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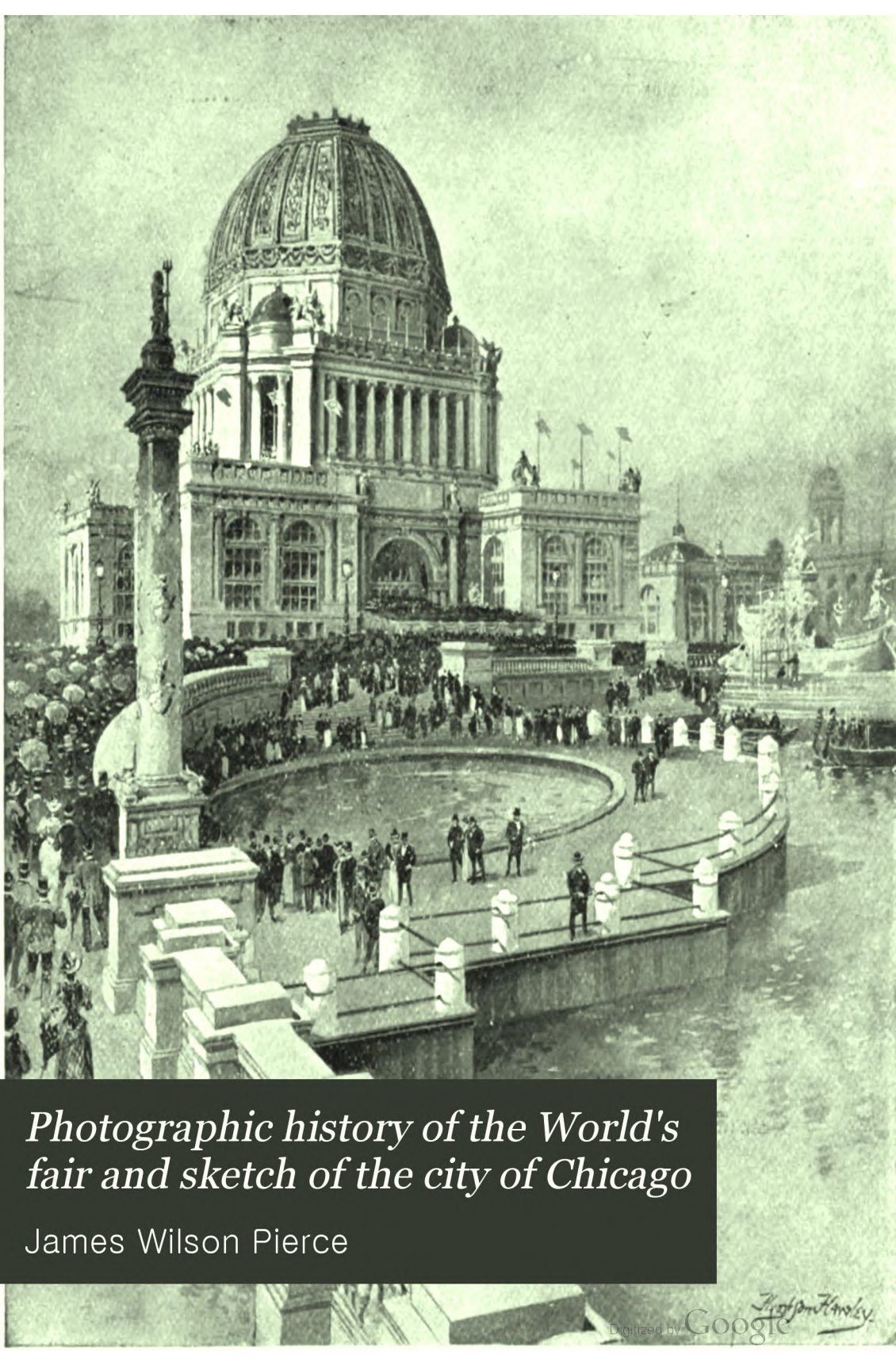
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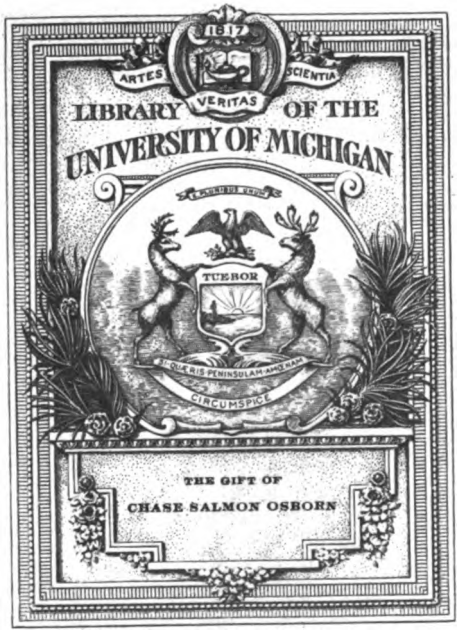


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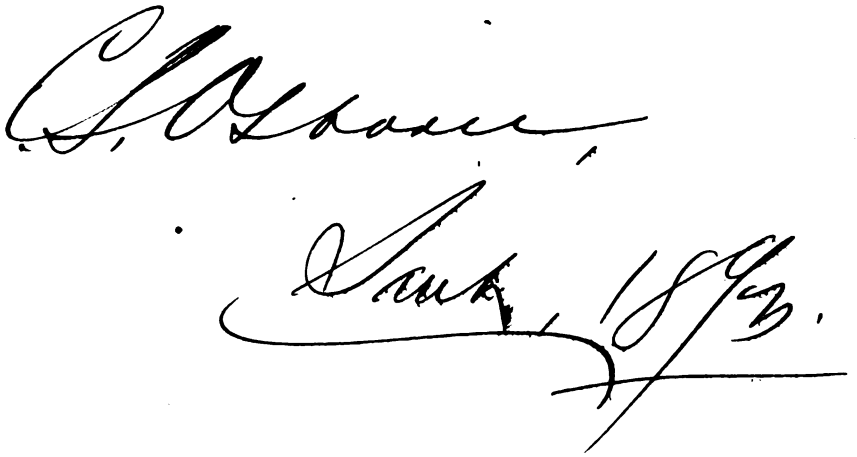
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THROUGHOUT HIS LONG LIFE.

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THE GOVERNMENT BUILDING.

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AUTHENTIC EDITION.

PHOTOGRAPHIC HISTORY

OF THE

WORLD'S FAIR

AND

SKETCH OF THE CITY OF CHICAGO.

ALSO,

A GUIDE TO THE WORLD'S FAIR AND CHICAGO.

BY

JAMES WILSON PIERCE, D. D., LL. D.

WITH INFORMATION FURNISHED BY THE DEPARTMENT OF PUBLICITY AND PROMOTION OF THE WORLD'S FAIR.

Profusely Illustrated.

BALTIMORE:
R. H. WOODWARD AND COMPANY
1893

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CONTENTS.

PART I.

THE CITY OF CHICAGO.

PAGE

A SKETCH OF THE CITY OF CHICAGO 1

PART II.

IMPORTANT BUILDINGS AND POINTS OF INTEREST.

AUDITORIUM BUILDING 42
AUDITORIUM THEATRE 42
CENTRAL MUSIC HALL 42
AUDITORIUM HOTEL 43
GRAND PACIFIC HOTEL 45
PALMER HOUSE 45
PERMANENT ART BUILDING 45
ART COLLECTIONS 46
GRAND OPERA HOUSE 46
HAVLIN'S THEATRE 46
BOARD OF TRADE BUILDING 46
LIBBY PRISON MUSEUM 48
CITY HALL 49
COOK COUNTY COURT-HOUSE 49
FIRST NATIONAL BANK 50
CHAMBER OF COMMERCE BUILDING 52
TACOMA BUILDING 52
TEMPERANCE TEMPLE 52
BRIDGES 53

Digitized by Google

PAGE

VIADUCTS 53
"ROOKERY" 54
MASONIC TEMPLE 56
POTTER PALMER 58
GRANT STATUE, LINCOLN PARK 61
HAYMARKET MASSACRE 64
HAYMARKET SQUARE 66
LOGAN STATUE 66
MICHIGAN AVENUE 69
GRAND BOULEVARD 69
MICHIGAN BOULEVARD 72
NEW BUILDING OF CHICAGO HERALD 72
ASHLAND BLOCK 74
COLUMBUS BUILDING 74
WATER WORKS 77
VON LINNE STATUE 77
WATER TOWERS 78
POST-OFFICE 81
UNION STOCK YARDS 82
GRAIN ELEVATORS 85
WASHINGTON PARK CLUB 89
ARMOUR MISSION 90
UNIVERSITY OF CHICAGO 90
CHICAGO LIGHT 93
CRIB AND BREAKWATER LIGHTS 94
GROSSE POINT LIGHT 94
THE PUBLIC LIBRARY 94
HOTELS 96
CHICAGO ATHENÆUM 96
COOK COUNTY HOSPITAL 98
FIRST REGIMENT, I. N. G. 100
PRAIRIE AVENUE 101
FARWELL HALL 104
MCCORMICK HARVESTING MACHINE COMPANY 104
NEWSPAPERS 106
COLUMBIAN ASSOCIATION 109
GERMAN SOCIETY OF CHICAGO 110
OGONTZ ASSOCIATION 112
BAPTIST MISSIONARY TRAINING SCHOOL 113
RAILROAD TRANSPORTATION 116

Digitized by Google

PAGE
ILLINOIS CENTRAL RAILROAD 120
WISCONSIN CENTRAL LINES 120
GRAND CENTRAL DEPOT 122
THE UNION DEPOT 123
PULLMAN 124
PULLMAN PALACE CAR COMPANY 141

PART III.

THE PARK SYSTEM.

CONSERVATORIES 152
SOUTH PARKS 158
DOUGLAS PARK 158
DREXEL BOULEVARD 158
GARFIELD PARK 160
JACKSON PARK 162
LAKE SHORE DRIVE 162
LINCOLN PARK 166
LINCOLN PARK PALM-HOUSE 168
MICHIGAN AVENUE BOULEVARD 168
OAKWOOD BOULEVARD 168
WASHINGTON BOULEVARD 168
WASHINGTON PARK 170

PART IV.

THE WORLD'S COLUMBIAN EXPOSITION.

BIRD'S-EYE VIEW OF EXPOSITION 190
DESCRIPTION OF THE ADMINISTRATION BUILDING 192
DESCRIPTION OF THE GOVERNMENT BUILDING 195
DESCRIPTION OF THE NAVAL EXHIBIT 197
DESCRIPTION OF THE WOMAN'S BUILDING 201
DESCRIPTION OF THE MACHINERY HALL 207
DESCRIPTION OF THE MANUFACTURERS' AND LIBERAL ARTS BUILDING . . . 210

Digitized by Google

PAGE
DESCRIPTION OF THE ELECTRICAL BUILDING 213
DESCRIPTION OF THE TRANSPORTATION BUILDING 219
DESCRIPTION OF THE HALL OF MINES AND MINING 225
DESCRIPTION OF THE AGRICULTURAL BUILDING 232
THE LIVE STOCK EXHIBIT 238
FORESTRY 240
THE DAIRY 241
THE HORTICULTURAL BUILDING 244
FLORICULTURE 247
THE FISHERIES BUILDING 249
LIVE FISH DISPLAY 252
THE ART PALACE 254
THE CASINO AND PIER 261
THE STATE BUILDINGS AND EXHIBITS 262
THE TERRITORIES 277
A GROUP OF STATE BUILDINGS 277
OTHER BUILDINGS 279
SPECIAL ATTRACTIONS 282
ARCHÆOLOGY AND ETHNOLOGY 282
GOVERNMENT EXHIBIT 282
INDIAN EXHIBIT 282
NOVEL, QUAINT AND CURIOUS THINGS 282
PHYSICIAN'S BUREAU OF SERVICE 288
MODEL POST-OFFICE BUILDING 288
LITTLE SHIP "SANTA MARIA" 289
STREET IN CAIRO 289
PALAIS INDIAN TEA HOME 289
FOREIGN EXHIBITS 291

PART V.

THE COLUMBIAN EXPOSITION—(CONTINUED).

A STATELY PROCESSION 321
CEREMONIES IN THE PARK 322
MUSIC AND PRAYER 324
FACTS ABOUT THE FAIR 325
PRESIDENT CLEVELAND 328

Digitized by Google

PAGE

THE EXHIBITION OPENED 330
IN THE IRISH VILLAGE 331
CRUSHED IN THE THRONG 331
THE WOMAN'S BUILDING 334
MRS. PALMER'S ADDRESS 334
VOICES FROM ABROAD 336
1492—THE PROPHESY 339
HOW TO SPEND A WEEK AT THE FAIR 343
FIRST DAY—A VIEW OF THE GROUNDS 343
THE STATE AND FOREIGN BUILDINGS 346
SECOND DAY—THE MANUFACTURES BUILDING 348
THIRD DAY—MODERN INVENTIONS 349
FOURTH DAY—THE PRODUCE OF THE FIELDS 349
FIFTH DAY—WOMAN'S AND CHILDREN'S BUILDING 351
SIXTH DAY—A TOUR OF THE MIDWAY PLAISANCE 352
MECHANICAL CONTRIVANCES 352
GLIMPSES OF FOREIGN LIFE 355
THE HOME OF THE ESKIMOS 357
WINTER SPORTS OF THE INNUITS 357
IN THE TURKISH VILLAGE 358
SEDAN CHAIRS 360
THE GRAND BAZAR 361
THE GREAT RUG ROOM 363
"MR. FARAWAY MOSES" 363
THE BEDCHAMBER 364
THE MOHAMMEDAN CEREMONY 366
A VISIT TO THE THEATRE 367
THE COSTUME 369
A PASHA'S PALACE 370
GREAT CANNON ON EXHIBITION 372
THE CHILDREN'S HOUSE 375
BARTHOLDI'S COLUMBUS 378
HOW THE STATUE WAS CUT 379
RAILROADS AT THE FAIR 381
DAWN OF ENGINE MAKING 382
PULLMAN COMPANY'S EXHIBIT 384
CANADA'S FINE TRAIN 387
HOW THE ENGLISH TRAVEL 388
CONTINENTAL CARS AND ENGINES 390
NORTHERN PACIFIC'S EXHIBIT 391

Digitized by Google

PAGE

MERCURY OUTSTRIPPED 393
THE ETHNOLOGICAL DISPLAY AT THE FAIR 394
GUNS OLD AND NEW 400
GUNS WITH HISTORIES 402
MODERN RIFLES 402
RAPID-FIRING GUNS 403
ART AT THE EXPOSITION 405
THE UNITED STATES EXHIBIT 409
THE ENGLISH EXHIBIT 415
GERMANY 424
AUSTRIA 427
HOLLAND 429
SWEDEN 430
FRANCE 432
JAN VAN BEERS, THE PRIDE OF BELGIUM 435
FROM DISTANT LANDS 438
ALGERIAN CORK 438
CAPE COLONY 439
AUSTRALIAN COLONIES 439
LIBERIA'S CURIOUS PRODUCTS 441
ECUADOR'S FINE EXHIBIT 442
SWEDEN AND HOLLAND 444
JAPAN'S EXHIBIT 444
DORÉ'S BRONZE VASE 445
A LABOR OF LOVE 447
IRISH ART METAL WORK 448
SHOE AND LEATHER INDUSTRY AT THE FAIR 451
WOMEN IN THE FIELD OF LITERATURE 454
THE EDUCATIONAL EXHIBIT 460
MANUAL TRAINING 463
JAPANESE AGRICULTURAL DISPLAY 475
NORWAY'S EXHIBIT 480
QUACKAHL INDIAN HOUSE 481
A TIMBER COUNTRY 486
SUGAR MAKING 487
FIVE KINDS OF TIMBER 488
GOLD MINING INDUSTRY 488
ROAR LIKE A BEAR 489
THE OLD LIBERTY BELL 490
THE DE WITT CLINTON RAILROAD TRAIN 491

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LIST OF ILLUSTRATIONS.

PAGE

BIRD'S-EYE VIEW OF THE CITY OF CHICAGO . . . . . Frontispiece.
TACOMA BUILDING 3
GRAND PACIFIC HOTEL 7
PLYMOUTH CHURCH 11
THE CITY HALL 15
INTERIOR VIEW OF AUDITORIUM HOTEL 19
INTERIOR VIEW OF THE CASINO 23
DINING-ROOM OF THE AUDITORIUM HOTEL 27
INTERIOR OF BOARD OF TRADE 31
HAVLIN'S THEATRE 35
CORNER OF STATE AND MADISON STREETS 39
INDIAN MONUMENT 41
AUDITORIUM HOTEL 43
INTERIOR VIEW AUDITORIUM HOTEL 44
DINING-ROOM OF THE PALMER HOUSE 47
LIBBY PRISON MUSEUM 48
RELIC OF OLD COURT-HOUSE AFTER THE FIRE 50
THE TEMPLE—WOMAN'S CHRISTIAN TEMPERANCE PUBLISHING HOUSE . . . 51
INTERIOR OF PRESENT ROOKERY BUILDING 54
THE ROOKERY BUILDING 55
LINCOLN STATUE 57
RESIDENCE OF POTTER PALMER 59
GRANT STATUE 62
RESIDENCE OF MR. C. V. FARWELL 63
GRANT STATUE 64
POLICEMAN'S MONUMENT 65
HAYMARKET SQUARE—POINT OF ANARCHIST RIOT, MAY, 1886 67
THE LAFAYETTE STATUE 68
GRAND BOULEVARD 70
MICHIGAN AVENUE BOULEVARD 71
CHICAGO HERALD OFFICE 73
VIEW ON STATE STREET 75

Digitized by Google

PAGE

VON LINNE STATUE 77
SCHILLER MONUMENT 78
CHICAGO WATER WORKS 79
SOL'S CLOCK 81
JACKSON PARK BRIDGE 82
STOCK YARDS 83
SCENE IN LINCOLN PARK 85
GARFIELD PARK 86
ARMOUR ELEVATOR 87
INDIAN MONUMENT 88
WASHINGTON PARK FOUNTAIN 89
A SCENE ON THE CANAL 91
OAKWOOD DRIVE 92
DREXEL MONUMENT 93
THE METROPOLE HOTEL 95
JACKSON PARK PAVILION 97
WORLD'S FAIR GLOBE 98
SEA WALL 99
SCENE IN LINCOLN PARK 101
CHURCH OF THE MESSIAH 102
SOL'S CLOCK 103
JACKSON PARK BEACH 105
SOUTH PARK FLAG 106
GATES AJAR 107
DEARBORN STREET DEPOT 108
SOUTH PARK LAKE 110
SCENE IN THE DOCK 111
DEARBORN AVENUE CHURCH 114
FLORAL DESIGN IN SOUTH PARK 115
IN THE STOCK YARDS 117
SCENE IN LINCOLN PARK 119
THE SHELDON RESIDENCE 121
SOUTH PARK SCENERY 123
ST. JAMES' CHURCH 125
LINCOLN PARK LAKE 127
STOCK YARDS 129
WORLD'S FAIR GLOBE 130
SOL'S CLOCK 131
BEACH FRONT 133
FLORAL DESIGN 134

Digitized by Google

PAGE

SCENE IN SOUTH PARK 135
IN THE BEAR PITS 136
LINCOLN PARK FLOWERS 138, 159
LINCOLN MONUMENT 139
DOUGLAS MONUMENT 142
IN THE ZOO 143–148
LINCOLN PARK LILY-BEDS 144
BARTLETTE RESIDENCE 145
AMONG THE LILIES 147
COMMERCIAL NATIONAL BANK, DEARBORN STREET 149
SOUTH PARK LILY PONDS 151
THE CONSERVATORY 152
LAKE SHORE DRIVE 153
SCENE IN LINCOLN PARK 155–156
JONES RESIDENCE 157
IN GARFIELD PARK 160
NICKERSON RESIDENCE 161
ABSTRACT BUILDING 165
IN LINCOLN PARK 167–170
AUDITORIUM BOXES 169
BOARD OF TRADE 172
BIRD'S-EYE VIEW OF EXPOSITION GROUNDS 174
SHIPPING YARDS 179
MENADNOCK BUILDING 182
CHAMBER OF COMMERCE 185
INTERIOR OF AUDITORIUM THEATRE 188
ADMINISTRATION BUILDING 193
GOVERNMENT BUILDING 196
PRAIRIE AVENUE 199
WOMAN'S BUILDING 202
CHICAGO UNIVERSITY—WHEN COMPLETED 205
MACHINERY HALL 208
MANUFACTURES AND LIBERAL ARTS 211
ELECTRICAL BUILDING 214
CENTRAL MUSIC HALL 217
TRANSPORTATION BUILDING 220
MINES AND MINING BUILDING 224
ART INSTITUTE 227
MASONIC TEMPLE 230
AGRICULTURAL BUILDING 233

Digitized by Google

PAGE

POST-OFFICE 236
LA SALLE STREET 239
WASHINGTON PARK RACE TRACK 242
HORTICULTURAL BUILDING 245
FISH AND FISHERIES BUILDING 248
STREET SCENE 251
ART PALACE 255
AUDITORIUM CURTAIN 258
PALMER HOUSE 260
RANDOLPH STREET 263
GREAT NORTHERN HOTEL 266
PULLMAN BUILDING 269
ILLINOIS CENTRAL R. R. TRACKS 272
MARSHALL FIELD'S BUILDING 275
AUDITORIUM OFFICE 278
GUNTHER'S CONFECTIONERY 281
ARMORY 284
LAKE FRONT, MICHIGAN AVENUE 287
ASHLAND BANK 290
FIRST NATIONAL BANK 293
VENUS 323
A FEATHER IN HER CAP 326
EVENING 329
THE DYING GLADIATOR 332
GROUP IN AGRICULTURAL BUILDING 335
LAOCOON—VATICAN, ROME 338
ANGEL OF TEARS 341
ANGEL OF PEACE 344
DAVID 347
WINE 350
BEER 353
COLUMBUS AT THE COURT OF FERDINAND AND ISABELLA 356
A GEOGRAPHICAL DISPUTE 359
BEETHOVEN AT THE HOUSE OF MOZART 362
MOSES 365
HIDE AND SEEK 368
THE BROTHER'S SOLO 371
THE TWINS 374
THE SOLDIER'S DREAM 377
SOUR GRAPES 380

Digitized by Google

PAGE

COLUMBUS ASKING PERMISSION OF THE PRINCE OF RABIDA 383
ADAGIO 386
DEPARTURE OF COLUMBUS FOR AMERICA 389
SCENE IN HORTICULTURAL HALL 392
ON THE NORTH SIDE OF MAIN BUILDING 392
ON THE ALERT 395
ENTRANCE TO DEPARTMENT OF ELECTRICITY 398
NORTH ENTRANCE AGRICULTURAL BUILDING 398
LOVE GROWN COLD 401
AT THE FAIR WITH OUR ARTIST—SCENES NO. 1–17 404-452
LEON AS IT NOW IS 455
INDEPENDENCE BELL ON THE WAY TO RAILROAD STATION, PHILADELPHIA . 458
THE DE WITT CLINTON RAILWAY TRAIN 461
SHOE AND LEATHER BUILDING 464
SCENE IN MIDWAY PLAISANCE 467
GERMAN EXHIBIT—MANUFACTURES BUILDING 470
AN EXHIBIT IN HORTICULTURAL BUILDING 473
VIEW IN ILLINOIS STATE BUILDING—MADE OF GRAIN 476
BIRD'S-EYE VIEW IN MANUFACTURES BUILDING 479
VIEW IN MANUFACTURES BUILDING 482
AN EXHIBIT IN AGRICULTURAL BUILDING 485

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PREFACE.

THE story of Aladdin and his lamp is among the most wonderful in the literature of fable, and in history the story of Chicago stands among the most marvellous for great and rapid growth in the annals of the Old and New World. Chicago has sprung into existence "like magic." Its history proves the old adage that truth is sometimes stranger than fiction.

All eyes are now turned towards this great city of the West because therein is to be held, in 1892–1893, THE WORLD'S COLUMBIAN EXPOSITION, by which the nations of the earth are to unite in celebrating the 400th anniversary of one of the greatest events in all history—the discovery of America by Christopher Columbus, October 12, 1492.

In this volume will be found not only a minute account of the GREAT EXPOSITION, but also a historical sketch of Chicago, and a description of that city as it is to-day in its greatness.

Many books have been written upon these subjects, but in this one volume are collected all the most important facts, which are presented in a very attractive and entertaining way, and which makes this work rank among the very best of its kind.

THE PUBLISHERS.

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IMPORTANT BUILDINGS

AND

POINTS OF INTEREST IN THE CITY OF CHICAGO.

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MICHIGAN AVENUE.

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PICTURESQUE CHICAGO

AND

GUIDE TO THE WORLD'S FAIR.

PART I.

A SKETCH OF THE CITY OF CHICAGO.

MATTHEW ARNOLD has called the American people uninteresting because "they had no ancient monuments of man's industry and devotion; no historic past to inspire reverence and kindle imagination; nothing to throw a misty haze over the crude strong realism of the present." I would like first to ask a question. "Does he consider, for instance, the building of a city like the subject of our sketch, to be done without industry and devotion?" Beyond doubt there were both in the very highest degree; true their product is not very ancient, but what is there in the *natural* order of things that would put such a premium on the one and such a discount on the other. And as for reverence; I wonder if there is more reverence, true and sincere, in the breasts of the English nation for their entire historic past than there is in the hearts of the American people for the history of the few short years embraced by the greatest of all wars, the war of the Revolution. Imagination! It isn't possible for a single person within the bounds of such a country, compelled by the force of circumstances to daily remember our past, to live in our present, and to contemplate our future, to be without an imagination the most vivid.

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I acknowledge, and with pride, that as a nation our imagination has been schooled by necessity to be practical as well as theoretical, but for all that it is imagination, purest and best. Who is the greater, a man like Moore who dreams of a Utopia, or one who brings his imagination within the bounds of reason and creates one?

Faults we have, and many of them; mistakes we have made, and grievous ones; but to be turned down as commonplace and uninteresting, impossible! Mr. Arnold, your criticism is a poor one, poorer for you than for us.

Let us leave Mr. Arnold and his unjust criticism and see if we can find something of interest and profit in a short description of one of our greatest cities; a city the story of whose building will one day vie with "Aladdin and his lamp." It has been said, and truly, "that there is not on record an achievement of human intellect, skill and industry that will bear comparison with the transformation of a dismal swamp in the midst of a trackless desert, within the space of a human life, into one of the mightiest and grandest cities of the globe."

We will pass over the discovery of the present site and its early history very briefly.

The world first became acquainted with the Chicago river, or portage, by a map made by the Frenchman, Joliet, who discovered it in 1673. The first settler was a fugitive San Domingo slave, named Pointe De Sable. How he escaped his master and reached Louisiana, and afterwards made his way through the wilderness to this point is not known, but that he was settled in a cabin at the mouth of the Chicago river and was leading the life of a trapper there in 1779, is a settled fact. Quite a settlement sprang up. Le Mai bought out De La Sable. Under him the business and the settlement improved. He in turn was bought out, in 1804, by Jno. Kinzie, the first "prominent citizen."

About this time the government owned a small tract of land here, six miles square, ceded to it by the Indians. On this land, in the midst of the wilderness, owned by the Indians and claimed by both English and French, Fort Dearborn was erected. This

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TACOMA BUILDING.

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move was bold if not reckless. Under the stress of the disastrous defeats and the general uprising of the Indians in the Northwest, during the war of 1812, the fort was evacuated, and most of the retreating garrison were killed by the Indians. This broke up, for a time, the settlement of the Chicago portage. The fort was rebuilt in 1814. The government at this time also ordered a survey of the water courses between the Chicago and Illinois rivers. Jno. Kinzie and family returned, and again the place had white inhabitants.

In 1830 Chicago was still what it always had been—a military post and fur station. It boasted twelve habitations. The old log fort (with its garrison of two companies of United States troops), the fur agency, three taverns (patronized largely by idle, drunken Indians, who made things lively as long as their fur money lasted), two stores (also largely patronized by Indians), a blacksmith shop, the house for the interpreter of the station, and one occupied by Indian chiefs. It boasted a large and varied population, never the same two days in succession, yet always the same. Most of them were Indians, to be sure, but then there was little else there but Indians and—mud. Some historian has said that at that time as many Indian trails marked the prairie and concentrated at the agency house as there are railroads now terminating in the city of Chicago.

Once a year John Jacob Astor sent a schooner to the post to convey supplies to it and to take away the year's product of fur. Once a week in summer, and twice a month in winter, a mail rider brought the news of the great world to this little outpost of humanity.

Let us pause a moment and glance at two pictures (1832–92) drawn by Mr. Kirkland in his "Story of Chicago." Point of observation, the top of the old block-house.

1832—"a lonely, weedy streamlet flows eastward past the fort, then turns sharp to the right and makes its weak way by a shallow, fordable ripple, over a long sand-bar, into the lake a half mile to the southward. At his feet, on the river bank, stands the United States agency storehouse. Across the river, and a little to the eastward, is the old Kinzie house, built of squared logs, by Pointe De Sable,

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nearly forty years ago: now repaired, enlarged and improved by its owner and occupant, John Kinzie. A canoe lies moored to the bank in front of the house; when any of the numerous Kinzies wish to come to the fort they can paddle across; when any one wishes to go over he can halloo for the canoe. Just west of Kinzie's house is Duillemette's cabin, and still further that of John Burns. Opposite Burns' place (near South State Street), a swampy branch enters the river from the south; and on the sides of this branch there is a group of Indian wigwams. The north side of the river is all woods, except where little garden-patches are cleared around the human habitations. The observer may see the forks of the stream a mile to westward, but he cannot trace its branches, either 'River Guave' to the north, or 'Portage River' to the south, for the trees hide them. Near him, to the west and south, sandy flats, grassy marshes and general desolation are all he can see. (Will that barren waste ever be worth more than a dollar an acre?)"

1892.—"Close at hand one sees the streamlet, now a mighty channel, a fine, broad, deep water-way running straight between long piers out into the lake; and stretching inland indefinitely; bordered by elephantine elevators; spanned by magnificent draw-bridges each built of steel and moved by steam; carrying on its floods propellers of 100,000 bushels of grain capacity. Looking north, west and south, he sees serried ranks of enormous buildings towering for miles and miles, each one so tall as to dwarf the fort and block-house to nothingness. He sees hundreds of miles of paved streets, thronged with innumerable passengers and vehicles moving hither and thither, meeting and impeding each other, so that sometimes so many try to pass that none can pass; all must wait until the uniformed guardians of the peace bring order out of chaos. Every acre of ground in sight is worth millions of dollars."

The real history of the place begins here. The tide of emigration turned toward the west. Her waste places were taken up rapidly under the "Homestead Act"; Chicago began to assume the appearance of a thrifty village; and from that time on, though interrupted

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now and then by dreadful calamities, her course has been steady upward and onward.

In 1833 there were no less than fifty families trying to solve the two great problems of how to rid themselves of Indians and mud. The Indians were finally disposed of in '35 by the common Uncle who bought their land and sent them beyond the Mississippi, and Chicago was rid of them forever. "Walking in the imposing streets of Chicago to-day, how difficult to realize that fifty years have hardly elapsed since the red men were dispossessed of the very site on which the city stands, and were toted off in forty days to a point now reached in fifteen hours." How they solved the mud problem we will explain later.

In 1834, when the whole town turned out on a wolf hunt and succeeded in killing about fifty, the records give the number of inhabitants as 2,000. In 1835 there were 3,000. Mr. Parton in speaking of this time gives a graphic sketch of the town and the people which we will quote at length.

"The motive must have been powerful which could induce such large numbers of people to settle upon that most uninviting shore. A new town on a flat prairie, as seen from car windows, has usually the aspect which is described as God-forsaken. Wagon-wheels had obliterated the only beauty the prairie ever had, and streaked it with an excellent article of blacking. There may have been twenty little wooden houses in the place; but it is 'laid out' with all the rigor of mathematics; and every visible object, whether animate or inanimate,—the pigs that root in the soft, black, prairie mire, the boys, the horses, the wagons, the houses, the fences, the school-houses, the steps of the stores, the railroad platform, are all powdered or plastered with disturbed prairies. If, filled with compassion for the unhappy beings whom stern fate seems to have cast out upon that dismal plain, far from the abodes of men, the traveler enters into conversation with them, he finds them all hope and animation, and disposed to pity *him* because he neither owns any corner lots in that future metropolis, nor has intellect enough to see what a speculation it

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GRAND PACIFIC HOTEL.

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would be to buy a few. What a pity! You might as well pity the Prince of Wales because he is not yet king."

But, for all the hope and animation of the inhabitants, for many years in all prairie towns it was shunned the most by those who were looking for the pleasant and the beautiful and, no wonder, if there be any truth in the following quotation also from Mr. Parton. "The prairie on that part of the shore of Lake Michigan appears to the eye as flat as the lake itself, and its average height above the lake is about six feet. A gentleman who arrived at Chicago from the South in 1833, reports that he waded the last eight miles of his journey in water from one to three feet deep,—a sheet of water extending as far as the eye would reach over what is now the fashionable quarter of Chicago and its most elegant suburbs. Another traveler records, that, in 1831, in riding about what is now the very center and heart of the business portion of the city, he often felt the water swashing through his stirrups. Even in dry summer weather that part of the prairie was very wet, and during the rainy season no one attempted to pass over it on foot. 'I would not have given sixpence an acre for the whole of it,' said a gentleman, speaking of land much of which is now held at one thousand dollars a foot. It looked so unpromising to farmers' eyes, that Chicago imported a considerable part of its provisions from the eastern shores of Lake Michigan as late as 1838. This Chicago now feeds States and Kingdoms."

Many people ignorant of its real situation are at a loss to account for the startling growth of the place. If they will follow us for a brief space we will try to show them not only that it is not mysterious but that under existing circumstances it could not have been otherwise. The only recommendation the place gave to the first settlers was the inlet which offered a chance for a harbor on the coast of a very stormy and dangerous lake, an advantage offered by no better sites. The inlet, or river as it is called, is simply a cutting of the lake into the soft prairie; it was 100 yards wide and ran three quarters of a mile straight into the prairie where it divided into two branches, one running north and the other south and both parallel with the lake shore.

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These branches extended several miles each. It was originally twenty feet deep, but the mouth was so obstructed that only very small vessels could enter; but nature had done her share and it only wanted the engineer and the dredge to make it capable of receiving the largest ships that sail the lake and to give to the city forty miles of wharves.

Situated at the southern end of Lake Michigan, from eight hundred to nine hundred miles from the principal ports on the Atlantic seaboard; twenty-four hundred and fifty miles from San Francisco, directly on the natural highway from East to West, and from the great northwestern States to the Atlantic; having all the advantages of a seaport town combined with those of a great inland feeder, it is not strange Chicago has grown with the development and accessibility of that wonderful region, of which it is the great depot, exchange, counting-house and metropolis.

Well might these prairies so long considered a wilderness and left to the trapper, the Indian and the buffalo, be called the "treasure-house" of nature, for there is no known spot on this globe where she has been so lavish in the variety and quantity of what man needs for the sustenance and the decoration of his life, or where she has placed fewer and smaller obstacles in his way. "That is the region where a deep furrow can be drawn through the richest mould for thirty miles or more, without striking a pebble, a bog, or a root; and under almost every part of which there is deposited some kind of mineral—coal, clay, stone, lead, iron—useful to man. Besides being well watered by rivers, nowhere is it so easy to make artificial highways—roads, railroads and canals."

The climate although occasionally extremely warm or cold is on the whole remarkably pleasant and healthy. The air is cool and bracing through most of the summer; hot nights are rare. In fact, there is none better. There is, no doubt, a great deal of truth in the theory that the wonderful growth of the city can be attributed in part to the stimulating atmosphere which arouses all the latent energy in the human system and makes possible the hard mental and physical labor of the people.

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In 1837 the whole country was depressed and Chicago did not escape; for five years there was no increase in her population. Her real estate boom fell flat; corner lots, river fronts and lake borders found no buyers. It is said that there are millionaires in Chicago to-day only because they could not sell their land at any price during those years of depression and despondency.

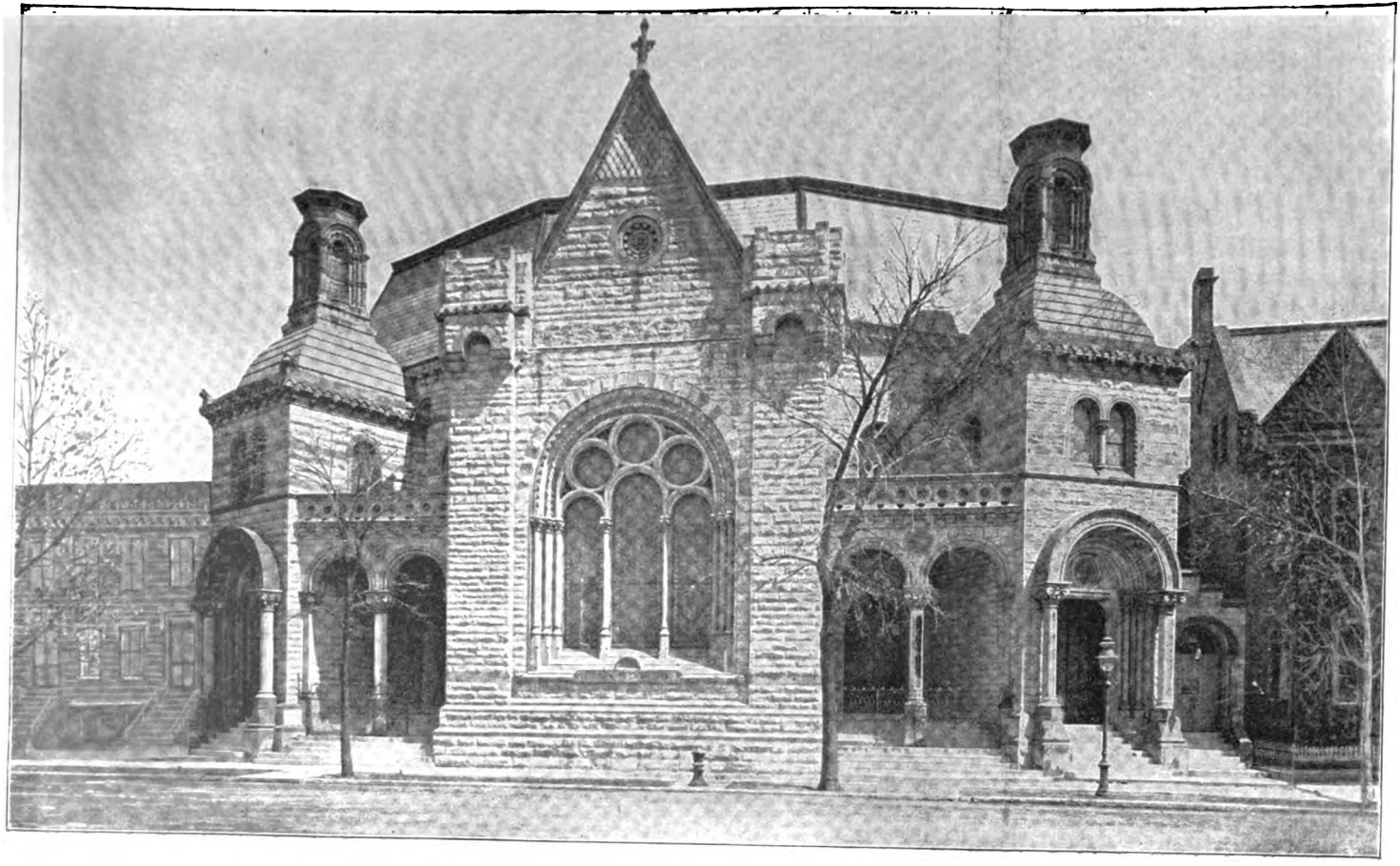
It was during this dark period (1837 to 1842) that Chicago made her first shipments of salt meat and wheat. In 1838 some reckless fellow shipped thirty-nine two-bushel bags of wheat across the lake; next year 4,000 bushels were exported; the next 10,000; and in 1842 it jumped to 600,000. The grain was brought in great canvas-covered wagons, prairie schooners, from the surrounding country, some of it coming as far as one hundred and fifty miles and shipped by the lake. Before Chicago had a railroad or a canal she shipped two and a half millions of bushels of grain in one year and sent back most of the wagons that brought it loaded with merchandise.

The canal connecting the Chicago river with the Illinois, and through that river the Mississippi, was finished in 1848. This opened up a large area hitherto not profitable to cultivation.

A scheme for a railroad to Elgin was proposed, but opposed by almost every one; they argued that if a road was built to Elgin the farmers would sell their grain and buy their merchandise there, and thus ruin the town. How blinded to their own interests! They did not see their entire success depended on their accessibility to the Eastern States and to the great prairie world. At last, after many difficulties, the road was put through by the perseverance of a few men. Compare the policy of the people then and now.

"When in 1853 the road paid a dividend of 11 per cent. and it was found that Chicago had trebled its population in six years after the opening of the canal, and that every mile of railway had poured its quota of wealth into Chicago's coffers, then the truth took possession of the whole mind of the city and became its fixed idea, that every acre with which it could put itself into easy communication must pay tribute to it forever. From that time on there has been no

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PLYMOUTH CHURCH.

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pause, no hesitation; she saw her vocation was to put every good acre in all that region within ten miles of a railroad, and to connect every railroad with a system of ship-canals terminating in the Mississippi or the Atlantic Ocean." Since then all the surplus force and revenue of Chicago has been expended in making itself the centre of the great system of railroads and canals that it is to-day.

"The Forties saw the beginning, in a small way, of nearly all the great institutions Chicago now enjoys. In 1841 the first waterworks were built. The first propeller was launched in 1842, in which year the exports were for the first time greater than the imports. The first book compiled, printed, bound and issued is said to have been in 1843. The first meat for the English market was packed in 1845. In 1846 the River and Harbor convention met, and Chicago was made a port of entry. In 1847 the first permanent theatre was opened (Rice's, south side of Randolph street, between State and Dearborn streets), and McCormick's reaper factory was started. In 1848 the first telegram was received, being a message from Milwaukee, and later the 'Pioneer,' the first locomotive, was landed from the brig 'Buffalo' and started out on the Galena railway. In the same year the Board of Trade was established and the canal opened. In 1849 the 'Chicago & Galena Union Railroad' was opened to Elgin." Certainly this is a good showing for ten years.

Let us notice here briefly this first railroad, for without this power of steam to annihilate distance all her natural advantages would count for little. As mentioned above, the first locomotive arrived in 1848 on the brig "Buffalo." It was a small affair, built by Baldwin, of Philadelphia, weighed only ten tons and had two drivers, instead of four, six or eight, now used. The entire equipment of the road consisted of this engine, five flat cars and one box car. On November 20 the first train drew out of Chicago amid the cheers of the people who had little to lose and the forebodings of most of those who had much. At the present time over ninety thousand miles of railroad centers in Chicago. She is "the greatest railway depot in the uni-

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verse—more passengers arrive and depart, more merchandise is received and shipped there daily than in any other city on the globe." 1849 was the year of the great flood; all the bridges were swept away, vessels and canal boats broken into kindling by the ice and the wharves ruined. The *Democrat* stated the losses as follows: Damage to bridges, $15,000; to vessels, $58,000; to canal boats, $30,000; to wharves, $5,000. Total, $108,000. In this age, when the cost of a single bridge or vessel far exceeds the total, the loss seems inconsiderable, but to a thoughtful person there is a deal of history in it.

At this time the long disputed and vexing question of the respective rights of landsmen and sailors came to a judicial adjustment. When Lake Street Bridge was begun, its opponents appealed to Judge Drummond, of the United States District Court, for an injunction, relying on the right of the General Government to keep from obstruction the navigable waters under its control. The complaint was dismissed, the learned judge holding that "the right of free navigation is not inconsistent with the right of the State to provide means of crossing the river by bridges or otherwise," when the wants of the public require them. But for a long time there was still trouble; when a favorable wind would blow the vessels would steam up the river in a line that would keep the draw open for hours. This caused great inconvenience and delay to those who happened to want to cross. This trouble is now obviated by the tunnels and by keeping the bridges open for land travel at certain times.

Thus we see Chicago well started on her way as a commercial centre; as we have seen she receives the products of the prairies and ships them East, she receives merchandise from the East and supplies the prairies, but here she is confronted by a new problem—that of economy in transportation. When "prairie schooners" conveyed the grain and the cattle came afoot, when it took a month, under favorable circumstances, to reach the Atlantic Coast, she never gave the matter a thought, but as her facilities increased it did not take her long to see the vast importance of the question; and how thoroughly she has mastered it. The first step was by sending away

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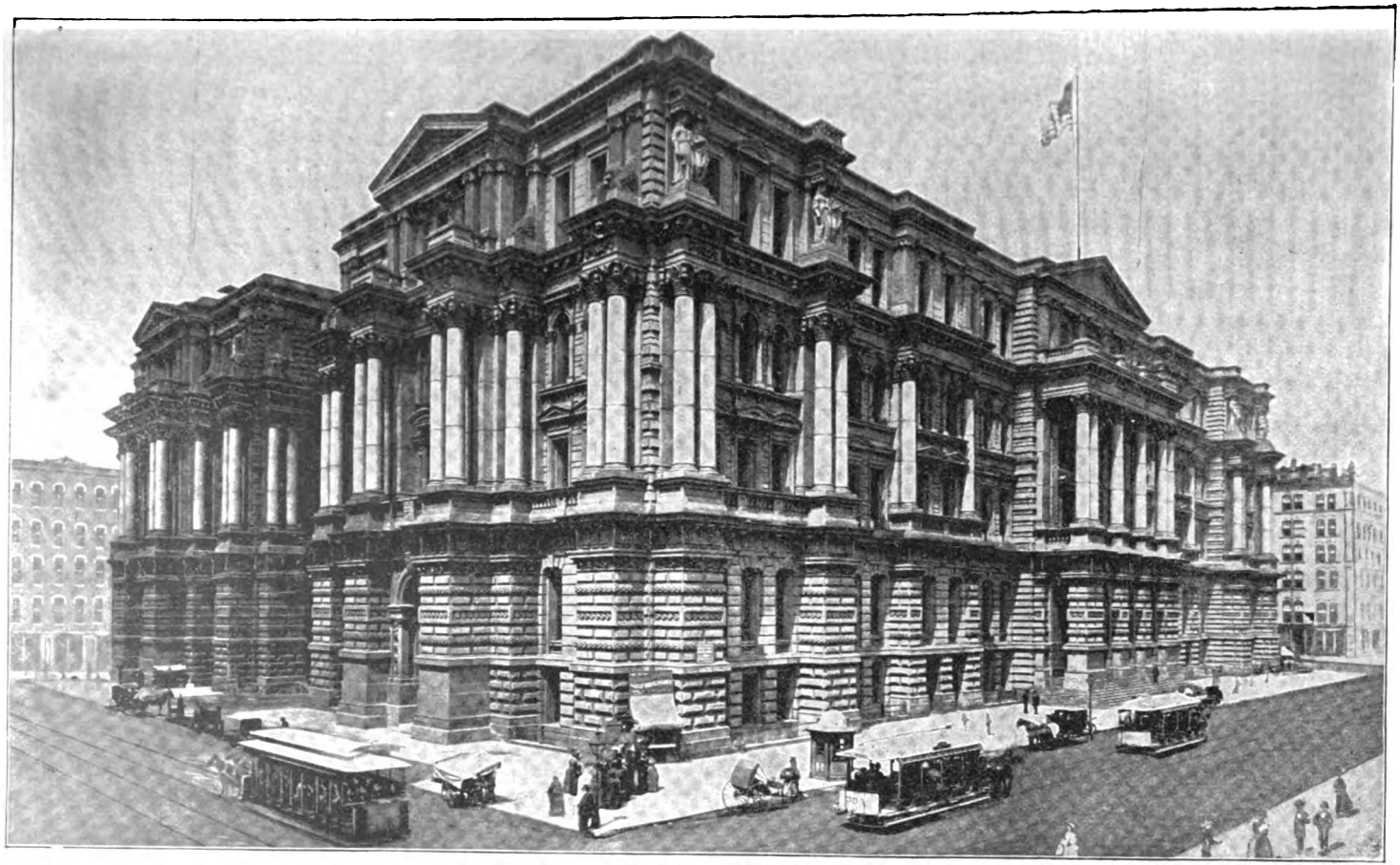
a great part of wheat in the shape of flour. The output in 1867 was 30,000 barrels; in 1891 it was nearly 5,000,000. But it is in the transportation of corn that the most surprising economy is effected. "A way has been discovered of packing fifteen or twenty bushels of Indian corn in a single barrel. The 'corn crop,' as Mr. S. B. Ruggle once remarked in Chicago, 'is condensed and reduced in bulk by feeding it into an animal form—more portable. The hog eats corn, and Europe eats the hog. Corn thus becomes incarnate; for what is the hog but fifteen or twenty bushels of corn on four legs?'"

The business of pork-packing, as it is called, which can only be done to advantage on a large scale, has attained enormous proportions in Chicago, started in 1840, and there were nearly nine million hogs received into Chicago in 1891, about one-third of the entire product of the west. Some of these establishments do a business of one million dollars a week. Chicago not only largely supplies this country but sends a great deal abroad. Her dealings in beef are even larger than in pork; for a number of years the larger part of the fresh beef consumed in our Eastern cities is Chicago dressed.

The western steer is an awkward piece of "raw material" to handle. In will he is perverse, and his power of resistance is not to be despised, and despite his ugliness he must be shown the greatest consideration; he must not be injured or bruised in any way; he must have two pails of water every twelve hours and he cannot go long without a large bundle of hay. Chicago has reduced the handling of these millions of live animals to a science. That is, they are handled with the greatest possible convenience to man and the least possible inconvenience to the animal. Her methods cannot but be admired and approved. (See Stock-yards later.)

In the "Standard Guide to Chicago," the following very funny description of one of the "guides" at the stock-yards is given. "There is one particular guide at the stock-yards frequently pointed out as an extremely interesting fellow. This is 'Old Bill,' the bunko steer. He is perhaps the most depraved animal in existence. There is no element of brotherly love or patriotism in his nature.

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THE CITY HALL.

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His duty at the yards is to guide droves of cattle to the slaughter-houses. He has mastered his little act; reduced steering steers to a science. Every day he takes his post near one of Armour's packing-houses and waits until it is necessary to drive a herd of cattle up the viaduct to the killing rooms. He then joins the drove, ingratiates himself into their good will, and tells them that he knows a good pasture not far away. At his suggestion the cattle think about it and finally resolve to let him lead them there. Bill, the bunko steer, laughs softly and a cruel look lights his eyes. He lopes off through the mud towards a large gate not far away. Following after him are a hundred or more cattle, every one entertaining a vision of gently swelling hills covered with long wavy blue-grass and sweet clover blossoms. Bill leads them to this gate and allows the herd to go through it, while he steps aside and avoids the rush. As the dust of the rush clears off a little a familiar figure is observed slowly strolling away from the gate. It is 'Bill.' On his face is no remorse as he saunters back to his post of duty near a tall fence. He is then ready to betray a couple hundred more of his unsuspecting relations."

Many people rank the packing business the first of Chicago's industries; this is a great mistake, because her trade in lumber is equally as important and her manufactories are more valuable than the two put together.

The prairies are without timber. Chicago brings lumber from the upper lakes and sends it all over the prairies. In 1890, she disposed of 2,000,000,000 feet of pine lumber and 3,000,000,000 shingles. Think of the houses that much lumber would build! To economize transportation there are firms that sell ready-made houses, stores, churches, etc., and villages for that matter, and will send them securely packed to any part of the country, express paid, on the receipt of price. What more can any one ask?

When we left Chicago itself, some pages back, to describe her industries, she was nothing more than a thriving country village. Great changes have taken place. Her population has increased from thirty thousand in 1850, to one million three hundred thousand in

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1891. From 1876 to 1891 there were sixty thousand buildings erected, at a cost of three hundred and ten million dollars, with a street frontage of two hundred and eighty-six miles. Her area in 1835 was nearly three square miles, now it is nearly eighteen square miles. The city frontage on the lake is twenty-two miles and on the river fifty-eight. The distance between North Seventy-first street, being the northern city limit, and One Hundred and Thirty-ninth street, being its southern limit, is twenty-four miles. The city at its broadest point is ten and one-half miles wide. State street has the greatest extension north and south, running from North avenue to the south city limits, eighteen miles; Eighty-seventh, the greatest western extension, running the entire width of the city. Her entire mileage of streets is two thousand two hundred and thirty-five.

The city is no longer a quagmire. For many years, after Chicago had become a flourishing town, the "one unequaled, universal, inevitable, invincible thing about the place was—mud." Mired wagons were an every day sight in the streets. A stage-coach stuck fast and immovable for days has a sign near it "no bottom here." One gentleman says he saw a lady who was trying to cross Randolph Street at La Salle, leave both shoes in the mire and only reach the sidewalk in her stockings. He does not say, however, that he swam out and rescued those dirty pedal appendages; he must have been a very modest or a very ungallant man.

The people were in despair, since water will only run down hill, and part of the town was below the level of the lake. "The first effort at drainage was a curious experiment. Lake Street was excavated to the depth of three feet, deepest in the middle, and planks laid from sidewalk to centre. This did admirably in dry weather. In 'wet spells' the planks were unfortunately not submerged; they were afloat, and under the impact of the wheels and hoofs sent up streaks and shoots of vileness indescribable." Then they tried open ditches, but this was as great a failure as the other. Many were the experiments and many the failures. They could not help it; the

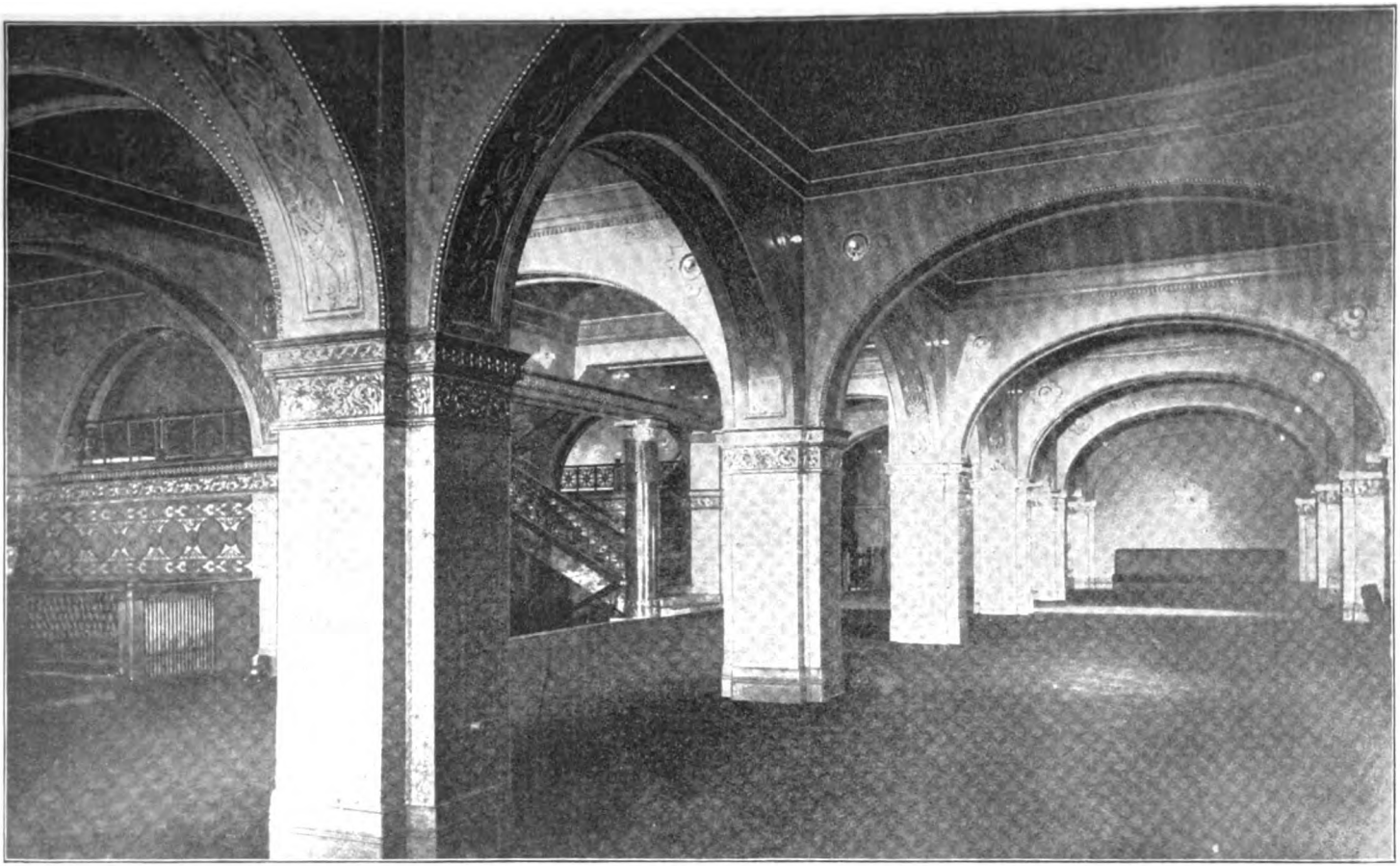
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whole prairie was at fault. At last they awoke to the fact that nothing could be of any permanent good short of raising the whole town. At once a higher grade was established, to which all new buildings were required to conform; this was not high enough, a higher one was ordered; even this did not answer, and a third raise was made. So that now the city stands nearly sixteen feet above the original prairie. Think of this task of lifting a city like this out of the mud and water high enough, not only, to make drainage *possible but perfect*, and to give cellars—they had none before—in which books and merchandise can be stored with safety. To us it seems incredible.

"During the term of years, while Chicago was going up out of the mud of the prairie to its present elevation, it was the best place in the world in which to develop the muscles of the lower half of the body." A street would be raised say six feet; then the old houses would be in the ditch; the new ones of course on the same grade as the street; so, if a man wanted to be neighborly steps had to be built. "The ups and downs of life in Chicago" was long a standing joke.

This state of affairs did not last long with the better class of people and buildings. The people are too energetic and have too much public spirit. One of the greatest undertakings along this line was the raising bodily, of the huge Tremont House, a solid hotel as large as the Astor, from its foundations to the proper level. Speaking of this gigantic task, Mr. Kirkland, in his story of Chicago says: "With the trouble came (once more!) the remedy. A contractor was found willing to raise the whole great high building (the Tremont House) to its new grade, without even interrupting its business. The cellar was vacated, huge timbers were introduced and placed so as to take upon themselves the weight of sustaining walls, five thousand jack-screws were placed under the timbers, and a small army of men detailed to work by word of command, one man to four screws. Then, at a signal by the whistle of the foreman, each man gave each jack-screw one-half turn; and the whole structure, by imperceptible steps, rose in the air, the bricklayers building up the walls as fast as

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INTERIOR VIEW OF AUDITORIUM HOTEL.

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there came spare space wherein to lay a course of brick. It was said the guests did not know they were mounting toward the sky. However that may be, not a wall was cracked, not the slightest accident or untoward event took place to interfere with the entire and perfect success of the novel experiment."

To quote still farther the same author: "Soon after, the entire brick block of stores facing south on Lake street, and reaching from Clark to La Salle street, was similarly treated, and these were only specimen instances of a great undertaking; the lifting of a whole city out of the slough of Despond on to dry ground.

"This enterprise benefited Chicago indirectly, thus: A young man, born in central New York in 1831, grown up without wealth and educated without help, having a widowed mother dependent on him for support, had bravely undertaken a large contract for the raising of buildings along Erie Canal to the new plane made necessary by the canal enlargement then recently effected. The knowledge of the great task to be done in Chicago in the direct line of his experience brought him out to the West, and he became the leading house raiser in Chicago. That man was George M. Pullman. After making much reputation and a little money in his original business, he turned his attention to the greater job of improving the system of long-distance travel, and began, in a small way, the enterprise which has revolutionized the passenger-carrying of the country, and, to some extent, of the whole world."

Another problem closely allied to this is the question of sewage. This is a continual source of worry and menace. It has confronted them for years and confronts them yet, but their indomitable energy and resolution will win here as it has in every other case.

"In the remote past, the overflow of the waters of Lake Superior and Lake Michigan ran through the Mississippi south to the Gulf of Mexico, instead of as now—northeast through the Gulf of St. Lawrence to the Atlantic. At the same time Lake Erie was emptying into the Atlantic through Lake Ontario and the St. Lawrence; not by the Niagara, but by the Dundas valley, a channel not far from the

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line of the present Welland canal. Then, at some epoch unknown and for some cause unguessed, the Detroit strait and the Niagara strait were opened, Lake Michigan slowly fell about thirty feet, and its outlet (now 'the Divide,' at Summit, close to the city limits, twelve miles southwest of the court-house) gradually filled up with mixed deposit; so that to-day the dry bed of Mud Lake is the sole remaining representative of the once great southward waterway. Within a few years, long before the close of the nineteenth century, the old order of things must be re-established and mighty Michigan once more find its waters flowing southward. The hand of man will compel it again to turn in its bed, and lie with its head to the north and its foot to the south as of old. The canal which is to be built as an outlet will carry a stream of water 160 feet wide, 18 feet deep, flowing 2½ miles an hour. Through this canal the largest steamers might float, but it is not intended that passage through shall be provided for them, because the locks by which they would have to descend (151½ feet) to reach the Illinois river are too small and the river itself is far too shallow for their accommodation. Some Mississippi boats can come to us, but our stately ships cannot go to them. Each must break bulk in Chicago. Also—an important consideration—light draft gunboats may pass and repass freely between the great lakes and the great river. As we stand now, any nation having control of the St. Lawrence and the Welland canal has at least the highway necessary to command Lake Erie, St. Clair, Huron and Michigan with all that lies on their shores. To accomplish the ends desired will cost the Sanitary District (practically the city of Chicago) about $20,000,000.

"The one great object of this ship canal, however, is to dispose of Chicago sewage. When the population was small, the city was drained by the Chicago river and the lake. Years ago it became apparent that a change would have to be made in this respect. The course of the Chicago river is naturally into Lake Michigan, but pumping works were erected at Bridgeport, in the southwestern part of the city, which lift an average of 40,000 cubic feet per minute into

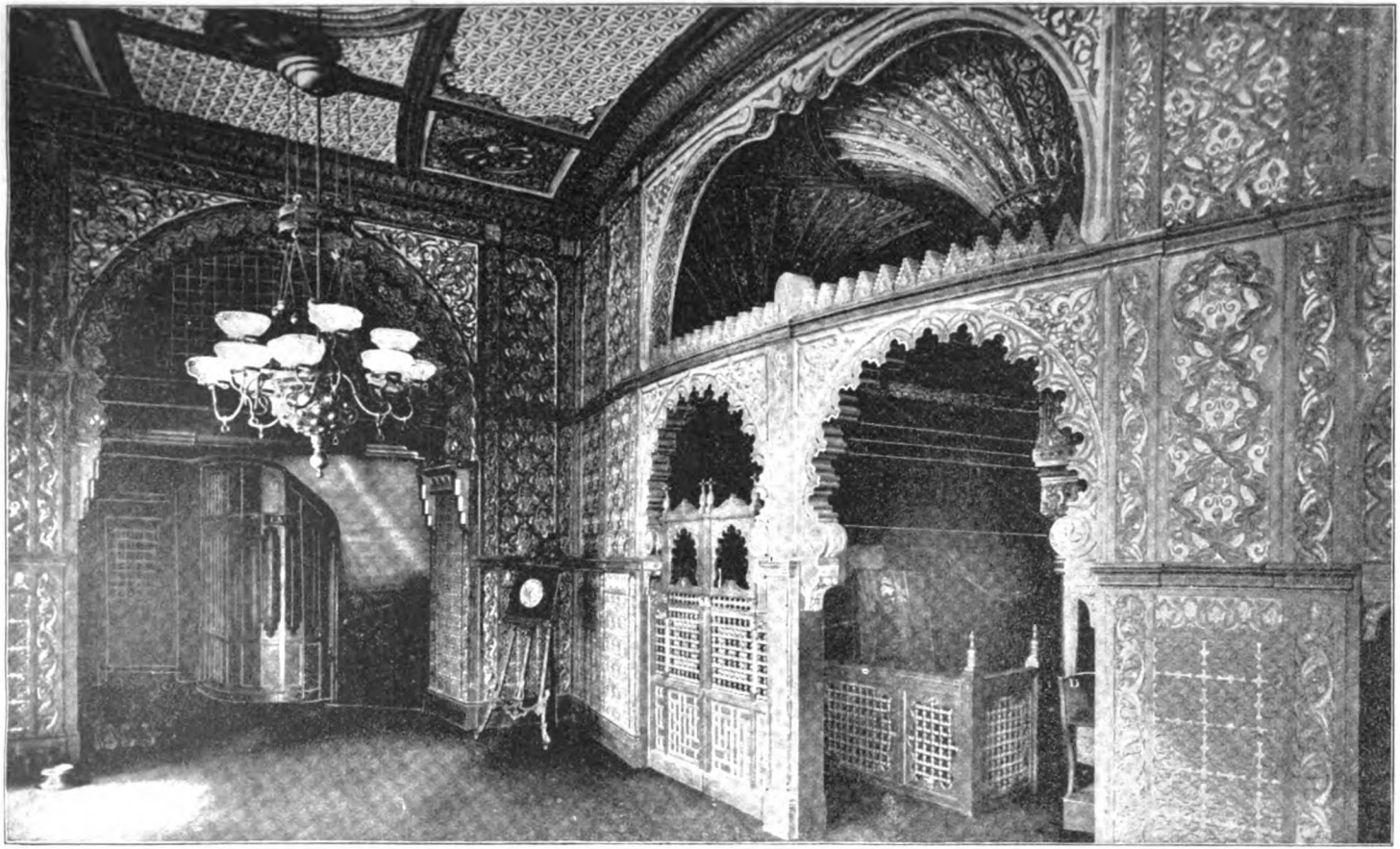
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the Illinois and Michigan Canal, causing, under ordinary conditions, a perceptible current away from the lake. The water thus pumped into the canal flows south to the Illinois river and thence to the Mississippi. Pumping works at Fullerton Ave., on the north branch of the Chicago river, force water from the lake into that stream, diluting its contents, and furnishing the head needed for a flow toward the Bridgeport pumps. This means of disposing of the city's sewage is wholly inadequate to its needs, and the pollution of the water supply of the city is constantly menaced. Measures have therefore been taken to construct a large gravity channel as an outlet for the sewage of Chicago into the Illinois river. The Chicago Sanitary District has been formed by act of Legislature of the State of Illinois; nine trustees have been elected to supervise the construction of a channel; a corps of engineers has been set at work making preliminary surveys, and plans are being perfected for a channel which will answer the double purpose of disposing of the city's sewage and establishing a navigable waterway for the interchange of commerce between Lake Michigan and the Mississippi River."

Thus, by one operation, the pumping is obviated, the canal is improved, the river is purified, and the city is rendered more salubrious. The Chicago River will at length be a river; only, it will run backwards.

The question of pure water is an important one. Previous to 1854 it was pumped out of the lake; but the increase in population, the introduction of sewerage, together with the establishment of packing houses, distilleries, etc., caused such a change in the quantity of filth flowing into the lake that complaint began to be made of impurity and offensiveness in the supply from the pumping works. Soon "it became so grave that it could no longer be neglected." At this time, be it remembered, the water was taken into the pumping well directly from the lake shore, a few piles being driven around the inlet about close enough together to exclude a young whale. The small fry of the finny tribe passed freely inward, and if they were lucky, they passed out again; if unlucky, they were sucked

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INTERIOR VIEW OF THE CASINO.

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up by the pumps and driven into the pipes, where they made their way into the faucets of private houses,—even the hot-water faucets, in which case they came out cooked, and one's bath-tub was apt to be filled with what squeamish citizens called chowder. About this time a most sensational article appeared in the *Times*, gravely asserting that we were all cannibals, eating our ancestors. For, it said, the cemetery being on the lake shore, a half mile of the pumping works was subject to overflow and abrasion by the waves; wherefore the fishes were fed on the dead at the cemetery, were sucked into the pumps, and were then fed to the living in the city! Of course this was fun; but it had a lasting effect and made easier the bold experiment that followed. It was an experiment, because not only had no such expedient ever been tried before, it had never been thought of. The method they employed is something to be proud of, not for its magnitude, but for the simplicity, originality and boldness of the idea. They ran a tunnel two miles out into the lake, and pumped the water from the bottom of the lake into the mains. The distance is long enough to give them pure water beyond all doubt or accident.

For many years Chicago was only an exchange, a buyer and a seller on a large scale. She depended on the East for all her manufactured merchandise, and made nothing herself. Their first efforts were in the line of rough agricultural implements; now there is one firm that turned out last year 121,780 reapers and mowers. This is about one machine every minute of the day, every working day of the year. Think of it! "Even in this day of gigantic achievements the manufacture and sale by a single establishment of nearly 122,000 machines for cutting grass and reaping and binding grain, during the briefly passing period of twelve months, is a wonderful performance. Had this great number reference merely to such implements as the old-time hand sickle and scythe, it would still be no small feat; but when it is remembered that these are modern machines to be drawn by horses, and that their weight is from 650 to 1300 pounds each, the fact is most stupendously presented; but, being a fact,

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must stand upon the pages of recorded history." This firm manufactures more than one-third of the world's entire output of grain and grass-cutting machines.

"One of the curiosities in the possession of the McCormick Company is a time-worn and weather-beaten specimen of the original Reaper, as invented by the late Cyrus H. McCormick,—the first practical machine that ever entered a harvest field and the admitted type and pattern after which all others are modeled. What volumes the storm-buffeted old landmark speaks to the gray-haired man of the middle West! Why, to watch the old McCormick Reaper was the delight of his earliest boyhood, and, standing in its august presence now, he lives over again the sunny days of life's June, the while the dear remembered faces of father and mother come back to him, and in fancy he feels the 'touch of a vanished hand,' hears the 'sound of a voice that is still!' "

This is only an example; at the present time there is hardly an article of any importance, for railroad construction, for farming, for house building or decoration, for clothing, necessary or ornamental, that is not made in Chicago. At present there are 3307 manufacturing firms, with an actual capital employed of $210,302,000. These employ 180,870 people, pay $104,904,000, and their product is valued at $567,012,300.

"July 3, 1871, was a 'showery day,' that is to say, one and a half inches of rain fell. From that time to October 9, 1871, but two and a half inches fell in all. In other words, in the ninety-eight days there was only a total rainfall equal to a day and two-thirds of showers, about one-fourth the average supply at that season of the year. Such dryness, if perpetual, would make a desert of the grand prairie. Meanwhile, the southwest wind, the hot haze-laden, the thirsty, the grass-killer, the corn-ripener, the hay-fever-breeder, the western sirocco—in short, the prevailing prairie breeze which, even in ordinary seasons, blows strongly and steadily, perhaps four days out of five the year round, and perhaps nine days out of ten during the summer, leaving its mark on the trend of the branches of every

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plastic tree, from the willow to the cottonwood: this blast blew without ceasing.

"It turned the prairies brown and dry as old hay, so that they lighted to the touch, and burned as long as a blade or a leaf was in the fire's path. The prairie fires ignited the grass in meadow and the hay in stack, the grain in rick and the corn in shock. The wind sucked all the moisture out of the forests, so that by the square mile and the township, they burned alike the grass and the crops. It turned all the wood in wooden Chicago into tinder; and as soon as the fittest moment came, turned the tinder into flames and ashes."

Chicago had then a population of about 334,000. The city limits were, Fullerton avenue on the north, the lake on the east, Thirty-first street on the south, and Western avenue on the west, about eighteen square miles, or 11,520 acres. The north side had chiefly wooden buildings, varying from elegant homesteads, occupying a whole square, to the miles of small, cheap tenements, each usually standing alone, gable towards the street, and only a few feet from its neighbors on each side, from which it was separated by huge pine fences. The pavements were wooden, but not inflammable; while the sidewalks, almost entirely of pine plank, were generally raised, and allowing a free circulation of air beneath, and fit to burn like a box of matches.

"The business part of the south side also contained a great number of wooden buildings; and even the brick structures were, as a rule, of flimsy build, with wooden floors, doors, windows, lathing and roofs. Of the west side no account need be made, except to say that from Jefferson to De Koven streets, to the South Branch, every thing was wooden. Worst of all and most disastrous (and insane), the water-works (at the foot of Chicago avenue) had a wooden ceiling to its engine room, and a wooden roof covered with a thin layer of slate.

"The fire of 1871, broke out on Sunday night, October 8th. There had been on the previous evening an extensive conflagration in the west division, involving a heavy loss of property in the lumber

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DINING ROOM OF AUDITORIUM HOTEL.

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district. The firemen had worked upon the blaze for many hours, finally succeeding in subduing it. The department, however, was pretty well exhausted when an alarm was sounded at nine o'clock on the following Sunday evening. The fire was caused by the upsetting of a little lamp, in a stable, in the vicinity of De Koven and Jefferson streets, west of the river, and south of Van Buren street. Whether the lamp was kicked over by a cow belonging to Mrs. O'Leary is a question that has never been satisfactorily settled. The fire first crossed the river at Van Buren street, and soon enveloped the old gas works on Adams street, where the Moody and Sankey Tabernacle afterwards stood, and where stately wholesale houses now tower towards the sky. From that moment the business section of the city was doomed, for the wind blew a perfect gale, and every moment added to the heat and fury of the conflagration, which marched steadily on, devouring granite blocks with the same ease as it destroyed wooden shanties. About one o'clock in the morning it had reached and wiped out the Chamber of Commerce Building; shortly afterwards it had swallowed up the Court-House, whose bell tolled to the last minute. Then in one column, it pursued its furious course eastward, laying Hooley's Opera House, the Times Building, Crosby's fine Opera House and many other noble structures in ashes. Then it moved toward the northeast, and then attacked the wholesale district at the foot of Randolph street, carrying away the Central Depot, the ruins of which are still standing. Then it formed a junction with another branch of the main column after the latter had demolished the Sherman House, the Tremont House and other magnificent buildings in its path. Then there was a general onslaught upon the city's centre from the left column which laid low all the buildings lying west of La Salle street, including the Oriental and the Mercantile buildings, the Union Bank, the Merchants' Insurance Building, where Gen. Sherman had his headquarters, the Western Union Telegraph office, and the solid and magnificent blocks of commercial houses that lined La Salle street in those days. By morning there was not one stone upon another in this great business centre.

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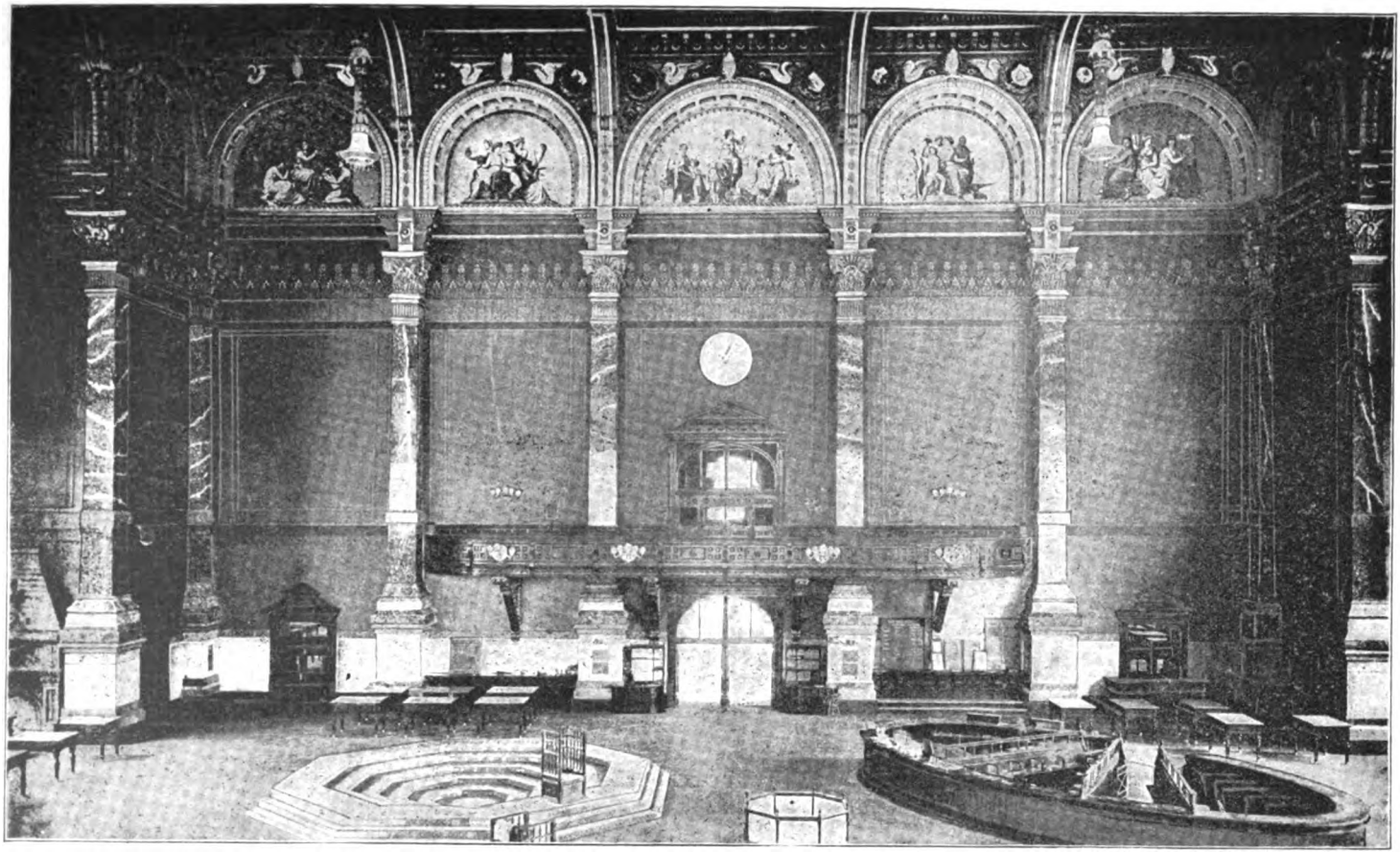
The right column of the fire is described as having started from a point near the intersection of Van Buren street and the river, where some wooden buildings were ignited by brands from the west side. This column had the advantage of a large area of wooden buildings, say Colbert and Chamberlin, 'on which to ration and arm itself for its march of destruction.' It gutted the Michigan Southern Depot and the Grand Pacific Hotel, and destroyed other handsome structures in the vicinity. Passing along the Post Office, the Bigelow House, the Honore Block, McVicker's new Theatre, the Tribune Building, Booksellers' Row, Potter Palmer's store, occupied by Field & Leiter, and all the smaller or less conspicuous structures on the road, it branched off and destroyed the handsome residences and churches on Wabash avenue, and was finally stayed in its southern course at Congress street. The fire crossed over to the north division about half past three in the morning, and among the first buildings to go down was the engine house of the water-works, which, foolishly, had been roofed with pine shingles. The fire was carried here by burning brands which must have traveled a mile and a half in advance of the conflagration. 'This was the system' say Colbert and Chamberlin, 'by which the north side was destroyed: blazing brands and scorching heat sent ahead to kindle many scattering fires, and the grand general conflagration following and finishing up.' The north side was left a mass of blackened ruins by morning. Only at the lake and the northern limits of the city was the fire stayed. The district burned over was bounded on the north by Fullerton avenue, on the west by Halsted street to Chicago avenue and from that point south on Clinton street, on the south by Twelfth street and on the east by Lake Michigan. The total area burned over was nearly three and a third square miles; number of buildings destroyed, 17,450; persons rendered homeless, 98,500; persons killed, about 200; loss, not including the depreciation of real estate or loss of business, estimated at $190,000,000; recovered by insurance, $44,000,000. One year after the fire many of the best business blocks were rebuilt; five years after the fire the city was handsomer and more prosperous

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than ever; ten years after the fire nearly all traces of the calamity had disappeared.

The finding of a large mass of molten iron by workmen excavating for the new Masonic temple in 1890, called attention to the fact that there were a number of interesting collections of relics of the great fire in Chicago. The most interesting and ornamental monument of the fire is the "Relic House," well-known to North Side and Lincoln Park visitors. In 1872, when the "leavings" of the fire could be had for the asking or the trouble of picking them up, a man named Rettig conceived the idea of building a small cottage out of such material as a melted mixture of stone, iron and other metals. The queer structure was built at North Park Avenue and Central street. Ten years ago it was removed to its present site, near the junction of Clark Street and North Park Avenue, (take North Clark Street cable line), Philip Vinter, becoming the proprietor. Four years afterwards the "Relic House" passed into the hands of its present owner, William Lindemann, who has added a refreshment parlor to the saloon, and made quite a rustic spot out of the relic. The only ruin of the '71 fire, which remains standing, is on a large vacant lot between Nos. 907 and 915 North Clark Street, a few doors north of the "Relic House," on the opposite side of the street. The ruin consists of three sections of red brick wall with stone foundations, showing where the chimneys, doors and windows, formerly were. The lot is owned by Hugh H. White, a lawyer, who lives in Evanston. The Chicago Historical Society has a large collection of fine relics, some from the ruins of the society's building, which was then near the corner of Ontario Street and Dearborn Avenue, but most of the relics are donations from Maria G. Carr, Mrs. E. E. Atwater, and various business firms who were burnt out. The Historical Society also has the key to the vault door in the office of the Assistant Treasurer of the United States at Chicago, which was destroyed, together with $1,500,000 in currency, and the books and the vouchers in the office. The key was presented to Henry H. Nash, Cashier. Large oil paintings of Gen. Grant, J. Young Scammon, and Miss Sneed (the

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INTERIOR OF BOARD OF TRADE.

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woman who Napoleon thought, was the most beautiful in the world,) which were saved from the fire, adorn the walls of the society's rooms. Mrs. Carr's collection is a curious one, among the burned, melted, scorched and twisted things, being a bunch of forks, a mass of type, bunch of tacks, pack of cards, a lot of knitting needles, a spool of thread from Field, Leiter & Co.'s dry goods house at Madison and Franklin Streets, hooks and eyes, a package of buttons, three jew's harps, thimbles, marbles, a bundle of melted glass, a piece of glass from Bowen Bros., Lake Street; an old fashioned clay pipe, china doll's head, three crucibles, a door bell, pen-knives, one being fouud under the site of a pulpit; a package of glass beads from Schweitzer & Beer's store, a bundle of screws, a walking cane without head or ferrule, necks of glass bottles from Jasger's place, and a package of slate pencils froin the Western News Co.'s place. In Mrs. Atwater's collection is a lump of black stuff, which was coffee once upon a time, labeled, "Browned too Much," remnants of the stock of a toy house, china dolls and playthings, bundle of hair pins, scissors, rosaries without the crucifix, glass beads, and a jet necklace well preserved, a box of charred biscuits from the ruins of Dr. Rice's church, a lot of stained and plain window glass from various city churches, and a variety of blackened cups and saucers from the ruins of crockery houses.

The city records were burned with the Court-house. No living man could lay claim legally to one foot of the burned district; only the "abstracts of titles" remained, and these were held by private parties. The narrative of the saving of these "abstracts," as given by John G. Shortall, the owner and saver of them, is of intense interest.

He had returned from church and was about to retire when he noticed the reflection of a great fire; he watched it for a short time and, surprised at its magnitude, determined to go. So impressed was he that he took his hat and started, not even waiting to change the house jacket he had on for a coat. He joined with the crowd and hurried to the scene of the conflagration. The fire even then

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was beyond control; the crowd could do little but retreat before it; they were completely awed; the noisy stage was long since passed; they worked in silence; not a sound was heard except the roar of the flame and the crackling of the timbers. Out of curiosity he timed the burning of a house about fifty by seventy-five feet, two stories, with a sort of attic—"a very fine house, one of the best of those days." It was destroyed absolutely in eight minutes. The wind had risen to a gale; the whole air was filled with movable embers and with hundreds—thousands—of larger pieces of burning material that had been wrenched away by the wind, and were being hurled along through space, northwesterly, towards his office, one mile away. The building in which his office was situated had a wooden cornice, wooden casings, and all the front windows had awnings. The thought occurred to him that those awnings would be a likely place for embers to lodge; in that case the building was doomed. He determined to cut them down. Not being able to find the janitor he broke in the door and finally succeeded in cutting them loose, but of what use was the removal of a half dozen awnings when the whole front of the building was covered with them. Only one course was left, and that was to procure a truck and remove his valuables *in toto*. By this time the street was full with streams of people; all sorts of vehicles, trucks, wagons were flying northward before the fire. He engaged truck after truck at their own price, but they never returned. At last by force he obtained a small wagon; this was soon filled, and yet not one-fifth part of the books to be saved had been brought down; at this trying moment a friend sent him a large double team truck; at last, after hours of struggling, they had what they wanted. By this time the fire was very near; the glowing embers fell like hail; the air was fairly filled with fire. The truck was soon loaded by the help of some of his clerks who gathered around him. Then a new difficulty presented itself in the report that General Sheridan and his soldiers were about to blow up the building at the corner diagonally opposite. The driver of the truck concluded he would not stay and be blown up for all the people in

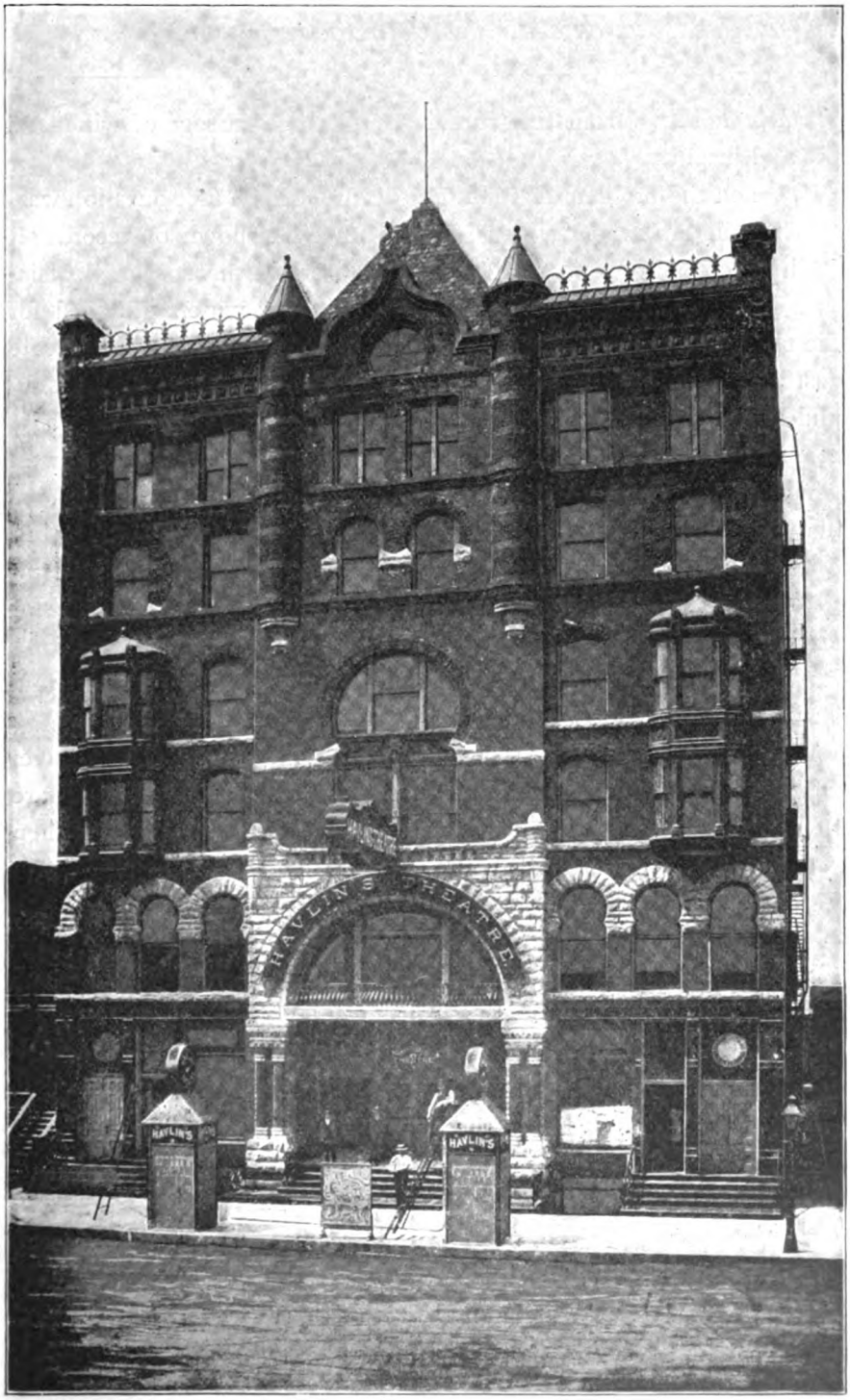
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Chicago. Mr. Shortall did not blame him at all, but gave him his choice between the explosion of the building and the explosion of the revolver he held cocked in his fingers. The driver was a very sensible man; he reconsidered the matter and reversed his decision. When they started the building was on fire. During the last hour of their stay the court-house and all its contents was burned down.

Only once during this terrible ordeal was the judgment of this gentleman at fault; we will give it in his own words: "At one time during these moments (while waiting for the return of the trucks) that seemed as years, a most providential thing occurred, well worth considering. I tried to get into the court-house at its eastern door, with the intention of carrying our books in for safety, never dreaming of the possibility of *its* destruction—a large stone building, isolated as it was. I found that east door locked, and I could not get the key. Had I found it all our books would have shared the fate of the Public Records they duplicated." . . . "Then we started, all being safely stored on the truck. There were two prisoners who had been allowed to escape from the jail (then in the court-house) and I had one of these two on each side of my overladen truck to hold the books on. I formed the apex of the group, with my pistol, cocked still in my pocket, and directed the truckman to drive forward through the rain of fire, so as soon as possible to get to windward of it; and we worked to eastward and southward, through the dense crowds of people who were fleeing towards the north, until we got finally through the fire and brought our precious books down to my house and gratefully stowed them away in safety—in safety if the wind should continue southwest, and not change, of which there was much and natural fear.

"When we arrived at home, my jail-birds, the truckman and I carried the books in, piling them up in the hall library and parlor—got them in any way. There must have been two hundred record volumes—and this I may say, in parenthesis, that it took three trucks to carry those books back again, to where we lodged after the fire, when we built our vault for them in a basement on Wabash Ave.

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HAVLIN'S THEATRE.

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We lost nothing from the truck in that savage passage of wind and fire and insanity."

When the problem of rebuilding came up, the first question was, "Who will lend money where titles cannot be shown of records?" "This agitation was soon quelled by the passage through the legislature of what is called 'The Burnt Record Act,' which provided for the use of abstracts of titles, and other documents (though in private custody) as foundation for the new records, and as proof of ownership under certain careful restrictions. Suits brought under this act had a calendar of their own, and were tried more promptly than other cases. This was the first great step towards perfect relief; the next was the liberal and reasonable course of the 'abstract men.' Luckily for Chicago these 'abstract men' were gentlemen, and instead of taking advantage of the situation they only charged a reasonable price for reasonable service.

"Then came the question whether the city could build, and business credit be re-established by a set of ruined merchants. In answer to this doubt came a cloud of telegrams from Eastern wholesalers and manufacturers reading in this wise: 'We suppose you are burned out. Order from us what goods you want, and pay us when you can.' Many a man who, dry-eyed, had seen his property burn, felt the tears surging up, as he spelled out this message."

A law was passed forbidding the erection of wooden buildings within the city limits; there was some bitter opposition to this; the people thought their burden was heavy enough. But, find one of them to-day who will deny its wisdom. Within six weeks after the fire two hundred and twelve permanent stone and brick buildings were in course of erection in the Southern Division alone. Between Dec. 1, 1871, and Oct. 1, 1872, there were twelve hundred and fifty building permits issued. The total amount spent for building in the first year was $45,000,000, but for all this show of progress the years 1873 to 1878 were years of extreme business depression; some going so far as to call them years of disaster, but this is a great mistake, because years of economical repair and renewal cannot rightly be called

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disastrous. In 1873, the imports were $300,000,000 more than the exports; indicating wild extravagance in the use of foreign luxuries. This was soon checked by the "hard times" and economy took its place. Debts were liquidated and the balance restored, so that in 1878 the exports were $300,000,000 above the imports. The process of contraction was not one of destruction, but of reconstruction. Strange it is, but true, that every check which Chicago has ever met, be it war, pestilence or (money) famine, flood, fire or scandal, has only marked a pause in her progress, a halt to gather strength for a higher leap.

A great and splendid city has risen from the prairie, in full view of all the people, who watch, criticize, compare, suggest. How narrow the man who, familiar with the facts, can give anything but commendation! But with all her greatness she stands among great cities an infant. We have tried to describe "the infant;" allow us to give an idea if possible of her maturity:

Date.	Population.	Per Cent. Increase.
1860	109,000	00
1865	178,000	65
1870	306,000	72
1880	491,000	62
1886	703,000	35
1890	1,098,000	55

If as many people come to Chicago during the next three decades as came during the last three, the business man of 1920 will see about him a population of over 10,000,000 of people. Chicago has erected since 1876, 56,240 buildings at a cost of $255,298,879; *i. e.*, the average each year has been about 4017 buildings, at an average cost of $18,235,634. At this rate, thirty years from now Chicago will have built 120,510 new buildings, at a cost of $547,069,020. But during 1889 alone 7590 buildings were put up at a cost of $31,516,000; and during 1890, 11,608 were put up at a cost of $47,322,100. The average number for the two years was 9598.

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Should this average hold good for thirty years, in 1920 there would be 287,940 new buildings, which will have been erected at a cost of $1,182,571,500.

The great question respecting Chicago and all other places under heaven is, What is the quality of the human life lived in it? It is well to have an abundance of beef, pork, grain, wool and pine boards so long as these are used as a means to an end, and that end is the production and nurture of happy, intelligent, virtuous and robust human beings. This alone is success; all short of this is failure. Cheerful, healthy human life,—that is the wealth of the world; and the extreme of destitution is to have all the rest and not that. The stranger, therefore, looks about in this busy, thriving city, and endeavors to ascertain above all else how it fares there with human nature. In Chicago, as everywhere, human nature is weak and ignorant, temptable and tempted; and in considering the influences to which it is there subjected, we must only ask whether those influences are more or less favorable than elsewhere. We thoroughly believe that Chicago is learning to interpret this great question aright. Those beautiful temples dedicated to religious worship, those excellent schools of every grade, those local benevolences, those ceaseless battlings with vice, that instinct of decoration, that conscientiously conducted press, those libraries and book-stores, all attest that Chicago does not mean to laboriously cherish the shell of the nut of life and throw the kernel away. It is our impression that human nature there is subject to influences as favorable to its health and progress as in any city of the world, and that a family going to reside in Chicago from one of our older cities will be likely to find itself in a better place than that from which it came.

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CORNER OF STATE AND MADISON STREETS.

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PART II.

DESCRIPTION OF THE IMPORTANT BUILDINGS AND POINTS OF INTEREST IN CHICAGO.

THE traveled stranger, to whom the great cities of the world are familiar, however he may become impressed with the manners and customs of our people, or with their methods of doing business, and however loth he may be to admit the justice of our claims to pre-eminence in other respects, must acknowledge that this is the best built city in the universe to-day. For nearly twenty years, or since the great fire of 1871 swept over the business center of the city, and laid it in ruins, architecture in Chicago has been steadily marching forward, until we are enabled in 1891 to point out some of the grandest achievements of the art to be found on the face of the earth.

CHARACTER OF CHICAGO BUILDINGS.—The character of the great buildings erected during recent years in Chicago demonstrates that architects have risen to the plane of the highest constructive knowledge in structures. It is not enough to use a material guaranteed by the maker, but Chicago architects themselves now employ engineers for the special purpose of examining and testing each and every piece and passing their individual opinion upon it in a written report, and only such as is accepted by these engineers is used in the buildings. So essential and necessary is this department of architectural engineering considered, that specialists are sent to the mills which furnish the iron and steel structural shapes and beams for buildings, and the metal is not only tested in the ingot, but the strength of resistance is ascertained for every finished beam. The result of all this gives to Chicago buildings which are not only theoretically safe, but known to absolute certainty to be safe down to

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the last cubic foot of masonry and the last cubic inch of steel. In this respect Chicago is unique, and it is a common remark in Eastern and foreign cities, among those actively engaged in building, that Chicago to-day erects the best-built structures ever known, and with the notable distinction that she does it with the closest economy in material and time. That is to say, that it is a fact that in Chicago



INDIAN MONUMENT (Lincoln Park).

buildings the quality is better, the distribution of material is more skillful and the buildings are naturally more reliable. The buildings have all been constructed fire-proof to a degree surpassing those erected under old methods. Not only are steel and iron used for supports for girders and for joists, but they are covered with fire clay, which is so disposed that air chambers are left next to the iron or steel in every case, making it impossible for the metal to be overheated, even by the hottest fires.

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AUDITORIUM BUILDING.—Among the many magnificent structures of Chicago, the Auditorium is the greatest. It is the most famous building on the American continent. At once a grand opera house, a superb hotel and a mammoth office building, there is not to be found on the face of the earth a pile that will compare with it. It represents the modern idea, as the Coliseum at Rome represented the ancient. It is in construction representative of Chicago as a city, where art, beauty and utility are so strongly defined though nearly always blended on every side. Cost of building, $3,500,000; with ground, $5,000,000.

AUDITORIUM THEATRE.—The theatre of the auditorium building is justly entitled to the distinction of being the best equipped for stage purposes, the handsomest in interior decorative work, the most perfect in acoustics and the most convenient and comfortable for audiences in this or any other country. Architects and artists of international fame have lauded its merits and its beauties. Thousands from foreign shores, who have visited it during the various notable performances which have been given within its walls, have been surprised at its size and magnificence, and gave willing testimony to its superiority over their own famous places of amusement.

CENTRAL MUSIC HALL.—The Central Music Hall Block was erected in 1879 by a stock company, its list of stockholders comprising many of the wealthiest and best known citizens of Chicago. Its object was "to promote religious, educational and musical purposes, the culture of the arts, and to provide for public amusements and entertainments." The leader in this enterprise was its first manager, the late George B. Carpenter, whose experience and success as a manager, well qualified him for the task. The architect chosen for the building was Mr. D. Adler, of the firm of Adler & Sullivan. It has a frontage of 125 feet on State street, and 150 feet on Randolph street, its central location rendering it easily accessible from all parts of the city. It is built of gray cut stone, has a wide and massive entrance of white marble, is six stories in height, and contains, besides the large auditorium from which the building derives its name, a small

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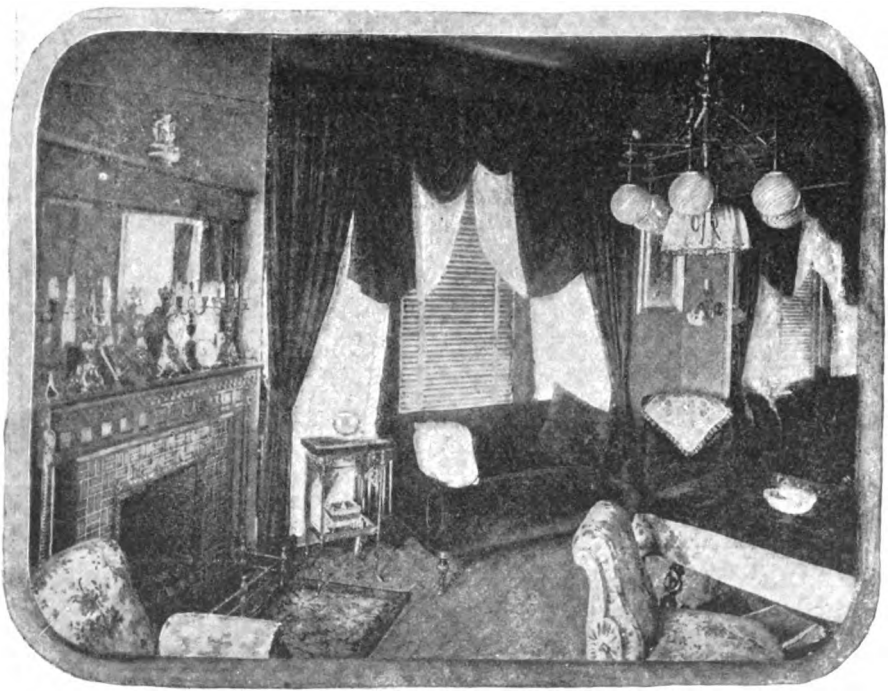


AUDITORIUM HOTEL.

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recital hall, known as Apollo Hall, twelve stores, seventy offices, and a perfectly appointed photograph studio.

CASINO.—Located on Wabash avenue, near Adams street. This is conducted after the manner of the Berlin Panopticon, and is principally an exhibition of wax works. Delightful place to spend an hour. There is a stage performance every afternoon and evening. Lyman B. Glover, business manager. Admission to all parts of the house 25 and 50 cents; children 25 cents.



INTERIOR VIEW (Auditorium Hotel).

AUDITORIUM HOTEL.—Situated on Michigan avenue and Congress street; occupies entire eastern half of the great Auditorium structure. It is under the management of the Auditorium Hotel Company, J. H. Breslin, of New York, president; R. H. Southgate, vice-president and manager. The building which it occupies is the

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grandest on the continent, and was prepared to meet the requirements of a great high-class hotel without regard to labor or expense.

GRAND PACIFIC HOTEL.—Located on La Salle, Jackson and Clark streets. The Jackson street front almost faces the Board of Trade. The Clark street front faces the general post-office. The La Salle street front faces some of the immense office buildings in the Board of Trade center. The main entrances are on La Salle and Clark streets. The ladies' entrance is on Jackson street. This building was scarcely completed in 1871 when the great fire swept it out of existence in a single night, although its construction was almost wholly of iron, stone and glass. It was immediately rebuilt and opened to guests in June, 1873. Although acknowledged to be one of the finest hotels in the world when completed, it has undergone many improvements since then.

PALMER HOUSE.—Located on the southeast corner of State and Monroe streets, in the heart of the city, with a frontage on State street, Monroe street and Wabash avenue. Main entrance on State street; ladies' entrance on Monroe street. The building occupies about one-half of the entire block. It covers an area of 76,550 square feet; is nine stories in height, has 708 rooms and accommodates usually from 1,000 to 2,400 guests. The grand rotunda of the hotel is 64 feet wide, 106 feet long and 36 feet in height. The dining room is one of the most elegant in Chicago. The parlors and waiting rooms are superbly furnished. The entire furnishings and fittings of the house are of the first order.

PERMANENT ART BUILDING.—Now in course of construction, on the Lake Front, site of the old Inter-State Exposition Building, main entrance to face Adams street. Within easy walking distance of all railroad depots, street car terminals, hotels, etc., in the heart of the business center. This magnificent structure takes the place of the present Art Institute, Michigan avenue and Van Buren street, which passes into the possession of the Chicago Club. The design of the new institute was prepared by Architects Shepley, Rutan and Coolidge, and was subjected to changes at the hands of the Commit-

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tee on Buildings. The structure has a frontage of 320 feet on Michigan avenue; the main depth is 175 feet, with projections making an arc 208 feet in depth. The plan is that of a parallelogram. It consists of two galleries, the first being devoted to plaster casts, sculptures, busts, models, etc.; the second to pictures, being lighted by sky-lights from above.

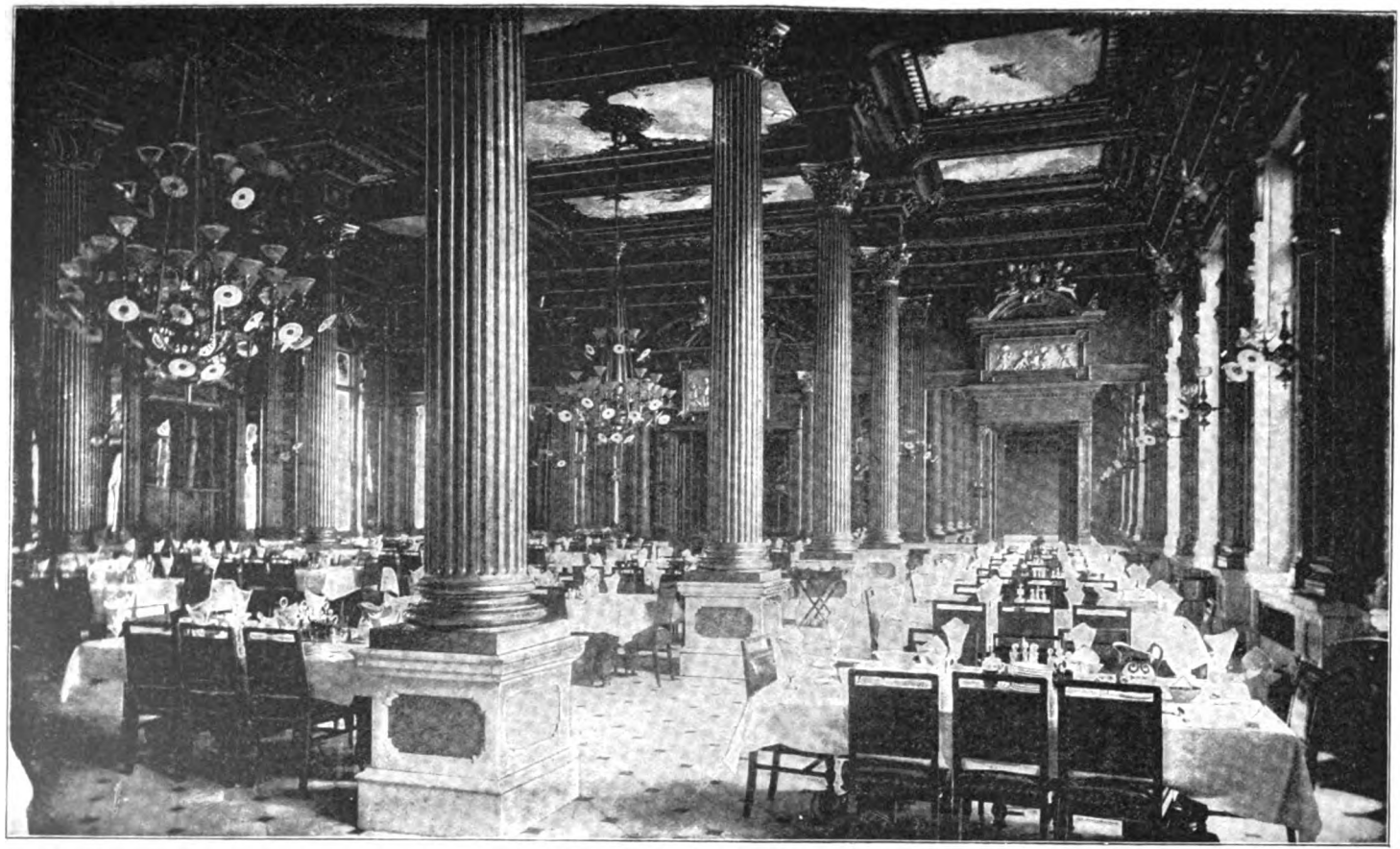
ART COLLECTIONS.—Private art collections in Chicago are very numerous and very extensive. This is strikingly evident at each recurring exhibit of loaned pictures at the Art Institute or elsewhere. The annual exhibits at the Inter-State Exposition, now a thing of the past, by reason of the changes necessarily pending the World's Columbian Exposition, have grown from year to year, until they promise to rank among the best in the country. Steps have been taken to erect a permanent Art Hall on the Lake Front, in which these annual exhibitions will be continued. This building will be erected for the Columbian Exposition, but will be constructed in such a manner as to be acceptable to the city as a permanent building after the exposition closes.

GRAND OPERA HOUSE.—Centrally located on the east side of Clark, between Randolph and Washington streets, opposite the Courthouse, close to all the leading hotels and convenient to railroad depots and street-car terminals. Harry L. Hamlin, manager.

HAVELIN'S THEATRE.—Located on the west side of Wabash Avenue, between Eighteenth and Twentieth streets. John A. Havelin, lessee; J. S. Hutton, manager. This was originally Baker's Theatre. It is a popular resort and deservedly so. The theatre building is quite an ornament to the section of the city in which it is located; and the theatre is conducted as a high-class place of amusement. Seating capacity, 2,000; stage, 50 x 65; proscenium opening, 36, to loft, 67. The building is fire-proof and was constructed at a cost of $300,000.

BOARD OF TRADE BUILDING.—Situated at the foot of La Salle, on Jackson street, between Sherman street and Pacific avenue, in the heart of the business center, and only a short walk from the

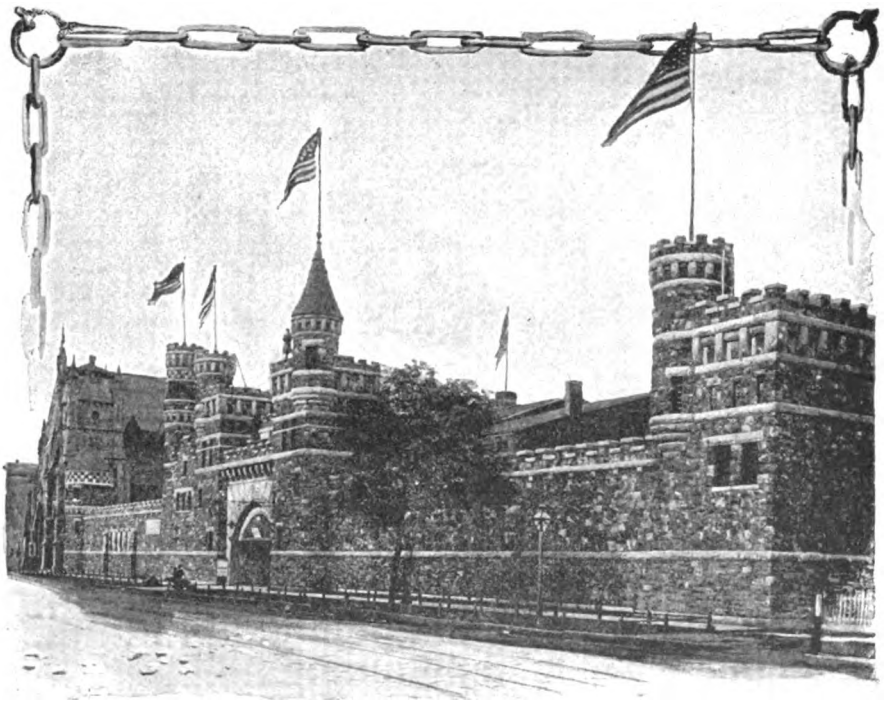
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DINING ROOM OF THE PALMER HOUSE.

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great hotels, railroad depots and street car terminals. The immense size and architectural beauty of the structure will attract the stranger's attention. It covers an area of 200 by 174 feet; and is built of gray granite. The beautiful front is surmounted by a tower which tapers to a pinnacle 322 feet above the pavement. On the top of this tower is the largest weather-vane in the world, a lake schooner 15



LIBBY PRISON MUSEUM.

feet in length, with rigging in proportion. From the street below it does not appear to be a fifth of this size.

LIBBY PRISON MUSEUM.—Located on Wabash Ave., between Fourteenth and Sixteenth streets. One of the principal permanent attractions of the city. The original Libby prison (transported from Richmond, Va., and put up, brick after brick, just as it stood during the War of the Rebellion, when used as a prison for Union soldiers)

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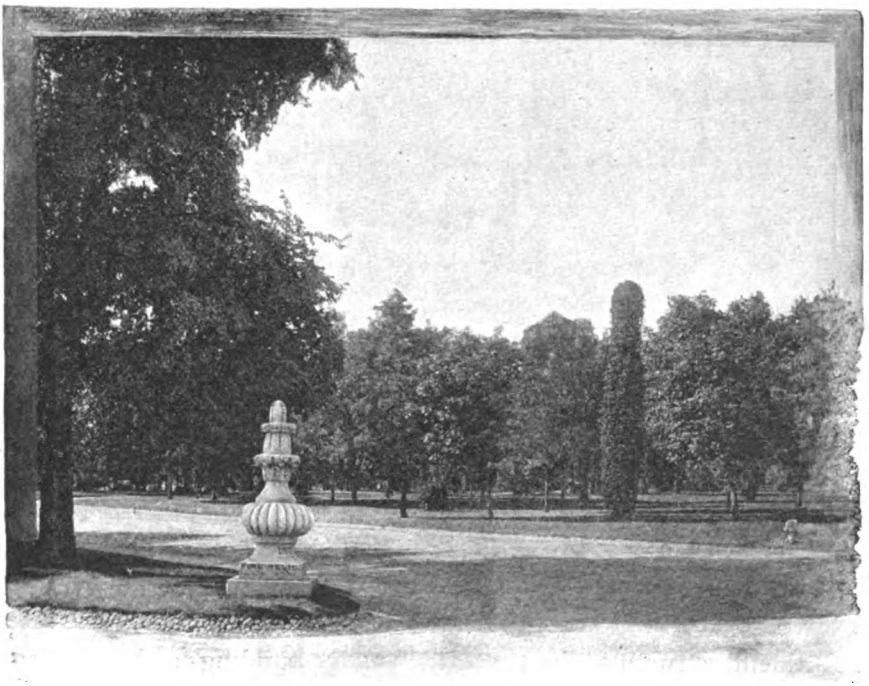
is enclosed within massive walls, built after the manner of the middle ages (see illustration). Among the attractions offered in Libby Prison are the following: Portraits in oil of all the leading Northern and Southern generals and statesmen; all kinds of firearms used in America, from colonial times to the present period; the finest collection of shot and shell used in American warfare; the original first dispatches of war from Generals McClellan, Grant, Hooker, Sherman, etc.; the original acceptance of the command of the Confederate Army by Generals Lee and Stonewall Jackson; original portraits of Abraham Lincoln and Mrs. Lincoln, with relics and mementos; the stove, goose and shears used by Andrew Johnson when working as a tailor in Tennessee; the original will made by John Brown an hour before his execution; the very rare curiosity of two bullets that met in mid-air in battle at Petersburg; the finest collection of historic chairs in America; the original photographs of scenes in Sherman's march from Atlanta to the sea; the original commission of Jeff. Davis to Congress in 1845; also his commission in the war with Mexico; the wheel of Commodore Perry's flag-ship, "Powhatan," that opened the ports of Japan to the world; the original Arctic clothing used in the Greely relief expedition. Admission, 50 cents; children half-price; open day and evening.

CITY HALL is one of the most central, as well as one of the most prominent, structures in the city. This building and the Cook County Court-house, adjoining, stand upon the site of the first Court-house erected in Chicago, and also upon the site of the Court-house destroyed in the great fire of 1871. The old Court-house stood in the center of the block, and was surrounded by a green lawn in the nature of a park. It was a handsome building as buildings went in those days, and had a tower in which there was a clock and a great bell. This bell rang out in doleful peals on the fatal Sunday night in October, 1871, almost up to the moment the tower became enveloped in flames. After the fire the bruised and battered bell was taken from the ruins by an enterprising firm and worked up into souvenirs.

COOK COUNTY COURT-HOUSE.—Occupies the entire east half

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of the block bounded by Washington, Dearborn, La Salle and Clark Sts., in the center of the business district of the South Side, the west half being occupied by the City Hall. This magnificent pile was erected in 1876–77 at a cost of about $3,000,000, and is one of the



RELIC OF OLD COURT-HOUSE AFTER THE FIRE.

handsomest public buildings in the county. It is at present four stories in height, and two additional stories are to be added during the present year at a cost of $275,000. In this building are located the County, Probate and various Circuit and Superior courts, the Law Library, and all the County offices, except that of the State's (or prosecuting) attorney, which is located in the Criminal Court building, North Side.

FIRST NATIONAL BANK.—At the date of incorporation, the First National Bank had a capital of $100,000. Its officers

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THE TEMPLE.

Building of the Woman's Christian Temperance Publishing House.

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were: president; E. Aiken; cashier, E. E. Braisted. It then stood number 8 in the order of National Banks. The capital of the bank was soon increased to $1,000,000. In 1867, President Aiken died, and was succeeded by Samuel M. Nickerson, who has held the office ever since. In 1868 Lyman J. Gage was appointed cashier. The fire of 1871 destroyed the bank's building, which stood at the southwest corner of State and Washington streets. This building was at once rebuilt, and was occupied until the bank moved into its present magnificent structure, which was erected especially for its accommodation, and with a view to the convenient transaction of its immense business.

CHAMBER OF COMMERCE BUILDING.—This structure occupies the site of the old Chamber of Commerce which was erected immediately after the fire and which was occupied by the Board of Trade until the great commercial edifice at the foot of the street was completed. The new Chamber of Commerce building is in many respects the finest commercial structure in the world and certainly one of the grandest office buildings in the United States. The property upon which it stands cost $650,000, and the building itself has cost Messrs. Hannah, Lay & Company, the owners, over $1,000,000.

TACOMA BUILDING—towering above its surroundings to the dizzy height of twelve clear stories. This was among the first of the modern sky-scrapers erected in Chicago. The corner which it occupies was for years covered by a tumble-down brick building put up in haste after the fire. It was wiped out to make room for the "Tacoma." From the twelfth story we are able to obtain a splendid bird's-eye view of the city, and we can see far out on Lake Michigan, if the smoke isn't too dense. This is a colony of offices.

TEMPERANCE TEMPLE.—"The Temple," is one of the sights of Chicago, and the equal of any one of the many magnificent structures that now adorn the city. In style it is a combination of the old Gothic and the more modern French. For the first two stories the material used is gray granite with a dash of pink running through it. Above that is used pressed brick and terra cotta. This

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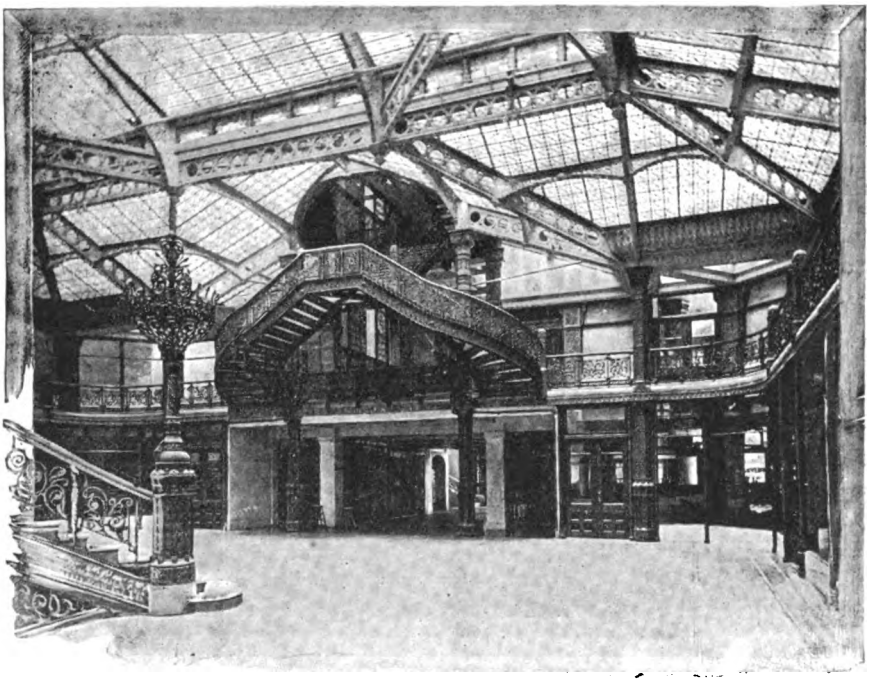
harmonizes nicely with the granite, taking on a tone and color the same, with the exception that it will be a darker pink. The frontage on La Salle street is 190 feet, while on Monroe it is 90 feet. In shape the temple is somewhat novel and might be likened to the letter H. It consists of two immense wings united by a middle portion or vinculum. On La Salle street is a court seventy feet long and thirty feet wide, and on Monroe street a similar one of the same length and eighteen feet deep. Facing the grand entrance and arranged in a semi-circle are eight great elevators, and from the front court rise two grand stairways leading clear to the top of the building. A central hall extends north and south on each floor and a transverse one also extends into the wings. The lower courts and halls are resplendent with marble mosaic paving, while plain marble is used in the upper halls. In height the temple is a "sky-scraper," extending thirteen stories toward the heavens.

BRIDGES.—The Chicago river being navigable for lake vessels, and intersecting the heart of the city, a large number of bridges have been required. No less than forty-five now span this small stream. Nearly all are swinging bridges, and many of them are operated by steam. Steel construction has been employed in the bridges most recently erected. Among these, the Adams street bridge is a notable structure. It is a four-track bridge, 259 feet long on center truss, and 57 feet in width. This bridge is two feet three inches lower at the east end than at the west end, and, at the same time is reversible, the turn-table track being set on a grade of one in 115. Some doubts were expressed as to its feasibility when the plan was proposed, but the city engineers say that no bridge in the city works better than this one. The *Rush street draw* is one of the longest in the world. The Lake, Wells and Jackson street bridges are handsome structures. The present bridge at Madison street is to be moved to Washington street, and one of the finest bridges in the city erected in its place.

VIADUCTS.—In few instances do railroads enter the city above or below the street level. Grade-crossings are the rule. Engineers

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have long sought to remedy this state of affairs, which will probably be accomplished in time; but, meanwhile, some relief is being provided at the most dangerous crossings by the erection of viaducts. There are thirty-five of these structures in the city, the longest and finest of which is on Twelfth street, extending from Clark street to Wabash avenue, crossing the tracks of the Atchison, Topeka and Santa Fe Railroad Company, and costing $209,736.



INTERIOR OF PRESENT ROOKERY BUILDING.

"ROOKERY."—After the great fire of 1871 the municipality erected for temporary use a two-story brick building on the half block bounded by La Salle, Adams and Quincy streets, and the alley between La Salle and Clark streets and called it the City Hall. It was also occupied by the Courts. The structure was put up in great haste and without regard to architectural beauty. It is stated that pigeons used to flock to the building, induced thither by a glass roof

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THE ROOKERY BUILDING. 55

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which surmounted a disused water tank which occupied the center of the structure and by the oats which fell from the feed-bags which the fire marshals used for their horses on the Quincy street side. The story goes that one day a gentleman marched into Mayor Medill's office to complain of the pigeon nuisance and spoke of the building as a "rookery." Whether this was the real origin of the term or not, the newspaper reporters got into the habit of calling the building the "rookery," and it was generally understood that they alluded to the dilapidated condition of the structure, which from the day it was finished began to fall to pieces. At any rate the name clung to it as long as the building stood, and when the present magnificent structure took its place its owners decided to retain it.

LAKE AND RIVER FRONTAGE.—The city has a frontage on Lake Michigan of twenty-two miles and a river frontage of about fifty-eight miles, twenty-two and one-half miles of which are navigable.

LAKES AND RIVERS.—There are three lakes within the present city limits containing an area of 4,095.6 acres, as follows: Calumet Lake 3,122 acres, Hyde Lake 330.8 acres, the portion of Wolf Lake lying within the city limits 642.8 acres. Of these Calumet and Wolf are navigable. There are two rivers within the corporate limits; the Chicago river, with north and south branches, which divide the city into districts known, respectively, as the North, South and West "Divisions" or "Sides"—and the Calumet river, with Big and Little Calumet rivers, which penetrate the extreme southern part of the city.

MASONIC TEMPLE.—This most marvellous structure, taken as a whole, is in the center of the business district. The idea of a grand Masonic temple in Chicago had been encouraged by Western Masons for the last twenty years. Numerous agitations of the project were started but fell through, partly for want of some one who was willing to take the responsibility, and partly because the money could not be raised. For, though the Masons as individuals are wealthy, the lodges are kept poor by their liberal charities and funeral expenses. In 1873 Norman T. Gassette, then eminent commander of the Apollo Commandery, renewed the agitation of this

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subject, in connection with a special effort to secure for the site of such a temple the lot at the northeast corner of Dearborn and Monroe streets, on which the Stock Exchange now stands. But there was no adhesiveness among the Masons whom he was able to interest in the scheme, and the old trouble of a lack of money killed it. The last and successful effort in behalf of this enterprise originated in December, 1889, when Gil W. Barnard and Dr. J. B. Fatrich, of



LINCOLN STATUE (Lincoln Park).

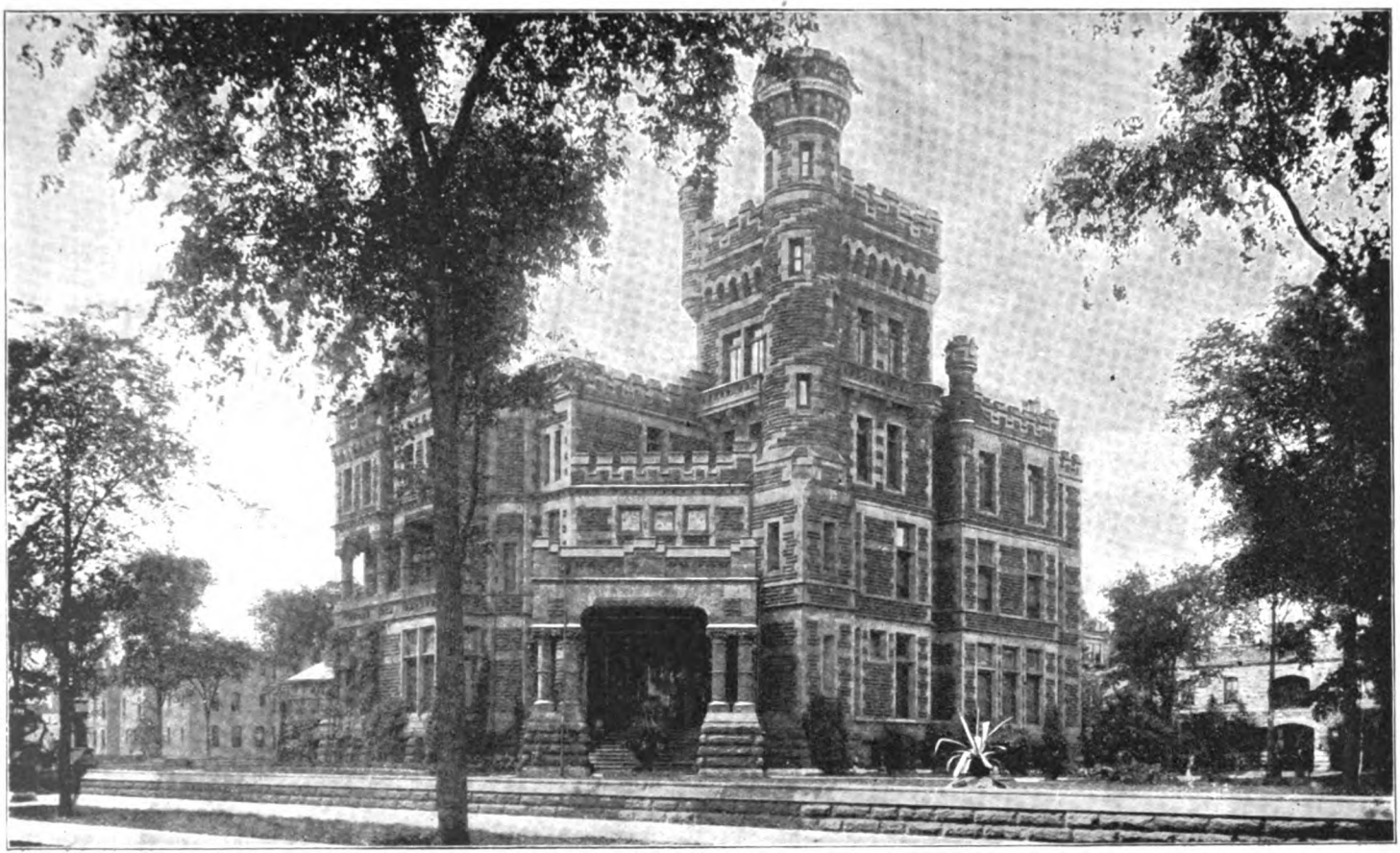
Van Rensselaer Lodge, issued a call for a meeting of prominent Masons to consider this subject. This call had several other names appended to it, among which was that of Mr. Gassette, and was addressed to sixty Masons. The meeting took place in Mr. Barnard's office in the same month. The result was that General John Corson Smith appointed a committee of ten, with Mr. Gassette as chairman, to select a location for a Masonic Temple, to devise ways

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and means for erecting the building and to report to a meeting of the craft to be held subsequently. The committee addressed itself to the task with great energy, and about a month later a meeting of 120 members of the craft was called at the Oriental Consistory preceptory to hear their report and consider their recommendations. The committee in the meanwhile had had several sites offered them, but had definitely selected the lots at the northeast corner of State and Randolph streets. The report was heard and approved in many particulars, and the committee was discharged. Immediately thereafter, however, the meeting appointed Norman T. Gassette, Amos Grannis and E. R. Bliss a committee to carry out the plan that had been proposed. There was no particular organization and everything devolved on this committee, with no instructions but to "go ahead." The committee took the meeting at its word and went ahead in the most approved fashion. In less than a month, without any organization or corporate authority whatever, it had purchased the site for $1,100.000 and opened books for stock. On April 4th, the Secretary of State issued articles of incorporation to the Masonic Fraternity Temple Association, with Norman T. Gassette, Amos Grannis, E. R. Bliss, John Buehler and C. H. Blakely as directors. The officers subsequently elected were: Norman T. Gassette, president; Amos Grannis, vice-president; E. R. Bliss, secretary; and Warren G. Purdy, treasurer. The company was capitalized at $2,000,000, and the price of stock was fixed at $100 per share. The building is pronounced to be one of the finest in the world.

POTTER PALMER.—While the citizens' meetings and the city council meetings were passing resolutions and enacting meaningless ordinances, Mr. Palmer was developing a plan for the widening of State street, in his own mind. This plan was a simple one. He carried it out. How? By presenting the city of Chicago with the frontage, taken from his own lots, necessary to give this section of State street a uniform width. He did it modestly. It was done so quickly and so quietly that the citizens and the city council were taken by surprise. There was no further business, so far as State

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RESIDENCE OF POTTER PALMER.

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street was concerned, before them, and they adjourned. The sacrifice made by Mr. Palmer was a great one. Every foot of the property he so generously gave away for the public good represented a large sum of money. Nobody has ever heard him speak of it, however. Only old citizens remember it now. Potter Palmer's generosity made State street what it is to-day, for if it had not been widened the retail business would have long since sought another avenue not far away. And while I am on this subject, I want to say to you, not exactly what I think about Potter Palmer, but what all Chicagoans who know anything about this man *feel*. To Potter Palmer, more, perhaps, than to any living man, is due the present greatness of Chicago. His influence has always been a mighty, if a silent force, in the development of this city. He has never lost faith in her future. Time and again his counsel, his judgment and his purse have saved the credit of the community abroad. When the reaction which followed the civil war set in, when values became demoralized, when the shrinkage in prices destroyed the capital of some of the strongest houses in existence here, Potter Palmer stood as firm as a rock between our merchants and bankruptcy, and compelled their creditors to make fair and honorable terms. After the great fire, though one of the heaviest sufferers, he was one of the first to step into the debris and proclaim that Chicago should not only be rebuilt, but should arise from its ashes greater than ever. The story of the rebuilding of the Palmer House, which we will see farther down the street, if properly told, would read like a fairy tale. By day and night, under the blaze of the sun and in the glare of torches and calcium lights, the work never ceased until the magnificent structure was completed. Practically penniless, then, and for years afterward, Potter Palmer commanded unlimited credit at home and abroad. The man's integrity was his capital, and it secured for him the means whereby he has been enabled, during the past twenty years, not only to retrieve the fortune he had lost in a single night, but to build up a new and a greater one. The great retail houses which we see on either side

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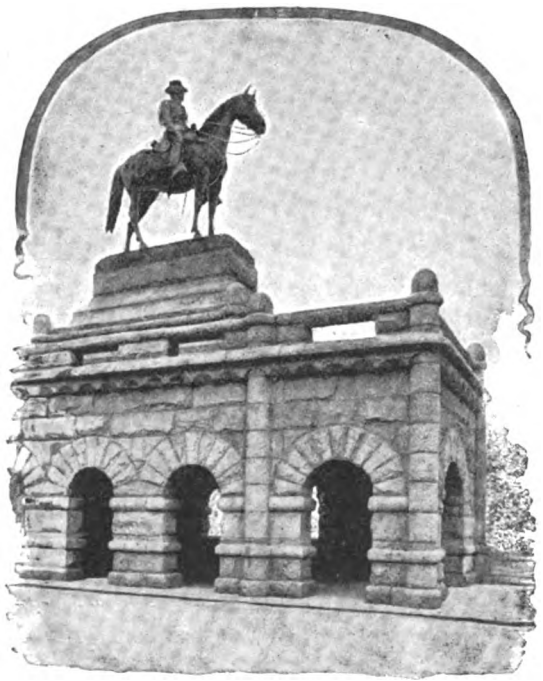
of the street, as far as the eye can reach, have all grown up during a remarkably brief period. The oldest of them, in comparison with European houses are merely in their infancy. We will have to stand close to the edge of the sidewalk or we will be carried along by the crowd. I don't think you ever saw so many well-dressed people anywhere. Most of them are ladies. There is a good deal of what the world calls style to be seen along here at all hours of the day.

MARSHALL FIELD & CO.—You have heard of Field's before. Everybody in this country has, and, in commercial circles at least, the house is known throughout the civilized world. It is not only the greatest dry goods establishment in this country, but greater than any in existence abroad. This is the retail store; the wholesale house we will see later on. Perhaps you remember that the style of the firm only a few years ago was Field, Leiter & Co. Mr. Leiter retired, and Mr. Field remained, forming a new partnership, and great as the house was when the dissolution took place—a dissolution, by the way, which surprised and startled the country at the time—it is three times as great to-day. The American merchant, who in point of wealth and vastness of business dealings must be ranked first among "the rich by honest brains and industry," is a man whose name is unfamiliar to most readers. His home is not in New York but in Chicago, and even there he is personally little known in comparison with the prominence to which his position in the business and social world entitles him. He is the head of the great house of Marshall Field & Co., general merchants.

GRANT STATUE, LINCOLN PARK.—Situated on the North Shore Drive, Lincoln Park. A magnificent monument to the memory of the great general of the Civil War. The sculptor was Louis T. Rebisso, an exile from his native land for the part he took in striving to establish a republic in Italy. Whilst the signs of public mourning were still visible in Chicago there was a spontaneous movement for the erection of a monument to General Grant. To suggest was to

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act; to act was to execute. Within a year the requisite fund was subscribed, and an award of $200 made to Rebisso of Cincinnati for presenting the most acceptable design. The result is before the public in the unique equestrian group unveiled amid the impressive ceremonies of October 7, 1891. There have been many attempts in sculpture to image General Grant, but we can recall none more suc-



GRANT STATUE (Lincoln Park).

cessful than Mr. Rebisso's. The physical proportions of the majestic figure are as faultless as the facial expression. Grant was about five feet seven inches high, with a well-knit frame, the image of conscious strength and matchless endurance. He had a square and spacious forehead, a strong lower jaw and firm-set lips. His hair and whiskers were always worn short. His habitual expression indicated repose and firmness, without assumption or severity. No more im-

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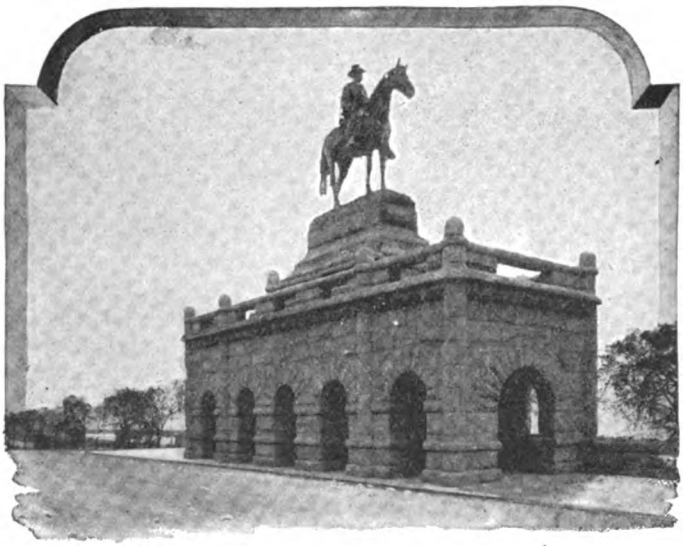


RESIDENCE OF MR. C. V. FARWELL.

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posing and successful specimen of monumental art graces any city in the United States.

HAYMARKET MASSACRE.—Night of May 4, 1886. The title is a misnomer. The tragedy recalled to mind by the name in reality occurred on Desplaines St., between the Haymarket and the alley which runs east from Desplaines St., south of Crane Brothers' manufacturing establishment. The wagon from which the anarchist speakers addressed the mob stood directly in front of Crane Brothers'



GRANT STATUE (Lincoln Park).

steps, about eight feet north of this alley. The bomb was thrown from the mouth of the alley and exploded between the second and third companies of policemen, as the six companies were halting close to the wagon. The bomb thrower unquestionably made his escape through the alley, which connects with another opening on Randolph St., east of the Haymarket. Seven policemen were killed outright, or died shortly afterward of their wounds, as a result of the explosion. A large number of policemen were badly and permanently injured. How many of those in the mob were killed or died

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afterward of the injuries they received in the police fusillade which followed the explosion has never been known, for their bodies were quietly buried and their wounds concealed by their friends whenever possible. The arrest of the leaders, Fielden, Spies, Engel, Lingg, Neebe, Schwab, Fischer, the searching of the *Arbeiter Zeitung* office, on the east side of Fifth Ave., near Washington street, and the dis-



POLICEMAN'S MONUMENT (Haymarket Square).

covery there of a vast supply of dynamite, arms, bombs and infernal machines; the discovery of bombs in different parts of the city, under sidewalks, in lumber yards and at the homes of the anarchists; the sensational surrender of Parsons, who had taken flight on the night of the massacre; the long trial, the speeches, the sentence, the appeal; the refusal of the Supreme Court of the United States to interfere; the efforts made to have the death sentence commuted; the day of execution, the 11th of November, 1887; the shocking

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suicide of the "tiger anarchist," Lingg, in his cell at the jail; the hanging of Parsons, Spies, Engel and Fischer, the commutation of the death sentences of Fielden and Schwab to life imprisonment, all contributed toward the popular excitement which followed the fatal 4th of May and continued until the gallows and the prison had performed the parts assigned them by the law. The executed anarchists are buried at Waldheim Cemetery. The cell in which Lingg committed suicide is directly in front of the "cage" in the county jail. The other anarchists occupied cells in the same row. The police monument at the intersection of Randolph and Desplaines Streets, (Haymarket Square) was erected by the citizens of Chicago in honor of the brave officers who risked or sacrificed their lives in defense of the law, and in commemoration of the death of anarchy in this city.

HAYMARKET SQUARE.—That portion of West Randolph street between Desplaines and Halsted streets, West Side. Near the east end of the square for many years stood the West Side Market House, a part of which was occupied as a police station. The square is now entirely open, the police monument being the only obstruction in the broad thoroughfare. To the north of the monument, on Desplaines street, the bomb was thrown on the night of May 4, 1886.

J. V. FARWELL COMPANY.—The great dry goods house of J. V. Farwell & Co., one of the largest in the world, and doing a business of over $40,000,000 per annum, was incorporated as a stock company on December 13, 1890; the board of directors are: C. B. Farwell, J. K. Harmon, J. V. Farwell, Jr., J. T. Chumasero, F. P. Potter, J. E. Downs and S. Farwell. The officers are: C. B. Farwell, president; J. K. Harmon, vice-president; J. V. Farwell, Jr., treasurer; J. T. Chumasero, secretary.

LOGAN STATUE.—To be erected to the memory of the late General and Senator, John A. Logan. Soon after the death of Gen. Logan, in 1887, the Illinois Legislature passed an act appropriating $50,000 for a monument of John A. Logan and for the appointment of commissioners therefor. The monument was to be erected "at such point in the City of Chicago or elsewhere in the State of Illinois

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HAYMARKET SQUARE—POINT OF ANARCHIST RIOT, MAY, 1886.

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as may be selected by his widow," and the commissioners were authorized and empowered to receive proposals and to contract for the completion of such monument and to receive subscriptions therefor. It was further provided, that if the place selected for the monument should be a public park, the commissioners in charge of such park should be "authorized, empowered, and directed to place the



THE LAFAYETTE STATUE.

monument upon a site so selected by said widow, and to provide that such monument shall be made the permanent resting place of the remains of said John A. Logan and of his widow after her death. When the bill was passed in 1887 it was the intention to erect the monument some place in the South Parks. The commissioners, or a majority of them, expressed an intention to erect the pedestal, and it was proposed to enlarge the appropriation for the monument by

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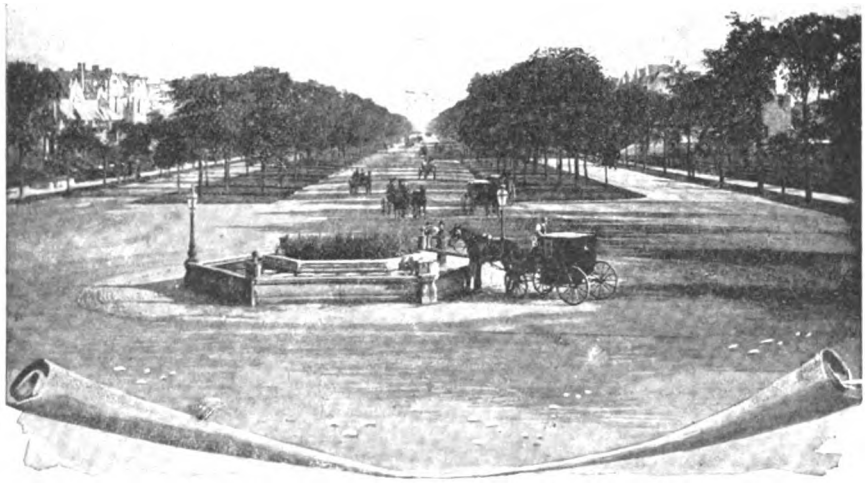
popular subscription; by subscription among the veteran soldiers and among the friends and admirers of the dead soldier-statesman. But, as time passed on, there were no subscriptions from any source, and the promoters of the project came to the conclusion that the $50,000 appropriated by the State would be the only available fund.

MICHIGAN AVENUE.—Formerly a residence street along the Lake Park, has changed materially within a few years. It is now Michigan Boulevard. It will probably become the great hotel avenue of the city. At present some of the grandest structures in Chicago are located along its west side. At Adams street is the Brunswick, and on the opposite corner is the Pullman building, which is more or less of a hotel. On the northeast corner of Jackson street is located the Argyle apartment building, which is really a large family hotel. North of it, on the ground owned by the Jennings estate, and occupied by Leroy Payne's stables, there will be a hotel. On the southwest corner is the Leland, and then the Richelieu. Next comes the Beaurivage, which has been remodeled into a hotel by the owner, L. J. McCormick, who will call it the Victoria. These three hotels occupy the entire block between Jackson and Van Buren streets. At the northeast corner of Congress street is the greatest of all, the Auditorium. Within three or four years the Auditorium Hotel Company will acquire possession of the Studebaker building, which adjoins it on the north, and which will be re-arranged so as to be suitable for hotel purposes. Between Harrison and Twelfth streets there are several large apartment buildings which answer the same purpose as family hotels. At Park Row and Twelfth street is the site selected for the new hotel, which will rival the Auditorium. The Batchelder interests will build at Twenty-second street, and at Twenty-third street the magnificent Hotel Metropole is being builded. There will be at the southeast corner of Thirty-fifth street a large apartment building. These different enterprises are gradually changing Michigan aveuue from a thoroughfare of fine residences to a semi-business street which has no parallel in Chicago.

GRAND BOULEVARD.—This is one of the fashionable drives

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of the South Side. Commencing at the southern extremity, where it joins Washington Park, we will walk up. Among the handsome residences we pass to the right and left are those of Judge H. M. Shepard, Mr. Charles H. Aldrich, Brice Worley, John W. Conley, Mark Webster, William W. Peck, H. E. Henderson, Patrick McManus, S. J. Gorman, Norman T. Gassette, J. H. Campbell, S. P. Parmly, E. Frankenthal, J. McMahon, Judge Gwyne Garnett, John



GRAND BOULEVARD.

F. Finerty, George E. Cole, and, as the political calls say, "many others." I have not asked you to go through the south parks with me, because you have all the information I can give you regarding those beautiful places in your possession already. I will let you take the parks in yourself later in the evening, and we will wind up our day's trip now by walking west on Thirty-ninth street, and north on

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MICHIGAN AVENUE BOULEVARD.

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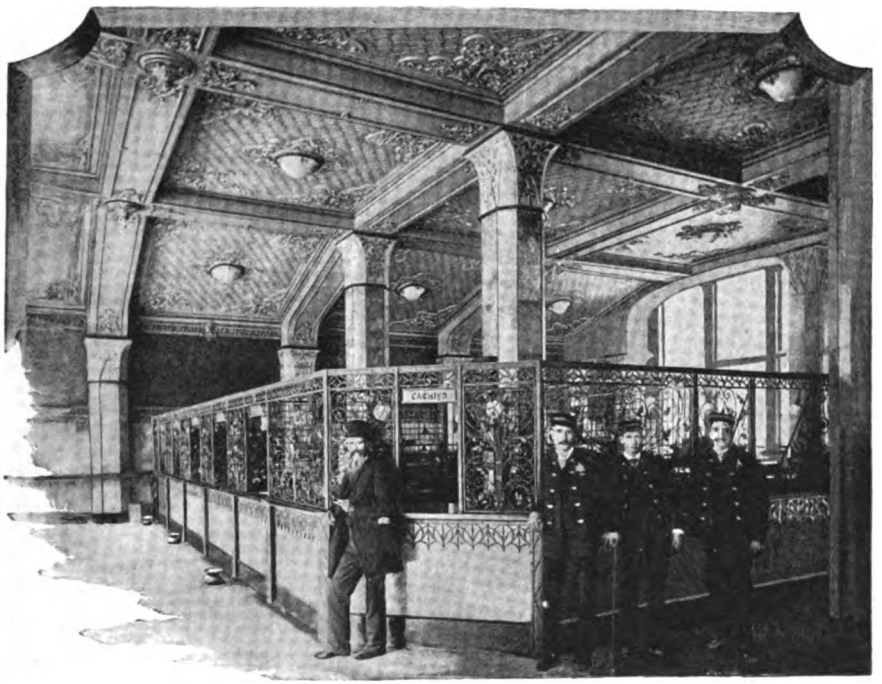
Michigan boulevard. All of the streets running north and south and east and west in this neighborhood are interesting to the visitor, for they are beautifully built up and inhabited by people of means and culture. We can only notice them casually as we pass, however. From Thirty-ninth street, north to Twenty-second street, the east and west streets, with one or two exceptions, are considered desirable residence avenues. Especially is this the case with Thirty-third, Thirty-seventh and Thirty-ninth streets. The latter is a boulevard connecting Grand and Michigan boulevards. Passing west on Thirty-ninth street, we admire the cheerful aspect of the houses and find ourselves on

MICHIGAN BOULEVARD.—Michigan avenue is the popular name; but the street is a boulevard and under the control of the park commissioners. Prairie, Calumet, Lake, Ellis, Grand, the Lake Shore Drive or Ashland,—Michigan is the finest of them all. What a magnificent stretch of perfect roadway! Stately and elegant are the residences of the boulevard, with their handsome lawns and their wide-spreading shade trees, rising on either side until the street narrows to a beautiful country lane a mile to the north! The roadway is as level as the top of a billiard table. Here are some of the finest mansions in the city,—mansions of the new and golden epoch in Chicago's history.

NEW BUILDING OF CHICAGO HERALD.—There is probably not another building devoted to the publication of a newspaper in the world equalling it in magnificence, and certainly there is none other in which so much attention has been given to completeness of detail. On entering the imposing counting-room, the visitor will at once notice the fine Italian stone mosaic with which the floor is hand inlaid, the counter of black Belgian marble, surmounted with black iron, wrought in graceful designs, and the sixteen columns of genuine Sienna marble; also the Italian marble wainscoting. They will also be interested in the working of the automatic tubes, which convey advertising matter to the composing-room and news matter to the editorial floor. Passing four long distance telephones, entrance is had

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to the visitor's gallery, overlooking ten Titanic presses. Next in point of interest is the composing-room, to which the visitor ascends in either of the two great elevators, framed in hand-wrought iron, and which travel up a shaft walled from top to bottom with the finest Italian marble. The walls of the composing-room are white enameled, and it is finished throughout in marble, iron and oak. Even



CHICAGO HERALD OFFICE.

the type stands are of iron, with the monogram of *The Herald* wrought in gold in each, and there are cases for 180 men on straight composition, to say nothing of those employed on advertising copy. Electric calls at each case connect with the copy-box, in the front of which is a perforated peg rack where are assorted slugs, numbered on both sides for every compositor, and by which the copy cutter tells at a glance what and how many men are working on "time" copy.

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An aerial railway takes advertising copy from the copy-box to the "Ad" department, and the proof from thence to the proof-readers. Electric call speaking tubes connect the principal departments of the building. The foreman's office is on an elevated platform, from which he can survey his entire force. Every compositor has a clothes locker, and the marble closets are unsurpassed in elegance by those of any hotel. Filtered ice-water, with a solid silver, gold-lined drinking cup, a restaurant finished in marble and oak, and provided with reading tables and library, are other provisions for the compositors. Four hundred electric lights illuminate this department, adjoining which is the stereotyping-room with its two-ton metal-pot, improved mailing machine, matrix drying and matrix trimming machines. A Turkish bath and marble-walled toilet-room is one of the luxuries afforded to the workers in this room.

ASHLAND BLOCK.—Located on the northeast corner of Clark and Randolph streets. Planned by Architect D. H. Burnham. Property leased from A. G. Alexander, of Louisville, Kentucky, by R. A. Waller, of this city, and L. Broadhead, of Kentucky, for a term of years. This building is sixteen stories high, with a frontage on Clark street of 140 feet and 80 feet on Randolph street. The exterior is classical. The windows of the lower stories are recessed and end in an arch at the third story. The principal entrance is from Clark street and is twenty-one feet wide. This extends to a height of two and a half stories and is finished in terra cotta of a delicate design. The first story has eight stores on the Clark street side and three on Randolph street. The second floor contains several spacious banking rooms 17 feet high and the remaining floors are divided into about 350 offices. Seven elevators are placed in the rear hall of the building. This building was ready for occupancy in May, 1892.

COLUMBUS BUILDING.—To be erected on the southeast corner of State and Washington streets, after plans by W. W. Boyington. The structure will be fourteen stories high, two floors being contained in the ornamental space above the cornice. It will cover

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VIEW ON STATE STREET.

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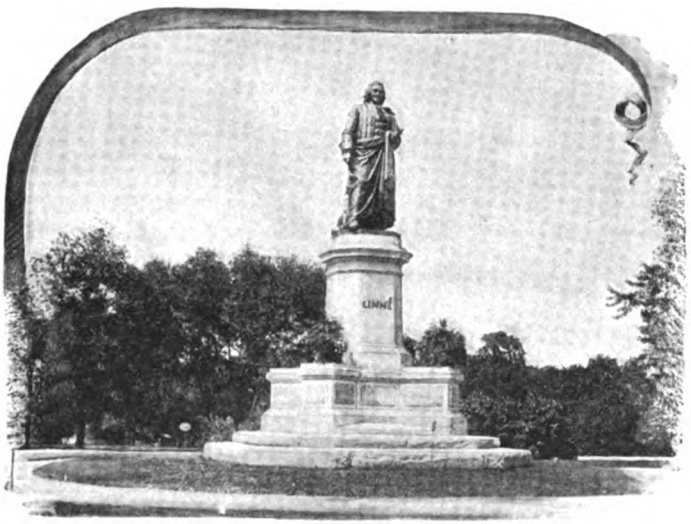
the lot, with its frontage of 100 feet on State street and 90 feet on Washington street. It will be constructed of stone, steel and terra cotta, after the best models. A main feature will be the two stores on the ground floor, on either side of the main entrance. Each will be forty feet wide. The decorations and fixtures will cost $175,000. At the rear of each will be a glass mosaic, one showing Columbus at the Court of Isabella and the other his landing in America. The contract for these mosaics has been placed in Venice. The ceiling beams of the stores will be of bronze, supporting Mexican onyx ceilings. Over the entrance to the building a ten-foot bronze statue of Columbus will be placed, which is now being made at Rome. The floors throughout the building are to be of mosaic.

The height of the tower from the sidewalk to the top of the glass globe will be 240 feet. The globe on top is to be of opalescent glass, with the continents marked in color, with a cut jewel locating Chicago, to be lighted with a 3000-candle-power electric lamp. The style of architecture in detail is Spanish renaissance. The various coats of arms of Spanish royalty will be shown in the cornice and elsewhere. Work will be begun May 1st, and the structure will be completed May 1, 1893. The building will cost about $800,000.

THE "CRIB."—The original crib is situated about two miles out in Lake Michigan, almost directly east of the foot of Chicago avenue. "The Man at the Crib," is Captain Charles McKee, who, with his family, has spent eleven years in that desolate, wave-washed and tempest-battered granite home. He has reared a family of five girls and one boy, all of whom are married, except one girl. Besides his wife and daughter, three men and a dog occupy the crib at present. The crib-keeper's quarters are comfortable. During the winter months, when ice floes threaten to clog the grated mouth of the water tunnel, his duties are as severe as they are important. There are thousands of visitors at the crib during the summer months; in the winter it is sometimes difficult to reach it with the city supply boat. The visitor can take an excursion boat, steam or sail, on the lake shore, foot of Van Buren street.

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VON LINNE STATUE.—Erected to the memory of Carl von Linne, or Linnæus, as the world calls him, an illustrious native of Sweden. The statue is of bronze, of heroic size, on a white marble pedestal, and it overlooks the little common near the foot of Fullerton avenue. The spot is one of the prettiest in the park. The monument is encircled with fine trees, and it looks south over a fine expanse of landscape. It cost the Linnæan Monument Association



VON LINNE STATUE (Lincoln Park).

which built it $22,000, and is one of the handsomest monuments in the West. The statue was unveiled May 23d, 1891.

WATER-WORKS.—The water-works of Chicago are among the wonders of the city, not alone because of their magnitude, but because of the magnificent engineering features which they present to the intelligent or curious visitor. The great central pumping works of the system are as follows: Foot of Chicago Avenue, North Side. These works are at the Southern end of the Lake Shore drive. West Side works, corner of Blue Island Avenue and Twenty-second street. Central pumping station, West Harrison street; between

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Desplaines and Halsted streets. To visit the different "cribs" situated in Lake Michigan, during the summer months, take excursion boats on the lake shore, foot of Van Buren street. The fare for round trip is 25 cents. The area of Chicago is about 181 square miles, the greater part of which is thickly populated, requiring good facilities for an abundant supply of water. This is drawn from Lake Michigan by a number of separate water-works, all of which are

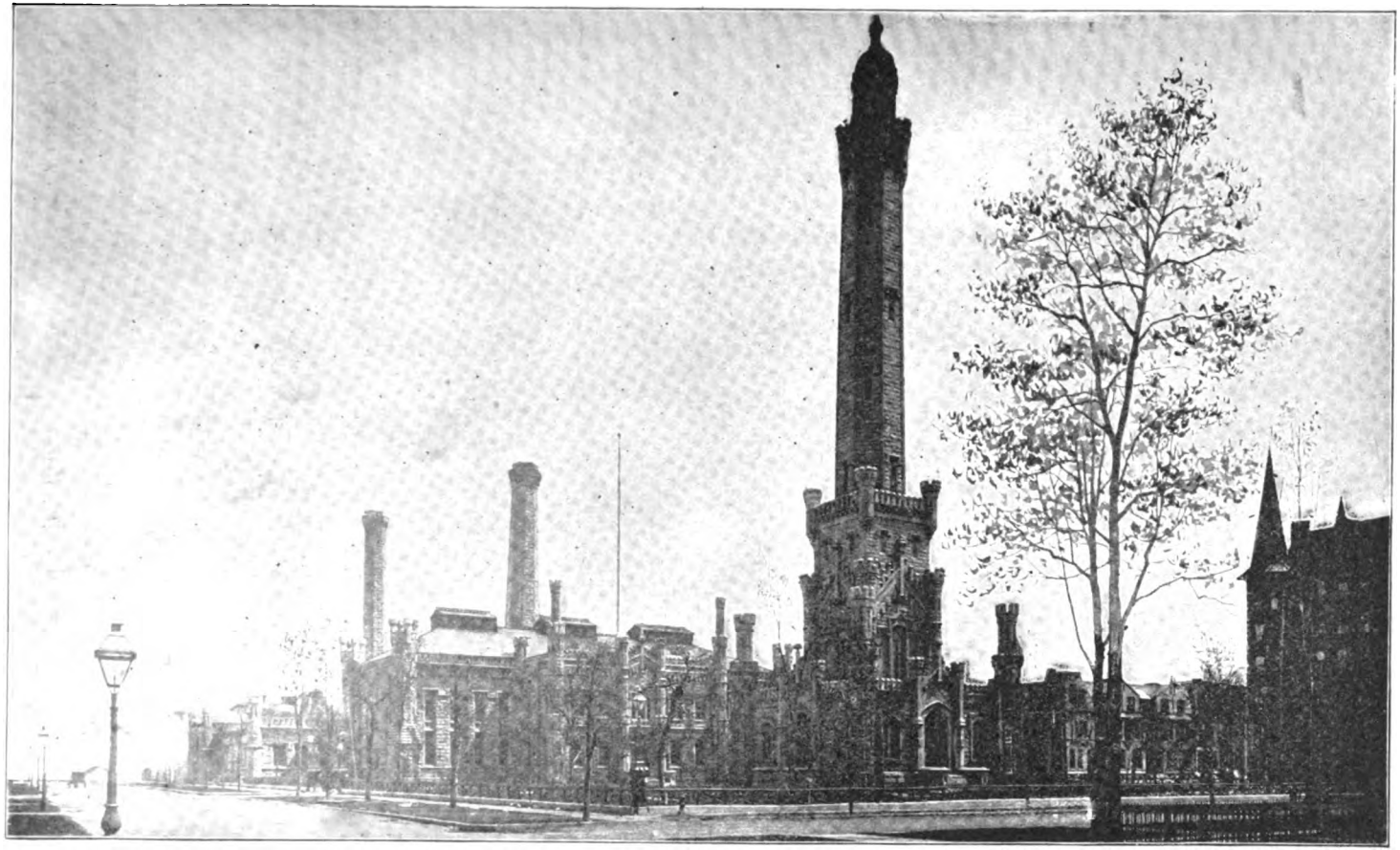


SCHILLER MONUMENT (Lincoln Park).

operated upon the same plan. Owing to the perfectly level plain upon which Chicago is built, there is no natural elevation available for the establishment of reservoirs. The water, when drawn from the lake, is pumped directly into the mains against a stand-pipe head of about 100 feet.

WATER TOWERS—For the benefit of those who do not understand the principles of water distribution in a great city, the following

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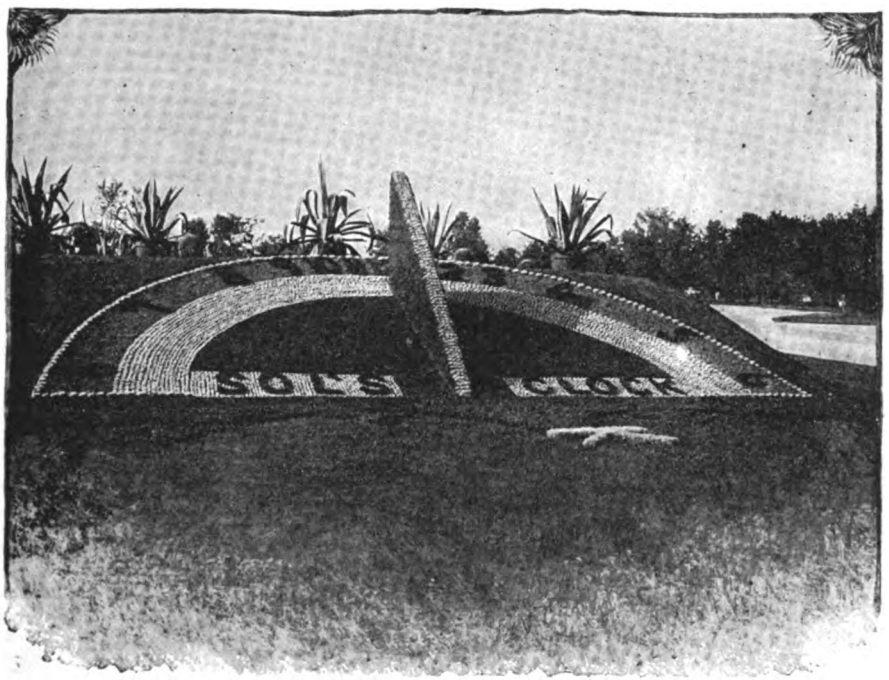
CHICAGO WATER WORKS.

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explanation is given: A tunnel from the crib in the lake is built on an incline so that the water pours into a well under the water-works. In getting there it has been allowed to fall several feet below the level of the lake. When the pumping is light, of course the water rises in the well to the level of its source—the lake—but in Chicago the demand is so strong that the pumps keep the water in the well several feet below that in the lake, raising the water from a distance maybe sixteen feet below lake surface. After the pumps have thus raised the water their work is just begun. They must now force it out the mains and into the houses, just as an ordinary well pump, with the valve in the bottom of the well instead of up near the pump handle, brings the water to the pump spout. The use of the tower is now shown. Take away a section of the masonry and there remains an upright pipe. A description of the West Side water-works tower will serve as an illustration. There the stand-pipe is five feet in diameter and about 167 feet high. It is made of plate boiler iron about five-eighths of an inch thick, and looks like an ordinary engine boiler, except in length. When the water passes the valve in the pump it passes through the main pipe close by the base of this tower, or may pass under the tower. An opening allows the water to run out of the pipe into the tower stand-pipe. At the West Side works there are four of these main pipes, all opening into the stand-pipe. Now comes the essential part, which is very simple, when understood. The pumps are started, say at a pressure of forty pounds to the square inch of surface. The water is forced out along the mains, and through the opening into the tower stand-pipe. That will raise the water about two and one-third feet in the stand-pipe for each pound of pressure, which is about ninety-three feet for the forty pounds. The weight of the water in the pipe represents that power, and stands there as an elastic spring or cushion, rising and falling, equalizing the pressure on the water faucets and pipes. If every one having faucets on the main should close them, the water pumped in the main would have an escape through this pipe, and the result can be imagined—the pipe wouldn't hold it very long if the

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pumps were not stopped. But there is an indicator, like the hands on the face of a clock, which shows just how much water is being drawn, or how much of the power is used, and the engineer regulates his pumping accordingly. After the above explanation it may be simply stated that the stand-pipe in the water tower furnishes an equalizer, so that when an engine is running at a given rate of speed or pressure, the turning on or off of a few more or less faucets by



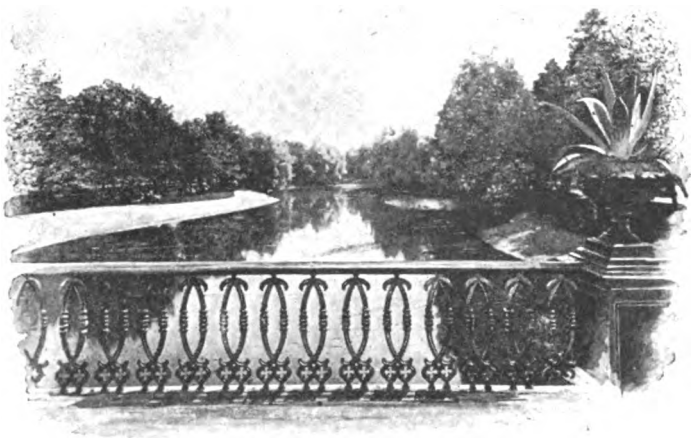
SOL'S CLOCK (South Park).

consumers may not seriously and too suddenly affect the pressure and supply.

POST-OFFICE.—The limits or jurisdiction of the postmaster of the Chicago Post-office covers less than one-third of the area of the city proper, the outlying offices being entirely distinctive, and having postmasters of their own. The central or general office is located in the business portion of the city. It has eleven carrier stations and

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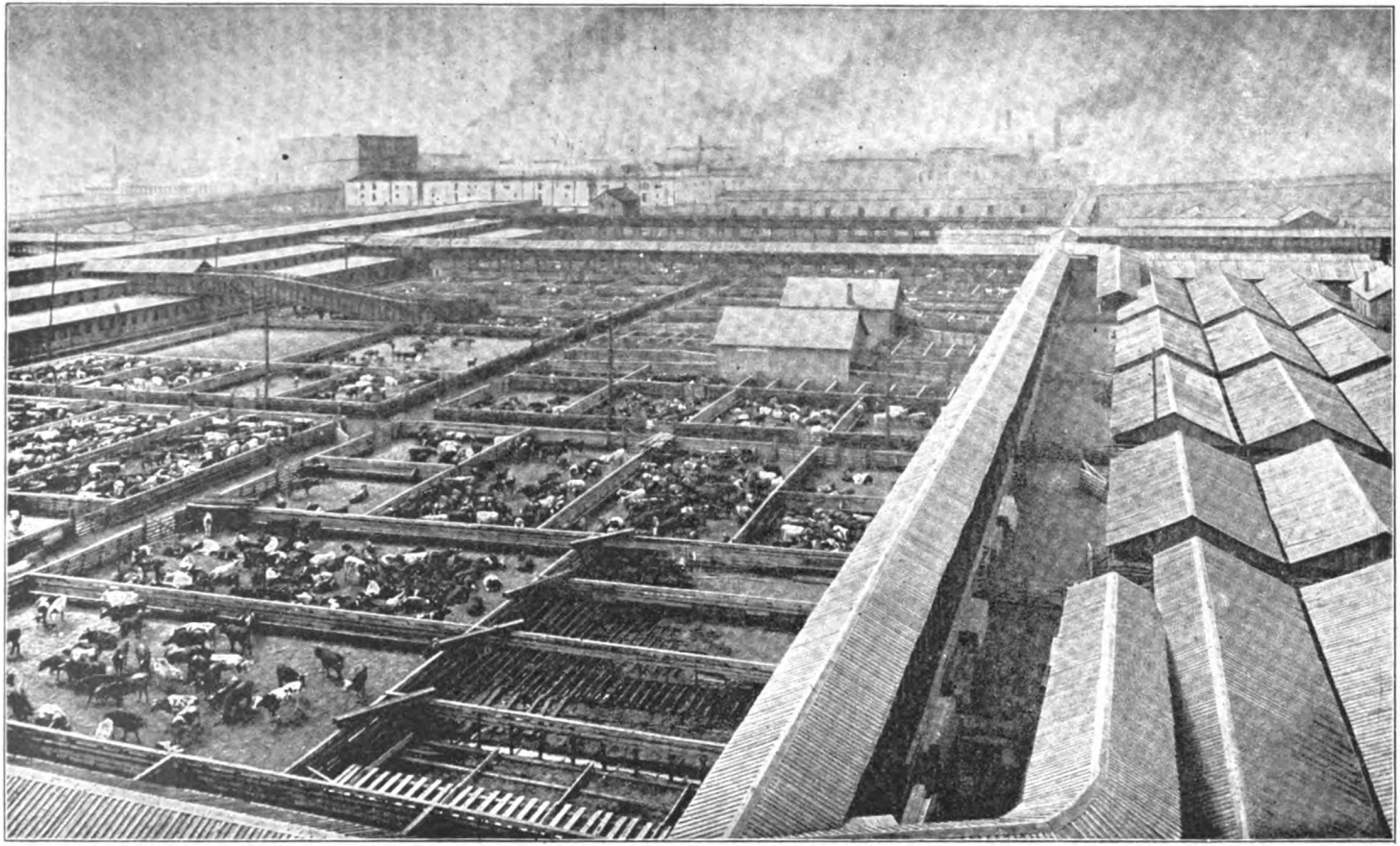
twenty sub-postal stations, distributed at various points within said jurisdiction. The force employed consists of about 769 regular carriers, 200 substitute carriers, 842 regular clerks, sixty substitute clerks, and about 90 persons in charge of sub-stations and stamp agencies, making a total of 1701 paid employes. Of this force, 105 carriers, 57 horses and 52 wagons are employed in the collection of the mail from the street letter-boxes.



JACKSON PARK BRIDGE.

UNION STOCK YARDS.—Located on South Halsted street, in the former town of Lake, now within the corporate limits, about five and one-half miles southwest of the City Hall. The Union Stock Yards were organized and opened in 1865. The Stock Yards Company at the present time own 400 acres of land—320 acres in one block and eighty acres in outlying lots. The larger tract is devoted to the stock yards; some 200 acres being devoted to yards, etc., while the balance is occupied by railroad tracks and car sidings. Before you, as you enter the main archway, is a town with twenty miles of streets, twenty miles of water-troughs, fifty miles of feeding-troughs

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STOCK YARDS.

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and about seventy-five miles of water and drainage pipes. Besides the regular water-works supply there are a number of artesian wells, having an average depth of 1230 feet. The plant of the Union Stock Yards Company proper costs about $4,000,000. Present capital about $23,000,000. The plants of the various packing companies cost, it is estimated, in the neighborhood of $10,000,000. During the year 1891, 3,250,359 cattle, 205,383 calves, 8,600,805 hogs, 2,153,537 sheep, and 94,396 horses were received at the yards, the total value of which was $39,434,777. There were slaughtered 2,184,095 head of cattle, 157,052 calves, 5,638,291 of hogs, and 1,465,332 sheep. The shipments of live stock from the yards were 1,066,264 cattle, 48,331 calves, 2,962,514 hogs, 688,205 sheep, 87,273 horses. The Stock Yards to-day are one of the wonders of the world. Twenty great trunk railroads, fed by hundreds of branches which stretch like a mighty octopus over the land, deliver and carry away the raw and manufactured articles which arrive at and depart from this spot. During the early morning the Western roads are busy unloading their freight of cattle, hogs and sheep, while in the afternoon the Eastern roads are equally busy taking delivery and loading up the stock that is going to Boston, New York and countless other points. At the packing-houses the work goes on all day—one train following another carrying away the finished product of the butcher and packer. The Stock Yards Company own all the railroad tracks (over 150 miles in all), and do all the switching or shunting connected with the business of the Yards. Every railroad company has a direct communication with the Yards, either through its own tracks or by the Belt line; at any rate, they can all get there without trouble, and no delays take place. The yards can accommodate, at their fullest capacity, over 30,000 cattle, 200,000 hogs, 30,000 sheep and 4,000 horses, and while at times they are taxed to their fullest limit, yet as a rule the stock is well and carefully looked after. As the trains come rolling in, the Company take charge of the stock; and its location, name of firm to whom consigned, description, etc., are detailed in the office of the Company.

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Some idea of the magnitude of operations at the stock-yards may be formed from the following figures with reference to the great house of Armour & Co. The firm did a business amounting to $66,000,000 during the year ending April 1, 1891. The hogs killed by the house numbered 1,714,000; cattle, 712,000; sheep, 413,000. Armour & Co.'s employes numbered during this period 7,900, and the aggregate wages paid was $3,800,000. The firm had 2,250 refrigerator cars. The total area covered by the buildings of the firm was fifty acres; total floor area of buildings, 140 acres; chill room and



SCENE IN LINCOLN PARK.

cold storage area, forty acres; storage capacity of buildings, 130,000 tons. The Armour Glue Works made 7,000,000 pounds of glue within the same period, 9,500 tons of fertilizers, grease, etc. The ground covered by the buildings of this department cover fifteen acres, and the number of employes is 600.

GRAIN ELEVATORS.—The visitor to Chicago will be surprised and interested by a visit to some of the great grain elevators of the city. The greatest elevators in the world are to be found here, and they are more numerous than in any other city on earth. A few figures in relation to one of them will serve as a description for all.

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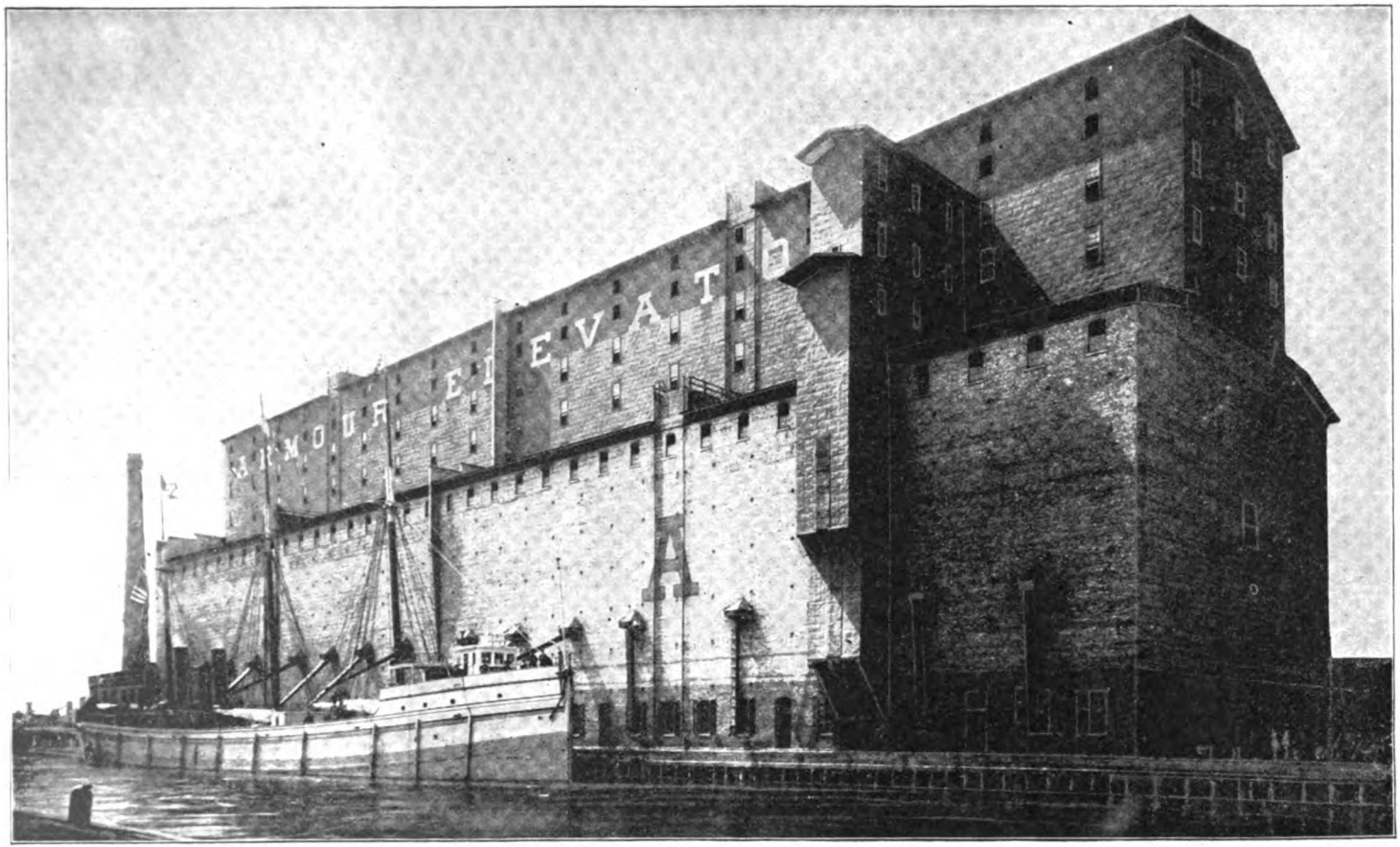
A grain elevator of the first class costs about $500,000; 12,000,000 feet of lumber is consumed in its construction; the outside brick wall is sixteen inches thick; a fire wall, two feet thick, usually divides the building in the middle; the height is about 155 feet; length, 155 feet; as a protection against fire iron ladders run this entire height and on all floors there are electric push buttons communicating with annunciators in engine room, and in the latter department there is also a fire pump with a capacity equaling that of four steam fire engines. Two hundred bar-



SCENE IN GARFIELD PARK.

rels of water, each accompanied by a couple of iron pails, are scattered about over different floors, and twenty-two chemical fire extinguishers are placed at convenient stations throughout the structure; forty-five fire plugs, to each of which is attached 1,000 feet of two and one-half-inch rubber hose, together with fourteen fire alarm boxes, about complete the precautionary measures for combating the devouring element; the superintendent and chief engineer are located at opposite extremities of the bulky framework, the one in a separate brick office building, with an electric instrument within

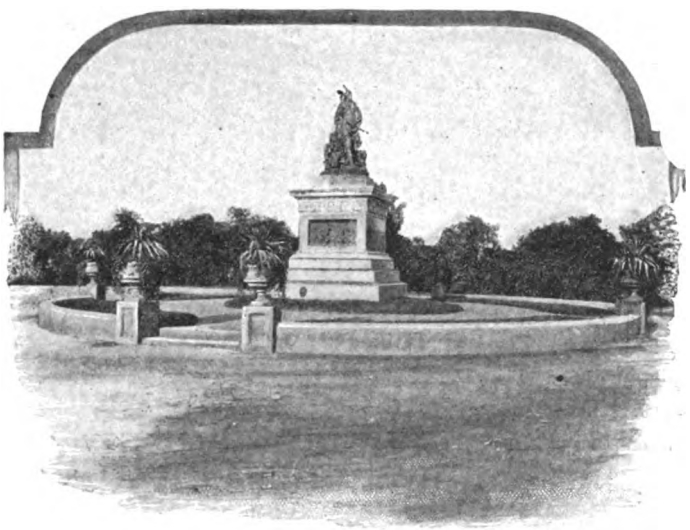
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ARMOUR ELEVATOR.

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reach, by which he is enabled to converse with the heads of departments, and the other in a large two-story, fire-proof brick building, where he takes pleasure in showing visitors a little bottle of river water after it had been transmogrified in passing through the granite filter. Once every week a fire drill is ordered, the time of turning in an alarm for which is known only to the watchman in charge. When the alarm is sounded every man takes his place, but no water is thrown. These drills demonstrate that the structure may be deluged with water in exactly seven seconds. It requires 100 employes



INDIAN MONUMENT (Lincoln Park).

to run a grain elevator; to move the ponderous machinery a 1,000 horse-power compound Corliss engine is required, making fifty-six revolutions per minute without varying one revolution in a day's run. This is one of the most elaborately finished pieces of mechanism in existence, and was constructed at a cost of $50,000. The diameter of the drive-wheel is twenty feet, and that of the shaft eighteen inches. Crank pins fourteen inches in diameter and fourteen-inch steel pins are provided, the momentum of which adds impetus to the work of the engine. The main belt is of rubber, 200

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feet in length and five feet in width. It is the largest bit of rubber ever manufactured from any material by any firm for any purpose, requiring special machinery in its construction. The chimney of the elevator has a 14-foot base and an altitude of 154 feet.

WASHINGTON PARK CLUB.—Situated at South Park avenue and Sixty-first street. Take Cottage Grove avenue cable line. Organized 1883. Occupies an unpretentious though commodious club



WASHINGTON PARK FOUNTAIN.

house, within easy access of the Washington club racing park, south of Washington park. It is a combination of the higher class of sporting, country and city clubs, members of nearly all the other leading clubs being connected with it. The club house is more in the nature of a rendezvous than a resort, and is handsomely fitted up for the comfort of the members and the ladies of members' families. The racing meetings of the Club are of national celebrity.

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ARMOUR MISSION.—Located at Butterfield and Thirty-third streets. Take State street cable line. Directors—Philip D. Armour, J. O. Armour, William J. Campbell, John C. Black, P. D. Armour, Jr., Edwin Barritt Smith; Rev. Howard H. Russell, pastor; established in November, 1886. This magnificent charity owes its origin to a provision in the will of the late Joseph F. Armour, bequeathing $100,000 for the founding of such an institution. He directed that the carrying out of his benevolent design should be chiefly intrusted to his brother, Mr. Philip D. Armour, who, accepting the trust so imposed, has given to it the same energetic and critical attention that he has given to his private affairs. He has greatly enlarged upon the original design and in consequence has added enough from his own resources to his brother's bequest of $100,000 to make the present investment about $1,000,000. Armour Mission is incorporated under the laws of Illinois. In addition to the Mission building proper, the Armour Mission corporation owns the Armour Mission Flats, consisting of 194 separate flats. The entire revenue derived from the rental of these flats is used for the maintenance of the Mission and its departments. The corporation also owns adjoining ground upon which Mr. Armour has recently erected a manual training school, not yet ready for occupancy. The Mission is a broad and wholly non-sectarian institution. It is free and open to all, to the full extent of its capacity, without any condition as to race, creed or otherwise.

UNIVERSITY OF CHICAGO.—The *newest* thing in the city is the new University of Chicago. The old institution of that name, after a struggle for existence for nearly thirty years, succumbed to financial difficulties in 1886, and suspended its educational work. So profound, however, was the conviction that Chicago was the ideal location for a great institution of learning, that efforts began to be made almost immediately looking to the establishment of a new university. It was soon found that John D. Rockefeller was interested in the project. In 1888 the Baptists of the United States organized the American Baptist Educational Society, and elected Fred. T. Gates its corresponding secretary. Mr. Gates soon became persuaded that

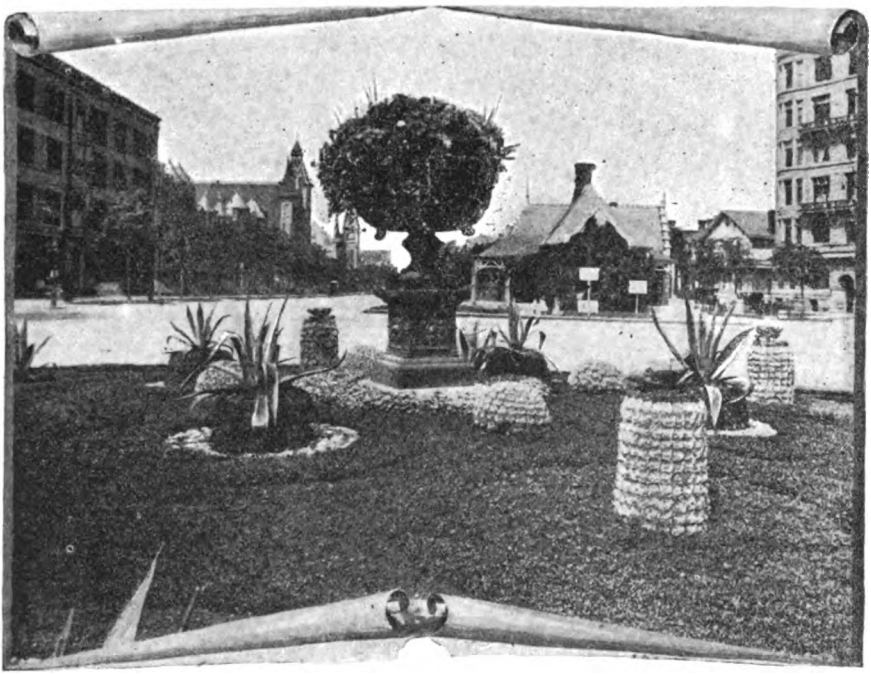
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A SCENE ON THE RIVER.

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the first great work for the new society to undertake was the establishment of a new university in Chicago. He and Mr. Rockefeller entered into correspondence, and to their conferences with each other Chicago owes its university. In May, 1889, the Education Society resolved to undertake the raising of $1,000,000 to found a well-equipped college in this city. Mr. Rockefeller at once made a sub-



OAKWOOD DRIVE.

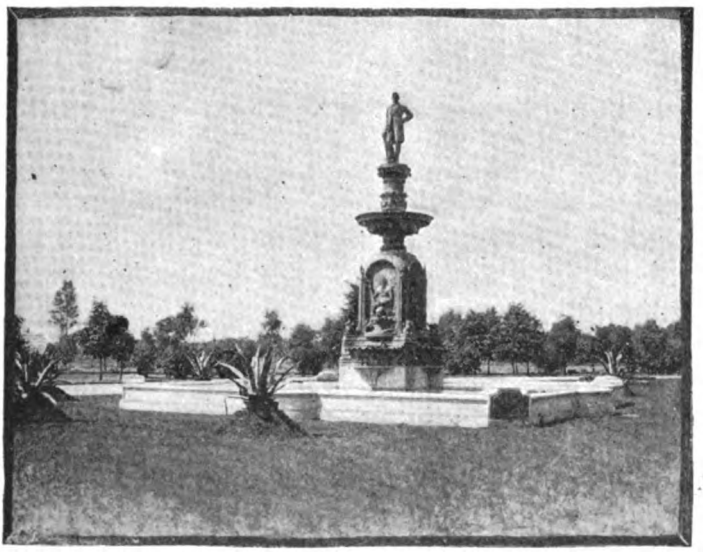
scription of $600,000, conditioned on the subscription being increased to a full $1,000,000 within one year. T. W. Goodspeed was associated with Mr. Gates in the effort to raise the $400,000 required by this condition. Not only was this done within the time specified, but $150,000 more than was required was secured.

Marshall Field gave a site of a block and a half valued at $125,000, but now worth much more than that sum. To this gift from Mr. Field there has since been added two and a half blocks, making

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the present site four blocks. The intersecting streets have been vacated by the city council so that the site consists of a solid block 802 by 1,261 feet, or nearly twenty-four acres.

CHICAGO LIGHT.—Chicago light is located on the inner pier, north side of Chicago river; was established in 1859; is a third order fixed white light, in a black skeleton iron tower; visible sixteen miles. This is the principal one of seven lights maintained by the government as aids to navigation near the mouth of the Chicago



DREXEL MONUMENT (Drexel Boulevard).

river. The harbor here is the most important on the lakes, with a greater average number of daily arrivals and departures during the season of navigation than any other in the United States. This city is in the ninth light-house district, with Commander Charles E. Clark, United States Navy, as inspector, and Major William Ludlow, of the Corps of Engineers, United States Army, as engineer. The eleventh district formerly embraced the three great lakes—Michigan, Huron, and up to the national line of Superior. The ninth is a division of the eleventh district. It includes all aids to navigation on

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Lake Michigan, Green Bay and tributary waters lying west of a line drawn across the Straits of Mackinac at the narrowest part east of McGulpin's Point light station. Since the boundary of the district was established a fog signal has been placed at Old Mackinac Point, in the Straits, which is also included in the ninth district.

CRIB AND BREAKWATER LIGHTS.—There are two lights on the old breakwater, both established in 1876; one of these, the south light, is a fifth order light, and the north is a lens lantern. At the new breakwater there are three lights, tubular lanterns, tended by two laborers. The light on the old north pier is a sixth order light, and has a fog bell struck by machinery. Calumet light, at South Chicago, is on the outer end of the pier north of Calumet river, eleven miles southeast of Chicago breakwater. It is a fourth order light, red, thirty-three feet above lake level, and is visible about twelve miles. It was established in 1873. Formerly it was in a tower rising above a structure on shore, but was in 1876 removed to its present quarters, which is fully a mile out on the pier. A beacon light is established at the old Crib. This light-house is provided and maintained by the city of Chicago.

GROSSE POINT LIGHT—The best light and light-house near Chicago is that at Grosse Point, just north of Evanston. It was established in 1873, and as it now stands complete has probably cost the Government more than $100,000, in addition to the expense of maintenance. Grosse Point light is a second order, fixed white coast light, varied by a red flash every three minutes, the regularity of the flashes being controlled by clock-work. The "lantern" is a prismatic lens, equaling in power 163 candles, and this feature of the outfit alone cost $15,000. The tower, from the water's level to the centre of the lens, is 120 feet, being built of brick and having ninety-nine piles placed beneath the stone foundation.

THE PUBLIC LIBRARY.—The Public Library occupies the entire fourth floor of the City Hall (excepting council chamber). Was founded in 1872. The library contained on January 1st, 1892, 171,709 volumes, and the collection is increasing by purchase and

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THE METROPOLE HOTEL.

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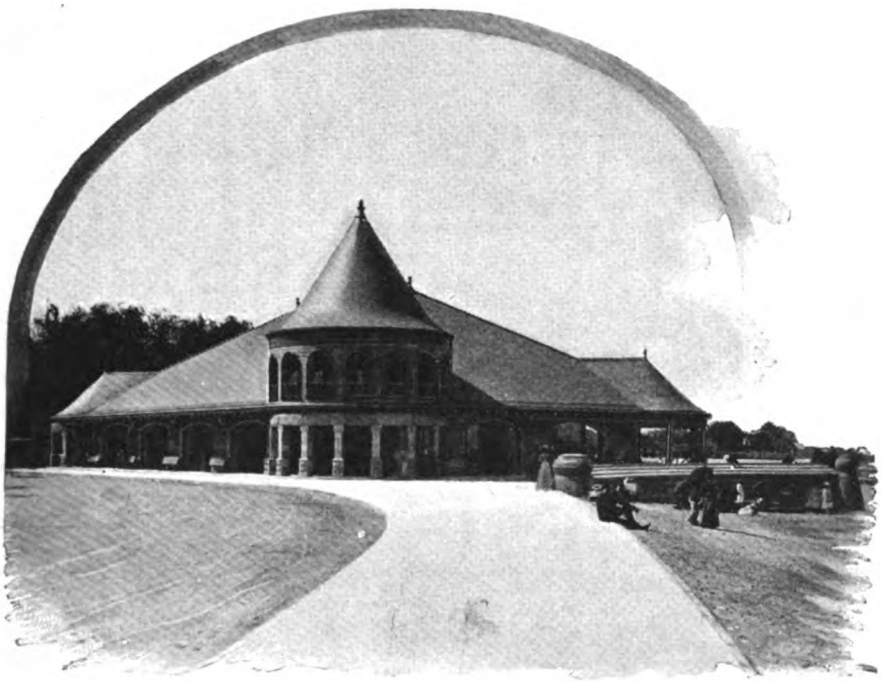
donation at the rate of somewhat over 10,000 volumes annually. Its literary treasures, many of which can not be duplicated at any cost, are at the lowest estimate valued at $275,000. With an annual circulation and consultation of over 1,500,000 volumes, it leads the circulation of the free public libraries of the country. At the Paris Exposition of 1889 it received the distinguished honor of an award of a gold medal, on an exhibit consisting of the annual report, finding lists and a volume showing in detail the administration of the library in every department. A reading-room is maintained, which last year was patronized by 500,000 visitors, 450,000 periodicals being given out across the counter. There are also reference departments, including general, patent and medical, which are consulted by thousands of people in search of special knowledge, annually.

HOTELS.—There are at present between fourteen and fifteen hundred hotels in the city of Chicago, including small and large, and houses of all grades, but excluding lodging houses, boarding houses and distinctively family hotels, where no transients are received. The united capacity of these hotels is estimated at 175,000. It is believed that they could, if pressed, accommodate 100,000 additional guests. But this will not be necessary. Numerous immense hotels are either projected or being constructed at the present time. The spring of 1893 will find Chicago ready with ample hotel accommodations for 500,000 guests. Neither the boarding houses, nor houses where furnished rooms may be rented, nor lodging houses, are considered here. Outside of the hotels there are eating houses or restaurants and cafés, with an estimated feeding capacity at the present time of 25,000 persons daily.

CHICAGO ATHENÆUM.—In the summer of 1890 this honored institution, which has justly been called "The People's College," entered upon the most promising period of its history, at the opening of its twentieth year. At that time the Board of Directors, composed of some of the best known and most influential citizens, with Ferd. W. Peck, Esq., as president, secured a valuable property 91 x 97 feet at 18 to 26 Van Buren street, one of the choicest locations in the city,

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which has been enlarged to a seven-story building and fitted up in the most attractive style, with all desirable conveniences. The property was purchased for $200,000, besides which $90,000 have been expended in the improvements. Situated in the very heart of the city, close to the Art Institute, and in the same grand square on which the Auditorium stands, it is destined to become a recognized educational center, and one of Chicago's most beneficent institutions. The Athe-



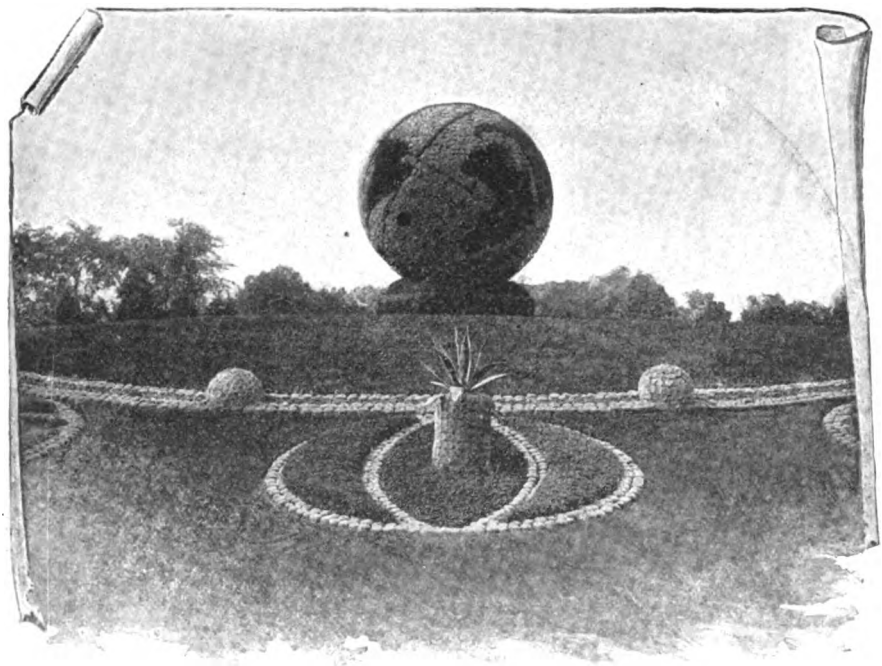
JACKSON PARK PAVILION.

næum entered its new home in March, 1891. From the date of its organization in October, 1871, its animating spirit has been philanthropic. Though a private corporation, it has always maintained the Athenæum solely for the public good, having been chartered as an institution not for pecuniary profit. The benefits that it has bestowed upon this city cannot be over-estimated. Open daily throughout the year, and five evenings a week for nine months of the year, with an

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able corps of twenty-nine teachers and a large list of studies—all elective—young men and women may enter at any time, without examination, and receive the desired instruction at moderate cost.

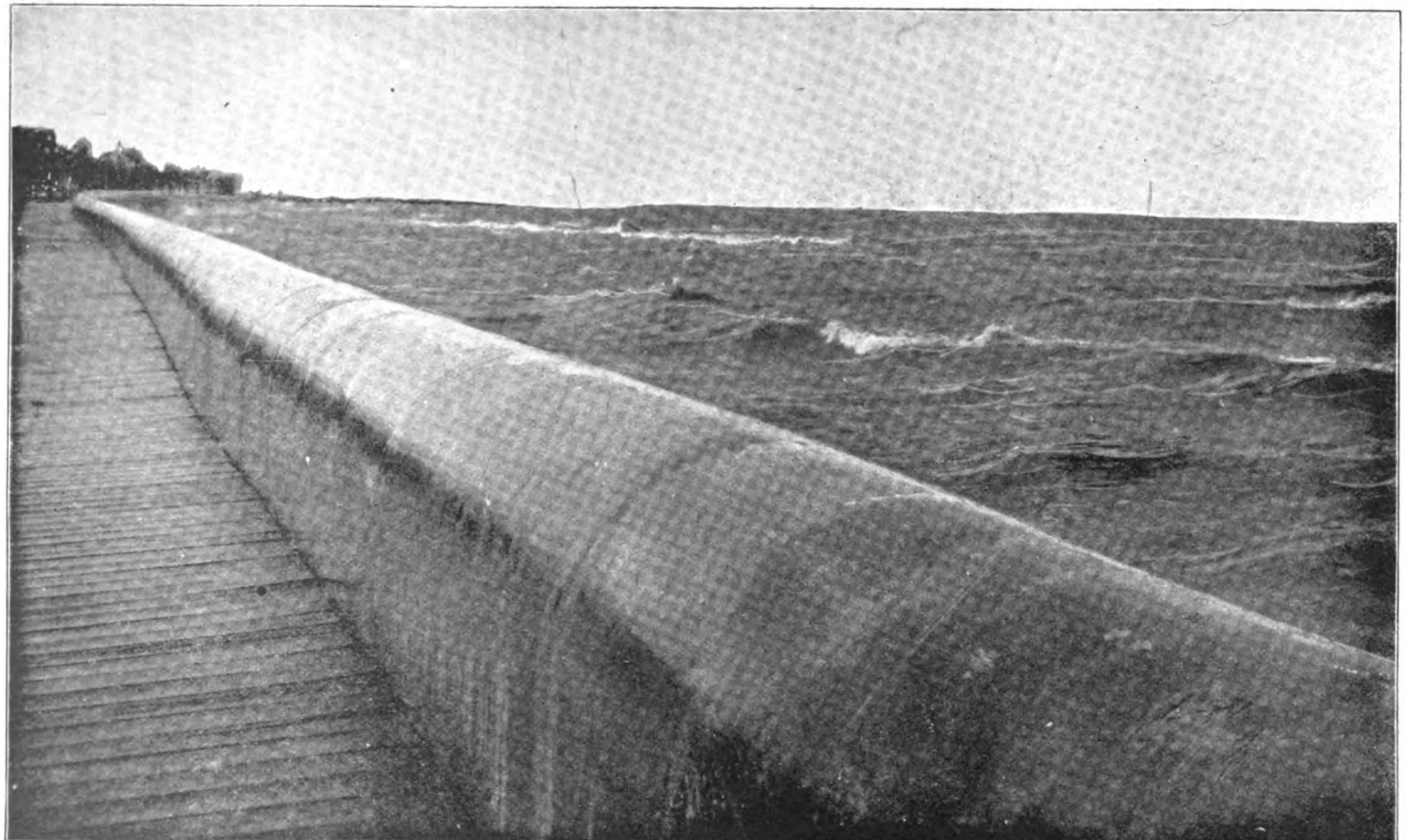
COOK COUNTY HOSPITAL.—Situated between Wood, Harrison, Lincoln and Polk streets, West Side. Take Ogden Avenue, Taylor street, or Van Buren street car. One of the largest public hospitals in the world. It is conducted under the management of a



WORLD'S FAIR GLOBE.

Warden, appointed by the County Commissioners. The visitors will be much interested by a walk through the spacious wards and corridors of this immense institution. The Cook County Hospital was established in 1865, though it did not begin its work until January, 1866. Previous to that time the city had been accustomed to board its sick at Mercy Hospital. But in January, 1866, it fitted up two wards in the old City Hospital, at the corner of Eighteenth and

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THE SEA WALL.

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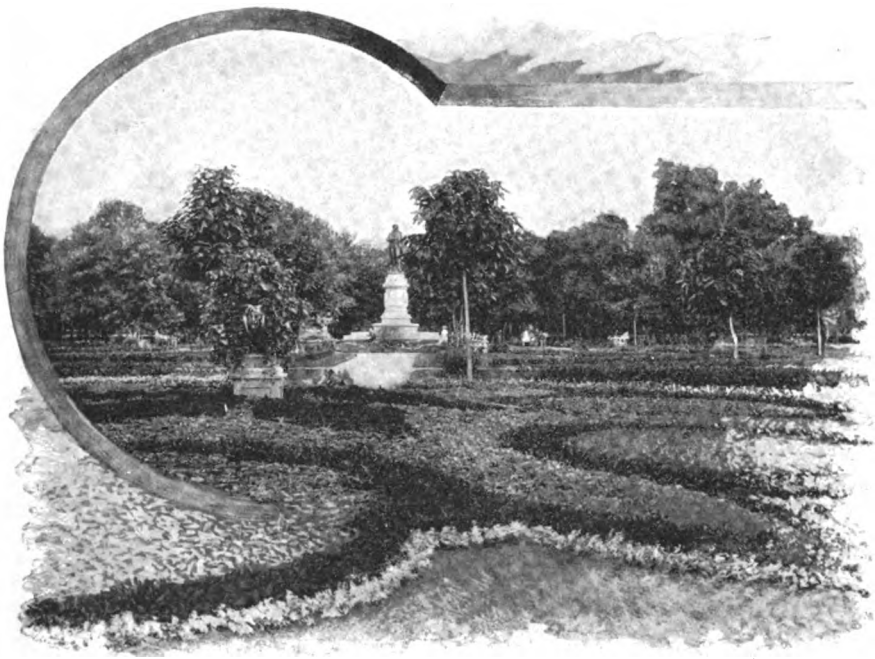
Arnold streets, and moved to them twelve patients from Mercy Hospital. These wards were soon filled and additions to the building were erected. But very soon these also were overcrowded, and in 1876 the institution was removed to its present location, at the corner of West Harrison and Wood streets. The new buildings, which were not all erected at the same time, consist now of a long administration building of imposing appearance, and a pavilion of four wards, and a wing of three wards on each side of it, with generous spaces between all these buildings, conducing greatly not only to their appearance, but to the light, ventilation and comfort of the wards. They are situated on a lot containing twelve acres of ground. During the six months ending January 1, 1889, there were received and treated 3,255 cases, and during the six months ending July 1, 1889, 3,903 cases, showing an increase of 648. As there were 435 patients present on January 1, 1889, and 488 on July 1, 1889, the number in the hospital during the two periods respectively was 3,690 and 4,391. So that, as large as the institution is, it is only a matter of time when its vast accommodations will have to be increased to keep pace with the growing wants of the city.

FIRST REGIMENT I. N. G.—Organized in August, 1874. At the first meeting held in behalf of the undertaking forty-eight men enrolled themselves. In January, 1875, having grown into seven companies, the regiment took quarters on Lake street, adopted its uniform—the same it wears to-day—and received its equipment of arms from Springfield. In February of that year the regiment was assembled and bivouacked in the armory during the Relief and Aid Society riotous demonstration. On May 13th it made its first public appearance with 520 men in line. Since that day its popularity has never waned. In 1877, during the railroad riots, the regiment twice dispersed mobs at the point of the bayonet without firing a shot. In 1878 the First removed to its armory on Jackson street. During the riots of November, 1886, at the Union Stock Yards and other points in the city, the regiment was called into service to quell disorder. Since then its history has been one of peace and continued

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prosperity. The enrollment at present is 650 men. Upon the rolls of the regiment is no small number of names which have won renown on bloody fields.

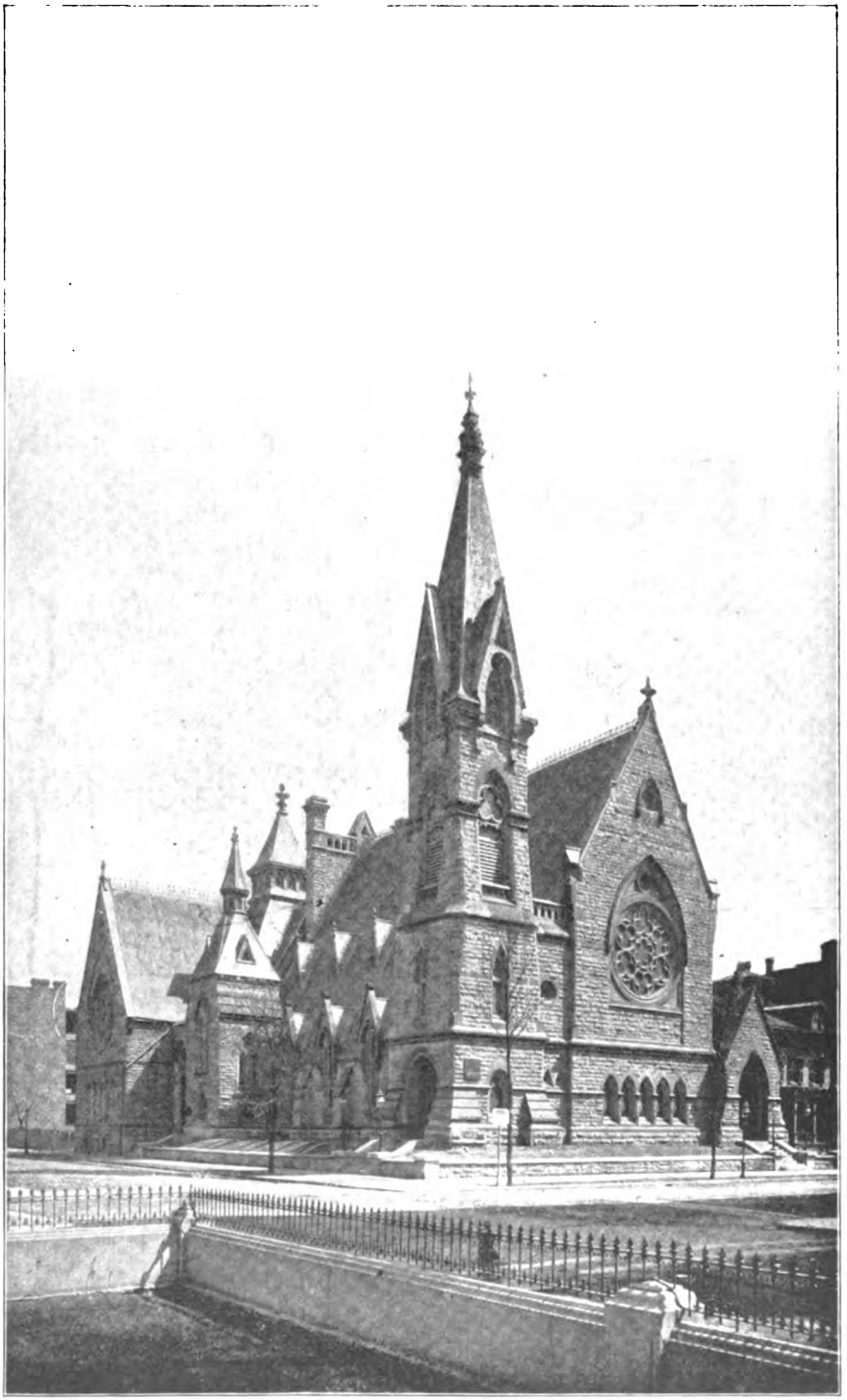
PRAIRIE AVENUE.—Prairie avenue is the avenue of avenues in Chicago. There are people, and very nice people, and very wealthy people, and I might add very exclusive people, living on other avenues, but on no avenue in the city are there to be found



SCENE IN LINCOLN PARK.

the homes of as many people whose names are so closely allied to the enterprise, the progress and the culture of Chicago. The Sweenie residence is on our left as we move south, and we pass the homes of Josiah H. Boyer, Joseph L. McBirney, Walter H. Wilson and John H. Hamline, on the same side of the avenue. On the other side are the handsome residences of John G. Shortall, Henry L. Frank and of P. E. Studebaker, the wagon and carriage manufacturer. Next

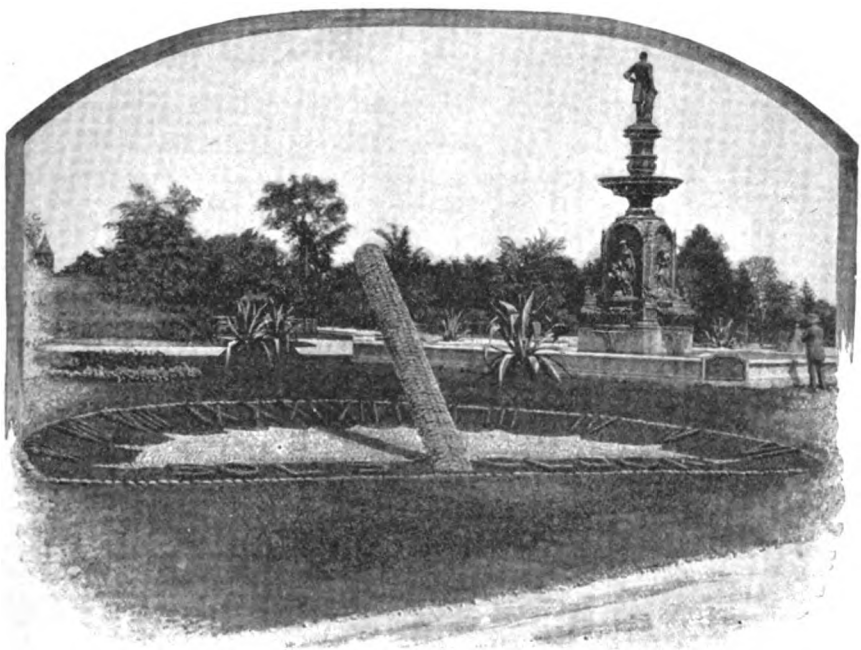
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102 CHURCH OF THE MESSIAH.

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door to him lives William R. Sterling. A little further down is Mr. Granger Farwell's place, and opposite is the home of the great coal merchant, Robert A. Law. South of Mr. Farwell's are the homes of Hugh J. McBirney and Isaac M. Linville, and the residence of George M. Pullman is a noble mansion, but far from being the home which you supposed Pullman lived in. Mr. Marshall Field's is an elegant, but unostentatious mansion. Like the homes of the



SOL'S CLOCK (Lincoln Park).

neighboring millionaires, there is nothing about P. D. Armour's residence suggestive of the great wealth of its owner. It is a handsome dwelling as to exterior; as to interior, it is fitted up with a regard to comfort principally, but at the same time an air of genteel refinement and elegant luxury pervades every part of it. From this point south we pass, on either side of the avenue, the homes of many of the leading people of Chicago. As a rule the dwellings are mod-

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est. The new fads in architecture, or what Joe Gargery might have called architectitooralooralism, have not found their way into favor along here to any great extent as yet. The street is as quiet as a country lane. Even the banana man's voice is hushed. No noise breaks the dignified stillness of Prairie avenue, save the occasional whirr of an Illinois Central suburban train as it flies by the back yards of the buildings on the east side. Although close to the business center, the numerous annoyances of city life are practically left behind by the busy men who make their homes here when they enter its secluded and sedate precincts.

FARWELL HALL.—A celebrated assembly room, and the Young Men's Christian Association. Farwell Hall in its time has held many notable gatherings. It was here that P. P. Bliss, the composer of sacred music and sweet singer, delighted vast audiences day after day for months during the great Moody & Sankey revival period. Yes, he's dead. Went down with his wife and a score of others in the horrible Ashtabula railway accident. Here Moody and Sankey have held forth frequently, and here also, Francis Murphy has preached gospel temperance to multitudes. Others equally well-known have been heard from the platform, among them no less a personage than George Francis Train. It was in Farwell Hall that the bolt occurred among Republicans which resulted in the defeat of Grant and the nomination of Garfield in 1880. The Young Men's Christian Association uses this hall frequently for large gatherings, noonday prayer meetings, etc. Passing over La Salle street we come upon the fronts of two blocks of buildings which will probably be transformed during the next three years. This part of Madison street is not up with the times. Restaurants, billiard halls, saloons, second-hand book stores, news-stands, etc., monopolize it.

McCORMICK HARVESTING MACHINE COMPANY.—Cyrus H. McCormick, president; Eldridge M. Fowler, vice-president; E. K. Butler, general manager. Offices, corner Wabash avenue and Congress street; works four miles southwest, on the south branch of

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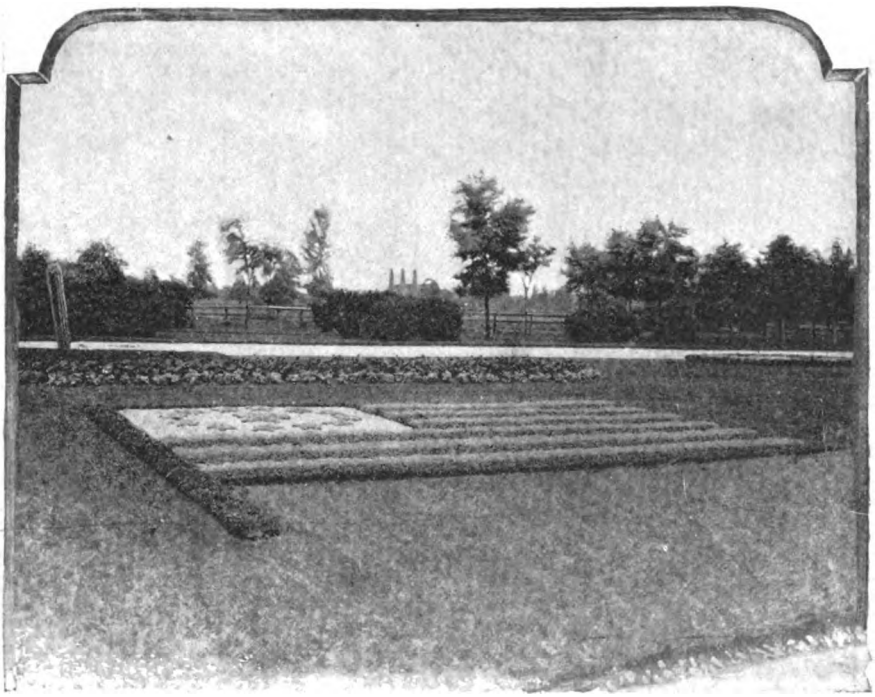


JACKSON PARK BEACH.

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the Chicago river, at the corner of Blue Island avenue, accessible from the business center of the city, via Blue Island avenue street-car line.

This immense establishment is of such magnitude in itself, and of such world-wide scope in its influences, as to make it the paragon of the nineteenth century business enterprise.

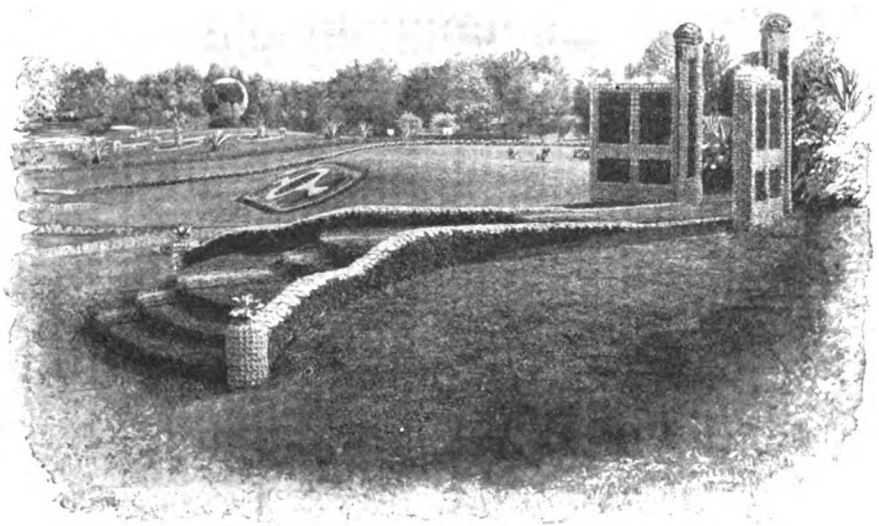


SOUTH PARK FLAG.

NEWSPAPERS.—There are published in Chicago 24 dailies, 260 weeklies, 36 semi-monthlies, 5 bi-monthlies, and 14 quarterlies, making a total of 531 daily and periodical newspapers. The fact was disclosed in the last report of the postmaster general that the quantity of newspapers mailed by the publishers at the Chicago post-office equalled the amount mailed at Boston, Cincinnati, New Orleans,

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Buffalo and Baltimore combined, or at St. Louis, Cincinnati, San Francisco, New Orleans and Baltimore combined, and also at Philadelphia, New Orleans, Baltimore and Cincinnati combined, or in the entire thirteen Southern States, with St. Louis combined, amounting to 20,000,000 pounds of serial matter. The newspapers of Chicago have contributed wonderfully to the growth, to the prosper-



GATES AJAR (Washington Park).

ity and to the fame of the city. To her great dailies is Chicago particularly indebted for the intelligent and wide-spread publicity they have given her at home and abroad.

TRIBUNE.—Location of publication office, southeast corner of Madison and Dearborn Sts. The Chicago Tribune Company, proprietors. Joseph Medill, editor-in-chief. The *Chicago Tribune* is a daily newspaper, with every equipment necessary to the successful

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DEARBORN STREET DEPOT.

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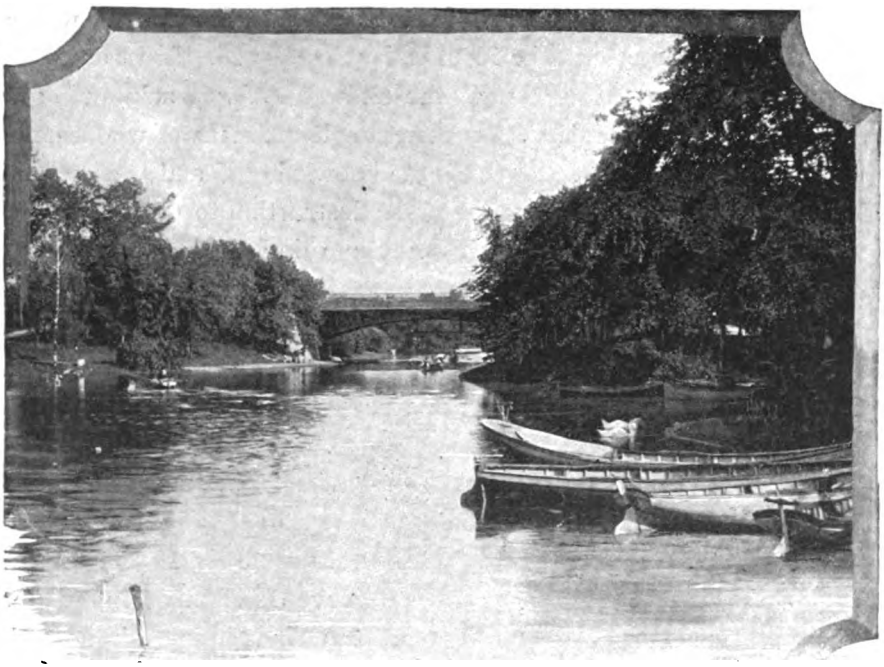
conduct of a great journal. It has the advantages of age and experience, and the means to present to the public the fullest and most reliable information of events transpiring in the world. Its building, erected after the great fire of 1871, on the site of the former structure, was planned and completed for the home of a great newspaper. There is no facility lacking. Its presses, manufactured to order, combine the very latest improvements, and have the speed necessary to supply any demand that may arise. In every department where mechanics are important, the *Tribune* is unsurpassed. In its arrangements for the collection of news the *Chicago Tribune* acknowledges no superior in its profession. Its correspondents, many of whom have a national reputation for their intimate knowledge of, and prominence in, political and social affairs, are under instruction to deliver to the *Tribune*, up to the latest hour in every morning of the year, impartial and full reports of every event, regardless of expense. Its financial reports are relied upon by bankers, capitalists and operators; its record of occurrences at home makes it a family daily; its political and literary features are among the ablest and most discriminating in the country.

COLUMBIAN ASSOCIATION.—Principal object the improvement of the home through the enlightenment of housekeeping as to scientific sanitation, relative value of various foods, and the most hygienic and economical method yet discovered of preparing them. There has been some concern lest women should, as their horizon widened, rush as a mighty, one-minded multitude out from their homes and leave the hearthside deserted. The widespread and enthusiastic interest which has been awakened by the proposition of the founders of this association to afford housekeepers reliable scientific information which will enable them to conduct their households more successfully shows that women first of all are anxious to improve their homes and that with all their gettings they greatly desire to get the understanding which will enable them to do so.

The association numbers about one hundred members and is really the outgrowth of the committee on household economics of

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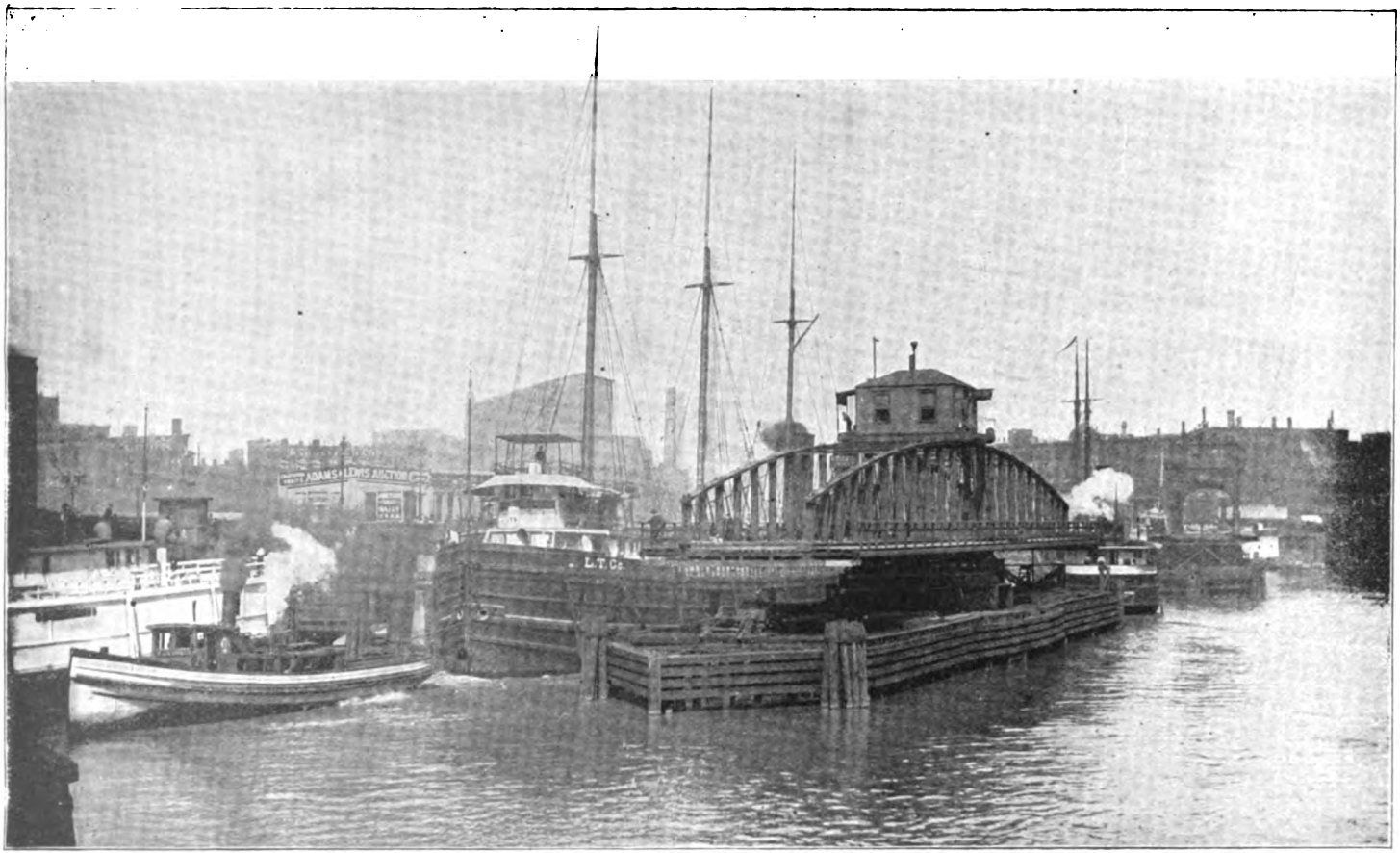
the world's congress auxiliary, of which Mrs. John Wilkinson is chairman and Mrs. Thomas F. Gane vice-chairman. The members of the committee on household economics are elected by the general committee of the world's congress auxiliary and its meetings are open only to its members. The meetings of the Columbian Housekeepers' Association are open to any one interested in their work.



SOUTH PARK LAKE.

GERMAN SOCIETY OF CHICAGO.—The German Society of Chicago (Deutsche Gesellschaft von Chicago, Ill.) was established in the month of May, 1854, under the name of Society for the Protection and aid of German Immigrants (Huelfs-Verein fuer Deutsche Einwanderer), and owed its origin to the fact that both the vast increase and the growing importance of German immigration to this country called for some means of protection to those immigrants who

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SCENE IN THE DOCK.

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were ignorant of our language and the peculiar conditions of this country, and who, on that account, might easily be taken advantage of by the dishonest and unscrupulous in our community.

OGONTZ ASSOCIATION.—Founded by the Chicago Alumnæ of the Ogontz School in 1891, who conceived the idea, in the name of their alma mater, of a lunch room for self-supporting women. The following plan was adopted: each active member subscribed $10 in annual dues, and each associate member subscribed $15, while many added their gifts of furniture, table furnishings and books. In addition friends and well-wishers added greatly to their contributions by placing their names upon the guarantee fund. In February, 1891, all arrangements were finally completed. Two sunny rooms were selected on the thirteenth floor of the new Pontiac building, which stands in the midst of the printing district, on the corner of Dearborn and Harrison Streets. One room was tastefully fitted for a reading and reception room, and provided with an excellent assortment of books, magazines and games; also tables, comfortable chairs and a piano. Over this room three or more members of the Ogontz Association preside daily; one to attend to the books, which may be taken from the library if returned within two weeks, and one to act as cashier. Others play, sing, or assist in making the lunch hour pleasant, and become acquainted with the members of the Lunch Club.

A monthly payment of ten cents entitles any wage-earning girl or woman to full membership, and enables her to obtain a wholesome lunch at small expense. Tea, coffee or milk is sold for two cents, home-made sandwiches or rolls or cake for five cents. During the summer ice cream and iced tea are served, and through the winter hot bouillon is furnished.

The light and pleasant lunch-room, which opens from the reading room, is well supplied with neat tables and chairs, muslin curtains and a cupboard for china. At one end stands the lunch-counter, behind which gleam tea and coffee urns. Here each member receives from the matron, assisted by one of the members of the Ogontz

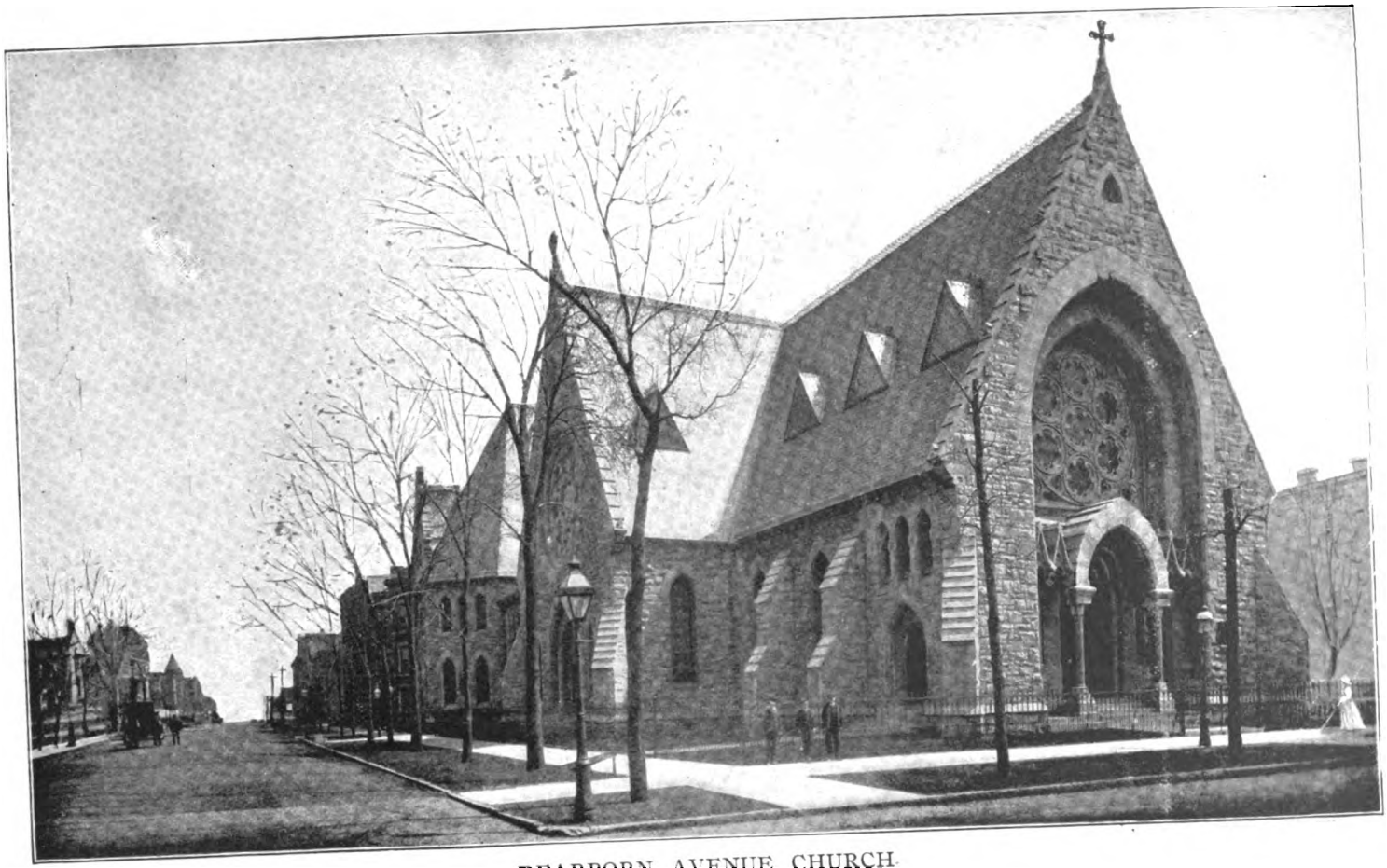
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Association, her order, accompanied by a check, and is at liberty to seat herself at any table. Many prefer to bring their own luncheon, and desire only a cup of tea or coffee.

BAPTIST MISSIONARY TRAINING SCHOOL.—Located at 2411 Indiana Ave. The first school established in this country devoted to the training of young women for missionary work is the one located in Chicago, conducted by the Women's Baptist Home Mission Society. The society itself is exceptional in being the first organization of the kind composed wholly of women, and was the result of a pressing demand from all parts of the country for missionary work, which only women could do, among women and children. Thirteen years ago so urgently was this need set forth by Miss Joanna P. Moore, who had been a nurse during the war, and remained in New Orleans on her own responsibility to work among the colored people; also by Mrs. C. R. Blackall, who had spent some time in the Indian Territory, and who declared that the need there was epitomized by an Indian woman, who said to her, "We want to live like Christian women, but we don't know how:" and others, who saw in different parts of the country the necessity of work among the women and children of the foreigners, who were then, as now, pouring into this country at the rate of seven and eight hundred thousand per annum, that the ladies of the several Baptist churches in the city decided to organize a society for this work. The representatives of the different churches throughout the country, excepting those from Boston, were in favor of making Chicago the headquarters of the organization, not only because it had its inception here, but because of the central location. The New England women, however, decided to organize a separate society. The society organized here now has between thirty and forty thousand regular members, and was last year in receipt, from all sources, of between $60,000 and $70,000.

WATER TRANSPORTATION.—A large number of steamers ply between this city and points on all of the lakes, and on the St. Lawrence river during the summer season. These in many instances carry passengers.

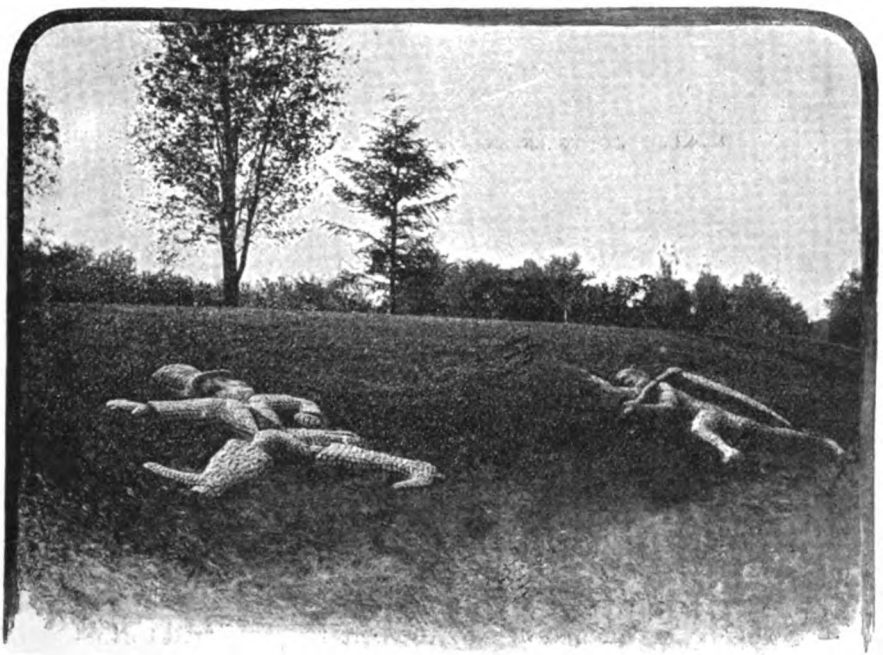
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DEARBORN AVENUE CHURCH.

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Although Chicago is termed an inland city, because it is nearly a thousand miles from the ocean, it possesses vast marine interest through its location on Lake Michigan, one of the chain of great lakes stretching along our northern frontier. The magnitude of the lake traffic is shown by the statistics collected by the government. A limited means of water communication in a southern direction is enjoyed in the Illinois and Michigan canal, extending from Chicago



FLORAL DESIGN IN SOUTH PARK.

to the Illinois river, navigable for light craft thence to the Mississippi river. The freight transported over this route in 1889 aggregated 917,047 tons. An ambitious scheme in this direction, which has been undertaken by the city of Chicago, contemplates the construction of a grand water-way not less than 160 feet wide and not less than eighteen feet deep from Lake Michigan to Lockport, Ill., for the improvement of low-water navigation of the Illinois and Mississippi

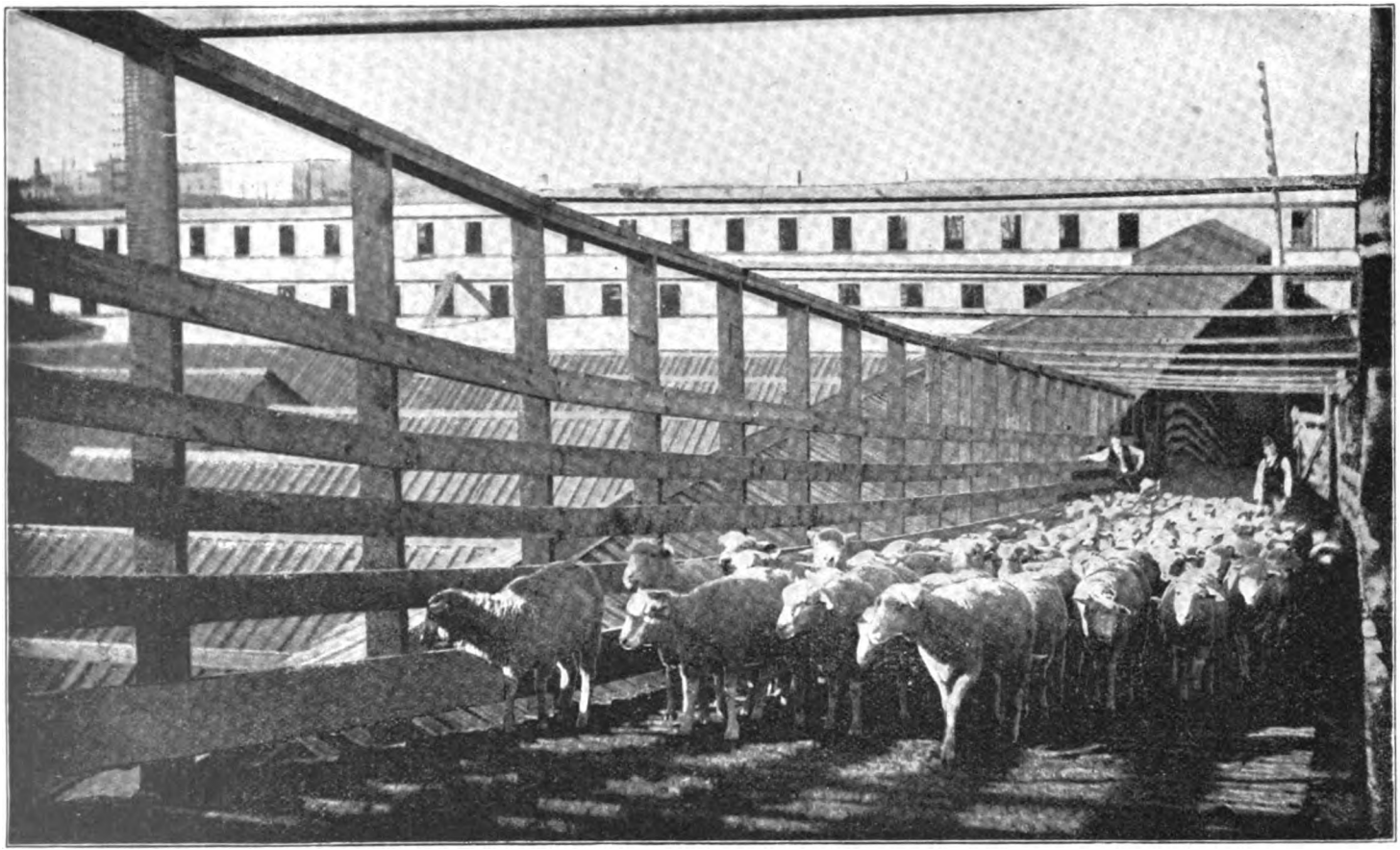
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rivers as well as to afford sanitary relief to Chicago. It is expected that the United States government will co-operate in making the connecting rivers navigable for large vessels, so that the lake and the Mississippi river traffic may interchange. Another water-way, called the Hennepin canal, is projected across the upper part of the State of Illinois, also to connect with the Mississippi river.

The Goodrich Line is the pioneer and leading line of the lake steamers, comprising the most elegant, most modern, as well as the safest steamships which ply Lake Michigan. Founded in 1856 by Capt. A. E. Goodrich, and ten years later incorporated under the laws of Wisconsin. Docks foot of Michigan Avenue. The steamers of the Goodrich Transportation Company ply between Chicago and all ports on Lake Michigan and Green Bay, forming regular lines during the navigation season.

RAILROAD TRANSPORTATION.—The railroads, however, are the chief factor in conducting the trade and commerce of Chicago. No other city in the world is so well supplied with railroad lines. Twenty-six independent roads run out of the city, diverging to all parts of the United States, Canada and Mexico. These railroads, with their branches and immediate connections, have a total length of over half of the total mileage of the railroads of the country. A belt railroad encircling the city connects with all lines, enabling freight to be easily transferred from one to another without breaking bulk. The immense traffic of this character, however, has so far outgrown the facilities afforded by the belt road referred to that two other intercepting lines have sprung into existence, one of which encircles the city at a distance of twenty-five to forty miles from it. This line is known as the "Joliet Cut-Off." The third belt road, which is known as the Chicago and Calumet Terminal, traverses part of the intermediate territory, intersects a number of important railroads, and will ultimately connect with all lines. To still further facilitate the interchange of freight cars among the various railroad lines, a great union transfer yard is being constructed on the west side of the city. These railroads and their belt-line connections have

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IN THE STOCK YARDS.

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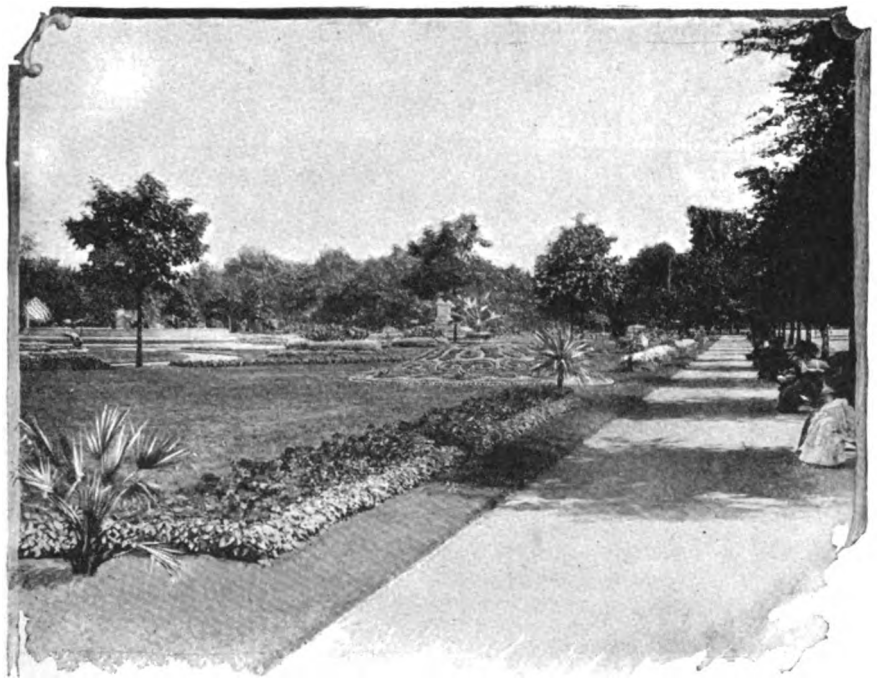
established a multitude of junction points in the immediate vicinity of Chicago, possessing transportation facilities of the most complete character for industrial enterprises. Raw materials originating on the route of any railroad are thus easily delivered to a factory on any other line by a short transfer, practically taking every Chicago railroad to the doors of every Chicago factory. Manufacturing products are likewise distributed without difficulty over the region traversed by every railroad line. These facilities have stimulated the growth of an unusually large number of manufacturing towns as suburbs of Chicago. Among such suburbs the town of Pullman has become famous by reason of its having been built with a special view to providing workmen with comfortable homes, pleasant surroundings, and everything necessary for their convenience and social enjoyment.

RAILROADS.—Chicago is practically the terminal point of all the great trunk lines of railway, North, South, East and West, in the United States, the Dominion of Canada and the Republic of Mexico. Nearly all the railway systems of the continent have, either directly or by proprietary connections, sought and obtained an entrance to this city and a share in the immense traffic which centers here. Over ninety thousand miles of railway center in Chicago at the present time, and it is conceded to be the greatest railway *depot* in the universe; more passengers arrive and depart; more merchandise is received and shipped here daily than in any other city on the globe. Illinois, of which Chicago is the metropolis, has the greatest railway mileage of any State in the Union—14,017 miles.

ST. CLAIR TUNNEL.—This is the greatest submarine tunnel in the world. It extends from Port Huron, Michigan, under the St. Clair river to Sarnia, in the Canadian Province of Ontario, and connects the Grand Trunk Railway system of Canada with the Chicago & Grand Trunk Railway and its connecting and associate lines. The tunnel proper is a continuous iron tube, nineteen feet and ten inches in diameter, and 6025 feet in length (or a trifle over one mile). The approaches, in addition to the tunnel proper, are 5,603 feet in length, making all told a little over two miles. This great inter-

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national undertaking was completed at a cost of $2,700,000, and opened for freight traffic October 27th, and for passenger traffic December 7, 1891. The tunnel is lighted by incandescent electric lamps, placed at suitable intervals. By reason of the method of construction employed, and the material (iron) used therein, the tunnel is absolutely water-tight. As illustrating the accuracy of engineering



SCENE IN LINCOLN PARK.

skill, and without entering into lengthy details, suffice it to say that the construction of the tunnel was begun and carried on from both the American and Canadian sides of the river simultaneously, and when the edges of the tunnel shields met midway under the river bed, the total errors in lines were found to be too small for measurement. Trains of the Chicago & Grand Trunk Railway are hauled through the tunnel by coke-burning engines especially constructed for the purpose. They are said to be the largest engines in the

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world. The entire weight of the engine and tender rests upon ten drive-wheels. The weight of one of these monster engines in actual service is found to be approximately one hundred tons.

ILLINOIS CENTRAL RAILROAD.—The great and only rail artery connecting Lake Michigan with the Gulf of Mexico; one of the principal and one of the most ably managed lines in the United States. Miles of railroad operated during the year ending June 30, 1891, 2,875; cost of operation, $11,890,366.21; gross earnings, $17,881,554.77; net earnings, without deducting rentals or taxes, $5,991,188.56. The history of this road is identical with that of the State of Illinois, to the prosperity of whose people it has contributed in a very large measure. The charter under which the corporation was organized exempts the company's property from taxation in this State, but requires a payment to the State, in lieu thereof, of 7 per cent. of the gross receipts of the original railroad, 705.53 miles in length, or the lines from Chicago to Cairo (364.90 miles and from Centralia, Ill., to Dubuque, Iowa, 340.63 miles). The sum so paid during the years from 1855 to 1890 amounted to $12,365.618. In this period the stockholders of the company received, in cash dividends, $64,782,357. The vast amount of money which the Illinois Central Railroad Company has turned into the State treasury very materially assisted the latter in liquidating the indebtedness contracted during the War of the Rebellion, and in meeting the regular annual expenditures of the commonwealth for educational, charitable and other purposes. The Governor of the State of Illinois is, *ex officio*, one of its directors.

WISCONSIN CENTRAL LINES.—Although forming the connecting link between the Northern Pacific railroad system and Chicago, and although operated by the latter company as lessee, the Wisconsin Central lines, familiarly but incorrectly regarded by the public as the Wisconsin Central Railroad, must be referred to separately. In April, 1890, a contract lease was made by and between the Wisconsin Central Company, the Wisconsin Central Railroad Com-

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THE SHELDON RESIDENCE.

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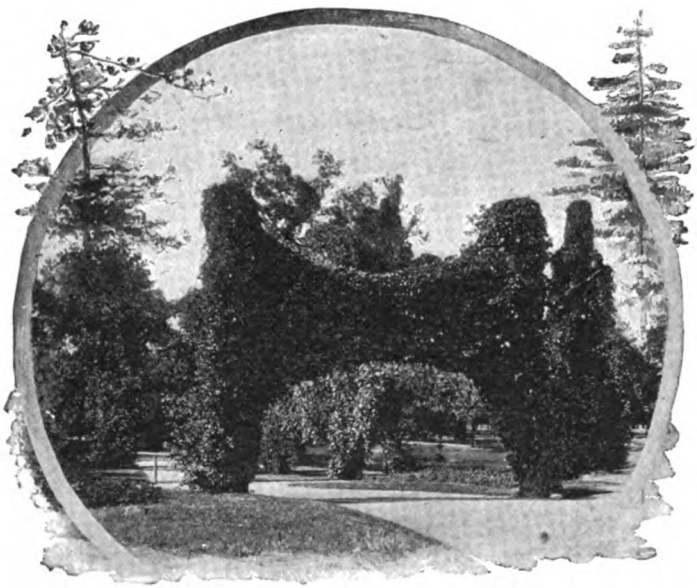
pany, and the Northern Pacific Railroad Company, whereby the latter company obtained a lease of all the lines of railroad owned and controlled by the Wisconsin Central lines between the cities of Chicago and St. Paul and Ashland, including the lines of railroad, real estate and terminal facilities of the Chicago & Northern Pacific Railroad Company in the city of Chicago, thus giving to the Northern Pacific Company a complete line from St. Paul to Chicago, with ample terminal facilities in the latter city. This combination of interests was deemed by the directors of the Northern Pacific of the utmost importance, as giving access to the city of Chicago by a line of its own ownership and possession, with unsurpassed terminal facilities. While the terms of the lease relieve the Wisconsin Central from operating details, it leaves the building of branches, feeders, and all extensions of, and permanent improvements upon, the Wisconsin Central lines, to be jointly agreed upon by the lessor and lessee, and to be actually constructed by the Wisconsin Central companies. The development of the land grant and management of the iron properties remain in the exclusive control of the Wisconsin Central Railroad Company. The Wisconsin Central, from its inception, has been peculiarly identified with Wisconsin, its growth and progress. Almost nine-tenths of the mileage of the system is within the borders of that State, and its principal offices are located at Milwaukee.

GRAND CENTRAL DEPOT.—No visitor to Chicago can escape having pointed out to him among the greatest attractions of the city, the magnificent Grand Central Depot, located at the corner of Fifth avenue and Harrison street. It is one of the best specimens of the highest type of modern architecture to be found in the world. Where this grand pile rises to-day the Bridewell or City Prison stood years ago. The site was long given up to stone and coal yards; it was for years one of the most uninviting spots in the city. The erection of the Grand Central Depot has made it one of the most attractive, and gradually the old buildings, which still stand in the vicinity, are giving place to structures which comport with the dig-

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nity and grandeur of the great railroad station. It is more familiarly known as the Wisconsin Central Depot than by any other name.

THE UNION DEPOT.—The ground covered by this railway station extends from Madison street on the north to Van Buren street on the south, and covers about a block in width along the river front. This depot has been frequently referred to before, and it only remains to be said here that it is one of the handsomest in the coun-



SOUTH PARK SCENERY.

try, and that its train shed is the largest in existence. On the west side of Canal street, and particularly in the vicinity of Madison, is a block of buildings which has long been not only a disgrace to the west division of the city, but to all Chicago. It is covered in part by tumble-down frame buildings, and in part by lodging houses of the lowest description, and the vicinity is the resort of idlers, thieves and vagabonds generally. The lodging houses have frequently been the scene of crimes which have shocked the community, and they have been as well a menace to the general peace of the city in times of

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riot and disorder. In these lodging houses, also, have been colonized at various times men who have been hired to do disreputable work at the polls. To our right is the old Washington Hotel, a landmark which will shortly disappear to make room for an elegant block of buildings. Beyond this, at the northwest corner of Canal street, is a handsome European hotel, and further on is the Gault House, one of the oldest and best known hotels in the city. From this point to Union street there is not much to be seen that reflects credit on the west side, or that will interest the visitor.

PULLMAN.—Pullman to-day presents the most advanced and improved example of city construction which the world has seen, and it is carefully studied for its suggestive value by men of science, capitalists, economists, and students of social science throughout the world.

Pullman is unquestionably one of the greatest attractions Chicago has to offer her visitors. It is situated on the west shore of Lake Calumet, fourteen miles south of the Court-house. The extreme length of the town is about two miles in a north and south direction, and it is half a mile in average width. The surface of the streets around the arcade is about nine feet above the lake level, permitting good basements for building. The land rises to the north and west, and the surface at the foundry is fifteen feet above the lake level. All improvements in the way of draining, paving, sewerage, gas and water preceded the population, or were put in when the houses were built. Pullman has a population of 11,783, and 6,000 operatives are employed in all the industries here, and their average earnings are $2 a day, or over $600 a year each. These earnings averaged $610.73 each in the Pullman industries for the fiscal year ending July 31, 1891. In no other place are all workmen so well provided for as here.

This beautiful town is the "pet" of Mr. Pullman; it is his "hobby," if the complete realization of an ideal can be so termed. As long as it was merely an *idea* it received scanty approval, but now that it is a *fact* there are none to be found who ever had the slightest doubt of the ultimate success of the undertaking.

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ST. JAMES' CHURCH.

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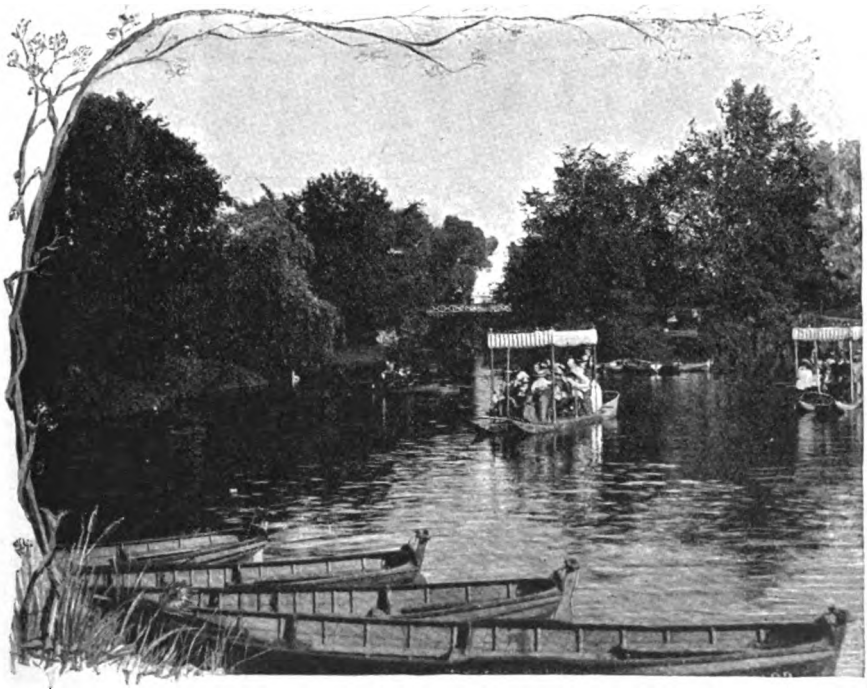
The idea was not a new one to Mr. Pullman, but it was not until 1880 that it began to take physical shape, architectural, mechanical, commercial, industrial and sociological detail. The perfect success of the plan is no doubt largely due to the fact, first, that Mr. Pullman was working out his own plan, and second, it was his privilege to work out that plan with no one to meddle and object. No doubt if some of our larger cities had been planned on a similar basis it would be better for those cities; this may not be a democratic idea, but study the history of this model village and draw your own conclusions. Mr. Pullman is a man of strong character and broad views. He welcomes knowledge from every source, but in his own affairs he proposes to be his own master. "So, having ample power, though little sympathy or encouragement, he managed every detail, and ever since success has crowned the work there is no man who disputes with him the credit of devising it, or arranging its details down to the smallest particulars."

The tract of land now "Pullman," at the beginning of 1880, was a lonely waste of low, nearly level, grassy prairie on the west shore of Lake Calumet, fourteen miles south of the center of Chicago. The principal advantage it has was that it was crossed lengthwise by the Illinois Central and Michigan Central Railways.

It has taken just ten years to change this unpromising plain into the most exquisite, best regulated manufacturing town in the world. It has nearly eight miles of paved drained streets, including a grand boulevard 100 feet wide, abutting on the lake; twenty-five blocks of brick dwellings along these streets, capable of housing 1,750 families; an arcade building 256x164 feet in size, containing all the stores of the place, the bank and post-office. The second story is used for offices, the library and theater; and the third floor holds lodge-rooms for societies; it is heated throughout by steam; a handsome and well-kept hotel, that can accommodate 100 guests; school-houses, where 1,000 pupils a day can be taught; a water-tower 195 feet high, on top of which is a large boiler iron tank which holds half a million gallons; this is always kept filled for use in case of fire, and only for fire

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use. A market 110x100 feet in size, with stalls for meat, vegetables, fish, poultry, etc.; and in its upper story a public hall with a capacity of 600; gas works connecting with every house in town; green-houses for furnishing the town, its parks and gardens with flowers and shrubs. Brick-yards with a capacity for turning out 30,000,000 bricks a year; the clay for them is dredged from the bottom of the lake; the bricks are all machine-made. Ice-houses, holding 24,000



LINCOLN PARK LAKE.

tons of ice; lumber yards covering eighty acres; about fifty different kinds of lumber are used here, and nearly half a million dollars' worth is always kept on hand; this lumber is obtained from South America, Central America, Mexico and from half the States of the Union. Finally, the soul of the whole and the reason of its existence, the great Pullman Car Works, the Union Foundry, the Drop Forge and Foundry, the Street Car Works, the Terra-Cotta Works, the Standard

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Knitting-mills, the Columbia Screw Factory, the Allen Paper Car-wheel Works, the Calumet Paint Manufacturing Works, the Pullman Iron and Steel Works, and other enterprises.

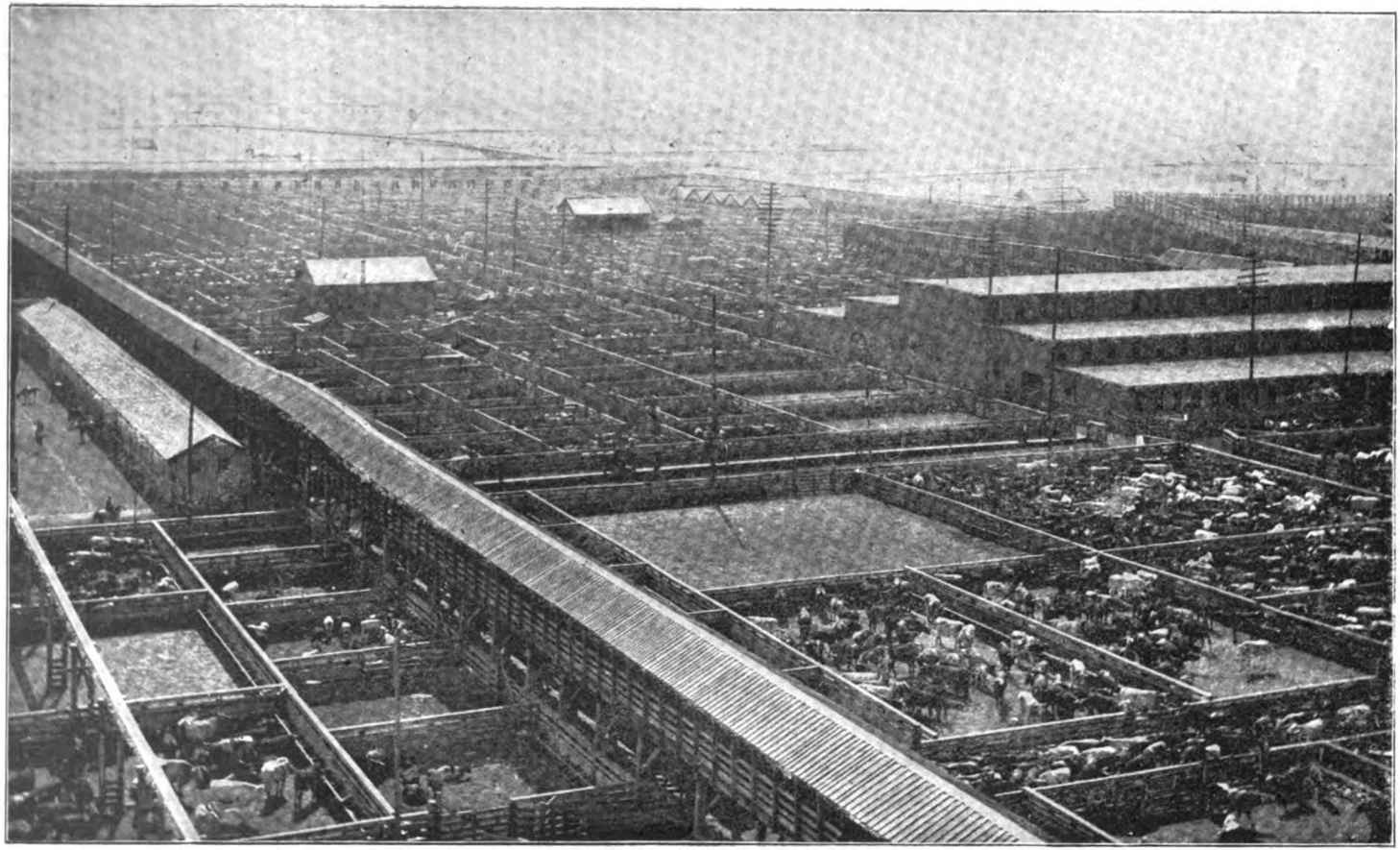
It is perhaps too much to say that any one mind could grasp in advance each of these details; but the idea contained the plan and potentiality of them all, and laid the broad and deep foundations on which they could rise, have risen and are constantly growing. Then, too, Mr. Pullman's designing mind has seized each position and made it a stepping-stone for each further advance. It has been his daily thought and nightly dream, and nothing has seemed to him too good and great for his model town.

The car shops furnish cars of every description, and have a capacity of turning out each week 3 sleepers, 12 passenger cars, 240 freight cars and several street cars, the number depending upon the value of the cars (making about 4 cars an hour during working hours). The other industries furnish, with the exception of glass, blankets, car springs and plushes used in upholstery, everything used in the construction of the best cars; all marble work, glass embossing, mirror-making and electro-plating are done here. The total value of the finished product from all the manufactories at Pullman is about $15,000,000 a year. This comes by the labor of about 5250 operators, whose average earnings are $2 a day. Of these only a few are children (perhaps 200 in all), and still fewer women, of whom only 150 are employed. Some of the latter hold clerkships; some work in the upholstering rooms, and some in the knitting-mill.

In selecting the architectural style to be followed at Pullman, it was deemed necessary to choose one that could be adapted to the great variety of buildings devoted to different uses. In general terms the style employed might be designated the round arched or Romanesque, without the Byzantine details of the great shops and principal buildings. It may be said that the buildings suggest a simplified modification of the Queen Ann style of architecture.

Turning now to the less obvious features, one finds still more to admire. The sewerage and surface drainage preceded the popula-

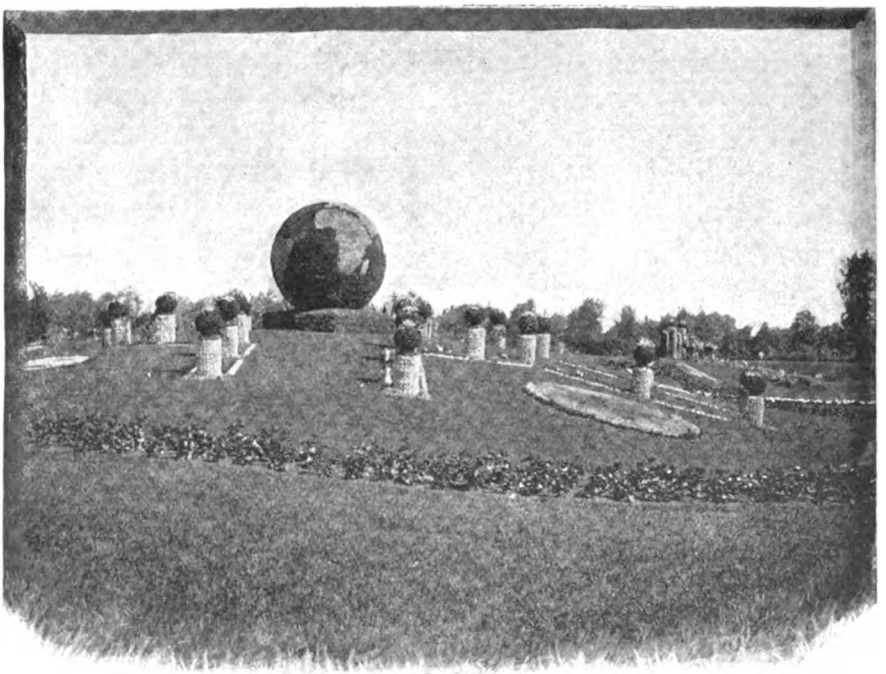
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STOCK YARDS.

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tion, being established at the same time when the dwellings were building. The surface drainage carries the rainfall into Lake Calumet. The sewerage proper is a separate system, connecting with every sink and cesspool, and taking the entire sewage from the houses and shops. Each house is supplied with sanitary plumbing. The sewage is conducted below the surface to a huge tank beneath the water tower, whence it is pumped and piped (1,800,000 gallons



WORLD'S FAIR GLOBE.

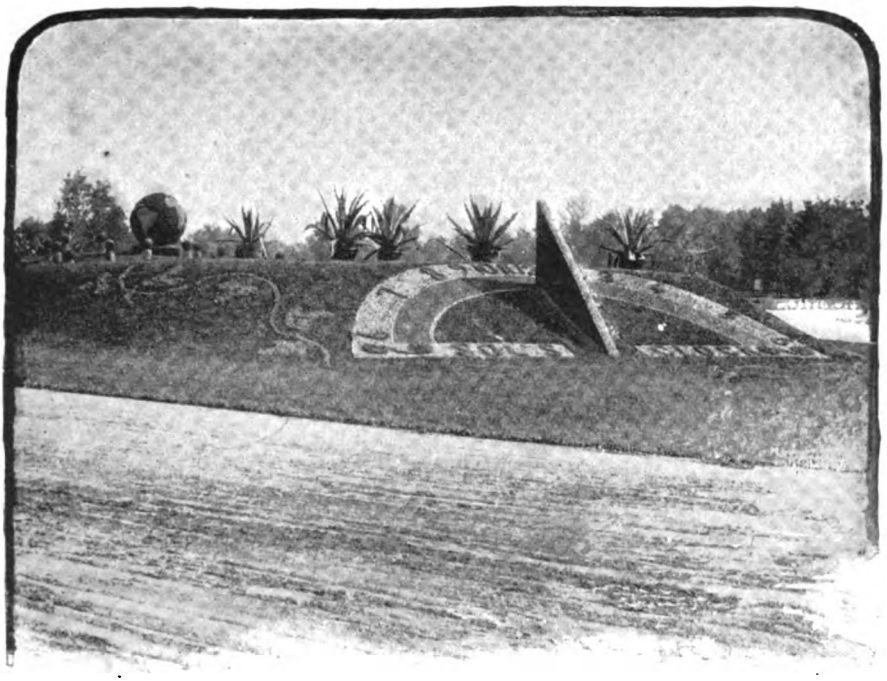
a day) to the Pullman farm, three miles away to the southwest, to be used as a fertilizer. The sewage tank is thoroughly ventilated through pipes debouching above the top of the water tower, and has, besides, a connection with the tall chimney of the boiler house, which outlets combined produce a down draught in all the sewer openings. The town has no evil odors.

The water supply does not come from the water tower, as many

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suppose, but from the Chicago water system. The town has fifteen miles of water mains.

The Pullman farm consists of 140 acres, thoroughly piped and underdrained for the reception, purification and utilization of the Pullman village sewage. Hydrants are so placed that the distribution can be conveniently done. All organic matter in the sewage is taken up by the soil and the growing vegetation, and the



SOL'S CLOCK (Lincoln Park).

water (which is, of course, by far the greater mass) runs off through underdrains to the ditches, and they deliver it pure and clear as spring water, into the Calumet river. In winter the sewage runs upon one field or one filter-bed, and then on another, the filtering process appearing as perfect as in summer. Thus are the waste products largely transmuted by vital chemistry into luxurious vegetable forms. The most profitable crops have been found to be

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onions, cabbage, potatoes and celery. One acre takes care of the sewage of one hundred of the population. This solution answers one of the problems so often propounded in relation to the sewage of Chicago, namely: "Why not utilize it for fertilization?" At one acre to the hundred of population, it would require twelve thousand acres to dispose of the sewage of Chicago, twenty square miles from which settlers would have to be excluded. At some future time, when lands naturally fertile and spontaneously productive shall have grown more scarce and distant, this may be effective; but now it is a manifest impossibility. Even in old Europe, where there are at least 150 sewage farms, there is scarcely one which pays expenses of handling, instead of the large profit which might be expected from a free gift of unlimited manure. The difficulty seems to be in the impossibility of rotting or properly composting the crude elements of the sewage. The Pullman farm pays a reasonable profit. One of the most admirable features of the town—true it is a negative one—is that there are no saloons, no gambling houses and no almshouse, and as a natural sequence I suppose, though I do not know positively, no jail. They have a cemetery; but it is not a paying investment. The growth of the "City of the Dead" is very, very slow. Now, some people who have no doctor friends, who are not interested in some cemetery company, or in a coffin or tombstone establishment will think this a great advantage; but to most of us common mortals (we are a race of vampires) it is a great defect.

The absence of drinking shops is due to the fact that the Company has not parted with its realty; in fact, this policy was adopted to prevent just such evils. Whenever and wherever public sentiment is up to it, they can exclude any evil by popular consent; but in this case the promoters preferred to take no chances, and "prohibition prohibits" in Pullman, however it may struggle, prevail, triumph and fail elsewhere. Do not misunderstand me; no one is prevented from drinking, only they must go elsewhere for it.

Just outside of the town limits there are drinking places by

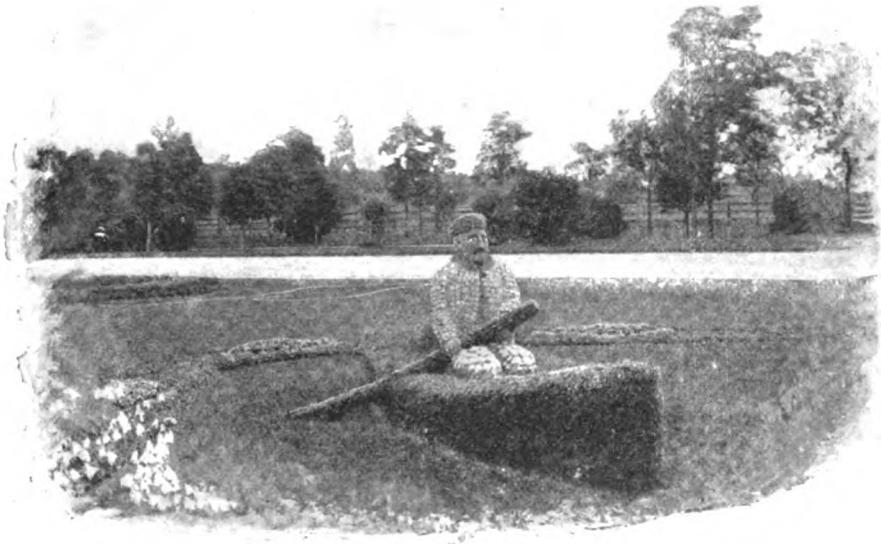
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BEACH FRONT.

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the scores, with plenty of customers; so drunkenness is not unknown; but it is marked, exceptional and disgraceful. The operators know which of them are drinkers and which are not, and form their likes and dislikes accordingly; but the management leaves it all to them, taking no cognizance of the matter. Freedom is held to be the only condition for a healthy, stable growth of morals, intelligence and wealth.



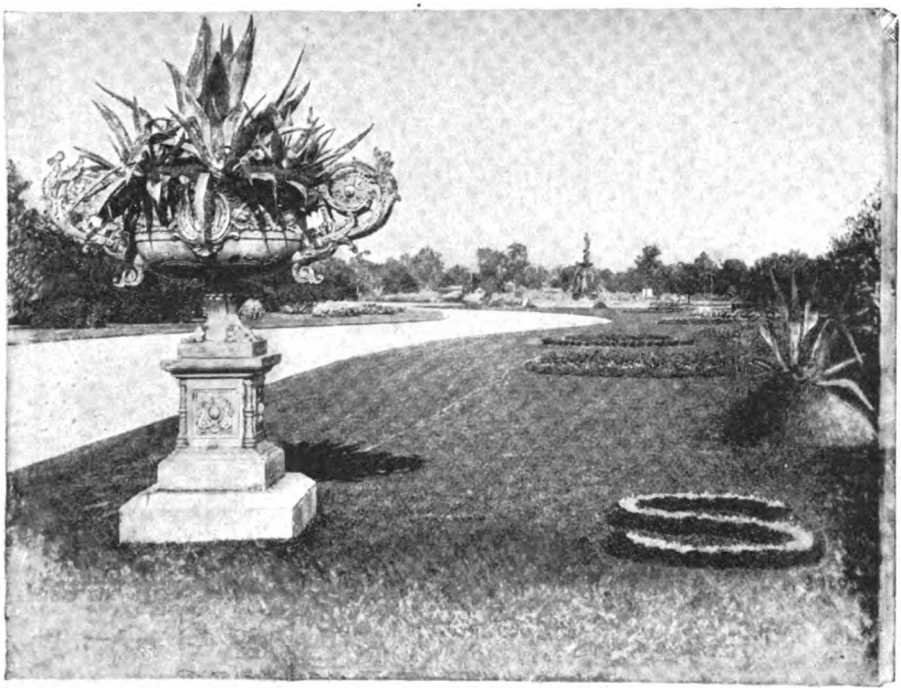
FLORAL DESIGN (Lincoln Park).

At Pullman personal liberty of thought is associated with that of action. Religion is not assailed and dwarfed by patronage—certainly not by opposition. There are eight places of worship in town, representing as many shades of sectarian belief. Each is entirely sustained by the voluntary contributions of its members. The company built, at the outset, a beautiful green-stone church, but it is rented to a congregation like any other edifice or tenement.

Good order in the community is always maintained, without in-

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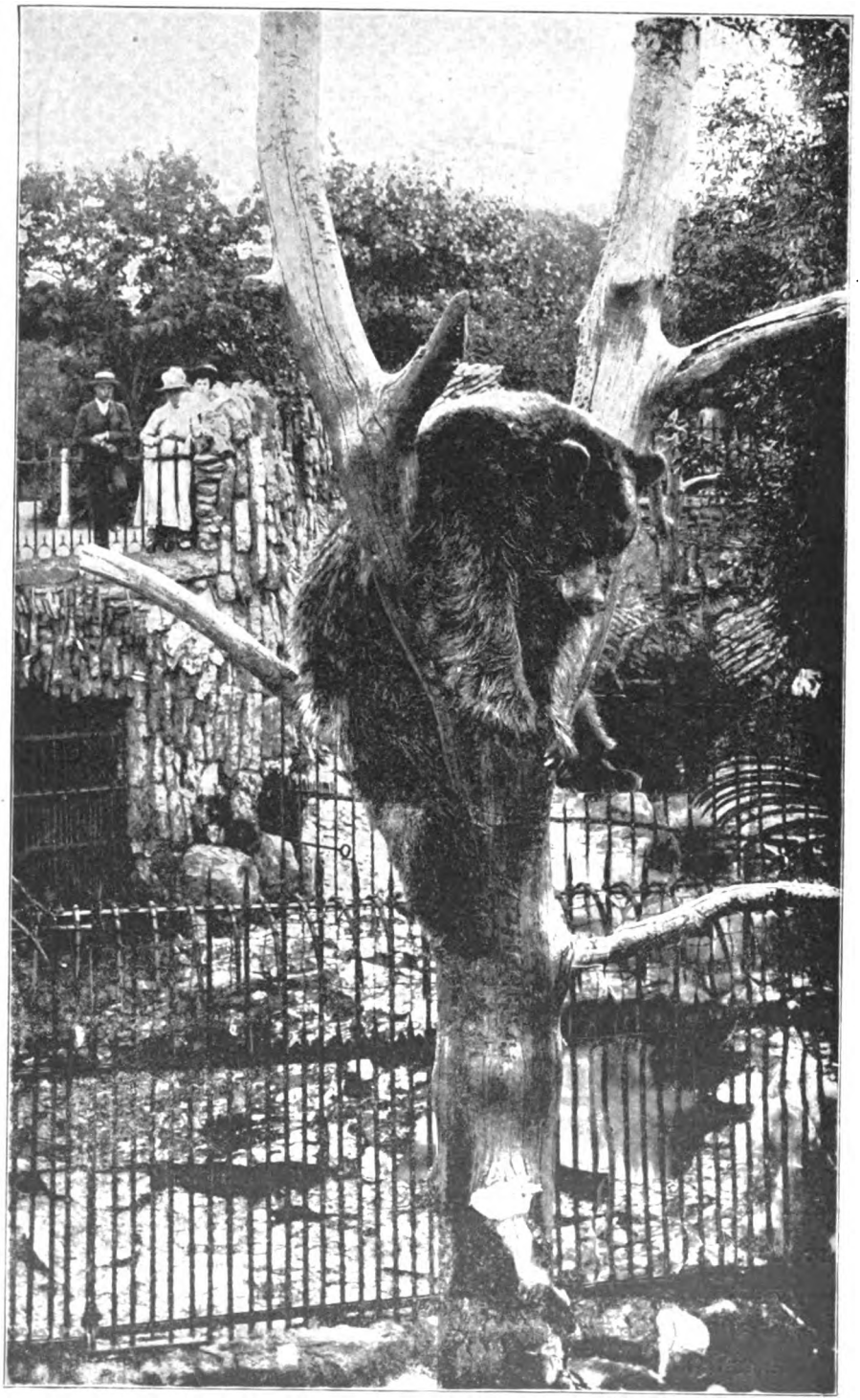
terfering with the freedom of the individual, so long as his freedom does not trespass on the liberty of another. There has never been any attempt (by the founders) to set up any religious denomination in the town. There was a church building constructed at the outset, but it was rented to a society which represented the majority in the town.



SCENE IN SOUTH PARK.

Within a stone's throw of the green-stone Presbyterian Church is a new building put up by the Catholics. In addition to this the Swedish Lutheran and other denominations have rooms where services are held. There is no artificial stimulus anywhere. There are no lectures given to the workmen. Neither politics nor religion has any part in the administration; that is left to the individual. Sunday is a day of relaxation; many go to church; many go to the lake-shore and take part in the out-door games. The town gave a small

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Democratic majority at the last election. The men know that they are perfectly free from criticism on the part of the management, whatever result is declared at the polls.

The Pullman Loan and Savings Bank is the local financial depository of the Company, and also the custodian of the voluntary hoards of the citizens. Its savings deposits in 1891 amount to $467,981.45, in the names of 1,828 depositors. The average sum held by each savings depositor in 1884 was $145.43. In 1890 it had grown to $243.97, and in 1891 is $256. By purchases in the immediate vicinity, 885 of the operatives are freeholders in their own right. In all 2,297 live outside the town. All employed are free to live where they please, but Pullman town is always full.

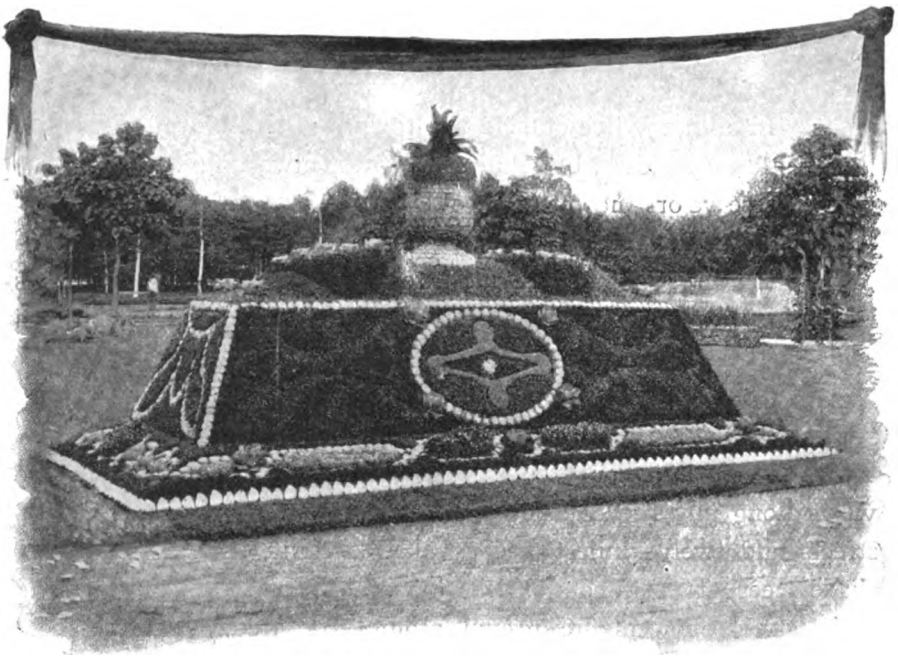
No reserve or "hospital money" or "insurance fund" is exacted by the Company, nor are any store accounts collected on the wages pay-roll. (The Company is not interested in the shops except as landlord of the shop-keepers.) The only deductions from the earned wages are rents due by those who occupy Company houses or flats.

The position of the city already built is about half a mile in width, and is two miles from the north to the south end of the town. The successive blocks are unlike, giving pleasing changes to the views along any street. There are now about seven miles of paved streets and twelve miles of sidewalks. At intervals of thirty feet shade trees are planted along both sides of the streets, and on the main streets flowers are grown around the trees. Open places planted with shrubbery and flowers really constitute a long park, in the midst of which the homes of the people stand. The monumental buildings and vast shops in the long stretches of meadow, walks and shrubbery emphasize the park features of Pullman.

There is one style of flats having from two to four rooms each, which rent for from six to nine dollars a month. Of these there are now six buildings, each containing twelve families, one building containing twenty-four families, two containing thirty-six families, and one containing forty-eight families. There is not a room in these buildings which has not one or more windows, giving residents abundance of

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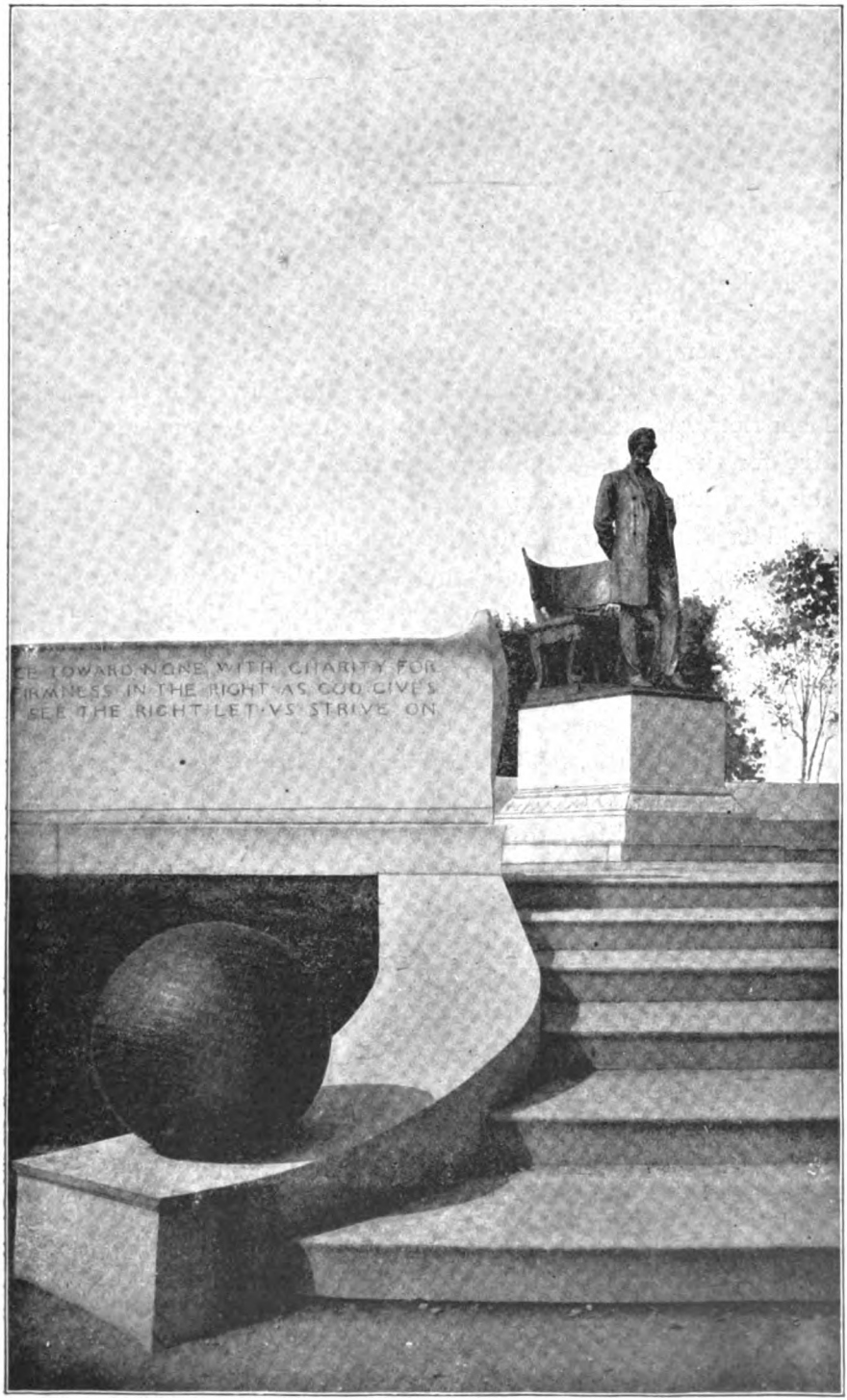
fresh air and light. These flats and their surroundings are kept in order by the Company. Blocks 14 by 27 and 30 contain 300 flats, each apartment containing from two to five good rooms and its proper proportion of basement. Still another style of flats is seen where every family has a separate entrance, and is accommodated with five good rooms and a basement. These flats rent for from $14.00 to $16.00 a month. There is now a tendency in cities to build flats,



LINCOLN PARK FLOWERS.

and the advantages in them are usually set forth as follows: The tenant secures a home for a lower rent, and is brought nearer his place of work and business. In case of sickness and trouble he has help close at hand; the common hallway is lighted and the whole building cared for by a janitor, services which cannot be rendered in single houses. By accommodating many families upon a small tract of land, men are able to reduce their living expenses to a minimum, while all have the advantage of living upon improved streets and in

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LINCOLN MONUMENT (Lincoln Park). 139

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close proximity to parks and gardens. Of course separate sinks, water-taps and closets, all inside the houses, are provided for every family.

There is a variety of single houses with rents ranging all the way from $16 to $50 a month. These houses are adapted to the needs of men receiving from $2 a day to $5,000 a year. The average rental of all the tenements in Pullman is only $14 a month.

"The connection of the Pullman Company with the so-called labor riots was short but full of interest for the moment, and suggestive for the future. Pullman industries were a shining mark, and the elements of destruction would score a brilliant victory if they could lay them low. Therefore the attack was expected, and it came—from the outside, of course. With a shrewdness worthy of them, the assailants chose as the weakest point in the industrial citadel, the cabinet shop, which was largely filled with foreigners, not yet imbued with the 'American Idea.'

"The foreign idea of irresponsible conflict between labor and capital, and of 'Internationalism' as the only refuge of the former from the oppression of the latter, these men had either brought over with them or readily absorbed from the plausible talkers sent among them. The mass of other workmen, not so much convinced by argument as moved by brotherly feeling, consented to join in the demand for an eight-hour day and other proposed changes, and at an appointed time a committee called on Mr. Pullman to lay that demand before him. The committee, as usual in such cases, was chosen mainly from the men known to, and respected by their employers; but contained also some of the 'walking delegate' element, men who had entered the employment on purpose to interfere with it. Mr. Pullman, recognizing easily the 'outsiders,' invited a statement of their position. They had free scope to ask what they had determined on, and to enforce the demands by such arguments as they thought best. When they had entirely covered the ground he expressed himself thus:

"That they evidently entertained the deliberate purpose of either

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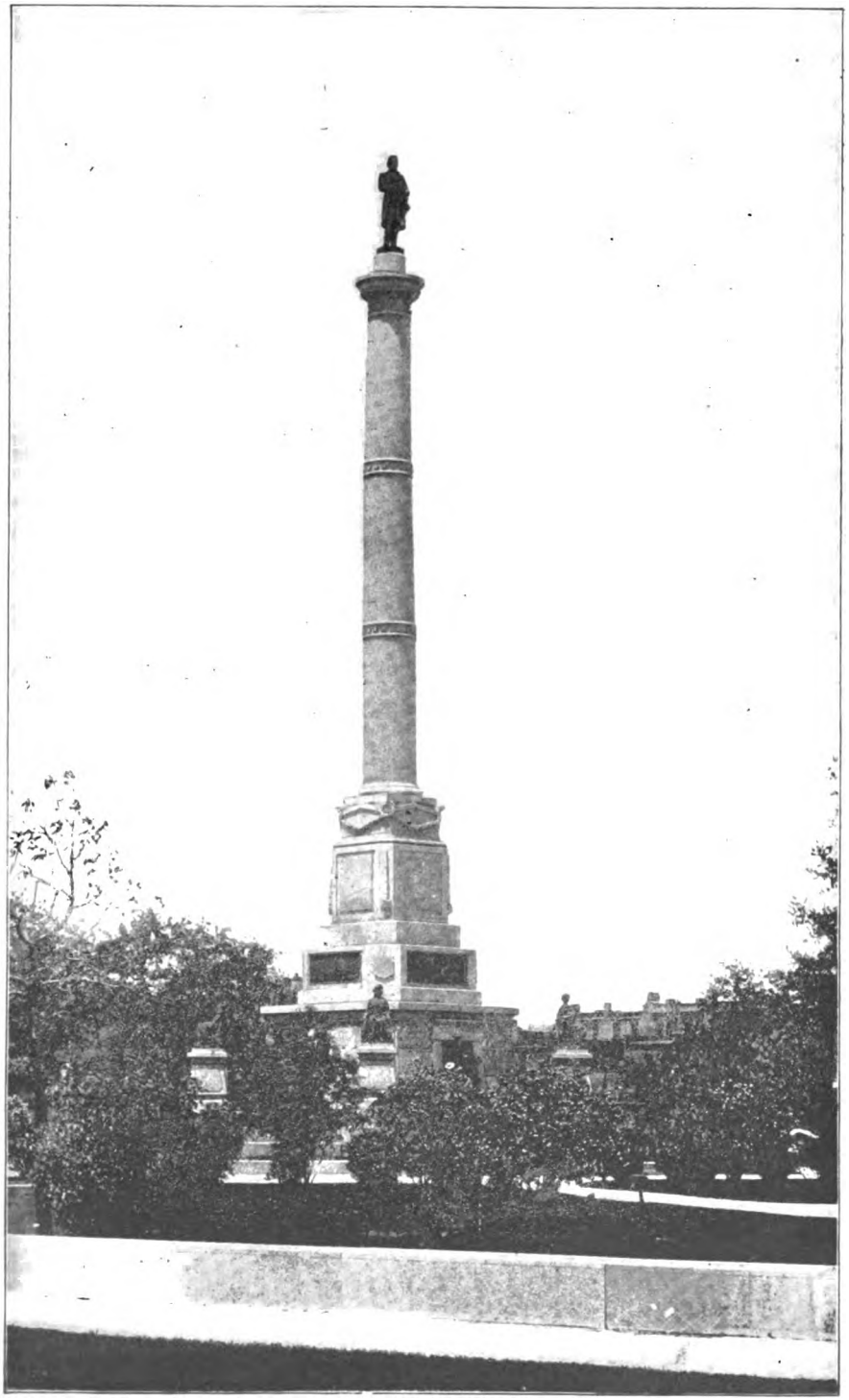
controlling the works or stopping them. The latter they might do, but to what purpose? When work stopped wages stopped. How would their families fare? The Company would live, doing its work elsewhere or not doing it at all. As to the former, the Company was satisfied with its present management and proposed to be as free in its actions as were its employés in theirs."

This was all. Mr. Pullman was kind, but firm. After their interview he refused to discuss the matter again. They knew his decision; it was unalterable. The men "went out," stayed two weeks and returned to their work. Since then things have gone smoothly; differences there are frequently, but they are settled in free discussion between the management and the operatives. These conferences are carried on in a friendly—not servile—spirit, and sometimes result in convincing the one party, sometimes the other; oftenest in a compromise of conflicting interests and claims.

"The historian is not the prophet, but it may be said without undue presumption that if—*if* the path in front of Pullman proves as fair to the foot as its vista appears to the eye, then the enterprise sounds the key-note for the full and final chorus of concord between labor and capital. In that case its founder has, single-handed, built the enduring monument of the passing nineteenth century; a pyramid, the broad, deep ground course whereof is human nature, while its sunlit cap-stone is peace."

PULLMAN PALACE CAR COMPANY.—Main office, Pullman building. President, George M. Pullman. Directors, George M. Pullman, Marshall Field, J. W. Doane, Norman Williams and O. S. A. Sprague, of Chicago; Henry C. Hulbert, of New York, and Henry R. Read, of Boston. One of the greatest corporations in the world.

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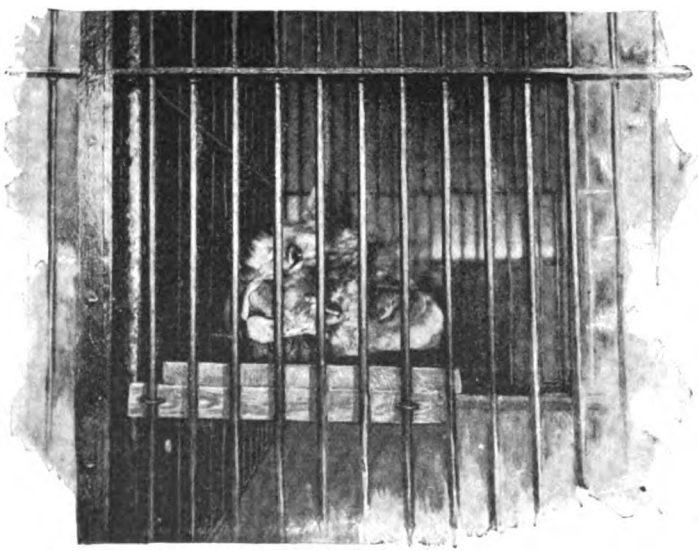
142 DOUGLAS MONUMENT.

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PART III.

PARK SYSTEM.

"THE splendid park system of Chicago, constituting (with its connecting boulevards), one of the most extended in the world, took its rise in the construction of Lincoln Park, and this in its turn was the offspring of the cemetery established in 1835,



IN THE ZOO (Lincoln Park).

north of and adjoining what is now North avenue. In all, this burial place included sixty acres of what was once sand hill and pine forest, but became, by the care of lot owners, a fine and well-ordered graveyard. The city also owned sixty acres north of and adjoining the burial place. In 1860 the council passed an ordinance forbidding the sale of lots and the interment of dead in the last named tract,

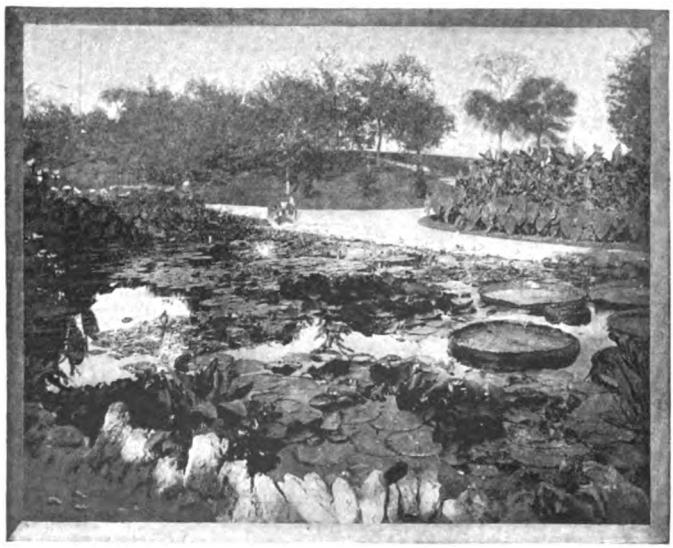
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BARTLETTE RESIDENCE.

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and in 1864, another ordinance setting apart the same for a public park. The latter ordinance also forbade the sale of more lots in the first plot, and the interment of bodies on the part not sold—the Potter's field. To-day in the appearance of the magnificent park, with its statues, fountains, hills, dells, lakes, streams, flower-beds, palm-house, menagerie, and miles of roads and paths, there is almost nothing to indicate that it was once the burial place of uncounted thousands of our fellow-citizens, many of whom, no doubt, accidentally



LINCOLN PARK LILY-BEDS.

omitted in the removal, still sleep beneath its surface. Nothing, except a single tomb, that of the old Couch estate, to which, for certain reasons, the Park Commissioners never obtained title; this remains silent and grim, as if to remind the pleasure-seekers that 'in the midst of life we are in death.' This park besides having the advantage of being the first, has also the peculiar and inestimable advantage of a Lake Shore drive. The Lincoln Park Commissioners were shrewd enough to see and profit by this opportunity at once; almost the first outlay they made was in preparing a drive-way along the Park

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BARTLETTE RESIDENCE.

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front. This served a double purpose; it reconciled the people to the increase in taxes, and it shut out and made forever impossible the alternative of the Lake Shore for a railway entrance to the city.

"It is easy to perceive that a range of wind-swept sand hills is an unpromising place for a park, but hard to conceive of the immensity of the task of subduing it to verdure and beauty. On the other hand, there are some compensatory features; the sand is easy to move by plow and scraper, and is a self-draining material when reduced to the desired form. On the whole, one would rather attack for park purposes warm sand than cold, refractory soaked clay or hardpan. A design once fixed on, with a pond here and there to be excavated, a hill or two or three to be brought low, a mound to be raised, a slope to be graded, a ridge to be ranged, numberless flower beds to be started, a hot-house, a conservatory, a green-house, a palm-house, a boat house, a tool and machinery house, a keeper's dwelling and barn to be built—all these things and a thousand others being laid out for deliberate achievement, the thing goes on step by step, and the change, to an occasional visitor, seems almost magical. 100,000 cubic yards or more of clay make a substratum to the grass plots; ten thousands of loads of black soil and the fertilizing city street sweepings make the top dressing; thousands of trees, home grown and imported, soon stand in orderly confusion, and behold! 'The wilderness blossoms as the rose.'"

There are 2,236 miles of streets, and some fifty miles of boulevards in Chicago, the latter connecting the surrounding cordon of attractive parks. The city is proud of the chief streets, which are 60 to 100 feet wide, with State street 125 feet wide. They are straight, cross at right angles, are mathematically as nearly level as drainage will permit, are generally well lighted and paved, and in the business section are bordered by solidly constructed buildings; while the residential section displays very fine dwellings, and Michigan avenue, at the lake front, is one of the handsomest foliage bordered streets of residences in the world. The outskirts are beautified by twenty parks, making with the miles of connecting boulevards a semi-circle

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around the city, having each end resting upon the shore of the lake. Nature gave to the monotonously flat prairie around Chicago no scenic charms excepting the glorious view over Lake Michigan. It has been a most admirable thing for the city that somebody has been able to pause in the universal and engrossing chase after the almighty dollar long enough to design these pleasant parks. The broad expanse of prairie was low, level, and treeless originally, but abundant foliage has been planted, and art has made little lakes and

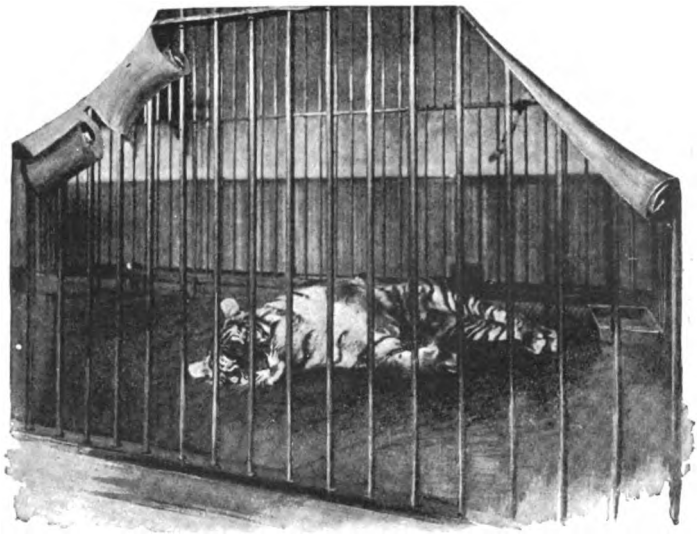


AMONG THE LILIES.

miniature hills ornamented by attractive flower gardens and shrubbery. There are nearly 2,000 acres of these parks, the system beginning on the northern verge, with Lincoln Park on the lake front, covering 250 acres, and stretching around to the South Park, and thence down to Washington and Jackson Parks, the latter fronting for almost two miles on the lake shore in the southern part of the city. Large sums have been spent in their care and development, and about $2,000,000 additional will be spent on these parks in anticipation of the fair. The Drexel Boulevard, which is the favorite drive-

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way to the South Park, 200 feet wide, is the most handsome of the connecting roadways, and is among the celebrated avenues of America. A magnificent fountain, surmounted by a bronze statue of the late Francis M. Drexel, the founder of the noted Drexel banking firm, adorns its entrance. This broad parkway has a fine carriage road on either side of a central walk for pedestrians, the latter winding among picturesque gardens, and the whole boulevard being well shaded, though the trees are still young. Washington Park, beyond



IN THE ZOO (Lincoln Park).

the South Park, contains 371 acres, Jackson Park 586 acres, and the broad midway plaisance, connecting them, 80 acres. These three are the grounds devoted to the World's Fair, and, combined, cover 1,037 acres, the chief buildings being located in Jackson Park.

The park system proper is under control of the commissioners, elected by the courts. The parks under the supervision of these commissioners are maintained by direct tax upon the respective divisions of the city. Under the control of the city government are a number of small parks, squares and "places" which are maintained

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COMMERCIAL NATIONAL BANK, DEARBORN STREET.

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at the expense of the city treasury. This chain of parks and boulevards gives one of the finest drives in the world, and there is no reason in the world why it should not be, for no expense was spared in its construction and no expense is spared in keeping it up. Besides it is as autocratic as the private park of an English nobleman; no vehicle that would injure its surface or mar its beauty is allowed upon it.

"Under the provisions of the park acts, any street boulevard is placed under the control of the Park Board, as to its care, government and use, and the Board can assess adjacent property for its reimbursements. The Board thereupon forbids the use of the roadway for business travel, and even for funerals except so far as absolutely necessary to the residents on the street itself. The Board must be applied to for permission by any railway which desires to cross its boulevards; in short, the whole length of each is treated as part of the park. This is not looked upon with favor by the residents on the parallel streets near by, as it not only gives the favored avenue a certain glory and distinction, but also throws on the other roadways more than their share of the public business, the traffic which is heavy, dirty, noisy, unsightly, undesirable and pavement wearing. Still, they submit, perforce with as good a grace as may be, 'it is for the city's good.'"

Only a very few years ago, complaint to the effect that the great parks of the city were too far removed from the people, and practically inaccessible to the very class whom they were intended to serve was general. Now, however, they are becoming the nuclei around which the populous districts are growing. In a few years, instead of being on the outskirts of the city, they will be breathing places in its interior.

"It is unquestionable that the park and boulevard system of Chicago was planned and carried out far ahead of the city's actual needs. In truth, even at the present time, they are beyond all proportion to the use made of them. Large expanses of park are lonely solitudes, except on some special feast day. Long stretches of boule-

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vards are as inappropriate to their respective neighborhoods as would be a cathedral in a country village. This being so when the city has long passed the million mark, how almost absurd must they have seemed when they were laid out encircling, though far away from a town of only 300,000 souls! But, all this being true, it only proves the projectors to have had the gift of second sight. If it had not been done when it was it would have been impossible ever after-



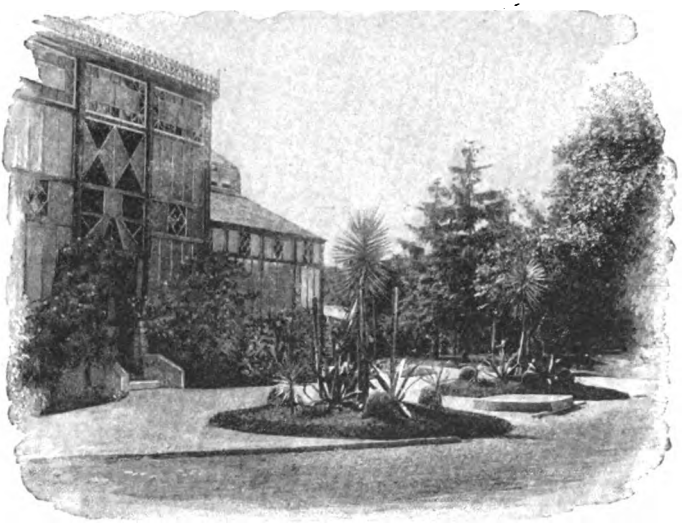
SOUTH PARK LILY PONDS.

wards. In spite of the loudly-blamed greed of the property owners, (who in general, though not invariably, got every penny they could,) land was bought at prices far below present values. The limit of permitted rates of assessment (between one and two cents on the hundred dollars of value) gave, at first, very scanty means for improvements and sinking-funds; but as surrounding lands and lots rise, (partly by aid of the parks and boulevards themselves,) the same old rates gave generous yearly sums to successive Boards, while the less-

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ening of the debt, by calling in bonds for the sinking-funds, reduced year by year the interest charges, so that in the Columbian year the whole system will be substantially clear of incumbrance, while the available funds will authorize expenditures not less than magnificent. Not only has this generation planned for the next and its successors a princely pleasure ground, it has bought it and paid for it, and devises it to the future free of the usual purchase money mortgage."

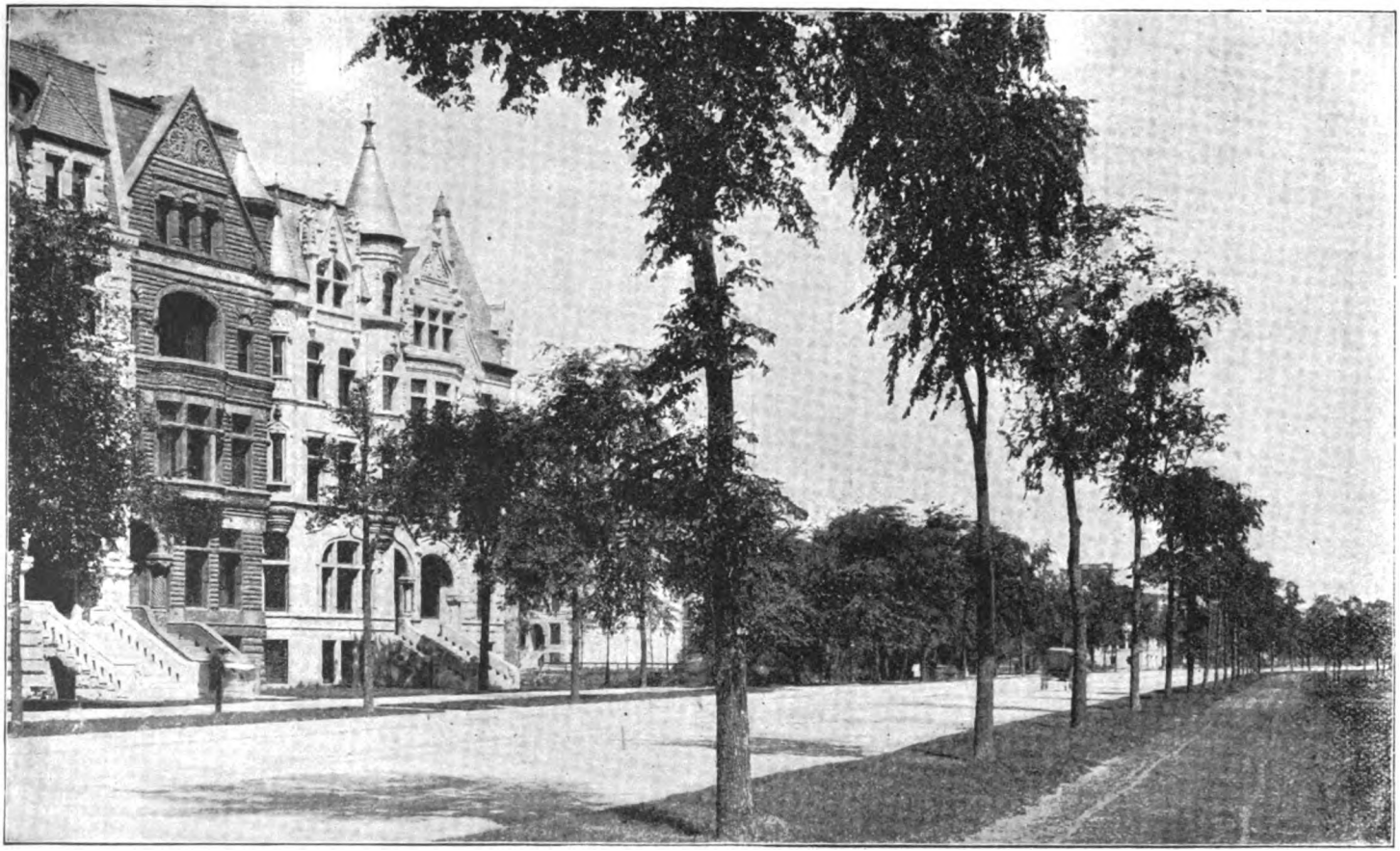
CONSERVATORIES.—Winter visitors will find the conservatories of the different parks among the most attractive sights in the



THE CONSERVATORY.

city. These conservatories are open during all seasons, and are in charge of a skilful corps of gardeners chosen by the several park boards. The new greenhouse, propagating house, and palm house at Lincoln Park will attract the attention of the visitor. Among the curious things to be seen within its walls is a sago palm 100 years old that came from Mexico many years ago; a tree fern 15 feet high; a very large date palm, and a Carludonica palmata in bloom. Mr. Stromback, the chief gardener, gives some interesting facts in refer-

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LAKE SHORE DRIVE.

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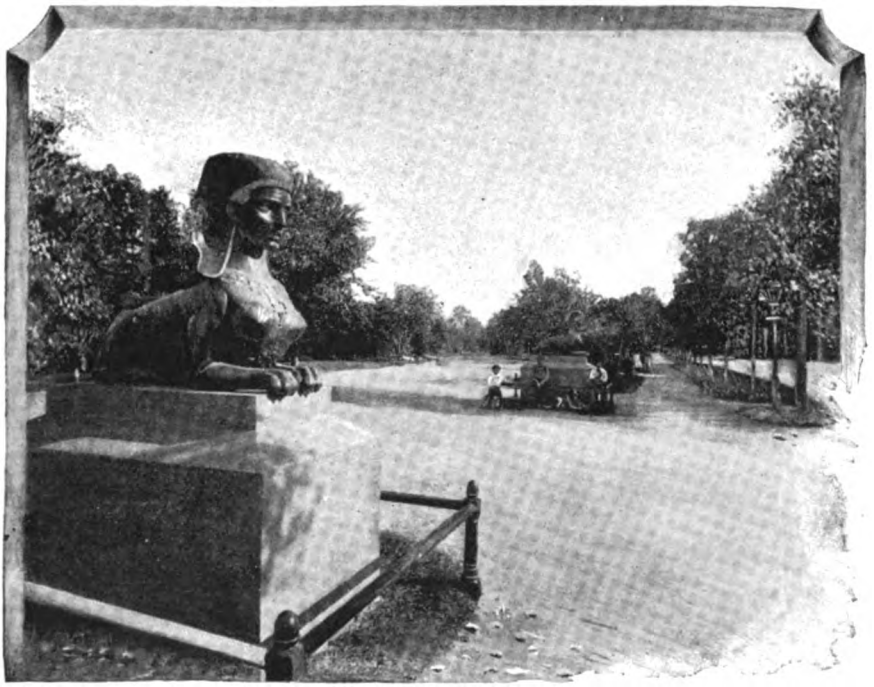
ence to the water-lilies that have proven so attractive outdoors during the past summer. The large lily with the tub-like leaves, Victoria Regia, is annually raised from seeds, a single pod having been known to contain 435 seeds. It is a night bloomer, and the blossom is quite fragrant. Some of the other water lilies are also night bloomers, while some open in day-time. The water in the basins in which they are grown flows from the engine house near by, after being heated to something like 90 degrees Fahrenheit. The managers of Lincoln Park have the honor of being the first to bring these wonderful lilies to Chicago. The greenhouse at Lincoln Park is now one of the largest and most beautiful in the country. The new palm house, referred to elsewhere, is completed. The propagating departments are themselves worthy of the attention of all lovers of plants and plant culture. Some magnificent chrysanthemums, ferns, and orchids are seen here. More people visit Lincoln Park greenhouses than any of the others.

Nothing could excel the delicious sense of refined taste pervading the conservatory at Washington Park, with its bank of chrysanthemums presenting a symphony in color, its aquarium half hidden beneath the delicately traced fern fronds that spring from the margin and gracefully bend and reflect in the mirrored surface, and its giant palms forming leafy frescades suggestive of tropical luxuriance and love-making. That remarkable aquatic production, the water hyacinth, is cultivated here extensively, and the round balls are seen like Limniades, or, what are more generally known, ducks, swimming about in the basins on top of the water. Upon entering the greenhouse the large stock of diminutive variegated-leaved plants intended for next summer's lawn decorations are observed in a room by themselves, laid off systematically in designs, so as to make a pretty display, thus utilizing a hitherto neglected agent for indoor ornamentation. In the cactus-room is a great assortment of that peculiar plant. A striking novelty in the palm-room is a plant from the West Indies bearing an edible fruit. The fruit is said to be like honey, quite palatable and much sought by natives of the islands, but owing to the

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frailty of its rind it cannot be successfully transported to this country. The outside covering resembles that of the American custard apple or pawpaw.

One of the most popular conservatories in the public parks is that at Garfield. Here is to be found one of the largest assortments of orchids in the city. The greenhouse contains a date palm of



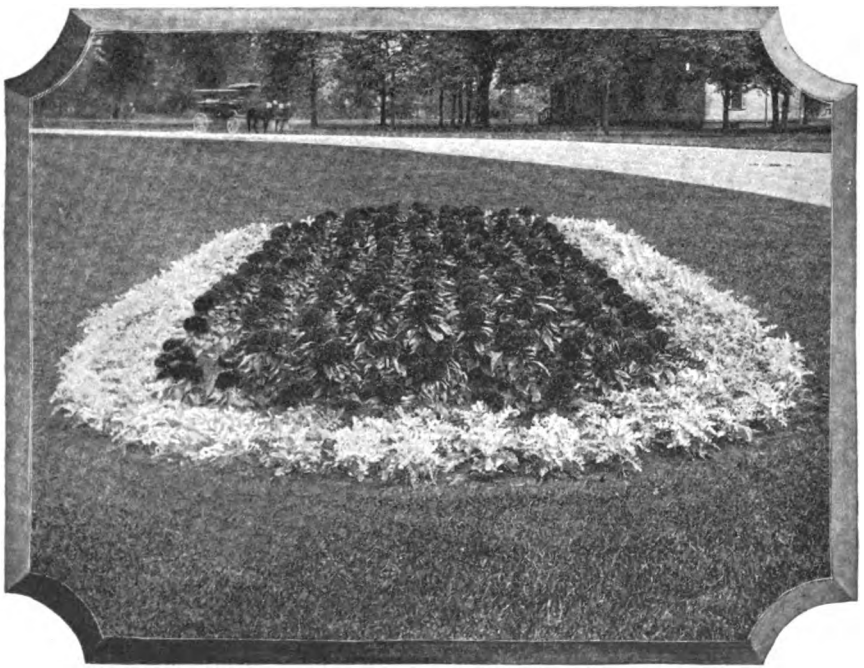
SCENE IN LINCOLN PARK.

extraordinary dimensions—probably the largest specimen of that particular variety of palm in all Chicago. The stock of agaves or century plants is very full, and one of these plants, the gardener asserts, is known to be thirty-two years old.

Decidedly the handsomest and costliest conservatory at any of the parks is the new $50,000 edifice recently erected by the West Chicago Board of Commissioners at Douglas Park. The new build-

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ing is filled with an immense quantity of rare plants. In the east wing is a large circular basin of water, in which are grown aquatic productions, including the Victoria Regia lily. Last summer this plant flourished in the basin in a way it has never been known to do before in the city, its leaves having reached the remarkable size of 7½ feet. Above the basin and ranged in a circle around the margin



LINCOLN PARK SCENERY.

are suspended in baskets a splendid collection of that unique exotic, the pitcher plant, nearly all of them in bloom and no two alike.

A eucalyptus, growing in free ground indoors, measuring 47 feet in height, is one of the numerous attractive sights to be witnessed in the famous Humboldt Park conservatory. The greenhouses at Humboldt are among the largest and handsomest to be found anywhere. At the threshold are caught glimpses of banks of color and vistas of verdure of the most entrancing character, and the air is richly per-

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JONES RESIDENCE.

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fumed by heliotrope, tuberose, and orange blossoms—a veritable paradise. In the palm-room, the central plateau resembles a miniature tropical forest, and ranged around this are fern-covered and vine-clad rockeries calculated to revive memories of dense woodlands. The fernery, a separate room, is, without doubt, one of the most artistic creations of the conservatory, being arranged to show to the best advantage those lovely contrasts which are a prominent peculiarity in the foliage of this class of plants.

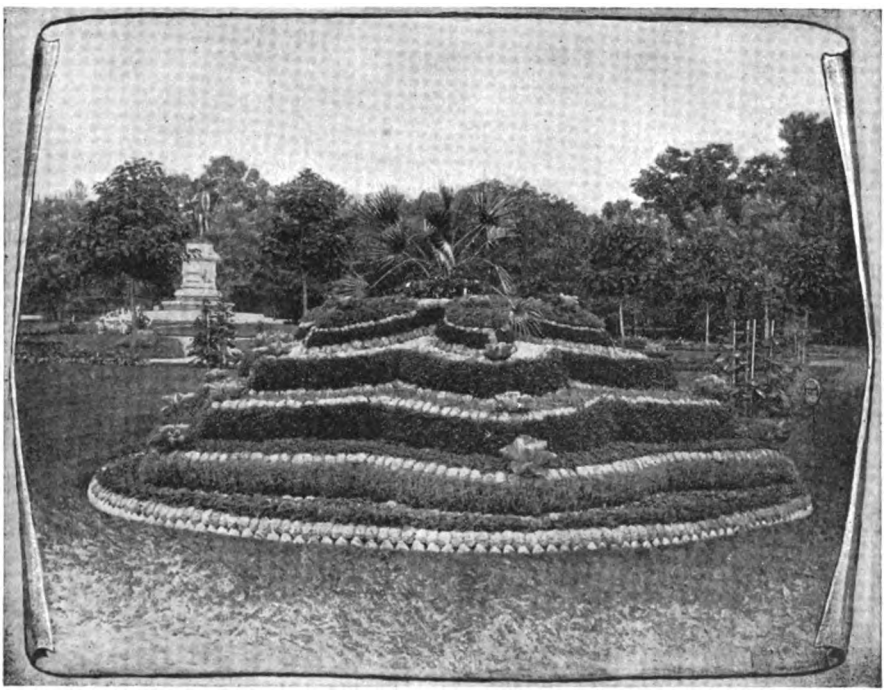
SOUTH PARKS.—Washington Park, Jackson Park and Midway Plaisance are known collectively and familiarly as "The South Parks." The cost to the city of the ground which they cover was $3,208,000. They are as yet in their infancy, but even now they rank among the finest parks in the world.

DOUGLAS PARK.—Area, 179.79 acres; situated four miles southwest of the Court-house; bounded on the north by West Twelfth street, on the south by West Nineteenth street, on the east by California avenue and on the west by Albany avenue. The district in the vicinity of this park was almost entirely destitute of residences ten years ago. Within a decade it has been built up, however, until those who have not visited the section for four or five years, or even two years, would hardly recognize it as the same. The popularity of the park, which has always been a beautiful piece of ground, has increased with the growth of the neighborhood and the improvement of the streets and drives in the vicinity. Douglas Park is beautifully laid out, well wooded and admirably situated. It has been cared for nicely of late years, and its lawns and flower beds bear evidence of skillful attention. Some of the avenues through this park are not surpassed by any in the city. The lake covers an area of seventeen acres. There is a handsome boat-house and refectory here. Douglas Park also has a medicinal artesian well with properties similar to those at Garfield and Humboldt Parks. The conservatories and propagating houses are among the largest of the system. Vast improvements are promised for Douglas Park within the next two years.

DREXEL BOULEVARD.—The eastern entrance to Washing-

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ton Park commences at Oakwood boulevard and the junction of Cottage Grove avenue and Thirty-ninth street. It is a double driveway, 200 feet wide for its entire length, running south to Drexel avenue and southwest from that point to the park. Through the centre is a wide strip of sward, covered here and there with beautiful shrubs, rose bushes and mounds. Upon the latter, which are interspersed

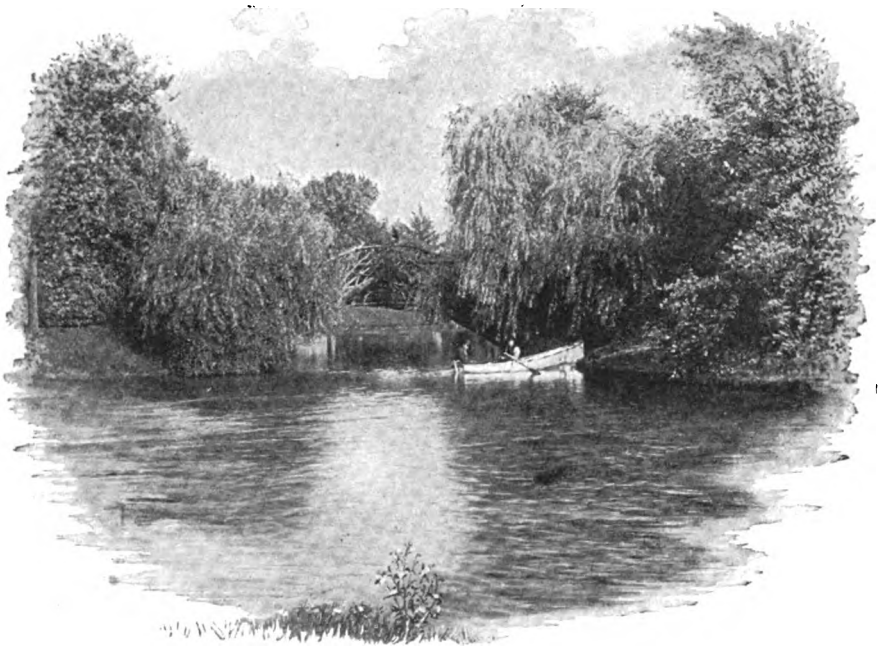


LINCOLN PARK FLOWER BEDS.

with flower-beds of beautiful design appear, during the summer season, unique figures wrought from flowers and foliage, and which attract thousands of sight-seers annually. At the intersection of Drexel avenue is a magnificent bronze fountain, presented by the Messrs. Drexel of Philadelphia, in memory of their father, after whom the boulevard was named. On either side of the driveways are to be seen some of the handsomest mansions and prettiest villas of Chicago.

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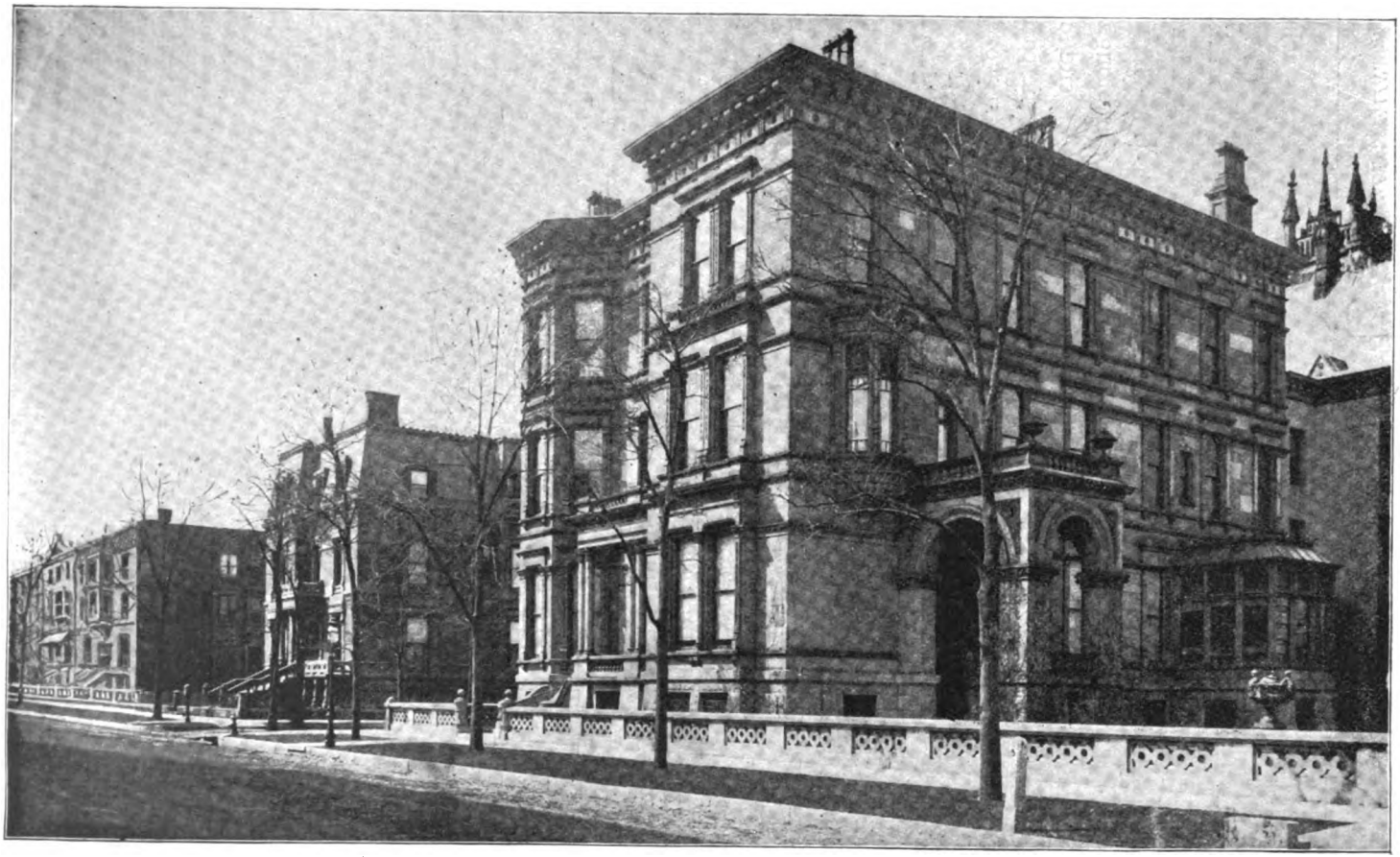
GARFIELD PARK.—Area 185.87 acres, situated four miles directly west of the Court-house; bounded by Madison street on the south, Lake street on the north, and running a mile and a half west from the head of Washington boulevard. This was formerly known as Central Park. The name was changed in memory of President Garfield. The lake in the centre of the park covers an area of 17 acres.



IN GARFIELD PARK.

The park is extremely picturesque, the drives and promenades being laid out in the most enchanting manner. The boat-house is one of the finest to be seen in the park system. There is a handsome fountain here, the gift of Mrs. Mancel Talcott, and an artesian well which furnishes half the city with medicinal mineral water. It is 2,200 feet deep, and discharges at the rate of 150 gallons per minute. The water is recommended for anæmia, diseases of the stomach and kidneys, and rheumatic disorders. Garfield Park is beautiful as it is, but

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NICKERSON RESIDENCE.

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just at present it is receiving the attention of West Side citizens, who contemplate making many improvements.

JACKSON PARK.—Area 586 acres; about eight miles from the Court-house; bounded by Lake Michigan on the east; Stony Island avenue on the west; Fifty-sixth street on the north, and Sixty-seventh street on the south. This beautiful park has been brought into great prominence of late by reason of its selection as the site for a portion of the Columbian Exposition. About one-third of the park has been improved up to the present year, although immense works have been in progress for some time in preparing the unimproved portion for the public. These works include excavating and dredging for the chain of lakes which are to have connection with Lake Michigan; bridge and breakwater construction; leveling and embanking, and landscape gardening on an extensive scale, the improved portion of the park at the northern end. Here there is a broad stretch of sward which has been used frequently as a parade ground by the militia, and by large picnic parties. This is surrounded or hemmed in by a wooded avenue of great beauty, which opens upon a sea-wall and a beautiful view of Lake Michigan. There is erected here an immense shelter, of great architectural beauty, where thousands may, on occasion, be protected either from the heat of the sun or from a sudden rainfall. The trees and shrubbery in the improved part of the park, as well as the flowers, are very attractive, although the variety which one finds in some of the other parks is lacking. The number of trees and shrubs in the unimproved portion is comparatively small. About Sixty-first street there is one clump of oaks and maple, shot here and there with bunches of fiery sumac. There is another and a larger grove west and north of this. Beyond there, except for a few small bunches and a fringe along the west fence, the unimproved portion is unbroken by wood.

LAKE SHORE DRIVE.—This is the grandest boulevard drive in Chicago. Beginning at North Side Water-Works on Pine street, its skirts the lake to the northern extremities of Lincoln Park, where it connects with Sheridan road, which is nearly completed for 25

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miles along the north shore. Before reaching the park some of the most magnificent mansions in the city are passed on the left. On the right is a fringe of sward, dotted with flower-beds and covered with beautiful foliage in the summer months. The lake beats against an embankment to the right, and frequently the spray is dashed across the flower-beds when the sea is high. Reaching the park you pass through beautiful avenues until you strike the drive again. Here vast improvements are being made. Some years ago the State Legislature gave the Lincoln Park Commissioners the right to issue bonds for $300,000 with which to defend the shore line against the encroachments of storm-tossed Lake Michigan. With that sum as a nucleus the commissioners designed and began work on a system of improvements which, when completed, will have cost a sum many times that raised from the original issue of bonds. Enough has now been finished to give a general idea of the work as it will appear when a continuous sea-wall will extend from Ohio street to almost the extreme northern limit of the city. The work was commenced in the Spring of 1888 at the foot of North avenue. Several hundred feet out in the lake a line of piles was driven. Powerful dredging-machines were placed in position and slowly but surely acre after acre was reclaimed from the lake. It is at this point that the Lake Shore Drive joins the boulevard now in course of construction. It will be finished this year. The breakwater proper rests on piles driven thirty-five feet into the sand. On this foundation granite blocks are laid and securely cemented. Back of this starts the paved beach, forty feet in width, slanting at an angle of about twenty degrees until it meets the granilethic promenade. This promenade is the most attractive feature of the improvement and is destined to become famous. Imagine a twenty-foot promenade, smooth as glass, three miles in length, with Lake Michigan vainly striving to scale the paved beach to the east of it, and a grand boulevard lined with carriages to the west of it; a promenade commanding on one side a magnificent view of the lake, and on the other a prospective of Lincoln Park with all its natural and acquired beauties. There is nothing rigid in the lines of

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the promenade or boulevard. Without detracting from the attractiveness of the sweeping crescent described by the sea-wall at Jackson Park, it must be said that the sinnous curves marking the contour of the Lincoln Park beach, promenade, boulevard and canal, are more artistic and pleasing. The old shore-line has been followed as nearly as possible. It is hard to improve on nature. With the shifting sands as the only obstacle to cheer their course, the waves have drawn along the beach curves such as would delight a follower of Hogarth. When they planned the outlines of the drive-way the commissioners wisely decided to follow nature. They have made no mistake. The objective point is Diversey avenue, the northern limit of the park. Here the regatta course will end, but the sea-wall and boulevard will be continued by the people of Lake View, who propose to make the Sheridan Road and the Lake Shore Drive continuous. The sea-wall will be extended to Byron avenue, opposite Graceland Cemetery. It is thought that the park commissioners will be able to complete their part of the work by the commencement of next winter. They will then have added 100 acres to the area of the park, and have given to Chicago a boulevard and regatta course unequaled in the world. Between the new boulevard and the park there will be three connecting points. There will be land connection at the north and south ends of the park and a bridge at a point opposite Webster avenue. The canal will connect with the lake at two points, one opposite Wisconsin street and the other at Fulton avenue. The boulevard will cross these connections on steel swinging bridges of a special construction. It will be several years before the dreams of the designer will be fully realized. Rows of shade trees will be planted to the east of the boulevard, and between the trees and the edge of the regatta course the sloping lawn will be beautified in the highest style of the landscape gardener's art. Between the west shore of the regatta course and the present Lake Shore Drive is a tract of land now piled high with stone and pine bark. This will be made one of the finest features of the park. Planked thus on either side by verdure-decked banks, the canal will wind its sinuous course towards what was Fisher's garden. At

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ABSTRACT BUILDING. 165

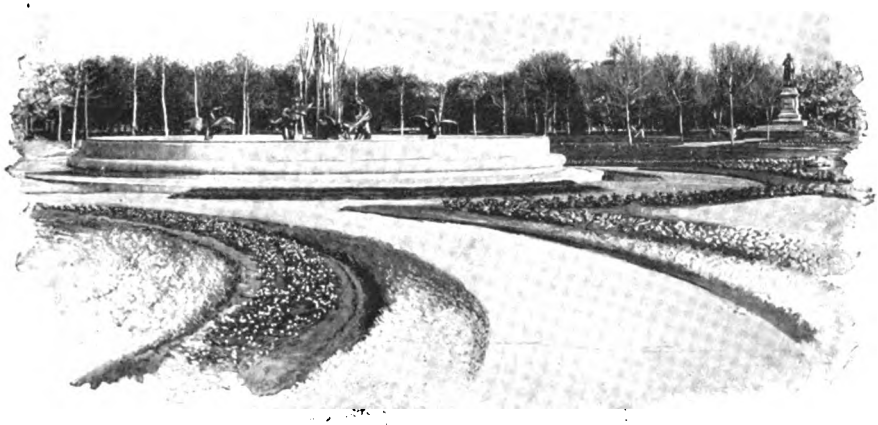
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no point will this placid stretch of water be less than 150 feet in width, while the average is nearer 200. At the ends it is widened to 350 feet, so as to permit boats to make a sweeping turn. Hardly less important is the improvement contemplated by the Lincoln Park Commissioners and the property owners who own the land fronting the lake between Elm and Oak streets. The sea-wall ends at Elm street on the south. With it the Lake Shore Drive practically comes to an end. The problem which has ever confronted the boards of park commissioners is to connect the North and South Side boulevard systems. In a recent message to the city council, Mayor Cregier suggested that Michigan boulevard be connected with a viaduct extending over the Illinois Central tracks and crossing the river at some point between Rush street and the lake. An expensive plan; there seems to be no other available. It is proposed to swing the boulevard out into the lake, starting at Elm street. It will curve out 1,000 feet from the present line and strike the existing beach at the foot of Ohio street. The Lake Shore Drive has for years been the fashionable rendezvous of the North Side. Thousands of carriages line the beautiful embankment on summer afternoons.

LINCOLN PARK.—Area, 250 acres, two and a half miles in width by one and a half miles in length; bounded by Lake Michigan on the east; Clark street on the west; North avenue on the north, and Diversey street on the south. The southern portion was formerly a cemetery tomb of the Couch family remains; all others were long since removed. First board of commissioners appointed in 1869, since which time it has been under State supervision. There is embraced within this small piece of territory perhaps more attractions than can be found in any park of the country. Where nature left off art began, and the two have contributed toward making Lincoln Park the most charming in the city. The visitor will be delighted with the undulating character of the ground, the gracefully winding and curving avenues, which stretch out in every direction; the beautiful lakes, the handsome bridges, the splendid foliage, the magnificent statuary, the gorgeous banks, beds and avenues of choicest flowers, the rare and

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wonderful shrubbery, the pretty little dells, knolls and nooks, that lie half concealed beneath the noble trees, and last, though not least, with the zoölogical collection, which has contributed in no small degree toward making Lincoln Park famous. Here we find the Grant monument, facing Lake Michigan on the Lake Shore drive. This magnificent work of art was presented by the citizens of Chicago, and cost $100,000. Here, also, is the Lincoln statue, by St. Gaudieur, facing the main entrance, a splendid likeness of the great president,



IN LINCOLN PARK.

and pronounced one of the finest pieces of sculpture in the world. This statue cost $50,000, and was presented, together with a drinking fountain, by the late Eli Bates. Here, also, are the "Indian Group" in bronze, presented by the late Martin Ryerson; the La Salle monument, presented by Lambert Tree, and the Schiller monument, presented by German residents of Chicago. An entire day may be spent pleasantly by the visitor in Lincoln Park. The great conservatories,

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flower-beds and zoological collection, can hardly be seen in less time. There is a comfortable refectory in the boat-house on the main lake.

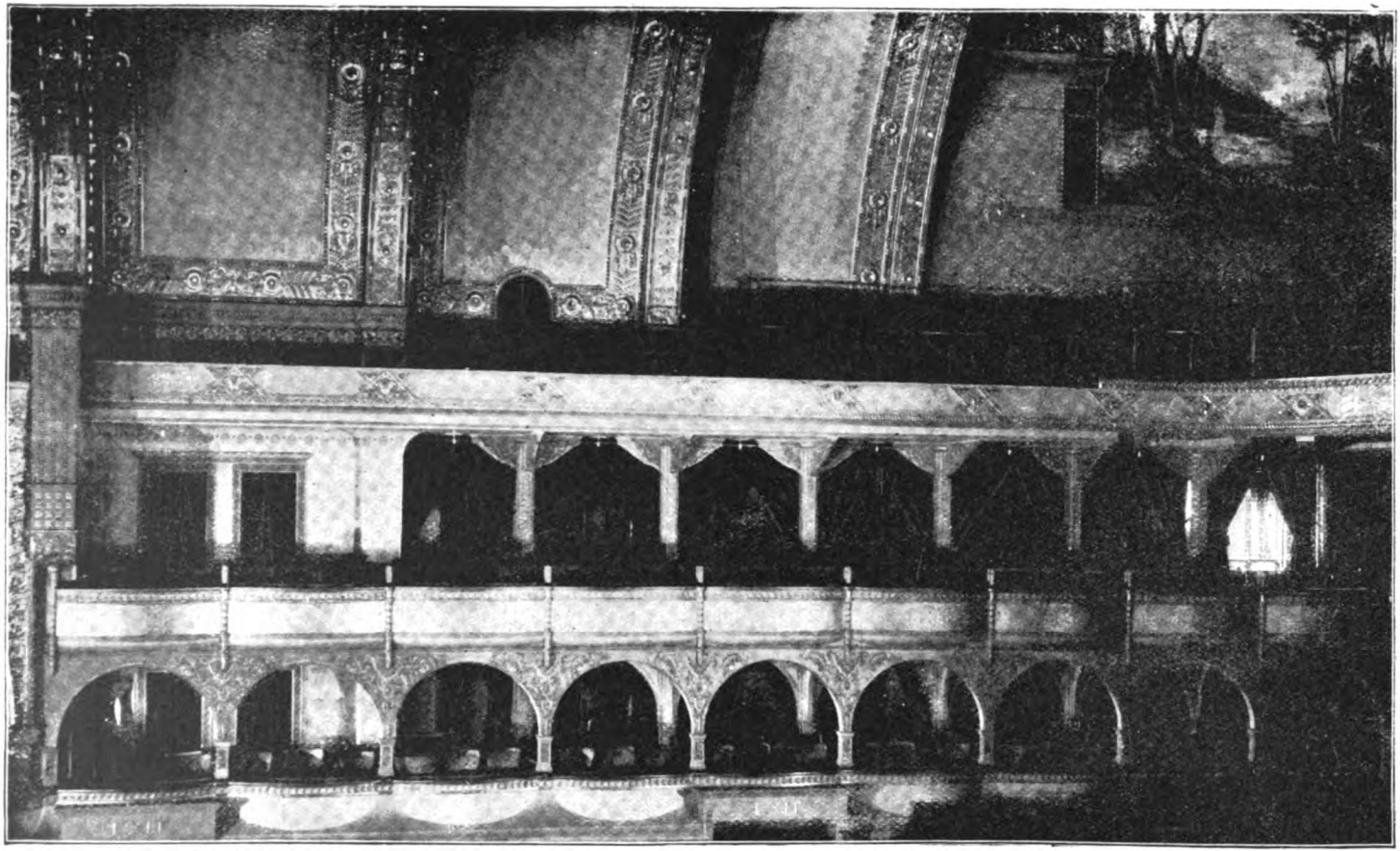
LINCOLN PARK PALM-HOUSE.—The plan of the palm-house just erected at Lincoln Park, drawn by Architect Silsbee, shows a beautiful structure of steel and glass, light, airy and picturesque, sixty feet high, resting upon a bowlder foundation of split granite. The main building is 168x70 feet, with a rear extension of seventy feet, making the entire length of the structure 238 feet. In front of the main building there is to be a lobby 25x60 feet, which is approached by a vestibule twenty feet square. The interior of the main building shows an unbroken stretch, save a few light supporting iron columns for the glass roof. The conservatory is in the rear of the palm-house. It is thirty feet wide. At the extreme north end is a room 30x60 feet, which will be exclusively devoted to the culture of orchids. This room will be further beautified by a sort of observatory tower built of pressed brick and terra-cotta trimmings. The building will be erected on two terraces northeast of the present canal vista and the animal's summer quarters. The terraces occupy the space due north of the present green-houses. The latter structure will be removed as soon as the new palm-house is completed. The main approach to the palm-house will be from the floral gardens. The new house will cost $60,000.

MICHIGAN AVENUE BOULEVARD.—Michigan avenue, from Jackson street on the north to Thirty-fifth street on the south, a distance of three and a quarter miles. It is 100 feet wide from curb to curb, and skirts the Lake Front Park, the site for a portion of the Columbian Exposition. Formerly the ultra fashionable residence street of the city. Now undergoing a transformation.

OAKWOOD BOULEVARD.—Connects Drexel and Grand boulevards; 100 feet wide and half a mile long. It enters Grand boulevard at Thirty-ninth street, and touches Drexel boulevard at its intersection with Cottage Grove avenue.

WASHINGTON BOULEVARD.—The continuation of West Washington street, west from Halsted street to Garfield Park, and

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AUDITORIUM BOXES.

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the driveway from the center of the city to the parks and boulevards of the West Park System. Passes through Union Park, a beautiful square. This boulevard is lined for the entire distance of nearly three miles with handsome residences. Large shade trees and a continuous strip of green sward fringe either side of the avenue. On Washington boulevard are many fine churches. The Chicago Theo-



SCENE IN LINCOLN PARK.

logical Seminary is passed at Union Park and Warren avenues, the Episcopalian Seminary on the north side, west of California avenue.

WASHINGTON PARK.—Area, 371 acres; situated about one and a quarter miles west of Lake Michigan and about six and a half miles southeast of the Court-house; bounded on the east by Kankakee avenue, on the west by Cottage Grove avenue, on the North by Fifty-first street and on the south by Sixtieth street. The finest of Chicago's parks, more by reason of its magnificent entrances, Drexel

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and Grand boulevards, than by any great natural or artificial attraction of its own, although its flower beds are the most beautiful of any. It lacks many of the advantages which are enjoyed by Lincoln and Jackson Parks, the contiguity of the lake being of itself one of the greatest charms of the two last named. It can not boast of a zoölogical garden that will compare with Lincoln Park, nor of the magnificent monuments that are making the north shore park classical ground. But South Park has statelier trees, grander avenues, more sweeping perspectives, more charming drives than any other park in the city. It has the famous "Meadow," a stretch of velvety sward that covers 100 acres and the "Mere," with its thirteen acres of water, picturesquely sparkling behind long lines of ancient oaks and elms, and bathing the emerald banks of the mounds and knolls which almost conceal it from the view of the passing visitor. It has also its great conservatory and its splendid stables, which cover 325 x 200 feet. It has its delightful refectory, known as the "Retreat," where refreshments are served for man and beast, but its flower gardens are its greatest boast. During the months between May and November, the best exhibition of the landscape gardening art in the world are seen. Flowers and foliage are made to do, in the hands of the gardener, what the brush and palette accomplish for the artist. The designs are changed annually, and are always original, always interesting and always lovely.

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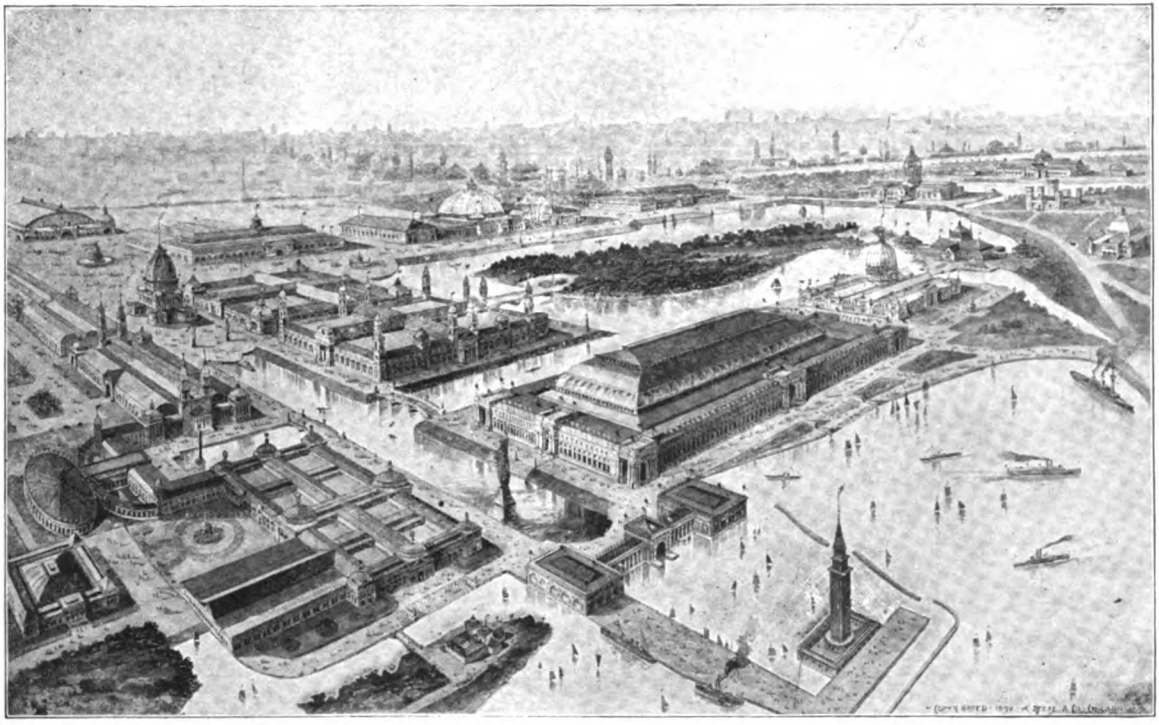


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THE

WORLD'S COLUMBIAN EXPOSITION.

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BIRD'S EYE VIEW OF EXPOSITION GROUNDS.

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PART IV.

THE WORLD'S COLUMBIAN EXPOSITION.

THE idea of holding a World's Fair at some point in the United States, in celebration of the four hundreth anniversary of the discovery of America by Columbus, was first seriously considered in the summer of 1889, and it quickly received popular approval. As soon as it seemed probable that such a Fair would be held, several cities, notably New York, Chicago, St. Louis and Washington, entered into a spirited rivalry to be designated as the place of its location, and urged their respective claims before Congress with all the force and influence they could command. It was apparent from the start, almost, that either New York or Chicago, would be selected. Chicago, with characteristic energy, formed an organization—The World's Fair Columbian Exposition, embracing the most substantial business men, raised more than $5,000,000 by subscription, and pledged itself to increase the amount to $10,000,000 to be expended in behalf of the fair. Chicago's superiority in many respects as a place for holding the Exposition was admitted, and after some discussion she was selected.

The buildings of The World's Columbian Exposition, as provided by Act of Congress, were to be dedicated on October 21st, 1892, the recognized anniversary of the discovery of America by Christopher Columbus. The Exposition, which will be the greatest universal fair the world has ever seen, will be formally opened to the public on May 1, 1893. The gates will be closed October 26, 1893. Everything will be in readiness for each of these events. The preparation for the dedicatory ceremonies have been made upon an elaborate scale, and the great buildings of the exposition will be completed and opened for the reception of the exhibits at the time named. From October 21st, 1892 to May 1st, 1893, the work of receiving and placing exhibits, and in making ready generally for the opening of the display will be carried on without intermission.

The management of the Exposition includes four organizations;

1. NATIONAL COMMISSION (authorized by Act of Congress).

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2. WORLD'S COLUMBIAN EXPOSITION (organized under laws of State of Illinois).

3. BOARD OF LADY MANAGERS (authorized by Act of Congress).

4. WORLD'S CONGRESS AUXILIARY.

The National Commission, which is a supervisory body is composed of eight commissioners—at large, with alternates, appointed by the President, and two commissioners and two alternates from each State and Territory and the District of Columbia, appointed by the President on nomination of their respective Governors. This commission has held four sessions, and has now practically delegated its authority to eight of its members who constitute a Board of Reference and Control, and who act with a similar number selected from the World's Columbian Exposition.

The World's Columbian Exposition, as its corporate name reads, is composed of forty-five citizens of Chicago, elected annually by the stockholders of the organization. To this body falls the duty of raising the necessary funds and of the active management of the Exposition. Its committees supervise the various departments into which the work has been divided.

The Board of Lady Managers is composed of two members, with alternates, from each State and Territory, and nine from the city of Chicago. It has supervision of woman's participation in the Exposition and of whatever exhibits of woman's work may be made. The participation of women in the Exposition promises to be one of its most interesting as well as novel features. With a commodious and imposing building, designed by a young lady architect, and with abundance of money, and with full recognition, indorsement and aid by the United States Government, and the Exposition Directory, the women have an opportunity of showing in the most signal manner, the condition of their sex throughout the world, what are the achievements of woman in the various branches of human endeavor, and what is her adaptability to different occupations and lines of industrial and charitable work. Under the direction of the Board's President, Mrs. Potter Palmer, the work of organization, and of enlisting the interest of women throughout the United States and in foreign countries, has progressed to a most satisfactory stage.

The World's Congress Auxiliary is an authorized adjunct of the World's Fair, and aims to supplement the exposition which that will make of the material progress of the world by a portrayal of the

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"wonderful achievements of the new age in science, literature, education, government, jurisprudence, morals, charity, religion and other departments of human activity, as the most effective means of increasing the fraternity, progress, prosperity and peace of mankind." This constitutes the intellectual and moral branch of the Exposition. Its motto is, "Not matter, but mind," and it is organized to provide for the presentation, by papers, addresses and discussion, of the mental and moral status and achievements of the human race. Under its auspices, a series of congresses will be held in Chicago during the progress of the Exposition, in which, it is already assured, will participate a great many of the ablest living representatives in the various fields of intellectual effort and moral endeavor. The auxiliary embraces between fifteen and twenty main departments, such as literature, government, education, music, science, art, engineering, etc., in each of which are subdivisions. A program is being arranged for congress in each of these departments and divisions, in which specialists and advanced thinkers may participate in discussing the vital and important questions, and presenting the best and latest achievements of the human mind in each. During the Exposition, the auxiliary will have the use of a magnificent permanent art palace, which the Chicago Art Institute, aided by the Exposition Directory, erects on the lake front. This will have two large audience rooms, each of 3,500 capacity, and from twenty to thirty smaller rooms, of capacity ranging from 300 to 750. The great Auditorium will also be utilized for the larger congresses, and numerous other halls are available when required. Each congress will be supervised by a committee of persons actively interested in its particular field, acceptance of such responsibility having already been given. The prospects are that fully 100 congresses altogether will be held. It is the intention to publish their proceedings in enduring form.

I. The grounds of fraternal union in the language, literature, domestic life, religion, science, art, and civil institutions of different peoples.

II. The economic, industrial and financial problems of the age.

III. Educational systems, their advantages and their defects; and the means by which they may be adapted to the recent enormous increase in all departments of knowledge.

IV. The practicability of a common language, for use in the commercial relations of the civilized world.

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V. International copyright and the laws of intellectual property and commerce.

VI. Immigration and naturalization laws, and the proper international privileges of alien governments, and their subjects, or citizens.

VII. The most efficient and advisable means of preventing or decreasing pauperism, insanity and crime; and of increasing productive ability, prosperity and virtue throughout the world.

VIII. International law as a bond of union and a means of mutual protection; and how it may best be enlarged, perfected and authoritatively expressed.

IX. The establishment of the principles of judicial justice, as the supreme law of international relations, and the general substitution of arbitration for war in the settlement of international controversies.

The Director General is the chief executive officer of the Exposition, and the work is divided into the following great departments:

A. Agriculture, Food and Food Products. Farming Machinery and Appliances.

B. Viticulture, Horticulture, and Floriculture.

C. Live-stock, Domestic and Wild Animals.

D. Fish, Fisheries, Fish Products and Apparatus of Fishing.

E. Mines, Mining and Metallurgy.

F. Machinery.

G. Transportation Exhibit: Railways, Vessels, Vehicles.

H. Manufactures.

J. Electricity and Electrical Appliances.

K. Fine Arts: Pictorial, Plastic and Decorative.

L. Liberal Arts, Education, Engineering, Public Works, Architecture, Music and the Drama.

M. Ethnology, Archæology, Progress of Labor and Invention, and Collective Exhibits.

N. Forestry and Forest Products.

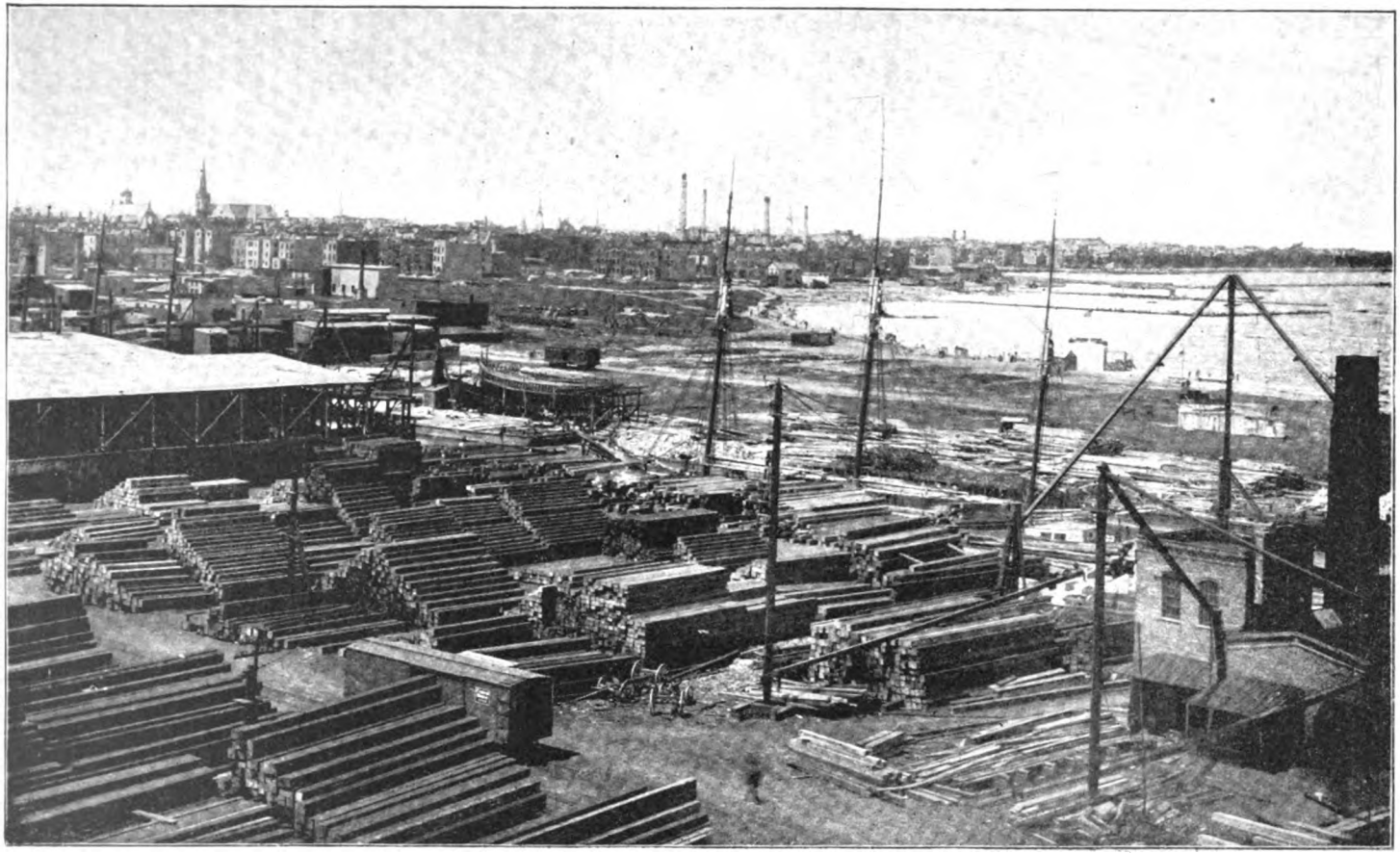
O. Publicity and Promotion.

P. Foreign Affairs.

It is hard to realize the magnitude and magnificence of this display because there has never been anything of the kind that can be compared to it.

Looking over the list of great international fairs, we see at once

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SHIPPING YARDS.

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that the Paris Exposition of 1889 was the largest in every way ever held; and while (even this being the case) no comparison can be made, yet the figures of the one and the plans of the other will be of interest.

The figures showing receipts and expenditures of the Paris Exposition are briefly: Receipts, $9,900,000; expenses, $8,300,000; profit, $1,600,000.

The Champ de Mars was selected as the site of the fair. The total space occupied was 173 acres. The Machinery Palace, the largest structure on the ground, measured 1,378 feet in length, 406 feet in width and 166 feet in height. This building alone cost $1,500,000 and covered eleven acres. The Palace of Arts cost $1,350,000, the Palace of the French Section $1,150,000, and the improvements in the parks and gardens, $16,500,000. Besides the buildings and ornaments devised and provided by the Exposition management, nearly all nations contributed to the architecture. The Indian dwellings, street in Algiers, houses of New Caledonia, Tunisian Minaret, Turkish village, English dairies, Dutch bakeries, etc., which were scattered over the park were very attractive. It is hardly necessary to mention the Eiffel Tower, of which so much has been written. The structure is 984 feet high, and has occupied a more prominent place than any other attraction in Paris for the past three years. The number of exhibitors was 55,000, the largest number that has ever contributed to the success of an art and industrial exposition before. The United States was represented by no less than 1,750, and received 941 awards. It was estimated that Americans alone emptied 350,000,000 francs into the lap of Paris during the Exposition. The gold revenue in the Bank of France rose enormously. Police estimates gave the total number of strangers in Paris during the Exposition at 1,500,000.

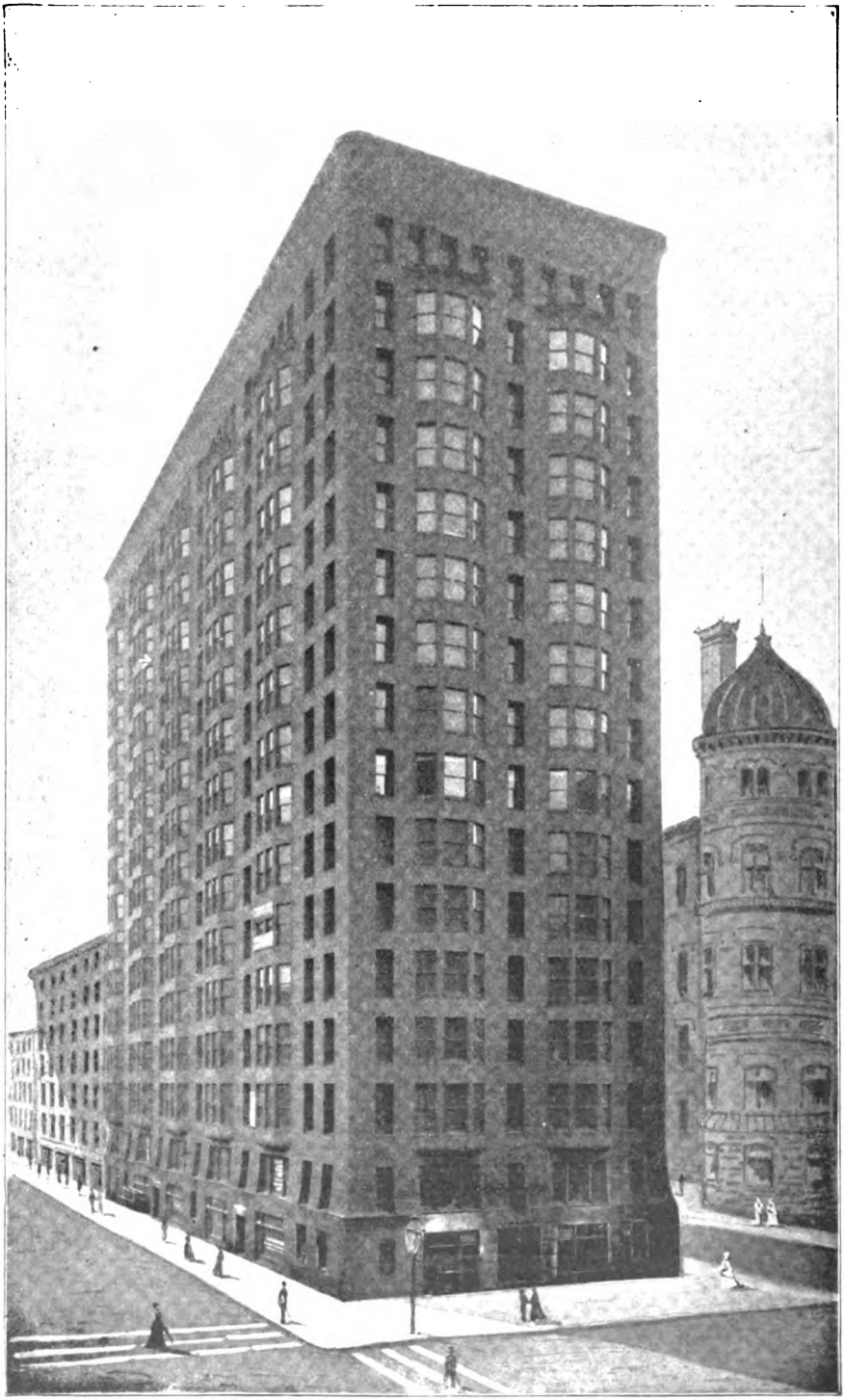
The various railroads reported an increase over the six months of the preceding year of 1,878,747 in the number of passengers carried, and in receipts an increase of 66,000,000 francs. The City of Paris Omnibus Company reported an increase of 14,000,000 francs. The Cab Company transported 29,097,111 persons from Jan. 1 to Nov. 1, 1889, the same period in the previous year only 12,000,000, with an increase in revenue of 1,558,000 francs. All other lines of business in Paris are known to have increased in revenue at a corresponding rate. Among the interesting things discovered was that

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the consumption of meat increased 3,278,871 pounds and of wine 3,162,227 gallons. The total excess of the receipts of the theatres over the corresponding six months of the previous year was 10,867,555 francs. It was estimated that the total gain to Paris must have exceeded 500,000,000 francs. The Exposition of 1889 gave very general satisfaction to visitors from all countries. Paris never looked better. The republic positively outshone the empire. There was not so much glare and brilliancy as during the Exposition of '67; there was less of tinsel and less of surface display, but the Parisians were evidently more contented, a spirit of patriotic regard for the government pervaded the masses, and strangers felt whatever appearance of prosperity they witnessed was genuine.

It was found in the spring of 1892 that the practical development of the World's Columbian Exposition had expanded away beyond the calculations of the public and the managers of the enterprise. This was the natural result of the determined effort made on all sides to eclipse everything that had been attempted before in the way of an international fair. The preparations for the greatest event of the nineteenth century were carried out upon a scale commensurate with this determination. Everything was to be better, greater and grander than the world had ever seen before, and as the grounds were laid out and the mammoth buildings began to assume form, it was seen that the management, instead of falling short in its promises and pretensions, had in every particular exceeded them. The plan and scope determined by the National Commission involved an expenditure upon the part of the local directory of about $10,000,000. It was soon evident that $20,000,000 would be nearer the amount which Chicago would be called upon to lay out on this gigantic enterprise, and that this latter sum would quite likely represent only fifty per cent. of the whole amount to be spent before the gates of the Exposition would be thrown open. The government outlay upon the federal exhibit easily exceeds $2,000,000, and additional appropriations it is thought will be necessary. The States of the Union (beginning with Illinois, which appropriated $800,000, and which was followed by Pennsylvania and New York with $300,000 each, and by a number of less wealthy commonwealths by sums ranging from $100,000 to $150,000) have added not less than $3,000,000 to the outlay. The appropriation of foreign nations aggregates about $200,000. The international character and importance of the World's Fair will be

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182 MONADNOCK BUILDING

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understood clearly when it is learned that the first sums set aside for their exhibits by such nations as Japan, Mexico and Brazil amounted to $630,000, $750,000 and $300,000 respectively. . . . The Exposition grounds cover an area of 633 acres, having a frontage of two miles on Lake Michigan. The largest building is about one mile in circumference, and its central aisle has a clean span of 368 feet and is 206 feet high. The Machinery Hall of the Paris Exposition, if placed within this aisle, would have a space 6 feet wide on each side and 11 feet on each end, with 50 feet clear for ventilation above its roof. There were used in the construction of this building 6,000 tons of iron and steel. These figures may mean much or little to the visitor, but for the purpose of comparison it may be stated that the Eiffel Tower required but 7,000 tons, and only 3,600 tons were used in the Brooklyn Bridge, and 5,600 tons in the great railroad bridge at St. Louis. The heroic dimensions of all the buildings have only lately been realized as they have appeared in their finished state and perfect outlines. The Exhibition buildings, including annexes, required a consumption of 18,000 tons of iron and steel. The buildings primarily projected, including landscape improvements, were contracted for at a saving of about $2,500,000 from the architects' estimates, but the growing necessities of the enterprise required the erection of others not at first contemplated at a cost of about $1,900,000. The total floor space of the great Exposition buildings (not including the foreign, State or special buildings) is 6,320,000 square feet or 155 acres. For the protection of these buildings and their contents, and to supply fountains and all the daily requirements within the grounds, the management provided for a possible supply of 64,000,000 gallons of water daily, which is carried through twenty miles of mains from six inches to three feet in diameter. For supplying power for machinery, etc., the management provided for boilers having a water evaporating capacity equal to 25,000 horse-power and engines for generating electricity, 18,000 horse-power; for driving line shafting and isolated exhibits, 2,000 horse-power; for compressed air, 3,000 horse-power, and for pumps 2,000 horse-power. Electrical force is supplied as power to the amount of 3,000 horse-power. The system of sewage projected is extensive and complete. The arrangements are made for the treatment of 6,000,000 gallons of sewage every twenty-four hours, the precipitated matter of which is burned and only clear water allowed to escape.

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The estimated cost of the completed structures, including landscape, statuary, fountains, terminal facilities, police and fire stations, and all that may be necessary for the comfort and convenience of visitors, is $15,117,500, exclusive of the cost of administration, which is estimated at $2,770,000, up to the opening of the Exposition, May 1, 1893.

The honor of designing these great structures and of displaying to the world our progress in architecture, as well as in construction, was wisely distributed among the leading architects of the United States. Three were selected from New York City, one from Boston, one from Kansas City, and five from Chicago, making a board of ten, by whom the general arrangement and character of the grounds and buildings were determined, in conference with the distinguished landscape architects, Messrs. Olmsted & Co., of Boston, and Chief of Construction D. H. Burnham, on the Committee on Grounds and Buildings. The Paris Exposition cost about $9,500,000. The Chicago Exposition, including administration and all other expenses, will probably be from $17,000,000 to $18,000,000. In addition to this there will be perhaps from $3,000,000 to $4,000,000 expended by the General Government and by the various States. A reasonable estimate of the amount of money that will be spent for all purposes may be fairly stated to be $22,000,000 to $23,000,000. The chief buildings of the Fair are located in Jackson Park.

Many of the minor buildings, special exhibits, etc., were provided for with space in Washington Park and on Midway Plaisance. Jackson Park is beautifully situated on the lake shore seven miles southeast of the City Hall, and embraces 586 acres. Washington Park is a mile or more nearer and has 371 acres. Midway Plaisance has 80 acres. Thus a total of 1,037 acres is available for the Exposition. The spacious grounds of the Washington Driving Park Association, adjoining Washington Park on the south, may be used for certain stock exhibits.

To supply the Exposition buildings and grounds with water two plants were put in, one with capacity of 24,000,000 gallons a day, and the other of 40,000,000 gallons. Thus 64,000,000 gallons a day are available. A system for drainage, believed to be adequate and perfect, was adopted. Plans adopted for lighting the buildings and grounds provided for 138,218 electric lamps, of which 6,766 are arc lamps of 2,000 candle-power each, and 131,452 incandescent,

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CHAMBER OF COMMERCE.

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16 candle-power each. The electric lighting cost something like $1,500,000 and is ten times as extensive as was employed at the Paris Exposition. The light and motive plant at the Exposition require 26,000 horse-power, of which 22,000 is required for the electric plant.

Before going into a general description of the Exposition buildings and grounds it is necessary that the visitor should learn something of the details. The dimensions and cost of the magnificent structures which rear their beautiful domes on all sides of you will be interesting. The following condensed table will convey this information in a compact and intelligible form:

BUILDINGS.	DIMENSIONS IN FEET.	AREA IN ACRES.	COST.
Manufactures and Liberal Arts	787 x1687	30.5	$1,500,000
Administration	262 x 262	1.6	435,000
Mines	350 x 700	5.6	265,000
Electricity	345 x 690	5.5	401,000
Transportation	256 x 960	5.6	370,000
" Annex	425 x 900	8.8	
Woman's	199 x 388	1.8	138,000
Art Galleries	320 x 500	3.7	670,000
" Annexes (2)	120 x 200	1.1	
Fisheries	165 x 365	1.4	224,000
" Annexes (2)	135 diam'r	.8	
Horticulture	250 x 998	5.7	300,000
" Greenhouses (8)	24 x 100	.5	25,000
Machinery	492 x 846	9.6	1,200,000
" Annex	490 x 550	6.2	
" Power House	100 x 461		
" Pumping Works	77 x 84	2.1	35,000
" Machine Shop	146 x 250		
Agriculture	500 x 800	9.2	618,000
" Annex	300 x 550	3.8	
" Assembly Hall, etc.	125 x 450	1.3	100,000
Forestry	208 x 528	2.5	100,000
Saw Mill	125 x 300	.9	35,000
Dairy	100 x 200	.5	30,000
Live Stock (3)	65 x 200	.9	
" Pavilion	280 x 440	2.8	335,000
" Sheds		40.	
Casino	120 x 250	.7	*210,000
Music Hall	120 x 250	.7	
U. S. Government	345 x 415	153.8	$7,041,000
" Imitation Battle-ship	69.25 x 348	3.3	400,000
Illinois State	160 x 450	.3	100,000
" Wings		1.7	250,000
		.2	
		159.4	$7,791,000

* Including connecting peristyle.

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Two of the last named buildings were erected at the expense of the United States Government, and one at the expense of the State of Illinois, but these must be classed among the great Exposition structures. The Exposition buildings, not including those of the Government and Illinois, have also a total gallery area of 45.9 acres, thus making their total floor space 199.7 acres. The Fine Arts building has 7,885 lineal feet, or 145,852 square feet of wall space.

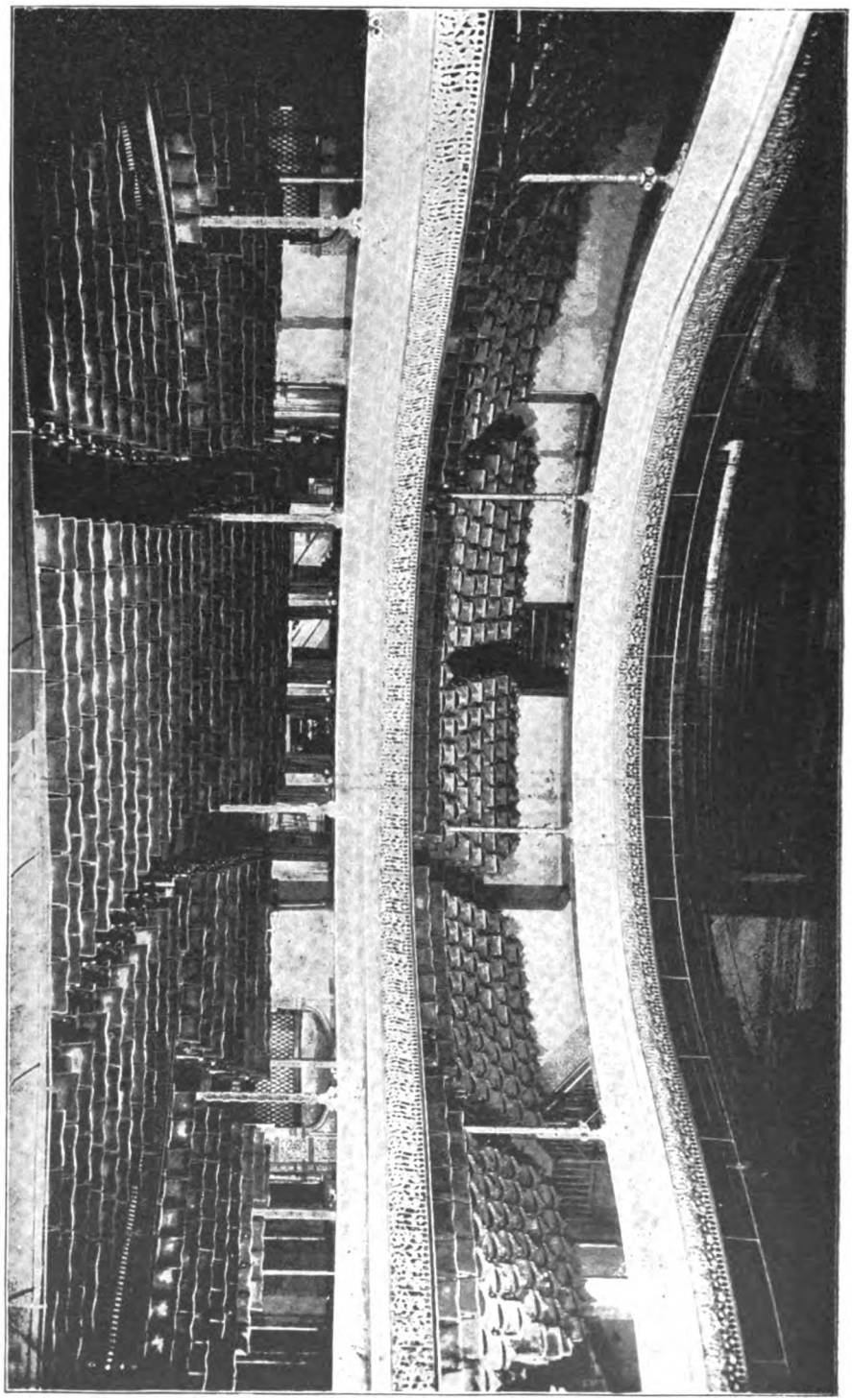
All of the annexes are scarcely less imposing and architecturally beautiful than the main buildings themselves. The live-stock sheds which cover an immense area as indicated, are constructed as inexpensively as possible without marring the general architectural effect. The power houses, pumping works, etc., are exhibits in themselves. There are several Exposition buildings in addition to those named, but these are mentioned in another connection. Among them are a Press building, in which every possible convenience and accommodation for the press representatives of the world is provided; and a reproduction of the Spanish convent, La Rabida, in which a wonderfully complete collection of Columbus relics and allied exhibits are gathered. The total cost of the Exposition structures alone is estimated at $8,000,000. Of course, it is understood, no reference is made here either to the numerous State or foreign buildings or to structures for the accommodation of special exhibits. These of themselves form a very important part of the Exposition.

The visitor will naturally be desirous of taking in the entire Exposition at one journey, if possible, before entering upon special views. The most delightful means by which the visitor may reach the Exposition grounds will be by steamboat on Lake Michigan. A ride of six miles from the embarking point on the Lake Front Park, with the towers and gilded domes of the Fair buildings constantly in sight, will take him there.

In the western part of the group stands the ILLINOIS BUILDING costing $350,000. Just south of the foreign and State buildings stands the FISH AND FISHERIES BUILDING, 700 feet in length, and flanked at each end by a curved arcade connecting it with two octagonal pavilions, in which is seen the aquaria and the tackle exhibit. The total length is 1,100 feet, and the width 200 feet. This building, designed by Henry Ives Cobb, of Chicago, is in the Spanish style, and conspicuous because of a liberal use of color.

A little further south across an area of the lagoon is the UNITED

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INTERIOR OF AUDITORIUM.

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STATES GOVERNMENT BUILDING, measuring 350 x 420 feet, and having a dome 120 feet in diameter and 150 feet high. It is constructed of stone, iron and glass, classic in style, covers four acres, and cost $400,000.

On the lake shore east of this building and in part in the intervening space, the government has a gun battery, a life-saving station complete with apparatus, a lighthouse, war balloons, and a full-size model of a $3,000,000 battle ship of the first class.

Steaming by the Government exhibits the visitor will come abreast of the largest building of the Exposition—that of MANUFACTURES AND LIBERAL ARTS. It measures 1,700 x 800 feet, with two interior courts. This building, which is of the French renaissance style, was designed by George S. Post, of New York.

Extending westward across the park, is a long avenue or court, several hundred feet wide. To the right, at the entrance of this grand avenue, is the great building of Manufactures and Liberal Arts, and farther back the other attractions already referred to. To the left is the AGRICULTURAL BUILDING, measuring 800 by 500 feet, designed by Architect McKim, of New York.

Passing the Agricultural building, the visitor will come to the great MACHINERY HALL, which lies to the westward of it, and which is connected with it by a horseshoe arcade, doubling a branch of the lagoon. It is nearly identical with it in size and cost, but differs from it considerably in appearance, being serious, impressive and rich in architectural line and detail, and the best work of its designers, Peabody & Stearns, of Boston.

Opposite Machinery Hall, and north of it in the centre of the "Long Walk," stands the EXPOSITION ADMINISTRATION BUILDING. This is one of the most imposing, and, in proportion to its size, by far the most inexpensive one of the large structures. Richard M. Hunt, of New York, President of the American Institute of Architects, is its designer. It is adorned with scores of statuary figures, and surmounted by a gilded dome rising 250 feet, or about the height of the Auditorium tower. In it are the offices of the National Commission and Local Directory, and the headquarters of all the numerous officials connected with the management and administration of the Exposition.

To the northward of the Administration building, on either side and facing the grand avenue, are two more immense buildings, one

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for the ELECTRICAL and the other for the MINING exhibit. These are about equal in size, covering each a little more than five acres and a half. Both are of French renaissance. The former was designed by Van Brunt & Howe, of Kansas City, the latter by S. S. Beman, of Chicago. North of these buildings in the main lagoon is an island of twenty or thirty acres in area.

To the southward of the line of buildings which are arranged along the south side of the grand avenue is a vast open expanse which is devoted to the live stock exhibit. Here immense stock buildings, a show ring and whatever else will contribute to the success of the live stock feature of the Exposition are to be found.

Jackson Park resembles a right-angled triangle in shape. The visitor has thus far, on his tour of inspection, traversed the lake shore or hypothenuse of the triangle, and across the southern end or base. It remains only to turn towards the north and note the structures ranged along the perpendicular. The first one arrived at is the TRANSPORTATION BUILDING. This is Romanesque in style and one of the largest of all, measuring 960 by 256 feet, exclusive of a great annex in the rear, which covers nine acres. North of this is the HORTICULTURAL BUILDING, another immense structure, 1,000 by 250 feet, with three domes, one at each end and a large one at the center.

Still farther north and directly opposite the park entrance of Midway Plaisance stands the WOMAN'S BUILDING, which is one of the chief objects of interest on the grounds. The exterior design was furnished by a woman architect, Miss S. G. Hayden, of Boston. Here the lady managers have their headquarters, and here is collected a wonderful exhibit illustrating the progress and attainments of women in the various branches of industry.

Passing the Woman's Building the visitor can turn toward the northeast and inspect the Foreign and State buildings in the northern portion of the park.

BIRD'S EYE VIEW.—The power of the pen is proverbial, but how inadequate and feeble an instrument it is to describe the picture presented by a bird's eye view of the Exposition Grounds and Buildings. Such beauty, such grace, such coloring! Does there exist to-day, has there ever existed, either on the canvas of the painter or in the brain of the poet, an ideal paradise that will compare with this reality? Spread out beneath him lie more than six

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hundred acres, upon which has been expended all the wealth of experience in art and science. The very essence of all that is elegant and unique in landscape gardening, grouped here and there are scores of graceful and imposing edifices, making a magnificent array of structures, which embody the best conceptions of America's greatest architects. Bordering this scene, and adding not a little to it, is Lake Michigan, one of the grandest of inland lakes. There is nothing to add, nothing to wipe out. Could a picture be more perfect?

To the north one sees a village of palaces; these are the buildings of Foreign Nations and some of all states of the Union. It is picturesque in the extreme because here are embodied the different tastes and characteristics of the world, national and provincial. This group is one of the most interesting parts of the exposition. These buildings are ranged on wide curving avenues, connected by numerous walks; they occupy about 100 acres of the park beautifully laid out; each building has ample grounds of its own, with lawns, flower-beds and shrubbery.

In front of the park, extending eastward into the Lake 1200 feet we see the great pier with its enclosed harbor dotted here and there by the picturesque little pleasure boats of all epochs and nations. The harbor bounded on the east, far out into the lake, by the long columned facade of the Casino, in whose free space crowds of men, women and children, in holiday attire, protected by its ceiling of gay awnings, look east to the lake and west to the long vista between the main edifices as far as the gilded dome of the Administration building. The first notable object of this vista is the colossal statue of Liberty rising out of the lagoon at the point where it enters the land, protected by moles which carry sculptured columns emblematic of the thirteen original States of our Union. Beyond this, beyond the first of many bridges, lies a broad basin, from which grassy terraces and broad walks lead on the north, to the south elevation of the enormous Main Building, and on the south to the structure dedicated to agriculture.

This Main Building, devoted to manufactures and liberal arts, stretches northwest one-third of a mile, The long, low lines of its sloping roof, supported by rows of arches, is relieved by the central dome over the great main entrance; and emblematic statuary and floating banners will add to its festive character.

The north elevation of the classic edifice devoted to agriculture,

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shows a long arcade behind Corinthian columns, supporting a series of triple arches and three low graceful domes. Liberally adorned with sculpture and enriched with color, this building, by its simplicity, refinement and grace, is ideally expressive of pastoral serenity and peace. At its noble entrance a statue of Ceres offers hospitality to the fruits of the earth.

The lofty octagonal dome of the Administration Building forms the central point of the architectural scheme. Rising from the columned stones of its square base 250 feet into the air it stands in the centre of a spacious open plaza, adorned with statuary and fountains, with flower-beds and terraces sloping at the east down to the main lagoons. North of the plaza stand the two buildings devoted to mines and electricity ; the latter bristling with points and pinnacles, as if to entrap from the air the intangible element whose achievements it will display.

South of the plaza is the machinery stall with its power-house at the southeast corner. West of this and along the western limit of the park is the Transportation Building. Still further north, lying west of the north branch of the lagoon extends the long shining surfaces and the gracefully curving roof of the Crystal Palace of Horticulture. Following the lagoon northward, you see the Woman's Building, and eastward, the island devoted to the novel and interesting aquaria, in which the spectator can look upward through the clear waters and study the creatures of ocean and river.

THE ADMINISTRATION BUILDING.—The Administration Building is the finest at the Fair, it being generally conceded that this structure is the gem and crown of the Exposition Buildings. Its location is at the west end of the great court in the southern part of the site, looking eastward, across the open space and the Lagoon outwards, the Casino and the Pier. Its great gilded dome forms one of the most conspicuous objects of the Exposition. This edifice cost $450,000. The architect is Richard M. Hunt of New York, President of the American Institute of Architects, to whose established reputation it is a notable contribution. The building covers an area of 250 feet square and consists of four pavilions 84 feet square, standing at each angle of its square ground plan, and connected by a great central dome 120 feet in diameter and 260 feet high. The center of each facade has a recess 93 feet wide, within which is a grand entrance to the building. The general design is in the style of the

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THE ADMINISTRATION BUILDING.

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French renaissance. The lower story, comprising the pavilions, is Doric in order of architecture, 65 feet high, of heroic proportions, surrounded by a lofty balustrade, and having the great tiers of the angle of each pavilion crowned with sculpture. The second story with its lofty and spacious colonnade is of the Ionic order, 65 feet high, being a continuation of the central rotunda, which is 175 feet square. Above is the octagonal base, 40 feet high, upon which rises the great dome. This building out-tops all the others.

There are four entrances, one on each side of the edifice, which are 50 feet wide and 50 feet high, deeply recessed and covered by semi-circular arched vaults, richly coffered. In the rear of these arches are entrance doors, and above them great screens of glass, giving light to the central rotunda. Across the face of these screens, at the level of the office floor, are galleries communicating with the different pavilions.

The interior effects of this great building will be fine, and its internal features will even exceed in beauty and splendor those of the exterior. A hall or logia 30 feet square is between every two entrances, connecting the intervening pavilion with the rotunda, and giving access to offices, being provided with broad circular stairways and swift running elevators. Within the rotunda is octagonal in form, the first story being composed of eight enormous arched openings, corresponding in size to the arches of the great entrances. Above these arches is a frieze 207 feet in width, the panels of which are filled with tablets, borne by figures carved in low relief and covered with commemorative inscriptions. The second story, 50 feet in height, rises above the balcony. The interior dome rising from the top of the cornice of this story towers 200 feet from the floor below, and in the center is an opening, 50 feet in diameter, transmitting a flood of light from the exterior dome overhead. The under side of the dome is enriched with deep panelings, richly moulded, and the panels are filled with sculpture, in low relief and immense paintings, representing the arts and sciences. In size this rotunda rivals, if it does not surpass, the most celebrated domes of a similar character in the world.

The corner pavilions are four stories in height, and are each divided into large and small offices, for the various Departments of Administration, and into lobbies and toilet rooms. The ground floor contains, in one pavilion, the Fire and Police Departments, with cells

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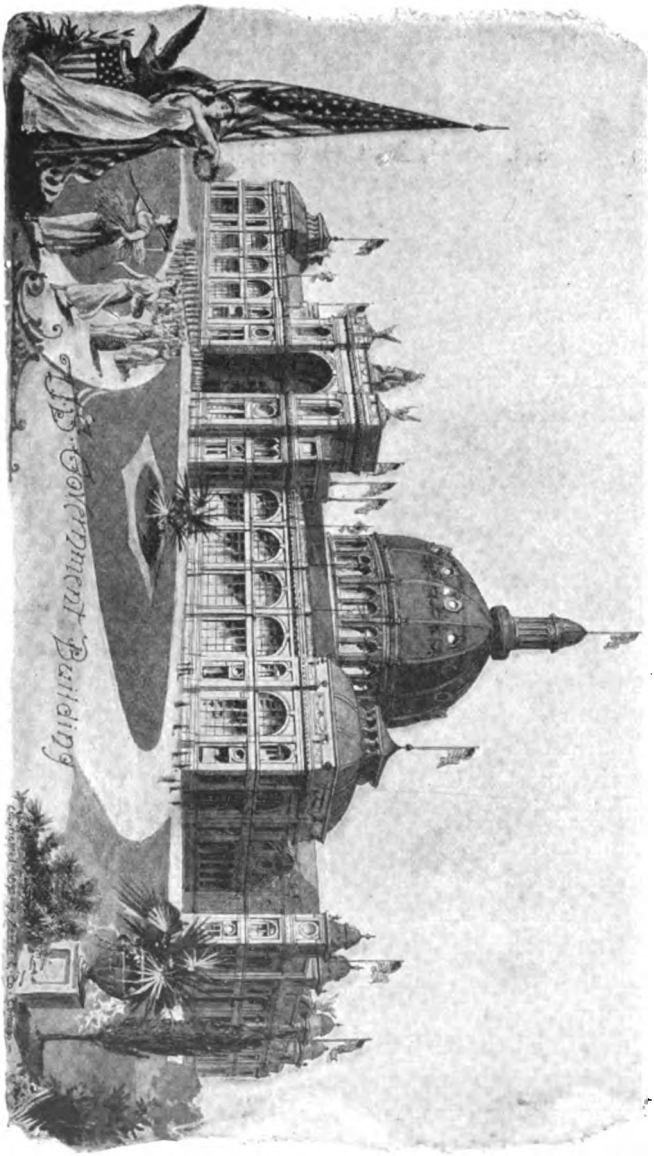
for the detention of prisoners; in the second pavilion are the offices of the Ambulance Service, the Physician and Pharmacy, the Foreign Department and the Information Bureau; in the third pavilion, the Post-Office and a Bank, and in the fourth the offices of Public Comfort and a restaurant. The second, third and fourth stories contain the Board rooms, the Committee rooms, the rooms of the Director-General, the Department of Publicity and Promotion, and of the United States Columbian Commission.

THE GOVERNMENT BUILDING.—This building is erected by the United States Government at a cost of $400,000, for its own use and exhibits. One-half of the building on the south is devoted to the exhibits of the Post-office Department, War Department, Treasury Department and the Department of Agriculture, the Smithsonian Institute, the Fishery Commission and the Interior Department. The exhibit of the Department of Justice extends from the rotunda to the west end of the building, and that of the State Department, from the rotunda to the east end of the structure.

Assistant Secretary Nettleton, of the United States Treasury, has charge of the Treasury Department Exhibit, and has arranged for exhibits of the Mint, the Coast and Geodetic Survey, the Supervising Architect of the Treasury, the Bureau of Engraving and Printing, the Bureau of Statistics, the Life-saving Board, the Lighthouse Board and the Marine Hospital.

Some of the most interesting exhibits among these are by the Mint. A complete group of the coins made by the United States, and a collection of coins of foreign countries; by the Supervising Architect of the Treasury, a number of photographs all of the public buildings of the Capital, including some of the original designs of Capitol dome and extension by the distinguished architect, Thomas U. Walter, LL.D.; by the Bureau of Engraving and Printing, new bills under framing, including samples of every bill of every denomination that the United States Government now authorizes as money; a life-saving station built and equipped with every appliance and a regular crew who will go through all the life-saving manœuvers; and by the Coast Survey, of a huge map of the United States, about 400 feet square, or about the size of a square of city property,—"accurately constructed of plaster of Paris and placed horizontally on the Exposition grounds with a covering over it, with galleries and path-

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THE UNITED STATES GOVERNMENT BUILDING.

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ways on the inside to allow visitors to walk over the whole United States without touching it, and built on a scale showing the exact height of the mountains, the depth of the rivers and the curvature of the earth."

The War Department will exhibit lay-figures of officers and men of the United States Army, of all grades, mounted, on foot, fully equipped in the uniform of their rank and service; besides will show the uniforms worn during the Revolutionary War and the War of 1812, and thirty-one figures showing the uniform of the Mexican War. There will be also shown the use of the telephone on battle-fields; the heliograph which annihilates distance; and all means of army signalling with the batteries, lines, cables, bombs, torches, and every other contrivance now in use in the army. By the arrangement of Col. Whipple, of the Ordnance Department, huge guns and explosives will be exhibited, and at special times daily there will be regular battery drills and loading and firing of pieces; many of the guns used being the finest of their kind in the world. For the use of the Medical Bureau a hospital tent will be provided, operated by a corps of hospital nurses and doctors.

THE GOVERNMENT BUILDING is classical in style, bears a strong resemblance to the National Museum and other Government buildings at Washington, was designed by Architect Windrim, is constructed of iron and glass, and covers an area of 350 by 420 feet. Its most prominent feature is a central octagonal dome, 120 feet in diameter and 150 feet high. The building fronts west and is approached on the north by a bridge over the lagoon. Its location is near the lake shore, south of the main lagoon and of the area reserved for the foreign nations and the several States, and east of the WOMAN'S BUILDING and of Midway Plaisance.

The allotment of space to the several departments' exhibits of the Government are as follows: War Department, 23,000 square feet; Treasury, 10,500 square feet; Agricultural, 23,250 square feet; Interior, 24,000 square feet; Post-office, 9,000 square feet; Fishery, 20,000 square feet, and the Smithsonian Institute, balance of space. The treasures of the latter are so numerous that it will be a task for its officers to select articles for exhibition for the world's great fair.

THE NAVAL EXHIBIT.—For the NAVAL EXHIBIT a protecting pier and breakwater have been extended into the lake, above the landing pier, behind which the United States will make a naval ex-

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hibit. A model of a coast defense battle-ship is being constructed upon a stone and concrete foundation for this part of the show, so as to observe the treaty with England which forbids a naval force or vessel of either England or the United States to be on the great lakes. This causes much comment and has given rise to the invention of the following *bon mot* about it, that, "the United States is not content with a war vessel in the abstract, but must have it in the concrete." A naval training ship is also to be brought here with a full complement of boys. It is also stated that the model of the *Victory* from the Chelsea Exhibition is to come to Chicago. A facsimile has been built in Spain of the little caravel *Santa Maria*, in which Columbus sailed on the fateful voyage that discovered America. She will first appear at the naval review in New York Harbor, in October, 1892, and be afterwards taken up the lakes to Chicago. The final resting place of this little vessel will be Washington. In coming to this country, after leaving the port of Palos from which Columbus sailed, with imposing ceremonies, the vessel will sail over the route taken by the discoverer of America upon his voyage in the original *Santa Maria* four centuries ago.

Unique among the other exhibits is that made by the United States Navy Department. It is in a structure which, to all outward appearance, is a faithful, full-sized model of one of the new coast-line battle-ships, the designs being planned by the United States Bureau of Construction and Repairs of the Navy Department, and now in course of construction at a cost of nearly $3,000,000 each by Cramp & Son, Philadelphia, and the Union Iron Works, San Francisco. This imitation battle-ship of 1893 is erected on piling on the lake front in the northeast portion of Jackson Park. It is surrounded by water and has the appearance of being moored to a wharf. The structure has all the fittings that belong to the actual ship, such as guns, turrets, torpedo tubes, torpedo nets and booms, with boats, anchors, chain cables, davits, awnings, deck fittings, etc., etc., together with all appliances for working the same. Officers, seamen, mechanics and marines are detailed by the Navy Department during the Exhibition, and the discipline and mode of life on our naval vessels are completely shown. The detail of men is not, however, as great as the complement of the actual ship. The crew give certain drills, especially boat, torpedo and gun drills, as in a vessel of war.

The dimensions of the structure are those of the actual battle-ship,

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PRAIRIE AVENUE.

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to wit: length, 348 feet, and width, midships, 69 feet 3 inches; from water-line to the top of the main deck, 12 feet. Centrally placed on this deck is a superstructure 8 feet high, with a hammock berthing on the same 7 feet high, and above these are the bridge, chart-house and the boats. At the forward end of the superstructure there is a cone-shaped tower, called the "military mast," near the top of which are placed two circular "tops" as receptacles for sharpshooters. Rapid-firing guns are mounted in each of these tops. The height from the water-line to the summit of this military mast is 75 feet, and above is placed a flagstaff for signaling.

The battery mounted comprises four 13-inch breech-loading rifle-cannon; eight 8-inch breech-loading rifle-cannon; four 6-inch breech-loading rifle-cannon; twenty 6-pounder rapid-firing guns; six 1-pounder rapid-firing guns; two Gatling-guns and six torpedo tubes or torpedo guns. All of these are placed and mounted respectively as in the genuine battle-ship. The superstructure contains the cabins, staterooms, lavatories, lactrines, mess-rooms, galley and fittings, mess-table for crew, lockers, berthings, and also shows the manner in which officers and enlisted men live, according to the rules of the United States Navy. On the deck and bridge of the superstructure the manner in which the rapid-firing guns, search-lights, beats, etc., are handled, is shown. The entrance to the conning tower is from the deck of the vessel, in which are all the appliances that the captain has at his command when taking the ship into action and during the progress of a battle at sea.

An electric light plant is provided and arrangements made for heating with steam. On the berth deck are the various articles usual to the hull, machinery and ordnance; ordnance implements, including electrical machines, gun-carriage, motors and range-finders; models showing typical warships of the past and present; samples of the provisions, clothing, bunting, flags, and naval stores in general—in short, all the supplies that go to make up the outfit of a man-of-war.

The costumes of the sailors of the Navy from 1775 to 1848 are exhibited by janitors dressed in those suits of clothing. On the starboard side of the ship is shown the torpedo protection net, stretching the entire length of the vessel. Steam launches and cutters ride at the booms, and all the outward appearance of a real ship of war is imitated.

This imitation battle-ship was designed by Frank W. Grogan,

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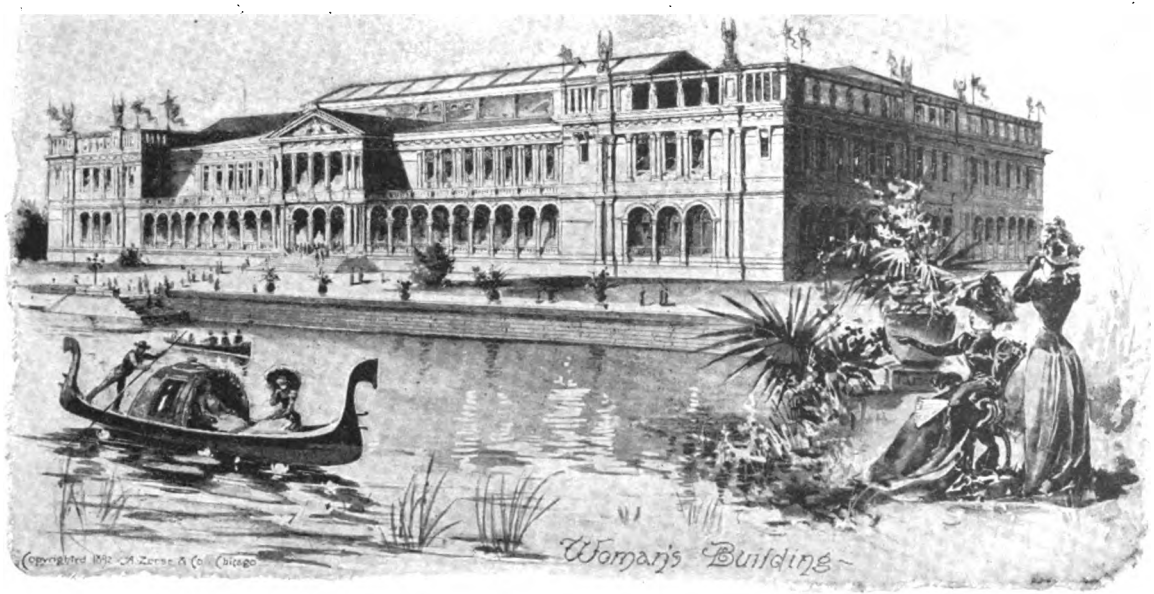
architect of the U. S. Naval Exhibit, under the direction of Capt. Meade, U. S. Navy, and Lieut. Tussing, U. S. N. The idea of having a structure to represent a man-of-war, manned with all appliances in position is new, and was conceived by Capt. R. W. Meade. Nothing of the kind has ever been attempted before, and the cost of this curious and original structure is about $100,000.

THE WOMAN'S BUILDING.—The Woman's Building is described as a new project upon an extended scale in exhibitions, and is a spacious structure designed to display woman's special achievements and work. A committee of ladies presided over most capably by Mrs. Potter Palmer, the wife of one of Chicago's most prominent citizens, has this in charge, and they propose organizing similar committees of ladies abroad and soliciting foreign exhibits. The design is to show the best things done by women. The building has a central gallery for the special display of the brilliant and artistic things done by women in art, authorship and handicraft. In other rooms there will be exemplified the charitable and industrial work carried on by women, where they labor for the benefit of humanity, in hospital service, kindergartens and schools, as housewives, and in cookery. The great achievements of famous women will have full representation, and as exhibition within this building will be upon special invitation based upon merit, this is expected to be a most attractive part of the Fair. At any rate, the ladies are enthusiastic about its prospective success, and they only fear that their building, which covers nearly two acres, may be found far too small for what they will have to put into it.

"Encompassed by luxuriant shrubs and beds of fragrant flowers, like a white silhouette against a background of old stately oaks, is seen the Woman's Building, situated in the northwestern part of the Park, separated by a generous distance from the HORTICULTURAL BUILDING on the one side, and the Illinois State Building on the other, and facing the great lagoon with Wooded Island as a vista. A more beautiful site could not have been selected for this daintily designed building."

There was a large number of designs for the building prepared by women architects from all parts of the land. The President of the Board of Lady Managers selected from them all the sketch by Miss Sophia G. Hayden, whose sketch showed harmony of grouping and gracefulness of details, which indicated the architectural scholar.

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THE WOMAN'S BUILDING.

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and to whom was awarded the first prize of one thousand dollars and also the execution of the design. The second prize was given to Miss Lois L. Howe, of Boston, and the third to Miss Laura Hayes, of Chicago. Miss Hayden, who is a graduate, with high honors, of the School of Technology, in Boston, went from there to Chicago, and personally made the plans and elevations for the building.

The lagoon, directly in front of the structure, takes the form of a bay about 400 feet in width, from the centre of which a grand landing and staircase leads to a terrace six feet above the water. Crossing this terrace other staircases give access to the ground, four feet above, on which, about 100 feet back, the building is situated. Flower beds, in artistic designs and low shrubs, cover the first terrace, forming, together with the creamy white balustrades rising from the water's edge, and also in front of the second terrace, a charming foreground for the fine edifice. Four hundred feet is the extreme length of the principal facade, the depth of the building being two hundred feet. Italian renaissance is the style selected.

This large edifice consist of a center pavilion flanked at either end with corner pavilions connected in the first story by open arcades, forming a shady promenade the whole length of the building. The first story is raised about ten feet from the ground line, and a wide staircase leads to the center pavilion. This pavilion, forming the main triple arched entrance with open colonnade in the second story, is finished with low and beautiful proportioned pediment enriched with a highly elaborate bas-relief. The corner pavilions being like the rest of the building, two stories high, with a total elevation of 60 feet, have each an open colonnade added above the main cornice. Here are located the Hanging Gardens, and also the Committee rooms for the use of the Board of Lady Managers.

The structure is adorned with an open rotunda 70 by 65 feet reaching to the full height of the building and covered by a richly ornamented skylight. A lobby 40 feet wide leads into this rotunda, which is surrounded by a two-story open arcade, as delicate and chaste in design as the exterior, the whole having a thoroughly Italian court-yard effect, admitting abundance of light to all rooms facing this interior space. On each side of the main entrance and occupying the entire space of the curtains and on the first floor, are located on the left hand a model hospital, on the right a model kindergarten, each occupying 80 by 60 feet. On the floor of the south

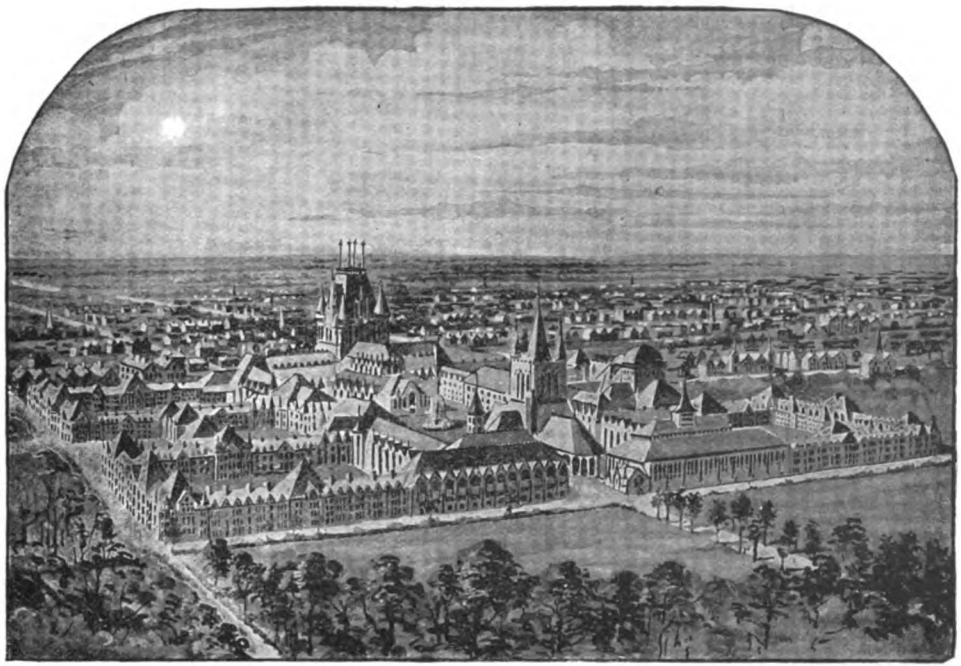
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pavilion is the retrospective exhibit, the one on the north, to reform works and charity organization, and each of these floors is 80 by 200 feet. The curtain opposite the main front contains the library, bureau of information, records, etc. Ladies' parlors, committee rooms and dressing rooms are located on the second story above the main entrance and curtains, and all leading to the open balcony in front, and commanding a splendid panorama of almost the entire ground. The great Assembly-room and Club-room is on the second floor of the north pavilion. The Assembly-room is provided with an elevated stage. A model kitchen, refreshment rooms, reception rooms, etc., are in the south pavilion. The building is encased with "staff," the same material used on the rest of the buildings, and as it stands with its mellow decorated walls bathed in the bright sunshine the women of the country are justly proud of the result.

The Board of Lady Managers was not created without some misgivings, nor encouraged without some fears. Established prejudices had to be overcome, numerous barriers removed and countless obstructions swept away before the necessary recognition was secured. The election of Mrs. Potter Palmer, of Chicago, a beautiful, an intellectual, and above all, an energetic woman, has contributed from the outset to establish the character of the undertaking and to insure its success. Mrs. Palmer infused life into the movement, inspired the women of the world with her own enthusiasm, planned a systematic campaign, and conducted the executive department of the board with a degree of judgment that marked her as a person of wonderful administrative ability. The woman of fashion, the leader of society, the devoted wife of one of the most prominent and wealthiest citizens of Chicago, her conduct of the great responsibility which was placed upon her shoulders not only surprised but amazed those who were actively employed in other departments of the Exposition, and who for that reason could understand and appreciate the magnitude of the task which she was called upon to perform.

The women of every country on earth were invited to take part in this exhibit; Mrs. Palmer communicated with the female sovereigns and with the consorts of sovereigns in foreign countries, asking for their assistance; the women of every State and territory in the North American republic were organized into Boards; the women of Canada, of Mexico, and of the South American Republics were brought into correspondence; not a moment nor an opportunity was

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CHICAGO UNIVERSITY, WHEN COMPLETED.

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lost in creating an interest in the Women's department everywhere, and the result is before us now.

Regarding application for space in the Woman's building, exhibits could only be entered there by invitation from the Board of Lady Managers. The space at its disposal was comparatively small and the Board wished to reserve it for the most select and distinguished things. The general design of the Women's exhibit, as outlined by Mrs. Palmer, was as follows: The Board wished to mark the first participation of women in an important national enterprise by preparing an object lesson to show their progress made in every country of the world during the century in which educational and other privileges have been granted them and to show the increased usefulness that has resulted from the enlargement of their opportunities.

The Board decided that in the general Exposition buildings, where the competitive exhibits were placed, it would not separate the exhibit of women's work from that of men, for the reason that as women are working side by side with men in all the factories of the world it would be practically impossible, in most cases, to divide the finished result of their combined work; nor would women be satisfied with prizes unless they were awarded without distinction as to sex and as the result of fair competition with the best work shown. They are striving for excellence, and desire recognition only for demonstrated merit. In order, however, that the enormous amount of work being done by women might be appreciated, a tabulated statement was procured and shown with every exhibit, stating the proportion of woman's work that enters into it. The application blanks sent out to manufacturers contained this inquiry.

Besides the foregoing extensive exhibit women had another opportunity of displaying work of superior excellence in an advantageous way in the Woman's building, over which the Board of Lady Managers exercised complete control. In its central gallery is grouped the most brilliant achievements of women from every country and in every line of work. Exhibits here were admitted only by invitation, which was considered the equivalent of a prize. No sentimental sympathy for women caused the admission of second-rate objects, for the highest standard of excellence was here strictly maintained. Commissions of women organized in all countries as auxiliaries to the Board of Lady Managers were asked to recommend objects of special excellence produced by women, and producers of such suc-

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cessful work were invited to place specimens in the gallery of the Woman's Building.

The platform for the guidance of commissions and organizations throughout the world who desired to coöperate with the Board of Lady Managers was laid down as follows:

1. To procure, for competition in the main buildings, a representative exhibit showing the work of women in all the varied occupations in which they engage.

2. To procure as far as possible statistics as to the amount of woman's work that enters into every exhibit, and interesting data connected with the same.

3. To recommend to the Board work of such supreme excellence as to be worthy of admission to the gallery of the Woman's Building.

4. To recommend to the Board such women as have the requisite expert knowledge to serve on various juries of award.

5. To see that the educational work being carried on by women, from the primary to the highest branches of education, is exhibited when possible, and when not possible that it be illustrated by means of maps, charts, photographs, monographs, relief models, etc.

6. To see that the charitable and philanthropic work, as well as that to promote recreation, healthfnlness, reform, etc., inaugurated by women, is either exhibited or made matter of record as above.

7. To aid in giving suitable publicity to the plans of the Board of Lady Managers in all the leading papers, through the agency of press women when possible.

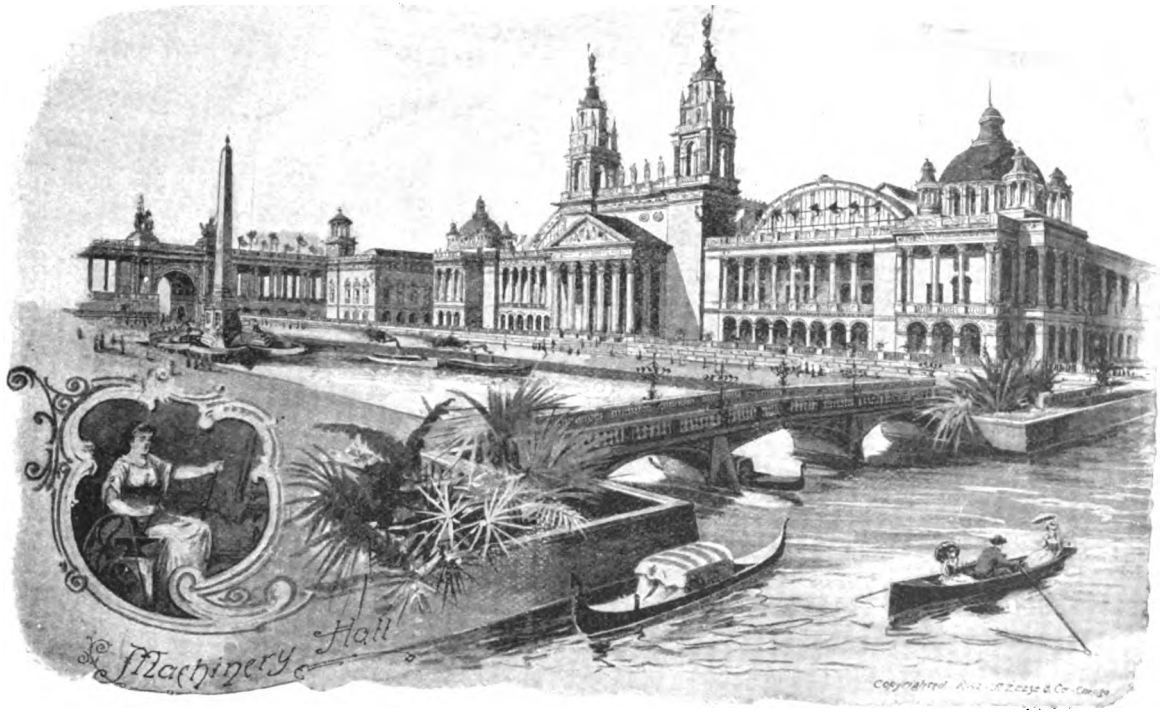
8. To aid in the collection of a loan exhibit of old lace, embroideries, fans, etc.

9. To secure books written by women for the woman's library, especially such as relate to the exact sciences, philosophy, art, etc.

10. To secure from every country a chronological exhibit, showing the evolution and progress of woman's industries from the earliest time to the present.

THE MACHINERY HALL.—Machinery Hall is second only to the ADMINISTRATION BUILDING in the magnificence of its appearance. It is 850 by 500 feet. It presents the appearance of a grand church and palace of the old world combined and on the largest scale, and was designed, with the other buildings on the great plaza where it stands, with a view to making a grand background for display, and in order to conform to the general richness of the court and add to the striking appearance, the two facades of the Machinery Hall in the court are rich with colonnades and other features. The design follows classical models throughout, the detail being followed from the renaissance of Seville and other Spanish towns, as being appropriate to a Columbian celebration. An arcade in the first story admits passage around

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MACHINERY HALL.

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the buildings under cover, and as in all other buildings, the front is formed of "staff" colored to an attractive tone; the ceilings are enriched with strong color. A colonnade with a cafe at either end forms the length between MACHINERY and AGRICULTURAL HALLS, and in the center of this colonnade is an archway leading to the Cattle Exhibit. From this portico there extends a view nearly a mile in length down the lagoon, and an obelisk and fountain in the lagoon for the southern point of view.

Machinery Hall with the Machinery Annex, somewhat smaller but of similar construction, and the Power House cost nearly one million and a quarter dollars. Machinery Annex is on the west of Machinery Hall, and is an annex in fact and not a detached edifice. The Annex covers between four and five acres and increases the length of the machinery building to nearly 1,400 feet, making it the second largest of all the EXPOSITION BUILDINGS, the great manufactures structure alone exceeding it in size.

It is spanned by three arched trusses and the interior presents the appearance of three railroad train houses side by side, surrounded on all sides by a gallery fifty feet wide. An elevated traveling train runs the entire length of the long naves for moving machinery.

The location of the Hall is at the extreme south end of the Park, midway between Lake Michigan and the west line of the Park. It is west across the lagoon from the AGRICULTURAL BUILDING, and just south of the ADMINISTRATION BUILDING. Peabody & Stearns, of Boston, are the architects.

All the power for running the machinery is supplied from the separate Power House, adjoining Machinery Hall, which will contain the steam-boilers, the engines and the dynamos, provision being made to supply the largest amount of electrical power ever made. A number of steam-engines of various types will furnish 16,000 horse-power, operating the dynamos for light and power, and driving the shafting. It is only in Machinery Hall and Annex that steam-power will be used. All the power elsewhere will be required here contrasts with the 6,000 at the Paris Exposition, and the 1,456 horse-power Corliss engine driving the machinery at the Philadelphia Centennial Exposition.

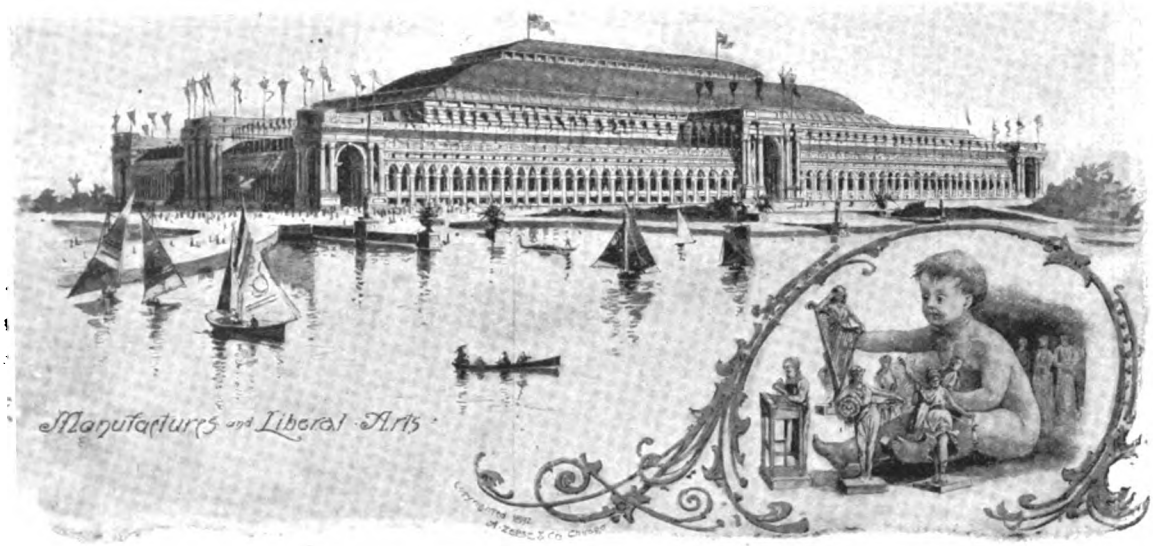
The display of machinery is large and more interesting than any ever made before in an International Exposition. The electrical machines are confined, of course, to the electrical department, and

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some of the mining machinery to the mines and mining department, but nevertheless every inch of space is taken up in the machinery building and the scene is one of the greatest animation from one end of the great hall to the other. Everything from the smallest to the most ponderous machines of the age is to be seen in the building and its annexes, and everything is in motion. The visitor is struck at once with the great diversity shown in the construction of engines, some of which exhibit movements that he little dreamed of. The nations of the earth are in competition here. England, Germany, France, Holland, Belgium and other European countries have sent the best examples of their machinery, and the United States makes an exhibit which alongside of the best any of the other nations has to offer is creditable. This is the land of invention, and the application of steam to all sorts of purposes was never before so fully illustrated. Machinery is doing everything, and more than the hands of man were employed in doing a century ago. Some of the ingenious contrivances one would imagine almost think, so thoroughly do they perform the task assigned them. Here the machinery used in every branch of manufacture is in operation. The arrangement is perfect, and from the trains which move around the building above, the visitor can take a splendid observation of the entire exhibit. The enormous extent of space under roof in the buildings devoted to machinery, in round numbers nearly eighteen acres, is proof of the appreciation of the importance of this branch of the Exposition by the management.

THE MANUFACTURES AND LIBERAL ARTS BUILDING.—The mammoth structure of the Great Columbian Exposition is the MANUFACTURES AND LIBERAL ARTS BUILDING. It is symmetrical throughout in its proportions. It is the largest exposition building ever constructed, being 1,688 feet long by 788 feet wide, and covering nearly thirty-one acres. A gallery fifty feet wide extends around the entire building inside, on all four sides, by which is added more than eight acres to the floor space available for exhibits, and making the total floor area of the building forty acres in all. In addition to this there are eighty-six smaller galleries, twelve feet wide, projecting from the great gallery, from which can be seen the vast array of exhibits and the throng of people on the floor below. An avenue fifty feet wide extends throughout the length of the building, on the main floor, called "Columbia Avenue;" and this is crossed at right

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THE MANUFACTURES AND LIBERAL ARTS BUILDING.

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angles at the center by another avenue of the same width. The roof covering this immense edifice is of iron and glass, and arches an area of 385 by 1400 feet, and has its ridge one hundred and fifty feet from the ground. The steel trusses for the roof will contain more metal by 50 per cent. than the Brooklyn bridge.

This gigantic edifice, with all its elaborate ornamentation, cost one million five hundred thousand dollars. It occupies a most advantageous position, facing the lake, with lawns and promenades between; and relatively to the other exposition buildings,—on the west is the ELECTRICAL BUILDING and the lagoon separating it from Wooded Island; on the south the harbor and in-jutting lagoon; and on the north the UNITED STATES GOVERNMENT BUILDING. Its own vastness and its location make it the most conspicuous building on the grounds.

In exterior appearance the building is covered with "staff," and so treated as to be made to represent marble. The great fluted columns and immense arches are apparently of this substantial and beautiful material. There are many fine entrances to the building; but those at the corners and midway at the sides of the structure are grand, with their lofty arches and piers of elaborate design and ornamentation.

THE MANUFACTURES AND LIBERAL ARTS BUILDING is in the Corinthian style of architecture, and in point of being severely classic excels nearly all of the other edifices. The long array of columns and arches which its facades present is relieved from monotony by very elaborate ornamentation. In this ornamentation female figures, symbolical of the various arts and sciences, play a conspicuous and very attractive part. Designs showing in relief the seals of the different States of the Union and of various foreign nations also appear in the ornamentation. These, of course, are gigantic in their proportions. THE AGRICULTURAL BUILDING perhaps is the only one which has a more elaborately ornamental exterior than has this colossal structure.

This building is regarded as one of the marvels of the Exposition, for its architectural success. George B. Post, of New York, is the architect.

It is no exaggeration to say that one might spend an entire month in the Manufactures and Liberal Arts building, giving ten hours a day to the inspection of exhibits without seeing all that is displayed

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here. The term "World's Fair" may be appropriately applied to this department alone, for here are the evidences of the progress of mankind in every section of the habitable globe. Whatever machinery or inventions may have accomplished; whatever the soil may have produced or the produce of the soil nourished, the results are here. Science, art and industry have their special departments; steam and electricity are represented fully; but these may be denominated causes; the effects of all our knowledge in science, art and industry, of the inventions in electrical and steam force, in navigation, in transportation, in culture, are made manifest in the Manufactures and Liberal Arts building. Here are the higher products of the age, the necessaries and luxuries of the civilized world. If the visitor, after passing through the Art, Agricultural, Machinery, Forestry, Horticultural and all the other departments and sections, is desirous of obtaining an insight into the results of man's achievements in all these branches of intellectual development and refinement, he will find it in the Manufactures and Liberal Arts building. The Liberal Arts department alone covers an immense space, and here the educational institutes and all that enters into educational systems of the various countries are fully represented.

THE ELECTRICAL BUILDING.—The Electrical Building has all the imposing appearance to qualify it to stand among the noble structures about it devoted to older arts and sciences. There will be represented in it a wonderful growth in a very short period of time.

This structure has an open portico running along the whole of the south facade, the lower or Ionic order of architecture forming an open screen in front of it. Its various pavilions are furnished with windows and balconies. The exterior orders are richly decorated in details, and friezes, pediments, panels and spandrils have received a decoration of figures in relief with architectural *motifs;* the general tendency of which is to illustrate the purposes of the building.

The architects have designed the building in its details and general outlines so that they might be capable of producing an illumination by night on a scale hitherto unknown, the flag-staffs, the open porticos, all being arranged with this in view. By day a fine effect is produced by the color of the exterior which is like marble, but the walls of the hemicycle and of the various porticoes and loggia are highly enriched with color, the pilasters in these places being decorated with scagliola and the capitals with metallic effects in bronze.

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THE ELECTRICAL BUILDING.

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This building is 351 feet wide and 769 feet long, the major axis running north and south. It fronts south on the great quadrangle or court, north on the lagoon, east opposite the MANUFACTURES BUILDING, and west the MINES BUILDING.

The general plan is as follows: A longitudinal nave 115 feet wide and 114 feet high, crossed in the middle by a transept of the same width and height. The nave and the transept have a pitched roof with a range of skylights at the bottom of the pitch and clerestory windows. A flat roof covers the rest of the building, averaging 62 feet in height and provided with skylights. The second story is composed of a series of galleries connected across the nave by two bridges, with access by four grand staircases. The area of the galleries in the second story is 118,546 square feet, or 2.7 acres.

The exterior walls of this building are composed of a continuous Corinthian order of pilasters 3 feet 6 inches wide and 42 feet high, supporting a full entablature, and resting upon a sylobale 3 feet 6 inches. Thus it is seen that these columns extend throughout the first and second stories. The total height of the walls from the grade outside is 68 feet 6 inches.

There are two great semi-circular projections to the structure, flanked by two towers 195 feet high, and the north pavilion is placed between these two projecting portions of the building. The great semi-circular window is the central feature of the edifice, and above it 102 feet from the ground, is a colonnade forming an open loggia or gallery, commanding a view over the lagoon and all the north portion of the grounds.

There are central pavilions on the east and west which are composed of towers 168 feet high. In front of these two pavilions is a great portico composed of the Corinthian order with full columns.

On the south there is a a pavilion semi-circular in form, 78 feet in diameter and 103 feet high. The opening of this niche is framed by a semi-circular arch, which is crowned by a gable or pediment with smaller gables on the returns and surmounted by an attic, the whole reaching the height of 142 feet. In the center of this niche, upon a lofty pedestal, is very appropriately placed, a colossal statue of FRANKLIN, "whose illustrious name intimately connects the early history of the Republic with one of the most important discoveries in the phenomena of electricity." Van Brunt & Howe, of Kansas City, are the architects. The cost of this structure is $375,000.

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The Electrical Department of the Columbian Exposition will be a revelation to even those who attribute almost miraculous powers to the great force. A hundred thousand incandescent lamps placed harmoniously about the grounds and buildings, and 10,000 arc lamps distributed advantageously to light up the beautiful architecture and pleasing landscape, would alone furnish almost a fairy spectacle; but combine with these, electric fountains, pointing rainbow sprays toward the sky, glittering lamps of many colors sparkling under the clear waters of the lagoons and at night setting out in all their dainty colorings the floral beauties and the most brilliant kaleidoscope will fade in an every-day dull contrast.

The Electrical Building itself is beautiful beyond description. Beside general ornamentation made under the direction of the chief of that department each exhibitor has been on his mettle to outdo his neighbor in uniqueness of design and grandeur in result. The laying out of arbitrary aisles in the building resulted in leaving a circular space thirty feet in diameter in precisely the center of the building. This space was the most desirable of course, and upon designs for it nearly twenty firms set at work. One firm, engaged in the business of artistic lighting, undertook to construct a great tower reaching to the dome of the building, 160 feet in height, the whole to be made of Bohemian crystal, vari-colored and in hundreds of dainty designs, all lighted from within by opalescent and tinted incandescent globes wrought into figures, designed to contrast pleasingly with the shimmering exterior.

Other exhibitors designed evanescent arches of incandescent lamps to span the main aisles of the building, the designs being so constructed that the figures could be changed instantaneously from a switch board hidden from view at the exhibitor's space. The best talent was secured by the larger electrical companies for the work of preparation of the department exhibit, and $2,000,000 were appropriated for the purpose.

A model house has been built to demonstrate in actual operation every economic application of electricity for use in the home.

Thomas A. Edison, the greatest of living electrical inventors, has been deeply interested in this department. His company it is believed has invested half a million dollars in its display.

All of the great electrical companies, telegraph and telephone companies, street railway and lighting and machinery companies of

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CENTRAL MUSIC HALL.

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the United States and the world at large are represented in the Electrical Building. An especially good display of engines and dynamos comes from England, and in fact the leading features of the electrical exhibition held in London in 1892 are all here. Eugene and Paul Champion, of Neuilly-sur-Seine, France, have a series of electrical fireworks for the Exposition. Neither gunpowder, dynamite, nor other explosive material is used in producing the dazzling effects. Among the novelties is a model light house prepared for the World's Fair by Sauter, Harle & Co., of Paris.

The German electrical firm of Shuckertt & Co., of Nuremberg, makes a general exhibit in the electrical department, and, at the same time, gave one of the Shuckertt ground glass reflectors for the services of the Exposition, and asked that it be given a prominent location in a convenient point to light the lake shore and the harbor of the Exposition. A complete system, demonstrating the European idea of long-distance transmission, is exhibited. A large multiphase dynamo of the five-wire system is also among the European exhibits. A 1,500 horse-power direct current dynamo, a 500 horse-power alternating current dynamo, and a 1,000 horse-power motor are features of the exhibition of the Siemens & Halske Company. A new street-car motor for conduit operation, developed by Herr Hasselwander, of Germany, the Buda-Pesth conduit railway of Siemens & Halske, and a number of storage battery systems of different European firms are likewise exhibited. The electrical display made by Siemens & Halske, of Germany, is probably the most extensive and costly ever witnessed.

In this connection it might be well to say that the following is the arrangement of electric lights: Arc lights—Machinery Hall, 600; Agricultural, 600; Electricity Building, 400; Mines and Mining Building, 400; Transportation Building, 450; Horticultural Hall, 400; Forestry Building, 150; Manufactures Building 2,000. The Fine Arts Building is completely lined with incandescent lamps, and one mile of wall space, on which pictures are hung, is lighted. The number of lamps is 12,000. There are no arc lights in this building. The Woman's Building is lighted by both systems. It was decided to place in it 180 arc lights and 2,700 incandescent lamps. The reception and dressing rooms are furnished with the incandescent lamps. The Administration Building is supplied with 1,000 incandescent lamps. The Machinery and Agricultural Annexes are supplied with

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arc lights. Each building is furnished with wires for incandescent lighting in order to accommodate the exhibitors.

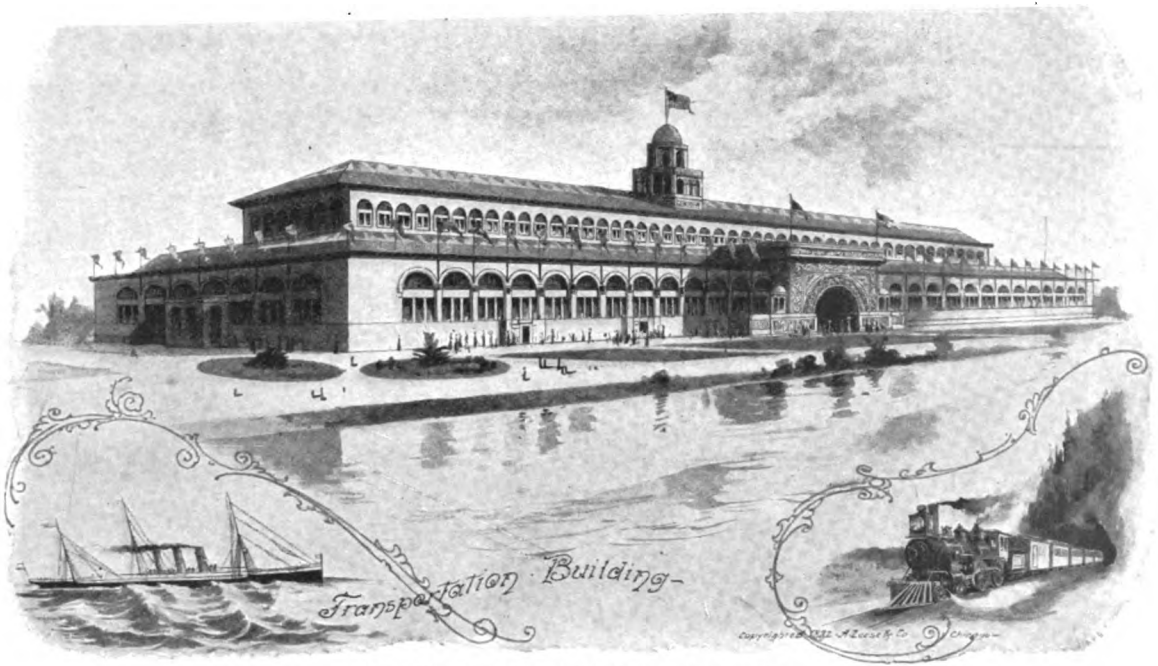
The saw mills are run by electricity. The Manufactures Building is supplied with electric power, and the saw mill employed there is worked by that force. At the Paris Exposition but three buildings were furnished with electric light. Each structure at the World's Columbian Exposition has a plant which may be used night and day.

In all there are used, approximately, 127,000 electric lamps, of which 7,000 are arc, of 2,000 candle power each, and 120,000 incandescent sixteen candle power lamps. To run the plant 22,000 horse-power is required. The World's Fair directors spent $1,000,000 for these electric plants. Exhibitors are not required to pay anything for light, except in cases where they call for more lamps than are furnished by the construction department.

It was the aim of the management to make the World's Fair site and the buildings one grand exemplification of the progress that has been made in electricity. The electrical exhibits are confined to a few of the buildings, but on every hand there is a display of electricity. The grounds, including the water-ways, the wooded island, the streets and avenues, and boulevards approaching the World's Fair site, are all lighted by electricity, and in harmony with the general effect which it is desired to produce. The great structures of the Exposition are turned into a panoramic view at night by the aid of powerful electric search lights. On the gilded dome of the Administration building, on the centre pavilion of the Casino, and at other suitable points these search lights are placed. During the evenings on which the Exposition is open, the lights are turned on the several main buildings and water-ways so as to flood them with a sudden burst of electric splendor. Glimpses of the outlines of woods, water and buildings suddenly flash before the eye. And this panoramic view may be had from different points of observation.

THE TRANSPORTATION BUILDING.—The Transportation Building is a long structure and is much of the Romanesque in its style of architecture. It is exquisitely refined and simple in architectural treatment, although it is very rich and elaborate in detail. Its interior is treated much after the manner of a Roman Basilica, with broad nave and side aisles. The roof is in three divisions, the

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THE TRANSPORTATION BUILDING.

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middle one rising much higher than the sides, with a beautiful arcaded clerestory. The cupola, exactly in the centre of the building, rises 165 feet from the ground. The main entrance is an immense single arch, enriched to an extraordinary degree with carvings, bas-reliefs and mural paintings, the entire feature forming a rich and beautiful, yet quiet color climax, treated entirely in leaf, and called the "Golden Door." There are numerous other entrances and with them are grouped terraces, seats, drinking fountains and statues. This leads to the central open space, surmounted by a cupola rising 165 feet, and reached by eight "lifts" which will be themselves exhibits. These carry visitors to the galleries running along the sides of the building. The remainder of the architectural composition falls into harmony with the highly-wrought entrance, and is duly quiet and modest in treatment. The main building of the Transportation Exhibits is 960 feet front by 256 feet deep, and will extend westward to Stony Island avenue. Adjoining on the west is the Transportation Annex, a triangle of nine acres, consisting of one-story buildings, each 64 feet wide, set side by side. These will contain in spaces 16 feet wide, long railway lines, to exhibit trains of both freight and passenger cars and engines. This display is expected to be stupendous, and hence the large space devoted to it. There will be at least 100 locomotives arranged so that each will face a central avenue, making a fine perspective effect. Everything in the way of transportation is expected to be exhibited, ranging from a baby carriage to a huge "Mogul" engine. Technically this exhibit will include everything comprised in class G of the official classification. It forms, with other buildings, the northern or picturesque quadrangle. It is situated between the HORTICULTURAL HALL and the MINES BUILDING. Its arcial relation is with the MANUFACTURERS' BUILDING on the east side of the quadrangle; the central feature of each of the two buildings being on the same east and west line.

The cupola of the TRANSPORTATION BUILDING, viewed from the lagoon, will form the effective southwest accent of the quadrangle, while from the cupola itself, reached by eight elevators, the Northern Court, the most beautiful effect on the entire Exposition, may be seen in all its glory. These elevators of themselves will naturally form a part of the TRANSPORTATION EXHIBIT, and as they will also carry passengers to galleries at various stages of height, a fine view of the interior of the building may be easily obtained. The

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main galleries of this building will prove quite accessible to visitors because of the abundant placing of passenger elevators.

If we add to the effect of the exhibits the architectural impression given by the long vista of richly ornamental colonnades, it may be easily imagined that the interior of the Transportation Building will be one of the most impressive of the Exposition. A transfer railway with 75 foot tables will run the entire length of the structure and immediately west of the main building, to assist in the placing of exhibits. Adler & Sullivan, of Chicago, are the architects. The Transportation Building cost about $300,000.

For the first time in the history of world's fairs it was decided to give the science of transportation in its broadest meaning that attention to which its importance entitles it. Every method of transportation, except the back of the mule and the foot of man, is shown. The development of modern transportation has been so recent and rapid that its significance has hardly been understood. Already its early history is in many instances fading away or utterly lost. Judged by their relations to the every day life of the world, no other industry surpasses it in utility or equals it as a power in the progress of civilization. Considered from the stand-point of the amount of capital invested, it overshadows every other industry. Prof. Arthur T. Hadley of Yale College says:

"The railroads of to-day are worth from $25,000,000,000 to $30,000,000,000. This probably represents one-tenth of the total wealth of civilized nations, and one-quarter, if not one-third, of their invested capital. It is doubtful whether the aggregate plant in all manufacturing industries can equal it in value. The capital engaged in banking is a trifle beside it. The world's whole stock in money of every kind—gold, silver and paper—would purchase only a third of its railroads."

If to the railroads be added the shipping of the world and all means of conveyance on common roads, the magnitude of the interests represented in this department of the World's Columbian Exposition may be fairly estimated.

It was the intent of this department that it should fully and fairly present the origin, growth and development of the various methods of transportation used in all ages and in all parts of the world. As far as possible the means and appliances of the barbarous and semi-civilized tribes are shown by specimen vehicles, trappings and

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craft. Past history is illustrated by relics of the earlier days. The development of water craft, from the crudest forms to the modern ocean steamship; of the wheeled vehicles from the first inception of the idea of the wheel to their present seeming perfection; and of that greatest of all means of transportation—the railway—is also further illustrated by accurate models, drawings, plans, and designs, in cases where the actual apparatus, appliance or machine itself could not be exhibited. It was the aim of this department to keep the historical feature clearly in view, and even to magnify it. By so doing the greatest exhibition of the actual means of transportation employed throughout the world to-day stands out in high relief by contrast, and the wonderful achievements of recent years bear more weighty testimony to the genius of the age in which we live.

Exhibits in this department are divided into six general classes —railways, intramural transit, carriages and other vehicles for common roads, bicycles, aerial and pneumatic machines, and marine transportation. Of these the railways, as most important, demand most space. A space of over eight acres is devoted to this interest. The plan adopted provides for the best possible utilization of space. Exhibitors have every opportunity for showing their appliances and devices to the best advantage. As far as possible, arrangements were made by joint agreement for showing everything in its proper place and relations. Locomotive appliances are best shown on locomotives and the appurtenances and furnishings of cars on cars.

It is believed that nearly all of the establishments engaged in locomotive, car and bridge building are represented. A large number of the leading railways of the world also make exhibits of their standard roadbed, track, and equipment. Street railways—surface, underground, and elevated—are shown very completely in this department.

A large portion of the floor space of the Transportation building proper is devoted to the display of carriages and vehicles for common roads.

Bicycles, the most recent of all road vehicles, receive the attention to which their popularity and rapidly increasing use entitle them.

Transportation through the air and by means of air is yet in a comparatively undeveloped condition. Whatever is worthy in past achievements is sent here, and whatever there is of present success or future promise. Whether or not this realm is ever conquered by

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THE MINES AND MINING BUILDING.

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human ingenuity, the subject will ever be a fascinating one. Montgolfier's early attempts in this field are exemplified, and the modern schools for the training of aeronauts have space allotted to them.

Every known method of transportation on water is shown in this division. Small craft of all kinds are exhibited in full size; vessels, from the nature of the case, must be shown by models. For fuller illustration, drawings, plans and paintings are shown. Much attention is given to the merchant marine. The navigation of the inland waters of the world, especially the great lakes and rivers, is illustrated more fully than in any previous exposition.

THE HALL OF MINES AND MINING.—THE MINES AND MINING BUILDING is of classic architecture. The architect, S. S. Beman, of Chicago, has followed mainly the early Italian renaissance, with which he has taken sufficient liberty to adapt it to its place in a great general Exposition. A decided French spirit pervades the exterior design; but it is kept subordinate. Its plan is simple and straightforward, embracing on the ground floor spacious vestibules, restaurants, toilet rooms, etc. This building is 700 feet long by 350 feet wide, and its location is at the southern extremity of the Western Lagoon or lake, and between the ELECTRICITY and TRANSPORTATION BUILDINGS.

There are entrances at the sides; but two grand entrances are placed at the ends, north and south, each 110 feet high, their enormous arched ways richly embellished with sculptural decorations, emblematic of mining and its allied industries, and opening into a vestibule 88 feet high. To the right and left of each entrance inside start spacious flights of stairs leading to the galleries, which are 60 feet wide, 25 feet from the ground floor, and lighted on all sides by large windows, and from above by a high clerestory extending around the structure.

The main front south looks out on the great Central Court, and the north front on the western and middle lakes and a beautiful thickly wooded island. Each corner of the building is a spacious square pavilion, each being surmounted by a dome, and the entire roof is of glass, elevated 100 feet above the floor, and all lighted by arched windows extending through the galleries. The cantilever system applied to the roof is the only one used in the Exposition buildings excepting the laxedomes, and not been used before for the support of roofs as in the Mines Building.

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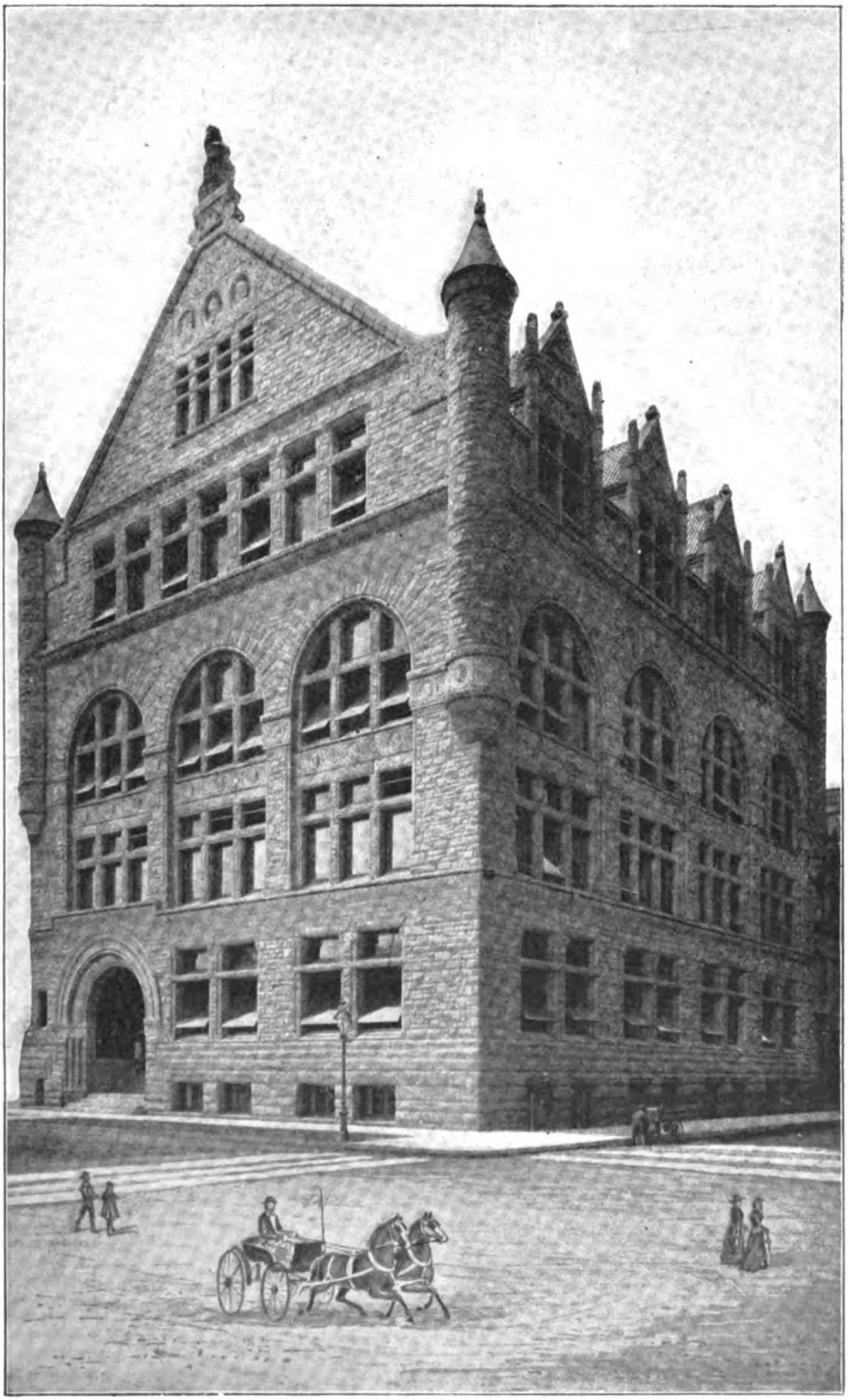
Between the main entrance and the pavilions are richly decorated arcades forming an open loggia on the ground floor and a deeply recessed promenade on the gallery floor level, which commands a fine view of the lakes and islands to the northward and the great Central Court on the south. These covered promenades are each 25 feet wide and 230 feet long, and from them is had access to the building at numerous points. The loggias on the first floor are faced with marbles of different kinds and hues, which will be considered part of the Mining Exhibit, and so utilized as to have marketable value at the close of the Exposition. The loggia ceilings will be heavily coffered and richly decorated in plaster and color. The ornamentation is massed at the prominent points of the facade. The exterior presents a massive, though graceful appearance.

The great space of the interior is one story high and 630 feet long by 230 feet wide, with an extreme height of 100 feet at the center and 47 at the sides. This is spanned by steel cantilever roof trusses supported on steel columns placed 65 feet apart longitudinally and 115 feet and 57 feet 6 inches transversely, thus leaving clear space encumbered with only 16 supporting steel posts. The canti-levers are of pin connection to facilitate erection. The inner and higher ends of the cantilevers are 46 feet apart, and the space between them is spanned by riveted steel trusses with an elliptical chord.

The exterior of this structure, like that of all the others, will be made of "staff," similar to that used in facing the recent Paris Exposition buildings. The cost of the MINES BUILDING is $250,000. This large building is to contain a most interesting exhibition of the minerals and metals of this country, with the methods and appliances for mining and working them.

In no other department of the World's Columbian Exposition, perhaps, is seen a greater diversity of exhibits than that of Mines and Mining. Not only is there a dazzling array of diamonds, opals, emeralds and other gems, and of the precious metals, but a most extensive collection of iron, copper, lead, and other ores, and of their product; of coal, granite, marble, sandstone and other building stone; of soils, salt, petroleum, and, indeed, of almost everything useful or beautiful belonging to the mineral kingdom. The mineral resources and products, not only of this country as a whole, but of each State and section as well as of foreign countries is of the most complete and representative description.

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THE ART INSTITUTE. 227

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The exhibit of coal at the Exposition, of course, is qualitative rather than quantitative. Not only are the different varieties of coal, which the different localities produce, shown, but chemical analyses of each and the results of tests determining economic value and adaptability to various uses. The coal resources of the different States and sections are shown by geological maps and drawings giving configuration, stratification, etc., which render apparent the extent and accessibility of the coal beds and veins.

So, too, as regards iron. The most strenuous efforts were made to have an exibit worthy of that great branch of industry. This country is now the first nation in the world in iron production, having recently forged ahead of Great Britain, its only real competitor. Our production of pig iron now exceeds 10,000,000 tons annually, or nearly four times what it was ten years ago, and the production of steel now aggregates about 5,000,000 tons a year, a growth of nearly 300 per cent. in the decade. The development of the iron resources of the Southern States has been especially great and rapid.

Another exhibit which is very extensive and varied is that of building stone. Granite, limestone, marble, sandstone and bluestone in scores of colors, are shown by the finest specimens procurable. Nearly every State has quarries of native material of excellent quality. From one to half a dozen of twenty or more recognized varieties of granite, for example, are quarried in twenty-eight states, Massachusetts, Maine, California and Connecticut being the largest producers. The value of the granite output in 1889 was $14,464,095, an increase of more than $9,000,000 over that of 1880. Limestone is quarried in almost every State, Pennsylvania and Illinois taking the lead. The value of the output in 1889 was $19,095,179. This is exclusive of the output of marble, which, as is well known, is a species of limestone, the quarrying of which in a number of the States is an important and extensive industry. Sandstone, including bluestone, was quarried in 1889. to the value of $11,758,081.

One of the greatest attractions of the mines department of the Exposition is the remarkable collection of minerals owned by Professor A. E. Foote, of Philadelphia. It is the finest private collection in the world, a complete history of mineralogy, and is so arranged that the mineralogy of the States is shown. This collection was shown at the Centennial, at London, and at Paris, and in each instance received the highest award.

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The Canadian Copper Company, of Sudbury, Canada, makes a mineral exhibit which includes the Canadian Company's exhibit.

In its exhibit the government geological survey places on view a sort of synoptic picture of the mineral resources of this country. Big chunks of native gold and silver are shown just as they were dug out of the earth, together with remarkable ores of all sorts, particularly those of what are called "economic minerals," such as iron, copper and tin. Accompanying these are maps drawn for the purpose of assisting the illustration. Professor Clarke, the distinguished chemist and mineralogist, was given charge of the whole matter, and he collected a wonderfully fine assemblage of precious and semi-precious stones also, which form part of the display. This collection, although it is largely composed of gems found in the United States, is not limited to those. Dozens of big boxes and trays full of such jewels of all sorts were sent from the National Museum.

Henry A. Ward, of Rochester, N. Y., whose display of minerals was one of the features of the Louisville Exposition, consumes 5,000 square feet of space for his mineral cases, and sends enough to fill 10,000 feet in a geological display. The exhibit of coal, iron ore, building stone and clays from Indiana is very extensive. There is also a special cabinet exhibit of what may be called commercial minerals. Gov. J. V. Aycardi, of Panama, tendered for exhibition at the World's Fair a beautiful piece of carved marble, a bas relief representing the landing of Columbus, which was presented to the State of Panama, nearly ninety years ago, by the Empress Josephine, who, at the same time, gave the colossal bronze statue of Columbus which now stands in Aspinwall. Pueblo, Col., makes a special exhibit. The celebrated Westerman and Briggle collection of gold specimens is seen, among other things.

The Columbian Exposition appropriately and properly yields a conspicuous place to the mining display. Interest centers in the Mining building as a museum of those metals and minerals that were such an incentive to the enterprise of the great Spanish voyager. More especially because here is placed an historical exhibit, illustrating by means of models, drawings, or original tools and appliances themselves, the successive advances made in the metallurgical art from the primitive methods in vogue among the natives of the new world at the time Columbus landed.

The evolution of the metallurgical industry is illustrated by

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relics of early days. Mexico furnishes some of the old-fashioned Catalan forges for ironmaking with their crude hammers and water blasts. Catalonia was a province in Spain where this antique implement was first employed and from which skilled ironmongers were exported to the new world. This primitive affair will make a strong contrast with the modern improved forging press of 4,000 tons worked by 2,000 horse-power engines and commanded by traveling cranes capable of lifting 150 tons.

The iron industry of the United States has much to show for its development since the days of Columbus. It was as early as 1619 that a London Company sent over to Virginia 100 persons skilled in the manufacture of iron. On the banks of the James River they established the first works for the smelting of ores in America, and erected one of the Catalan forges. Unfortunately the colony was, within a few years, annihilated by Indians and the works demolished. The first blast furnace in Maryland dates back to 1724, and was christened the "Principio." Some years ago two pigs of iron bearing the lettering "Principio, 1751," were raised by fishermen from the Patapsco river. One of the pigs is exhibited at the fair.

The growth of Bessemer steel operations is the most stupendous fact in the development of the metallurgical industries. In 1865 two Bessemer converters combined gave a total annual product of 500 pounds. In 1890 there were eighty-two and the product over 4,000,000 tons. This great expansion is to be accounted for largely through the perfection of the machinery used in these processes. The most striking illustration of this is seen in the iron and steel section of the Mining building. In a conspicuous place is exhibited the original steel converter, upon which, in 1857, Mr. Kelly, of Kentucky, obtained his patent. In comparison with this relic is placed the ponderous equipment of a steel plant, presented either by a model or by a working apparatus. There are blast and puddling furnaces, open-hearth furnaces, rolls, steel trains, and every conceivable process of manufacture together, flanked by artistically arranged stacks of the product in its various forms of bars, rods, sheets, wire, etc.

The mineral exhibit from Michigan is sure to attract much attention. This includes, besides extensive collections from museums, etc., granites, marble, and other building material of rare and beautiful qualities, but which have not yet been marketed to any great extent; raw material from the iron mines, in plates 69 to 70

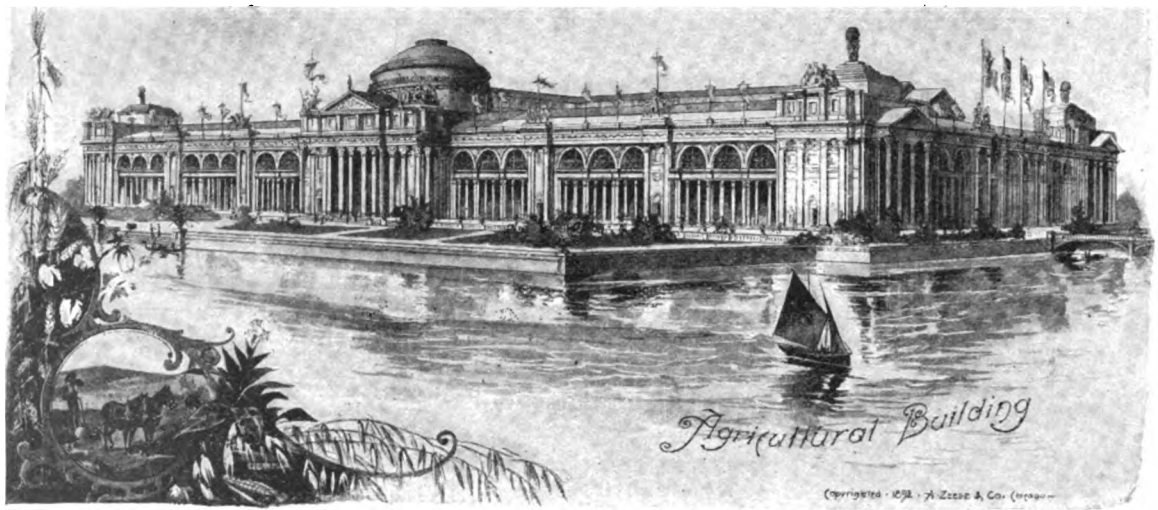
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per cent. pure, as taken from the mines; and especially, specimens of copper, which, in its pure state, is found only in the Michigan mines A copper exhibit, the "largest and most extensive ever attempted," is made by the Calumet and Hecla mines. It includes "obelisks of pure copper ranging in weight from fifty to five hundred pounds, also quantities of wire and sheet copper that has been drawn and rolled from the native metal just as it was taken from the mines; rods of copper bent into different shapes, and even tied into knots, as one would tie a cravat, without breaking or splintering, as would be the result of such an operation on the copper produced by other mines and containing an alloy which renders it less ductile. A curious fact concerning the silver deposits sometimes found in the copper, is, that nature has welded the silver and copper together without mixing them, whereas no process has ever been discovered by mineralogists by which the same thing can be done artificially. Examples of this phenomena are included in the exhibit."

Nearly all the mineral-producing states of the Union make large exhibits. Geological societies at home and abroad are well represented.

THE AGRICULTURAL BUILDING.—Standing very near the shore of Lake Michigan and almost surrounded by the lagoons that lead from the lake into the Park is the magnificent structure known as THE AGRICULTURAL BUILDING. It is classic renaissance in its style of architecture, and is 600 feet wide, and 800 feet long, its longest dimensions being east and west. The north side of the structure is almost on a line south of the Pier extending into the lake, on which stand the heroic columns emblematic of the Thirteen Original States. The front of the building runs for its entire length along the lagoon. On the east the building faces a harbor for pleasure boats. On the west is a continuation of the lagoons, for the whole length of the front. For a single story building the design is bold and heroic. The general cornice line is 65 feet above grade, while on both sides of the main entrance are mammoth Corinthian pillars 50 feet high and 5 feet in diameter. There is a pavilion on each corner and in the center of the building, the center one being 144 feet square. The corner pavilions are connected by curtains, forming a continuous arcade around the top of the building. The main entrance is 64 feet wide, and its vestibule leads to the rotunda 100 feet in diameter. The dome is mammoth in its proportions,

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THE AGRICULTURAL BUILDING.

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being 130 feet high and 100 feet in diameter, and made of glass. In the main vestibule statuary is placed, having for design the illustration of the Agricultural industry. And about all the entrances similar designs are grouped in the most elaborate manner. The corner pavilions are surmounted by domes 96 feet high and above these tower groups of statuary. The design for these domes is that of three women, of herculean proportions, supporting a mammoth globe.

This immense structure covers more than nine acres of ground, and together with the DAIRY and FORESTRY BUILDINGS, which cover 7 and 4.5 acres respectively, costs about $1,000,000. The idea is new as agricultural interests are promoted by this Exposition. A large building stands on the south of the Agricultural Building, devoted to a Live Stock and Agricultural Assembly Hall. It is near the Elevated Railroad. Like the other important buildings of the great Exposition it is a very handsome structure. On the first floor are located—A Bureau of Information; suitable Committee and other rooms for different live stock associations of every character; two large and handsomely equipped waiting-rooms for ladies, lounging-rooms for gentlemen, and ample toilet facilities. From this floor broad stairways lead to the Assembly room in the second story, which has a seating capacity of 1,500. Lectures will be provided by qualified persons upon Agricultural subjects. Here will be set forth the theories to be illustrated in the other buildings.

The building and annexes devoted to the Agricultural exhibit, which include the products of the soil, agricultural implements, machinery, etc., will attract great attention from those visitors who are interested in this branch of industry. The history of no previous Exposition attested such general interest among all classes of people as to the general character, extent, the benefit it is believed will follow, and the possibilities for good awaiting agricultnrists from the exhibit in the Agricultural Department of the Exposition. A great advancement has been made since the Philadelphia Centennial Exposition in all branches of farm work. Since that time the Department of Agriculture has been given a position in the Cabinet; has attained a firm foothold in the estimation of the people, and has not only become one of the most prominent of the government departments, but has been productive of most beneficial results to the commerce of our country, and every one engaged in farm work. Another advance in agricultural work is the Experiment Stations

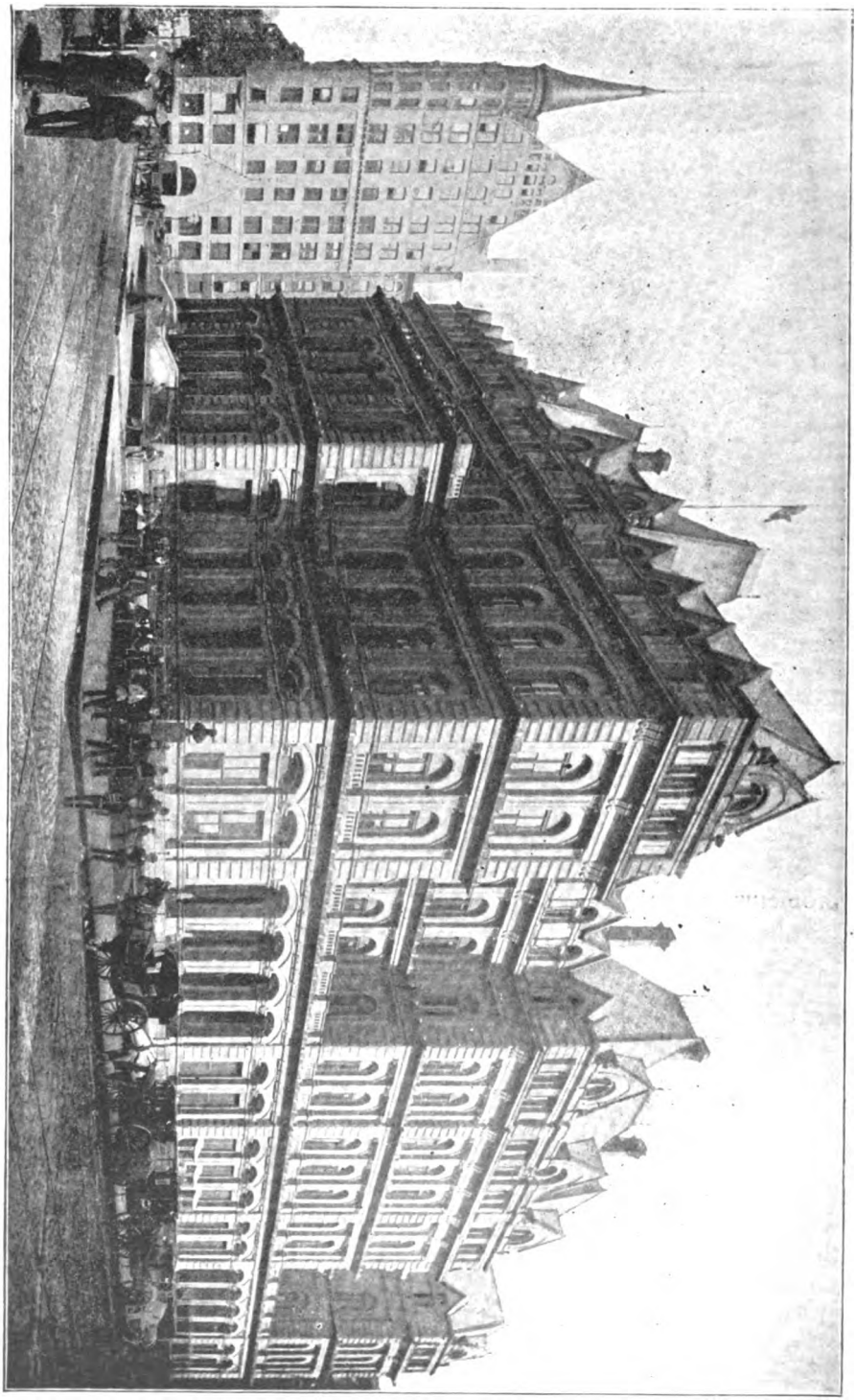
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that are now connected with the Agricultural Colleges of the country, supported by the Government, with trained scientists and educators at their head, their work reaching out into all the fields of scientific research, seeking to assist in a practical way those engaged in farm-work and to advance the standard of excellence in this great industry to a foremost place in the estimation of mankind. The subject of irrigation and its possibilities has, within a few years, become one of intense interest, and this Exposition presents the subject in such a way that it will attract very great attention. The great advance made in the study of dairying and the successful breeding of live stock has been one of the marvels of the past decade, and with the impetus that will be given these industries by the Dairy School and the immense Live Stock exhibit at the Exposition, the good result likely to follow cannot be estimated.

The interest throughout the country in beautifying road-ways by tree planting, the setting aside by several of the State legislatures of one day in the year to be devoted to this purpose, known as Arbor Day, and the encouragement given this excellent practice in the common schools; the popularity of and interest taken in Farmers' Institutes throughout the country by the farming community, are all indicative of the rapid advancement that has been made in agricultural pursuits since the Philadelphia Centennial Exposition. The present Exposition is the focusing point at which all the best results, the thought, intelligence, and energy of those interested in the great problems connected with the agricultural life is centered. As an instance: the question of the production of sugar from sorghum and the sugar beet is one that is attracting great interest in many sections of the country, notably in the west. The Experiment Stations in connection with the Agricultural Department at Washington are devoting time and attention to this work and the results that are shown in the Exposition, as to what can be done with an acre of ground devoted to producing sugar from these products is a source of wonder and amazement to the visitor. It attracts attention to the localities adapted to this industry, and is the means of building factories and their industries connected with the production of sugar in this manner.

The South is represented at the Exposition by so great a variety of products that one ceases to wonder at the great material advancement made by that part of the agricultural area of the country. One

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THE POST OFFICE.

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purpose of the Exposition of 1893 was to show to the assembled world such a magnificent result of the energy, advancement and culture of our agricultural population.

For the first time in the history of Expositions, a magnificent building is devoted entirely to the use of agricultural organizations, with a splendid auditorium or lecture-room in which to meet and deliberate.

The products of every State in the American Union and of nearly every colony and country on earth are collected here. The arrangement of the exhibits will excite the wonder and compel the admiration of the visitor. Taste of the highest order has been displayed in every section, and the interior of the great agricultural building is a scene of enchanting beauty. Illinois makes a magnificent display in this department. In the Agricultural implement and machinery section Chicago takes first place. Here are produced the greatest harvesters known. The McCormick Harvester Company has made the leading exhibit at many international expositions, and has eclipsed itself at this one. The State Board of Agriculture of Illinois has offered the prizes to exhibitors in this form :

All samples shown in this class are to become the property of the Board of Agriculture, from which selections will be made for the purpose of exhibition at the World's Fair.

For the best and largest display from any county in each of the grand divisions of the State of Illinois, $200 ; second prize, $150 ; third prize, $100.

All counties competing, but failing to receive one of the foregoing prizes, will each be paid $50 by an award of that amount to the best and largest display sent from them respectively.

There were expended on the display of farm products of the State of Illinois the sum of $20,000.

The exhibit of the agricultural experiment stations of the United States is not one of the least interesting features of the Chicago Exposition. One portion of the proposed exhibit, which is to attract general attention, is *an experiment station in operation*, with its office, laboratories, etc., illustrating how the indoor work of a station is actually carried on. In another portion of the exhibit each station presents, by means of maps, diagrams, pictures, sets of publications, etc., a full statement of its location, equipment, lines of work, etc., so that the visitor can, if he desires, follow out in detail the history and the work of any particular station. The main feature, however, is a topical exhibit of the work of the stations as a whole. In this is

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made not the full showing of the work of any single station, but a unified exhibit showing the kind of work done by the stations, the way in which they do it, and some of the more important results which they have reached. The preparation of the exhibit was in the hands of the Committee of the Association of American Agricultural Colleges and Experiment Stations co-operating with the United States Department of Agriculture.

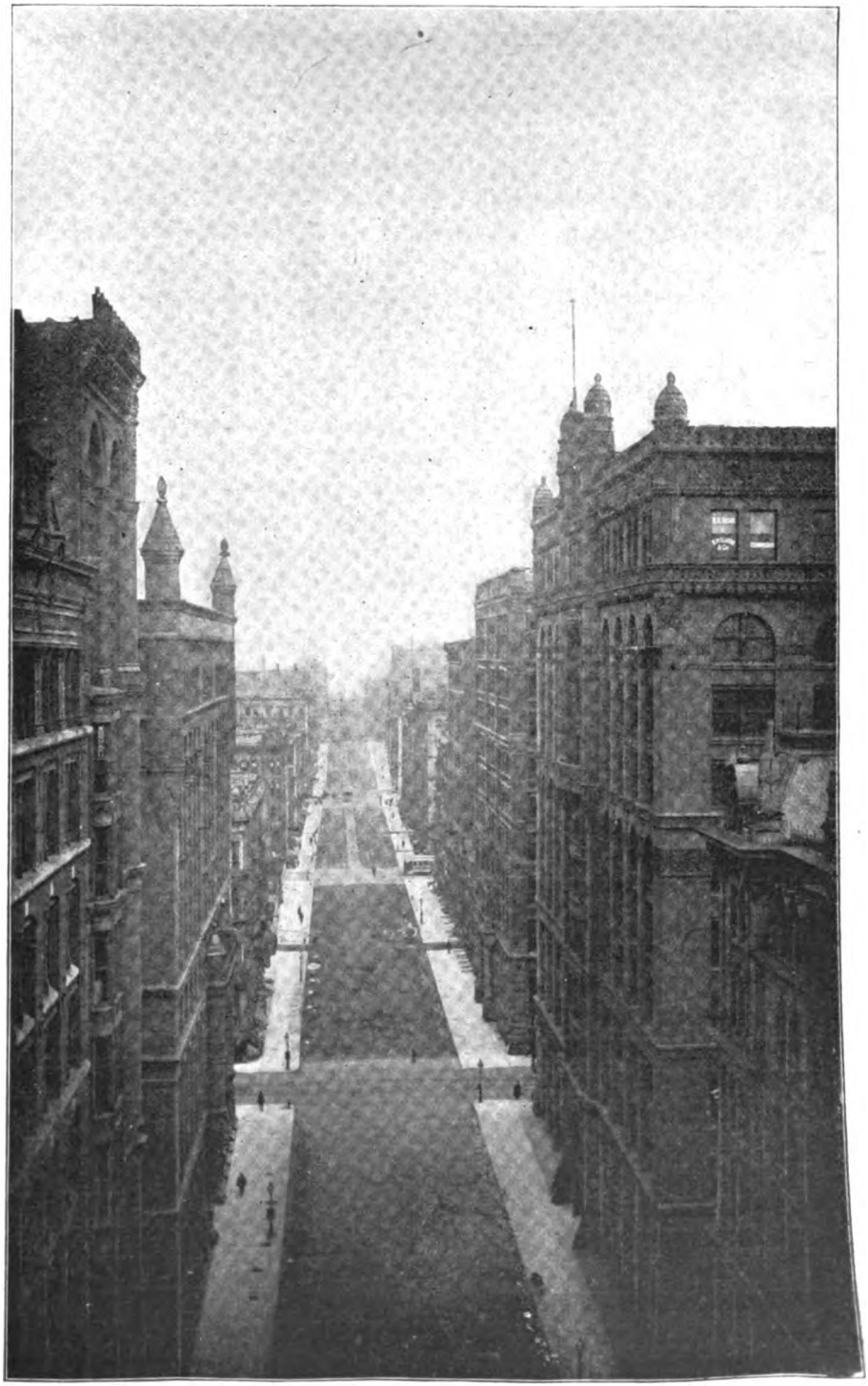
LIVE STOCK.—The Live Stock Exhibit will open upon June 2, 1893, with the kennel show, which will undoubtedly comprise the largest and finest collections of dogs ever seen. The rules adopted by the Live Stock Department provide only for dogs of unquestioned pedigree, and even in such cases applications will be considered strictly upon their own merits, by a committee of three experts. The kennel clubs and dog fanciers of both Europe and America are deeply interested in the exhibition, and those best informed say not less than 3,000 dogs will be exhibited. The various kennel clubs propose to supplement the already handsome premium list by a number of very handsome medals. Lord Bute, reputed to be the biggest dog in the world, and the winner of twenty-six first prizes in cups at various bench shows, will be placed on exhibition. Lord Bute is a pure-blooded St. Bernard and is owned by Knowles Croskey, proprietor of the Menthon Kennels, Phœnixville, Pa. He is a noble dog, bred in England, and cost the present owner $3,750. He is thirty-six inches high and weighs 247 pounds.

Members of the Mascoutah Kennel Club, of Chicago, expect to play the part of host to the various kennel clubs of the country which may visit the Exposition. The club passed resolutions calling upon similar clubs in all parts of the world to make a special effort to create an interest in the World's Fair.

The period devoted to the exhibition of animals for awards is as follows: Cattle, Sept. 11 to 27; horses, jacks and jennets, Aug. 24 to Sept. 27; sheep and swine, Oct. 2 to Oct. 14; kennel show of dogs, June 12 to 17; poultry, pigeons, pet stock, etc., Oct. 18 to 30. Exhibitors of horses and cattle must accompany their application with pedigree of animals offered for entry. This written evidence implies a description or pedigree in the standard live stock records. Animals unregistered, but which have some peculiar value, historical or otherwise, may be exhibited, but may not compete for prizes.

The exhibit of blooded and fat cattle, sheep, swine, horses, etc.,

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LA SALLE STREET. 239

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it is expected, will be the greatest ever held in this country. Cattle and horses will be here from England, France and Germany, at least. Some magnificent Normans are expected. Every State in the Union will send contributions. Prizes will be given, sometimes by the State boards and sometimes by private people for the best exhibits. The great stables of trotting horses in France and many famous English racers will be here. England, Ireland and Scotland will send over larger exhibits than they have ever made at a foreign exposition before.

FORESTRY.—The Forestry Building is in appearance the most unique of all the Exposition structures. Its dimensions are 200 by 500 feet. To a remarkable degree its architecture is of the rustic order. On all four sides of the building is a veranda, supporting the roof of which is a colonnade consisting of a series of columns composed of three tree-trunks each 25 feet in length, one of them from 16 to 20 inches in diameter and others smaller. All of these trunks are left in their natural state, with bark undisturbed. They are contributed by the different States and by foreign countries, each furnishing specimens of its most characteristic trees. The sides of the building are constructed of slabs with the bark removed. The window frames are treated in the same rustic manner as is the rest of the building. The main entrances are elaborately finished in different kinds of wood, the material and workmanship being contributed by several prominent lumber associations. The roof is thatched with tan and other barks. The visitor can make no mistake as to the kind of tree-trunks which form the colonnade, for he will see upon each a tablet upon which is inscribed the common and scientific name, the State or country from which the trunk was contributed, and other pertinent information, such as the approximate quantity of such timber in the region whence it came. Surmounting the cornice of the veranda and extending all around the building are numerous flagstaffs bearing the colors, coat of arms, etc., of the nations and States represented in the exhibits inside.

The forestry display, like the Forestry Building, is one of the most unique of the Exposition. It is likewise comprehensive and instructive. Forestry is rapidly becoming a vital subject of study, both for the States of the Union and the nation at large. As a science it is perhaps more feebly developed in the United States than in any other civilized nation. The depletion of our natural forests is

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alarming to those who have made this subject a study, and a rational forest management is becoming a necessity in our civil governments. The forestry exhibit at the Fair will probably give more instruction and arouse more interest in this vital question than anything else possibly could. The plan followed out in this department is simple. The government makes the exhibit which treats of forestry as a science, while the States make exhibits which have for their object the illustration of existing forestry conditions. The plan of the exhibit is the work of Dr. B. E. Fernon, Chief of the Forestry Division of the Government Department of Agriculture, and one of the highest authorities on the question. By his plan the States make an exhibit showing the forestry resources of the country, and methods of forestry development, wood-working and all industries relying on forest products and the work necessary to forest management. The government exhibit is calculated to give the student of forestry a comprehensive view of the subject. The government shows all the trees native to the United States—about four hundred and twenty-five species—and the most important of these trees—about one hundred species—are elaborately exhibited. This exhibit also shows the nature of raw wood materials, the difference of structure and quality of woods grown in different sections. There is shown a collection of fruits and seeds, planting tools, illustrations of planting methods and statistics of forest management.

In the construction of the Forestry Building, the idea of exhibiting the woods of the different States was beautifully carried out.

Many foreign nations have contributed to this picturesque exhibit. There are trees from Asia, Australia and all parts of South America among these specimens of growth of which people read but never see. The orange, lemon, banana, fig, rubber, palm, cork, date, calisaya, tar, and every species known is represented here. As in the Agricultural and Horticultural departments, the exhibits of the different States and countries are grouped.

THE DAIRY.—The Dairy Building, by reason of the exceptionally novel and interesting exhibits it will contain, is quite sure to be regarded with great favor by World's Fair visitors in general, while by agriculturists it will be considered one of the most useful and attractive features of the whole Exposition. It was designed to contain not only a complete exhibit of dairy products but also a Dairy School, in connection with which will be conducted a series of tests for

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WASHINGTON PARK RACE TRACK—GRAND STAND.

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determining the relative merits of different breeds of dairy cattle as milk and butter producers.

The building stands near the lake shore in the southeastern part of the park, and close by the general live stock exhibit. It covers approximately half an acre, measuring 95x200 feet, is two stories high and cost $30,000. In design it is of quiet exterior. On the first floor, beside office headquarters, there is in front a large open space devoted to exhibits of butter, and farther back an operating room 25x100 feet, in which the Model Dairy will be conducted. On two sides of this room are amphitheatre seats capable of accommodating 400 spectators. Under these seats are refrigerators and cold storage rooms for the care of the dairy products. The operating-room, which extends to the roof, has on three sides a gallery where the cheese exhibits will be placed. The rest of the second story is devoted to a cafe, which opens on a balcony overlooking the lake.

The Dairy School, it is believed, will be most instructive and valuable to agriculturists.

This department belongs properly to the agricultural exhibit, but it has been deemed advisable to separate them. No feature of the Exposition, probably, possesses greater interest or value to the agriculturist than the Dairy School. The school includes a contest between both herds and individuals of the chief breeds of dairy cattle with a view of ascertaining the respective merits of each in milk giving and butter and cheese producing. Each herd is charged each day with food consumed accurately weighed, and is credited with the milk, butter and cheese produced. Manufacturers of dairy utensils and appliances gladly furnish all that is required in their line. Accommodations are provided so that spectators may view the processes of butter and cheese-making.

The tests and all details of management are under rules prepared by a committee composed of one member from each of the dairy cattle associations in the United States, three from the Columbian Dairy Association, three from the Agricultural Colleges and U. S. Experimental Stations, and one from the manufacturers of dairy utensils.

The manufacture of the product takes place in the Dairy building, in an operating space 25x100 feet, above which on either side is a gallery which accommodates fully 500 spectators. The school in all probability will continue through four months, and each participating herd is represented by a given number of cows. The results of

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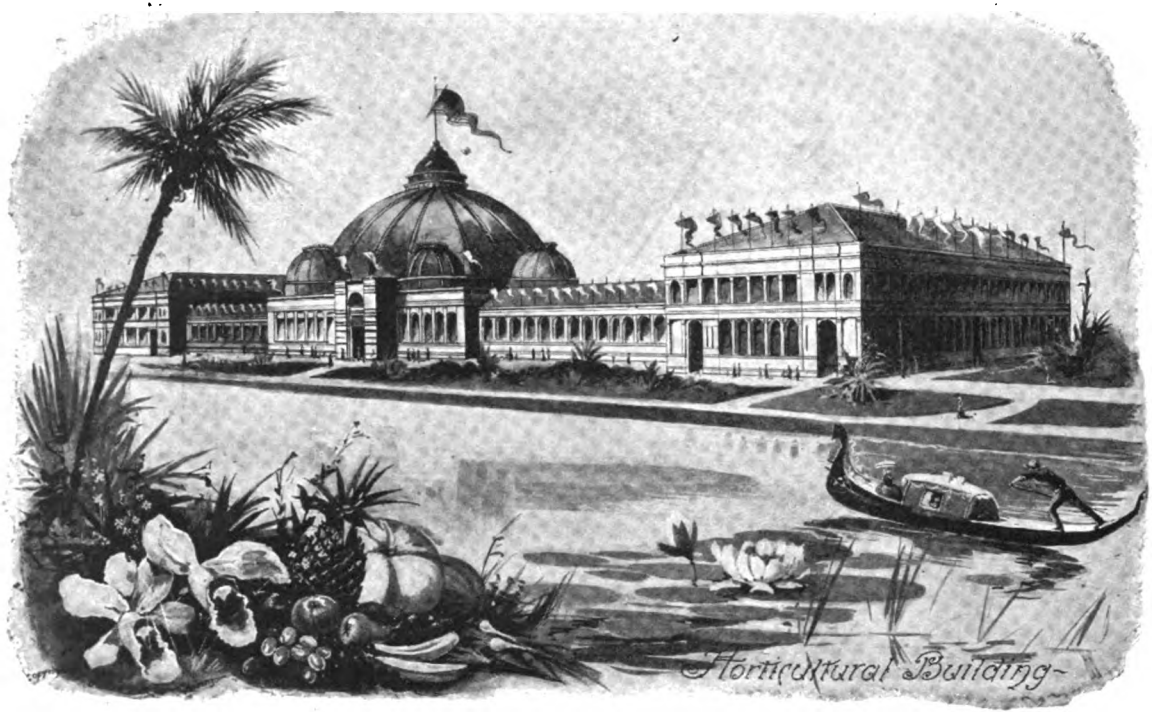
this test and of the exhibition which will be made of the latest and most advanced scientific methods known in connection with the feeding and care of cattle, the treatment of milk and the production of butter and cheese, cannot fail to be of very great value to the dairy interests of this country. These interests, it is scarcely necessary to state, are of enormous importance and extent and, indeed are scarcely surpassed by any other branch of industry in respect of the amount of money invested. It cannot be doubted that the Exposition Dairy School will cause a more economic and scientific management of the dairy interests of the entire country and consequently a greater return from the capital and labor invested.

Representatives of seven breeds of dairy cattle have furnished herds for the test which will be the longest in duration, and the most thorough and exhaustive so far as cows are concerned that has ever been held. From twenty-five to fifty gilt-edge cows of each of the dairy breeds of Devons, Brown-swiss, Short-horn, Guernseys, Red-polled and Jerseys will contest with each other for the prizes which will be awarded both to herds and individual cows.

THE HORTICULTURAL BUILDING.—The HORTICULTURAL HALL faces east upon the largest lagoon, immediately south of the entrance to Jackson Park from the Midway Plaisance, and has in front a flower terrace for an outside display, including tanks for nymphéas and the Victoria Regia. The structure is 1,000 feet long with a width of 286 feet, and cost $400,000. The front of this terrace, having a low parapet between large vases, borders the water, and has a boat landing at the center. The plan of this fine hall included a central pavilion, with two end pavilions, each connected to the center by front and rear curtains, thus forming two interior courts. These courts, each a parallelogram of a half-acre, will be decorated in colors and planted with ornamental shrubs and flowers. A crystal dome surmounts the central pavilion 187 feet in diameter and 113 feet high, and under this will be the palm house. The curtains will contain the hot-houses and the plants under glass. There are galleries in the end pavilions, designed for cafés, being surrounded by arcades giving charming views over the grounds and the interior, which will present an attractive floral and horticultural display.

The exhibits in this building consist of all the varieties of plants, vines, seeds, horticultural implements, etc. The roof will be of glass not far removed from the plants, so that those plants requiring sun-

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THE HORTICULTURAL BUILDING.

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shine light will be provided for, while provision is made to heat such parts as need it. The front curtains and space under the galleries are designed for exhibits that require only the ordinary amount of light. The exterior of the building is in "staff," tinted in a soft warm buff, color being reserved for the interior of the courts.

The cost of this building was about $300,000, and W. L. B. Jenny, of Chicago, is the architect.

The horticultural display is greater and grander than anything ever attempted before. The description already given of the magnificent HORTICULTURAL BUILDING indicates in itself the great attention which the management has given to this branch of the Fair. While only portions of buildings or small structures have been devoted to horticultural displays heretofore, the World's Columbian Exposition has created an immense, beautiful and cosy structure, and dedicated it to this purpose.

To the Horticultural Department belongs the distinction of the first installed exhibit of the Exposition. This consists of three great trees, an elm, an ash, and a sugar maple, which were planted near the HORTICULTURAL HALL. The elm is seventy-five feet high, two feet in diameter and weighs ten tons. Mr. Peterson, the Rose Hill nurseryman, planted these trees as a permanent exhibit, the planting and transferring requiring 22 men, 12 horses and the expenditure of $600, all of which was at Mr. Peterson's individual expense.

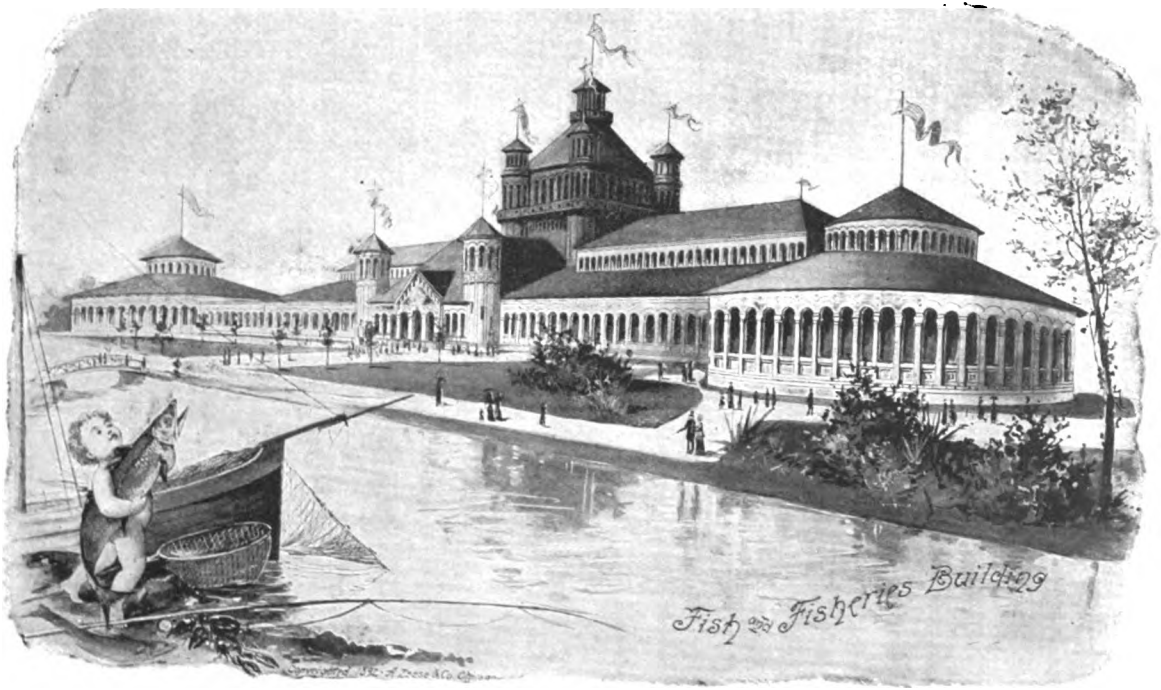
The States of the Union have contributed some wondrous exhibits to the Horticultural display, such a collection of fruit as perhaps has never been seen before. The great fruit-bearing states from New York to California and from Michigan to Louisiana have rivaled each other in the extent and costliness of their exhibits. California as was to be expected takes the lead. Missouri, New York, Delaware, Indiana, Iowa, Nebraska, Virginia, Florida, in fact, every state in the Union, has exhibited its specialties in fruit growing magnificently. The immense oranges of Louisiana, Florida and southern California are brought into contrast with the beautiful grapes of Missouri, the big red apples of Michigan, the mammoth watermelons of Mississippi and Georgia, and the luscious strawberries of southern Illinois. The Citizens' Association of California alone occupies two and a half acres and makes a wonderful exhibit. The Southern California World's Fair Association has a space 88 by 270 feet in which an ex-

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hibition of oranges trees in full bloom is to be seen. Five acres out doors for oranges, lemons, limes, etc., and 3,000 square feet of table space for an exhibition of fruits were also granted this association. England, France, Germany, Switzerland, Austra, Russia, Turkey, Italy, Spain, Portugal, and in fact every country in Europe, as well as portions of Asia, Africa, Australia and all the Latin-American Republics and the numerous colonies are represented here. The Michigan peach orchard in full bearing is not the least attractive feature. The exhibits are changed frequently, and the odor of the tropics mingles with that of the temperate zones.

FLORICULTURE.—The floral exhibit is to be found in the HORTICULTURAL BUILDING also and it passes description. Not only the republics and colonies of the American continents, but the nations and colonies of the earth, have contributed toward making this the most gorgeous display ever beheld by man. All of the State horticultural societies, the royal and imperial horticultural societies of European nations, the associations of nurserymen everywhere, and the owners of private conservatories and hot-houses in every part of the world, have taken an active interest in this beautiful display. It required five acres in addition to the original allotment of space to accommodate the floral exhibits. The space at first intended for the Indian exhibit on the Wooded Island was given over to a rose garden; 20,000 feet of space are given to an exhibit of flower seeds alone; five acres are given over to a nursery exhibit; two beautiful greenhouses, one of them 1,000 feet long and 24 wide and the other 500 by 600 were added to the space in the summer of 1892. Half a million pansies, one hundred thousand roses, and millions of other flowers, including every known variety and species, are seen at the Exposition. The horticultural exhibit is on a scale never before attempted in the history of the world. Mr. Thorp, of the floricultural division, estimated that the equipment of the Horticultural Building, including the purchase price of plants, would be $350,000, and the total expense of the display $750,000. The floriculturists of the country donated a large share of the plants. Ten of the sixteen acres of ground on the wooded island are planted in flowers. The shores are left wild for scenic effect, and the waters around the margin are bright with water lilies and other aquatic vegetation, while the interior is planted with roses, rhododendrons, and lilies, besides a variety of wild flowers, preserved in a nursery.

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THE FISH AND FISHERIES BUILDING.

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In addition to all this the roof of the WOMAN'S BUILDING, the interior of nearly all the department, State and foreign buildings, the grounds surrounding them, the beautiful terraces along the lagoon, etc., are all decorated with flowers.

THE FISHERIES BUILDING.—The Fisheries Building is, as far as the exterior of the structure is concerned, in the Spanish Romanesque style of architecture contrasting agreeably with the classic architecture of the neighboring buildings. The length of the building is 1,100 feet and the width 200 and cost about $200,000. There are two smaller polygonal buildings or wings connected with the main or middle structure and curving outward at either end. This gives a concave curve to the group which has a most pleasing effect. It is built on a banana-shaped island, and subdivided into three parts to conform to the curved shape of the island on which it stands. The general Fisheries Exhibit is in the central part of the building. In one of the polygonal buildings is the exhibit of the angling paraphernalia, and in the other is the water pool and aquaria, in which live fish are displayed and which constitute a wonderful exhibit. Marine fishes are transported to Chicago from the coast in sea water. An addition of 3,000 gallons of pure sea water was required for the supply on each trip.

The building for the display of live fish is circular, 134 feet in diameter, standing near one extremity of the Marine Fisheries Building and in a great curved corridor connecting the two. A rotunda 60 feet in diameter is in the center of this building, and under this rotunda, and in the middle of it, is a basin or pool 20 feet wide, from which rises a towering mass of rocks covered with moss, lichens and other aquatic plants. Crystal streams of water gush from the clefts and crevices in the rocks and fall upon the reeds, rushes, and ornamental semi-aquatic plants in the basin below.

Gorgeous gold fishes, golden ides, golden tench and others swim in this pool. Here also are ten large aquaria and a number of smaller ones. From the rotunda one side of the large series of aquaria may be viewed, which are ten in number and have a capacity of 7,000 to 27,000 gallons of water each.

Passing out of the rotunda and into a great corridor or arcade, the opposite sides of this series of great tanks, another line of tanks somewhat smaller, ranging from 700 to 1,000 gallons each in capacity, can be viewed by passing through a great corridor about 15 feet in

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width and reached from the rotunda through the entrance. The glass fronts of the aquaria are in length about 575 feet, through which the fish may be seen swimming in their native element, and have 3,000 square feet of surface. They make a panorama never before seen in any exhibition, being the finest exhibition of the kind ever seen in the United States, and rival the great permanent aquariums of the world, not only in size but in all other respects. The United States Government Fish Commission will provide much of this display. These aquaria have a capacity of 18,725 cubic feet of water, or 140,000 gallons, which weighs 1,192,425 pounds or about 600 tons. Of this large quantity 40,000 gallons is, including reservoirs, used for the Marine Exhibit. In the entire salt water circulation, including reservoirs, there are 80,000 gallons. The pumping and distributing plant for the marine aquaria is constructed of vulcanite. The pumps are in duplicate and each has a capacity of 3,000 gallons per hour. The sea water is supplied by the United States Fish Commission from Wood's Hall Station, and the fresh water supply is secured from Lake Michigan. The sea-water supply is obtained by evaporating the necessary quantity to about one-fifth its bulk, thus reducing both quantity and weight for transportation about 80 per cent. The fresh water to restore it to its proper density is supplied from Lake Michigan.

To the close observer the exterior of the building cannot fail to be exceedingly interesting, for the architect, Henry Ives Cobb, exerted all his ingenuity in arranging innumerable forms of capitals, modillions, brackets, cornices and other ornamental details, using only fish and other sea forms for his *motif* of design. The roof of the building is of old Spanish tile, and the side walls of pleasing color.

One of the most interesting exhibits at the World's Columbian Exposition is that of FISH and FISHERIES. Therein not only will visitors of piscatorial inclinations find much to engage their attention, but others who have been wont to regard "fishy" and "incredible" as synonymous and equally inconsequential terms will undoubtedly have reason to change their minds as to the interesting features of a fish display after visiting this department of the Exposition. The Fisheries Building is a corner where the public will wish to linger, a spot where it will be possible to realize the words of John Bunyan when he wrote:

> You see the way the fisherman doth take
> To catch the fish, what engines doth he make!

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A STREET SCENE.

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Behold how he engageth all his wits,
Also his snares, lines, angles, hooks and nets.

Much has been said and written of the magnificence of the World's Columbian Exposition, by way of comparison with previous expositions, which it is proposed to eclipse. The immense strides made in every department of art, science and industry during the second half of the present century have been fittingly illustrated at the various international expositions held since the late Prince Consort of England inaugurated the great London Exposition of 1851.

Everything that science has rescued from the depths of ocean, sea, lake or river, is displayed at the fisheries exhibit. Inhabitants of deep-sea grottoes; the coral animal—builder of islands and contitinents; sea anemones, that blossom miles below the surface of the ocean; monstrous devil-fish, sharks and other terrors of the deep are seen, beside the speckled beauties of stream or lake, the plebeian catfish, perch and sucker, suggestive of the boyish angler and the shallow stream. From ocean depths are brought specimens of subaqueous life so marvellously delicate and so richly beautiful that the microscope will only reveal in part their wondrous beauty and film-like tracery. The methods, too, by which the mysteries of the deep are penetrated, the paraphernalia of the United States Fish Commission, the inventions by which the finny tribe is cultured, the wonderful progress made in the art of fish farming, in addition to the implements of commercial fishing and the latest tackle for angling—all these are displayed to their fullest extent.

Not the least interesting portion of the exhibit is the Aquarial or Live Fish Display. This is contained in a circular building, 135 feet in diameter, standing near one extremity of the main Fisheries building, and in a great curved corridor connecting the two in the center of the circular building is a rotunda sixty feet in diameter, in the middle of which is a basin or pool about twenty-six feet wide, from which arises a towering mass of rocks covered with moss and lichens. From clefts and crevices in the rocks crystal streams of water gush and drop to the masses of reeds, rushes and ornamental semi-aquatic plants in the basin below. In this pool gorgeous gold fishes, golden ides, golden tench and other fishes disport. From the rotunda one side of the larger series of aquaria may be viewed. These are ten in number, and have a capacity of seven thousand to

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twenty-seven thousand gallons of water. Passing out of the rotunda by the entrances, a great corridor or gallery is reached, where on one hand may be viewed the opposite side of the series of great tanks, and on the other a line of tanks somewhat smaller, ranging from 750 to 1500 gallons each in capacity. The corridor or gallery is about fifteen feet wide. The entire length of the glass fronts of the aquaria is about 575 feet or over 3,000 square feet of surface. They make a panorama never before seen in any exhibition, and rival the great permanent aquariums of the world not only in size, but in all other respects.

The total water capacity of the aquaria, exclusive of reservoirs, is 18,725 cubic feet, or 140,000 gallons. This weighs 1,192,425 pounds, or almost 600 tons. Of this amount about 40,000 gallons are devoted to the marine exhibit. In the entire salt water circulation, including reservoirs, there are about 80,000 gallons. The pumping and distributing plant for the marine aquaria is constructed of vulcanite. The pumps are in duplicate, and each have a capacity of 3,000 gallons per hour. The supply of sea water is secured by evaporating the necessary quantity at the Woods Hall station of the United States Fish Commission to about one-fifth its bulk, thus reducing both quantity and weight for transportation about 80 per cent. The fresh water required to restore it to its proper density is supplied from Lake Michigan. In transporting the marine fishes to Chicago from the coast there was an addition of probably 3,000 gallons of pure sea water to the supply on each trip.

It is a matter of importance that provision was made in the upper part of the building for an eating saloon in which a specialty is made of supplying food composed of fish and other animals taken from the water. This is a practicable and most excellent illustration of our fisheries, and this special work is so conducted as to give those who patronize fish dinners at the Exposition a better conception than the majority of them now have of the value of fish as food.

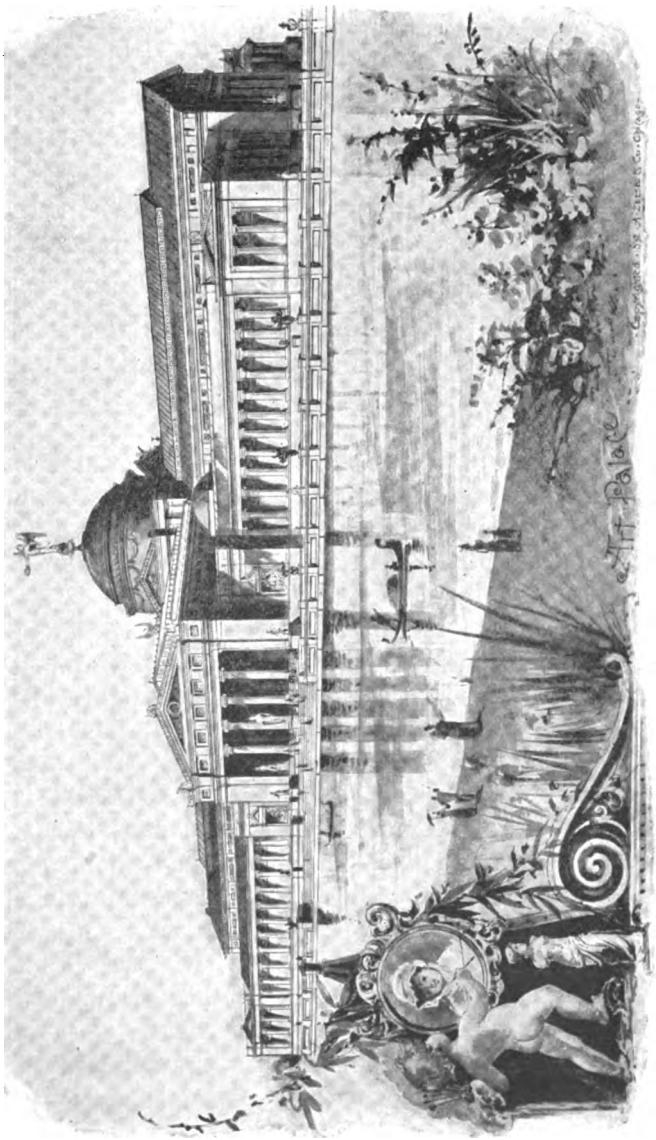
Under the direction of Henry Elliott, the only artist who has ever drawn and painted the seal and walrus in their native haunts, an interesting exhibit for the World's Fair was prepared by the Smithsonian Institution. This exhibit consists of models in papier mache representing the fur seal and walrus fisheries on the Alaskan coast. The animals represented, as well as the men who catch them, are modeled in clay. One of the models shows a seal "drive." This

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model includes hundreds of mimic seals which Aleuts are driving along to the killing grounds by waving cloths and shouting. Another illustrates a "rookery" on which the full grown seals, bellowing and pugnacious, have hauled up out of the surf upon the islands to breed. Another model shows a hauling ground of bachelor seals. The killing of seals is also shown, a group of Aleuts being represented in the act of smashing their heads with clubs. There is also represented a number of hair seals, which are not useful for their fur, but merely for food supply to the natives of that region. The walruses, now rapidly becoming extinct, are also reproduced in material that gives them a remarkably life-like appearance. Hundreds of models in clay are made of these animals, in order to represent the different species and sizes of each. They are cast in papier mache and painted.

THE ART PALACE.—The FINE ART GALLERY is intended to be a perfectly safe depository for the art collection, and it and the UNITED STATES BUILDING will be, considering size, the costliest structures of the Fair. Many of the art exhibits herein contained will probably be bought for the permanent gallery Chicago intends establishing after the Fair is over, as its memento. Among the paintings already here is Moro's picture of Columbus, executed in 1540, and bought in London to exhibit at the Fair. The ART BUILDING is in reality a group of galleries. The chief structure is cruciform with a nave 320 feet long by 96 feet wide, and transepts stretching 500 feet. The four exterior angles are filled in with lower constructions, thus making it a parallelogram or oblong, 500 feet by 320 feet, with a wide projecting portico in the middle of each side, the roof extending from all the cornices back to a central dome, and intersected north, east, south and west by a great nave and transept 100 feet wide and 70 feet high, and at the intersection of which is the great dome 69 feet in diameter. This magnificent structure is in the Grecian-Ionic style of architecture and is a pure type of the most refined classic architecture. It is 125 feet to the top of the dome, which is surmounted by a colossal statue of the type of famous figures of winged Victory. The transept has a clear space through the center of 60 feet being lighted entirely from above. On either side are art galleries 20 feet wide and 24 feet above the floor. The cost of this ART PALACE is between $500,000 and $600,000 and was planned in the World's Fair Construction Department, under the eyes of Supervising Architect D. H. Burnham and Chief Designer P. B. Atwood.

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THE ART PALACE.

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On the main floor of the nave and transept the collections of sculptures are displayed, and on the walls of both the ground floors of the galleries are ample areas for displaying the paintings and sculptured panels in relief. The corners made by the crossing of the nave and transept are filled up with small picture galleries. And around the entire building are galleries 40 feet wide forming a continuous promenade around the classic structure.

Separated from the main gallery, and 100 feet distant on the east and west sides, are two annexes, each 320 feet by 120 feet. These annexes are one-storied and divided into large and small galleries. The annexes are brought forward so that the whole group surrounds three sides of a court 300 feet by 700 feet, which will be made an attractive feature. The architect of the annexes in its facade at least, is George W. Root.

The entrance to the main building is by four great portals, richly ornamented with architectural sculpture, and approached by broad flights of steps. The walls of the loggia of the colonnades are highly decorated with mural paintings, illustrating the history and progress of the arts. The frieze of the eastern walls and the pediments of the principal entrances are ornamented with the sculptures and portraits in bas-relief of the masters of ancient art The general tone or color is light gray stone. The building, though of a temporary character, is necessarily fire-proof. The main walls are of solid brick covered with "staff," architecturally ornamented, while the roof, floors and galleries are of iron.

This palatial structure is beautifully located in the northern portion of the Park, with the south front facing the lagoon. Beautiful terraces separated the structure from the lagoon. They are ornamented with balustrades, with an immense flight of steps leading down from the main portal to the lagoon, where there is a landing for boats. The north front faces the wide lawn and the group of State buildings. Groups of statues, replica ornaments of classic art, such as the Choriagic monument, the "Cave of the Winds," and other beautiful examples of Grecian art, ornament the immediate neighborhood of the building. The ornamentation also includes statues of heroic and life-size proportions.

It was the general impression for some time after the holding of the Columbian Exposition at Chicago had been decided upon that the department of Fine Arts would be the weakest. The point was

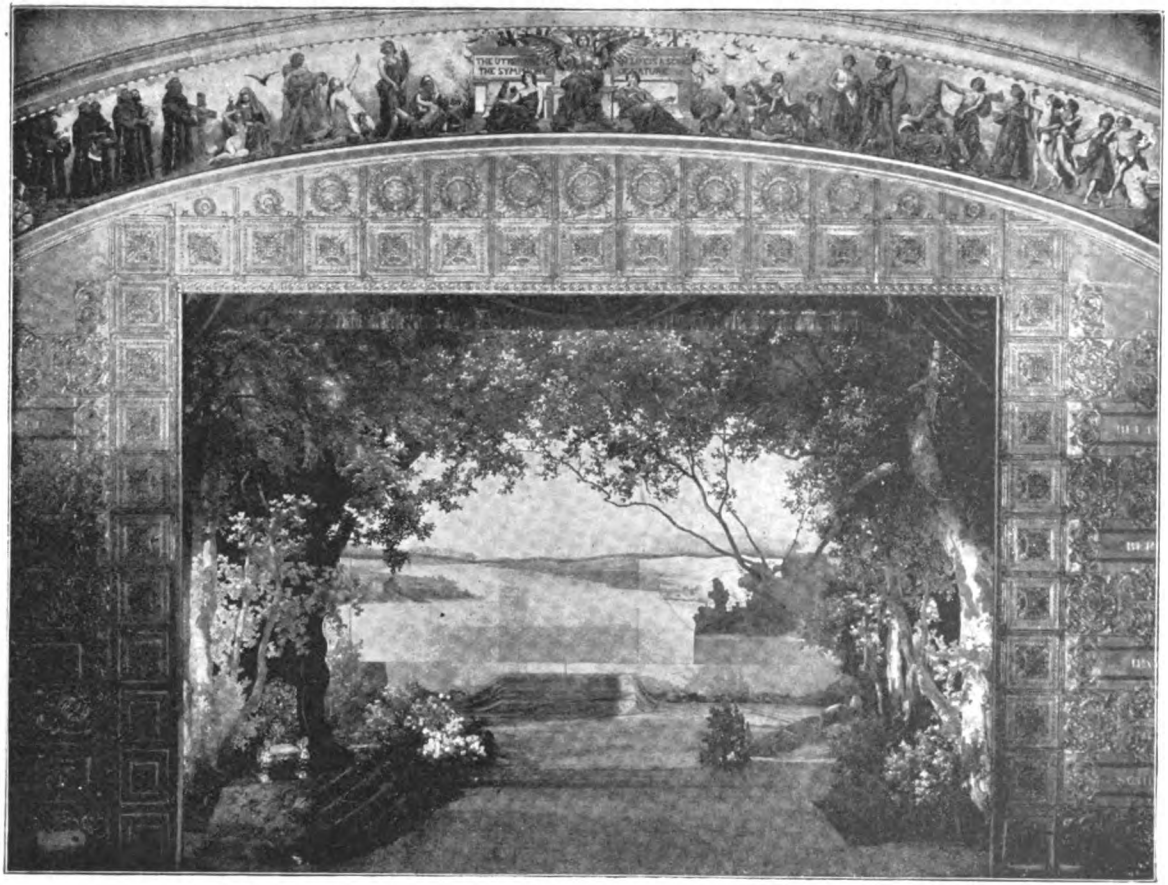
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raised that Europe would not contribute its art collections or any considerable portion of them for the reason that Chicago was generally believed abroad to be a city far removed from the centre of education and culture in the United States. This point was raised, however, by persons who under-rated European knowledge with regard to Chicago. It very soon became evident that the choice of Chicago as the location of the World's Fair was not only received favorably abroad, but with more satisfaction than if New York had been selected, and by no class was the selection of Chicago received with more satisfaction than by that interested in the development of art. Scarcely had the invitations to foreign governments been sent out by the State department before applications for space began to pour in. The amount of wall space asked by England, France, Germany, Austria, Italy, Belgium, Switzerland, Russia and other European States was greater than they had consumed at the last Paris Exposition, and was a pleasant surprise to the Exposition management. In 1892 Halsey C. Ives, chief of department, made a six months' tour through Europe. He visited every important art center on the Continent, and returned convinced that England, France, Germany, Belgium, Holland and Italy would make magnificent displays.

The Art Building, as planned, had approximately 125,000 square feet of space for pictures. This was exclusive of the space allotted to Sculpture and Statuary. Mr. Ives found that 200,000 square feet would be necessary for pictures. He based his opinion upon the fact that early in 1892 all the available space had been practically consigned, while a dozen foreign countries at least were still to be heard from. France alone had asked for 82,000 square feet. Eighty-two thousand square feet for an art exhibit was more than twice the combined amount asked for by England and Germany. The former secured 20,000 square feet and the latter a like amount. Belgium asked for 8,000 square feet; Holland, 3,000; Denmark, 3,000; and Japan 2,000, making a total of 56,000 square feet. It became necessary, therefore, that the two annexes to the building should be considerably enlarged. Even with the additional space the visitor will find that the walls and floors of the magnificent building are crowded.

No one thing exhibited at the Centennial attracted more general attention, or was more distinctly remembered than the "Sleeping Iolanthe," in butter, by Mrs. Caroline S. Brooks. Since that won-

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AUDITORIUM CURTAIN.

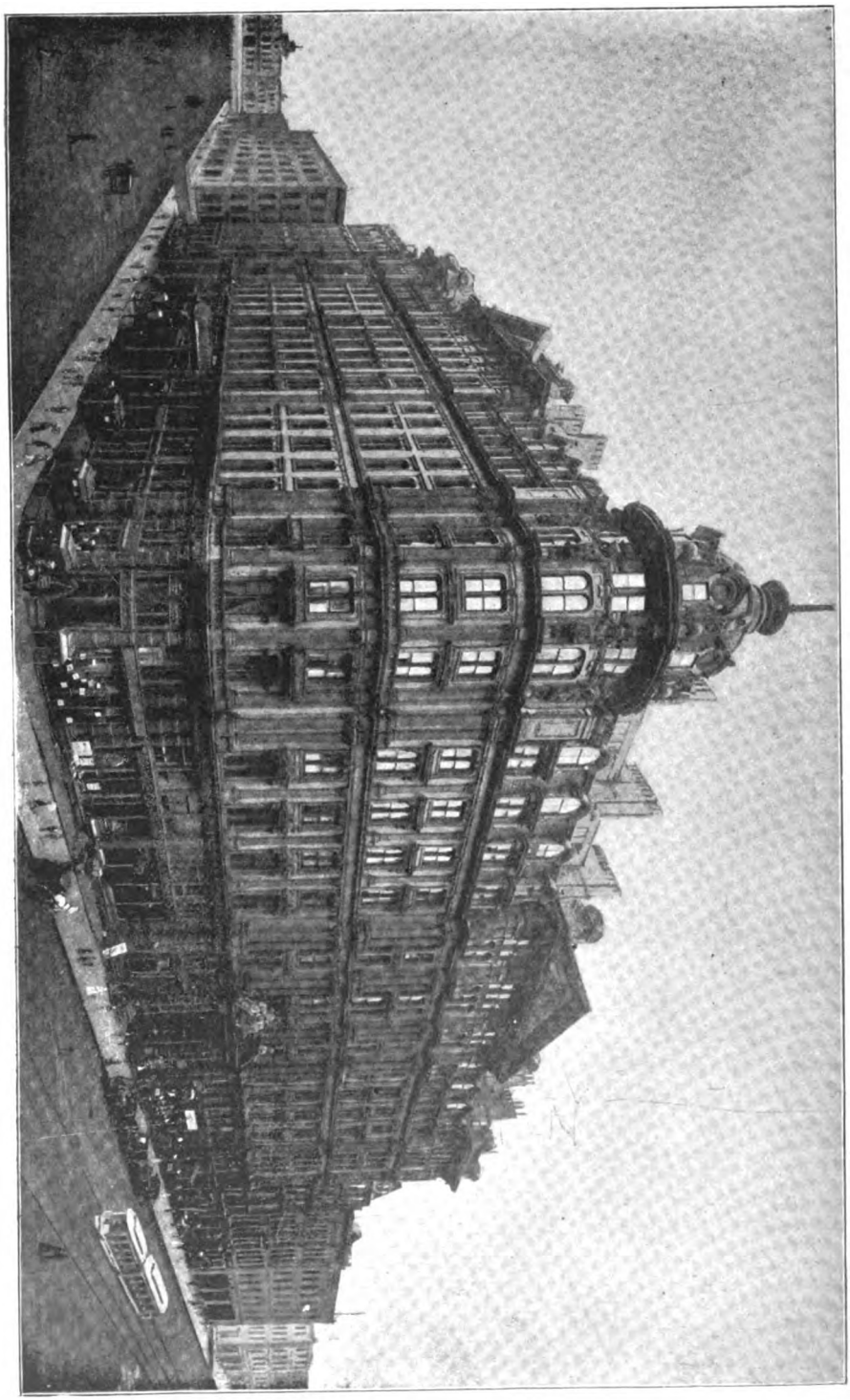
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derful success, the artist has done several notable bits in a characteristic vein, the best known being "Lady Godiva," a bas-relief which was also in butter. The World's Columbian Exposition, however, has another, and a full length "Sleeping Iolanthe" in marble. Mrs. Brooks worked upon the exquisite creation for several years, and found difficulty in securing a block of marble, flawless in quality, which should also be large enough.

The statue of Shakespeare, by William Ordway Partridge, intended for Lincoln Park, and the statue of Alexander Hamilton, intended for Boston, by the same sculptor; a life-size portrait of Columbus, by Sallus, the celebrated painter of Ecuador; two ancient Greek vases made of baked clay and which are twenty-two centuries old; a marble tablet representing the landing of Columbus, from Colon, United States of Colombia; the Spitzar art collection, the most comprehensive collection of European art in the world, and valued above $4,000,000; an immense display of ceramics from many nations; the $10,000 portrait of Columbus, executed by the famous Moro in 1540; the display of the American Society of Wood Engravers which attracted so much attention at the last Paris Exposition; displays by the etchers of the United States and foreign countries; the display of the National Lithographers' Association; an immense exhibit by the photographers of this and other countries; the paintings of G. A. P. Healy, the famous American artist; the large and valuable collection of Rudolph Crenan, of Leipsic, representing scenes and incidents in the life of Columbus; the greatest paintings of France, Germany, England, Belgium, Holland, Italy, Spain, Switzerland and other European nations; the choicest specimens of art from Asiatic, Australian, African and South American centers; the rarest and most costly sculptures, statues, arts, etc., from the greatest galleries in the world, and the most impressive collection of the works of American artists, will be among the attractions of the Art Building.

Architecture is represented strongly in the Art Building. The American Institute of Architects took a decided stand in favor of making the exhibit a prominent and a worthy one. This Institute includes in its membership all the well-known names, in different parts of the country, of men to whom the growth of American architecture, as distinguished from mere building and construction, is due, and of which they are to-day the honored representatives.

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THE PALMER HOUSE.

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The rules governing the Art exhibit may be briefly stated as follows: "All work to be admitted must be originals, with the exception that casts from original works by modern artists are placed in the same class with original figures and groups in marble. There will be three sections in the department—an American section, a section for foreign countries that are represented by a commission, a section comprising private collections and the works of artists from countries not represented by a commission. All works must be examined by the official jury before they can be admitted. Progress in American art and architecture is to be a special feature of the exhibit."

THE CASINO AND PIER.—The Pier, extending out into Lake Michigan from the eastern extremity of the Grand Court or avenue running from the ADMINISTRATION BUILDING to the lake, is one thousand feet long and eighty feet wide. At the extremity of the Pier is the beautiful Casino. Along the shore from which the Pier projects runs a beautiful promenade large enough to hold the thousands of visitors that will throng it during the fair.

From the Pier will be in full view the entire line of Exhibition Buildings. Passenger steamers will ply to and fro from the Pier and the City.

The architecture of the Casino is of the Venetian order, and was planned by Architects Burling and Whitehouse, of Chicago. It is a composite structure embracing nine pavilions, and is meant to be a representation, on a small scale, of Venice in the waters of Lake Michigan. It is built on piles, and is 180 bv 400 feet. It has nine pavilions two stories high, except in the middle, where the central pavilion rises to the height of 180 feet. The communication between the nine pavilions, separated as they are by water, is by means of gondolas and bridges, in imitation, as far as possible of the way of getting about in Venice. The aspect is truly Venetian,—with its gondolas, bridges and water.

In front of the Casino is the harbor for small pleasure boats. At night this harbor is lighted by incandescent lamps sunk beneath the surface of the water. A gallery fifty-six feet wide surrounds the central pavilion, while at the west end of the Pier stands thirteen columns designed by sculptor St. Gaudens to represent the THIRTEEN Original States of the UNION.

The material of the Casino is of wood, and the walls are covered with "Staff," in resemblance of marble, highly and variously colored,

At the Casino the visitor will be furnished with excellent music and light refreshments, as well as permitted a view of water, city and exposition palaces while enjoying the cool breezes.

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THE STATE BUILDINGS AND EXHIBITS.—Sites for buildings or space for special exhibits were allotted by the Exposition management to every State and Territory of the American Union. Every one of them is represented in some manner on the Exposition grounds; most of them creditably, some of them magnificently. The foreign visitor must understand that each of the States and Territories is perfectly independent in all such matters, and that it is only by a vote of the respective State or Territorial Legislatures, involving the appropriation of funds to meet the expenses of the exhibit, that action could be taken. It is a matter in which neither the Federal government nor a neighboring state or territory can interfere. Some of the State legislatures were generous in their appropriations; some delayed action until the last moment. As a rule, when the legislatures failed to act, or when their action was considered inadequate to the importance of the event, private citizens contributed, in order that their States should not be left out in the cold or misrepresented by a poor display. Chicago being the chief city of the State of Illinois' the latter commonwealth very naturally takes the lead among her sisters.

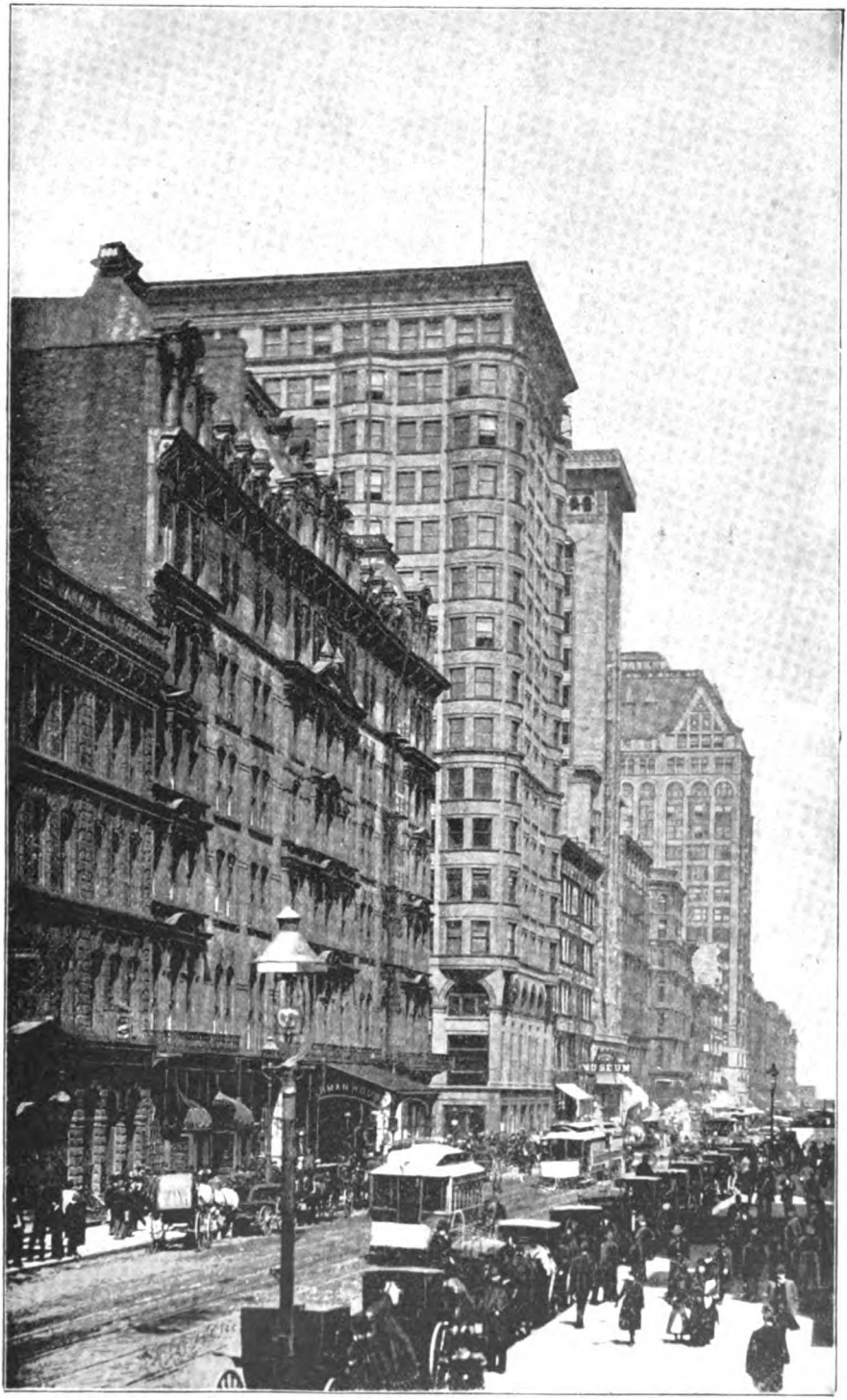
The Illinois building is one of the grandest on the grounds, and the Illinois exhibit ranks among the first. For convenience sake the State buildings and State exhibits are arranged alphabetically rather than with regard to their prominence, politically or otherwise. The following is a description of some of the State buildings.

ALABAMA.—Provision was made for a state building for Alabama. The state is represented in miniature at the Exposition by a series of comprehensive relief maps. It is proposed to show the mineral deposits, cotton belt, vegetable farms and everything else of interest in the state on a series of maps covering 20,000 square feet. Besides this an exhibit of the state's industries and products will be found grouped in the Department buildings. Alabama likewise contributed to the general display.

ARKANSAS.—Arkansas has no special state building, but she makes an exhibit of her industries and products that will be representative and worthy. While the legislature did nothing toward furthering the exhibit of the state, the citizens organized and the result is apparent to the visitor. Arkansas also contributed to the general Exposition. In the forestry display there are some noted specimens of her pine trees. In the agricultural building also she has made a creditable showing.

CALIFORNIA.—The California building is characteristic of the great Pacific Coast State, picturing in its exterior the California of the Padres, and in its interior the California of to-day. While the architect has closely followed the old mission style, he has interjected enough of the more ornate Moorish to relieve the somewhat somber effect of the old churches, and he gives the required light and roominess. Therefore there is a charming simplicity of detail. Outside there is a clear story with a great, flat central dome as the crowning feature and a roof-garden to heighten the semi-tropical appearance. From the ground to

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RANDOLPH STREET. 263

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the eaves is fifty feet and to the highest point of the roof proper sixty-five feet, while the elevation of the dome is eighty feet. Those portions of the roof not devoted to the garden are closely copied after the quaint adobe buildings of the early Spanish settlements, with genuine earthen-ware tiles, deep red in color, semi-cylindrical and overlapping. The dome and middle portions are tiled with iron plates curled and shaped like the original roofing. The material of the walls is wood, treated with some sort of cement and worked into a close imitation of the yellowish-gray adobe of the old days. On the four corners and flanking the dome are towers designed after the mission belfries, and in them are swung some of the old Spanish bells which have outlived the Padres and their crumbling churches. The interior carries a gallery giving an area equal to two-thirds of the ground floor. This is set apart for offices, which are grouped so as to command a clear view of the main floor. The ground-plan is one vast exhibition hall, the arrangement of compartments conforming to the extent of the displays as decided upon by the Commissioners. The total floor space is 100,000 square feet, of which the gallery affords 40,000, the extreme measurements of the building being 500 feet by 110 feet main width. The cost of the building is $75,000.

A wonderful exhibit is presented by California. The state has long been famous for the size of its trees, some of which are the largest in the world. This exhibit is nothing more nor less than a complete railway car, excepting only the trucks, fashioned and carved from the trunk of a "Sequoia Giganta," or big tree of Tulare county. The originators of the idea are Messrs. Doyle, Meyers and Bachman, of the county named. The tree used is about twenty-eight feet in diameter and something more than four hundred feet long. The immense log was cut down to the size of a car, or about eleven feet square and fifty-five feet in length. All this had to be done by hand with long saws made expressly for this purpose. It was then hollowed out inside by first cutting doors at each end, working out the insides and polishing the inside surface; the roof is the natural bark of the tree. The material taken from the inside and cut off in squaring the log was manufactured into useful little souvenirs of this wonderful production. A full-sized railway car made of but a single piece of wood will surely be a feature of great interest. California will show as a part of its exhibit the finest collection of minerals in the United States. Instead of making a special collection, as was done for the New Orleans, Philadelphia and Paris expositions the state sends the magnificent collections belonging to the State Mining Bureau Museum. The State University had the collection of the State Geological Survey, the Voy collection, Hanks collection, Keene collection, and several others. These are all classified, arranged, identified and labeled. Each county and district in the state is properly represented. Every department of the mining industry has its separate place with locality indicated. No other state or territory of the Union has any such collection as belongs to California now. Among the exhibits from Southern California is a model constructed to illustrate irrigation. Of course the California exhibit is one of the greatest and grandest on the grounds. The state appropriated $300,000, and every cent of this, and a great deal more, has been spent in securing an exhibit worthy of the golden state. The wine and fruit exhibits alone are superb. Besides California's special dis-

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MARYLAND.

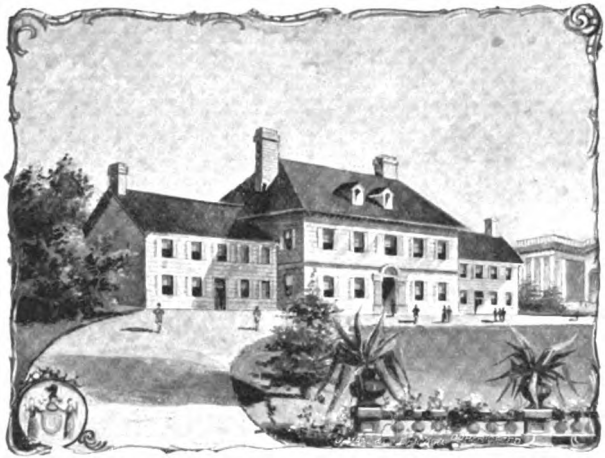


PENNSYLVANIA.



ILLINOIS.

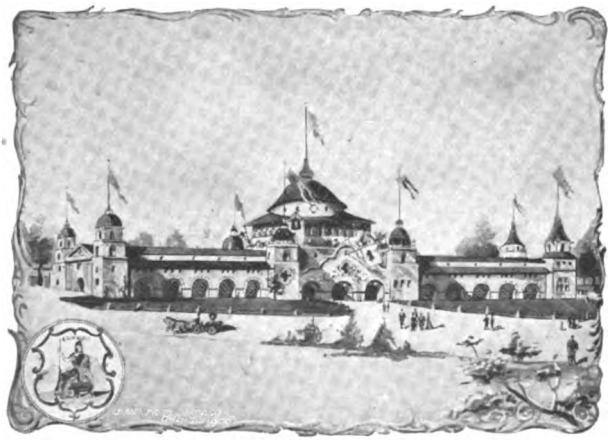
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NEW JERSEY.



WEST VIRGINIA.



CALIFORNIA.

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play she has contributed largely to every other department of the Exposition, and the visitor will be amazed at the extent of her resources. The state's various exhibits are mentioned in connection with the different departments.

COLORADO.—This young state has a granite and marble palace. The Colorado Marble and Mining Company contributed the material for the building. Besides the mineral, agricultural and educational exhibits, the flora and fauna of the state are shown in great completeness. More than 1,000 specimen plants were pressed; nearly 200 varieties of fruit were duplicated perfectly in wax and more than 2,000 species of insects were mounted long before the Exposition was opened. Colorado contributed largely to every department of the Exposition. The women of Colorado subscribed $10,000 for the purchase of Powers' famous statue "The last of his race," which appears in connection with the Colorado exhibit. The statue represents a dying buffalo with an Indian standing by its side with uplifted spear. This state makes a specially fine mineral exhibit. The exhibit of Colorado is both technical and economic in its character, and forms a popular and massive display of the state's resources in ores, building stone, coal, iron, commercial clays, gold and silver.

CONNECTICUT.—The state of Connecticut made no appropriation for the World's Fair, but $50,000 was raised by general subscriptions, the city of Hartford contributing alone $10,000. This money has been spent in a manner that insures Connecticut a favorable representation in the several departments, and also a special exhibit.

DELAWARE.—The little state of Delaware lost no time in subscribing its loyal adherence to the World's Columbian Exposition, and considering the extent of its area opened its coffers with a liberality which is highly complimentary to its citizens. The first donation was $10,000, which was to be followed by a further sum of $15,000. It occupies a position in the Exhibition buildings, but its headquarters will be in the space allotted in Jackson Park to the different states. The building which is constructed wholly of native woods and materials of the state of Delaware, is very picturesque and elaborately finished, measuring 58 feet by 60 feet. The cost was $7,500. A room in the building is fitted up in Colonial style, with hangings, pictures, and furniture all in representation of Colonial days. There are figures in clay of the old Swedes' Church in Wilmington, Barratt's Chapel, near Frederica, the home of Methodism, and Christ Church, near Laurel. Old Swedes' Church was founded in 1699 at a cost of £800. Barratt's Chapel, located in Kent county, near Frederica, and eleven miles south of Dover, was founded in 1780. Christ Church, Broad Creek, about two miles east of Laurel, Sussex county, was built more than a hundred years ago of heart pine. It is without a particle of paint. It has the high-backed pews, the chancel at one end, the servants' gallery at the opposite end, while midway on the east side is the lofty pulpit, and immediately below are the reading-desk and the clerk's desk. The first consignment of Delaware's exhibit comprised six cars loaded with native woods, three cars from Sussex, two from Kent, and one from New Castle counties. The consignment was placarded "From the World's Fair Commissioners of Delaware to the Columbian Exposition, Chicago." This was one of the earliest consignments received.

FLORIDA.—The design of the Florida state building is modeled after old

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268 GREAT NORTHERN HOTEL

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Fort Marion, which is one of the most picturesque as well as the oldest structure in North America, and an interesting relic of Spanish conquest in the new world. Begun in 1620, when the Pilgrim Fathers were landing at Plymouth Rock, this curious four-bastioned fortress was ancient long before the white man reared his cabin on the spot on the shores of Lake Michigan which is now a center of interest throughout the civilized world. The form of the building renders it peculiarly well adapted for the display of Florida's varied resources, the mast and ramparts affording opportunity for a series of sunken and hanging gardens of remarkable interest. The cost of building and exhibit was $100,000. In addition to her special exhibit, Florida occupies three acres of space in the exhibition of flowers.

GEORGIA.—Georgia has a handsome building and a creditable display, the cost of which was provided by private subscription. The sum of $100,000 was raised by the citizens of the state. The state is represented in nearly every department of the Exposition.

IDAHO.—Idaho has a state building peculiar to herself. Recognizing the folly of attempting to compete with the older states in the erection of an elaborate building, she constructed one somewhat rustic in appearance and costing $15,000. In its exhibit Idaho pays special attention to the mining industry. It may not be generally understood, but the fact remains that the state has contributed $175,000,000 of money in gold and silver to increase the wealth and enrich the commerce of the land. It produces one-half the lead product of the United States. In consideration of these facts a special effort was made to have a mining exhibit commensurate with the importance of the state as a valuable mineral producer. The state legislature appropriated $20,000. Private citizens contributed $100,000 additional.

ILLINOIS.—The state of which Chicago is the chief city very naturally takes the lead among her sisters, both as regards her special building and her special exhibit. Aside from private contributions, which were numerous, the state legislature appropriated $800,000 to defray the expenses, to begin with. The Illinois building has come to be looked upon as one of the main structures of the Exposition. It occupies one of the most favored spots on the grounds, in the northern or "improved" portion of Jackson Park, where on the south for nearly one mile there is a view of a beautiful water-way, and on the north and east are the unique buildings of other states and foreign nations. Illinois was the first state to be ready with its building, and in its construction there was expended $250,000. The building, with its dome 200 feet high, is located near where the boat-house formerly stood on the artificial lake. A broad channel about sixty feet wide was extended from the southeast portion of the park up to this lake. The grand entrance to the building faces this water-way, and passengers up this channel discover the Illinois state building looming up at the end of the route. The structure is placed on a terrace four feet high, and in front of the entrances there are stone terraces with railings, statues, and stone steps leading down to the roadway. The main features are the terraces north and south, the south the more important of the two, as from this point may be viewed the panorama of all the magnificent Fair buildings, as well as the water-way. The building is embellished with fine carving and statuary, the material

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being cast blocks of approved composition. It is thoroughly lighted, first from the side windows, which are placed about fourteen feet above the floor to permit cases to be placed against the walls; second, with skylights placed in the flat roof of the side aisles; and third with continuous skylights on the ridge of a pitched roof or nave. Ventilation is provided for through windows placed a story above the flat aisle roof and the foot of the sloping roof over the nave. The building is constructed of Illinois stone, brick and steel. The Memorial hall and school were formerly designed to be separate buildings, but it was decided to incorporate them in the main structure. Fountains and flowers decorate the adjacent grounds, and allegorical statuary finds a place in the decorative features of the building. The interior of the structure is appropriately ornamented. There are no competitive exhibits in the Illinois state building. It is "a collective, departmental exhibit for the state, which shall illustrate its natural resources, together with the methods employed and results accomplished by the state in its municipal capacity through its several departments, boards, commissions, bureaus and other agencies in the work of promoting the moral, educational and material welfare of its inhabitants, so far as such methods and results are susceptible of exhibition." A feature is a model common school-room of high grade, fully equipped and furnished, under the direction of the state superintendent of public instruction. This includes the following: An illustration of the methods and results of educational work as pursued in the normal universities, the public, technical and art schools and the high schools of the state; an exhibit by the University of Illinois of the equipment, methods of instruction and achievements of that institution in its several departments; an exhibit of the educational and industrial work as conducted in the state charitable institutions. There are also collections, correctly classified and labeled, illustrating the natural history and archæology of the state; an exhibit by the state fish commission of native and cultivated live fish, with hatchery and appliances and equipments for transportation, models of fish-ways in use; also a special collection of the cultivated products in the several branches of agriculture; architectural drawings (with elevations) of every public building erected and now used or maintained in whole or in part by the state; also maps, charts, diagrams and tables for the state, and, so far as practicable, for each county. In the memorial hall, which is fire-proof, there are placed such relics and trophies belonging to the state as the governor has designated. The control and general management of the exhibit devolves upon the state board of agriculture. The board in turn invited the co-operation of Illinois members of the national commission and of the board of lady managers.

There are three entrances—the prominent one to the south, one to the west facing the Midway Plaisance, and the other on the north end of Memorial hall from the boat landing or the edge of the lagoon. The building in the main is 160 feet wide by 450 feet long, with the school-house, about 75x60 feet, taken out of the east end and within the building. The dome is 72 feet in diameter and about 200 feet high, with a lookout about 80 feet high and another in the lantern about 175 feet high. The side walls are 47 feet high, while the center wing on the south is 72 feet high, and both ends 54 feet, with a still higher projection in the center. On the north the Memorial hall forms a wing 50x75 feet,

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THE PULLMAN BUILDING. 271

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while on the south is placed the executive offices in a wing 75x123 feet, carried up three stories, with a public hall in the third story. In addition to these offices, there are others in each of the four corners for the departmental officers. The Memorial hall has a gallery. There is a gallery around, inside and outside of dome piers for viewing the exhibit hall.

The figure which crowns the main entrance of the Illinois building is from the hands of the sculptor Taft. It is a draped figure with arms outstretched, and is called "Illinois Welcoming the Nations." Another allegorical group to be seen on this building is "The Birth of Chicago." Chicago, a rare and radiant maid of grace divine, garbed in trailing robes, is pictured coming from earth like a new Pallas Athene springing full-armed from the forehead of Zeus. Nymphs of the lake, the forest and the stream attend the nativity of fair Chicago, and all their unstinted offerings are poured out in glad profusion at the feet of the new queen and goddess. "La Salle and his Companions" and "Education" are other groups that will command attention and admiration. All are by Taft. There are twelve groups in all, and the cost was $12,500.

One of the most interesting features of the Illinois exhibit is the Worthen collection of fossils and library. There is a splendid coal exhibit here showing the product of the Illinois mines. The state fish commission is well represented among the exhibits; there are exhibits of the state charitable and criminal institutes; of the various products, and mineral and industries; a geological exhibit, an emergency hospital exhibit, a kindergarten exhibit, an educational exhibit, besides great displays of fruit and flowers. Illinois does not confine her exhibits to this building, however. Her competitive exhibits will be found in every department of the Exposition. The following was the apportionment of the funds at the disposal of the state commission: woman's exhibit, $40,000; construction, $195,800; statuary, $17,700; architect's fees, $11,500; grounds and exterior ornamentation, $10,000; interior furnishing, $60,500; normal and common schools, and university, $30,000; board of charities, $20,000; natural history, geology, archæology, $40,000; fish commission, $5,000; agriculture, etc., $25,000; live stock, $40,000; horticulture, $20,000; agricultural drawings, maps, etc., $27,000; state and county statistics, $8,000; printing and stationery, $30,000; administration, including cost of ceremonies, receptions, expenses of board, salaries, freight transportation, rents, care of buildings, contingencies, etc., $175,000.

INDIANA.—The World's Fair commissioners of Indiana offered prizes of $300, $200 and $100 respectively for the first, second and third best plans for the Indiana building. The building cost about $25,000, and it contains about 6.000 square feet of floor space. Instead of costing $25,000 the building when completed is said to have cost double this sum. Indiana is represented in every department of the Exposition, and everywhere creditably.

IOWA.—"The Blue Grass Palace" of Iowa is one of the attractive novelties of the Exposition. The state appropriated a preliminary sum of $50,000, which was greatly increased to meet the expenses of the Iowa building and exhibit. The Iowa building, a handsome structure, cost alone $25,000. The corn, educational, horticultural, mechanical and industrial exhibits generally of the state are among the attractions of the Exposition.

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KANSAS.—The Kansas state building is cruciform in design, two stories high, and cost $20,000. It is constructed entirely of Kansas material. The building consists of 13,934 square feet. There are 4,058 square feet in the rear for the natural history exhibit of the state university; 3,340 square feet in the front of the building for headquarters accommodations, leaving a balance of 6,336 square feet for odd bits in the center of the building. The second floor contains 3,840 square feet for exhibits and 3,340 square feet in the front of the building for further consideration. The building combines the idea of a club-house and a building for the state exhibit. Kansas contributes largely to the attractions of nearly every department of the Exposition. Aside from the state appropriation, her citizens raised by private subscription $150,000 to defray the expenses of a creditable exhibit.

KENTUCKY.—Kentucky is represented by a handsome building and a worthy exhibit. She contributes to every department of the Exposition. The legislature appropriated $100,000, and private citizens contributed generously.

LOUISIANA.—Louisiana is represented in many of the departments of the Exposition. Her exhibits are not as complete as they should be, but they are not unworthy of the great gulf state.

MAINE.—The Maine building is constructed entirely of native granite, and cost $10,000. The building is used principally as a club or reception house. Maine contributes exhibits to every department of the Exposition.

MASSACHUSETTS.—The designers took for their model the old Hancock house that stood for so long a time the most familiar structure on Beacon street, Boston, and which is an admirable representative of the old colonial residence, with such modifications only as the purposes of the structure demand. The reproduction of this type of our architecture is a happy idea, and will undoubtedly meet with general appreciation. The cost of reproduction was about $40,000. The building is used exclusively as a state headquarters and club house. Massachusetts contributes very largely to every department of the Exposition, particularly to the art, educational, horticultural and mechanical displays. The exhibit of the state cost $75,000.

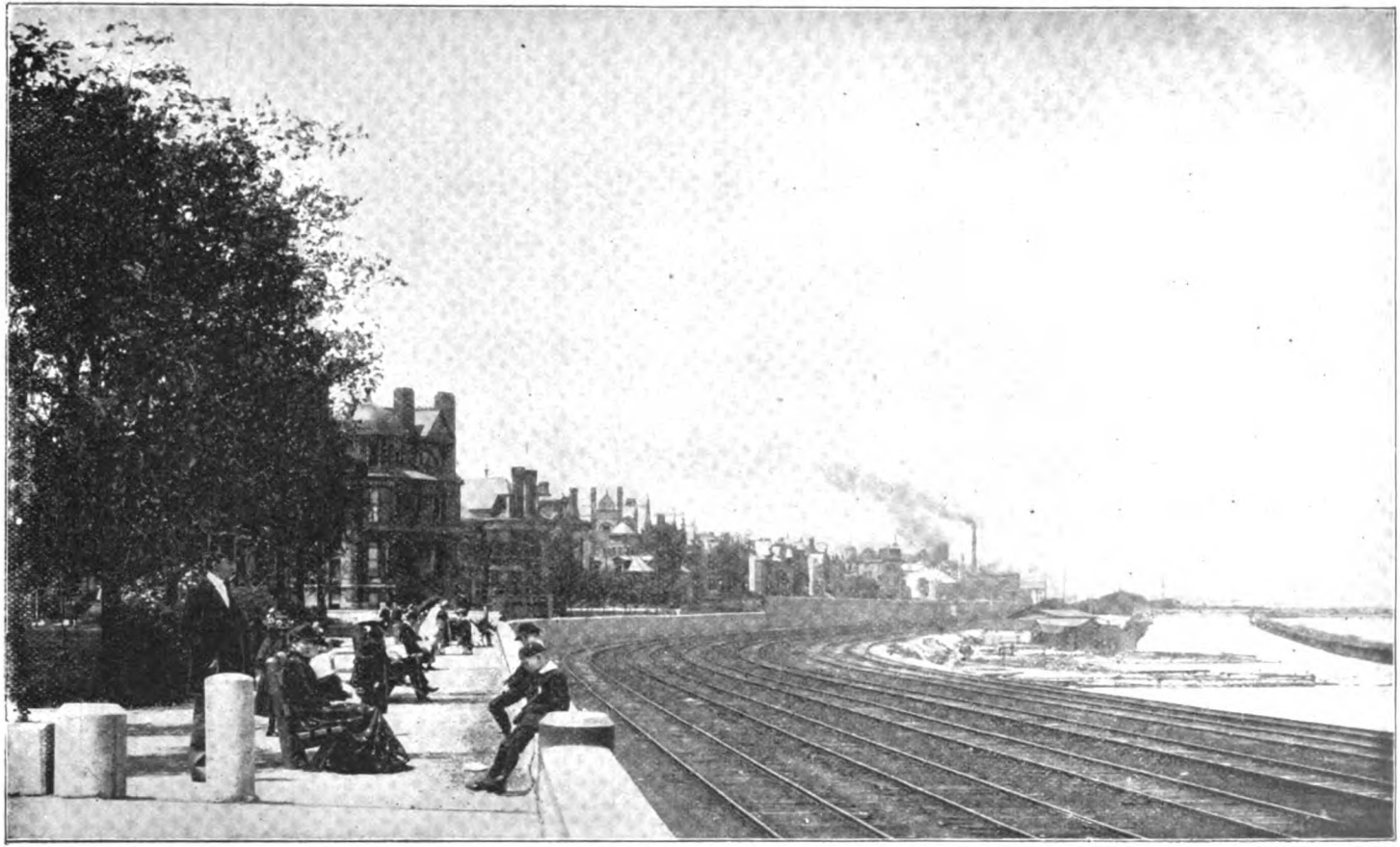
MARYLAND.—The Maryland building, a reproduction of the state house, is constructed of granite, and cost $35,000. Maryland's canning and oyster interests are represented on a large scale. The canned goods exchange of Baltimore has a canning house in which a practical illustration of the work done is given. The exhibit of the state, aside from the building, cost $30,000.

MICHIGAN.—The legislature of Michigan appropriated $20,000 for the State Exposition building, but most of the material was contributed, so that the structure, as it stands, represents an outlay of about $50,000. Its dimensions are 100x140 feet. The building is constructed wholly of Michigan materials.

MINNESOTA.—The Minnesota building is one of the handsomest on the grounds, a prize of $500 having been awarded the successful architect. The legislatnre subscribed only $50,000, but this sum was increased to $150,000 by private subscription. Every county in the state contributed generously, and the result is a creditable building and a creditable exhibit in nearly every department of the Exposition.

MISSISSIPPI.—Mississippi makes a very creditable showing, particularly in

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ILLINOIS CENTRAL RAILROAD TRACKS.

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the agricultural and horticultural departments. The state and citizens subscribed generously toward the exhibit.

MISSOURI.—The exhibit of the state of Missouri is one of the most extensive at the Exposition. The state is rich in agricultural and mineral land, and besides, is one of the foremost of the manufacturing states of the Union. The state very early applied for 20,000 square feet of space in the horticultural department alone. The Missouri building cost $50,000, and is one of the handsomest structures of the state group. The state originally appropriated $250,000, but this was increased to $500,000, an appropriation equal to New York's.

MONTANA.—The legislatnre of this young but wealthy state appropriated originally $50,000 for the state's exhibits. Later on this amount was doubled. Montana's exhibits will be found principally in the department of mines and mining. One of the interesting exhibits from the state is a relief map of Butte, the greatest mining camp in the world. The state board set aside $5,000 for the woman's exhibit.

NEBRASKA.—The style of Nebraska building is Romanesque, and its arrangement combines to a remarkable degree the qualities of utility, beauty and small cost for construction. The building covers 9,652 square feet, not including a large veranda on the side adjoining the little lake. The agricultural and general exhibit is arranged in a hall 100x60 feet. Facing the exhibit hall on the first floor are offices, balconies and a lobby. The exhibit from this state is one of the grandest to be seen. Nebraska is represented particularly in the agricultural, horticultural and forestry departments.

NEVADA.—Nevada is represented almost wholly in the mines and mining department.

NEW HAMPSHIRE.—This state is represented in every department of the Exposition, notably in the geological and mining displays. New Hampshire also contributes valuable works of art and exhibits for the educational display.

NEW JERSEY.—The appropriation of this state was $70,000, a portion of which was set aside for the building of a state headquarters. The state has contributed exhibits to every department of the Exposition.

NEW YORK.—New York appropriated $300,000 to defray the cost of its building and exhibit at the World's Fair. This amount was increased later on, and greatly added to by private subscriptions. There was considerable delay on the part of New York, and active work did not begin until the spring of 1892. From that time on, however, New York's interest in the Exposition lacked nothing in enthusiasm. The building of the state of New York represents, with very slight modifications, the historical old Van Rensselaer residence, which was for so long a time one of the most familiar landmarks in Gotham. New York contributes, of course, to every department of the Fair, and more largely than any other American state excepting, perhaps, Illinois. Her exhibits are prominent in the art, agricultural, horticultural, musical, electricity, mechanical and manufactures departments.

NORTH CAROLINA.—North Carolina has reproduced for its building what is known as the "Tyron Palace." This structure, constructed of material brought from England the middle of the eighteenth century, is a fine type of colonial architecture. A circular colonnade connects upon the right and left of the

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main building two similar structures; and to reproduce it entire in full size, occupies the entire space allotted to North Carolina. This state is represented in every department of the Exposition. One of the oldest states of the Union, its contribution of art treasures and curios is very interesting.

NORTH DAKOTA.—The North Dakota building is 70x50 feet. A space 46x21 feet in front of the main assembly hall, between two committee-rooms, is used as a court-yard. From this court-yard the main assembly-room is entered through a large stone arch, above which on the exterior is an elaborately carved panel containing the coat of arms of North Dakota. The main feature of the interior is the assembly hall, which includes a space 24x56 feet. North Dakota of course pays great attention to the exhibit of her principal product, wheat, but, also, makes a good showing in several other departments. The educational advantages of the young state are fully presented, and her school exhibit is among the best. She makes contributions to the department of forestry.

OHIO.—The style of architecture of the Ohio building is distinctive and much unlike that of any of the other state buildings. The original idea was to have the building constructed of material furnished gratis by contractors, and thus make it in itself an exhibit of the building materials of the state. However, the contractors were slow in taking the matter up, and so many obstacles stood in the way that it was determined to build it of wood. The estimated cost was about $35,000. The building is two stories, the lower one being of more than the ordinary height. The state of Ohio sends exhibits to the Fair valued at between $5,000,000 and $6,000,000. The appropriation of the state was $100,000.

OREGON.—The state of Oregon is represented very fully in the agricultural, mining and other departments. It has also contributed to the forestry department. The real work of the state did not commence until late in 1892, but the exhibit is nevertheless creditable

PENNSYLVANIA.—The Pennsylvania building, as is quite appropriate, is one of the costliest and handsomest of the group. One of the main attractions is the old "liberty bell" from Independence Hall, which hangs in the tower or rotunda directly opposite the gallery on the second floor. The entire height of the building is 165 feet. Over 800 electric lights are used to light it. Porches 20 feet wide surround the building. The whole structure is practically a reproduction of Independence Hall, Philadelphia. Pennsylvania appropriated $300,000 to defray the cost of its building and exhibits, but this represented only a small portion of the state's contributions.

RHODE ISLAND.—The building of the little state of Rhode Island is a two-story structure, modeled after the Doric style of architecture, with towering pillars resting on porches at either end. The entrance at the front is through three circular arches into a circular porch twenty feet in diameter, which opens into a main hall 20 x 42 feet. The first cost was estimated to be $8,000. Rhode Island contributes largely to the manufactures and liberal arts department, as well as to every one of the great sections of the Exposition.

SOUTH CAROLINA.—South Carolina, owing to the defeat of an appropriation bill in the legislature, was late in securing a place among her sister states; but the exhibit made, though small, comparatively, is creditable.

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MARSHALL FIELDS—WHOLESALE.

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SOUTH DAKOTA.—The state building of South Dakota is in the style of an old French farm-house. The walls are of bricks. Its dimensions are 60 x 72 feet. On the first floor is an assembly hall with towering mantels and house fireplaces at each end. The state raised between $80,000 and $100,000. The legislature was late in acting, but the energetic and enterprising people of the young state made full amends for its neglect. South Dakota is well represented in the agricultural, horticultural, mineral and forestry departments.

TENNESSEE.—The private citizens and counties of the state of Tennessee subscribed liberally toward securing an adequate exhibit at the World's Fair, the legislature having failed to pass an appropriation bill. The funds raised were ample to provide for a very creditable display, and the state is represented in nearly every department.

TEXAS.—This great state has one of the most notable buildings of the group. The structure is 85 x 250 feet. The main height is 70 feet. Constructed entirely after the style of the old Spanish missions, it is a good example of Spanish renaissance architecture. The structure is built of Texas materials. Texas took unbounded interest in the Exposition from the very first. The city of Galveston alone raised over $150,000. There were over $300,000 raised by contributions throughout the state. Texas is represented, and represented well, in every department.

VERMONT.—One hundred of the substantial citizens of Vermont subscribed $100 each, and the building, costing $10,000, was erected without drawing upon the state treasury. Vermont is represented in the geological, agricultural, horticultural, mechanical and art departments, and quite fully in the mineral and forestry departments. A $6,000 monument of Barre granite is one of the exhibits from Vermont.

VIRGINIA.—The best exhibits of the Virginia State Fair of 1892 are offered the visitor at the Exposition of 1893. The state appropriated about $80,000, which was increased by private subscriptions. Virginia makes a good showing, but one hardly commensurate with her age or high position among the states of the Union.

WASHINGTON.—Washington's is a unique state building. It is constructed almost entirely of material brought from the state, and forms an illustration of the building materials and industries peculiar to that young but vigorous commonwealth. The building is 220 x 140 feet. The exterior is of timber from Puget Sound region and all the lumber entering into it was donated by the state lumbermen's association. The main entrance is made one of the features of the building, and is of granite, marble and ore quarried in the state. In addition to what was contributed, the state expended $50,000 in constructing and elaborating the details of the building. It is surmounted by a flagstaff 175 feet high, and there are four towers of unique design. A peculiar incident in connection with the acceptance of the design for this building was that the one which at first was considered third in merit was adopted, and the architect who received the first prize in the competition was relegated to the rear. The state spent $100,000 on the collection of an exhibit, and contributes largely to the departments of agriculture, forestry, mines, fisheries, education, electricity, live stock, fine arts, woman's work and transportation. Her displays are very creditable.

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NEBRASKA.



KANSAS.



VIRGINIA.

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KENTUCKY.



WASHINGTON.



SOUTH DAKOTA.

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WEST VIRGINIA.—West Virginia has a beautiful little building which cost about $20,000. The state contributes very extensively to the departments of mines and mining, forestry, agriculture, floriculture, horticulture, manufactures and liberal arts, and machinery.

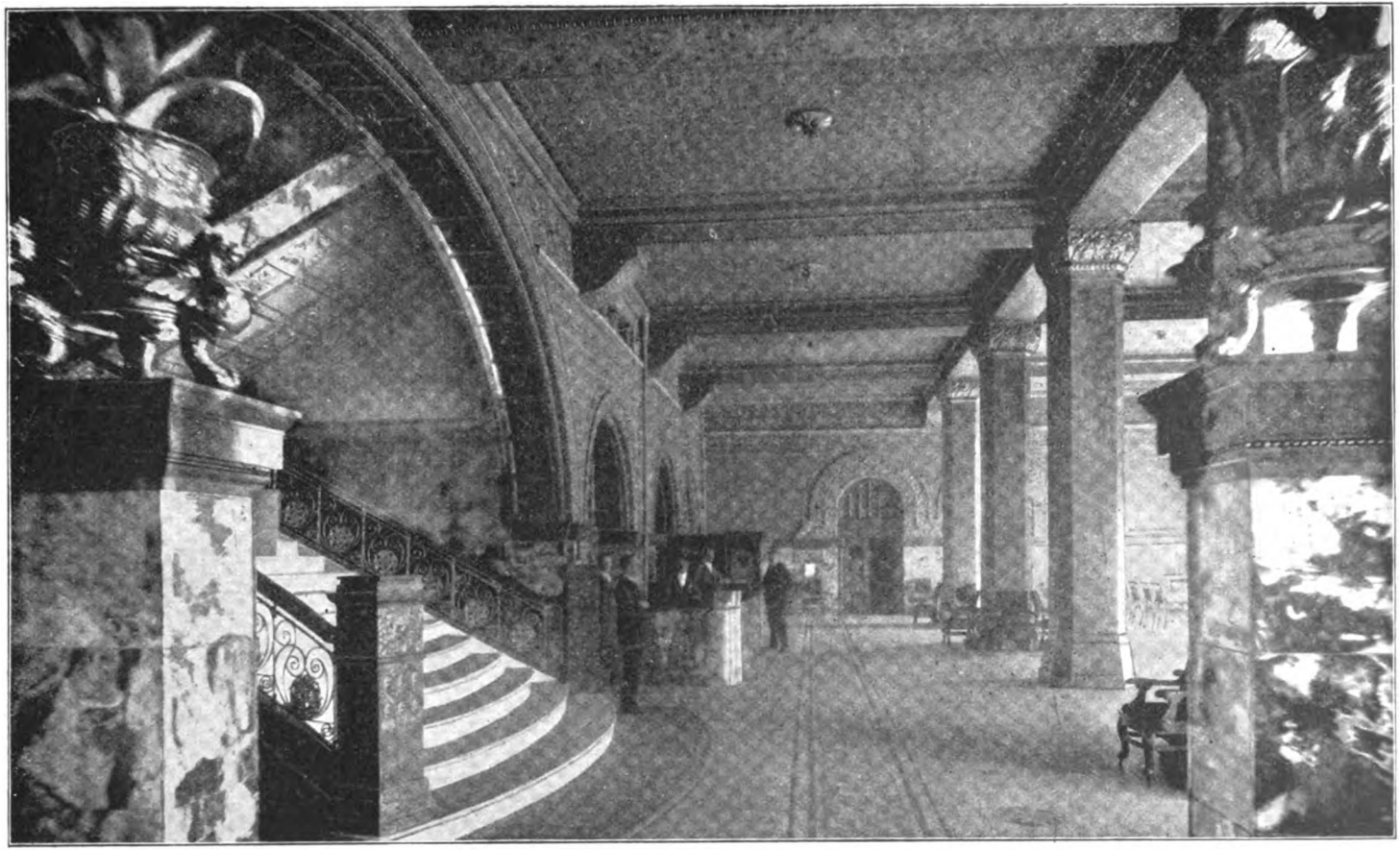
WISCONSIN.—The Wisconsin state building is a handsome structure. It is commodious, and the interior is arranged with special reference to the products of this wealthy state, which in variety and character make the exhibit one of the most attractive and interesting to be seen at the Fair. It is two stories high, with not less than 10,000 feet of floor space exclusive of porches. The whole structure is built of Wisconsin material. The exterior walls are of stone, brick and terra cotta, and the roof of slate, tile or iron made in Wisconsin. The interior is ornamented and furnished with plate, beveled and mirror glass, Wisconsin pine and hardwood, and encaustic tile. The cost of the building was $30,000. Douglas county appropriated $2,000 to pay for a stained-glass window at the head of the main staircase. Wisconsin is represented in every department of the Exposition.

WYOMING.—The Wyoming building is in style a model club house. The dimensions are 70 feet in length by 50 feet in width. The cost of the building was $20,000. Wyoming contributes to the agricultural, mines and mining and other departments of the Exposition displays, which show her to have made wonderful advancement.

THE TERRITORIES.—The territories of the Union are well represented. Beginning with far-away *Alaska*, each and every one of them makes a creditable exhibit. The government takes care of the Alaskan display, which is a novel and interesting one in many particulars. The seal industry is represented among others. *Arizona* contributes largely to the mines and mining departments and to the Indian exhibit. *New Mexico* raised over $75,000 and in consequence the visitor sees a great many attractions from this wealthy territory, notably in the mines and mining department and Indian exhibit. *Oklahoma*, youngest of the territories, has made a splendid effort to bring herself properly before the world, and her efforts have been crowned with success. *Utah* ought not properly to be classed among the other territories, so much is she in advance of them. Her building is a "Salt Palace," and her exhibits are really deserving of a first place among those of the great agricultural and mining states. *District of Columbia.*—The display made by the district in which is located the seat of government includes pictures of the school buildings, views of the streets and avenues, and probably a fac-simile in miniature of the city and its public buildings. There is to be also a collection of historical relics.

A GROUP OF STATE BUILDINGS.—The four states of Wisconsin, Indiana, Michigan and Ohio, are grouped together on a triangular plat of ground near the western limit of Jackson Park, just north of Fifty-ninth street. How to arrange these four state buildings so that each would have a commanding view of the fine art galleries and the pretty little lake near by has been one of the problems for the construction department. The buildings are so placed that each commands a fine view of the art galleries, the picturesque lake and the buildings of a number of foreign nations. The Indiana building cost about $100,000, of which amount $70,000 was to be donated by lumber associations.

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AUDITORIUM OFFICE.

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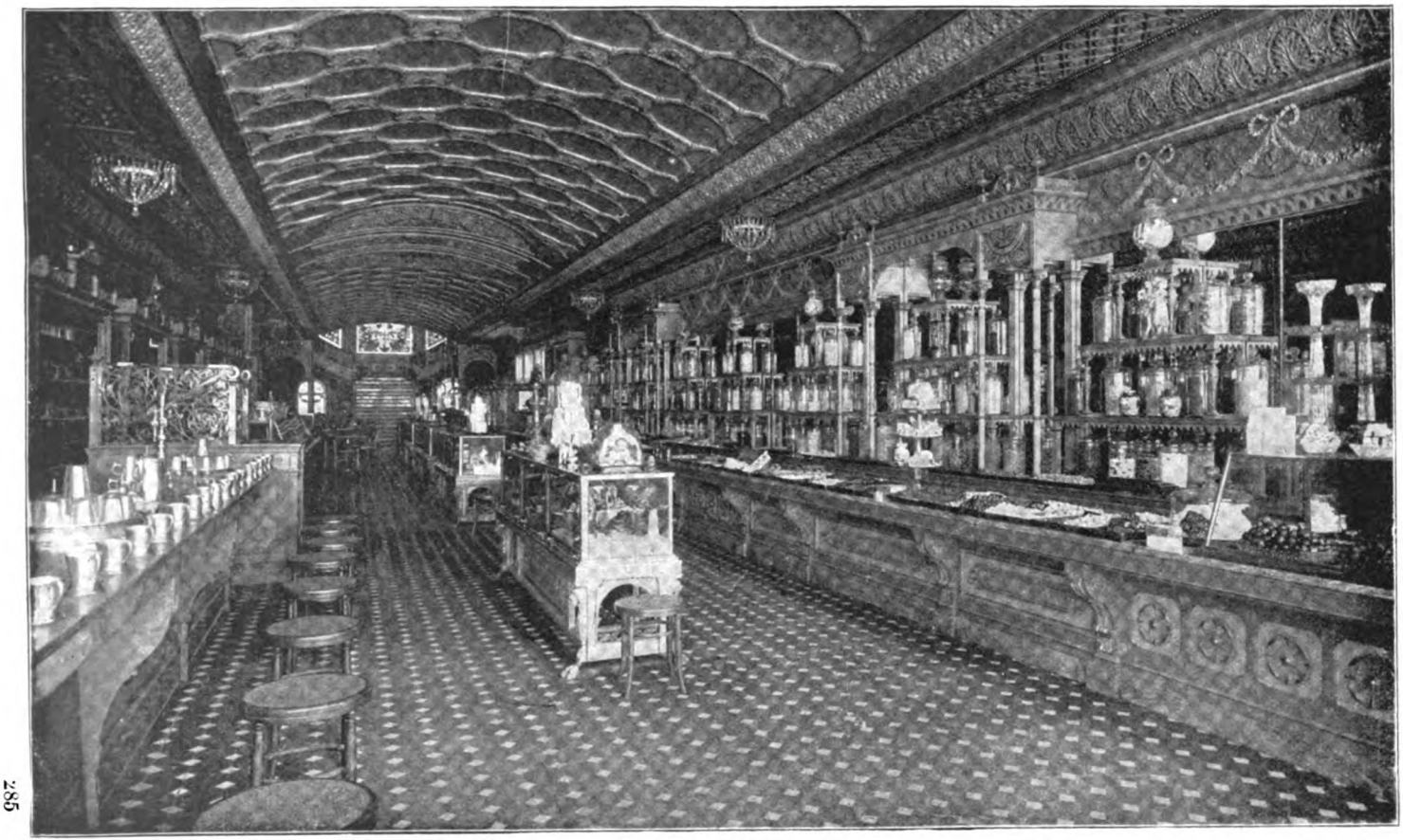
The Michigan building represents an outlay of $40,000, most of which was donated from private sources. The Wisconsin and Ohio buildings cost about $50,000 each, and as in the case of Michigan and Indiana, most of the building material was donated.

OTHER BUILDINGS.—Notwithstanding the generous provision made for space by the management, the great size of the buildings as originally planned, and the number of them, exceeding that of any previous exposition, it was found in the spring of 1892 that others must be erected to meet the demands of exhibitors and the public. Some changes were also made in the original designs, more especially with relation to *The Casino*. No casino is to be seen as originally designed, at the end of the pier 1,000 feet from shore, and there is no curved mole bearing columns emblematical of the thirteen states. In place of the latter there is a peristyle, 60 feet wide and 500 feet long, extending north and south and spanning the lagoon entrance by a grand arch. Ranged along this peristyle are emblematic columns representing all of the states and territories. At the north end of the peristyle is *The Music Hall*, which for a time it was thought would have to be put on the wooded island. It measures 140 by 200 feet, and has an auditorium large enough to seat 2,000 people, with an orchestra of 75 pieces and a chorus of 300 persons. It also has a rehearsal hall 50 by 80 feet, capable of seating 600 people. This music hall is designed to be used by musical talent and connoisseurs of the art rather than by the mass of the people who will visit Jackson Park. It is intended that here shall gather the fine singers and instrumentalists who may wish to be heard and criticized by the best representatives of their art or profession. The grand choruses and band concerts—the proper musical entertainments—will be held in an amphitheatre accommodating 15,000 people or more. This is located in the extreme Southern part of the park, and after the close of the projected musical programme will be transformed into a live-stock show ring. At the south end of the peristyle there is a restaurant and cafe, of the same size and style as Music Hall. This is constructed to supply the main features of the abandoned Casino. The cost was $206,000. The pier, extending 1,000 feet into the lake, is one of the greatest features. At its extremity, in place of the Casino, is erected a *Tower* 250 feet high. This is of iron, covered with staff, and resembles a lighthouse in appearance. From its summit electrical displays of exceeding brilliancy are made, and by means of electric "search-lights," the grounds, or any particular portion of them, can be flooded with light on fete nights. *Department Building.*—The building, which is two stories high, cost $58,000. Its dimensions in feet are 165 by 310. In the center is an open court, and about this court are located four important departments of the Exposition management. The northeast section is devoted to general offices for the Chief of Construction and his assistants. The southeast quarter furnishes room for a hospital. In this hospital are three wards, 39x19 feet each. Two wards are for male patients and one for female patients. The hospital is complete in all appointments. The south end of the building, running west from the hospital, is devoted to the fire department. Here are located steam and chemical engines, police patrol-wagons, ambulances, fire and police alarm offices, stalls for horses, etc. Running east and west through the center of the building is a driveway eighteen feet wide.

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On the west side of the structure, between the driveway and the fire department, is stable room for twenty horses and a number of carriages and other vehicles. Across the driveway, just north, are police headquarters. Here Col. Wright will assemble his Columbian Guards. Cells for lawbreakers are also provided. The northwest section of the building is devoted to a large restaurant. The upper story is largely used for dormitories. *Convent of La Rabida.*—It may be remembered that early in 1492 Columbus, while traveling on foot and in a destitute condition, applied for food at the Franciscan convent of La Rabida in Spain, and was kindly and hospitably received. The prior of the institution, Father De Marchena, was a man not only of education and culture, but of large influence with Queen Isabella. Columbus explained his plans for the discovery of the new continent to the prior, who became interested, and secured for him a reception at the court of Ferdinand and Isabella, who were then in camp with the besieging army in front of Grenada. There is little doubt but that for the timely assistance of the good abbot Columbus would have completely failed in his endeavors to secure assistance to discover the new world, as he had previously failed in his endeavors to obtain aid from the governments of Spain and Portugal. A fac-simile of the convent, costing $50,000, is among the structures on the grounds. It is alluded to elsewhere. *Shoe and Leather Building and Mineral Display Building.*—These are located in the grand central court of the Manufactures and Liberal Arts building. Their dimensions in feet are 325x425 each, and their cost $100,000. It was the original intention to leave two great open courts in the center of the Manufactures building, each about 400 by 500 feet. After the shoe and leather industries of the country made such a determined fight for the building, and agreed to raise all the money necessary to put it up, it was decided that the two buildings named could be erected in the court which it was originally intended to decorate with flowers and fountains. The buildings are one story high, and are separated from the walls of the main building by streets about fifty feet wide. *Bridges.*—The bridges over the lagoon and canals are all worthy of attention, and have been constructed at a great expenditure of time, labor and money. The cost of the viaducts and bridges was $125,000. *Lavatories, Closets, Etc.*—The lavatories, closets, etc., at the World's Fair required the expenditure of between $450,000 and $500,000. There are 3,000 closets, 2,000 urinals and 1,500 lavatories. The contract for the construction and care of all these was said to be the largest contract of the plumbing description ever let. At the Centennial and the Paris Expositions the plumbing and sanitary precautions were very unsatisfactory. It was the determination that they should be as perfect as possible at the Chicago Exposition. *Streets in Reproduction, etc.*—Many streets, villages, etc., in imitation of streets and villages in foreign towns and countries, are reproduced. These will represent portions of North, South, and Central America, streets in Cairo, Egypt, etc., all of which are referred to elsewhere. *Towers.*—The decorations of the towers involves a great deal of attention and a great outlay. The towers, it is seen, are not bare shafts of iron, but their exterior framework is surrounded with an additional structure which makes them appear like columns of masonry. At the first landing of the tower on the pier, 200 feet high, will be a big clock with bells and chimes. At the second landing, 250 feet high, is an electric plant and an

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GUNTHER'S CONFECTIONERY.

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immense searchlight for giving panoramic views of the Exposition grounds and buildings. *Religious Exhibits Building.*—The Evangelical Alliance (at this writing) proposes the erection of a great building for religious exhibits. *Band Stands.*—Visitors to the World's Fair will find on every hand bands of music for their entertainment. Fifteen music-stands are provided for the accommodation of the different bands anxious to visit the Exposition and make music for the visitors. *Natatorium.*—A natatorium, or swimming school, will be found directly west of the location assigned to the Dutch Settlement on Midway Plaisance Its dimensions are 200 by 250, and cost $60,000. *Bank.*—The Chemical National Bank has established a branch in the Administration building for the accommodation of visitors. *Additional Buildings.*—As up to the very last moment changes were made in the general arrangements for special buildings, it is impossible to enumerate them all in this connection. Two handsome structures, however, in addition to those already named, will be found by the visitor in all probability—one for the accommodation of the brick tile and terra cotta manufacturers, the other for exhibits of heavy machinery, such as drop hammers, forges, etc.

SPECIAL ATTRACTIONS.—In addition to the many other useful and attractive features of the exhibition, the following will be found of special interest to the visitor:

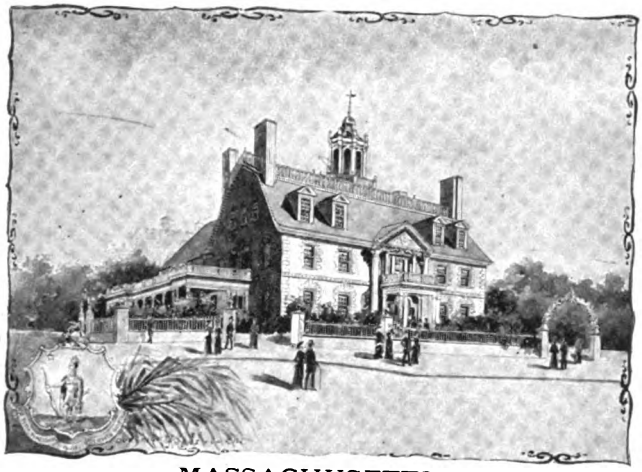
ARCHÆOLOGY AND ETHNOLOGY.—All possible phases of pre-historic man in America and the life of the aborigines at the time of the landing of Columbus are illustrated at the World's Columbian Exposition by the department of Archæology and Ethnology. Prof. F. W. Putnam, of Harvard University, is the chief of this department and is pronounced the most competent man in America for the position.

GOVERNMENT EXHIBIT.—The Government Exhibit has been treated in this volume in connection with the several departments, under the head of "Fish and Fisheries," "Battle Ship," "Naval Exhibit," "Post Office," "Indian Exhibit," etc.

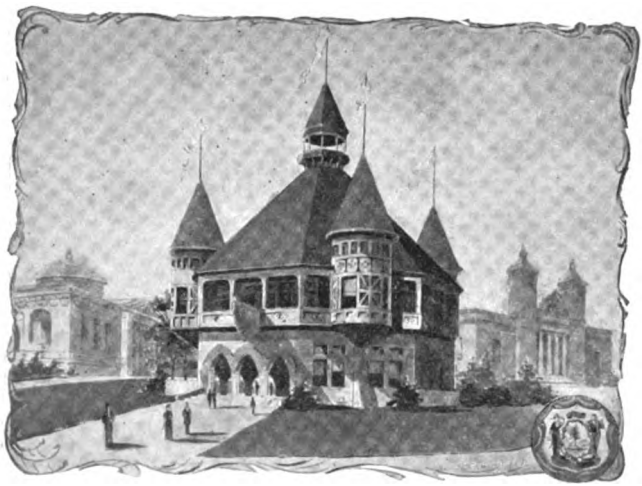
INDIAN EXHIBIT.—This exhibit is partly under the direction of the United States' Government, and partly under the direction of Prof. Putnam, chief of the Archæological and Ethnological department.

NOVEL, QUAINT AND CURIOUS THINGS.—There are many novel, quaint and curious things exhibited. These include exhibits—sometimes in the department buildings, sometimes in the state and foreign buildings, and sometimes in the special exhibits made by private individuals, firms and corporations. The following comprise the most conspicuous of these exhibits, and include such features as "A Street in Cairo," "Bazaar of All Nations," "Esquimaux Village," strange things from foreign lands, antiquities, etc. Two anchors that Columbus carried in his ships are exhibited. A bell 790 years old, from Carthagena, Columbia, South America, is on exhibition. Capt. William A. Andrews, known as "the Lone Voyager," from his trips in his wonderful little boats, Nautilus, keel fifteen feet, and Dark Secret, keel twelve feet, makes an exhibit in the Marine department of the World's Fair. The Very Rev. Doctor Peralta, Bishop of Panama, tendered for exhibition at the World's

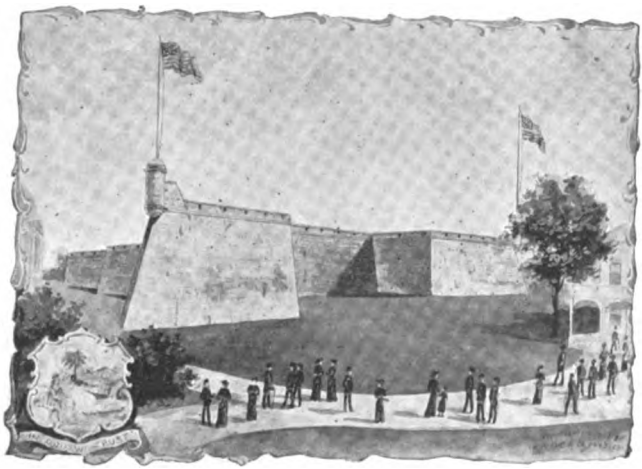
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MASSACHUSETTS.



MAINE.



FLORIDA.

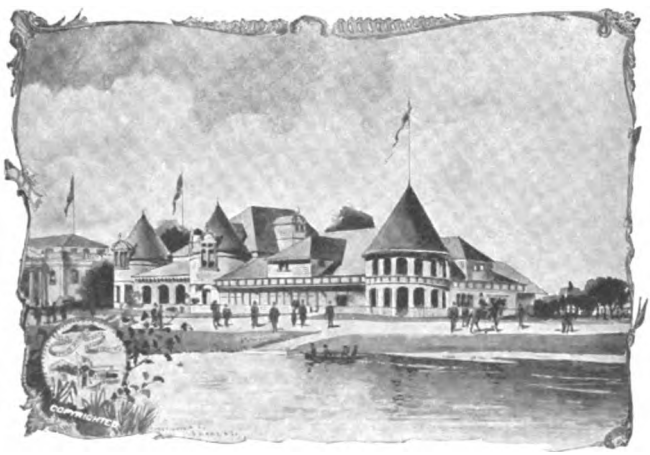
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IDAHO.



RHODE ISLAND.



IOWA.

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Fair his very remarkable historical and ethnological collection, which has been for some years in a museum connected with the bishop's palace.

Australia contributes the most wonderful astronomical clock that has ever been exhibited. It was constructed in New South Wales. This clock is in many respects similar to the celebrated time piece at Strassburg, showing numerous figures during the hour and performing many marvellous mechanical feats. The case is forty feet high, by twenty-five feet square and is made of colonial cedar. Captive Balloon Ascensions may be made from the grounds or from grounds in the vicinity daily. The "Bazaar of all Nations" is established near Midway Plaisance. Persons having a concession to sell goods in the bazaar were allotted space in which to erect buildings suitable for the purpose. These buildings were expected to be erected in the style of architecture that prevails in the country in which the articles are produced.

H. W. Young, of Augusta, Ill., sends a Bible printed in 1615, the ownership of which in this country he has traced back to 1660. Some novelties may be seen around the California and other buildings. The Monterey Cypress, a yellow fir tree 111 feet high, a California "Big Tree," and others, are visible outside the forestry exhibit. A continuous clam-bake is one of the attractions which epicurean visitors will find at the Exposition. One of the two old sunken vessels in Lake George is on exhibition as a relic. Van Houten & Zoon, the manufacturers of cocoa at Weesp, Holland, set apart $100,000 with which to make an exhibit. The Hercules Iron Company was granted the privilege of constructing and operating a cold storage warehouse on the Exposition grounds. It has a capacity of 600,000 cubic feet, and cost $150,000.

The congregation of the little colored church at Haleyville, in Cumberland County, N. J., contributes an interesting historical relic. It is the bell that has for years called them to church. In the year 1445 the bell, it is said, hung in one of the towers of the famous mosque at the Alhambra. After the siege of Granada the bell was taken away by the Spanish soldiers and presented to Queen Isabella, who in turn presented it to Columbus, who brought it to America on his fourth voyage and presented it to a community of Spanish monks who placed it in the Cathedral of Carthagena, on the island of New Granada. In 1697 buccaneers looted Carthagena and carried the bell on board the French pirate ship, La Rochelle, but the ship was wrecked on the island of St. Andreas shortly afterward and the wreckers secured the bell as part of their salvage. Captain Newell, of Bridgeton, purchased it, brought it to this country, and presented it to the colored congregation of the Haleyville church. The bell weighs sixty-four pounds and is of fine metal.

Rudolph Cronau, the eminent author and scientist of Leipsic, Germany, has contributed his extensive collection of paintings, sketches and photographs, representing scenes in the life of Columbus, and places visited by Columbus during his voyages to the new world.

W. L. Libby & Son Company, of Toledo, Ohio, were granted a concession for the operation of a big cut-glass factory. The Company invested between $50,000 and $75,000 on its plant, which is located at 59th street, in the Midway Plaisance, on a plat of land 150 by 250 feet. One of the events of the Exposition will be a Cyclist's parade, in which many of the 24,000 members of the League

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ARMORY.

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of American Wheelmen will take part. The date will be announced in due season. Among the transportation exhibits are coaches used in the early days of railroading, formed after the style of stage coaches, and many other curiosities, sent by the Old Colony railroad company. An East Indian village and exhibit occupies 200,000 square feet of space on Midway Plaisance. It is conducted by the East Indian Exhibit Co. A reproduction of the famous Eddystone Lighthouse may be found by the visitor on the lake shore, used as an exhibit and a beacon light. John W. Stiles & Co., of Spokane, Wash., was granted a concession for the reproduction of an Esquimaux village on the Exposition grounds. M. O. Jaensch, of Wahoo, Neb., sends a valuable collection of arms. The collection includes 100 pieces, including swords, pistols, guns, etc.

Not the least interesting feature of the government exhibit at the Fair is the fast flight of carrier pigeons. Captain R. E. Thompson, of the signal service, has this feature of the display in charge, and at frequent intervals he will liberate birds for flights to within 200 miles of Chicago. George W. Childs, the Philadelphia philanthropist, has taken a great interest in this feature of the government display, and offers a prize valued at $100, which will be on exhibition at the Fair, to the owner of the bird making the greatest distance in one day. The first cotton gin made by Eli Whitney is exhibited by the New Orleans Machinery Company, which also makes an extensive exhibit of cotton gins, sugar mills and other machinery. Dr. West, a collector of curios at Antigonish, Nova Scotia, is entitled to the credit of having shipped to the Columbian Exposition the first exhibit from a foreign country. It consists of useful and ornamental articles purchased from the Antigonish Mountain Indians. The first locomotive ever used is exhibited in the Transportation Department. Other curiosities connected with the early days of steam transportation are also to be found there. The first map of the world ever made is exhibited. Pope Leo consented to its loan from the Vatican library. It is known as the Diege Ribere map, and was begun in 1494 and finished in 1529.

W. A. Alexander and Louis Gelder, representing the insurance associations of Chicago, were granted space, 50 by 100 feet, to construct a building to constitute an exhibit of the most improved methods of fireproof construction and the appliances used in saving goods from burning buildings. The building may be occupied by a salvage corps during the Fair. The Western Union Telegraph Company exhibit, handsomely framed, the first telegraph message ever sent, which was in May, 1844. The message was received by Prof. Morse at the Capitol in Washington, from an assistant in Annapolis. It is seen in the Electricity Department. One of the exhibits that the Baltimore & Ohio road makes in the Electricity Building is a model of the first telegraph wire strung along that line by Morse. The line was nine miles long, and extended from Baltimore to Relay Station. The line was laid in a lead pipe.

An eagle measuring almost 20 feet between wing tips perches above the main entrance of the Manufacturers' Building. The old gunboat "Niagara," which was sunk in Massasauga Bay, Erie Harbor, in 1812, is exhibited. The Manufacturers' Club, of Philadelphia, has a building constructed entirely of material made by members of the club, as headquarters for manufacturers. A building in the form of an iceberg in which to make a polar exhibit is projected.

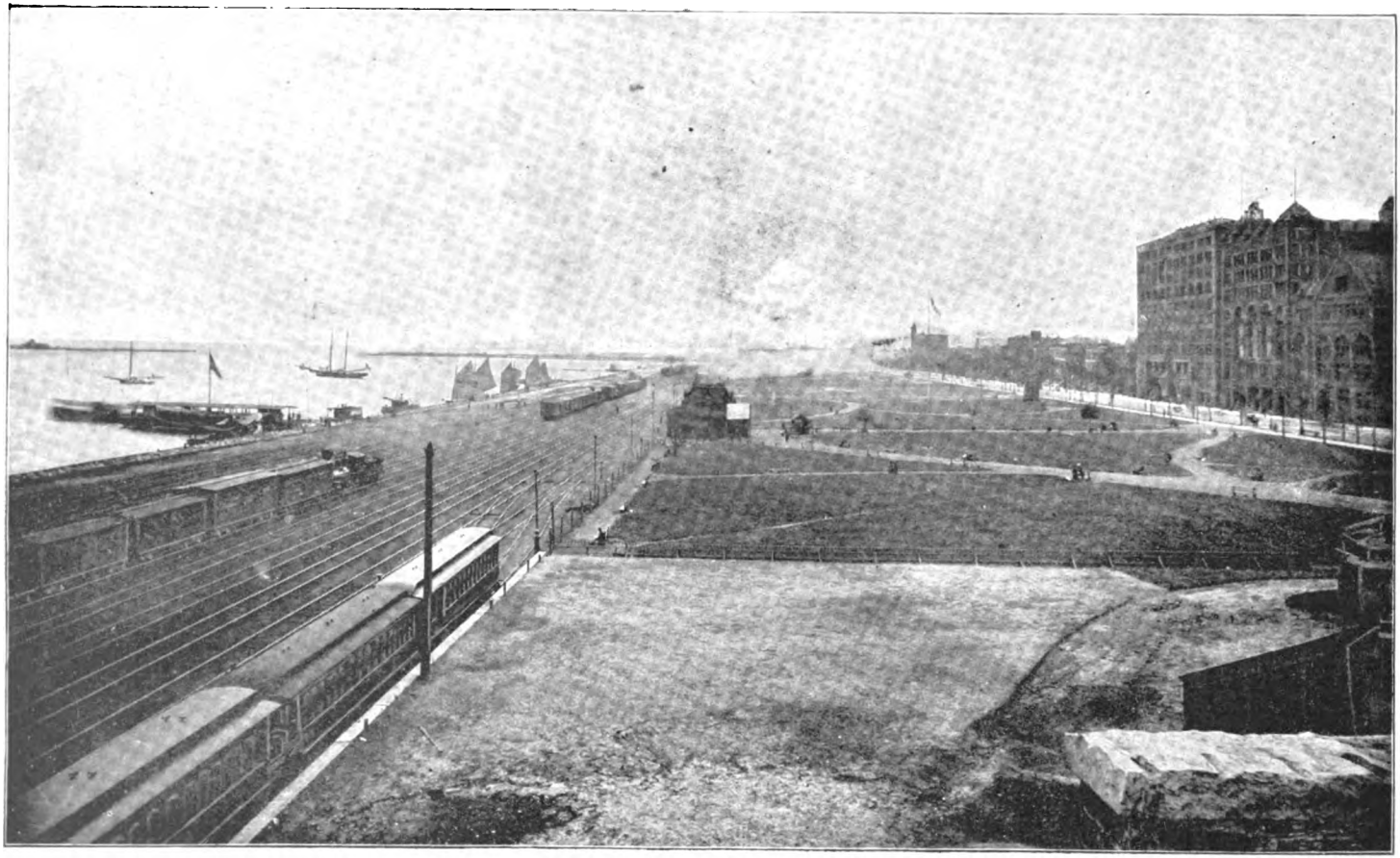
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One of the novelties of the Fair is a building 200 feet square used as a skating rink. This rink is to be supplied with a 16-inch layer of ice summer and winter by artificial means. A Government Life Saving Station is on exhibition. A magnificent microscope was made by the Munich Poeller Physical and Optical Institute for the Chicago Exposition, at a cost of $8,750. It possesses a magnifying power of 11,000 diameters. John McAdams & Co., of Brooklyn, exhibit on Lake Michigan a device to prevent boats from coming in collision. It is a marine brake, powerful enough to stop boats running at a high rate of speed. A genius at Muhlenberg, Pa.,completed a marvellous clock for exhibition at the Fair. Around the dial is a railway track, on which a miniature locomotive makes the round every five minutes. It requires a magnifying glass to see the delicate machinery.

Sir Walker Bullard contributes the finest collection of native Maori curiosities and paintings in the world. Maj. John Wilson, of Auckland, has brought a colony of Maoris to the Exposition. The United States Consul to Merida, Yucatan, sent to the Exposition a Maya house, with its native inmates and their belongings, and a Maya potter who makes native vessels in public. Meteoric stones of various sizes are exhibited. One of the finest specimens was sent from Marengo, Ill. Charles P. Southard, of New Jersey, has erected a model home, valued at $2,000, built through the medium of a co-operative building loan association. Models of all the warships of the United States Navy are shown in the battle-ship Illinois, in which is made the naval exhibit of the government at the World's Fair. A concession was granted to M. Stepanni to erect the Moorish Palace. One of the many attractions which are exhibited in this palace is $1,000,000 in gold coin in one pile. A space 200 by 250 is used for the palace, which cost $400,000. There is a $60,000 natatorium in operation on the Exposition grounds. It includes bath-rooms, a swimming pool, a cafe, and a stand for the sale of cigars and flowers. This concession was granted to L. J. Kadish of Chicago.

The most gruesome exhibit at the Exposition is that made by the National Prison Association. The exhibit is a comprehensive expose of the devices and methods employed for inflicting punishment from the beginning of history to the present time, and shows the progress which humanity has made in the quality of mercy. A special building is used for the exhibit, and in it is arranged cells of every description, many of them reproductions of places which have detained persons famous in history. Mr. Sell, the London advertising agent, exhibits specimens of all the leading newspapers of the world which have been printed during the last two centuries. The Clayden model of the ocean currents is exhibited by the Navy department. This is a kind of huge scientific tank show. Mrs. Lou Barnes, of Vicksburg, granddaughter of the late Col. J. W. Nailor, sends the samples of cotton which her grandfather exhibited at the World's Fair in London in 1851, and at the New York Crystal Palace in 1853, with the medals awarded him at each. The cotton is still well preserved. A panorama of the Volcano Killean, of Hawaii, is exhibited on the ground. The original volcano has a crater one-half mile in diameter, in which there is constant volcanic action. The exhibit is under the auspices of the Hawaiian Government.

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LAKE FRONT, MICHIGAN AVENUE.

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A full-sized model of the Parthenon of Athens is one of the most interesting of the Exposition buildings. It contains the World's Fair in miniature. A company embracing several very wealthy men will operate a permanent circus after the style of the Hippodrome in Paris. A building, with seating capacity of 5,000, and having a garden on the roof, has been erected, and the attraction will be in operation to entertain World's Fair crowds. Among the wonderful things to be seen is a petrified log from Oregon. This is probably the largest petrifaction ever exhibited.

A business house in Chicago has established a physicians' bureau of service and information, which it proposes to make of great value to the medical profession who may visit the Exposition. A tribe of African Pigmies may be seen by the visitor at the midway plaisance. A chronometer, supposed to have been the property of one of Pizarro's men, recently found in Ecuador, is exhibited. A perfect reproduction of a street in Pompeii, the pavement of which is made of lava from Vesuvius, showing several houses as they appeared before the eruption which destroyed the place, together with relics, etc., is among the attractions. The visitor to the Exposition will have an opportunity of learning among other things, just how a first-rate post-office is managed. A working model of such an office is a part of the U. S. Government exhibit. It is a branch of the central Chicago Post-office so far as mails are concerned, but entirely independent in its exhibition features. It handles all mails of officials, exhibitors, and others to and from the Exposition grounds, and has a special delivery service of its own.

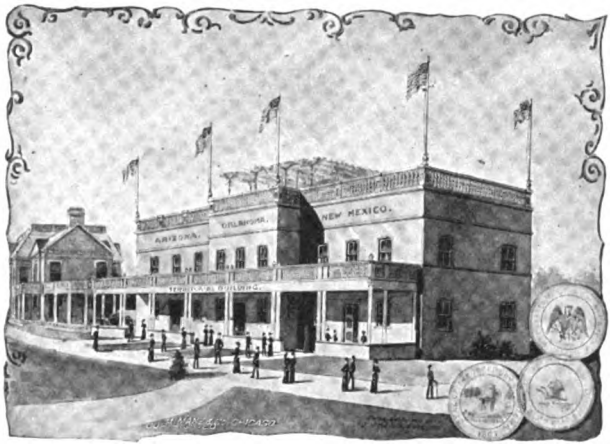
In the model post-office building heretofore referred to is located the Government postal museum. Among this collection are the most interesting foreign exhibits. The building erected on the grounds by the publishers of Puck is one of the most interesting attractions of the Fair. It shows fully every detail of the process of editing and publishing a humorous paper. A miniature model of the town of Pullman, 30x80 feet, is a part of the exhibit made by the Pullman Palace Car Company. The State of Ohio sends a number of valuable and interesting relics of the Mound Builders. These are from 100 mounds in Ohio and are 20,000 in number. Saginaw, Mich., has a miniature reproduction of a Salt plant.

The cottage in which George Fox, the founder of the Society of Friends or Quakers, was born, in Leicestershire, England, was brought over and appears on the Fair Grounds. A cast-iron slack trough which was captured by General Sam Houston from Santa Anna, at the battle of San Jacinto, has been sent from Texas. The old locomotive "Sansom," built in England in "the thirties" by the celebrated Timothy Hackworth and brought to this country in 1838, is shown in the Transportation Building.

When Columbus was made a prisoner in San Domingo, the governor who arrested him feared there might be an attempt at rescue. So he trained a big gun on the entrance of the citadel, or castle, in which Columbus was confined. That cannon laid in the same place until Mr. Ober, a World's Fair representative, recovered it, and with the permission of the Governor of San Domingo, brought it to the United States. It is on exhibition.

A very novel feature of the Historical Exhibit at the Exposition is a fac-

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TERRITORIAL.



MINNESOTA.

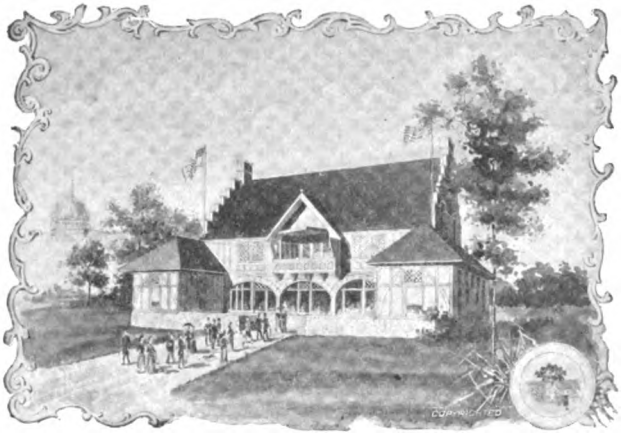


DELAWARE.

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NEW YORK



NORTH DAKOTA.

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simile reproduction of the little ship "Santa Maria," in which Columbus sailed. It is proposed that the vessel will be taken to Washington after the Exposition and there anchored in the park south of the White House. Shakspeare's historic home at Stratford-on-Avon is also reproduced here and is located on the space set apart for the British Government exhibit.

No side shows are permitted within the Exposition grounds. The Directory decided that the entrance fee shall entitle the visitor to see everything within the inclosure. There are, however, several theatres built and kept running, at which the finest talent in the world appears, and visitors who choose to attend the performances have to pay an admission fee. Such sights as "A Street in Cairo" is free, but natives of oriental countries in a few cases are allowed to charge a small fee to special performances of a theatrical nature.

A silversmith of Monterey, Mexico, sends a piece of silver which is an exact reproduction of the Agricultural building. It is eight feet wide, contains a quantity of silver valued as bullion at $10,000, and is valued at $20,000. A $10,000 model of a stamp mill for reducing copper, the property of the State Museum of Michigan, is shown at the Fair. This model was made and presented by the Calumet and Hecla Copper Company.

Some magnificent statues adorn the grounds. Notable among these is the statue of Franklin, at the main entrance to the Electricity building; the statue of Columbus, belonging to the city of Baltimore; and the statue of Columbus, by St. Gaudens, at the entrance to the Administration building. A colossal statue of the Republic rises from the basin in front of the Administration building. This is by Daniel C. French, of New York.

An immense wooden box, bound in iron, was recently found at Helsinfors, in Finland, by workmen engaged in excavating in the cellar of an old house. Upon opening the box the men found that it contained a large parchment and a quantity of pieces of iron of odd shapes. Being unable to make out the contents of the parchment, they carried it to Mr. Rizeff, the nearest magistrate, who found that it was written by Father Suger, one time minister to Louis VII., of France. It was an elaborately written treatise upon the use of steam as a motive power, and further examination revealed that the bits of iron were numbered parts of a rudimental but complete steam engine. The pioneer steam engine has been put together, and is exhibited.

The concession for the reproduction of "A Street in Cairo," was granted to George Panyolo, of Egypt. The space occupied is 600 by 300 feet. The location is the Midway Plaisance. The exhibition is open to visitors, free of cost, except upon occasions of a special street spectacle, as, for example, during the passing of the wedding procession, which will form one of the features of the display.

One of the most novel buildings at the Paris Exposition was the tea house erected by the Palais Indian Tea House Company, of London. This same concern has constructed on the Exposition grounds a series of tea houses which are finer than anything seen at Paris.

The leading theatrical managers of the country will probably erect a building in which theatrical and musical entertainments may be given during the progress of the Fair. An exact reproduction of the Tower of London, costing $250,000, will probably be one of the attractions of the Fair. The North Ameri-

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 ASHLAND BLOCK.

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can Turner Bund displays gymnastic apparatus, literature on the subject of physical exercises and development, and representations of gymnastic organizations. Eight days during each month of the Exposition the Turners give gymnastic exhibitions. The Washington Park Club perfected arrangements for a most notable race meeting during the Fair. The stakes in the American Derby are $50,000; in the "Queen Isabella" one mile for three-year-old fillies, $25,000: in the "Columbus Handicap" for three-year-olds upwards, $25,000; in a race for two-year-olds, $25,000; and large stakes are provided for a number of other races. The racing track is close by the World's Fair grounds.

Waukesha mineral water is furnished to consumers on the Exposition grounds at one cent per glass. Space of 8,000 square feet was granted the White Star Steamship Co., for an exhibition of models of the "Greyhounds" of its line. Similar exhibits are made by other ocean steamship lines. A Wild West Show will be given near the Exposition grounds daily, but it will have no connection with the Exposition. The location of the show is south of the Exposition grounds. One million signatures of people directly or indirectly connected with the Exposition are being collected by the World's Fair Mammoth Autograph Album Co. Copies of these collections of autographs will be bound in three volumes of 2,500 pages each, to be presented, respectively, to the President of the United States for the Smithsonian Institution, to the Governor of Illinois for the State Library, and to the Mayor of Chicago for the City Public Library. The names will be collected from all parts of the world.

FOREIGN EXHIBITS.—The civilized world, sections of the semi-civilized and many portions of the uncivilized, are represented at the World's Columbian Exposition. The Chicago World's Fair of 1893 has a stronger claim upon the term Universal than any of its predecessors. For the first time in history the great nations of Europe are able to exhibit their progress in science, art, and industry, on what may be justly termed neutral ground. The political and social rivalry which has ever been a menace to different nations in international expositions heretofore, finds no place here. While the United States comes into competition with all nations, in every department of human activity, the narrow environments and prejudices which exist abroad are unknown here, and every nation is certain to be treated fairly, impartially and justly, not only in the allotment of position and space, but in the distribution of honors. The foreign department of the Exposition, from the beginning, has been intelligently and wisely managed. The sending of a commission into the countries of Europe in 1891 was the most politic and judicious step that could have been taken. The effect of their mission was felt almost immediately. Europe was awakened to a sense of the importance and magnitude of the World's Fair, and upon the return of the commission two of the greatest empires on earth—England and Germany—sent representatives to inquire further into the status of the enterprise and to report to their respective governments the result. The reports of Sir Henry Wood and James

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Dredge, on the part of England, and of Herr Wermuth, on the part of Germany, as well as the active interest these envoys have since taken in the success of the Exposition, are fresh in the minds of the public. Not only has their friendship and enthusiasm interested the exhibitors of the two empires named, but they have stimulated every European nation, many of which, for a time, at least, were inclined to be apathetic. The visit of the ambassadors of foreign nations accredited to Washington in 1891 also served to enlighten the Old World as to the magnitude of the preparations being made here. Later on, the sending of additional commissioners—notably the departure of Mr. H. N. Higginbotham and T. B. Bryan for southern Europe—served to renew the interest of foreign nations in the World's Fair.

The organization of a Latin-American Commission likewise resulted in bringing the Spanish-American republics into line, and the exhibits made by our neighbors on this continent demonstrate how well the bureau having this department in charge has been conducted by Mr. W. B. Curtis. Finally the appointment of Walker Fearn as chief of the foreign exhibits department gave an impulse to this branch of the executive service of the Exposition, the favorable effects of which have continued to be felt up to the present time. The passage of the McKinley bill by Congress for a time had a depressing effect upon the prospects of the Exposition. Foreign manufacturers were inclined to hold aloof, in the hope, perhaps, that by so doing the government might be influenced in the direction of more liberal customs laws; but as our system of government can not be thus influenced, and as foreign governments and foreign manufacturers began to realize that outside pressure of this kind would probably have an effect quite contrary to that which was desired, they gradually accepted the situation and set about making the best of it.

It has been decided that agents in this country of articles manufactured in foreign countries cannot have the same entered for exhibition as American products. Although the capital of residents of the United States may be employed in the manufacture of such goods, the exhibits will have to be entered as foreign ones and space be assigned for them by the World's Fair Commission of the country in which the articles are produced.

The following are the nations and colonies represented at the World's Columbian Exposition, with all information concerning their respective exhibits in possession of the Exposition management:

ALGIERS.—The Governor of Algiers has taken a deep interest in the Exposition. It was the wish of exhibitors in that colony to have a distinct sub-section of the French exhibit. The Algiers display is novel and brilliant. It may be seen in the French section.

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FIRST NATIONAL BANK.

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ARGENTINE REPUBLIC.—The President of the Argentine Republic appointed a World's Fair Commission early in 1891, and no time was lost in collecting and forwarding exhibits. The sum of $100,000 was placed at the disposal of the commission and visitors can readily see how judiciously this sum was expended. The Argentine display is a handsome one.

AUSTRALIA.—Australia is one of the most important exhibitors at the World's Fair. Not less than 1,000,000 feet of space were demanded by her exhibitors, and this was placed at their disposal. New South Wales took a lively interest in the Exposition from the first, as did New Zealand and Queensland. The merchants and manufacturers of Sydney and Melbourne were enthusiastic, and the public of Australia in general determined upon making a display which should attract the attention of the world to the progress the great island is making.

AUSTRIA.—The Austro-Hungarian Empire was a little late in responding to the President's invitation, but finally decided to participate, although not officially. The premier notified the U. S. minister that the Empire would give its utmost support to anything that private parties might do toward making an exhibit. Private interests at once took up the matter, and the exhibits from Austria and Hungary in the several departments of the Exposition are fully up to the standard established by the great powers of Europe. As a strong evidence of her friendship, Austria postponed the International Art Jubilee, which was to occur in 1893, until 1894, so that it should not interfere with the World's Fair.

BELGIUM.—Belgium from the first displayed the greatest interest in the World's Fair, and determined upon taking an active and conspicuous part in the Exposition. She made a grant of 600,000 francs, and has sent an art exhibit much more extensive than that displayed at the last Paris Exposition. Belgium is represented in all the leading departments. A supplementary grant of 300,000 francs was made to aid the private exhibitors.

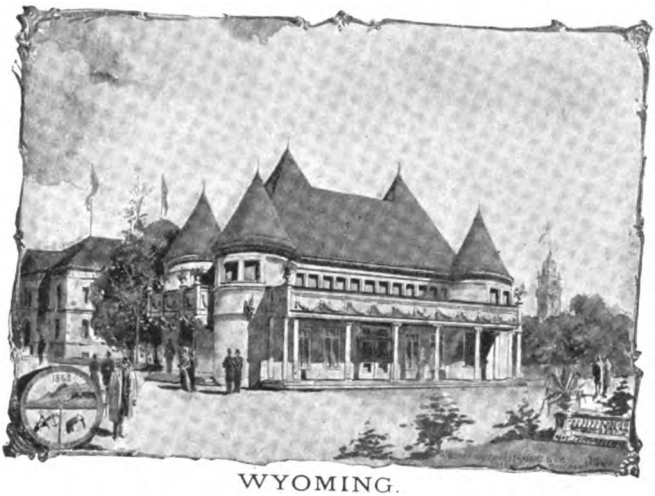
BOLIVIA.—Bolivia has an excellent exhibit. It is among the best from the Latin-American Republics. Bolivia's appropriation for the Fair was $150,000.

BRAZIL.—The government of Brazil makes a magnificent display. The cost of the exhibit was over half a million dollars. The Brazil building is in itself a leading attraction. In addition to the $550,000 appropriated by the Federal government of Brazil, $250,000 were appropriated by the different states of the Republic. Brazil's exhibits will be found in the art, agricultural, forestry, horticultural, floricultural and other departments, and always occupying a conspicuous and creditable position.

BRITISH COLUMBIA.—British Columbia is represented by a building which is a novelty in architecture, composed of every variety of wood known to the British Columbia forests. British Columbia is represented in nearly all of the principal departments.

BRITISH GUIANA.—British Guiana appropriated $20,000 for an exhibit and appointed a commission to collect and display the same. A space of 60x30 feet is allotted to the exhibit from this colony, close to the exhibit and building of the Dominion of Canada. The location was chosen by British Guiana so as to afford an opportunity for contrasting its exhibits with those of other British

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WYOMING.

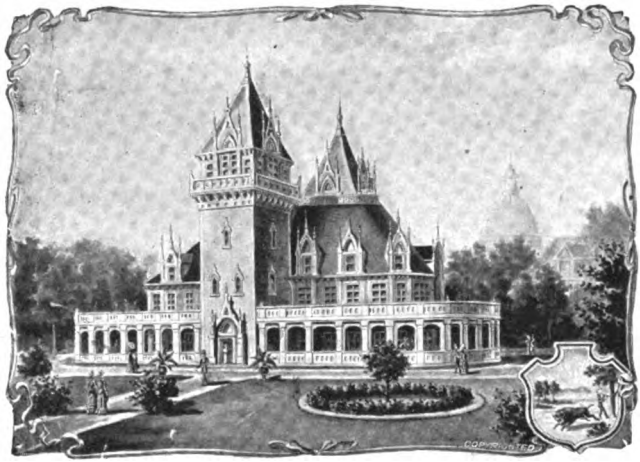


COLORADO.



LOUISIANA.

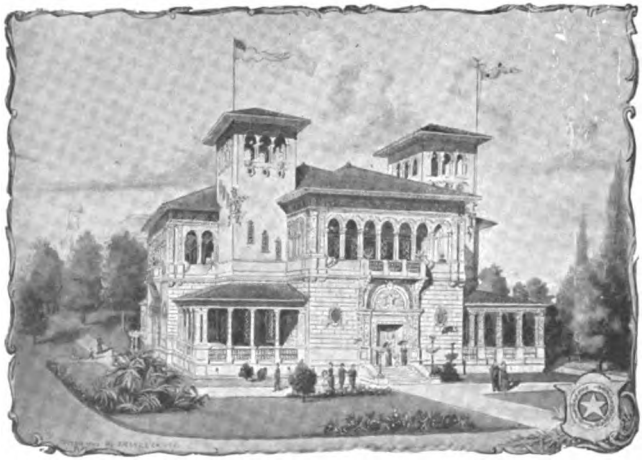
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INDIANA.



OHIO.



TEXAS.

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American colonies. A local exhibition of the resources of British Guiana was held previous to the shipment of the exhibits to this country, so that the choicest might be selected.

BRITISH HONDURAS.—This colony makes an excellent exhibit, consisting principally of woods, plants, fruits, tropical flowers, native minerals, etc.

BRITISH WEST INDIA.—The display made by British India in various departments and sections is an interesting one. Exhibits from Burmah are particularly attractive. The commissioner for British West Indies was granted 25,000 square feet of space. Much of the exhibit from these colonies consist of tropical plants, etc., which are to be seen in the horticultural department.

BULGARIA.—Bulgaria has a surprisingly fine art and industrial display. The kingdom is represented worthily for the first time at an International Exposition.

CANADA.—Canada early in 1892 asked for 96,000 square feet of space, but this did not represent the total space desired. In the fine arts and fisheries annexes additional room was necessary. Canada was granted in all about 100,000 square feet.

CEYLON.—Ceylon has a special building on the grounds. Among the attractions of its display is a large tea house.

CHILE.—The position of Chile as to its participation in the World's Columbian Exposition long remained in doubt. The impoverished condition of the country, and the stagnation of its trade due to the recent revolution, compelled the government to abandon its original design of appropriating $100,000 to defray the expenses of an exhibit, but it is believed she will be creditably represented.

CHINA.—Owing to certain diplomatic troubles between the United States and China, caused by the exclusion of Chinese immigrants, it was doubted for some time whether China would participate in any way in the Exposition. But the government of the Empire, while giving no official countenance to the Exposition, it was understood, would assist private exhibitors substantially. Later on it was announced that China would subscribe $200,000 and $50,000 to defray the expenses of a private exhibit. The Chinese government authorized Tao Tai, the representative of the custom service at Shanghai, to remove all export duties on exhibits intended for the World's Fair. Later still the Chinese government announced through its minister at Washington that its Embassy to this country would eventually be made a commission to represent China at the World's Fair and see that the rights of its citizens were thoroughly protected. The general indications are that China will be represented in many of the important departments of the Exposition and will probably erect a building on the grounds.

COLOMBIA.—Colombia's display is particularly attractive. Its building is modeled after the capitol at Bogota. The exterior is in imitation of the sandstone of which the capitol is built, while the interior is finished in the valuable hardwoods of the country, comprising more than a hundred varieties.

COSTA RICA.—Among the first exhibits received in Chicago for the World's Fair of 1893, were ten cases of curios and antiques collected in Costa Rica by the Latin-American bureau. Lieut. Scriven was specially detailed to make the

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collection. It was valued at $500. This little Republic appropriated $50,000 to defray the expenses of her display. Her exhibits are to be found in nearly every one of the principal departments.

CUBA.—The exhibit from Cuba is principally remarkable for the wonderful floral and horticultural specimens which it includes. These are to be found in the proper departments. Cuba also contributes to other departments of the Exposition, particularly to the manufactures, where her display of tobaccos and cigars will attract general attention.

DENMARK.—The Danish exhibit comprises contributions to nearly all departments, and particularly to those of fine arts, agriculture and manufactures. The sum of $55,000 was set apart by Denmark in order to show as a leading feature of its exhibit a Danish dairy complete and in full operation.

DUTCH WEST INDIES.—The Dutch colonies of the West Indies, composed of the Islands of Curacoa, St. Martins, Bonaire, Aruba, St. Eustache and Saba, are represented by special exhibits in several departments.

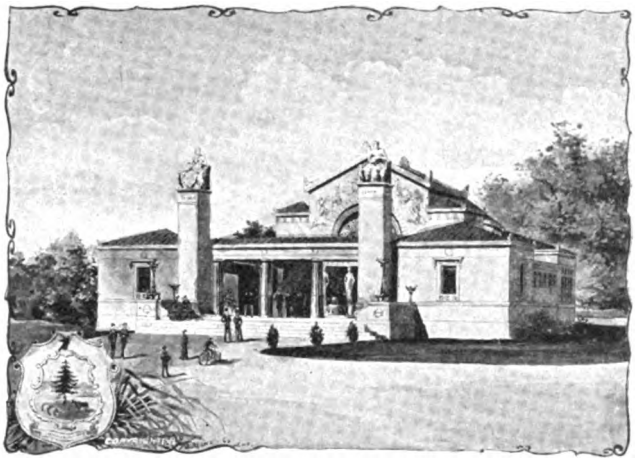
ECUADOR.—The President of Ecuador early in 1892 decreed that the Governor of each state of the Republic should collect and forward to Quito exhibits of all kinds illustrating the riches and the productions of the country. The Consul-General of the United States in Quito directed the Consuls and Vice-Consuls and Consular Agents at different points in Ecuador to assist the Governors of states in every way possible in the collection of articles relating to commerce with exterior countries. The best of these exhibits so collected and exhibited in Quito during the National Exposition held there in 1892, were forwarded to Chicago. The President of Ecuador also named Commissioners to Chicago, and a sufficient sum was appropriated to meet the expenses. The state of Esmeralda makes a special exhibit of gold and gold ores from the mines of Ibarra, rubber, and other lowland products. The department of Guayaquil also has a special exhibit. Ecuador has her own building on the grounds. Ecuador is represented in many of the leading departments.

ENGLAND.—England made application for 200,000 square feet of floor space for exhibits, or nearly five square miles. This was equal to the space asked for by Germany, and indicated at an early day the international character of the Exposition. The exhibits from England are on a greater and grander scale than were ever seen before outside of London Expositions. England contributes to every department of the Fair. It is unsettled, at this date, whether the Irish exhibit shall be included in England's. The Scotch exhibit certainly will. Both of these kingdoms contribute very creditable displays.

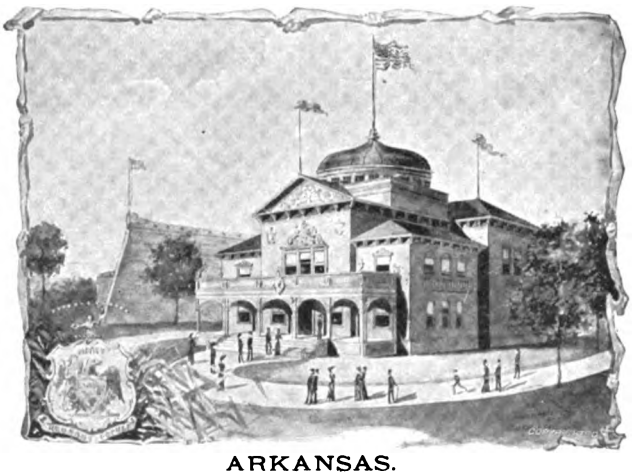
FRANCE.—France asked for 25,000 square feet of space for its picture exhibits alone. The leading men of France became interested in the Columbian Exposition early in 1892, and from that time on the collections made in France and forwarded to this country gave every assurance that France would maintain her pre-eminent position among the industrial nations of the world. France occupies 100,000 square feet in the manufactures, 10,000 in the machinery, and 10,000 in the live stock departments. The first appropriation made by France for the expenses of the exhibit amounted to 3,250,000 francs, or about $650,000.

GERMANY.—The demand of Germany for 200,000 square feet of floor space early in 1892 indicated pretty clearly the intentions of that empire with regard

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VERMONT.



ARKANSAS.

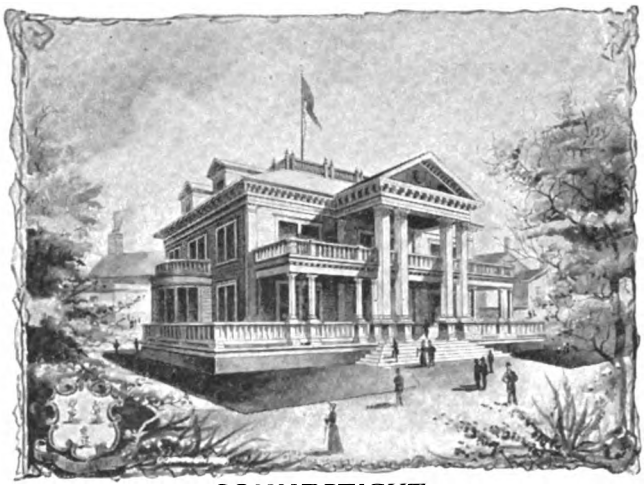


MISSOURI.

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MICHIGAN.



CONNECTICUT.



UTAH.

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to the Columbian Exposition. The interest of the people of Berlin, Dresden, Leipsig, Stuttgart, Nuremburg, Hamburg, and, in fact, of all the leading commercial, manufacturing, art and educational centers of Germany, has been centered in the Columbian Exposition for over two years. The first appropriation made by the German government to defray the expenses of its exhibit amounted to 900,000 marks. This, however, was quickly swallowed up, and large additional appropriations became necessary.

GREECE.—The financial situation in Greece prevented that kingdom from doing what it would have liked to do in the way of sending an art exhibit to the Columbian Exposition. It proposed a display of casts and models of the Greek art schools, the value of which, it is said, can scarcely be overestimated, and asked that the Columbian Exposition Company pay a sum ranging between $20,000 and $200,000 for this proposed exhibit. This proposition is referred to under the head of Art department.

GUATEMALA.—Guatemala started out by appropriating $100,000 in gold to defray the expenses of its exhibit at Chicago. Later on an appropriation of $20,000 was added to pay for the erection of a suitable building to be used as headquarters for this republic. The greatest interest in the Exposition was manifested in Guatemala from the first. This country contributes its national band to the Exposition. It will perform daily. This band is the third largest in the world, that of Austria being first and the Mexican National Band being second. It is composed of 200 performers.

HAYTI.—The congress of Hayti appropriated $25,000 for its exhibits. Frederic Douglas, the celebrated American negro, is in charge of the Haytian display, which is a very creditable one.

HOLLAND.—The Netherlands not only contribute one of the finest collections of paintings from the Dutch masters, but are represented in the Liberal Arts and Mechanical departments quite fully. Some of the most unique and interesting exhibits displayed at the Exposition came from Holland.

HONDURAS.—The exhibits of Honduras are very attractive and interesting. One of the measures adopted in that country for raising the necessary funds was the establishment of a national lottery. The exhibits forwarded are classified under the heads Minerals, Wood, Agriculture, Drugs, Animal Kingdom, Ethnology, Industries and General Information, and include a geological collection showing the mineral wealth of Honduras in building stone as well as in such semi-precious stones as opals, etc.

INDIA.—No money was appropriated by the Indian government, but the viceroy declared he would encourage private exhibitors in every way possible. Indian exhibits began to arrive early in 1892. Several Indian princes will attend the Exposition.

IRELAND.—An effort was made by the Irish members of Parliament to separate the Irish from the British exhibit, and to secure an independent subsidy from the crown. Before this question was determined the Countess of Aberdeen, a patriotic Irish lady, took the matter of collecting an exhibit of Irish industries in hand, and raised between $15,000 and $20,000 in this country, her object being to have an independent room in the Women's building.

ITALY.—The United States was not on amicable diplomatic terms with

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Italy in 1891, and there was no resumption of relations until late in 1892. This was the result of the Italian massacre in New Orleans. Accordingly it was feared that Italy would take no part in the Exposition. Commissioners Higginbotham and Bryan visited southern Europe in 1892 and paid particular attention to Italy. Before they returned an *entente cordiale* was established, and they brought back assurances that Italy would do her part toward giving an international complexion to the World's Fair. The king has officially recognized the Exposition by the appointment of a World's Fair Commission. Although no appropriation will be made, the government will in all probability transport Italian exhibits without cost to exhibitors.

JAPAN.—Japan leads all foreign countries in the amount of its appropriation for the World's Fair. The empire of the Mikado was willing to spend more money in making an exhibit in 1893 than many of the countries of Europe, so far as their appropriations were first reported. Exposition officials were both surprised and pleased to receive authoritative information that the Japanese Parliament had set aside $630,765 for a display at the Fair. It is thorough and shows everything of interest which the ingenious people of Japan manufacture or otherwise produce. In appropriating the money the Parliament took occasion to authorize its expenditure as follows: During the year 1891, $51,495; 1892, $313,098; 1893, $241,536; 1894, $24,636. Japan made a novel proposition for the consideration of the World's Fair management. It offered, if a suitable location should be granted, to reproduce a building of the most ancient style of architecture of Japan, and make to the city of Chicago a gift of the structure at the close of the World's Fair. The offer to do this came from the Japanese government. The estimated cost, including the elaboration of the gardens about it, was figured at $100,000. This edifice, with all its surroundings, will be tendered to the city of Chicago as a permanent monument of Japanese architecture and landscape gardening.

Japan was given 40,000 square feet for the purpose indicated in the north end of the wooded island. In addition to this Japan consumes over 90,000 square feet; in the Manufactures building, 35,000; Agricultural building, 4,000; Fine Arts, 2,000; Mines and Mining, 750; Forestry, 350; Bazaars, 42,000.

Japan makes a magnificent display in all of the principal buildings, and has a Japanese tea house on the lake front and a bazaar on the Midway Plaisance.

MADEIRA.—The Governor of Madeira accepted the invitation to participate in the Exposition early in 1892, and the work of collecting an exhibit began at once. The display made by this province is worthy of attention. There are numerous Columbus relics in the exhibit.

MEXICO.—The nearest Republican neighbor of the United States makes one of the most prominent as well as one of the handsomest displays in each of the great departments of the Exposition. It was announced quite early that $2,000,000 would be expended upon the exhibit of this Republic, and the fact that the first appropriation amounted to $750,000, which was intended merely to be preliminary, justified this prediction.

The Mexican exhibits are to be seen in nearly every department of the Exposition. The floral display of the Republic is one of the handsomest to be seen in the Horticultural Building.

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MOROCCO.—The Moorish minister of foreign affairs communicated with the United States Consul at Tangier immediately on receipt of the invitation to participate in the Exposition and asked that space be reserved for Morocco. Hassan Ben Ali took charge of the exhibit. Morocco makes a very interesting showing in the transportation department, where some horses, saddles, and other equestrian equipments from that country are displayed.

NEWFOUNDLAND.—The colony of Newfoundland participates in the Exposition and makes an independent display close to that of the Dominion and other English colonies. It is also represented largely in the fisheries department.

NICARAGUA.—Nicaragua set aside $30,000 for her display at the Exposition. It is the best exhibit the country has ever made. Senor Don Sallaverri, who had charge of Nicaragua's exhibit at Paris, arranged the country's display here.

NORWAY AND SWEDEN.—The amount raised in Norway and Sweden, including government and private subscriptions towards defraying the expenses of the exhibit, was about $150,000. It is understood that Norway and Sweden will each have a building on the grounds.

PANAMA.—The little government of Panama is well represented in the different departments, especially in that of horticulture. The marble slab presented by the Empress Josephine to Panama, and many other novel and curious articles are exhibited.

PARAGUAY.—The government of Paraguay very speedily accepted the invitation to participate, and the president of the republic was authorized to use whatever public funds he deemed necessary to enable Paraguay to make a proper exhibit. The republic makes an excellent display.

PERSIA.—The government of Persia as a first evidence of friendship toward the Exposition lifted the export duty on all goods sent to the World's Fair and all goods which might be purchased and returned to that country by visitors to the Exposition. This was looked upon at the time as a most liberal concession. The most important portion of the Persian exhibit is to be seen in the Manufactures Building, where there is a magnificent display of carpets, rugs, shawls and fabrics from that country. Ivories, curios and contributions to the art and other departments are also numerous. The representative of the Shah of Persia is M. E. Spencer Pratt, formerly United States Minister to Persia.

PERU.—The exhibit made by Peru is certainly equal to that made by any of the Latin-American republics, with the exception, perhaps, of Mexico and Brazil. A national exposition was held at Lima in May, 1892. This was known as a "Congress of Producers." The exhibition continued several months, and when it closed the entire exhibits were shipped to Chicago. The first appropriation made by Peru amounted to $25,000.

RUSSIA.—Although one of the most dreadful famines of recent years prevailed throughout the Empire during the greater part of 1892, the interest of the Russian Government and people in the Columbian Exposition was not permitted to languish. The Imperial Government appointed a commission of which the famous Count Tolstoi, the novelist and statesman, was a member, and the work of preparation, though hindered by the depressed financial condition of the Empire, went steadily on. The Russian Government undertook to bear

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all expenses for transportation and insurance of private exhibits. Every exhibitor, whether from European or Asiatic Russia, who had goods of historic, artistic or economic value to offer worthy of a place in the Exposition was encouraged to send them. Russia is represented in every one of the leading departments in a manner befitting the greatness of the Empire.

ROUMANIA.—Roumania contributes exhibits to the Art and several other departments. Her display is in every way more prominent than at the last Paris Exposition.

SAN DOMINGO.—Many interesting relics from this island are on exhibition. The most valuable and the most interesting perhaps is the first church bell that ever rang out in the New World. It was presented to the colonists of the first settlement of San Domingo by Queen Isabella in appreciation of the fact that the first settlement bore her name. There is also an exact reproduction of the cross which Columbus raised immediately upon landing. The material of the cross is the same exactly as that which Columbus nailed up, having been taken from the wood of a building erected in 1509. There are also in this collection fac-similes of the doors which close the cells in which the bones of Columbus repose. The collection of relics is very extensive and is contained in a building erected for this special purpose.

SANDWICH ISLANDS.—A separate building is devoted to exhibits of the government of Hawaii. The collection in the department of agriculture, from these islands, include rice, arrowroot, sugar cane, sugar models and machinery for making sugar, photographs of mills, coffee in the berry, in the shell, cleaned and growing. In the forestry department are shown trees of every description and in the horticultural department a great variety of fruit. In the floricultural department many beautiful palms are exhibited, and in the department of viticulture will be found a display of grapes, preserved fruits of every description, dried or in alcohol or in syrups. The Islands are also represented by fish, fish products and manufactures, including gold ornaments, palm leaf, bamboo, feather work, artificial flowers, seed work, etc.

SERVIA.—The kingdom of Servia sends a large and interesting display, a great portion of which was taken from the government museums and stores, and of articles such as ancient armor, tapestries.

SIAM.—The kingdom of Siam charged the commissioner of agriculture to charter one or more vessels and load them with the products of the farms, mines, forests and manufactories of that country and ship them to Chicago. The exhibit which is made here eclipses that made at the Paris Exposition, where it carried off the honors of the Oriental section.

SOUTH AFRICA.—The exhibits from South Africa include those of the British colonies, Orange Free States and other settlements. These are scattered through the various departments of the Exposition. Cape Colony alone appropriated $25,000, and the De Beers Company a like amount. Zanzibar exhibits among other things a score of pigmies from the east coast of Africa.

SOUTH AMERICA.—The exhibits from South America include those from all of the so-called Latin-American republics, and are referred to here under the headings of the different countries represented. In the spring of 1892 commissioners had been appointed and appropriations made to pay the expenses of rep-

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BRITISH.



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resentation of the South American republics which exceeded in the aggregate the sum of $2,000,000 more than had been provided up to that time by the United States, with Illinois excepted.

SOUTH SEA ISLANDS.—The South Sea Islands are represented at the Exposition. The nature of their display was not known to the Exposition management when this book went to press.

SPAIN.—It is but natural that Spain should have taken more than an ordinary interest in the World's Columbian Exposition, designed as it is to celebrate the most glorious achievement in the history of that nation—the discovery of America. For many reasons, however, but principally because the financial situation in Spain is depressed, the display made by that country does not compare favorably with that by other European nations. Spain is represented in nearly all of the principal departments. The Queen Regent of Spain sends a portrait of the youthful king. Many of the jewels and other possessions of Ferdinand and Isabella are exhibited in the Spanish collection.

SWITZERLAND.—There was considerable feeling manifested in Switzerland against the United States and the World's Fair, owing to the passage of the McKinley bill, which it was claimed would have the effect of depressing the trade of that country. Besides it was held that to exhibit the expensive and complicated pattern of embroideries would result in having the trade of Swiss manufacturers injured by cheap imitations, as had been the case at Paris. The sentiment in Switzerland, however, underwent a very decided change upon the arrival of the Columbian Commission. The importance of the World's Fair, and the gigantic nature of the enterprise having been laid before them, the manufacturers quickly decided to make an exhibit, and the government was called upon to make a suitable grant. Among the attractions of the Swiss exhibit is a magnificent display made by the watchmakers of that country. Switzerland is represented in nearly every department of the Exposition.

TRINIDAD.—Trinidad was the thirty-first nation to accept an invitation to participate in the Columbian Exposition. The display made by this little country is very interesting and creditable.

TURKEY.—Enthusiasm for the World's Columbian Exposition and material assistance in making it an international affair, strangely enough came at the beginning from nations that were not expected to participate to any great extent. This fact was particularly exemplified in the cases of Japan and Turkey. The Turkish flag was the first foreign flag hoisted at the World's Fair grounds. This event occurred on September 20, 1891, with appropriate ceremonies. The flag was raised on the site which Robert Levy, of Constantinople, secured for his Turkish specialties. The Sultan took a great personal interest in the Exposition, and gave orders concerning certain exhibits which make a showing of Turkish progress in science and education. He officially signified his consent to the erection of a mosque, to be used by Mussulmans for religious services during the Exposition. The supervision of the construction of the mosque was committed to the imperial Turkish commissioner and cost $3,000. The merchants of Smyrna occupy about 1,000 square feet of space in an exhibit of the finest Turkish rugs and carpets. Turkey is represented in nearly every one of the leading departments. The Turkish commissioner is Hakki

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Bey, translator at the imperial palace, and Fahni Bey, of the general post-office, is sub-commissioner. In addition to these, other representatives of the Turkish government and Imperial Palace are daily on the grounds.

URUGUAY.—The display of the government of Uruguay is in charge of the rural association, and is one of the most interesting to be seen. The Rural Association of Paraguay is an important national organization, and has spared no pains or expense in making the exhibit creditable. This association managed the Uruguay display at Paris. The republic is well represented in the agriculture, live-stock and educational departments.

DEDICATION DAY PROGRAMME.—The dedication of the World's Columbian Exposition took place October 21, 1892. The programme agreed upon for the first three days devoted to the festivities was as follows:

1. March for orchestra. Written for the occasion by John K. Payne.
2. Prayer by the Rt. Rev. Bishop Brooks, of Massachusetts.
3. Report of the World's Columbian Commission by the Director-General.
4. Presentation of the buildings, for dedication, by the President of the World's Fair Columbian Exposition to the President of the World's Columbian Commission.
5. Chorus, "The Heavens Are Telling"—Haydn.
6. Presentation of the buildings, for dedication, by the President of World's Columbian Commission to the President of the United States.
7. March and chorus from "The Ruins of Athens"—Beethoven.
8. Dedication of the buildings by the President of the United States.
9. Hallelujah chorus from the Messiah—Handel.
10. Dedicatory Oration by the Hon. William C. P. Breckinridge, of Kentucky.
11. Dedicatory Ode. Words by Miss Harriet Monroe; music by E. A. McDowell.
12. "Star-Spangled-Banner" and "America," with full chorus and orchestral accompaniment.
13. National salute.

DEDICATION OF THE BUILDINGS, ETC.—In the dedicatory exercises on the 12th, the completed buildings were tendered by the President of the Exposition to the National Commission. President T. W. Palmer accepted them on behalf of that body and at once presented them to the President of the United States, who fittingly responded. The dedicatory oration followed. Much attention was given to the musical portion of the programme. This included the dedicatory ode and orchestra marches written for the occasion. These and other numbers, including "America" and "Star-Spangled Banner," were rendered with full choral and orchestral accompaniment.

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In April, 1893, a grand international naval review, preliminary to the opening of the Exposition, as provided for by Act of Congress, will be held in New York harbor.

FIRE WORKS.—For a consideration of $25,000 Mr. James Payn, of London, gave a display of fire-works at the dedicatory ceremonies, that excelled in magnificence anything of the kind ever attempted. There were three displays on as many nights. The first night's programme included a salute of 100 aerial maroons, four and one-half inches in diameter, fired from iron mortars. Following this was a grand device, representing Chicago's welcome to all the nations of the earth. Then came Columbus and his departure from Spain, and a floating star-spangled banner, which remained in the air for hours.

On the second night a grand device in honor of the army and navy was given. A scene from the battle of Lake Erie was selected. After this was shown a prismatic fountain, a reproduction of the Capitol at Washington and many other equally striking and beautiful pictures.

On the third night was shown a reproduction of the facade of the Administration building and devices showing the portraits of the Exposition officials.

The grand display was closed with an illumination of the entire Lake Front from Van Buren Street to Jackson Park, together with the lagoons and the canal with a crowning device representing the Goddess of Peace surrounded by Science, Art and Literature, with glimpses of the Brooklyn bridge, the Eiffel Tower and other famous structures.

MILITARY DISPLAY.—Fifteen thousand troops at least, with all the crack artillery companies in the country, were present for the week of the World's Fair dedicatory ceremonies. The display of troops was particularly impressive, and there was the greatest display of artillery here ever brought together in one place in the United States si ice the close of the Civil War. Ohio sent 1,000 men, Indiana 500, Illinois 3,000, Missouri 500, Iowa 500, Minnesota 500, Wisconsin 1,000, Michigan 1,000. This makes atotal of 8,500 troops specially invited. In addition there were 5,000 regulars of the United States army.

The encampment lasted from Oct. 11 to Oct. 14 inclusive. The Exposition management furnished quarters and subsistence during the encampment. Beyond the number of men of the National Guard of the United States army indicated, the Governors of many of the States were accompanied by their guards.

The entire cost of the encampment is estimated at $30,000. The reasons for inviting the Governors of the States adjoining or near to Illinois to send the specified allotment of troops was because of their proximity. In the summer of 1893 there will be another encampment,

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when it is expected that troops from a distance will be present. Gen. Nelson A. Miles will have charge of the military display.

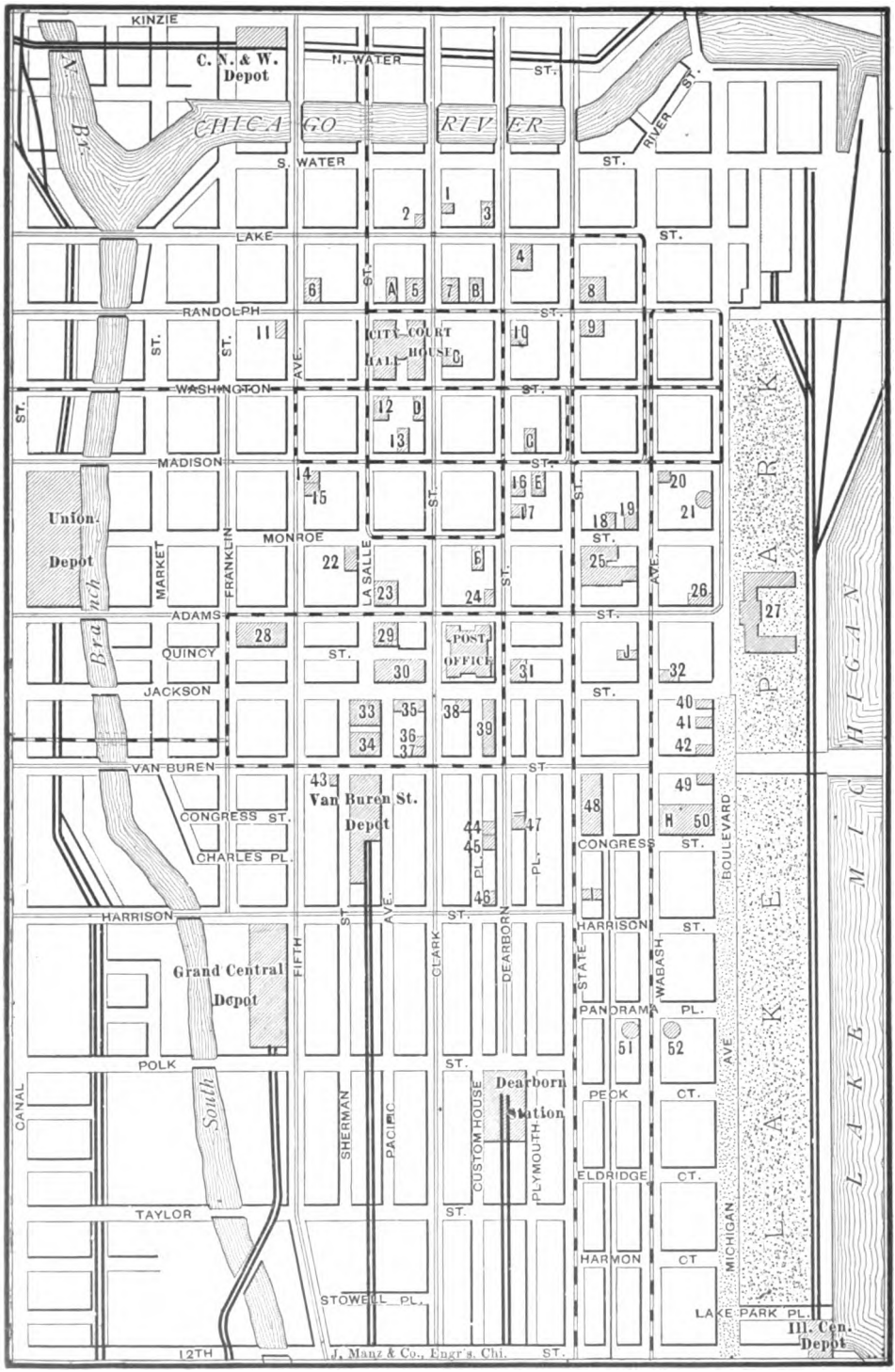
PROCESSION OF CENTURIES.—After months of deliberation the joint committee representing the National Commission and Board of Directors adopted twenty-four floats, which formed the procession of centuries. These floats were drawn around through the canals and lagoons of Jackson Park on dedication night. They were built at an average expense of $3,800 each, or a total cost of $91,200. Following is the list of floats:

1. The Stone Age; representing the cliff-dwellers and the Toltecs.
2. The Bronze Age; representing the Aztecs and the mound-builders.
3. The Aboriginal Age; representing the American Indians.
4. Columbus at the Court of Ferdinand and Isabella.
5. Departure of Columbus from Palos.
6. The discovery of America.
7. Columbus before the Court of Ferdinand and Isabella presenting natives and the strange products of the new country.
8. English Cavaliers and the Settlement of Jamestown.
9. Hendrick Hudson; Discovery of the Hudson river; Dutch Settlement at New Amsterdam.
10. Landing of the Pilgrams.
11. Illustration of early Puritan Life.
12. Ferdinand de Soto; Discovery of the Mississippi.
13. Père Marquette, Chevalier La Salle, and the Northwest.
14. Washington and his Generals.
15. Signing the Declaration of Independence.
16. Union of the Colonies; the thirteen original States; the sisterhood of the great Republic; welcoming the Territories to the constellation of States.
17. "Westward the course of empire takes its way."
18. The genius of invention; application of steam, etc.
19. Electricity and electric appliances.
20. War; representing valor, sacrifice, power, death, devastation.
21. Peace; representing tranquillity, security, prosperity, happiness.
22. Agriculture.
23. Science, art and literature.
24. Universal freedom of man; equal rights; law and justice; liberty enlightening the world.

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PART V.

THE COLUMBIAN EXPOSITION.

THE Columbian Exposition, the thirteenth and greatest of World's Fairs, was opened May 1, by President Cleveland, in the presence of members of his cabinet, officials of the various States, distinguished representatives of foreign countries and a great throng of American citizens. The attendance was estimated by D. H. Burnham, director of works, at 300,000 persons.

The morning opened misty, but the sky brightened as the day advanced, and the necessity for holding the services indoors was averted. As the exercises progressed the sun shone forth in full splendor, and the long spell of bad weather was over. The mud was so plentiful that the hundreds of planks laid over the roadway had little effect.

The President received the foreign commissioners and visited several of the buildings. He left for Washington at 5 o'clock in the evening.

The Woman's Building was opened with impressive ceremonies. Mrs. Potter Palmer and the Dutchess of Aberdeen made speeches.

The Missouri and Iowa State buildings were also dedicated.

A STATELY PROCESSION.

The procession of officials and invited guests to the grounds, escorted by military, was an imposing one. National Commissioners P. A. B. Widener, of Pennsylvania, and Bradley B. Smalley, of Vermont, with Directors Thomas B. Ryan and James W. Ellsworth for company, occupied the first carriage. In the second carriage were Commissioners Gorton W. Allen and Geo. H. Barbour, Directors Chas. Henrotin and Wm. B. Kerfoot. Next to them rode Commissioners V. D. Groner, of Virginia, and James Hodges, of Maryland, and Directors Ketcham and Lawrence. The fourth and fifth carriages were also jointly occupied by commissioners and local directors, while

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in the sixth were Director-General and Director of Works George R. Davis and D. H. Burnham.

President Cleveland and Presidents T. W. Palmer, of the World's Columbian Commission, and H. N. Higginbotham, of the World's Columbian Exposition, were in the seventh carriage. Vice-President Stevenson rode with two World's Fair ex-presidents, Lyman G. Gage and William T. Baker; Secretary Gresham rode with National Commissioner Davidson B. Penn; Secretary Carlisle with George V. Massey, of Delaware; Secretary Herbert with Charles H. Schwab; Secretary Hoke Smith with Commissioner J. W. St. Clair, of West Virginia, and Secretary Morton with Director H. B. Stone.

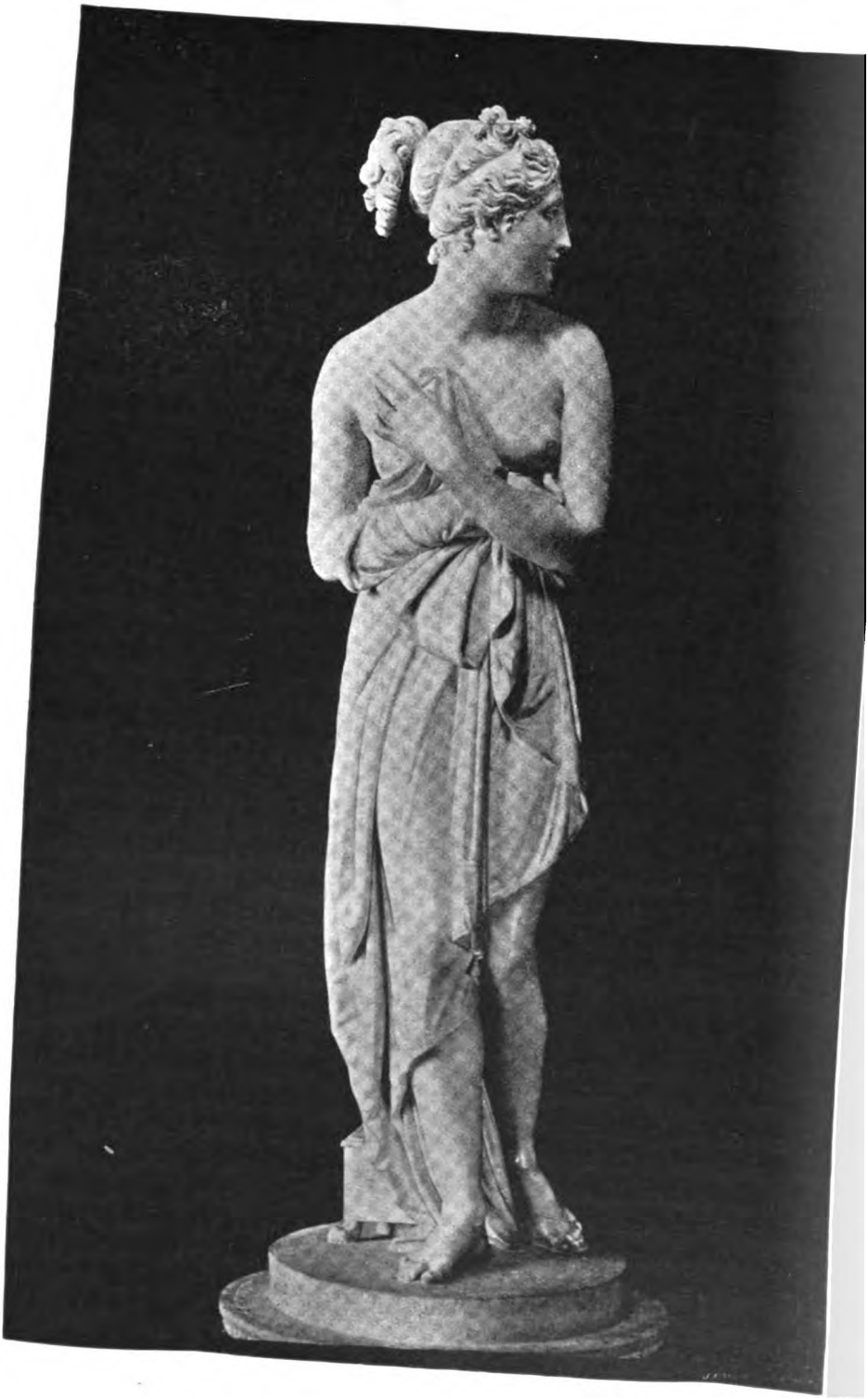
The foreign division was headed by the Duke of Veragua; the first vice-president of the commission, ex-Governor Waller, of Connecticut; the first vice-president of the exposition, Ferd. W. Peck, and Commander Dickens, of the United States Army. The Dutchess of Veragua was escorted by Mrs. Potter Palmer, president of the board of lady managers, and by Mrs. Commander Dickens. The ducal party was succeeded by carriages occupied by Ambassador to England Thomas F. Bayard and ex-Minister to Belgium Lambert Tree, Major-General Miles and aides, Admiral Gherardi and aides and Governor Altgeld. The carriage of Mayor Harrison, who was accompanied by three members of the board of aldermen, brought up the extreme rear.

CEREMONIES IN THE PARK.

The ceremonies took place on a stand in front of the Administration Building, commanding a view of the grand basin crowded with gondolas and steam launches loaded down with spectators. In the foreground, over the heads of the people, could be seen the imposing McMonnie's fountain, typifying old Father Time steering his craft with a scythe. Far in the distance loomed up the colossal gold statue of the Republic, and beyond it again the inspiring peristyle crowned by the Columbian arch and the heroic figures of the Quadriga, and near them the imposing facades of the Casino and Music Hall. Immediately on the right were the buildings devoted to agriculture and machinery; on the left the colossal structures dedicated to manufactures and electricity.

From the centre of the platform proper there radiated a special stand, and upon this were chairs for President Cleveland, Vice-President Stevenson, the Duke of Veragua and his party, and the higher

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VENUS.

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national and local officers of the Fair. Immediately in the rear were the sections assigned to the members of the diplomatic corps, while to their right and left the other officials and guests.

In the space assigned to celebrities from foreign countries a remarkable group attracted general attention. One was a medium-sized man, with swarthy complexion, piercing black eyes and high cheekbones. This was a genuine East India rajah, Dado Su Ama, who occupies the distinguished position of secretary of state for the Sultan of Johore, on the Malay Peninsula. Near by, clad in long black robes, their heads surmounted by curiously shaped black hats, were Ye Chayum, Jeung Kiung Won and Yi Shing Su, the royal commissioners from Corea. Talking earnestly with one of these was Cæsar Gondra, envoy extraordinary and minister plenipotentiary of the republic of Paraguay, and towering over the slight form of the latter his Excellency Prince de Gloukovskoy, chamberlain to to his Majesty the Czar and general imperial commissioner of Russia. Baron Fava, Italy's minister plenipotentiary, sat a little distance away with the Marquis di Rudini. Representing the Dominion of Canada was a notable group, comprising the acting premier, Mackenzie Bowell, Minister of Public Works Quinet and Minister of Agriculture A. B. Angeans. In the centre of the group of lady managers were the Princess Maria Schach Oskay, maid of honor at the court of the Czar, and Mme. Somet Sepkin, also a representative of the Russian court and of the imperial institutions of the Empress Marie. Conspicuous also in the forefront of the throng below the platform were the Duchess of Buckingham, the Earl and Countess of Craven and the Counts Bela, Zichy and Honekhein.

MUSIC AND PRAYER.

It had been intended to preface the speech-making with a grand chorus of 1,000 voices, but owing to an oversight in drawing the plans of the platform this feature was eliminated, and in its place was rendered a Columbian march, composed for the occasion by Prof. John K. Paine. Theodore Thomas wielded the baton, and 600 instruments responded to his wand.

As the music died away the blind chaplain of the United States Senate, Rev. Dr. W. H. Milburn, was led forward to the front of the platform by his adopted daughter, Miss Cora Gemley, and asked the blessing of God on the Exposition. The young lady has been his

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constant and faithful attendant for many years. In this circumstance there was afforded a link between the United States and its friends of the Dominion of Canada, the young lady being a daughter of the late Rev. John Gemley, for many years one of the foremost divines of Ontario.

Miss Jessie Couthoui, a Chicago elocutionist, in clear, impressive tones that could be heard distinctly by the two thousand guests upon the platform and which penetrated far into the throng, read the poem of the day, entitled "The Prophecy," written by W. A. Croffut, a journalist of Washington.

Hearty applause rewarded the reader as she retired, and it was renewed when the orchestra rendered the "Rienzi" overture by Wagner.

FACTS ABOUT THE FAIR.

Director-General Davis arose from his seat, and after bowing to the Chief Magistrate and those surrounding him, faced the assemblage. After the applause had subsided he said:

"This enclosure, containing nearly 700 acres, covered by more than 400 structures, from the small State pavilion, occupying an ordinary building site, to the colossal structure of the Manufactures and Liberal Art Building, covering over thirty acres, is filled and crowded with a display of the achievements and products of the mind and hand of man such as has never before been presented to mortal vision.

"The habits, customs and life of the peoples of our own and foreign lands are shown in the variegated plaisance. Those stately buildings on the north are filled with the historical treasures and natural products of our several States. The artistic, characteristic and beautiful edifices, the headquarters of foreign commissions, surrounding the gallery of fine arts, which in itself will be an agreeable surprise to the American beholder, constitute the grand central zone of social and friendly amenities among the different peoples of the earth.

"Surrounding this grand plaza, where we stand, and reaching from the north pond to the extreme south, is the great mechanical, scientific, industrial and agricultural exhibition of the resources and products of the world.

"The number of exhibitors will exceed 60,000 when everything is in place. The citizens of our country are proud and always will be proud of the action of the Congress of the United States of Am-

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erica in authorizing and directing this celebration to take place, for the appropriations of more than five millions of dollars in its aid and for the unswerving support and encouragement of the officers of the government.

"A sum in excess of six million of dollars has been raised and expended by the States and Territories for their official use in promoting their own interests conjointly with the general success of the exhibition.

"More than six million of dollars has been officially appropriated by foreign governments for their commissions in furtherance of participation in the Exposition. The great nations of Europe and their dependencies are all represented upon these grounds. The governments of Asia and Africa and the republics of the Western Hemisphere, with but few exceptions, are here represented.

"To the citizens and corporations of the city of Chicago, who have furnished $11,000,000 as a contribution, and, in addition, have loaned the management $5,000,000 more, are due the grateful acknowledgment of our own people and of all the honored guests who share with us the advantages of this great international festival.

"To the women of Chicago and our great land, whose prompt, spontaneous and enthusiastic co-operation in our work turned the eyes of the world toward the Exposition as toward a new star of the East—an inspiration for womanhood everywhere—we extend our cordial and unstinted recognition.

"It is our hope that this great Exposition may inaugurate a new era of moral and material progress, and our fervent aspiration that the association of the nations here may secure not only warmer and stronger friendships, but lasting peace throughout the world.

"The grand concerted illustration of modern progress which is here presented, encouragement of art, science, of industry, of commerce has necessitated an expenditure, including the outlay of our exhibitors, largely in excess of $100,000,000. We have given it our constant thought, our most devoted service, our best energy, and now, in this central city of this great republic, on the continent discovered by Columbus, whose distinguished decendants are present as the honored guests of our nation, it only remains for you, Mr. President, if in your opinion the Exposition presented here is commensurate in dignity with what the world should expect of our great country, to direct that it shall be opened to the public, and when you touch

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this magic key the ponderous machinery will start in its revolutions and the activities of the Exposition will begin."

PRESIDENT CLEVELAND.

When President Cleveland arose foreigners and natives alike joined in the acclaim to the highest representative of the sovereign people of the republic. There was a flutter of white handkerchiefs from the ladies' side of the platform, and instantly it was taken up by the thousands of the sex that occupied the gondolas and launches on the water far in the distance. At last, when throats and arms alike were tired, and a semblance of quiet had once more come over the throng, he commenced his address. He said:

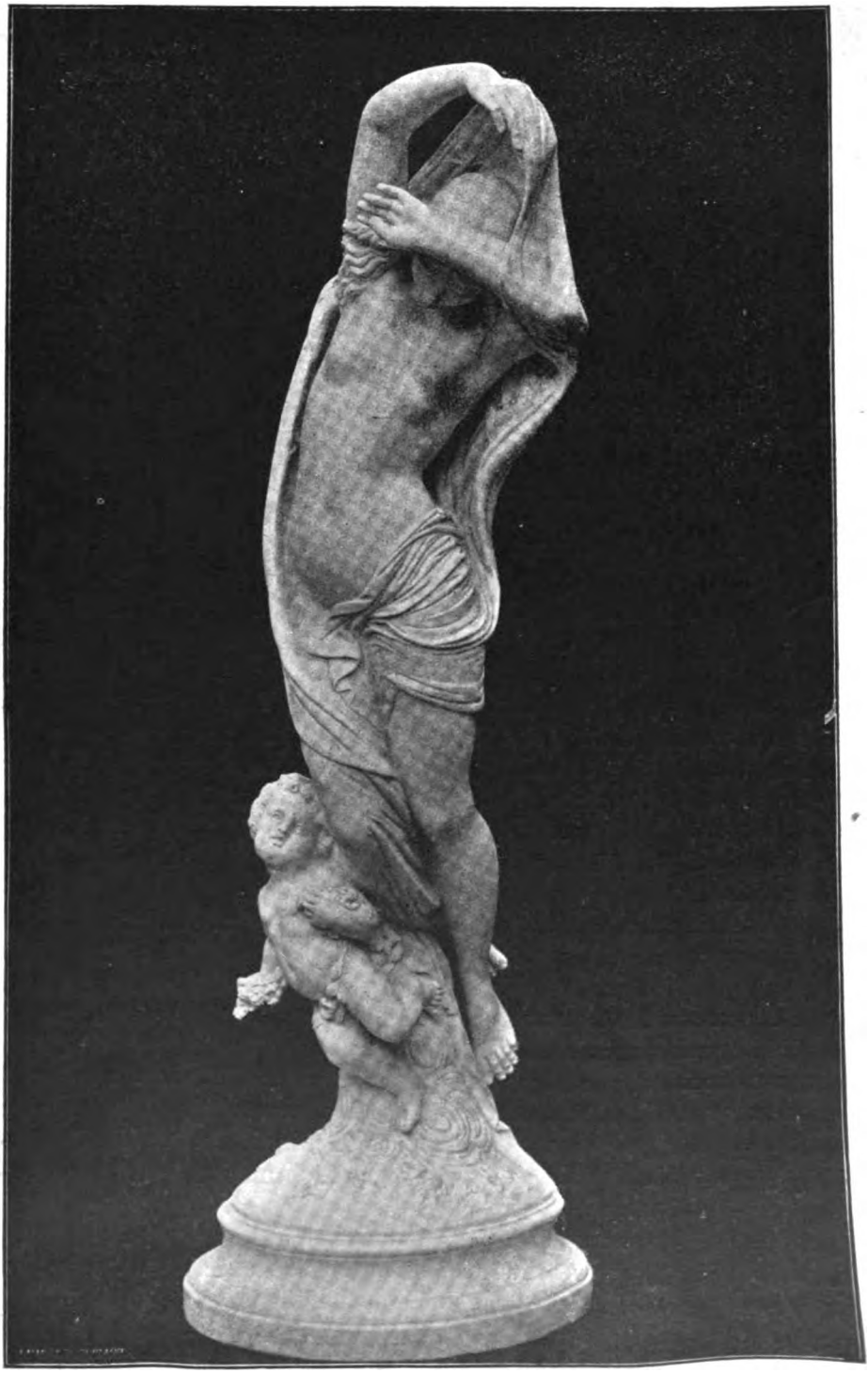
"I am here to join my fellow-citizens in the congratulations which befit this occasion. Surrounded by the stupendous results of American enterprise and activity, and in view of the magnificent evidences of American skill and intelligence we need not fear that these congratulations will be exaggerated. We stand to-day in the presence of the oldest nations of the world and point to the great achievements we here exhibit, asking no allowance on the score of youth.

"The enthusiasm with which we contemplate our work intensifies the warmth of the greeting we extend to those who have come from foreign lands to illustrate with us the growth and progress of human endeavor in the direction of a higher civilization.

"We who believe that popular education and the stimulation of the best impulses of our citizens lead the way to a realization of the proud national destiny which our faith promises gladly welcome the opportunity here afforded us to see the results accomplished by efforts which have been exerted longer than ours in the field of man's improvements, while in appreciative return we exhibit the unparalleled advancement and wonderful accomplishments of a young nation, and present the triumphs of a vigorous, self-reliant and independent people. We have built these splendid edifices, but we have also built the magnificent fabric of a popular government, whose grand proportions are seen throughout the world. We have made and here gather together objects of use and beauty, the products of American skill and invention, but we have also made men who rule themselves.

"It is an exalted mission in which we and our guests from other lands are engaged, as we co-operate in the inauguration of an enterprise

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EVENING.

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devoted to human enlightenment, and in the undertaking we here enter upon we exemplify in the noblest sense the brotherhood of nations.

"Let us hold fast to the meaning that underlies this ceremony, and let us not lose the impressiveness of this moment. As by a touch the machinery that gives life to this vast Exposition is now set in motion, so at the same instant let our hopes and aspirations awaken forces which in all time to come shall influence the welfare, the dignity and the freedom of mankind."

THE EXHIBITION OPENED.

As the last words fell from the President's lips he pressed his finger upon the electric button on the table before him. This was the signal for a demonstration difficult of imagination, and infinitely more so of description. At one and the same instant the audience burst into a thundering shout, the orchestra pealed forth the strains of "The Hallelujah Chorus," the wheels of the great Allis engine in Machinery Hall commenced to revolve, the electric fountains in the lagoon threw their torrents toward the sky, a flood of water gushed forth from the McMonnies fountain and rolled back again into the basin, the thunder of artillery came from the vessels in the lake, the chimes in Manufacturers' Hall and on the German Building rang out a merry peal, and overhead the flags at the tops of the poles in front of the platform fell apart and revealed two gilded models of the ships in which Columbus first sailed to American shores.

At the same moment hundreds of flags, of all nations and all colors, were unfurled within sight of the platform. The largest was a great "Old Glory," which fell into graceful folds from the top of the centre staff in front of the stand. The roof of the Manufacturers' Building was gorgeous in red gonfalons, while the Agricultural Building was dressed in ensigns of orange and white. It was a wonderful scene of transformation, and amid it all cannon continued to thunder and the crowd to cheer. It was fully ten minutes before the demonstration subsided. Then the band played "America," and the exercises were at an end.

A lunch was served in the Administration Building, to which the officials and guests were invited. The President received the foreign commissioners and visited the different buildings.

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IN THE IRISH VILLAGE.

At the close of the Presidential reception to the foreign commissioners, Mr. Cleveland, accompanied by Secretary Gresham, drove to the Irish village on the Midway Plaisance. Here he was entertained by the Countess of Aberdeen, who was assisted by Lady Arnot and her daughter, Clara Arnot, and the Misses Brown, Emmet and Walsh, four decided pretty natives of the Emerald Isle. In Rush Brook, the special cottage of the Countess of Aberdeen, the President accepted a cup of tea, which he drank with evident relish, while the harpist of the village, Miss Flora Sullivan, rendered the "Harp That Once Through Tara's Halls" and other distinctively Irish selections.

Before departing for the Woman's Building the President was introduced to Hon. Archibald John Majoribanks, brother of the Countess, and several other distinguished natives of the Emerald Isle.

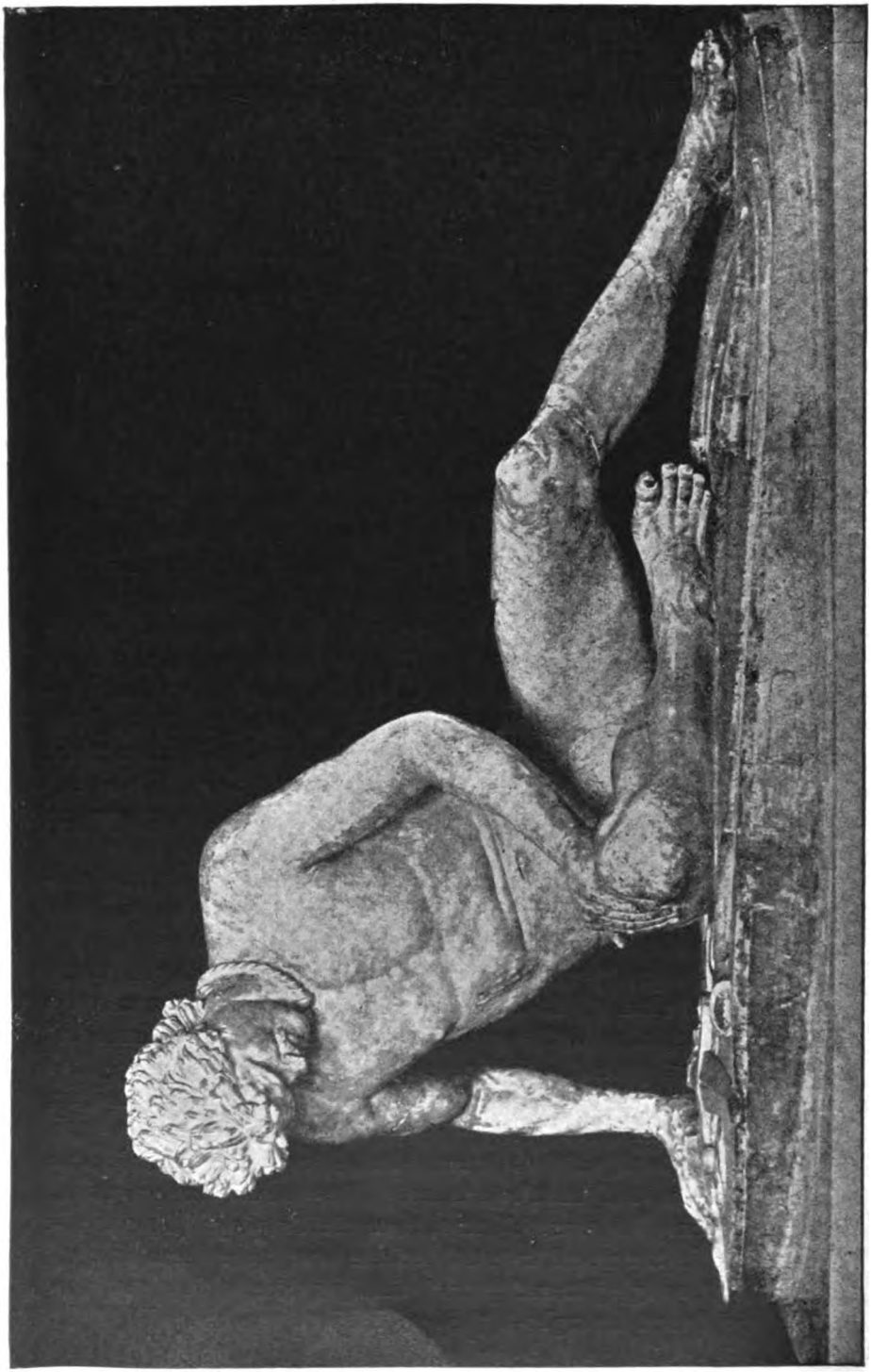
CRUSHED IN THE THRONG.

The bad police arrangements were shown in an unfortunate manner for many people. A handful of Columbian guards had been detailed for duty to keep the inside border of the mass of humanity from encroaching on the press seats, which were arranged below the grand stand on either side. Not even a rope was strung along the line of the grand stand to keep a passageway clear for the newspaper men and ambulance corps.

The pushing and crowding at the northeast end of the Administration Building soon became so severe that many women fainted, while others became so sick that they had to be lifted bodily over the railing into the press seats until the arrival of the Red Cross Corps with the wheel chairs. Colonel Rice, commander of the guards, ordered all the captains of the guards who were mounted to force and maintain a passage and hold the mass of people in check. The mounted officers were not numerous enough to do the work, and the situation became critical.

While the poem was being read it looked as though a panic with fatal consequences could not be averted. The guards were powerless, their work being no more effectual than child's play. The people farther back in the crowd knew that there was more room in front and they kept swaying to and fro, and finally succeeded in closing the passageway almost throughout the length of the grand stand.

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THE DYING GLADIATOR.

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Women continued to faint, and the weaker ones who were getting in a fainting condition were lifted over the heads of the crowd by the guards and newspaper men into the press seats and grand stand, reserved for distinguished guests. City police mingled with the guards and endeavored to quiet the excited, swaying mass within bounds of personal safety.

Before the ceremony was half over twenty women and half as many men had been removed unconscious to the hospital, where a corps of physicians was in waiting. Most of the helpless ones had simply fainted, but a number were suffering from more serious injuries received in the jam.

President Higginbotham realized the gravity of the situation, and while the orchestra was playing he arose from his seat, advanced to the edge of the platform and raised his hands above his head in a mute appeal to the assembled thousands. He cried out at the top of his voice, "Keep cool," but his words were not heard far. His appeal had a salutary effect, however, as the centre and rear portions of the wedged-in mass refrained from pushing toward the frail barriers. Yet the hospital chairs continued to be forced through the almost blocked passageway to carry out the sick women and children. Others, braver and stronger, fought against the physical strain and were able to hold their ground, with the aid of liberal doses of brandy supplied by the Red Cross Corps.

The multitude continued to sway to and fro, and the air was filled with the shrieks of the women, the hoarse shouts of the men, the cries of the little children, of whom there were many hundreds if not thousands, and the warning cries of the occupants of the grand stand.

With the view of facilitating the disposal of the throng President Higginbotham escorted Mr. Cleveland and the ducal party from the platform with all possible haste, but this did not suit the temper of the spectators and they yelled, "Come back; we want to see more of the President." Finally, by breaking into the throng from a half dozen points, the Columbian guards succeeded in turning it into half as many channels, but not before the section of the platform occupied a few moments before by the President and his party had been turned into a harbor of refuge for no less than twenty-six sick or unconscious women and children.

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THE WOMAN'S BUILDING.

The most satisfactory feature of the day's proceedings, from a feminine standpoint, was the formal dedication of the Woman's Building. The grand march by Jean Ingoborg von Bronsart, of Weimar, Germany, was followed by prayer by Miss Ida Hullin. Miss Frances Ellicott, of London, England, favored the assembled women with a dramatic overture, after which Mrs. Potter Palmer delivered an address.

MRS. PALMER'S ADDRESS.

Mrs. Palmer said in part: "On this occasion of the formal opening of the Woman's Building, the board of lady managers is singularly fortunate in having the honor to welcome distinguished official representatives of many of the able foreign committees and of the State boards which have so effectively co-operated with it in accomplishing the results now disclosed to the world.

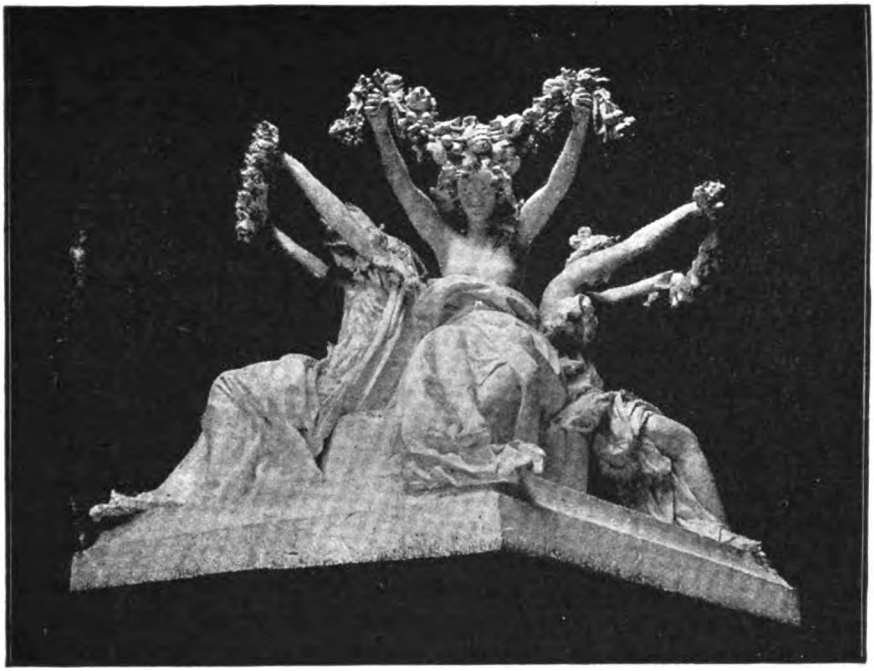
"Experience has brought many surprises, not the least of which is an impressive realization of the unity of human interests, notwithstanding differences of race, government, language, temperament and external conditions. The people of all civilized lands are studying the same problems. Each success and each failure in testing and developing new theories is valuable to the whole world—students, political economists, humanitarians, employers and employed.

"Of all existing forms of injustice there is none so cruel and inconsistent as is the position in which women are placed with regard to self-maintenance, the calm ignoring of their rights and responsibilities which has gone on for centuries.

"If the economic conditions are hard for men to meet, subjected as they are to the constant weeding out of the less expert and steady hands (who are thereby plunged into an abyss of misery), it is evident that women, thrown upon their own resources, have a frightful struggle to endure, especially as they have always to contend against a public sentiment which discountenances their seeking industrial employment as a means of livelihood.

"The theory which exists among conservative people that the sphere of woman is her home, that it is unfeminine, even monstrous, for her to wish to take a place beside or to compete with men in the various lucrative industries tells heavily against her, for manufacturers and producers take advantage of it to disparage her work and

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AGRICULTURE.



GROUP ON AGRICULTURAL BUILDING.

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obtain her services for a nominal price, thus profiting largely by the necessities and helplessness of their victims. That so many should cling to respectable occupations while starving and following them, and should refuse to yield to discouragement and despair, shows a high quality of steadfastness and principle. These are the real heroines of life, whose handiwork we are proud to install in the Exposition, because it has been produced in factories, workshops and studios under the most adverse conditions and with the most sublime patience and endurance.

"Realizing that woman can never hope to receive the proper recompense for her services until her usefulness and success are not only demonstrated, but fully understood and acknowledged, we have taken advantage of the opportunity presented by the Exposition to bring together such evidences of her skill in the various industries, arts and professions as may convince the world that ability is not a matter of sex. Urged by necessity she has demonstrated that her powers are the same as her brother's, and that like encouragement and fostering care may develop her to an equal point of usefulness."

Mrs. Potter expressed thanks to the Emperess of Russia, the Queen of Italy, the Queen of England, the Queen Regent of Spain, the Empress of Japan, the Queen of Siam, and other exalted persons for their sympathy and assistance. Queen Victoria sent an exhibit of the work of her own hands.

VOICES FROM ABROAD.

A jubilate by Mrs. H. H. A. Beecher, of Boston, was the next feature of the programme.

Addresses were then delivered by the Duchess de Veragua, of Spain; the Countess Di Brazza, of Italy; Mrs. Bedford Fernwyck, of England; Duchess of Aberdeen, of Scotland and Ireland, and the Princess Schachoffsky, of Russia.

The Countess of Aberdeen said in part:

"I am proud to think that I am here as the representative of the two countries in which I can claim a share of nationality—Scotland and Ireland.

"Women have counted for much in the histories of both these countries, and I think we can show by our exhibits that our peasant women do much for our national industrial reputation in both instances. We hope to show in the Irish village the work of Irish

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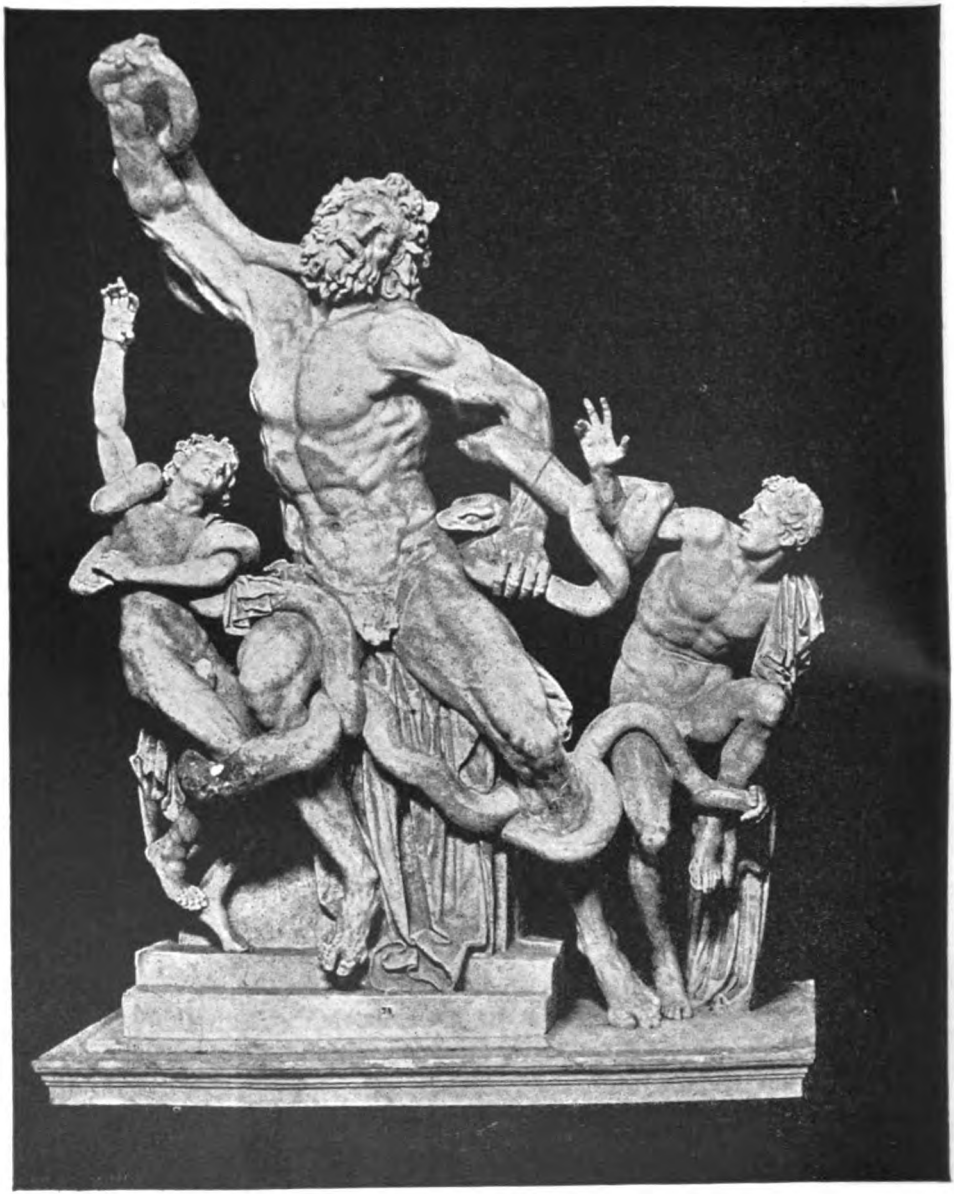
peasants in the process of being made, and here in the building we show specimens of their finished work, thus bringing home to the minds of the visitors the fact that all these beautiful hand-made laces and embroideries which adorn the garments and the palaces of the wealthy are manufactured in Irish cabins, as well as the ordinary linens and woolens which are needed.

"We expect much good to come from this splendid opportunity of exhibiting our goods which you in the New World have afforded us, and we know you will rejoice in the thought of whatever prosperity you may thus bring into lowly homes and lives full of the pathos of poverty, but to whom just a very little sunshine will mean perfect happiness amidst the hills and vales which they love so.

"But our expectation by no means rests here. We are looking with eager expectation to the results which will flow out to all nations of the world from the arrangements you are making for the meeting of the representative women of all countries. It is much when the women of one country will thus meet one another face to face, and learn to know one another and to realize what is being done to forward the common cause of humanity, but when now we see before us the women workers and thinkers of the world coming together from all climes to prove their sisterhood and to find new and rich sources of common strength from which they may gather inspiration wherewith they may render higher and holier and more fruitful service to their own homes and to the world than has yet been dreamed of, how can we but linger on the threshold in expectancy of what we feel may yet prove the discovery of a new world, more potent in possibilities for the race than even that wonderful new world, whose discovery we celebrate to-day.

"Will this indeed not be so if the women of the world, stimulated by what they will here see, of what has been accomplished by their sex under imperfect conditions, and perceiving the grandeur of their vocation and the splendour of their opportunities, go forward united in spirit and fired with a common devotion and faith to serve the day and generation with a service with which past ages have never yet been blessed."

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338 LAOCOON—VATICAN, ROME.

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1492—THE PROPHESY.

COLUMBIAN EXPOSITION ODE, BY W. A. CROFFUT, OF WASHINGTON, D. C.

The following is the ode, by W. A. Croffut, Ph. D., read at the opening of the Columbian Exposition to-day.

Sadly Columbus watched the nascent moon
Drown in the gloomy Ocean's western deeps.
Strange birds that day had fluttered in the sails,
And strange flowers floated 'round the wandering keel,
And yet no land. And now, when thro' the dark
The Santa Maria leaped before the gale
And angry billows tossed the caravels
As to destruction, Gomez Rascon came
With Captain Pinzon thro' the frenzied seas,
And to the Admiral brought a parchment scroll,
Saying, "Good Master, read this writing here—
An earnest prayer it is from all on board,
The crew would fain turn back in utter fear;
No longer to the Pole the compass points,
Into the Zenith creeps the Northern Star;
You saw but yester-eve an albatross
Drop dead on deck beneath the flying scud.
The devil's wind blows madly from the east,
Into the land of Nowhere, and the sea
Keeps sucking us adown the maelstrom's maw;
Francisco says the edge of earth is near,
And off to Erebus we slide unhelmed.
Last Sunday night Diego saw a witch
Dragging the Nina by her forechains west,
And wildly dancing on a dolphin's back;
And as she danced, the brightest star in heaven
Slipped from its leash and sprang into the sea
Like Lucifer, and left a trail of blood.
I pray thee, Master, turn again to Spain,
Obedient to the omens, or, perchance,
The terror-stricken crew, to escape their doom,
May mutiny and"——
"Gomez Rascon, peace!"
Exclaimed the Admiral, "thou has said enough,
Now, prithee, leave me. I would be alone."

Then eagerly Columbus sought a sign
In sea and sky and his lonely heart,
And found, instead of presages of hope,
The black and ominous portents of despair.

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The wild wind soared around him and he heard,
Shrill voices cry, "Return! Return! Return!"
He thought of Genoa, and dreams of youth,
His father's warnings and his mother's prayers,
Confiding Beatriz and the prattling babe,
The life and mirth and warmth of old Castile,
The tempting comfort of the peaceful land,
And sad winds moaned, "Return! Return! Return!"

As thus he mused he paced the after deck
And gazed upon the luminous waves astern.
Strange life was in the phosphorescent foam,
And thro' the goblin glow there came and went,
Like elfin shadows on an opal sea,
Prophetic pictures of the land he sought.

He saw the end of his victorious quest;
He saw ablaze on Isabella's breast
The gorgeous Antillean jewels rest,
The islands of the west,

He saw invading Plenty dispossess
Old Poverty, the land with bounty bless,
And through the wailing caverns of distress
Walk star-eyed Happiness.

He saw the Bourbon and Braganza prone
For ancient error tardy to atone,
Giving the plundered people back their own
And flying from the throne.

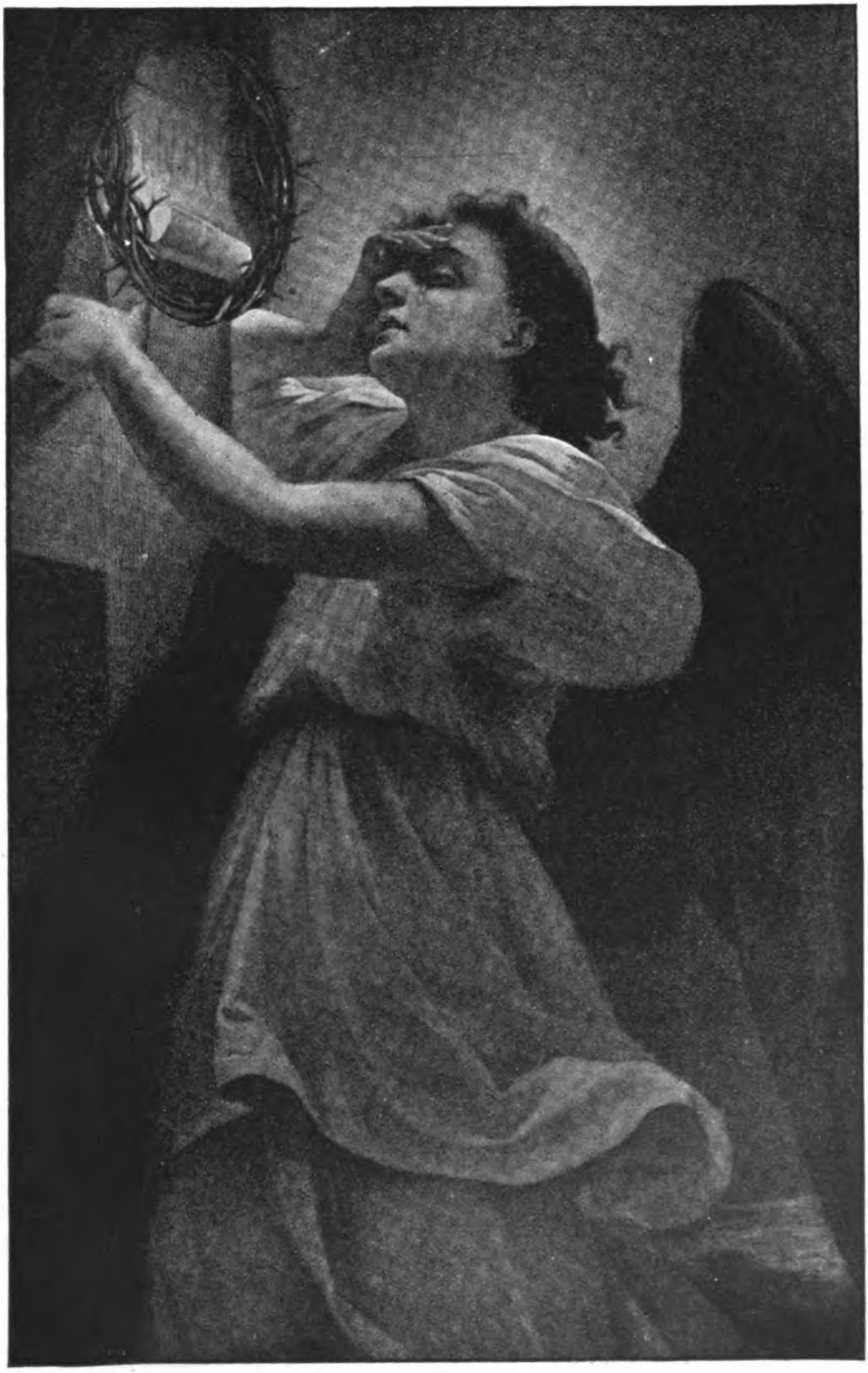
He saw an empire radiant as the day,
Harnessed to law, but under Freedom's sway,
Proudly arise, resplendent in array,
To show the world the way.

He saw celestial peace in mortal guise,
And, filled with hope and thrilled with high emprise,
Lifting its tranquil forehead to the skies,
A vast republic rise.

He saw beyond the hills of golden corn,
Beyond the curve of Autumn's opulent horn,
Ceres and Flora laughingly adorn
The bosom of the morn.

He saw a cloth of gold across the gloom,
An arabesque from Evolution's loom,
And from the barren prairies' driven spume
Imperial cities bloom.

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ANGEL OF TEARS. 341

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He saw an iron dragon dashing forth
On pathways east and west and south and north,
Uniting fondly in beneficent girth
Remotest ends of earth.

He saw the lightning run an elfin race,
Where trade, and love, and pleasure interlace,
And severed friends in Ariel's embrace
Communing face to face.

He saw Relief through deadly dungeons grope,
Foes turn to brothers, black despair to hope,
And cannon rust along the grass-grown slope,
And rot the gallows rope.

He saw the babes on Labor's cottage floor,
The bright walls hung with luxury more and more,
And Comfort, radiant with abounding store,
Wave welcome at the door.

He saw the myriad spindles flutter round ;
The myriad mill wheels shake the solid ground ;
The myriad homes where jocund joy is found,
And Love is throned and crowned.

He saw exalted Ignorance under ban,
Though panoplied in force since time began,
And Science, consecrated, lead the van,
The Providence of man.

The pictures came and paled and passed away,
And then the Admiral turned as from a trance,
His lion face aglow, his luminous eyes
Lit with mysterious fire from hidden suns :
"Now, Martin, to thy waiting helm again !
Haste to Pinta ! Fill her sagging sails,
For on my soul hath dawned a wonderous sight.

Lo ! thro' this segment of the watery world
Uprose a hemisphere of glorious life !—
A realm of golden grain and fragrant fruits,
And men and women wise and masterful,
Who dwell at peace in rural cottages
And splended cities bursting into gloom—
Great lotus blossoms on a flowery sea.

And happiness was there, and bright winged hope,
High aspiration, soaring to the stars !
And then methought, O Martin, thro' the storm,
A million faces turned on me and smiled.

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Now go we forward! Fear avaunt!
I will abate no atom of my dream,
Though all the devils of the under world
Hiss in the sails and grapple to the keel!
Haste to the Pinta! Westward keep her prow,
For I have had a vision full of light!
Keep her prow westward in the sunset's wake
From this hour hence and let no man look back!"

Then from the Pinta's foretop fell a cry,
A trumpet song, "Light, ho! Light, ho! Light, ho!"

HOW TO SPEND A WEEK AT THE FAIR.

So vast, varied and many are the attractions of the Columbian Exposition, that visitors must proceed on some definite plan if they wish to gain any clear idea of the whole display. Otherwise they will have reason to regret, when too late, that they forgot or overlooked many important features.

Most visitors will probably have not more than one week in Chicago, although the Fair well deserves six months of constant sight-seeing, and thoroughly seen, would be in itself a liberal education. A plan, therefore, well devised for each and every day, will prove of great service.

FIRST DAY—A VIEW OF THE GROUNDS.

Let us suppose that the visitor has secured lodgings and is now at one of the six entrance gates, or, better still, is landed at the pier from the lake-side, guide-book in hand, and note-book and pencil in pocket. How shall the first day best be spent?

Certainly in seeing the grand buildings, the external aspects of the Fair, the architecture, the beauty of the grounds, the statuary, the fountains, the whole panorama of effect.

Do not hurry here, whatever else you have to cut short. Take time—take the early, cool morning hours if possible, for calm contemplation of these veritable wonders. Let this great poem of human art and effort so impress itself on the mind as to remain there to the end of your days. Do not be diverted by the hurrying crowds, but commune with your own thoughts. At each distinctly new prospect sit down for a few minutes on a bench, and so absorb the views as they unfold.

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ANGEL OF PEACE.

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The great Building of the Manufactures and Liberal Arts may well be the point of departure for this first day's walk. It will be best not even to enter it on this day, save to walk along the great outer colonnades.

Now you come to the lofty statue of the Republic, the calm, majestic embodiment of the Genius of America. It stands on the basin near the south end of the Liberal Arts building. On the left—facing the Basin—you catch glimpses of the pale-blue lake, from between the white Corinthian columns of the Peristyle, flanked on either hand by Music Hall and the Casino, where one may well pause to listen to the music which will be performed here on most days of the Fair.

Passing around the foot or lake end of the Basin and turning westward, we confront the noble Building of Agriculture, its swelling dome surmounted by St. Gauden's famous statue of Diana.

Next comes Machinery Hall, in many respects the most beautiful of the buildings, with its pleasing combinations of classic and Moorish architecture. From within resound the whir and rattle of machines; but these for this day shall be passed by.

Turn then to contemplate the towering dome of the Administration Building where the Executive Offices of the Exposition are located. Pass between two other buildings, that on the left devoted to Mining, and this on the right to Electricity in all its myriad scientific and mechanical applications.

Before us now opens a truly imposing panorama—canals, bridges, flowers, shrubbery, fountains, stretching away for half a mile. Back a little at our left rises the long front of the Transportation Building, with its "Golden Door." Farther to the north, on that same side, swells the immense dome of Horticultural Hall; a palace of flowers, palms, ferns, grottoes and fountains.

Directly across the Lagoon from the Horticultural Hall stands the substantial United States Government Building, its dome purposely suggesting that of the Capitol at Washington. Beyond it on the left, still looking northward, is placed the pretty Fisheries Building of Gothic aspect; while over against it, across the Lagoon, rises the chaste, severely plain architecture of the Women's Building.

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THE STATE AND FOREIGN BUILDINGS.

Farther down the vista on the right, the view is intercepted in part by the mellow tints of the largest of all the State Buildings, that of Illinois. Its eastern wing is outlined against the beautiful white Art Gallery which approximately heads the great park-way and closes in the view northward.

Nowhere in the world can so magnificent a plaza be found, enclosed by architecture so colossal and imposing. One can but regret that it is to endure but a single year. For this reason it should be the more carefully observed.

It will now be well to cross by one of the Rialto bridges to Wooded Island, or Rose Island, sixteen acres in extent, situated in the midst of the great Lagoon, where are the "Hooden" and other Japanese exhibits in the midst of flower-gardens.

Afterwards, walking more deliberately, one may approach, in turn, each of the six buildings last above named, and inspect them more closely. Previously we had taken but a distant view of them from the foot of the grand park-way.

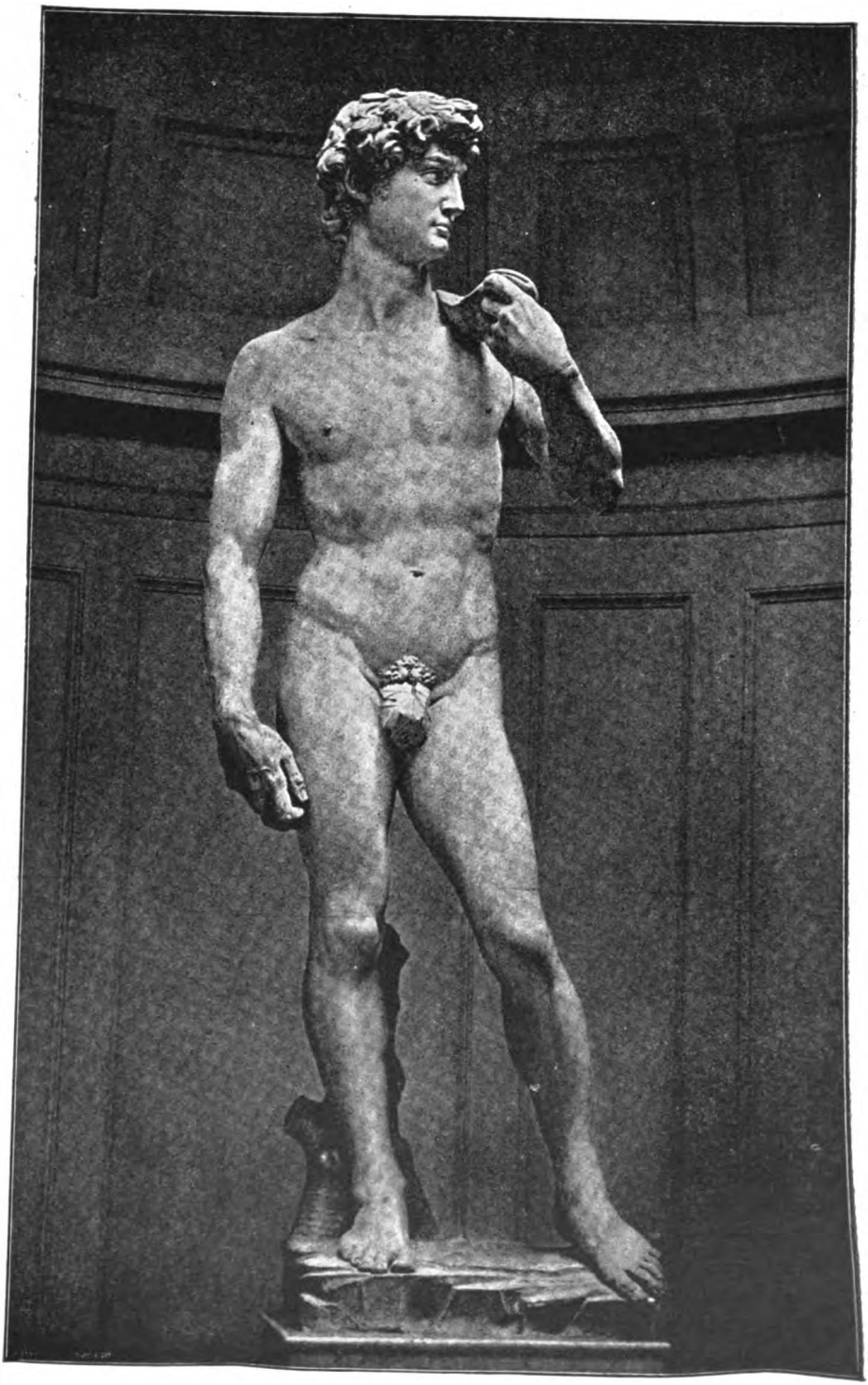
Several hours will be found to have elapsed already, and refreshment at some of the many restaurants may by this time be needed. Afterwards, take an excursion of a mile or more among the numerous State Buildings, which form a small city of themselves, and a very handsome one, at the north end of the grounds. While here one should visit the Eskimo Village, or Innuit Colony, located in the extreme northwestern corner of the grounds, where some sixty Eskimos may be seen at home.

A trip to the buildings of various foreign nations, situated mainly at the northeast side of the grounds, can now conveniently be made, and the model of a Battle-Ship, the *Illinois*, which it is difficult to believe is only a brick structure, built up from the bottom of the lake, may be visited at the pier hard by.

Thence, passing down the water front of the Liberal Arts Building, there may yet be daylight for visiting the Convent of La Rabida, associated historically with the sadly troubled life of Columbus; the Forestry Building, the Krupp Gun House, the Leather Building, the Stock Pavilion, the Sawmill and the Cattle Sheds.

Some of these may have to be neglected, or given but a cursory glance, in passing; for by this time the eyes and feet of visitors will

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DAVID. 847

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be alike tired. Yet if this programme be adhered to, the best of the outward aspects of the Fair will have been seen.

SECOND DAY—THE MANUFACTURES BUILDING.

The visitor may now be said to have seen the Fair in its out-of-door aspects. Next come the more especially interesting indoor features.

One full day of the six should be devoted to the immensely varied exhibits in the great Building of the Manufactures and Liberal Arts. A month, indeed, might be spent here. The building itself is a Fair, one had almost said a city, of streets, shops and stores.

It covers the area of a good-sized farm. Forty-four acres of floors are loaded and adorned with the most beautiful specimens of human handiwork, from all over the world.

Shall I enable the boys for whom I write, to gain a better idea of this immense structure, when I say that six full games of base-ball, each on a regulation "field," might be played at once on the main floor, with a space for batting so unrestricted that a "home run" might be made on each field simultaneously?

Three Coliseums like that of ancient Rome might be set down side by side on this interior space, with room for St. Peter's Church in addition! Or if you think that the vast crowds that are to congregate here this year will leave you no room to move about, you may be reassured when you are told that the entire standing army of imperial Germany might be assembled beneath this vast roof!

All this great area is full of the most elegant and costly articles in the world. Truly, the visitor needs to be here as early as the gates are opened, on this day, if he is to see a hundredth part of this varied wealth.

To specify here even the nature of the exhibits is impossible. No one could see them all in a month, much less in a day. Each visitor may best give attention to the things that have special interest for him, and the Official Guide-Book will direct him to their location.

This day in the Building of Manufactures and Liberal Arts will tire the eyes often, and time and again it will be advisable to withdraw to the colonnade on the lake-side to rest and to take the breeze.

When food is needed it may be found across the great canal, at the Dairy café southward of La Rabida; or at the "Clam-Bake" across the northern canal, near the Fisheries Building.

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THIRD DAY—MODERN INVENTIONS.

The plan for this day will be much more extended than that of yesterday. It should include Machinery Hall, the Mines, Electricity and Transportation Building—to each one of which an entire day might well be devoted by visitors able to spend three or four weeks instead of one at the Fair.

There will be time for no more than a leisurely walk amidst the thousands of clattering machines which cover the seventeen acres of floor space in Machinery Hall. Do not forget the power-house, in the rear, where are located the immense battery of boilers, and the twenty-four thousand horse-power engines that set all these machines in motion.

Leaving Machinery Hall we may next enter the lofty portal of the building devoted to Electricity, less noisy than the one we have left, but not less complex. Here are nearly ten acres of Electric Dynamos, Batteries, Telegraphs, Signals, Heaters, Forges, Telephones, Motors and Lights, and other subtle devices of which our fathers knew nothing, but which enter into the every-day life of this generation.

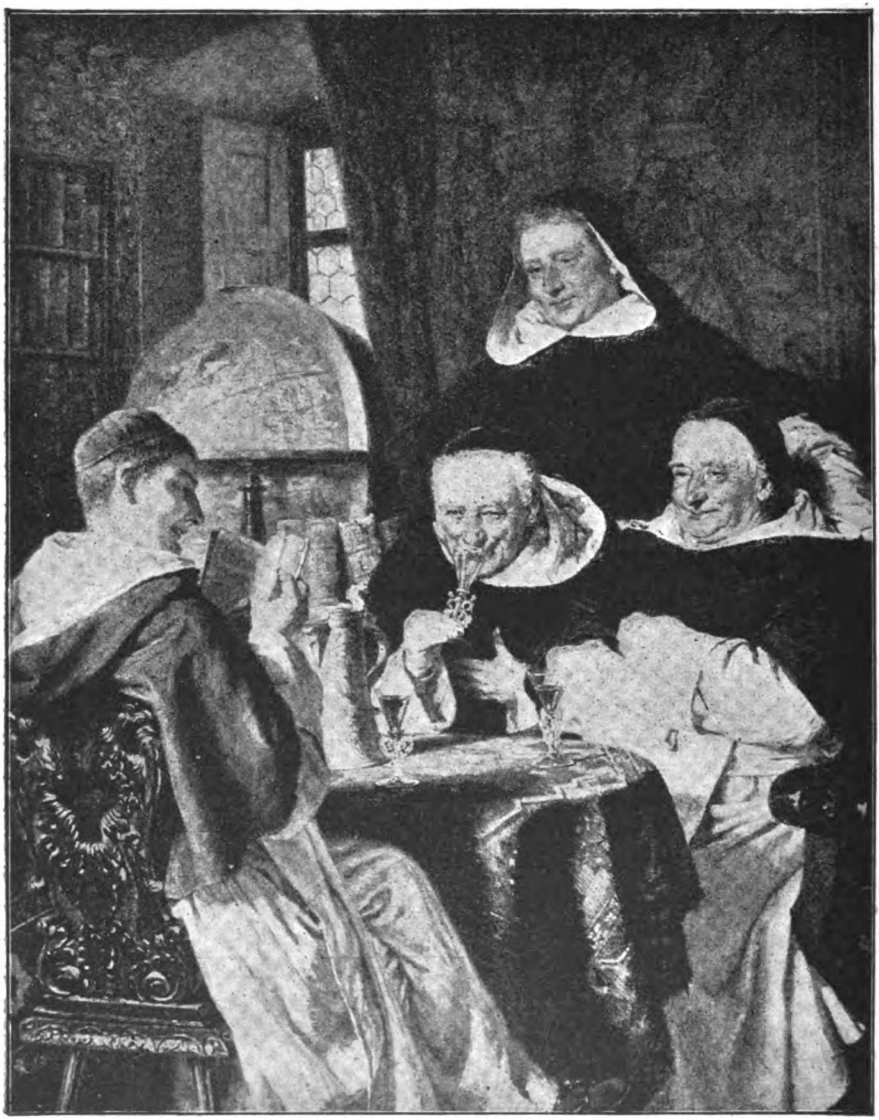
Parallel and abreast of the Electrical Building stands the Mining Building, to which we may next take our way. Here are displayed all those varied devices by which men pierce the rugged mountain lodes, and wrench the metals from the iron grasp of Nature. Here are ores, gems, crystals, coal, coke, petroleum, natural gas, gold, silver, tin, nickle, minerals in general. Here are stamps or crushers, assay and mining apparatus, boring and drilling machinery.

It is a display which one might probably visit for study every day for a week. But we must cross over to the Golden Door of the Transportation Building, where for two hours more we shall find our attention absorbed by palace cars, locomotives, road engines, steam craft, yachts, naval construction, flying-machines, pneumatic tubes,—in short, all the devices of modern travel at high speed.

FOURTH DAY—THE PRODUCE OF THE FIELDS.

Go first to the Building of Agriculture, one of the most beautiful structures on the grounds. Beneath its ample roofs lie spread out eighteen acres of exhibits, of interest to all, and of especial interest to the farmer, ranchman and gardener. Here, amidst a calm, sugges-

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tive of green fields and pastures, we find cereals, grasses and forage plants, sugars and confections, dairy products and foods, farming tools and farm buildings, pure and mineral waters—innumerable articles suggestive of country life and country quiet. Two or three hours will be occupied in gaining even the most general conception of them.

Next, we may well go to see the exhibit of live stock beneath the forty acres of sheds in the rear, to the southward. Here are horses, cattle, sheep, camels, goats, swine, dogs, cats, ferrets, rabbits and many wild animals. A hurried view of them will occupy two or three hours more of our day ; and we shall have to hasten past the Stock Pavilion, for performing animals, with no more than a glance inside it.

Finally, pass up through the grounds, northward, to Horticultural Building, amidst whose lovely flowers, palms, grottoes and fountains the two last hours of the afternoon may appropriately be spent.

FIFTH DAY.

Some particularly pleasing spectacles have been purposely reserved for the last two days of the week. Two hours of the morning of the fifth day may be spent at the Women's and Children's buildings, neighboring one another, to the north of Horticultural Hall.

The exhibit in the Women's Building is designed to represent the progress of women from the earlier, darker ages of humanity to the present era, and to illustrate some of what may be called the public services of the sex. There is a model hospital and model kindergarten, as well as parlors fitted to illustrate the comforts of home.

Another department is devoted to those organizations of reform and charity of which women have ever been the champions.

In another wing there is a model kitchen ; and in the open air on the roof, whence a grand view of the grounds is obtained, are the "hanging gardens," with pleasant cafés attached.

At the Children's Building near by may be seen all manner of famous toys, including the "talking doll." Here also are model nurseries, kindergartens, children's kitchens, crèches, etc. It is a place to which the little ones will beg to return, time and again.

The chief interest of this morning's excursion, however, will be centred at the Fine Arts Building, with its spacious Annexes, where are to be seen five acres of the master-pieces of the world's greatest painters, sculptors, etchers, carvers and other artists. Never before

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has so varied and extensive an Art display been collected under one roof. Hours will pass like moments here.

Yet time must be economized, this afternoon, to visit the Fisheries Building, where all the boys, at least, will be captivated by the illustrations of sea-fishing and angling, fresh-water fishing, and fish culture. Living fish, large and small, of almost every known kind, fill the great tanks of the aquaria, some of which have a capacity of forty thousand gallons.

If possible, an hour more of the afternoon must be given to the interior of the stately United States Government Building, located across the canal immediately south of the Fisheries. Here are cannon, Gatling guns, shells and projectiles of every sort; a mint, showing specimens of every coin made by the United States; and also exhibits from every other department of the general government.

SIXTH DAY—A TOUR OF THE MIDWAY PLAISANCE.

The Midway Plaisance is the Bohemian wing of the World's Fair.

It was a happy thought of the Directors to separate from the Exposition proper all those features that fall within the category of "Shows"—and place them somewhat apart and by themselves, where they can be seen or omitted at the pleasure of the visitor.

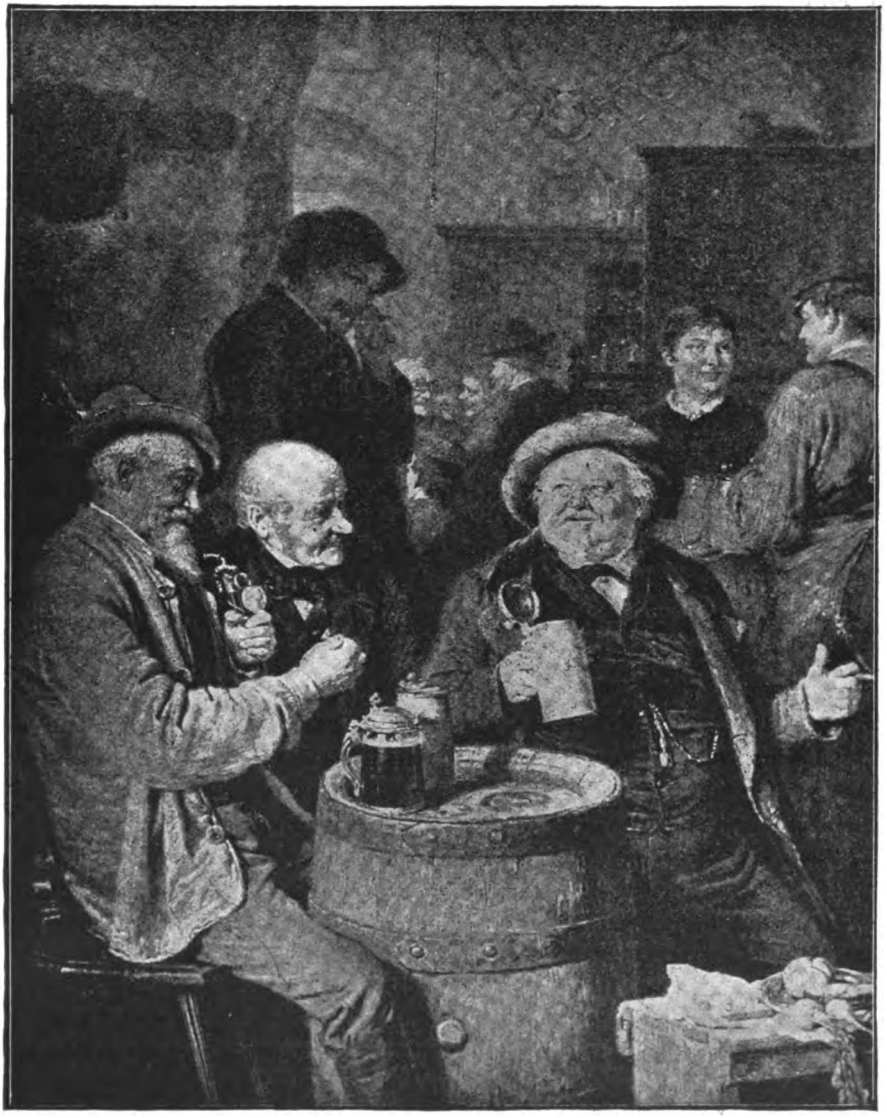
Midway Plaisance is a tract seven-eighths of a mile in length by two hundred yards in width, extending away eastward at right angles from Jackson Park, the site of the main Exposition. It is enclosed, as are the Exposition grounds; and the same ticket of admission suffices for both.

But extra admission fees are charged by the proprietors of all the amusing special "Concessions" which constitute the attractions of the Plaisance. Here, then, all may spend a little money in recreation, or in the restaurants with which the place abounds. All the "Shows" and "Sights" here are eminently proper, while not a few possess merits which commend them, especially to young folks.

MECHANICAL CONTRIVANCES.

THE SLIDING RAILWAY extends along the entire south side of the Plaisance. It is not an inclined plane, as the name might suggest, but resembles an ordinary elevated railroad. Here, by purchase of a ticket, the visitor may ride at the rate of a hundred miles per

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hour. A speed of a hundred and sixty miles an hour has, indeed, been claimed for the train. The motive power is water under high pressure.

The cars have no wheels, but are provided with shoes which fit closely to rails about eight inches wide. Connected with each shoe is a pipe through which water at a pressure of one hundred and fifty pounds to the square inch is forced out betwixt the surface of the rail and the shoe, thus continuously lifting the shoe on a film of water about a sixteenth of an inch in thickness.

Joined with every second car of the train, there is a turbine motor driven by water from the same large pipe, which extends beneath the track. The motors impel the train, which glides onward very easily and smoothly, since it literally rests on the water film between the rail and the car shoe.

THE CAPTIVE BALLOON.—In the car of a large, strong balloon, which is securely anchored by long lines, visitors who have aërenautic tastes may make a voyage skyward, ascending fifteen hundred feet—five hundred feet higher than the celebrated Eiffel Tower. If the day chosen for the ascent be clear, a fine view of the Exposition grounds, the lake and city of Chicago may be obtained. A party of fifteen persons may ascend at one time.

THE FERRIS WHEEL.—This is a prodigious counterpart of those "swing-wheels" often seen at country fairs; an open, vertical wheel with swinging seats, attached at the perimeter, which keep their equilibrium and yet alternately ascend and descend as the wheel revolves.

The wheel at the Plaisance is two hundred and fifty feet in height, or diameter, the axis resting on opposite towers, each one hundred and thirty feet high. It is an enormous affair of its kind, with immensely heavy castings, and altogether is estimated to weigh fully two thousand tons. The effect of its revolution will be something quite thrilling.

THE TOWER OF BABEL.—This odd structure is said to have a height of four hundred feet and a diameter at the base of one hundred. It is designed neither as a joke, nor as a burlesque of the modern Chicago hotel or business block, although many of these approximate it in height.

Like that upon the Plain of Shinar this tower is provided with a gradually ascending walk which appears to coil about the structure

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like the threads of a screw, by means of which the visitor may reach the top. But unlike the tower of ancient days, so far as recorded, there is, in addition, a double track electric railway and a swiftly-running elevator for the benefit of degenerate modern muscles. An extensive view is to be had from the top story of the Tower, where there is hung a pleasing chime of bells.

THE GLASS FACTORIES.—An exhibit of a more practical sort is the Glass Works. There are two of these factories at the Plaisance: one where the manufacture of Venetian glassware, by native workmen, will be illustrated; the other displaying the blast furnace and methods of an American Company. At the American establishment, fifty or more workmen from Toledo will be constantly employed. Very beautiful glassware will be for sale here.

THE NATATORIUM.—A large swimming-pool is inclosed within a building two hundred and fifty by one hundred and ninety feet, where one may take a real "swim" in water of agreeable temperature, and afterwards refresh himself at a café beneath the same roof. Boys who go to the Fair will find this Natatorium a very attractive addition to the "features."

GLIMPSES OF FOREIGN LIFE.

THE DAHOMEY VILLAGE.—The Amazons, or female soldiers of the King of Dahomey, have an historic notoriety which has been renewed within the last two years by reports of their desperate contests with the French army of invasion. Assurances are given that a detail of the warlike "ladies" will do garrison service at the Dahomey village on the Plaisance.

The mode of life, house, cookery, etc., of the Dahometans will also be illustrated by forty or fifty of these singular Africans, who will live there during the summer much as they live in their own country.

THE HAGENBECK ANIMAL SHOW.—This is a German "concession," where visitors may witness the performances of a trained troupe of seventy or more lions, tigers, leopards, dogs, elephants, cattle and horses. The trainers have a world-wide renown, and many of the feats performed by the animals are little less than marvellous.

The attractions mentioned are but a small part of those which will stud this broad avenue of the Plaisance, on either hand.

There are to be a German Village, an Austrian Village, a Malay Campong, a Tunisian Village and a Turkish Village; a Dutch Set-

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COLUMBUS AT THE COURT OF FERDINAND AND ISABELLA.

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tlement, and an East India Settlement; an Ice Railway; a Japanese Bazaar; a Moorish Palace, and a Street in Cairo; a Pompeiian House; a Minaret Tower; and a Panorama of the Volcano of Kilauea.

THE HOME OF THE ESKIMOS.

The Eskimo Village, called also the Husky Village and the Innuit Colony, is located in the extreme northwestern corner of the Exposition Grounds, near the 57th Street entrance. It is surrounded by a green fence; and the fence signifies that a small admission fee has to be paid before entering. No resentment need be felt against the parties who control the colony, however, on this account, since they are obliged to pay the World's Fair directors liberally for the privilege of exhibiting it. Moreover, how, without some sort of barrier and an admission fee would it be possible to protect the little settlement from being overwhelmed by the crowds of sight-seers?

An area of several acres is thus inclosed, including a pond, where will be displayed during the summer the Eskimo modes of boating in *kayaks* and *oomiaks*, also fishing and seal capture.

The village is composed of nine or ten families; in all about sixty persons; men, women, boys, girls, and one little baby, only three weeks old—the quaintest mite of humanity imaginable.

Each family resides in a cabin covered with bark or with moss; and there is also a *topek*, or lodge, of walrus-skin, pitched on birchen poles, in which—at present writing—are laid up *kayaks*, harpoons, paddles, nets; sleeping-bags,—in short, the complete outfit of an Innuit hunter.

On the other side of the inclosure are the dog-pens, where one may see very fine specimens of the strong, thick-haired, draught dogs, along with some very pretty puppies. Numbers of handsome dogs are running about the village. Still others are attached to sledges in couples, by collar-straps and long traces of green hide.

WINTER SPORTS OF THE INNUITS.

During the winter season a great many young people from the neighboring city have enjoyed the novelty of a sledge-ride after Eskimo dogs, in charge of a Husky driver, generally a boy fourteen or fifteen years of age, provided with a prodigiously heavy whip, not less than fifteen feet in length, the loud crack of which resounds through the village like a pistol-shot.

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Five of the men, three of the women and a number of the girls and boys have already learned to speak English with considerable fluency; and when the visitor has become a little familiarized with their appearance, he will find that they are by no means lacking in intelligence, shrewdness, or even in humor.

The three older men evince a candor and good sense with regard to their situation at the Exposition and their sojourn in the United States, which do great credit to their powers of observation and judgment. They converse sensibly and give one the impression that they accept the fact that they are a part of the Fair, and hence must tolerate with patience and good humor the sometimes impertinent curiosity of sight-seers.

None the less, it is well for the visitor to bear in mind that these denizens of the far north are fellow-creatures, entitled to the courtesies of life, and that their domiciles, though humble, should not be rudely entered without knocking and a courteous word, asking permission to do so. For surely we would not wish to give these people the impression that Americans are a very numerous tribe of savages.

Several of the larger girls are comely and attractive in appearance; and as for the boys,—well, they are good, hearty boys, in just a little danger, perhaps, of learning too many things from their Chicago contemporaries.

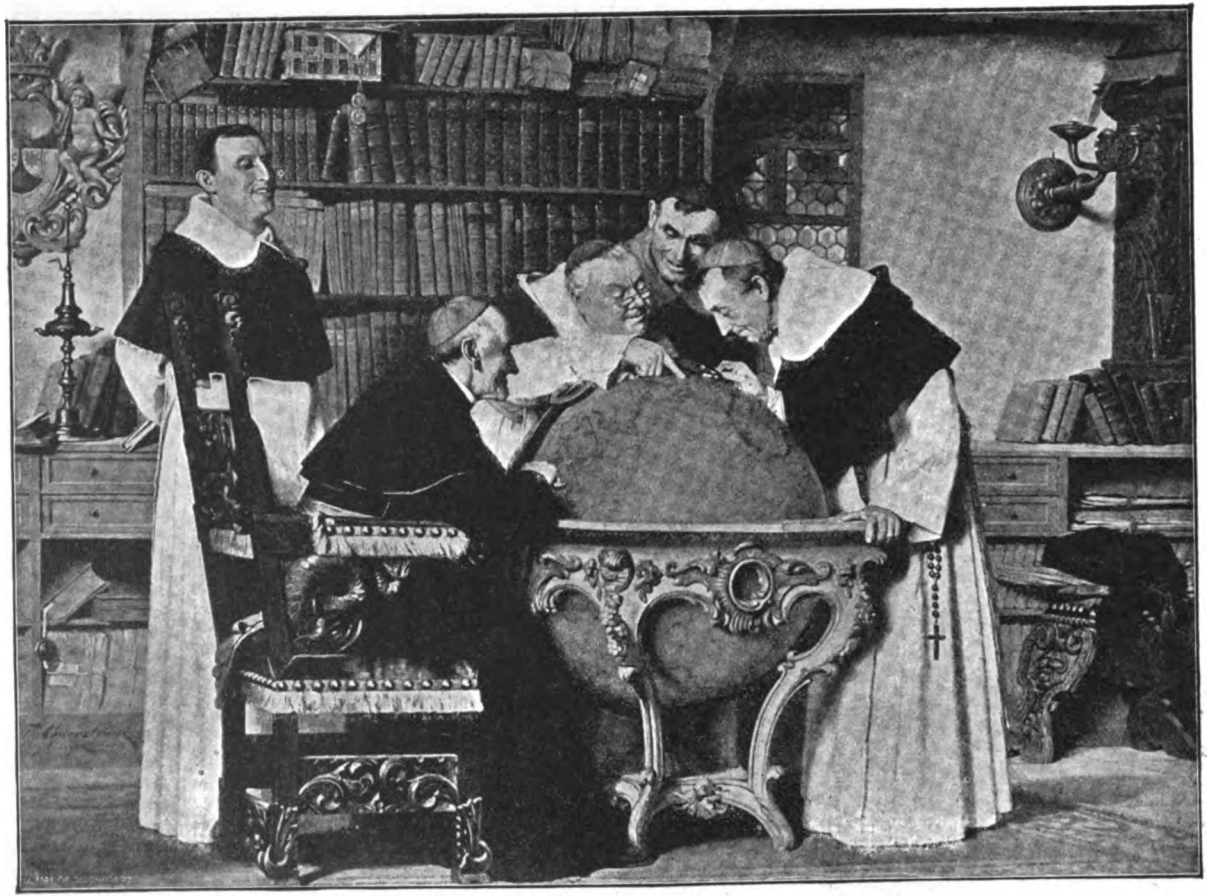
When this was written they had not discarded their winter garb of seal-skin for summer clothing. It is decidedly handsome, and in the ordinary sense "expensive," apparel, of a pearl-gray color, flecked and tinged with darker tints of the fur. What especially commends it to the eye is its warmth, utility and fitness to the climate for which it has been devised.

It consists of a frock, trousers, moccasins and hood, with underwear of fox fur; and the style of dress for the two sexes appears not to differ much, save in the matter of ornamentation, bindings and borders, and in the hoods attached to the collar of the frock.

IN THE TURKISH VILLAGE.

The Turkish Village, which is under the management of Mr. Robert Levy, of Constantinople, occupies a space about half-way down the length of the Midway Plaisance on the left of the broad thoroughfare. Unlike most of the foreign villages, it is not shut off from the road by high walls and gates, and one can have the satis-

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A GEOGRAPHICAL DISPUTE.

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faction of seeing the outside at least of all the buildings without the payment of a fee.

The scene represented is an adaptation of a square with its surrounding buildings in the Stamboul quarter of Constantinople. On the street front, stands a restaurant, a "Damascus palace," a cafe-concert, and some smaller refreshment booths. These structures are of wood, painted brilliantly if not artistically. Bright blue is the prevailing tint, this being a favorite color for the decoration of many of the houses along the shores of the Golden Horn. A little beyond these gaudy buildings in the southwest corner of the village is a white mosque with dome and slender minaret, a miniature copy of that mosque in Constantinople to which the Sultan goes in state every Friday to perform his devotions. Back of this little temple and serving to form one side of the square, is a long building, part of which is devoted to a display of fine rugs and part to the exhibition of a beautiful Persian tent and other curiosities. At right angles with this is the grand bazar facing the courtyard which lies between it and the buildings on the street. In the center of this courtyard or square rises an obelisk, whose sides are covered with curious hieroglyphics. This is a fac-simile of an obelisk in the Hippodrome at Constantinople, the erection of which dates back to the days of the founder of the city.

In the northeastern corner of the grounds and behind the restaurant is a Turkish theater, while back of the bazar is a row of artisans' houses, whose upper rooms serve as lodging places for some of the inhabitants of the village, and whose lower stories are used as offices and as shops, where practical demonstration is given of the different industries of the people.

SEDAN CHAIRS

are placed in a conspicuous position near the edge of the road, and guarded by the swarthy mortals whose business it is to furnish locomotion for these odd vehicles. For the first few weeks of the Fair's existence the sedan chairs had little patronage, but they are gradually increasing in favor. Their tops protect their occupants from the sun, and the slight motion produced by the steady trot of the bearers is much pleasanter, when one becomes accustomed to it, than the jolting of the ordinary wheeled chairs of the Exposition grounds, which, with their student attendants, have thus far proved dangerous rivals

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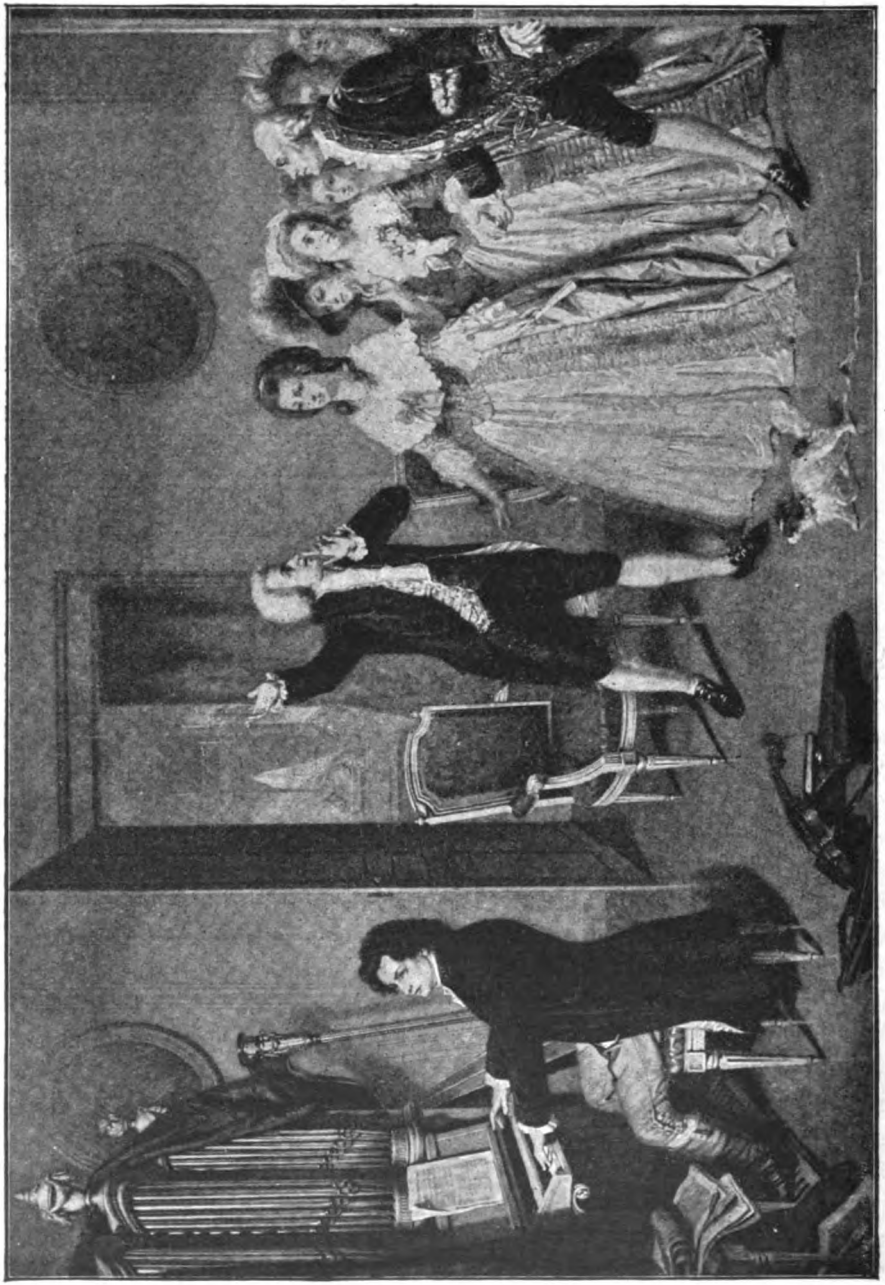
of the Oriental conveyances in the favor of a conservative public. Only a modest amount of custom is expected by the manager for his sedan chairs. He has brought but fifty of them from Constantinople, and even some of these are kept as a reserve supply, for each requires two men to propel it, and there are not more than sixty bearers among the villagers.

A few days ago when I visited the village I questioned the overseer of these men a little, and found that there were only eight Turks among them, while all the rest were Armenians. "Topous," the overseer, a bright-looking Armenian, who has been a dragoman in Constantinople, and speaks very good English, explained the reason for the preponderance of his race over the Turks in this way. The Turks, he said, were altogether too religious to be useful. As good Mohammedans they must pray fives times a day, and I could judge for myself how much time they would have left for work. It would never do for patrons to be unceremoniously deposited on the ground in their chairs of state when the hours for worship came around, while their pious carriers hurried to the mosque to offer their petitions to Allah. He preferred, therefore, to rely for actual service upon his own people, who were Christians, and who could postpone their devotions till a convenient season.

THE GRAND BAZAR

of this mimic Stamboul contains the booths of thirty or forty merchants, whose wares consist of beautiful embroideries, gay-colored slippers, jewelry, olive-wood knick-knacks, candies, preserves, and all other manufactures for which the Turks are celebrated. The prices attached to these articles are very reasonable, when we consider the duty that has been paid by the dealers on goods which they wished to offer for sale at the Fair. A well-known character among the merchants of this bazar is old "Faraway Moses," whom Mark Twain has immortalized in his "Innocents Abroad." Very proud he is of his distinction, and if questioned as to his identity, he says: "If you do not believe that I am he, look on page 382 of the book." In fact, in spite of the changes wrought by time, a resemblance can still be traced between the face of the Turk there portrayed, who objected so strongly to being called "Ferguson" and that of the old Constantinople merchant who has come with his associates to the Exposition. I had seen

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BEETHOVEN AT THE HOUSE OF MOZART.

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"MR. FARAWAY MOSES,"

as I was instructed to call him, a year ago in Constantinople, and so, after renewing my acquaintance, I ventured to ask him whether his visit to Chicago had thus far been a success. I had unwittingly touched upon an unpleasant subject. Not only had his customers been few and far between, but the people who did not come to buy turned over his choicest embroideries, and said: "Is this made by hand? Is that made by hand?" Then, when he answered in the affirmative, and told them, "Yes—by hand-machine," they would touch their foreheads, as if to say, "He is mad." "They understand nothing," continued the old man, waxing wroth at the remembrance of his trials. "If they say they write by hand, do they mean by the hand alone? No; but by a machine—a pen, in the hand. So, also, are my goods made by a machine in the hand, and they are called hand-embroideries."

Then he proceeded to show me table covers, curtains, jackets and various other articles of his stock in trade, all so beautiful and so exquisitely worked that I did not wonder at the vexation caused him by unappreciative visitors. One of the finest exhibitions in the bazar has portieres, prayer rugs and fine embroideries of marvellous beauty and richness, and a valuable collection of antiquities and curiosities. Among these are numerous coins, a model of the Hippodrome obelisk made in silver and steel, a medicine chest with silver-mounted fittings said to have belonged to Francis II. of France, a bowl whose decoration proclaims it as dating from the earlier part of the Byzantine period, fine articles of faience, samples of oiselé work, and an "ark of the covenant," a casket of silver-gilt more than eight hundred years old, which once belonged to a high-priest, and which is surmounted by figures of two angels, while its sides are covered with repoussé work representing scenes from sacred history. At least, I was told that these curious figures were characters with which we are all familiar, but although, I am possessed of a reasonable amount of imagination, I should never have been able to trace the resemblance without assistance.

Leaving the grand bazar by the south door, I had only to cross a graveled path to find myself at the entrance of

THE GREAT RUG ROOM.

Here is a display calculated to engender covetousness in the

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hearts of many. I should have written "in the hearts of all." If I had not overheard an elderly woman say to her daughter as she glanced at the treasures spread before her: "Well, I must say, I never saw any beauty in them Turkish rugs;" so, concluding that many men, and many women also, have many minds, I have qualified my statement. There are rugs as hangings on the walls, rugs heaped up in corners, and rugs spread out on a portion of the floor, which is roped off from the rest of the room lest it should be trodden by feet profane. In this space the most beautiful rug is an Ushak silk carpet, twenty-nine feet long and twenty-six feet broad, and valued at $2,000. The groundwork or floor is of the softest, richest blue imaginable, while the border is a combination of harmoniously blending colors. This is one of the most expensive of the modern rugs in the collection, though there are antiques worth twice or three times its value. There are two smaller Ushak carpets spread near it, one whose prevailing tint is a dull gold, and another blue, like its mammoth neighbor.

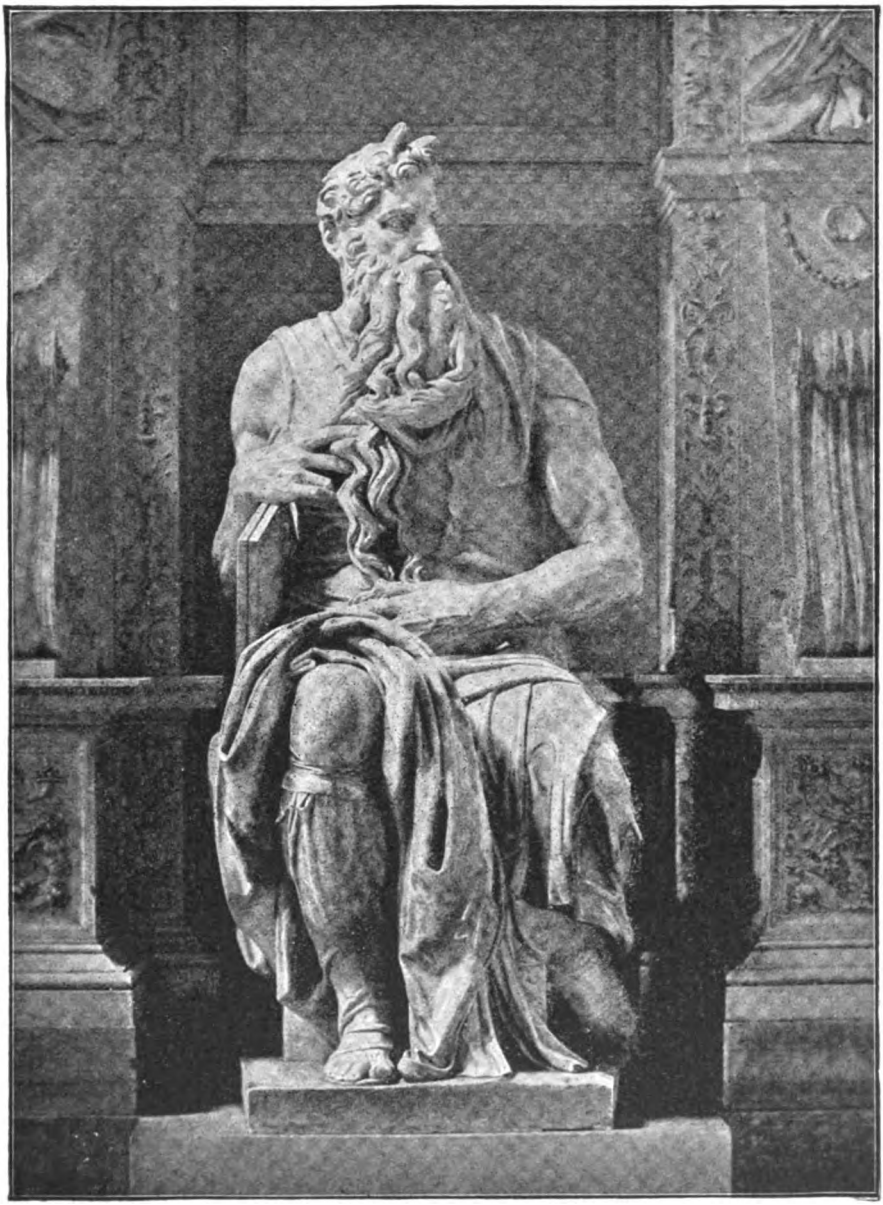
The rugs in this exhibit are all manufactured by the inhabitants of the little towns in the vicinity of Smyrna. Smyrna is the market-place for these commodities, and hence they are often called by the general name of Smyrna rugs, but to be exact, one should designate the different varieties by the names of the different villages of Asia in which they were made. The rugs of Nefeez, Ferah, Parlak, Nazyk, Yordes, Hamidiek, Demirdjik and Ushak are among the most celebrated for their beauty and value.

At the end of this long room, opposite the principal rug display, is a little pavilion, the walls and ceiling covered with costly hangings, the floor spread with soft Oriental carpets, and the front, which is otherwise open into the room, protected from the invasion of the crowd by a low fence or screen of carved wood. The pavilion is fitted up to represent

THE BEDCHAMBER

of the daughter of a Turkish Sultan. The bedstead itself is magnificent. It is of solid silver, curiously wrought, and weighs three thousand pounds. The metal employed in its manufacture is worth alone $350,000, while its delicate workmanship, as well as the fact that it once belonged to the sister of Abdul Mamond II., render this regal couch of immense value. A few other articles of furniture, suitable

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MOSES. 365

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for the adornment of the bedroom of an Oriental princess, are also arranged in the pavilion, but, though interesting in themselves, they are quite overshadowed by the magnificence of the silver bed.

Next to the rug room is an apartment set aside for the exhibition of a wonderful tent, bought from the Persians. It is fine enough to have belonged to a shah, and to have been used by him for his summer outing among the mountains. There is one large room for the owner and his family, and another smaller one for servants. The material of the tent is a soft cloth, almost entirely covered with embroidery done by hand. Delicate open-work in the embroidery is arranged to form something like latticed windows, through which the light and air can be admitted. The interior walls of the tent are decorated with pictures of Persian women, and altogether it is a most elaborate affair. A little later, by some change of partition walls, the pavilion containing the princess' silver bed and this Persian tent are to be included in one room to which a small entrance fee will be charged. Close by the rug emporium stands the mosque, and happening to be in its vicinity about the noon hour, I waited a few minutes that I might see

THE MOHAMMEDAN CEREMONY.

At twelve o'clock the turbaned priest ascended into the balcony surrounding the minaret, and, in loud and monotonous voice, called the faithful to prayer. The Turks were already performing their ablutions. There are no fountains provided for them here as in Constantinople, at which they can wash their heads, their hands and their feet before addressing their petitions to Allah, but a water-pipe, with faucet attached on the outside of one of the buildings in the yard, although not especially ornamental, seems to answer every purpose.

The door of the mosque is left open, but a wooden fence about the steps serves to keep at a respectful distance the crowd that usually assembles to see the faithful at their devotions. The floor of the temple is covered with prayer rugs, one being an especially fine antique, lamps are hung by chains from the ceilings, and the altar is at the east, that the worshipers may turn their faces toward distant Mecca. The Mohammedans, kneeling on the rugs, touch their foreheads to the floor and recite their prayers, paying no heed to the spectators, who too often forget that they are looking, not at a show prepared

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for their benefit, but at a real religious ceremony, the sincerity of whose participants should at least command their respect. It was one of the stipulations in the contract made for the Turkish exhibit that the Mohammedans should show their peculiar form of worship.

At the corner of the village farthest distant from the mosque is the theatre. Musicians at the entrance play upon their native instruments with a perseverance which commands admiration, though the melody produced is of a somewhat weird and erratic character. A man standing near them, who has evidently been chosen for office on account of the penetrating quality of his voice as well as for his familiarity with the English tongue, announces the attractions which are to be seen within.

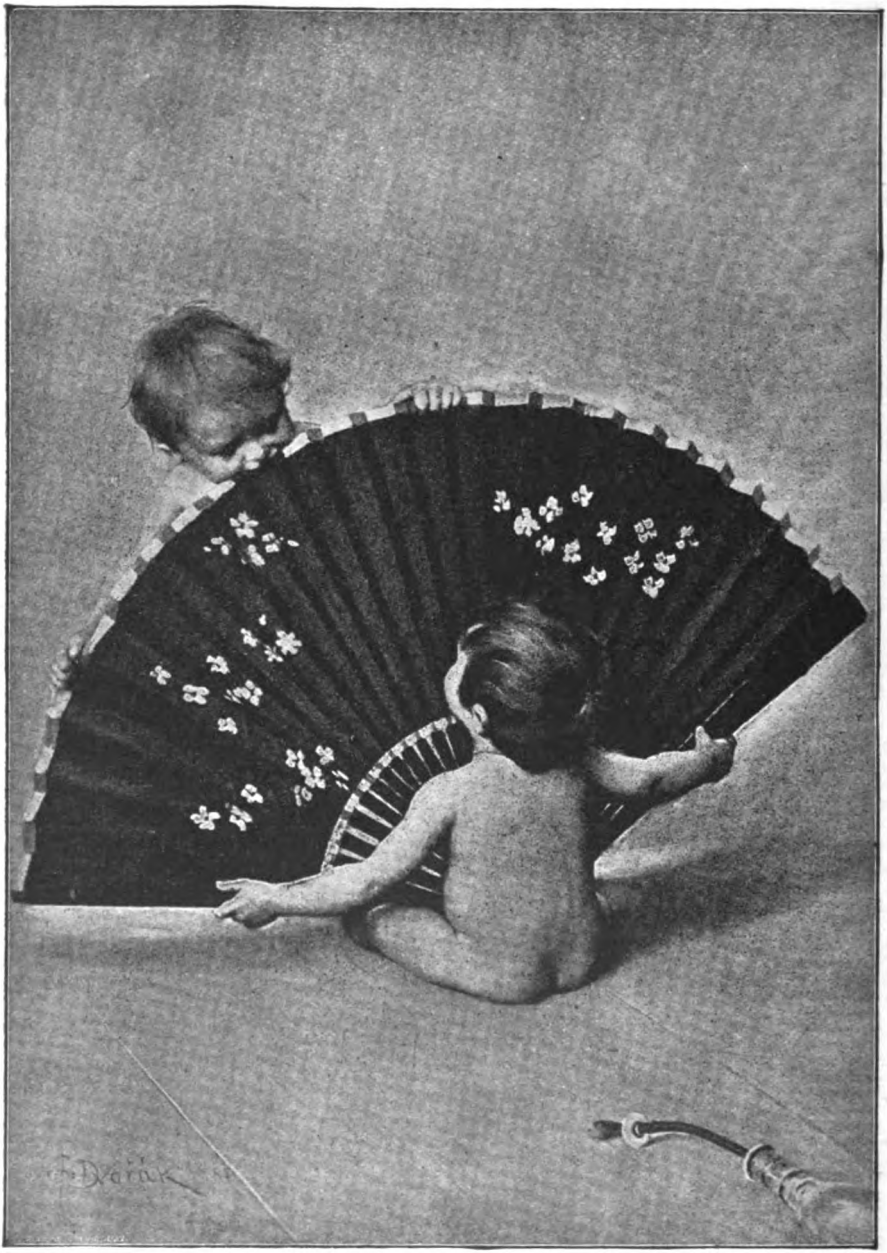
A VISIT TO THE THEATRE.

The performance was a Kurdish drama, preceded by orchestral music, by singing and by dancing. It was all very good. The playing and singing was rather peculiar, to be sure, and to Anglo-Saxon ears there was a marked similarity in the selections rendered. The dancing-girls are, for the most part, from Damascus, and performed the native dances in a highly creditable fashion.

There was a graceful, flexible moving of the head, a sinuous motion of the shoulders and arms, an undulation of the body, but a scarcely perceptible change in the position of the feet. This was the dance most applauded—"The Damascus Dance." But there followed others which were more like what we are accustomed to consider dancing, though there was nothing in the least resembling ballet. The dancing-girls were dressed in long and rather heavy garments, wore a profusion of silver chains and other ornaments, and sometimes accompanied their movements with the clapping of castanets.

The play that followed the terpsichorean prelude was a melodrama, and the acting was very good. The dialogue and monologue were in an unknown tongue, to be sure, but the audience had no cause for complaint, as they were furnished with hand-bills on which the argument was printed in English, while, to further help matters out, an interpreter stood by the stage and explained in a loud voice what was taking place. This running commentary was quite amusing, and the interpreter seemed to enjoy the joke as much as the hearers, for he smiled sympathetically as he delivered his well-rounded English sentences, as, for instance: "Now he doth deplore his love."

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868 HIDE AND SEEK.

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"Now he doth regret that his obstinacy hath brought him into such a case." The theatre was quiet and orderly, and I have heard many mention the excellent character of all its entertainments.

One of the girls has been considered the best dancer in Damascus, and receives a salary of two hundred and fifty dollars a week during her engagement in this country.

The "Damascus Palace," as one of the buildings in the street-front is placarded, is quite well worth the quarter which is charged for a sight of its contents. The whole of the enclosure is not occupied by the palace. The plan of the exhibition is to show the opposite extremes of life in and about Damascus. The visitor first enters a Bedouin camp, and is introduced to some of the customs of this nomadic people. Under the shadow of the dingy tents are to be seen the cooking arrangements, the looms and the various rude household utensils. The Bedouins seem to take a friendly interest in those who visit them. There are only three tents, and I saw but five grown persons and one child as their occupants. Two of the men are rather fine specimens of their race, and the women would not be bad-looking if they were a trifle cleaner and had not painted or tattooed their faces.

The child is a pretty baby-girl about a year old, who sleeps as peacefully on her dirty pillow or smiles as brightly from her father's arms, as if she were in her own land, instead of being here as part and parcel of a World's Fair. She has little round cheeks and beautiful brown eyes, whose brilliancy her mother has already tried to heighten by smearing their lower lids with black paint.

The Bedouins perform for their visitors' entertainment various evolutions, among which is a sword dance. Bread is mixed and baked in thin sheets on the primitive cooking apparatus, and is then passed to those who choose to partake. It is quite good, and tastes like a cross between water-crackers and toast.

THE COSTUME

of the men is peculiar, and I have heard it graphically described as a sheet with a bed-quilt over it and another sheet over that. Their hair is long, and falls in little braids and stringy locks from under their turbans, but they have clear, dark eyes and very good features.

The palace, which represents the dwellings of the rich in Damascus, opens from the camping-ground of the Bedouins. It is one large

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room, the center occupied by a fountain said to be six hundred years old. The basin of this fountain is of mosaic, the stones having been brought from three different cities, Damascus, Aleppo and Mecca. The floor about this fountain should be tiled, and a portion of the tiling is shown, but the packing-case containing the rest was lost on the way to America. The walls are of wood, but are painted so that, at first glance, one thinks that they are covered with stamped leather. Nearly up to the ceiling, which is very high, are shelves, on which are placed vases and other Oriental bric-a-brac. On the right and left of the entrance space are raised platforms, furnished with luxurious divans extending the length of the three walls. The divans, against the middle walls or those opposite the edge of the platform, are very high, while those at the sides are much lower. The covering of the couches on the left platform is of blue velvet with heavy gold ornamentations, and that on the right is of scarlet satin with silver decorations. The room is to represent

A PASHA'S PALACE,

and much of the furniture is very old, and once belonged to a real pasha of Damascus. The left platform or room is where the pasha would receive his guests, seated on the high middle divan and inviting those of most exalted rank to sit beside him, while the humbler guests occupied the lower places. The room on the right of the entrance would be for the women of the household, and would be separated from the rest of the apartments by screens. The manager of the exhibit explained that he had almost made up his mind to say, in future, that both rooms were for the women. The American ladies who visited his model palace informed him that the more handsomely decorated of the two ought to be assigned to the fair sex. He was quite willing to make the desired change, if it would please them, though in Damascus the lords and masters would have been the more sumptuously lodged; but there seemed such a difference of opinion as to whether red satin or blue velvet were the more desirable upholstery that he had been at a loss how to adjust matters satisfactorily.

There are many curiosities to be seen among the furnishings and decorations of these rooms, and interesting explanations of the various articles are given by the men in attendance.

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THE BROTHER'S SOLO.

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THE "GREAT ZEIBEK,"

who, in his brilliant costume, is one of the most noticeable personages in the Turkish village. He is the sole representative at the Exposition of a war-like race which for many years inhabited the mountainous passes of Eastern Asia, but is now fast becoming extinct. In former days, the Zeibeks were of great service to the government in helping to protect the cities from the depredations of robber-bands, but, by reason of much fighting, their numbers were gradually lessened, till now few of the race remain. These are a farming people, who still assume the costume of their forefathers on all holiday occasions. This dress has always been noted for its magnificence throughout Turkey. The Zeibeks are men of great size, but in complexion they vary, some having comparatively fair skin, blue eyes and light hair, and some being dark as the average Turk. In religion they are, as a race, Mohammedans, though there are, of course, exceptions. This special Zeibek, who is a chief of his tribe, is a Christian, and is now a citizen of Smyrna. He can speak eight languages, and has acted as dragoman for many years for families traveling through parts of Asia and Africa. He does not always travel in costume, but often wears his brilliant dress at the request of the party for which he is acting as escort, for a Zeibek is known throughout the East and is invariably treated with deference by the natives. These facts concerning the people and himself I learned from the Zeibek in the Turkish village, who is by no means a formidable individual in spite of his clothes. He is called Alfred Melloni, having received a Christian name at baptism. It was expected that thirty of his countrymen would have joined him at the Exposition, and would have given exhibition of their various customs, but here, as in many other cases, a "monopoly" interfered with cherished plans, and the Zeibek is alone in his glory.

GREAT CANNON ON EXHIBITION.

At the suggestion of the German Emperor, Herr Krupp, the famous manufacturer of great guns, has expended about a million of dollars upon his exhibit of cannon and other arms at the World's Fair. A large building has been erected especially for this purpose, placed between the building for the Leather Industries and the Convent of La Rabida.

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The chief interest of this warlike display will center in an enormous rifled cannon said to weigh two hundred and sixty-four thousand pounds, or a hundred and thirty-two tons—"long tons"—which is asserted to be the largest cannon ever cast, or at least the longest and heaviest.

In the forward turret of the British Battle-ship *Sans Pareil* are mounted two cannon of a hundred and ten tons each. H. M. S. *Victoria*, lately sunk in the Mediterranean by her sister ship *Camperdown*, also carried a like armament; while guns of a hundred tons and of sixty-eight tons each are now common not only in the English navy, but on the battle-ships of France and Italy.

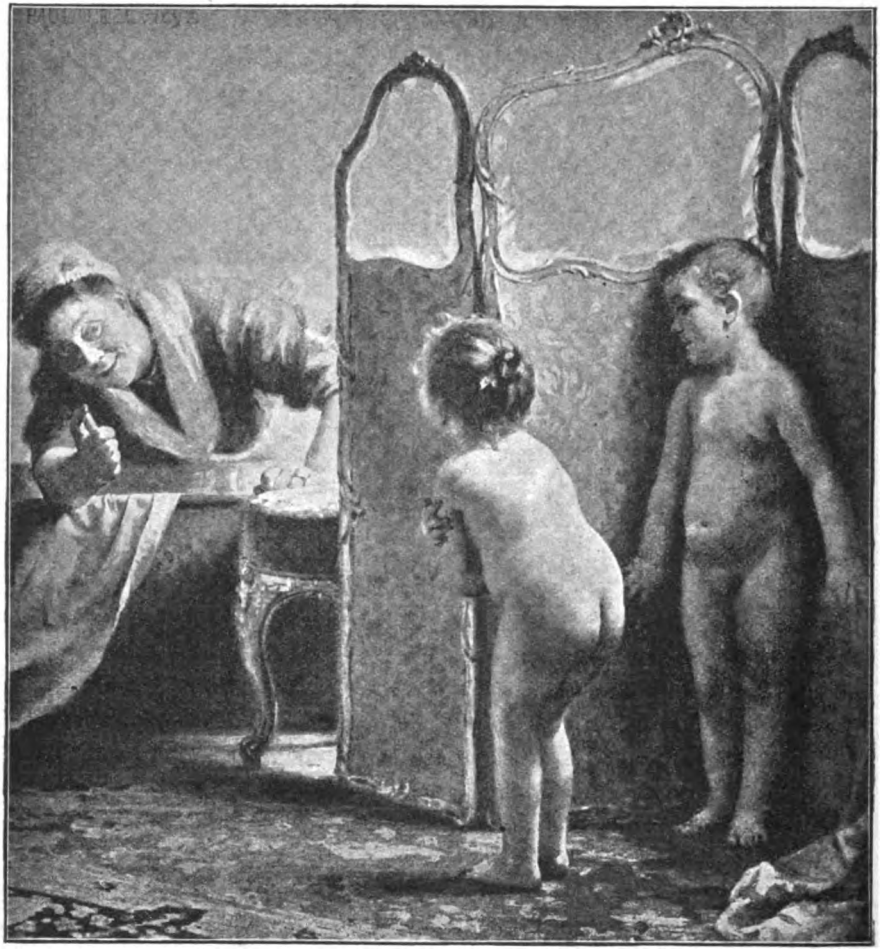
This one hundred and thirty-two ton gun exhibited by Krupp is a breech-loading steel rifle, forty-eight feet in length, having a calibre of sixteen and a half inches. The diameter of the piece near the breech-block is six feet and four inches. The conical, chilled steel projectile weighs exactly a ton, and the charge of powder near eight hundred pounds. So that, speaking of it as a rifle, we may say that the cartridge for this mammoth shooter weighs well nigh three thousand pounds.

Fired with the maximum charge of powder the piece is estimated to have a range of from fifteen to sixteen miles. It is almost needless to say that the use of steam or water is required to hoist the projectile to the chamber of the gun when it is to be loaded.

From the factory at Essen it was transported to the sea upon a steel "bridge" mounted upon two very strong cars, having steel frames and sixteen wheels each. On arrival at Baltimore the Pennsylvania Railroad received it from the steamship and loaded it on a similar bridge and two cars, constructed after the German model. Thence it was drawn as a special train to the Exposition grounds at Chicago, where it will remain on exhibition until November next.

Compared with this huge gun, the largest cannon exhibited by the United States at the Fair appear like mere toys. One of these, however, is far from being a plaything from any ordinary point of view. It is a twelve-inch breech-loading rifle, weighing about sixty tons, thirty-feet six inches in length, and throws a projectile of a thousand pounds. Four hundred and sixty pounds of powder are burned every time it is fired; and the range is estimated to be nearly or quite ten miles.

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374 THE TWINS.

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THE CHILDREN'S HOUSE.

Were the children forgotten when people were considering how to make the Fair attractive to every one?

By no means. On the contrary, they have a house built and furnished on purpose for them. It has been built wholly from gifts of those who love children and desire that they, as well as the older folks, may be represented at the Exposition, and may enjoy the idea that there is one building which is in a peculiar sense their home, and the place where all that interests them is exhibited.

It is a beautiful building, containing eight or ten large well-lighted rooms, or salons, decorated delightfully with pictures, panels and friezes, in blue and gold.

In front there is a handsome fountain in marble, made in London, under the direction of Miss Frances Willard and Miss Gordon. The design is that of a little girl holding out a cup of cold water.

Within the house, first of all, in a pleasant nursery-like room, we are allowed to visit a *creche*, or baby garden, which is so fortunate as to be in the personal care of Miss Maria M. Love, of Buffalo, whose name is of itself a pledge of fitness. Here are to be seen all those things which pertain to the wants, necessities, joys, sorrows and pleasures of the youngest children.

It is a model of what a nursery should be; and throughout the Fair instruction will be given here as to the most approved methods of dressing, feeding, "doctoring" and amusing very little people.

There is also an exhibition of the Japanese methods of caring for infants in the flowery isles of the far eastern seas, and more novel still, the methods of the Pueblo Indian mothers of New Mexico.

Incidentally there is an exhibition of the cradles of various nations and races, and the nursery amusements of Guatemala and of distant Paraguay are displayed.

The French toy makers, moreover, have a room forty feet long by twenty in width, in which are shown to American children all the curious toys of France; and they are indeed something wonderful in their variety.

In another room is a model kindergarten; and in still another a children's kitchen, where it is enough to make one laugh outright to see little girls not more than six or eight years of age learning to cook; while others are taught to make cakes, to boil, to bake, to sweep, to dust, make beds and perform other household duties.

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For older children, in another room there is a Swedish work-shop, where wood-carving is taught, and boys learn to handle carpenter's tools.

In the library, which is in charge of Mrs. Clara Doty Bates, are to be seen scores of famous picture-books, and also a great array of juvenile magazines and periodicals, American, English, French and German, together with a large number of books for young people, by the most popular authors.

But perhaps the most interesting feature of all is the room where, by authorization of the State of Pennsylvania, is an illustration of the method by which little children who are unfortunately born deaf-mutes are successfully taught to speak and converse like other children. This philanthropic endeavor is in charge of Miss Mary Garrett of Philadelphia.

The Assembly room is furnished as a children's auditorium, with little chairs, settees and a stage, where stereopticon lectures, with a wonderful collection of views, of a great variety of interesting and instructive subjects, are given by the older boys, assisted by girls.

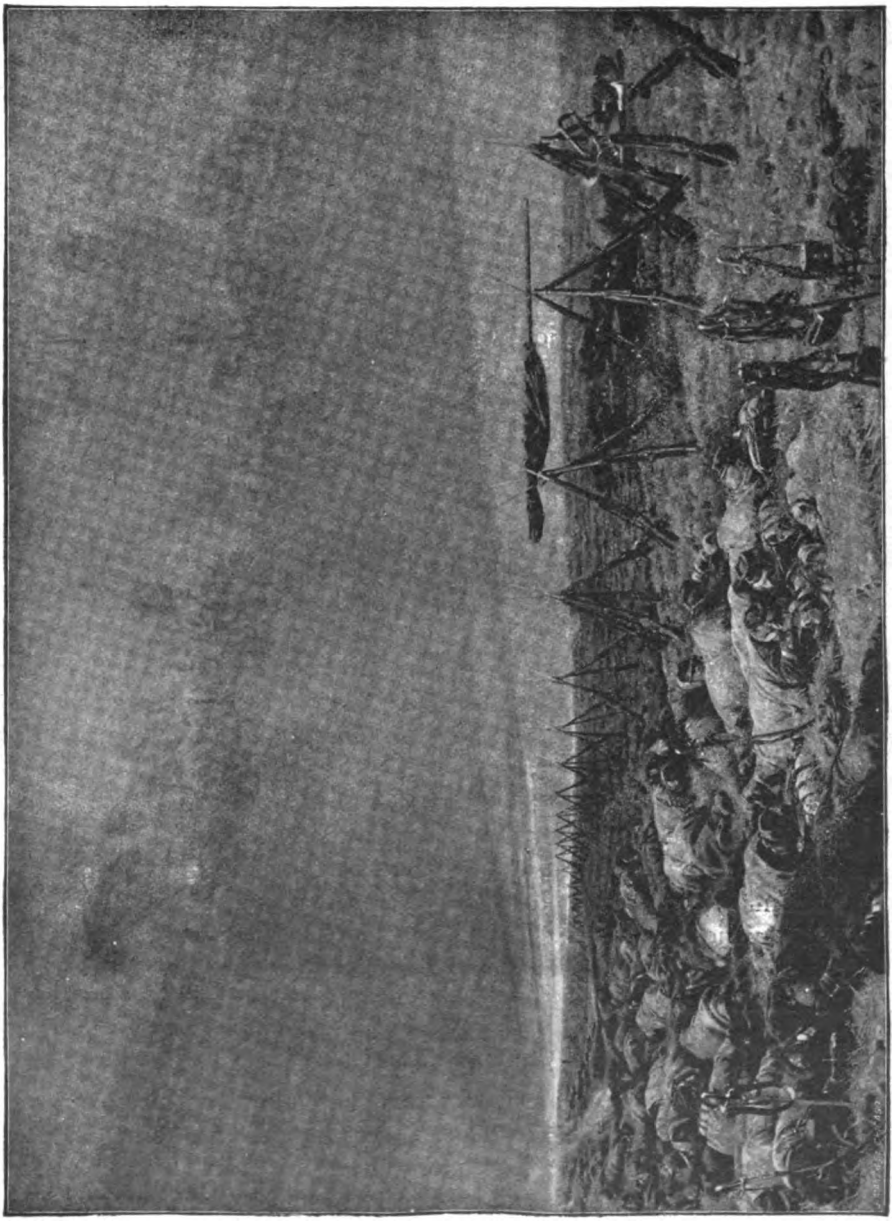
Among the decorations on the panels of the different rooms are many scenes from "Grimm's Fairy Tales," illustrating the exploits of "Jack the Giant-Killer," and "Little Red Riding-Hood." Across the ceiling are artistically depicted the Signs of the Zodiac.

Finally and topmost, the broad roof of the house is fitted up as a play-ground, or play-garden, with a strong wire netting set up around the parapet to guard the young visitors from accident. Here there are flowers, vines, arbors and—it is said—real birds, butterflies and squirrels.

AN ARBOREAL PALACE.—That a building more than five hundred feet in length, by two hundred in width and proportionately lofty, could have been constructed entirely of logs, poles, saplings and withes—wooden pins taking the place of iron bolts and rods—is another of the wonders of the World's Fair grounds. Such architecture is in remarkable contrast with that of its imposing neighbors in "staff" and iron. Appropriately in contrast, since in this arboreal palace is lodged the timber and woods exhibits of America.

Here is to be seen rustic architecture on a colossal scale; the triple rows of pillars which support the encompassing piazzas are so many huge tree-trunks with the bark on them, just as they were felled

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THE SOLDIER'S DREAM.

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in the forests ; other great logs form the door-frames and the jambs of alcoves ; the walls are of slabs, and the interior partitions of thousands of saplings, inwrought in rude yet pleasing diagonal work. More than two and a half million feet of timber are said to have been used in the construction. Even the roof is of the bark of trees.

A veritable temple of Pan and all sylvan divinities ! A shrine to which it is the aspiration of the builders that the American people may come, and, coming, awake to a realization of the grandeur of our country's forests, and the necessity of preserving them from that ruthless wholesale destruction which has already so sadly marred the beauty and disturbed the climate of the national domain.

BARTHOLDI'S COLUMBUS.

As a work of art it excels anything that has appeared in this country purporting to represent Columbus, and no other work of this size produced in silver is to be compared with it. The statue was designed by Bartholdi especially for exhibition by the Gorham Company at the Fair. It is a little larger than life size, its height being a trifle more than six feet, and it stands on a silver pedestal about a foot high. The navigator is represented as catching the first glimpse of America, his right arm and index finger being extended in full length in the direction of the unknown land.

He holds a globe and compass in his left arm and hand as though he had just been making calculations as to his whereabouts. Back of his left foot are a coil of rope and an anchor. His cloak is blown apart in front by the wind, and the attitude of the figure is one of heroic confidence; it seems to say: "It is there, as I told you." The metal is finished in the oxidized form which permits effects in light and shade that could not be had if polished.

The statue was cast at the works of the company in Providence, R. I., but the model was done at the studio of the sculptor in Paris. Manager Bruce Bonny said of the process:

"The sculptor first made in clay his complete model exactly as it was to appear in the finished statue. Then a mold was taken of the model by applying a heavy layer of plaster of paris. The plaster mold was then removed in arched sections, so that, being removed, they could be placed together to form a complete figure with the outlines of the interior. From this mold a plaster of paris cast was made, thus reproducing in plaster the identical figure first modeled

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in clay. The plaster cast, covered first with a coating of shellac to prevent the absorption of moisture, was then ready for the founder, and in this form was shipped from the studio of the sculptor at Paris to the works of the Gorham Company at Providence. At the foundry the plaster cast was first put on a soft bed of sand and covered with a layer of molder's sand, shaped into arched sections, as was the plaster mold, and a sand mold thus formed which could be taken off the cast and put together again. An outside frame of sand, beaten hard over the sections, served to keep the layer intact. After this step was completed the sections were removed, and a coating of liquid plumbago, or black lead, was applied to the inner surfaces.

HOW THE STATUE WAS CUT.

"The molder's, or French sand is of a peculiar nature, containing the qualities of a pliable clay and a coarse sand, which will allow, by its porous composition, the escape of gases generated in the interior. The lead-coated sections, after being put together, were secured by perforated iron pipes running through the figure in all directions, like a veinous system.

"A second cast was then made from the second mold by packing the mold full of sand mixed with a flour paste, so that the particles of sand would cohere, the sand model being held together and in place by the iron pipes which traversed the interior of the mold. Again the sections of the sand mold were removed, the plumbago still adhering and remaining on the interior surface. The sand model or core, bared from the outside shell, was then shaved down to a depth corresponding to the thickness of metal in which the statue was to be cast, and then painted with a layer of plumbago as the interior of the shell or mold. Both shell and core were then ready for the oven, and after being subjected to a three day's bake they were dry enough for the operation of pouring.

"Then the sand shell was built up again over the core, and the whole fastened and held together by an iron frame. Thus the final mold for the casting consisted of the space bounded on the outside by the sand mold, giving the exact outlines of the original plaster and clay models, and on the inside by the sand core, which had been reduced in all parts, corresponding to the depth of metal to be cast. The entire mold was then covered with a heavy outside coating of sand, through which channels were cut leading to all parts of the

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SOUR GRAPES.

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interior space. These channels were for the purpose of causing an even and rapid distribution of metal, and extended from the top or mouth of the mold, where the metal was poured, through the outside layer, in tortuous, pipe-shaped passages to the various parts of the mold.

"Four black lead crucibles containing the ton and a quarter of precious metal were placed in the furnaces after the completion of the final mold. After about four hours the molten contents of the crucibles were at a white heat, and all was in readiness. One by one each crucible was lifted by a chain fall and the contents poured into a large iron bucket, and thence the molten metal was carried to the huge mold buried in sand. After a few hours the casing was sufficiently cool to allow the removal of parts of it, enough to show to experienced eyes that the casting was practically perfect."

RAILROADS AT THE FAIR.

Not alone the railroad companies, but the manufacturers of everything used in track or on train, from a locomotive to a coupling pin, have combined to make the railway exhibit at the Fair at once complete and interesting. Men of technical knowledge, who desire to complete their education in their specialty by examination and comparison of late improvements, have the products of the work-shops of the world spread before them, while the general visitor finds himself introduced to luxuries of travel of which he may have been ignorant.

The western extension of the Transportation Building is wholly devoted to rolling stock and railway appliances and devices. Side by side, on tracks extending the length of the structure, are locomotives of all American makes, with some from European factories. Model cars of all varieties are open for inspection, with several complete trains. To the practical railway man perhaps the most interesting of all the exhibits is that of the Baltimore and Ohio road, showing the birth, development and perfection of the locomotive. In long rows extend models and originals of the engines that have become historic.

Joseph York tells the story to the visitor. He is to be found seated on the Traveler, a veteran engine of the grasshopper type, which was built for the Baltimore and Ohio road fifty-six years ago by Phineas Davis, and only retired from active service that it might be brought to Chicago. Mr. York is proud of his engine and of his

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service of many years with the Baltimore and Ohio road. If the visitor desires, from this old gentleman he can obtain a complete history of the locomotive, commencing with its birth and ending with its latest development.

The start is made with the revival by Sir Isaac Newton in 1680, of an idea set forth by Hero of Alexandria some 1800 years previously. It was thought a boiler blowing steam through a narrow nozzle would propel a wagon on which the apparatus might be mounted, on the principle that the recoil of a gun follows the ignition of gunpowder in its charge. In other words, the resistance of the surrounding air was to be utilized. Perhaps Sir Isaac's carriage moved, although one looking at the reproduction of the device would hardly think so.

DAWN OF ENGINE MAKING.

Of later date—1690—is Dennis Papin's application of the steam engine to the propulsion of a road wagon. A reproduction is shown of a machine constructed on this principle for military service by a French army officer in 1770.

Further along is shown by reproduction the original grasshopper engine, constructed by James Watt, the father of the steam engine, in 1784. Two of Richard Trevithick's conceptions are reproduced, one of importance as introducing the connection from the crosshead to the driving wheel, the other being now recognized as the first railroad locomotive. Sections of the original rails are shown, short, rusted pieces of L iron, with the masses of stone, which preceded the wooden ties of the present.

From Trevithick's machine one passes to a steam dredge that Oliver Evans constructed near Philadelphia in 1804. To move his scow to the water he mounted it on wheels, and made connection with rope belting.

Early in the history of the locomotive a burning question was the ability of a smooth wheel to hold to the rail with sufficient force to drag a heavy load. In 1814 one Blenkinsop constructed an engine provided with a cogwheel, which fitted into a rack placed by the side of one of the rails, while Runton exploited a device whereby iron legs working between the tracks pushed the engine forward. Whether or not the smooth wheel would answer was settled forever in 1829, when Stevenson's engine, the Rocket, which is reproduced in the exhibit, won in the competition with four others.

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COLUMBUS ASKING LEAVE OF THE PRINCE OF RABIDA TO GO TO DISCOVER AMERICA.

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The first locomotive run on American soil, named the Stowerbridge Lion, purchased by Horatio Allen, of New York, in 1829, for the Delaware and Hudson Canal Company, is reproduced exactly. It is of the grasshopper type. Peter Cooper tried his hand at engine planning, and the Baltimore and Ohio road in 1830 ran, as an experiment, an engine constructed under his supervision, this being the first locomotive to run on this road. It is a curious looking affair and was not a startling success, but Phineas Davis, of York, Pa., did better in 1832, constructing a movable engine for the Baltimore and Ohio road. This was the beginning of a series of engines of genuine merit, proved by service of half a century and more. The grasshopper engines are curious affairs. There are numerous specimens in the exhibit, all resembling more or less an old fire engine placed on a flat car. The cylinders are vertical, the piston rods moving up and down.

During these years improvements in engine building, from which gradually has been evolved the magnificent machine of to-day, are shown in the exhibit of the Baltimore and Ohio road, the finish being made in the M. M. Baldwin, No. 1, made in 1876 for exhibition at the Centennial Exposition.

Differences are shown progressively in detail. The epoch when the first horizontal replaced the vertical boiler is set forth, as is the engine in which steam was first turned up the stack to cause draught, replacing the clumsy device in which a blower, turned by exhaust steam, furnished air to assist in the combustion of the coal, these being the most radical differences between the grasshopper and the present type. Phineas Davis perfected the grasshopper. He was killed on one of his engines, but Ross Winans took up the work where he dropped it and completed the locomotive. This is the story in brief of the exhibit of the Baltimore and Ohio road, as explained by the custodian.

PULLMAN COMPANY'S EXHIBIT.

From the products of the laborious toil of the inventors who made travel possible it is but a step at the Fair to other masterpieces that make travel a luxury. In the splendid exhibit of the Pullman Palace Car Company is shown advancements in art as well as mechanics. Two trains, with various sample cars, with the latest of improvements and finest of decorations and finish, comprise the major

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portion of the exhibit. Entering the night train of five cars, full vestibule, even to the engine, in the front of the combination baggage car is seen an engine and dynamo for electric lighting. Behind the baggage compartment is the general smoker, elaborately fitted up in Byzantine style and provided with barber shop and bath, the finish of the lavatory being in onyx, as is now customary with the company in all its first-class cars. A desk and library are provided.

Passing to the diner, it is noticed that the vestibules are extended to the full width of the car, the steps being concealed until needed, when they are exposed by lifting a section of the flooring. Beyond the kitchen and pantry is a splendidly decorated dining-room with tables, each seating four. The finish is in vermilion wood, a new variety, elaborately carved. At the end of the car is a cupboard and ornamental center-piece, wrought iron grill work, of fine design, made in Chicago, entering into the general scheme of decoration. Next is the drawing-room sleeper, containing ten beds and two private cabinets. Magnificent upholstery and artistic wood-work are seen at their best. Spaciousness is obtained in that the line of the upper berths, when closed, is kept farther from the center of the car than was possible formerly. In the rear is the bridal chamber, finished in white enamel and gold, with hand-made embroidery of Bohemia.

Next comes the composite sleeper, with ten separate rooms, each made distinctive by a different scheme in color and design in the decorations, which are of the highest order. Complete toilet appliances are provided for every room. The last car of the train contains twelve beds, ladies' bathroom, with shower, and a ladies' parlor with a desk; at the extreme end of this car is an observation platform, from which twenty passengers can view the country. Many devices, each small in itself, perhaps, help to the general effect. The electric lights, for instance, are shaded by silk fringe. Vases are scattered on stands throughout the cars, proving that the makers are satisfied of freedom from lateral motion. Entrance floors are paved with rubber mosiac, a new idea of easily appreciable merit. Ropes of various colors replace the cumbersome draperies of the past. The entire train, in fact, is a model of luxury, convenience and comfort.

The Pullman Company's exhibit includes also a day train, showing a postal car, a parlor car, and a day coach. Specimens of cars for street traffic are shown, including a double-decked electric car,

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such as are in use in Washington, and a sample of a new motor car, in which gas is used to create electric power. In addition to its exhibit of cars the company shows a reproduction in miniature of Pullman, with the workshops and all other buildings, including residences.

CANADA'S FINE TRAIN.

The Canadian Pacific road is represented by a passenger train, with sleeper, first-class day coach, colonists' car, dining and baggage cars, and engine. J. H. Hall, a conductor of the road, is on duty, ready not to punch tickets but to show visitors through the train. All the cars are vestibuled and lighted by electricity. The finish and decoration of the diner is superb. White mahogany, with bronze tablets for ornamentation, with linen, silverware, crystal and china on the spread tables, create a pleasant effect of light and cleanliness. Thirty persons can be seated at the tables. The sleeping-car is a model of comfort, of the type familiar to all travelers, but brought up to date by modern improvements. The finish of the first-class day coach is in quarter-sawed oak, the seats having backs arranged rather for comfort than economy of space. This car is divided into three sections by two arches, which create an impression of spaciousness foreign to cars of the usual pattern. There are two smoking compartments, one at either end of the car, and the usual toilet conveniences. In the colonists' car, what is called in this country an emigrants' sleeper, many improvements are found. The seats are comfortable and the beds furnished with good bedding. In finish and decoration the car is superior to many first-class day coaches. All the cars are finished without and within with oil and varnish, no paint being used in any form. This is a specimen train, being a duplicate of those now in service on the road. Each of the cars are 14 feet 10 inches high by 10 feet 3½ inches wide. The sleeper is 78 feet long, and weighs 98,000 pounds. The locomotive is known as a ten-wheel engine. It weighs 106½ tons when loaded, and the cylinders are 19 x 24 inches. Steam from the boiler heats the train, and the customary bell cord is replaced with a pneumatic device. Electricity is provided from storage batteries, charged before the train starts.

In reference to light and heat, the Chicago, Milwaukee and St. Paul road makes an interesting exhibit in one of its special tenders. This is a square, box-like car, with iron sides and concrete floor, for

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the greater extent, containing an engine, boiler and dynamo. To two trains on this road, each of ten cars, the tenders are regularly attached, furnishing the necessary steam for heating and electricity for 200 incandescent lights, each of sixteen candle power. Great strength has been supplied the tender, which would withstand a shock at greater force than would be required to wreck the train. As the tender is isolated from the baggage car by iron doors, a conflagation in the event of an accident would be practically impossible.

HOW THE ENGLISH TRAVEL.

Turning from luxury in travel as developed in America, where great distances have brought into use every device for the alleviation of fatigue, in the exhibit of the London and Northwestern railway, of England, the visitor sees how different conditions have worked to different ends. There are two cars and a locomotive. To one unaccustomed to travel abroad the very exterior of the coaches suggests discomfort. That such is not the case, during short trips at least, is proved by examination. One of the coaches known as first-class, composite, is divided into five compartments, two each of first and third class and one of second class. The difference between the classes is chiefly of comfort, the luxury of the first class not being the cause of its superiority, but the fact that but five people are seated in it, instead of nine, who are crowded into the same space in the third-class apartments.

No amount of description will make perfectly clear the points of difference between an American and an English car, as is evinced by the expressions of surprise heard when visitors examine the exhibit. Entrance is had to fairly roomy compartments running across the car from doors on either side. Inside the effect would be that of an ordinary coach were it not that the settee on one side is broken by a passage-way leading to a lavatory. Comfort is possible if luxurious upholstery, good ventilation, and electric light, with a silk night-cap attached to shade the light when passengers desire to sleep, make comfort; but the roominess of a Pullman is replaced by what is little better than a well-padded box into which people are crowded, without an approximation to the freedom of a Pullman, where refuge in the smoking-room will escape a disagreeable companion or a promenade through the train furnish exercise. Doors from either side of the compartment lead to a platform similar to that on open

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DEPARTURE OF COLUMBUS TO DISCOVER AMERICA.

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street cars on which the guard moves back and forth. The doors are locked, but can be opened by lowering the windows, reaching out and turning the handle. It is all very odd and not quite so convenient as it might be. If, however, but two or three people happen to occupy one coach, comfort must be great. This can usually be secured by an extra payment. But it must always be rememberd the largest trip on the Northwestern and allied lines, practically from one end of the island to the other, only consumes from eighteen to twenty hours.

Second and third class travelers are well provided for in that they travel in the same car, though in different compartments from first-class passengers. Between a well-filled coach of the customary American pattern and a third class compartment with nine occupants, preference would be given the latter in many cases.

Those of the English who like to take a nap stretched at length, instead of sitting up, can ride on the London and Northwestern road in a splendid sleeping saloon car, patterned on the American model. One of these coaches is shown, which is well up to the standard of American cars in all but size. At either end is a lavatory, the center of the car being taken up with three state rooms, accommodating ten persons in all, and a stateroom for two attendants. The finish and decoration is elaborate, a feature being oblong boxes fitting under berths for the storage of clothes. Trains on this road are drawn by fine engines. That attached to the two cars of which a description has been attempted being of three cylinder, compound, express passenger type, the high pressure cylinder being fifteen inches in diameter, with stroke of twenty-four inches. The driving wheels are seven feet in diameter.

Typical of the performance of English engines is the record of the Lord of the Isles, a veteran with 789,306 miles to its credit, which was sent to the Fair by the Great Western Railway of England. This engine was made in 1851, and stopped running in 1881. Its great driving-wheels of eight feet diameter rested on trucks seven and one-quarter feet apart. As this extreme width of guage has been abandoned, the locomotive has clearly outlived its usefulness.

CONTINENTAL CARS AND ENGINES.

For the royal Prussian state railways the makers have furnished a splendid exhibit, consisting of locomotives, a regular passenger car

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divided into four compartments, a day coach, a flat car, and a coal car. A side view is given of the compartment car with the interior partly exposed. In a general way this view conveys an idea of the typical European car. It differs from the English coach described above in that the conductor seats himself in a windowed observation box placed at the front of the car.

The compartments in the German coach are connected two and two, being first and second class. One washroom thus does duty for two compartments. The finish and decoration are good, but hardly sumptuous in comparison with the luxurious interiors of the best American cars. Lighting is by gas, ventilation apparatus is of a superior order, and there is a switch by which the steam-heating apparatus is controlled by the passengers. The day coach is a beautiful affair, with finishings of blue stuffs picked out with gilded metal work, the ceiling being frescoed.

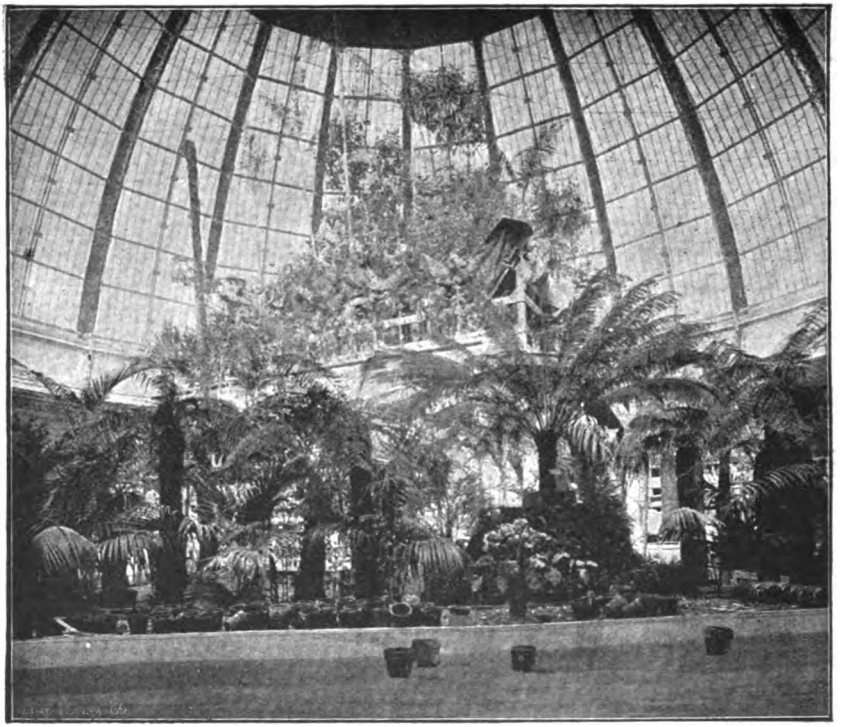
In addition are shown the various compartments opening on the step, along which the conductor passes in collecting fares, which he receives through the windows in the doors, which he opens for the purpose. In the exposed portion the seats facing one another are shown, with the space between compartments, which is occupied by the lavatories. One of the locomotives of this exhibit may readily be made the subject of comparison with a standard American engine by the visitor.

NORTHERN PACIFIC'S EXHIBIT.

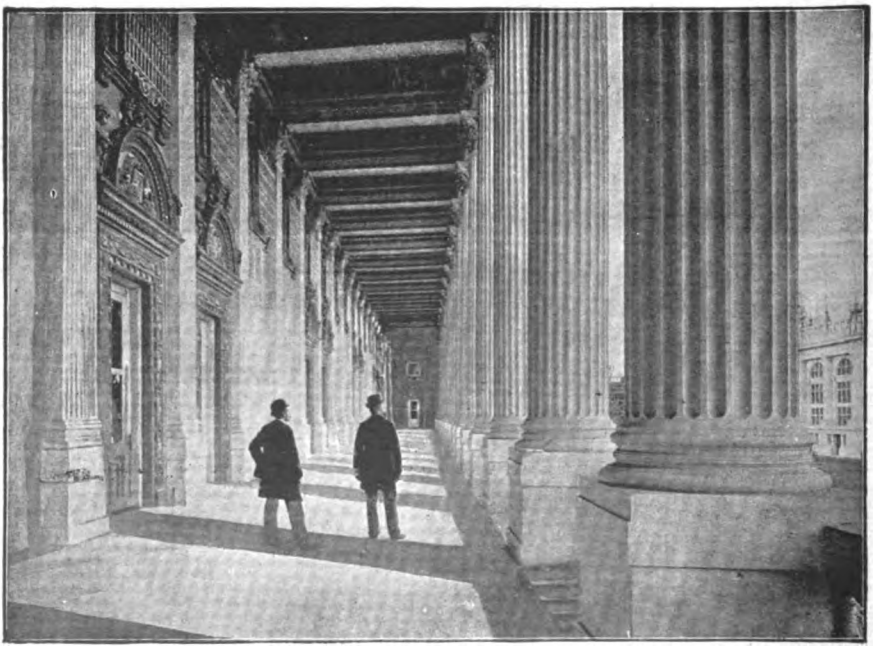
Something out of the ordinary is the exhibit of the Northern Pacific railroad. Two cars have been fitted up as showrooms in which are to be seen the products of the Northwest. Other exhibits are of stock cars, which cover several tracks. These are of various styles, with appliances for feeding and watering cattle. Among various devices for expediting train service are steam snow-shovels, mighty engines that are used to burrow through drifts, doing in a few hours work that an army of men would require days to accomplish. An interesting exhibit is that of a tilting flat car. The engineer by a lever turns on air from the reservoir of his brake apparatus, and the car tips its load at the side of the track. A ballasting machine is also shown. Crushed stone is dropped from one car and distributed evenly between the rails by a car that follows.

In the main aisle of the transportation building are interesting

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SCENE IN HORTICULTURAL HALL.



 ON THE NORTH SIDE OF MAIN BUILDING.

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exhibits. Prominent among these is a double-decked platform, showing the various appliances of the Johnson Railroad Signal Company. By a working model and section of a switch, full sized, the interlocking switch system is displayed. Another feature is the electric interlocking system, employing tablets and staves, for the safe operation of single-track railroads. The Westinghouse Air-Brake Company has a splendid exhibit of appliances located opposite the signal station described above.

MERCURY OUTSTRIPPED.

Outside the transportation building and in such close proximity to the Fair entrance from the terminal of the Alley "L" road that no visitor should miss it, is engine No. 999, the flyer of the New York Central and Hudson River Railroad, with the cars of the train. This is the engine with a record of a seven-mile run at the rate of 112 miles per hour, with Matt Sawyer for engineer and Edward France for fireman.

Engine No. 999 is an eight-wheel passenger locomotive. The cylinders are 19 x 24-inch stroke. The drivers are four in number, 7 feet 2 inches in diameter, tire 3½ inches thick by 5¾ inches wide. The engine truck wheels are 40 inches in diameter. The weight on the four driving wheels, loaded, is 84,000 pounds, and on engine truck, 40,000 pounds. The boiler is of the wagon top type, 58 inches in diameter at the smallest ring.

The total heating surface is 1,930 square feet, with a grate surface of 30 7-10 square feet. The boiler is designed to carry 190 pounds pressure to the square inch. The tender has a capacity of six and three-quarter tons and carries 3,587 gallons of water. The weight, loaded, is 80,000 pounds, making the total weight of engine and tender 204,000 pounds. The engine, truck, and tender have air brakes.

A part of the exhibit of the New York Central road is the De Witt Clinton, the first locomotive run in New York State, which was built at the West Point foundry in New York city in 1831. She was mounted on four wheels, 4 feet 6 inches in diameter. There were two cylinders five and one-half inches in diameter by sixteen inch stroke, and the weight of the engine was about six tons. The boiler had thirty copper tubes two and one-half inches in diameter.

This engine was run on a trial trip on the Mohawk and Hudson

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River Railway at various times from July 2, 1831, until Aug. 9, when the first regular excursion trip was made. Many of the best men of the State rode in the coaches, among them being Erastus Corning and Thurlow Weed. The engineer was David Matthews, who gave the signal for starting by blowing on a tin horn. The coaches resemble old stage coaches with seats inside and on top.

Take all in all the railroad exhibit at the Fair is complete, elegant artistically, wonderfully interesting from the mechanical standpoint, and of vast service in showing the history of the most important application of the steam engine to the use of man.

THE ETHNOLOGICAL DISPLAY AT THE FAIR.

A writer of profound perception has said that the proper study of man is man, or words to that effect, and perhaps it is some kindred interest which leads visitors to linger in the ethnological display which the Smithsonian Institution has made in the government building. At any rate, it is a wonderful collection of aboriginal Americans and their works, and its glass cases are daily surrounded by dense throngs of spectators.

Along the North and South aisle the Smithsonian has ranged two lines of cases filled with wax figures representing various types of the true American, he who occupied this continent before the white man came to despoil him of his birthright. These figures were made by scientific men, and are not only faithful in size, color and cast of countenance, but the expressions on the faces are suited to the attitude or the temporary occupation of the subject. While the figures are molded in wax they are decked out in the genuine garments and ornaments worn by the types they represent, many of these having been gathered by army men and special agents of the Smithsonian during a long series of years.

It was inevitable that much of an exhibit of this kind would be familiar, but there is so much else of the strange and curious that an enthusiast might spend weeks in this department alone. Most people, for example, have the impression that the Indian had no historical record, but that is refuted by the display of some picture writings in which the red man left a lasting account of events and ceremonies of long ago. A buffalo skin 6 x 6 feet is covered with a pictograph description of a battle. The horses are something like the American school boy's—"an animal with four corners and a leg under each

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ON THE ALERT.

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corner"—but they are not to be mistaken for anything else. The men are drawn in crude outlines, and the use of nine drumsticks at the end of a hand may indicate a redundancy of fingers, judged from the Grecian standards, but art is a realm of imagination, and we must take results as we find them. Some sticklers may question the accuracy of guns that are flying in mid-air and going off without any visible human aid, but that is a detail which does not hamper the Indian understanding. Near by is a calf skin, four feet broad, which is covered with records of dances and religious ceremonies. These are colored, and are ornamented with porcupine quills dyed in hues that challenge the art of the civilized dyer.

Not far away is the figure of a crow, in the act of recording the story of a battle. Before him is a white skin, the fur still on the under side. The scribe kneels to his work, resting a part of his weight on his left hand, while he makes his drawings with the right, using pointed sticks dipped into colors gathered from the fields. Some æsthetic souls may criticise the art which represents yellow horses and blue men, but that is an incident not worth quibbling about. Colonel Garrick Malley, of the regular army, has described robes of this kind that bear the historical records of the Indians for periods of more than 100 years.

One of the most interesting figures represents a Chippewa shaman in his medicine lodge in the act of writing an incantation on the inner surface of a piece of prepared piece of bark. The shaman is cross-legged and bending over the bark, which he holds in his left hand while he draws his designs with a stick in the right. The old man is surrounded by the tambourine, drum, rattle-box, and other noisy implements of his profession, and his attire is worthy an interested study.

Much has been written of the degradation of the squaw, and this collection gives a vivid illustration of her toilsome life. In one of the larger cases are represented two women dressing hides. Before one, suspended from a pole resting on forked sticks in the ground, is a buffalo hide, and she is laboriously scraping the meat from the inner side with a stick and a piece of stone. The other is kneeling before a hide and tediously pounding it into pliability with a heavy stone club.

The groups represent the eastern and the western Eskimos. The dress of the former has been modified somewhat by contact with the

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whites, but those from Alaska are dressed only in deerskin, caribou, marmot and beaver. One of the alcoves not far away is filled with the arms, implements and playthings of the pygmies of the frozen north. The reader may not recognize boats under the names kaiaks and umiaks, but the models leave no room for doubt. It may surprise many people to learn that the Eskimos wear an armor, but here are samples on exhibition. One is made of rows of ivory pieces like the bones of a minstrel end man, which are bound together with sinews. Another is made of bits of iron, and it is worthy remark that it very much resembles certain kinds of Japanese armor in its form and construction.

Lieutenant Peary says the Eskimos are merely animals who can talk, but that is the license of a traveler who is expected to tell wonderful stories. The dance masks are liable to throw a nervous man into delirium tremens. All are crudely carved from wood. One, twenty inches in length, resembles a turtle in form, with a face in white painted in the center. It has a handle for carrying, and is tipped with feathers, making a cumbersome and hideous object. A second looks like the face of an Indian twisted half around by a cyclone or the toothache. A third, with the mouth cut from ear to ear and with shoe pegs for teeth, apparently represents a shark; a third takes the form of a wolf's head, and others would make first-class hoodoos. The Eskimos are dreadfully wasteful of their walrus ivory. They use the tusks for ice-picks, and wooden shovels are tipped with ivory for cutting edges. Pieces of this material are fashioned into the form of animals and used to throw to the birds. They are fastened to buckskin strings and thrown at water fowl, which become entangled and are thus captured. Even dolls and needle-cases are made of this ivory.

One of the wax groups represents a party of Kiowa children at play, and it evokes cries of "Isn't that cunning?" and "Oh, how cute!" from the ladies. Two boys are going out to play at the wheel game, and the little girls are playing hide and seek about a teepee of deerskin. One of the girls has a pet dog, and another carries a doll made of rags and skins and decorated with beads. The expression on the faces are wonderfully life-like, and excite general comment.

One of the strangest figures is that of an Aztec using the drill with which those ancients made fire and bored the holes in their rude beads. The Pueblos, a family akin to the Aztecs, still live in New

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ENTRANCE TO DEPARTMENT OF ELECTRICITY.



 NORTH ENTRANCE, AGRICULTURAL BUILDING.

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Mexico very much the same as they did before Columbus discovered America, and they are represented by pottery and pictures.

The Hupa Indians of Northern California are represented by a family group that also appeals strongly to the sympathies of the ladies. It contains a mother and two children, the youngest a baby who is strapped into a comfortable and pretty wicker-work basket of fine construction, a receptacle that a civilized baby might envy.

At the head of this collection are two figures that Frank Remington and "Buffalo Bill" might covet. One represented a mounted warrior in the full panoply of war, and the other shows the squaw on the march with two children on the horse with her, and two others riding with the household belongings on the pack which drags behind them. Near by is an Apache family, representing a tribe who have been in contact with the whites for over 300 years without adopting any of their ways.

The aborigines of Alaska and British America are represented by a remarkably large variety of religious, warlike and domestic articles gathered in their midst. Here are medicine charms, the fetishes of witch doctors and the rattle boxes of shamans, some in the form of birds, fishes and animals, and all crudely carved. There are attractive looking spoons made from single pieces of goat's horns, which are bent into shape by being steamed and pressed in molds. Bits of ivory are carved in many curious forms and inlaid with abalone shells. Here are the wooden masks used in their religious ceremonies, and seal clubs carved with the totems of their owners, and with heads fashioned into the semblance of sea lions.

If gamblers want points on a new game with less expensive implements than a roulette outfit they they can get them here. The Tlinkit Indians use little sticks, and one of them hides a number in one or more stacks of bark tow. The other player guesses whether the number is odd or even, or tries to locate the particular pile of tow in which they are concealed. He wins or loses a corresponding number of sticks, according to the quality of his guess, and the two gamblers keep up this performance until one loses all his sticks, when he hands over the object at stake.

In a collection comprising thousands of pieces it is possible, of course, only to mention a few and refer to the others in a general way. To the student unable to visit Washington this exhibit is of special convenience, and he who is only interested as his curiosity is stirred will find here material to keep him engaged for hours.

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GUNS, OLD AND NEW.

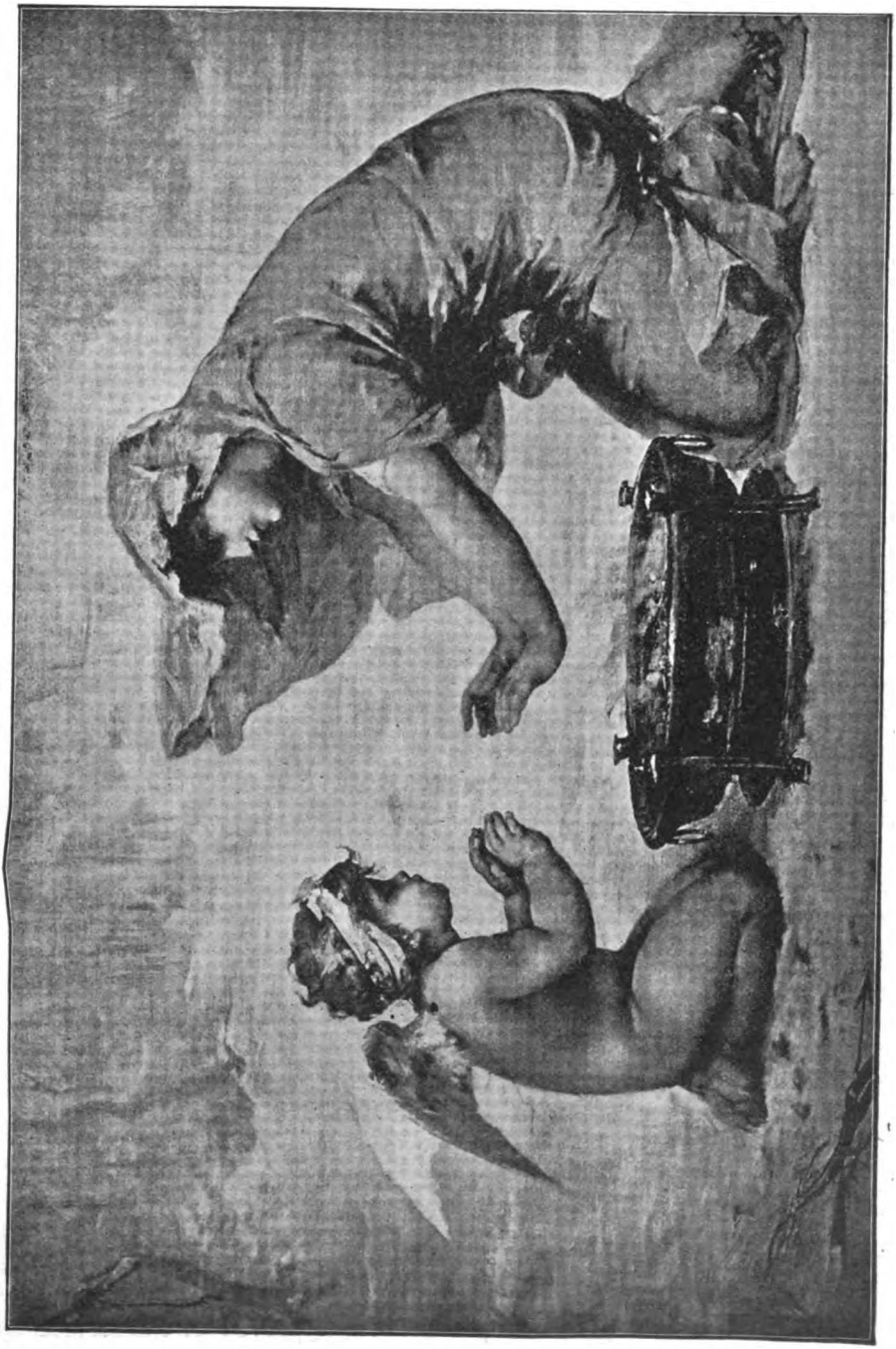
Encircling the central division of the space occupied by the War Department in the Government Building at the World's Fair, is a fringe of old guns. All are black with age, or reddened with rust. Puny weapons, are they, when contrasted with the great twelve-inch rifle. Insignificant, when viewed with but a passing glance. Yet any one of them could tell, were its mouth gifted with speech, more of the glory and sorrow, the pomp and horror, the pride and despair of war, than all the fine new armaments of the Nations.

Sometimes one of the girls at the cartridge machine will stop her work to call the attention of the visitor to these silent memorials. Comparatively few, however, seem to care for what war was, because of interest in what war will be, should it come. The veterans hunt up their old comrades, however, and fraternize with them, for these old guns and a stand of battered muskets are full of interest to men with memories of thirty years ago.

At the southwestern corner of the inclosure is seen the gun that fired the first shot at Fort Sumter. Most people regard this as being the first shot fired during the war. Even if, as is said, some one down in Texas burnt powder previously, this old cannon opened active hostilities. It is a four-pounder, marked with a brass or bronze eagle in the center. It is unmounted. As a companion piece to this old cannon is the gun that fired the last shot against the Confederate forces. This is a wrought-iron rifle of three-inch bore. Its weight is 815 pounds. Its record is that it fired the last shot at the battle of Appomattox Court-house, prior to the surrender of Lee's army in 1865. It was the left piece of Elder's battery, Battery B, First United States Artillery.

Of the other old cannon, one is a bronze English flint lock, with three-inch bore. There is a Chinese breech-loader of the fourteenth century, a standing monument of the adage, "There is nothing new under the sun." There is displayed, also, a veteran of the Mexican war in a bronze six-pounder. The bronze French gun Lafayette, presented to the United States, is also in the exhibit, and others including a gun the British forces surrendered at Yorktown. A novelty is an old-fashioned Colt's revolving cannon, with six shots, the calibre being two inches.

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LOVE GROWN COLD.

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GUNS WITH HISTORIES.

Relics from the battlefields are not numerous, but whatever there is possesses interest. There is the stump of an oak tree that was cut down by musket balls during the battle of Spottsylvania Court-house, May 12, 1864. A wheel is shown with its war record in detail. Other relics of the rebellion are shown in a stand of bent, shattered, and rusted muskets, gathered from many battlefields. Several have bullets imbedded in the metal of the barrels. There are specimens of the balls fired from Fort Sumter on April 13, 1861.

To mark clearly the difference between what is thought warlike to-day and the weapons of the past, an exhibit of modern arms is made in close proximity to the old guns just described. In an upright case are models of most of the famous European makes, not all, however, of the latest model. A Martini-Henry is an ugly looking weapon, with a sword bayonet having saw-teeth on one side. The Springfield breech-loader, model of 1873, is shown with a trowel bayonet. It has been the aim of the government to show the advance in gun-making from the earliest times to the present. That this end may be attained, on the east wall of the building is arranged a series of old guns, which work up through the centuries, passing the arms just described, to the most recent models, which are arranged convenient for handling on a horizontal platform.

The oldest of all is a Chinese wheel-lock pistol. Next comes an Arabian matchlock. There is a smooth-bore matchlock of the fourteenth century and a weighty wheel-lock rifle of 1520. The growth of the flint locks, invented in the sixteenth century, is shown. An Albanian musket and a fine Arabian piece, with a barrel fully six feet long, is shown. There is a matchlock from India, a stand of old locks of all patterns, specimens of swivel guns and a table of shot of all kinds. Specimens of glass cannon balls are shown, chain-shot that has seen service, and a curious contrivance called a turbine-shot, which is cylindrical and has a hole passing through the center. Among these relics is a little French howitzer, mounted on a stand which would make an interesting paper-weight, but in modern warfare would be insignificant.

MODERN RIFLES.

Of the recent arms, the Krag-Jorgenson, approved for the service in the army of the United States, is of greatest interest. In the ex-

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hibit of the patent office is shown the approved gun of the model of Feb. 21, 1893. The gun is of thirty calibre, sighted for 2,000 yards, and adapted to the use of smokeless powder. The barrel is thin, it having been found unnecessary to use the cooling jacket that was formerly thought necessary. The breech-block has a double motion, and can be removed and thrown away on pressing the trigger fully home, so that the piece can be rendered useless, if its owner is obliged to discard it.

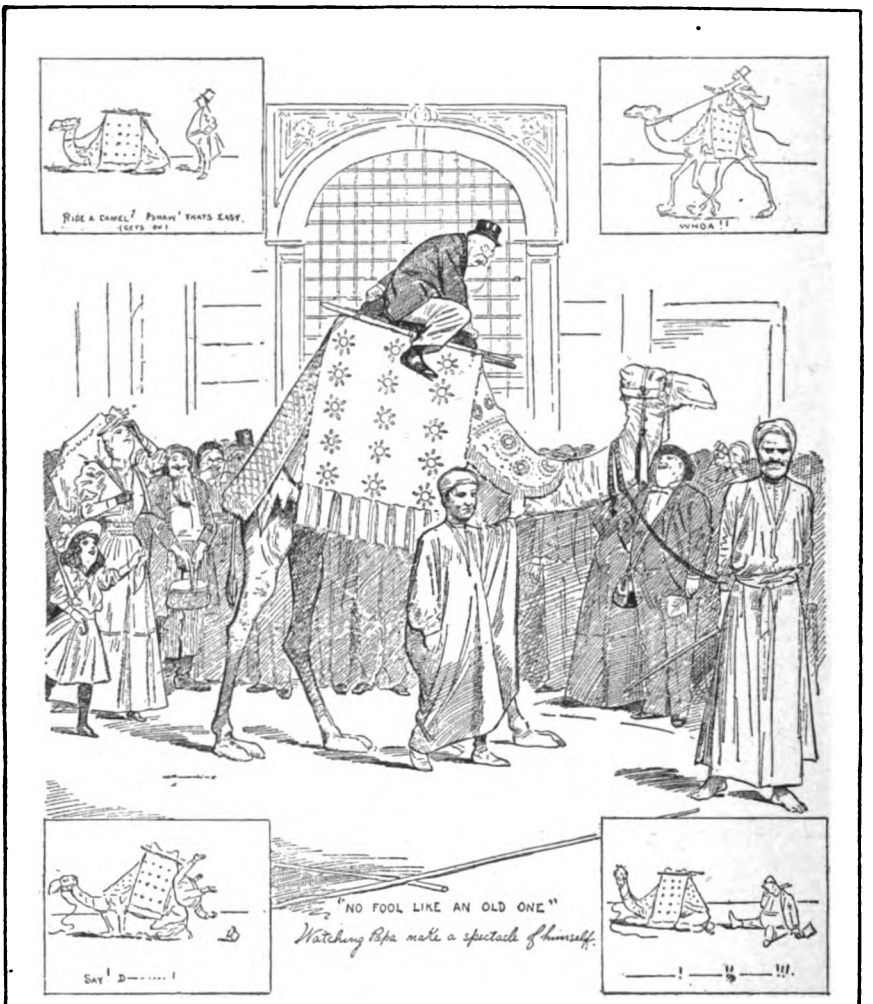
The "clip," or repeating reservoir, holds five cartridges. From a repeater the gun can instantly be converted into a single-shot weapon. The new model has several improvements over the older style of Krag-Jorgenson as used abroad. Patent rights will be secured for the use of the United States government, and the guns manufactured here. Smokeless powder, it is said, is a complete success. A Springfield rifle is shown, calibre 30, with 36½ grains of powder, penetration at twenty yards was nineteen and a half inches in an oak block, crossing the grain, and twenty-four and a half inches going with the grain. The Springfield rifle was selected for the test, to prove that guns now in use can be converted and used without danger from the rapid ignition of the powder. The most recent models of European countries are all of the same general type as that of the gun approved for use in this country. Smokeless powder is favored, the use of small calibres, and the loading "clip" entering the lock from side or bottom appearing in all the rifles.

RAPID-FIRING GUNS.

Of modern ordnance there are many examples. Noticeable are the rapid-firing guns. Of these the most numerous are of the Hotchkiss type.

Guns of this make are calibred for balls running from eight pounds to thirty-three pounds, fitting a four-inch calibre. For the field there is a piece throwing a ball weighing 13.2 pounds 6,000 yards with a charge of smokeless powder, the initial velocity being 3,200 feet per second. For naval use a fine rifle is made to throw a three-inch fifteen-pound shell 5,000 yards. There are hydraulic cylinders to take up the recoil and a shoulder whereby the gunner can aim and discharge his piece. From ten to twelve shots per minute can be fired. Small pieces are made for use in mountain warfare, so arranged that they can be carried on pack animals. They are shown

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CAMEL RIDING ON THE PLAISANCE.

404 AT THE FAIR WITH OUR ARTIST—SCENE NO. 1.

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in the War Department mounted on mules. Some of the Hotchkiss guns are exhibited on the man-of-war on the lake shore east of the Government Building, while the company has a special exhibit in the Transportation Building. Here is shown a stand of shells, with cardboard imitations of the new smokeless power. One of the best of the naval guns fires seventy one-pound shells per minute.

The big 12-inch rifle receives much attention from the visitors. This gun weighs fifty-two tons, fires a projectile weighing 1,000 pounds, the charge of powder being 450 pounds. Its length is thirty-six and a half feet, and it cost the government $52,000. It was manufactured at the Watervliet arsenal at West Troy, N. Y. This is the largest gun made in America. There is also a United States 8-inch breech-loading steel rifle on service carriage.

ART AT THE COLUMBIAN EXPOSITION.

AMERICAN ART FIRST.—You might visit the United States section first—its familiar scenes are sure to please—for there is some art that is tiresome in the German exhibit, much that is bad sent by Italy, Spain, Denmark, Norway, and some very soulless, mindless, mediocre stuff shown by France. But American art is refined, healthy and genuine. There has been some cause for fear that our artists might become the cuckoo among the nations of art; for as she never builds a nest of her own, but lays her eggs in that of some other bird for it to hatch out, so our young artists have shown such a propensity for foreign nurture that it became possible that France, or Germany, or Holland might stamp our output of art with her own crest, till we should cease to have a national impress. • But this collection of two thousand five hundred products of brush and pencil shows that for the most part this superstition has not been well founded.

Winslow Homer, the Walt Whitman of the brush, stands as firm as an oak for American subject. So does George De Forest Brush, our Gerôme. Note these two painters' works and that of George Inness, of Abbot H. Thayer, F. D. Millet, W. M. Chase, Frank Fowler, F. W. Benson, T. W. Dewing. Selection, however, is quite impossible; but do not allow prejudices toward any one class of art to prevent your admiration of the collection as a harmonious whole.

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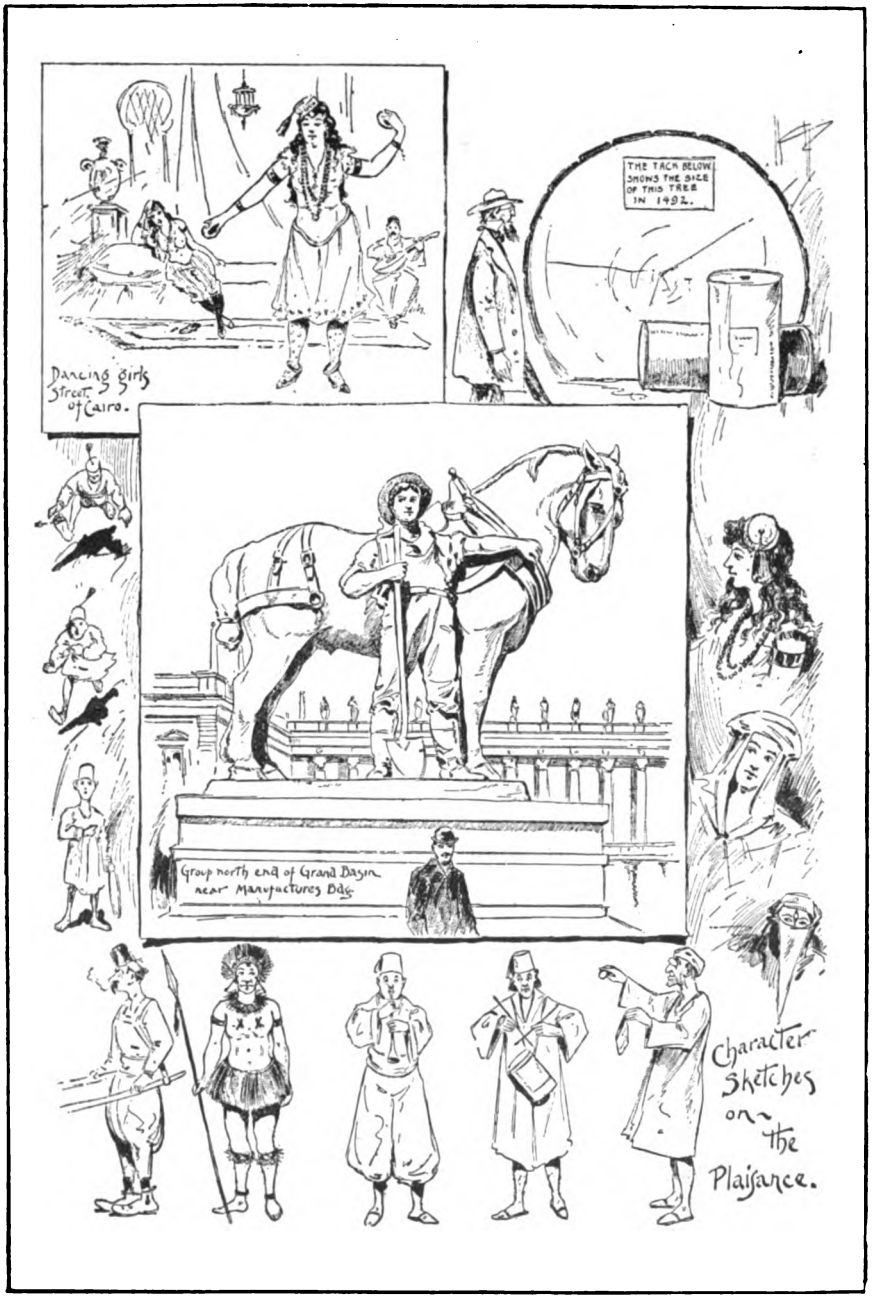
THE LOAN COLLECTION OF FOREIGN PAINTINGS OWNED IN THE UNITED STATES.—In addition to our progress as an art producing nation, during the last decade America has become rich in the possession of much of the best foreign art of to-day. The American millionaire's picture-buying proclivities are becoming proverbial abroad. When the authorities found that the foreign nations were only sending works by living artists, and not including all of them, so that not only do we miss from the French exhibit Millet and Meissonier, but also Gerôme and Puvis de Chavannes, they arranged to avail themselves of these treasures in America. Museums and private collections have supplied over a hundred masterpieces! It is very true these are not comprehensive exponents of what we own (the collection has all the appearance of having been made in a hurry), yet they give us the higher examples of French art than do the French themselves.

This perusal of the Loan Collection will acquaint you with the standard against which to gauge that seen in English, French, German, Austrian, Dutch and Swedish departments, supplying as it does an opportunity to study much that is classical in Nineteenth Century art. We have the eccentric Puvis de Chavannes, Gericault, Delacroix, Courbet and Fromentin; as well as Fortuny's celebrated "Beach at Portici," Michetti's "Springtime," "A Sewing Bee in Holland" by von Uhde, Cazin's "The Expulsion from Paradise," and Lefebvre's "La Cigale." Alma Tadema's "Reading Homer" is hung near "In the Book Stall," by his master, Baron Leys. The healthy Knaus is flanked by the poetic Israels. The superb Jules Breton, "The Lark," is a strong rebuke to vulgarity, which is so dominant in the French section. Manet is satisfactorily represented by the "Dead Toreador." Gerôme seems more of a colorist in "L'Eminence Grise" than in the "Serpent Charmer." The latter hangs near Ingres' "Cardinal Bibbiena Introducing Raphæl to His Niece." Gerôme refused to study under Ingres, but it is easy to see that he was none the less influenced by his manner of painting.

The Constables, which we miss in the English section, are here hung in juxtaposition with Daubigny, Rousseau, Millet, Diaz, and Duprè, and others of the so-called Barbizon school which he, though an Englishman, so strongly influenced for good.

BEST FRENCH EXAMPLES.—The French really exhibit no single picture which can command our consideration. Jules Breton's "The

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AT THE FAIR WITH OUR ARTIST—SCENE NO. 2. 407

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Pardon of Kergoat" (351) will be more interesting on account of our having seen "The Lark," and Carolus Duran's portraits may be compared with that of Madame Modjeska in the Loan Collection.

ENGLISH GEMS.—In the English department we have an array of important works: Watts' "Love and Life" and "Love and Death," Sir Frederick Leighton's "Garden of the Hesperides," Herkomer's "Last Muster," Holl's "The Earl of Spencer," Elizabeth Butler Thomson's "Roll Call," Millais' "The Ornithologist" and "Bubbles," and Shannan's portraits. And no one, after having seen the "Reading of Homer" in the Loan Collection, will miss the three Alma Tademas.

RUSSIA NOT IN PLACE.—The Russian exhibit not being ready at this date, I cannot say what pictures should be seen there, but doubtless the contributions by Constantine Makovsky will be interesting, as well as Repine's "Cossacks' Answer," while Jacoby, Peroff and Litovtchenko are celebrated names. Aivazovosky is a prolific marine painter; but, judging from his work recently exhibited in New York, his art is that of yesterday. I believe that Verestchagin will not be represented, which is a pity.

DUTCH PEARLS.—Holland gives us "Alone in the World," by Israels; "Plowing," by Mauve; "Woman and Child," by Neuhuys; "The Angelus," and "Portrait of Queen of Holland," by Vos.

HARMONIOUS SWEDEN.—Sweden, like the United States, should be considered in its entirety, though Liljefors' "Hunter" and "Foxes" are pictures that stand out as attractive compositions. Zorn is a strong painter, but there is no one canvas of his I can select for special mention.

GERMANY'S BIG CANVASES.—In the German exhibit there are some pictures important for their largeness, such, as Keller's "Apotheosis of William I;" Hildebrand's "Tullia," driving over the body of her father; von Uhde's "Announcement to the Shepherds;" Schuch's "William II," on horseback. And there are pictures that have historical interest, like von Werner's "Berlin Congress," in which are portraits of Bismarck, Prince Gortschakoff, Lord Beaconsfield, Schuwaloff, Lord Salisbury and other celebrated diplomats who figured in that important council. Menzel's "Rolling Mill" gives one an opportunity to study the work of one of Germany's greatest *genre* artists. We know Knaus, Deffregger, Max, in this country; but heretofore Menzel, as a painter, has not been seen.

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But the liveliest pictures in the German department are Koner's portrait of Emperor William II.; Max's Katharina Emerich; Harburger's "In the Cellar;" Lenbach's portrait of Prince Bismarck, Mrs. Vilma Palarghy's portrait of Kossuth; Knaus' portraits of Mommsen, Helmholtz, and "The Duel Behind the Fence."

And now for a more detailed consideration of the exhibits of the several countries.

THE UNITED STATES EXHIBIT.

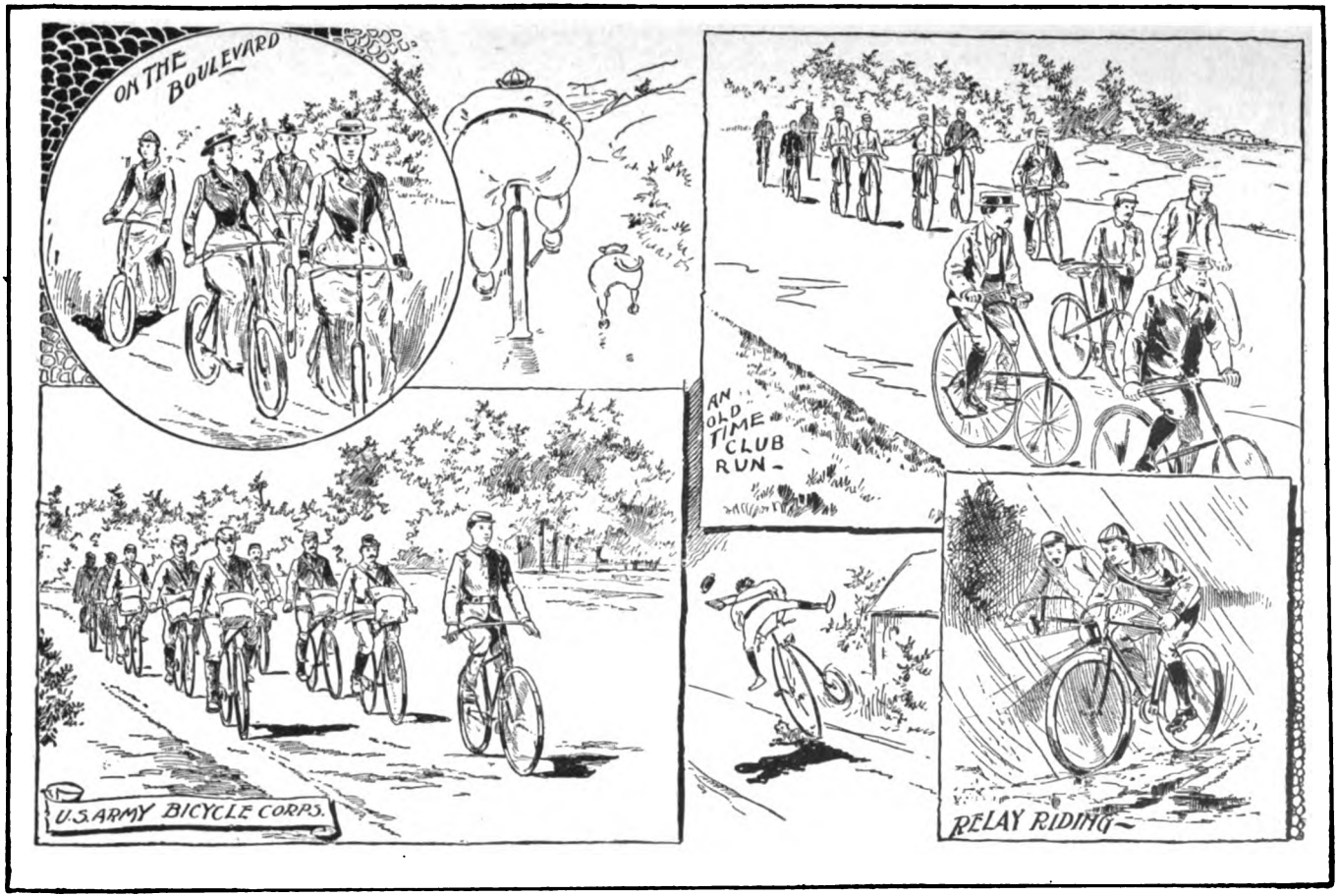
It is lack of vulgarity and of the commonplace that characterizes our productions.

Turn to the northeast corner of gallery 9, and study "The Virgin Enthroned" (954), by Thayer, and "Mother and Child" (222), by Brush, and we find the keynote of this refinement. Unless one can feel that not one spot of these superb canvases contains an iota of vulgar coloring, one cannot easily be in sympathy with American art. Dewing, somewhat less robust, is still poetical. Whistler on the one hand, Winslow Homer on the other, join to complete this harmony, though it must be said that Whistler's unfinished study of a girl (1,104) is a signal piece of bravado. Since a single picture separates J. G. Brown's "Pull for the Shore" (212) from Winslow Homer's "Lost on the Grand Banks" (575), it permits one making a distinction between the commonplace and the poetical. The comparison is not unjust, since Mr. Brown's picture is as strong an example of that side of art as could be selected. It is real, American, and thoroughly good. But Winslow Homer is more. He a poet where Brown is a reporter.

As I have said, Winslow Homer is the Walt Whitman among our painters. He is a self-taught painter, and though his black and whites, published in *Harper's Weekly* and *Appleton's Home Journal*, in the seventies, brought him prominently before the public, his early paintings were crude in color; but of recent years his work has so improved as to bring him in the very foremost rank of American artists. His poetic appreciation for the beauties of nature in every form, moonlight or sunlight, sea or rock, has the intense beauty of truth. He is astoundingly, startlingly truthful.

Mr. Sargent easily leads the portrait painters. We should dislike to pick out any separate example, but taking him in the aggregate, he becomes the ideal painter for painters. A modern Velasquez, he

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AT THE FAIR WITH OUR ARTIST—SCENE NO. 3.

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draws with his color. Jules Stewart, in "The Hunt Ball" (940), and portrait of the Viscountess de Gouy d'Arcy (939), would be apt to take second place, were one not inclined to feel that he will soon be out of fashion. Chase has his own interest as a manipulator of the brush, but nearly all his subjects seem to be posing.

Mr. Gaugengigl, of Boston, will surprise Westerners and New Yorkers at least on account of the workmanlike and well-rounded finish of his work. F. D. Millet makes a better showing, also, than one would have expected. He is to be complimented on the selection of American subjects. In ideal miniature-like painting Mowbray makes a good showing.

In room 8 we find "The Flagellants" (690), by Carl Marr. This will be one of the star pictures of the exhibition, together with Brozik's "Fenstersturz at Prague." One may have his personal opinion as to whether so disagreeable a subject as the former is worth so many square feet of canvas, but one can hardly deny that the painting of it is a triumph for American art. The picture represents a troop of flagellants, those fanatic companies of pilgrims of the Middle Ages, administering scourgings upon one another in the name of Christianity. However offensive this subject may be it is hardly as sickening as Julian Story's picture of "Mlle. De Sombreuil" (943), who was obliged to drink a glass of blood in order to save her father's life during the French Revolution.

It seems as though gallery 8 were made a sort of tribunal of the doubtfully beautiful, since we also have here Mr. Alexander Harrison's "Bathers" (523) and "In Arcadia" (522). Eliminating the nude figures from these pictures we have perfect refinement, superb tonal qualities, wonderful effects of realism; but we fancy the general verdict given Mr. Harrison will be that while in his landscapes and marines he paints like a poet, he paints the nude like a boor. Kenyon Cox has usually come in for a share of that criticism which has been aimed at American nudes, but in this room his "Painting and Poetry" (296) seems flat and uninspiring, and none of his exhibits will challenge as much criticism as one would have expected.

As we pass through the galleries, especially No. 37, 38, and 39, old favorites from the New York annual exhibitions loom up before us. Here is Douglas Volk's "Puritan Girl;" G. Gaul's "Charge of the Battery;" Ulrich's "In the Land of Promise." Walter Shirlaw's "Sheep Shearing in the Bavarian Highlands" (911) appears

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more modern than his "Tuning the Bell;" it is still brilliant in color, but it seems overcrowded in composition.

The landscapes of George Inness are mostly hung together, and he makes a fine showing. He has individuality as a colorist; he is brilliant, intense, burning. He paints as Horace Greeley wrote. Unluckily, John LaFarge, our greatest colorist, is but poorly represented. His "Nicodemus and Christ" in oil is not what it is in stained glass.

LaFarge is disappointing, Vedder is more so. He is an original figure in American art, his illustrations to the "Rubaiyat of Omar Khayam" being perhaps the greatest illustrations ever made for any book. It is a great pity that Houghton, Mifflin & Co. did not take the pains to exhibit the originals, for Mr. Vedder's leathery paintings do not give him any position among the colorists.

In some of the smaller rooms we find highly successful hangings, notably that about Sargent's portrait of Ellen Terry. We find in gallery No. 4 a collection of early American art which is sober, refined, free from crudeness, even if for the most part dry and hard. In this gallery you must notice at least the work of Hunt and Fuller, the fathers of what is best in our art of to-day. Then you have a water color room to examine, and you need hardly be told that America takes first rank in the production of water colors. Besides, there are more Sargents, Frank Fowler's portrait of Walker Shirlaw, a Freer, a Frank Benson, W. L. Picknell's "Road to Concarneau," Curren's "Windy Day," Gari Melchers' "The Pilots," and landscapes by Tyron, Hasbrouck, Rehn, and Palmer, to be seen.

It is a pleasant excuse for omitting nine-tenths of the good things that the merest enumeration of them would exceed the most generous allowance of space.

In sculpture America shows her wholesome taste. We have French's grand "Death and the Sculptor;" Elwell's sweet "Dickens and Little Nell;" Adams' beautiful portrait bust.

OUR ILLUSTRATORS.—Since the Centennial that department of the graphic arts wherein we have made the most unique advancement, it has grown up like Jack's beanstalk, is that of black and white, or let us say more truly—"illustrating," for quite recently our magazine draughtsmen have taken to using water color in place of monotone. Such was the case in Mr. Smedley's illustration of the Fair Grounds, done for *Scribner's* magazine. With the exception of Vedder, most

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PEOPLE FROM MIDWAY TAKE A RIDE.



THE HUNGARIAN VILLAGE, MIDWAY PLAISANCE.



SAMOAN TYPES.



A HOME IN THE RURAL DISTRICTS.



Eskimos and their Snow Hut.



ARMY DEPARTMENT, GOVERNMENT BUILDING.



The Convent of La Rabida.

AT THE FAIR WITH OUR ARTIST—SCENE NO. 4.

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of our illustrators are represented. Here is Abbey, Bacher, Blum, Birch, Castaigne, Church, Cox, Day, Edwards, Fenn, Frost, Gaul, C. D. Gibson, W. H. Gibson, Kemble, Low, Parsons, Pyle, Reinhart, Remington, Smedley, Alice Barber Stevens, Thulstrup, Wenzell, Wiles. Cox and Low have done more serious work than is shown, and we miss Mary Hallock Foote and Jessie Curtis Shepherd. Equally representative is our rich collection of etchings and wood engravings.

NO SURPRISES.—Beyond the fact that the American exhibit shows that we take no second place in the art of the world, there is no great surprise in store for us. Most of our best art comes from New York or Boston. Carl Marr's large canvas will doubtless make his name known to many who were not acquainted with him before. But the best art comes from just the men we should have supposed it would have come from, and with the exception of three or four who, like Homer and Inness, can hardly be said to have studied in any school, the work is that of the younger men who have studied in France and Germany. The West has not sent us any prodigies, and no artist has done for any section of our country what a group of our writers did for California before the Centennial, and a younger group has done for the South more recently. The mountains of Idaho and Washington, the plains of Dakota, the rivers of Colorado have not furnished the subject for any great painting. Thomas Moran (1152) has no youthful follower.

OUR ABSENT FRIENDS.—Among the painters of note missing from the American section are: F. E. Church, Albert Bierstadt, William and James Hart, William Beard, J. H. Dolph and Thomas W. Wood, the president of the National Academy of Design. From a technical point of view, the work of none of these men would have added to the weight of the exhibition. But it is to be regretted that at least Church and Bierstadt could not have been represented. In the pioneer days of American art these men did herculean work in building the foundation upon which our younger men have erected a magnificent edifice. Had it not been for the work of the former, that of the latter would have been a lower building; and though it may be true that this pioneer work was in a measure rough hewn, it may be said, without fear of contradiction, that it was never gross, was always refined, showing a love for nature and a respect for her. There is much in the work of the younger men that, though not lacking in technical quality, does not show refinement or good taste.

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To this category belong the nudes of Mr. Alexander Harrison, and the painful hospital scene by Mr. Thomas Aiken, the Zola of our art. While John LaFarge is represented in the painting department, it is to be regretted that, because the authorities did not make proper provisions for its exhibition, none of his stained glass is shown. Of all departments of American art that of stained glass has made the greatest stride in the world's estimation. In Munich, Paris, and London the LaFarge glass carries all before it.

THE ENGLISH EXHIBIT.

HERKOMER'S "LAST MUSTER."—Beginning in gallery 18, the largest of the British section, and turning to the right we find "The Last Muster" (213), by Prof. H. Herkomer, an historical painting known to many by engravings. Herkomer was born in Bavaria, but lived most of his life in England and represents adequately a middle place in the English school, having neither the overfinish of the older men nor the impressionistic tendencies of the younger. Up to the time of the painting of this picture he was principally known as an illustrator, having drawn for the London *Graphic*. This subject, pensioners of the British Army attending service at the Chelsea Hospital, on account of the red coats of the soldiers was difficult to paint, but he successfully coped with the task and kept the scarlet coats "down" in color. Its subject, not always understood, is that of a veteran who has just passed away at the service, and has taken his departure in the form of tranquil sleep. He is the end figure on the second bench. The subject has sometimes been explained as being the possible last muster of *all* the veterans. Herkomer is represented in gallery 17 by two celebrated portraits usually known as "The Lady in Black" and "The Lady in White," now entitled "Entranced" and "Miss Grant." Herkomer's style is his own.

A portrait of this artist by his nephew, Herman G. Herkomer, is found in 216.

GENRE AND PORTRAITURE.—Herkomer's "Last Muster," and his two portraits strike the keynote of two branches of art in which the English are particularly strong—modern *genre* and portrait painting. In the former, J. E. Millais is pre-eminent. His "Ornithologist" is to childhood what "The Last Muster" is to old age. An elderly scientist, with his five children or grandchildren around him, is explaining to them the genus of a bird. It is a sweet picture.

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A GERMAN ROOSTER.





AT THE ENTRANCE TO THE INDIANA STATE BUILDING.



PUCKERSHOOS, IND., BAND.



The United States Battle Ship Illinois.



VERY APPLAUD MR. HARRISON.



THE LOBBY.



The German Building.

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The children's faces are comely and pure, the profile of the eldest being particularly girlish. If photographed or given in black and white, the undulating outline of her features, the luscious lips and the curly hair would make this acceptable as representing an ideal of girlhood. This facility in producing such types of beauty, often reproduced in mezzotint (a favorite reproduction which in its velvety aspect covers many a sin of harsh outline or jagged juxtaposition of planes) has brought the painter great renown. With his position secured, and always in demand of the market, he has been careless of learning oil painting, and we do not find in these children's faces such examples of modeling and strength of values that we find in works like those of Herkomer. His faces are without planes, his colors are simply darker in shadow than in light, his flesh tones are white and pink; but in the sweetness of his types, the simplicity of his compositions, we have a culture which has helped to keep English art exceedingly pure. It has not become, as the French art has, voluptuous and sensuous. We thank the English for having painted the harem.

Millais' other subject, "Bubbles" (337), in room 15, is familiar to many on account of its having been reproduced in color as an advertisement for a famous soap firm. In his "Shelling Peas," "Lingering Autumn," "Sweet Emma Moreland," the artistic carelessness of touch and tendency to slur over the modeling, texture or "value," is more perceptible. In two landscapes in which his individuality of style is less marked, they represent the portrayal of detail which Ruskin so vehemently pleaded for when Millais was forming his style.

The public would not find in the pale color of "A Portrait Group" (361), by W. Q. Orchardson, the same sweetness of color as in Millais. It is questionable if the ordinary spectator would recognize the flesh of the baby as really flesh and blood. But in this sole example of Orchardson's we find a grace and sureness of outline and tonal qualities missing in Millais. Orchardson's refinement reminds us of the high place occupied by portraiture in England. Turning to No. 223, the portrait of the Earl of Spencer, by Frank Holl, we find a virile example. The work is dignified, sober, robust; the head strong in modeling. He is also represented by the portrait of the artists Samuel Cousins and John Tenniel.

The color of the face in this latter portrait brings to mind the

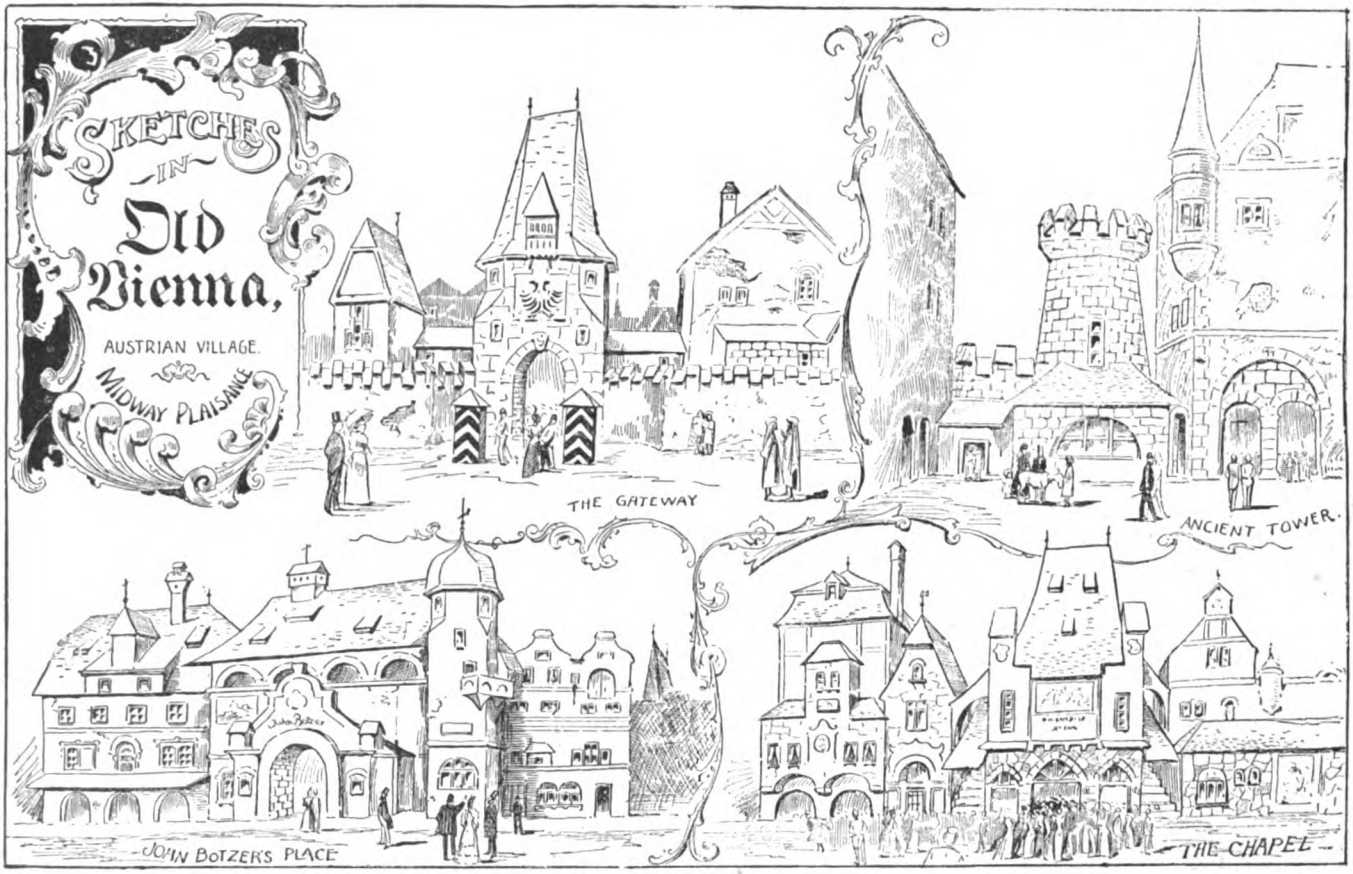
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division that we may make between Holl, a leading portrait painter, a man of gigantic talent, and Watts, a man of stupendous genius.

THE GIANT WATTS.—Watts' "Browning" and "Walter Crane" satisfy, but they do not force upon us the unique quality of Watts' genius, as did the portraits in the collection of his work in the New York Metropolitan Museum of Art some years ago, when Browning kept company with Tennyson, Leslie Stevens, Sir Frederick Leighton, Lord Lytton, together with a galaxy of London beauties. Luckily, however, his ideal composition, "Love and Life" (486), and "Love and Death" (487), in room 14, proclaim his poetical tendencies. In these Watts fairly transcends his British compeers. His color is not that of nature—he does not try to imitate the pink of the flesh, the green of grass and the blue of sky—but is rather that of poetry, selected for the sake of harmony or to express his "feeling." He paints through the mind, not through the eye. It is not in color he is strongest. It is the grace of his line, the simplicity of his composition. In his "Francesca and Paolo" (488) the beauty of the line is particularly perceptible, but the death pallor in each of the figures is not calculated to make it a popular picture in an exhibition of this kind.

SIR FREDERICK LEIGHTON'S "FAULTLESS ELEGANCE."—Sir Frederick Leighton, whose "Garden of the Hesperides" (275) hangs in the same gallery (17) with Watts' "Francesca and Paolo," occupies a middle space between such painters as Orchardson and Holl on the one hand, and Watts on the other. His portraits, as for example, "Captain Burton" (277), hanging next to "Browning," and which is very nearly equal to the latter, may compare favorably with works of Holl and Orchardson, while in his ideal or classical themes he almost approaches Watts in composition; in popularity he outstrips him. His painting lacks "quality" and poetic "depth." The "Hesperides" is not an unusually strong work. It has surface beauty, which attracts at first sight, but woe for this work when its author is no longer in vogue. It is eminently fitted for an exhibition picture. Its color, especially in the upper portion, is like that of the finest Majolica or Dutch tiles, or Byzantine mosaic. In the lower portion the iteration of the lines in the drapery is aggravatingly monotonous. His "Perseus and Andromeda" (276) hangs in room 15, and "Hercules Wrestling with Death for the Body of Alcestis" (274) in room 18. These three masterpieces verify the characteriza-

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AT THE FAIR WITH OUR ARTIST—SCENE NO. 6.

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tion of Leighton's style found in this character sketch : "There is a faultless elegance in every work that has come from his hand ; everywhere we discern his profound sense of beauty in color ; everywhere we are charmed by the ideal grace of his classic purity of form." The ideally classical is represented in the same room by two paintings of E. J. Poynter's (393 and 394), refined in color and scholarly in workmanship, which incline one to search for similar subjects and lead us back into room 18, where we find Alma Tadema's "The Sculpture Gallery" (59), and "A Dedication to Bacchus" (57). The former is a rather large composition, the latter representing the style of the majority of this artist's works. In both we find a love for archæological correctness in detail of costume and interior ornamentation. Alma Tadema was born in Holland and studied in Antwerp, under Baron Leys. He has always been an original figure in English art, and we cannot but be thankful for the sombreness of his color, which was clearly inculcated in him by Leys, and which separates him from many another English artist who, like Waterhouse, John Collier and Val Prinsep, treat of similar subjects.

HISTORICAL SUBJECTS.—As Tadema and the men mentioned with him have made a specialty of the beautiful side of classical life, another set of English artists have made the semi-historical and the costumes of the olden times their specialty. A leader among these is Frank Dicksee ; his "Passing of Arthur" (149) hangs near "The Last Muster." In this he is not mindful of correctness of costume nor details ; and lays no special emphasis on his types of characters. A handsome man, a pretty girl, may serve as his model for servant or secondary personage, or for hero or heroine, as convenience may rule. In "The Passing of Arthur" hardly two faces are visible, and the subject would not lose one whit of interest if in place of the dying knight a maiden or a man sat comfortably esconced in the shadow on a cushioned seat at the stern of the boat ; the rowers might row on and the barge still silhouette itself against the green water and the cold moonlight, giving us an equally pleasing impression, and the picture holds its own as a decorative composition. His "Redemption of Tannhäuser," in gallery 14, shows us more distinct delineation of face and feature, but I fancy all will agree with me that it is yet lacking in "type." But Dicksee is a "composer," and his pictures, as compositions, will always be popular. He paints as our own Longfellow wrote, to please.

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Marcus Stone—"The Passing Cloud," and "The Gambler's Wife" (447 and 446), in gallery 12, and "Two's a Company and Three's None," in gallery 13—is a popular darling of the English picture-buying public. His slick, clear coloring and the delicacy of his touch, not unlike our own Boughton, make his subjects particularly adaptable for reproduction, and prints of his works hang in thousands of English and American homes. But he is not a painter of the aspects of nature. His work has no more atmosphere than a Dresden china landscape. In his choice of long-waisted gowns of a hundred years ago, and in selecting a type of English beauty as his model, he does not commit himself.

DERBY DAY ART—HOGARTH'S MEMORY KEPT GREEN.—He has a better chance of some recognition from posterity than has Frith, one of the most popular of English painters for the people. The latter, in selecting costumes of the day and painting his groups entirely without artistic quality, does not produce that which can hold its own with the change of public taste. In his six story-telling groups, "The Spider and the Flies" (173), he openly disputes functions with the novelist, as English art since the day of Hogarth has always done. Next to these pictures hangs John Charlton's "Jubilee Procession," which created a sensation in London recently. It is not dissimilar to Frith's "Derby Day," represented at the Philadelphia Centennial, art entirely of the last decade. In substituting portraits of army heroes and the aristocracy for the characters of every-day life, Charlton puts in his work such semi-historical material as may cause it to live beyond Frith's, since it may have a value ten years hence, from an historical point of view, that it will not have artistically.

In E. Armitage's "After an Entomological Sale," the portrayal of individual character is strong enough to lift the latter somewhat above Frith's works.

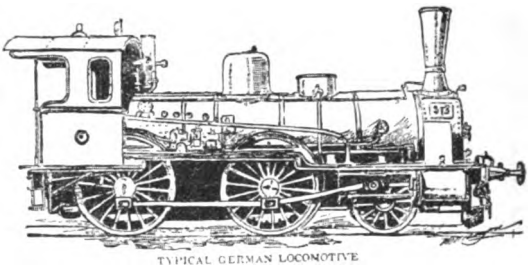
In gallery 13 we find P. R. Morris' "Sons of the Brave" (346), an example of popular composition.

"THE ROLL CALL" ART OF YESTERDAY.—Great as the popularity of some of these recently mentioned works has been, none of them has equaled the celebrity of "The Roll Call," by Elizabeth Thompson Butler. Its position as the most celebrated painting by a woman is only disputed by Rosa Bonheur's "Horse Fair." Painted at a time when Armitage and Frith were the painters of the day, we

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BOTCHER'S MOUNTAIN GUN ON PACK MULE

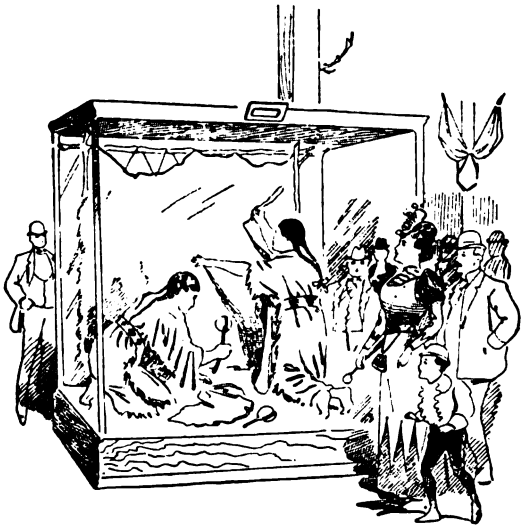


TYPICAL GERMAN LOCOMOTIVE





LOUISVILLE ST., KINDERGARTEN.



CLEANING KIDS.



Statue of the Republic.

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can well imagine it was eminently satisfactory from a technical point of view. It represents the roll-call of a regiment after the Crimean war, and its purport is apparent to the dullest spectator—a very good quality for a popular painting. One cannot visit the exhibition of English art without finding such historical milestones in the march of painting interesting beyond measure. And turning from "The Roll Call" (105) to Ford Madox Brown's "Romeo and Juliet" (286), in the same gallery, and John Linnell's "Storm at Harvest," we come face to face with more of the products of the last decade.

A LATER PERIOD.—Of a later period is the work of Seymour Lucas, who paints thinly and little more than sketches his subjects, but "The King's Visit to St. Paul's" (13), with the figure of Charles I., the Duke of York and Christopher Wren (300), makes an historical subject of more than ordinary interest, as does his Louis XI., in gallery 13.

Identical in style is John Pettie's "Monmouth Pleading for His Life before James II." The recent death of Mr. Pettie makes it necessary that three other of his contributions to the English section should be returned to England. Lucas and Pettie introduce more life into their historical scenes than does Sir James Linton, in whose paintings the expression in the faces of the composition called "Victorious" are not a whit more joyous than are the solemn visages in the "Benediction."

MODERN REALISM.—If we stand before "A Summer Night" (165), by S. Melton Fisher, we have a forcible object lesson on the subject of modern realism. It will be noted that the darkest shadow upon the white feather in the yellow straw hat is many tones lighter than the shadow thrown by the figure on the white table cover. Viewing the picture throughout from still life up to still life, from hand to face and from hair to hat, we find a gradation of tones and an extensive gamut of "values" which is not perceptible in the paintings the blackish tones of which we associate with the so-called old masters. This picture was painted in 1892, and its qualities are such as are found in more or less degree in most of the paintings by the younger school of English artists. The realism of the painting and the truth of its "values" does not necessarily make it a great or good painting, nor even one of the forcible examples of modern art. Realism does not make good art, or else our oil paintings would

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be relegated to the cellar and the wax-works of Madame Tussaud and the Eden Musèe would be set up in our art galleries.

Lack of space prevents further consideration of many good works. We can only add to this list the names La Tangue, Furse, Shannon, Solomon, Bramley, Wortley, and among the water colorists Henshall, Gow, Dodd, Hague, Allen, Moore, Gotch, Parsons, Fripp, Rainey, Macallum, Whitely.

Representative of the unclouded quality of English art and outstripping the French in sentiment are "Mignon" (461), by W. R. Symons; "Requiescat" (411), by Briton Reviere; "Eve" (330), by Mrs. Anna Lea Merritt; "Mater Triumphales" (459), by Mrs. Annie L. Swaynnerton, and Mrs. Louise Jopling-Rowe's "Dear Lady Disdain" (249).

Associating the names of Constable and Turner with English art, we expect to find it strong in landscapes. It is fairly so. Vicat Cole is represented by several fine specimens. Yeend King, like Alfred Parsons, whom we all know so well, paints the cold green and gray of English landscape with the anti-Constable effects that are so pleasing.

In the absence of Whistler, seen in the American section, and Tissot in the French, had Alma Tadema been taken away from the English section the loss would have been still greater, and we are glad to say that F. D. Millet (Mr. Millet is also represented in the American section), George H. Boughton and Mrs. Anna Lea Merritt add to the richness of the collection.

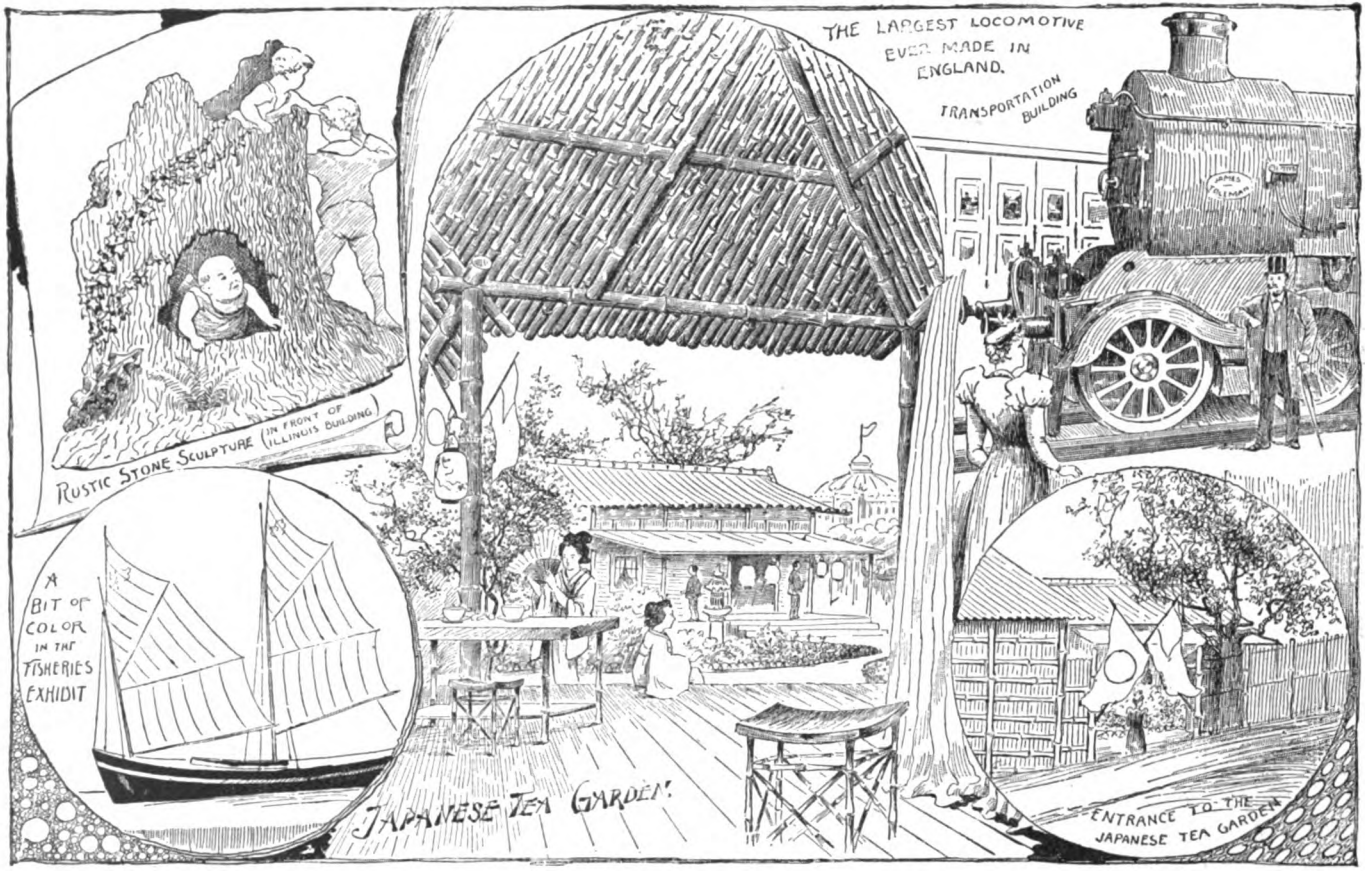
In sculpture England has little to show, but much of that is good. Thornycroft's "Mower" is graceful in every line. Onslow Ford's "Henry Irving as Hamlet," Leighton's "The Sluggard," and Swan's Barye-like animals are all sterling.

CANADA.—The technical standard of the Canadian exhibit is not far behind the English, though, of course, its small size practically precludes its containing a single masterpiece; but a uniform excellence like this is an earnest of the formation of a school in future, just as the uniform quality of the Swedish exhibit is more to be honored for its promise than its realization.

GERMANY.

THE GERMANS PAINT THE COMMONPLACE.—A dozen or more of the popular German painters are millionaires. Art thrives

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AT THE FAIR WITH OUR ARTIST—SCENE NO. 8.

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commercially in Germany. Every Turnverein, every Walking, Talking, Eating, Singing verein must have for its councilroom walls portraits of state, civil, or local hero. And since, after the Field Marshal Schmidt, in his epaulettes, or Band-Leader Wise with his brass buttons and ebony baton, or Ten-Pin Alley Inspector Schwartz, with his visor cap, is hung in a councilchamber, he looks lonely without company, so a few *genres* are bought, some Swabian pig drivers, or Bavarian beer-drinkers, or strutting hussar, is purchased, together with the landscape of a duck-pond and a wind-mill or two; and so a nucleus of an art collection is formed. And the German artist is trained to meet this patronage in very thorough schools and a national art is established, its back bone the commonplace.

IMPORTANT PORTRAITS.—Of course, in an international exhibit like this we do not find the portrait of the Herr Inspector of the Goose-Pond-Wading-Verein, but national dignitaries are portrayed. His majesty the Emperor William II., is given us in many different poses. On horseback as large as life, by Schuch,(454); no larger than your finger, standing on the prow of the *Duncan Grey* spearing whales, by Saltzmann (423); twice again, still in miniature, reviewing his army; and finally very dignified, very realistically realized for us, by Koner, No. 315. Here, is a "blauen mantel" with red lapels that harmonize well with the quite green background, every line of his face proclaims his impetuous temperament.

Time may give to Lenbach's "Bismarck" (330), a higher place than Koner's "Wilhelm," but it is now sober and dignified, and sets back in its frame more modestly than the Emperor.

It is a woman's work we would name for a third place among the portraits—Vilma Parlaghy, whose "Kossuth" (385), looks more like a kindly poet than a revolutionist. But Ibsen tells his vocation in Professor Smith's No. 472, where every touch of the brush is a full modern one.

For such theatrical productions as the immense "Apotheosis of William I." (302), by Professor Kneller, the American public will have very little sympathy. The same is true of Hildebrand's "Tullia" (268).

Beyond these portraits a few gems are Harburger's "In the Cellar," which exemplifies how the artistic mind may treat the most vulgar subject with poetic touch. This fat German lounging between two beer barrels is not an inspiring subject, but the tonal quality

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throughout the painting is equal to that of Vollon, the celebrated French still-life painter. William Thubner's "First Step," in gallery 32, is a second example of refined treatment of a *genre* subject. A small boy is taking a glass of wine from a bottle he has just purloined from a cupboard. Vautier's "Convalescence," Deffregger's "Sunday," Hugo Kōnig's "Going Home," Knaus' "Duel Behind the Fence," Velten's "Courier" represent that which is best and most refined in German art. Max's "Katharina Emerich" is one of the star pictures of the exhibition. It represents this saintly woman all in white seated in her bed with white counterpane and pillow, her head bandaged, a crucifix before her, a candle burning dimly in the background. The color throughout is low in tone, mannerish, like all of Max's work, but less yellow and brown than his "Last Token," "The Lion's Bride," "Saint Cecilia," and other of his pictures known to America. Katharina Emerich was known as the nun of Dulmen, and from her youth up was subject to trances for which she has become famous.

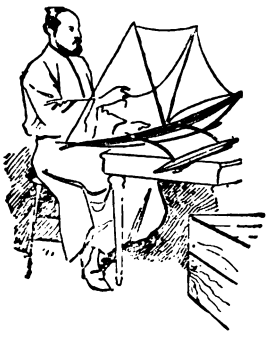
MENZEL.—From Menzel, the greatest German draughtsman, one expected a great deal, and his pencil drawings, studies of heads, hands, armor and iron work, in the gallery, together with his water colors, are not disappointing. In the former he is equal to the old masters, and no one should permit the lack of subject in these studies to deter him from examining them closely. His water colors are full of life and spirit; they are mostly in the gallery, but two are in the lower room 34, upon easels. "Unter den Linden" and "In the Thiergarten" are crowded with figures and are thoroughly illustrative. Any one who has seen "The Life of Menzel" will remember the reproductions from pencil studies made for figures to his celebrated "Rolling Mill" (351), "Walzwerk." Seeing the same figures in the painting they are disappointing. René Reinecke is a leader among the younger illustrators of Germany, as Menzel is among the elder. His water color, "In the Waiting Room" (611), should not be missed.

Among the marines and landscapes may be mentioned "S. S. Paris" (443) and "A Narrow Escape" (444), by Schnars-Alguist, German Art Commissioner; Val. Ruth's "Twilight" (422), Aug. Fink's "Evening" (214).

AUSTRIA

GIVES US SUBJECT PICTURES.—For a small exhibit the Austrian one will doubtless have a striking effect upon the public. Almost

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A BOAT-BUILDER



TEPEE INDIAN BABY BASKET



MASSACHUSETTS KINDERGARTEN.

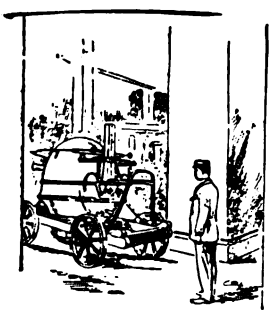








WE THREE — ON OUR WAY TO THE FAIR



SIR ISAAC NEWTON'S FIRST IDEA OF A STEAM CAR



ARMY WITH FIRE DRILL.



A LIGHTHOUSE LENS.

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every canvas is an exhibition picture. There is little or no distinctive quality in the collection. It is equally German and French. Simm, who is also represented in the German section, comes to the fore on account of his dainty and highly finished cabinets of picturesque figures in old-time costume. "The Duet" (107) is his best. Charlemont proves himself fairly the equal of Meissonier in his superb interiors with similar figures. His "In the Studio" and "The Philosopher," recently seen in the Knoedler sale in New York with other miniatures, are preferable to his large canvas "The Pages." Brozik's "Defenstration—Fenstersturz (the throwing from the window)—of Prague" hangs in gallery 35. It represents the Protestants who have visited the Palace of the Emperor Mathias with demands for the rescindment of certain objectionable laws, which, being denied, they are throwing the counselors Martiniz and Slavala out of the window. The picture is theatrically dramatic; the man resisting, with one foot turned at right angles to the other, gives us a Henry Irving-like pose which is very modern.

The picture is unmistakably a popular one and should be judged from the painter's point of view, which is satisfactory. The color is clear, clean, and not mannered, the drawing robust and manly. A second picture which will appeal to the public is Payer's "Never Retreat" ("Nie Zuruck," 82), which represents the Arctic explorers, under Weyprecht. Weyprecht stands, Bible in hand, from which he has just read, and is proclaiming to his disheartened followers that they must go forward and not retreat. The color here is less satisfactory, but the work is not without feeling. The Austrians throughout show themselves good draughtsmen, and Hirschel's "Wedding Procession" (51), though lacking the depth and richness of an Alma Tadema, is nevertheless a scholarly bit of work. And in the mermaids, in his "Prometheus," we find graceful lines and some original composition. Makart's "Five Senses;" Angeli's "Portrait of Architect Schmidt;" Brozik's "First Communion of the Hussites," and Deffregger's "Children with a Dog," are other strong works of this collection.

HOLLAND.

GRAY AND TRANQUIL.—The modern standard in American water color painting is avowedly that of Holland. To resemble Kever, Mauve, Mesday or Israels is the desideratum of our younger aquarellists. The distinguishing quality of this school is a gray tone. The

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Italian water color, with its bits of crude red, blue, yellow and green spotted over the paper, is the antithesis of the Dutch manner and of the Dutch feeling for "ensemble" and "tonality." The water colors at the entrance of the Holland exhibit will repay careful study; but a few moments with them and one must feel their quiescent influence. The same gray tone permeates the oils, and the impression of a cursory visit is that from this quality the pictures lose individuality, and one is apt to carry away the impression of a pleasing, soothing influence of *all* the pictures, rather than a distinctive recollection of any one canvas. Transcending this generic quality, each one holding its own, are Israels' "Alone in the World" (74), Mauve's "Ploughing" (111), Neuhuy's "Dutch Woman and Child" (139), and Hubert Vos' "Angelus" (178).

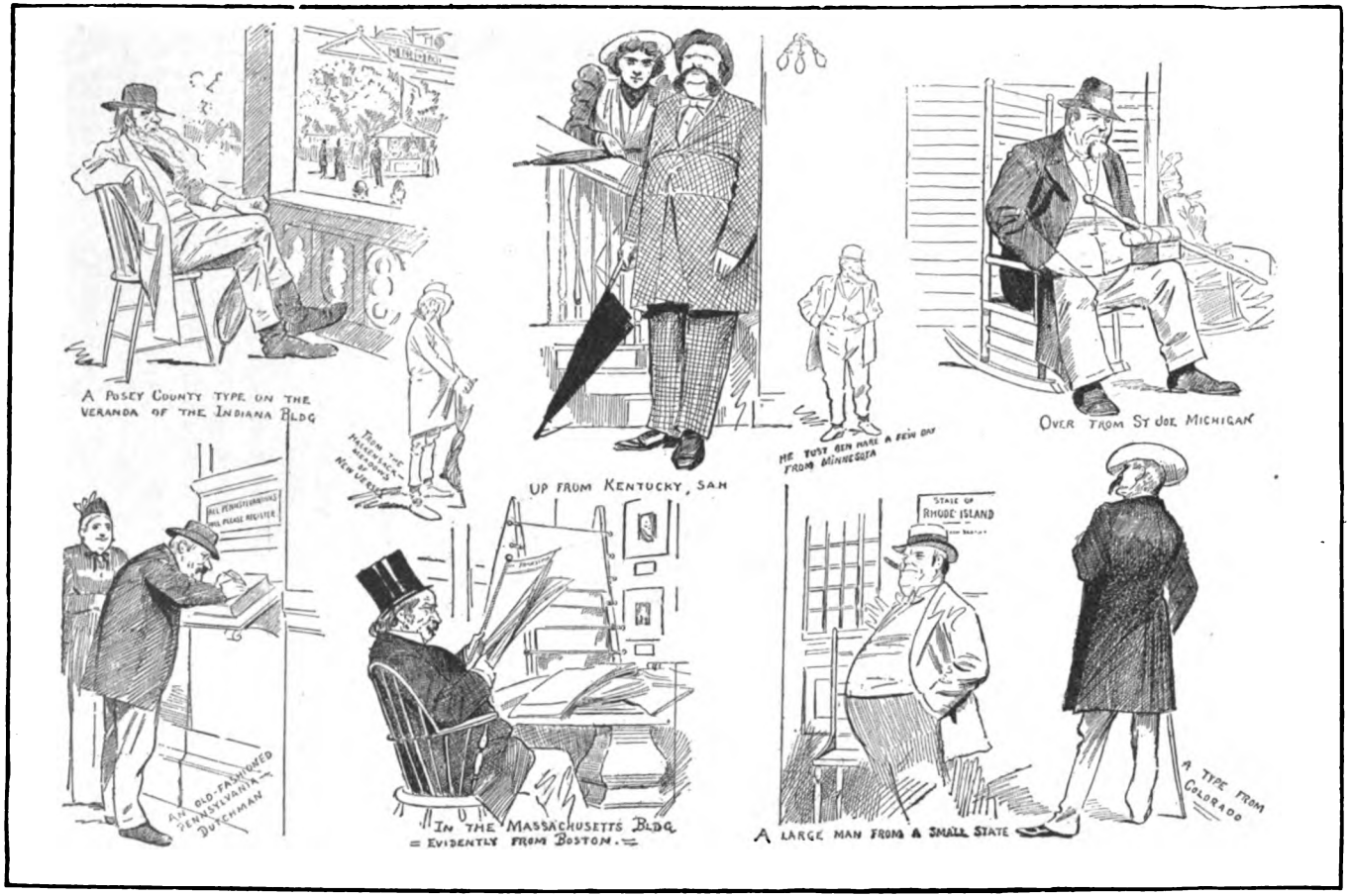
ISRAELS' "ALONE IN THE WORLD."—We have to thank the Dutch for probably the greatest picture of the exhibition, "Alone in the World." A similar subject, a mourner by the bedside of a departed dear one, has been done over and over again. Almost the identical subject is found in the German department in Theod. Hummel's "The Deathbed of the Mother" (281). But as was the case in Millet's "Angelus," the great painter need not select a new subject in order to produce a masterpiece. Millet's "Angelus" had thousands of prototypes. Again, a subject need not be forced in order to be a great accomplishment. Simplicity itself makes up this great picture of a poor Dutch widower seated beside the bedside of his departed wife, his hands upon his knees, his head drooping as he tries to collect his shattered thoughts and realize his situation. There is no dramatic contortion of his muscles as in the Frenchman Beraud's "Descent from the Cross" (306); the eyes do not stare, the jaw does not drop. The figure lying on the bed is at first sight a trifle repulsive in the colorless hue of her face, but after a while we get used to this, and the whole picture takes one harmonious hue to the eye. The same simplicity makes Neuhuys' "Woman and Child" a beautiful tribute to motherhood, as Mauve's "Ploughman" to husbandry.

Vos' pastel portrait of H. M. the girl "Queen of Holland" (175) is a charming example of child portraiture.

SWEDEN.

ARTISTIC TO HER FINGER TIPS, AN HARMONIOUS EXHIBIT.—The exhibit which makes the most pleasing impression upon the

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AT THE FAIR WITH OUR ARTIST—SCENE NO. 10.

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visitor is that of Sweden. The number of contributors is limited, they seem to belong to the younger school and are in harmony with one another, so that a striking unity is prevalent throughout the galleries. The younger school seems to have been influenced by French impressionism, though only in a few cases have the artists gone to the extreme. Mr. Zorn, who is slightly known in New York because of his exhibit with the Etching Club, is technically a young master. In his etchings in the gallery his best side is seen, a sureness of line telling throughout his work. In his paintings he has values well under control; the scene in an "Omnibus" (137), and "The Ball" (140), are a trifle blackish, but his Arcadian "Forest Study" (143), a nude nymph, is a triumph of technical accomplishment. However, in this figure, and in the girl bathing at "Sunset" (144), he displays a woeful lack of taste. It seems as though it were a waste of energy to learn to paint so well if one is going to select so repulsive a subject. Bruno Liljefors seems to be the Winslow Homer of Sweden. His "Bird Hunting" and "Foxes" and other studies of animals remind us of that American master. A woman here, as in the German exhibit, holds her own with a strong portrait, "Mr. H. L." (38), by Eva Bonnier. Count Prof. G. von Rosen, Carl Larsson, E. Chadwick, R. Thegerström, O. Hermelin, O. Björck and W. Behm are all strong men.

THE FRENCH

SHOW A FEW IMPORTANT PORTRAITS.—In the French exhibit, Bonnat's "Cardinal Lavigerie" holds an analogous position to Koner's "Emperor Wilhelm," and Holl's "Earl Spencer." If the same qualifications were requisite in a painting as are in modern gun-making, Bonnat's portrait would be the Krupp of the art exhibit, on account of its carrying power. Were it hung at one end of the Plaisance, it could be seen at the other. The red, which in Koner's "William," was relegated to two small triangles on his gray mantle, predominates the entire Lavigerie portrait. The same artist's "Rénan" is flat and "cut out" despite the rotundity of the subject. Both these portraits are in room 55.

The German section would imply that the artists of that country do not drink a health "to the ladies." Ungallant Teutons, note how your Gallic brother stands up for the fair sex, and paints her on all occasions. He depicts her with drapery high upon her shoulders, about her neck and up to her chin (Carolus Duran), and he portrays

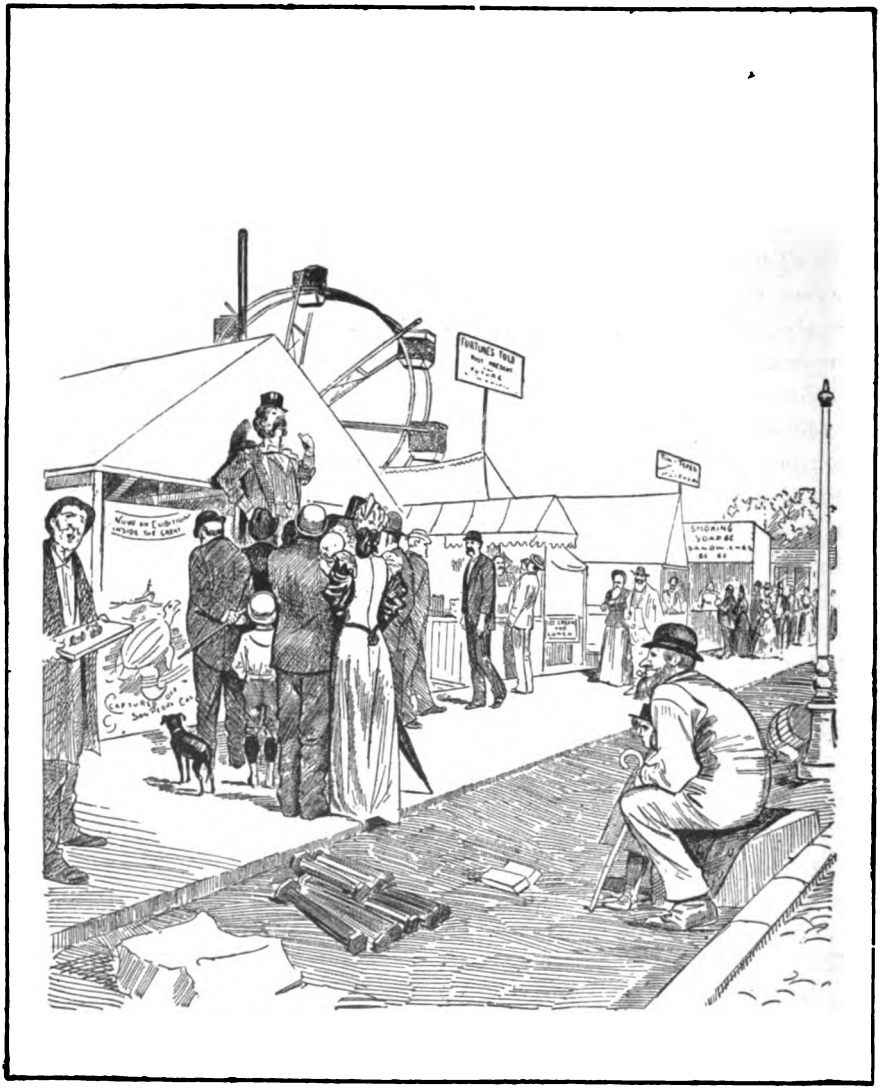
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her without drapery about her chin, or much over her shoulder, vide Courtois' "Madame Guateau!" Who but a Frenchman could give us this bit of imprudence so prudently. The same artist's "A Fortunate One" may challenge comparison with Max's "Katharina Emerich." To Bonnat, Duran and Courtois add Gervex, Yvon—his portrait of President Carnot (730), with a frame bedecked with plush and gold fringe, hangs in gallery 56—Henner ("Portrait of my Brother"), the miniature portraits of Weerts (720 and 721), and "Antonin Promst" (469), by Friant, and you have all there is of important portraiture in the French department.

HISTORICAL PAINTING AT A LOW LEVEL.—In historical work the French simply drop to the lowest level. From Albert Maignan we expected something of importance, but his "William the Conqueror" (581) is simply an unsuccessful sketch. In room 53 Benjamin Constant's "Triumph of Columbus" (301) is important in name only; it is simply lay figures supporting rich draperies. Nor is J. P. Laurens' "Columbus before Isabella" (545) in room 56, much more valuable. Chartran's much talked of "Pope Leo XIII." (378), portrayed in an explosion of currant jelly, is louder than Lenbach's "Leo," in the German section, but not as refined. Of Rochegrosse we expected something stronger than "The Spoils" (663). Lehermite's sober pastoral (568), is a satisfactory foil to Rosset-Granger's "Flotsam and Jetsam," the purple figure of a dead girl on a sea beach, one of many of the tasteless examples of French painting, most amply represented in room 57, where we find the prototypes "en gros" of Harrison's and Zorn's Arcadian scenes. Delort's "Capture of the Dutch Fleet in the Texel by the Hussars of the Republic, 1793," is every inch picturesque, and we study it with great relief, together with a few good landscapes in this room, turning from Fourie's gross "Sunshine" (461), Collin's and Lamy's cheap ideals. We have not Rosa Bonheur's "Horse Fair" to compare with Mrs. Butler's "Roll Call," but in room 56 is her "King of the Forest" (327), looking a little old-fashioned, but serious and painstaking, showing a true love for animal life. In the same room is Bouguereau's well known "Wasp's Nest" of Cupids (339). Tissot's four story-telling pictures, "The Prodigal Son" (703), shine like crown jewels among the paste finery of the French exhibit.

Modern French sculpture is represented in the east and west courts of the Fine Arts Building by Bartholdi's "Washington and

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446 AT THE FAIR WITH OUR ARTIST—SCENE NO. 15.

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arm around a cupid, holds aloft a cup. To the right Venus is teaching a cupid the use of the bow and arrow. Elsewhere are to be seen satyrs and bacchantes.

But cupids are everywhere. Baby faces peer from the vine leaves, and frolic in the depths of the vase. A lizard causes consternation among some frolicsome youngsters. Others are playing with beetles, flies, bees and butterflies. A snake has attractions for some of the infants, while others content themselves with watching the efforts of their companions.

With all this wealth of detail the work is not overcrowded. At a distance the effect is of simplicity. It is only when close inspection is made that the wonderful imaginative powers of the artist are made apparent.

As with all others of his greater creations, Dore's style is indelibly stamped on this work. No other artist of his time could have achieved it.

A LABOR OF LOVE.

Dore himself would not have been equal to the task had it not been a labor of love. It is related that this, one of the last great works of the master, was the subject of his almost constant care for many months. Besides the toil and anxiety, it is estimated that the vase cost Dore what is equivalent to $12,000. Its present value of $20,000 is, therefore, not to be held as excessive. The vase was modeled in time for display at the Paris Exposition of 1878. Singular lack of appreciation was shown by the judges, for no award was made by the government, although works of inferior merit were recognized. Shortly after the close of the Exposition the casting in bronze was made. In 1883 the artist died.

Gustave Dore was born in Strasburg in 1833. At an early age his predilection to art was made manifest. His first lithographs were published when he was only 11 years old. In the following year he went to Paris with his father, where his studies were continued. In 1848 he published his first series of sketches. When he was 20 years old he commenced the exhibition of oil paintings, while in 1854 he illustrated the works of Rabelais. The decoration of the Cross of the Legion of Honor was awarded him in 1861. Until the close of his life he worked indefatigably. The total number of his drawings and sketchings is variously estimated at from 45,000 to 50,000. Of the many works illustrated by Dore the most

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but they make collectively a rather feeble showing. The mural decorations to the building, on the other hand, especially those by Mrs. MacMonnies, Mrs. Sewell and Miss Mary Cassatt, are equal, if not superior, to what the men have done. The decorative frieze of the Ladies' Parlor in the Illinois Building is also highly creditable. Less harmonious are the panels by women in the Pennsylvania Building.

THE BUILDINGS.

The character of the buildings is too well known to need detailed description; little can be said, save that no photograph or print truly represents them. They are white and brilliant. If Hopkinson Smith could come here with his gray paper and do them in water color, using plenty of Chinese white, he would effectually portray them. The Peristyle is certainly a dream. Mrs. MacMonnies' Fountain seems too short lengthwise and somewhat overdone in action. However much the Greeks may have painted or gilded their statues, the American people are not yet ready for chryselephantine statuary, and French's "Republic" looks less chaste and dignified in her golden robes than she did in the large photograph exhibited at the New York Architectural League last winter. She also seems to be placed too low. Among the buildings that are thought to be failures are the Government Building, the Transportation Building, Illinois and Indiana State buildings; but on the whole the buildings are very satisfactory models of the classical in architecture, and, considering the haste and economy with which they were erected, are truly herculean accomplishments. This haste should be taken into consideration when viewing the decorations of the Liberal Arts Building, by Beckwith, Shirlaw, Earl, MacEwen, Melchers, Reinhart, Cox, Weir, Simmons, Blashfield and Millet; the last three seem to my mind to have been most happy in their accomplishments. Mr. Melchers has been least successful, though his failure is not as gigantic as Mr. Dodge's idiotic performance on the dome of the Administration Building. On the exterior of the Agricultural Building Maynard has imitated Pompeiian decorations with novel effect, in a composition representing the Seasons.

A PERMANENT BENEFIT.

Finally, when this caravansary of five months' domicile will have folded its tents and stolen away, or to be more literal, shed its crusta-

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AT THE FAIR WITH OUR ARTIST—SCENE NO. 14. 443

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tion of staff, the influence of the art exhibit, at least, will not have ceased, but will have widened the horizon of our appreciation for what is beautiful in painting and statuary, and have added greater catholicity to our taste.

FROM DISTANT LANDS.

Several of the foreign nations and colonies not yet old enough to be advanced in the arts made their only or chief World's Fair exhibits in the agricultural building. Of these Algeria, Cape Colony, the Orange Free State, and Liberia are of great interest; they are worthy of more attention than they receive from the casual visitor. A description of their wonders will therefore not be out of place, as well as a brief mention of others of the exhibits of foreign nations in this building.

Algeria is a French colony, but it has been given a distinct place and large space in the agricultural building. The most prominent object in the exhibit is what is called the Moorish room, which is a reproduction of an apartment in the palace of the governor at Algiers. Inclosed by Moorish arches, in imitation of marble, is a central court. The office of Mr. Monteils, the commissioner from the colony, is situated at one of the corners, the rest of the space being devoted to a display of the products and art works of the country. Pictures by native artists hang on the walls, showing the four seasons in Algeria, a street scene in Algiers and other subjects. A fine cabinet in native woods is shown, tobacco, manufactured and natural, and specimens of the ramiee, a variety of reed from which fine fibrous material is made. Woods of the country are exhibited in the form of thin sections bound in volumes, resembling books. There is a fine Arabian mirror, the frame of which was carved with a knife by a native artist, and other specimens of wood carving.

ALGERIAN CORK.

In the main department of the exhibit, a great display of cork is made. The trunk of a tree is shown, the rough bark in bales, and manufactured corks. Sheet cork for hat linings is shown, and thicker leaves for insoles for shoes. There are 1,200,000 acres in Algeria covered with cork trees, which will be in full production in five or six years, when the crop will be enormous. Algerian cork is equal to that of Spain, it is asserted. Growth of the tree is limited

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to lands in the Mediterranean basin. There are 260,000 French people in Algeria, the same number of persons of other nations, and 3,500,000 natives. A curious product of the country is alfa, a fibrous grass from which ropes are made. It pulps readily, and fine paper is made, much of which is exported to England. As evidencing the importance of Algeria's commerce, goat skins to the value of $300,000 were exported to the United States in 1892. This industry is of recent growth, as, four years ago, none were exported. Wool is another important product, while the grain of the colony is of superior quality.

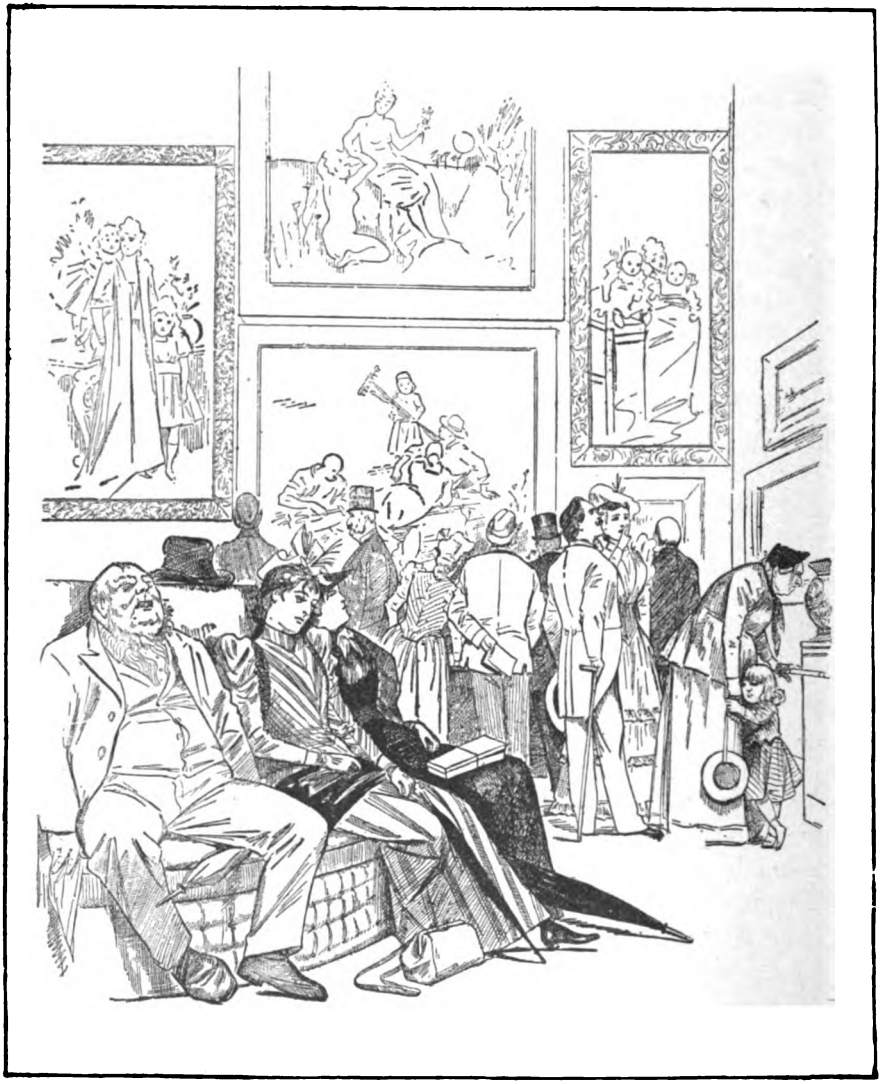
CAPE COLONY.

That Cape Colony is worthy of more than a glance is proved by the fact that its population is 1,527,224 ; its total of exports in 1892 amounted to £11,116,231 ; its wool clip for the same year was of the value of £2,264,489, while ostrich feathers valued at £468,221 were marketed. The exhibit is of limited size, but the space is crowded with objects illustrative of the products of the colony. Ostriches, their plumes and eggs are shown, the display being of stuffed birds, selected plumes in cases, and eggs in boxes and crates. Wool is one of the most valuable products of the country. The sheep were imported from Spain. The Angora goat thrives in this climate, and its long and silky hair is a valuable product, bringing thirty-four cents per pound in London. Selected skins are shown. Wool is shown in bales, fleeces, and hides A stuffed specimen of the fat-tailed sheep is exhibited. The skin of the tail tanned, is now in demand by glove manufacturers. Other products exhibited are raisins and currants, wheat, wines, and brandies, gum arabic, and ivory. Of the latter, it is related that the smaller tusks are more valuable, when sold by the pound, than the larger specimens. One great tusk is shown that is worth $6 per pound. Its weight is 137 pounds. Curiosities of the Kaffirs are exhibited, including weapons and articles of dress, while various articles of Malay make are shown.

AUSTRALIAN COLONIES.

New South Wales fairly revels in wool in its exhibit. It is no more than natural the colony should take pride in its great product, for the value of the clip of 331,886,720 pounds for 1891 was £55,180,090. In the pavilion are pyramids of wool, arches of wool, and an educational exhibit of the various staples arranged in cases.

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452 AT THE FAIR WITH OUR ARTIST—SCENE No. 17.

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There are pictures of sheep and sheep stations, or ranches as they would be called in this country, and wool wagons. Victoria has some wool to spare, and that the people of the world may know it, a fine exhibit is made adjoining that of the sister Australian colony.

Ceylon's pavilion is well patronized, for tea is there converted into a beverage. Natives serve it and expatiate upon the merits of the product. Plumbago is shown in a case, and cocoanut products are displayed. Native woods are to be seen, products of cocoa fiber, a model tea plantation, and an irrigation machine, and various agricultural impliments.

LIBERIA'S CURIOUS PRODUCTS.

In the northwest corner of the building are grouped a number of exhibits that contain many interesting features. Liberia, which bears the distinction of being the only Christian negro state in Africa, displays palm oil, cocoanuts and fiber, cocoa and coffee. The country produces gold and rubber, citrons and other fruits. Coffee, however, is the great staple. The principal exports are palm oil, palm kernels, coffee, camwood, cocoa, ivory and rubber. On July 26 Liberia day was celebrated at the World's Fair in commemoration of the forty-seventh anniversary of the independence of the Liberian government and the establishment of its capital at Monrovia.

In the exhibit are many interesting objects used by the native Mandingoes. Among them are weapons, leather and rattan ware, musical instruments, and worship heads. A curious mask is shown. The products of the country are also exhibited in various form. Bundles of fiber are shown, coffee and cotton, dyestuffs, palm oil, and ivory.

The attraction of the Uruguay exhibit is a pavilion where a couple of girls who are not products of the country dispense beef tea all day long. Quebec shows grains, while Ontario make an attractive display of various products. Germany, among other things, shows mineral waters, while Austria makes a specialty of a similar product. Great things will be done by the Brazilian government. The Orange Free State, of South Africa, displays its products attractively.

The West Indies are well represented. Trinidad displays cocoanuts and sugar-cane products, hemp, and tobacco. Birds of the country are shown. Exhibits from Cuba, Porto Rico, the Phillipine islands, and Spain are grouped together. Tobacco is splendidly

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heels. France also exhibits some of the footwear worn by famous fops of the last century, while a pair of boots purchased by Prince Shouisski of Russia, in Paris, for 3,000 francs have a section of the case all to themselves. The foot is of white undressed kid, the boot legs of white velvet embroidered with gold, while precious stones glitter in the open places of the uppers. There are hundreds of other queer designs in the case which have been collected from distant parts of the world.

There are some curiosities in the leather business exhibited in the building. The hide of the biggest horse in the world, tanned with the hair and heavy mane and tail, is exhibited. There is a tanned walrus hide, an inch thick, and large enough to make a good sized tent. There is a pair of shoes which weigh but two ounces apiece, and which have a tinkling bell concealed in the high heel.

Leather for decorative purposes has an important place in the display. There are tanned snake skins, alligator hides and morocco leather in this department of the exhibit, while some manufactured goods are shown. There are specimens of leather tanned by all kinds of processes, and pieces of hide which have lain in the vat for years. Then there are leather dressings, pyramids of French polish and stacks of blacking which needs the expenditure of elbow grease to make it shine.

In the gallery the machinery is buzzing and humming. In one exhibit, young women in black dresses with broad white collars make shoes while you wait. One can watch the piece of leather from the time it is cut out of the hide until the last girl puts the bottom on it and hands out a completed shoe for inspection.

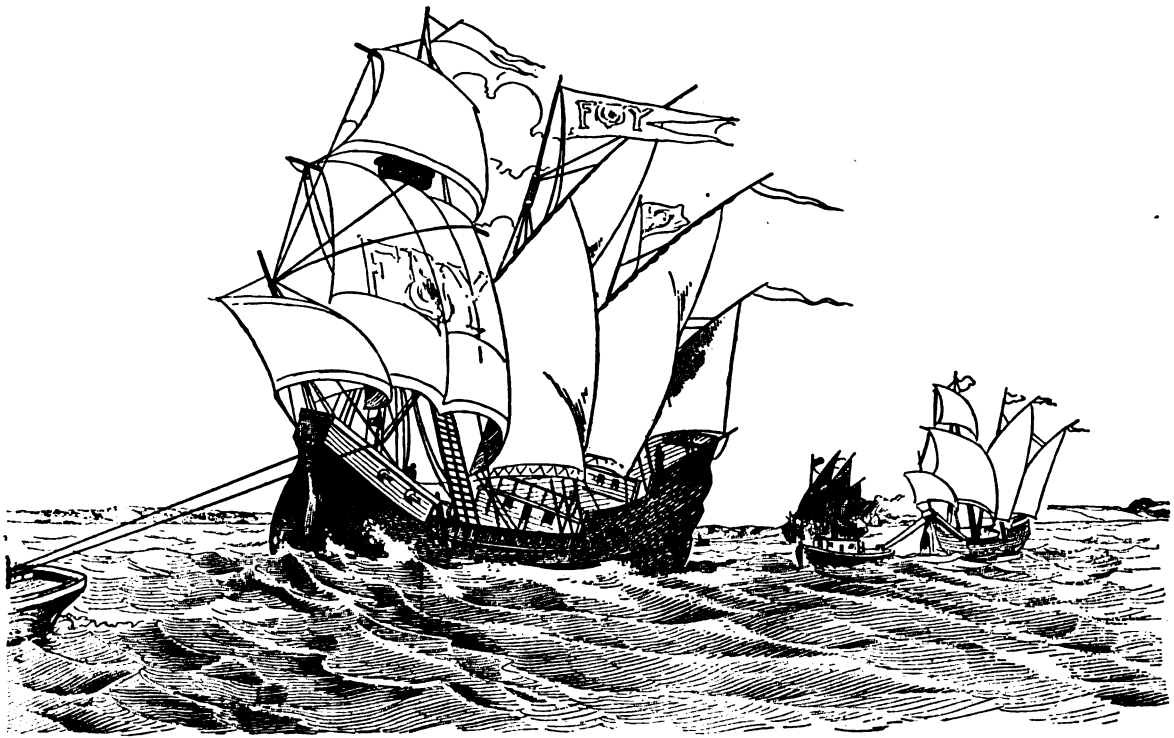
The gallery contains specimens of all the complex machinery used in the manufacture of shoes.

WOMEN IN THE FIELD OF LITERATURE.

Some idea of women's share in the writing of books may be gained in the library of the woman's building, where 7,000 volumes are shown. An inscription over the door which reads "Contributed by the State of New York" is misleading, for, although the women of the Empire state decorated and furnished the room, nearly every state in the Union and several foreign countries contributed to the library and its interesting accessories.

The function of the library is almost self-evident to those who

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THE CARAVELS IN FRESH WATER.

LEON AS IT NOW IS.

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pass before the well-stocked shelves and read the names of the writers. Not a man's name appears; every book and manuscript has a woman for its author. The work of cataloguing the library is under way, but has not reached a point where the real value of the library as an index of women's literary progress and strength will be given. The 7,000 volumes are not the works of 7,000 women, for in some cases three or four books by the same writer are shown, and duplication is apparent in the collections made by states.

In the formative days of the library every state was requested to send in the works of its women authors. This request was construed in several ways. Some states construed it as only "native" writers, and sent only works of women born in the respective states. Others construed it to mean "native and adopted." Still others, notably New York, put such a broad construction upon the request that it sent 2,500 volumes written by women born in the state and still living there; natives of the state who live and write in other states, and those born in other states who live and write in the state sending the books. In consequence of this elasticity of construction the same author is claimed by several states, and the same book shown in several state collections. Massachusetts drew the line sharply, and the collection from the state which claims the literary center of the country contains only the works of Massachusetts women, either by birth or adoption.

The following schedule taken from the manuscript of the catalogue shows the number of books in the collections of states and foreign countries:

Alabama	64	Maryland	56
Arkansas	1	Massachusetts	100
California	9	Michigan	24
Colorado	46	Minnesota	34
Connecticut	111	Mississippi	4
Delaware	8	Missouri	3
District of Columbia	100	Nebraska	20
Florida	8	New Hampshire	3
Georgia	9	New Jersey	350
Illinois	100	New York	2500
Iowa	2	North Carolina	26
Indiana	1	Ohio	96
Kansas	3	Oregon	11
Kentucky	6	Pennsylvania	400
Louisiana	72	Rhode Island	45
Maine	42	South Carolina	13

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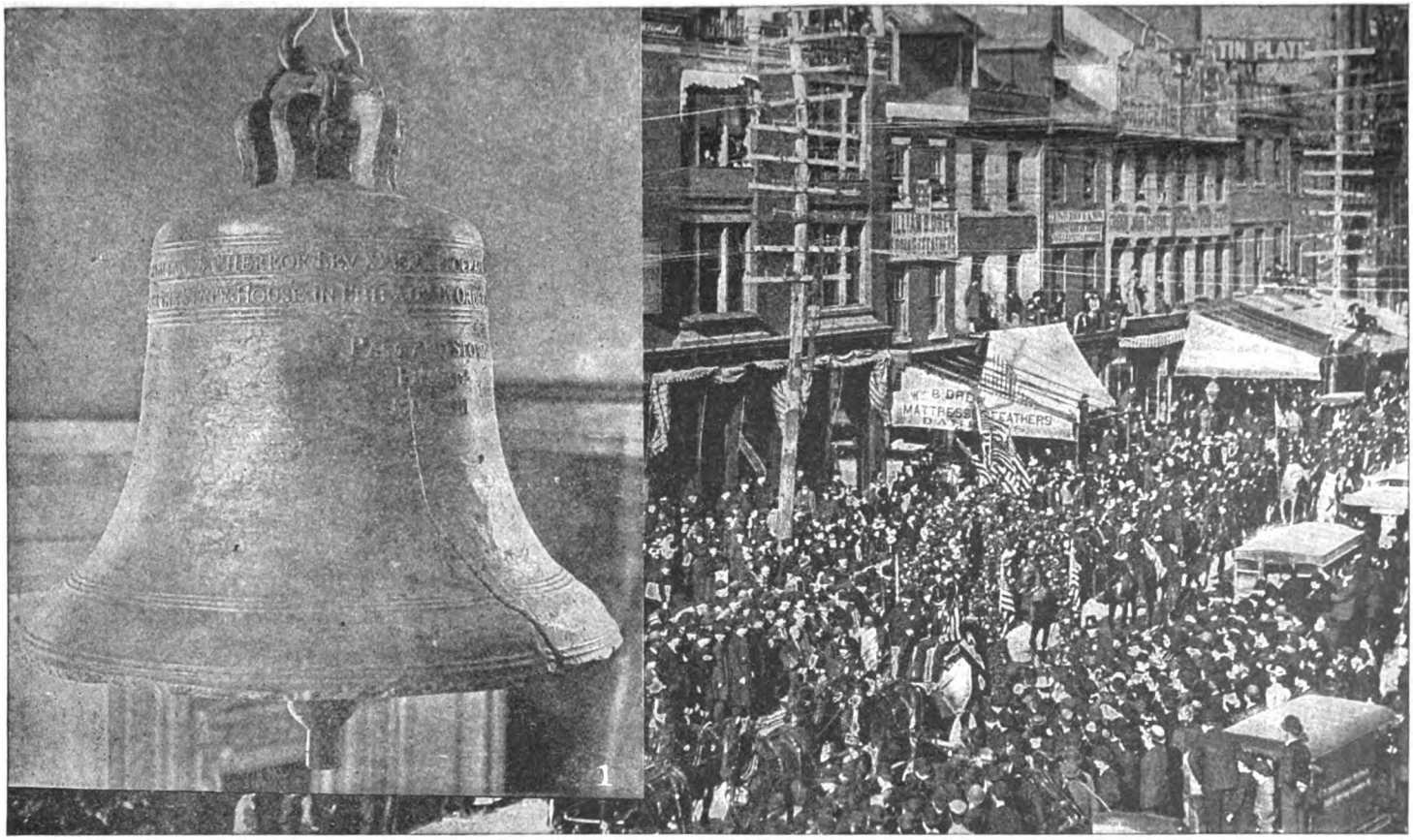
Texas	27	Great Britain	500
Virginia	14	Italy	150
West Virginia	5	Japan	50
Wisconsin	4	Peru	1
Belgium	350	Mexico	9
Bohemia	307	Spain	300
Finland	1	Sweden	130
France	800	Turkey	3
Germany	500		

These figures, of course, do not indicate the relative literary strength of the different states, but rather the energy and conscientiousness of the women delegated by the different commonwealths to collect the books. The fact that Japanese women sent half a hundred books written by their own sex is one of the surprises of the library. Another is the library of 307 volumes written by Bohemian women; for, although the term "Bohemian" covers a wide class of writers and artists, it is a revelation to the literary people of this country to see the prominence in book-making attained by the women of Bohemia.

The room which contains what is conceded to be one of the most interesting and valuable exhibits in the entire Exposition is beautifully furnished and decorated. The wainscoting and cabinets of the book-shelves were formerly part of an old Flemish cathedral, a relic of the sixteenth century. The heavy oak is almost as black as ebony and is richly carved. The mantlepiece of somewhat different design is of the same period. All of the upholstered furniture in the room comes from the Associated Artists of New York, and the carved furniture is loaned by a New Yorker. The ceiling, painted on canvas by Dora Wheeler Keith, of New York, is said to be the best piece of decorative work ever done by this talented artist. Her mother, Mrs. Candace Wheeler, superintended the decorations of the woman's building, and, borrowing the idea from the vatican, she has placed in the center of the room a large table mirror, in which her daughter's beautiful composition can be seen without danger of straining neck muscles. The center figures in the paintings are Literature and Science, with Imagination between them, and the figures in the four corners, medallions, represent history, romance, music and drama.

New York was given the privilege of decorating and furnishing the library, as Cincinnati was given the reception-room, California

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ESCORTING THE BELL FROM INDEPENDENCE HALL TO THE PENNSYLVANIA RAILROAD STATION IN PHILADELPHIA.

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the drawing-room, and New Jersey the president's room. The women of New York more than carried out their contract, for the library is a magnificent room. Great Britain sent, in addition to books, a rare lot of manuscripts and valuable autographs. In the south record-room connecting with the library is a large center show-case. In it, carefully guarded by oak frames, are several sheets of the original manuscript of George Eliot's "Adam Bede," Charlotte Bronte's "Jane Eyre," Miss Burney's "Evelina," "Helen," by Maria Edgeworth, "The Watson's," by Jane Austen, and others. Near them is a finely bound copy of Queen Victoria's "More Leaves from the Journal of Life in the Highlands," and an original manuscript bearing the signatures of Ferdinand and Isabella of Spain.

On the other side of the case is the manuscript of "The Story of Tonty," by Mary Hartwell Catherwood. Among the ancient books in this case is one published in 1656. Its title, in quaint type, with the f-shaped "s," reads as follows': "A Discourse of Auxiliary Beauty or Artificial Hansomenesse in point of Conscience between two Ladies." Another is a well-preserved volume of Mrs. Latter's "Pro and Con., or the Opinionists," published in 1771. "Montababert" is the title of a high-strung romance by Charlotte Smith, published in 1823, with old-fashioned wood-cuts of sighing swains and fainting maidens with long curls and wasp waists.

Among the English autographs is the original of the poem writtenby Elizabeth Barrett Browning, "The North and the South;" a letter written by Lydia Maria Child in 1861; some letters of Fanny Burney's to her sister, written in 1787, and a few pages of the original manuscript of Mrs. Cowden Clarke's "Concordance to Shakespeare." Young Americans are instinctively drawn to Anne Whitney's marble bust of Harriet Beecher Stowe. In a cabinet beneath the pedestal is a copy of every translation of "Uncle Tom's Cabin," which, next to the Bible and Shakespeare, has been published in more languages than any other book. Some of the titles read as follows: "La Case de L'Oncle Tom," "La Cabane de L'Oncle Tom," "Oncle Tom's Hutte," "La Case du Pere Tom," "Stric Tomaz," "La Capanna dello Zio Tom," "Zio Tommaso." "Papa Tom," and "Neger Hut."

Yesterday John Boyd Thacher's collection of autographic letters, with their pictures of famous women of all ages and countries, was placed in position. This is one of the best features of the library, and

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was loaned by Mrs. Thacher. Perhaps the most valuable letters in the collection are from the correspondence between Queen Elizabeth and Mary Queen of Scots. These two letters are famous in history. In one Queen Bess writes her unfortunate relative that she need not fear any violence on her part, and beautiful Mary replies that she knows the Queen will be kind and loving.

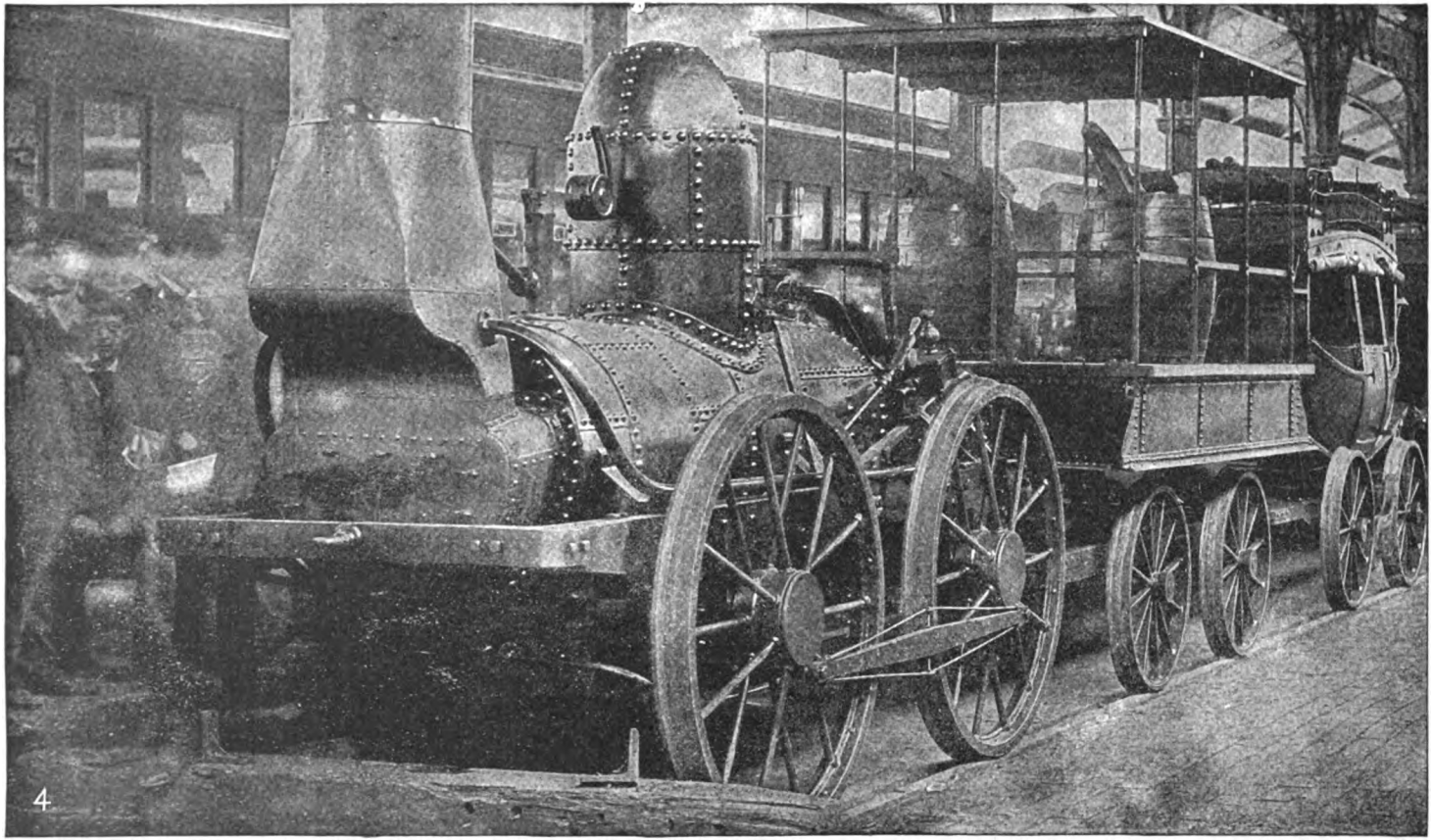
One of the letters with a story is from Aaron Burr's daughter Theodosia, who sailed away one day, and was never heard of again. Abigail Adams, wife of President John Adams, wrote a letter to her husband without dreaming that it would be read by curious people in a place she never dreamed of, and Mme. de Stael's liveliest imagination fell short of the idea that her penned thoughts would some day be carried to a city of 1,500,000 in the wilds of America. In the collection are letters of the Countess of Huntington, the patron of Gecrge Whitfield ; Elizabeth Fry, the quakeress ; Mme. de Sevigne ; Jane Porter, author of "Thaddeus of Warsaw" and the "Scottish Chiefs;" Hannah Moore, Lady Mary Wortley Montague, Jean Ingelow and hundreds of others, women known to history, romance, and poetry for years back.

The collection is admirably arranged. Mrs. S. Lockwood, of Washington, D. C., is chairman of the press and library committee, which is composed of Mrs. Salisbury of Utah, Mrs. Paul of Virginia, Mrs. Briggs of Omaha, Mrs. Allen of Oregon, and Miss Cunningham of South Carolina. The cataloguing of the library is in charge of Edith Clarke, of the Newberry library, who, with three assistants, is making a classified and biographical catalogue. Arrangements have been made to have two different librarians each month. This month Miss Caroline H. Garland of the Dover (N. H.) public library and Miss Mary L. Titcomb, of the Rutland (Vt.) public library, are in charge. Next month Miss Ellen M. Coe, librarian of the New York free circulating library, and Miss Hannah P. Jones of the Osterhout library of Wilkes Barre, Pa., will overlook the woman's library.

THE EDUCATIONAL EXHIBIT.

One may review his entire school life in the gallery of the Manufactures Building. The educational exhibit is located there, and the visitor, no matter what direction his education has taken, can find something that will remind him of bygone days. Colleges of all kinds, schools in as large variety, are all represented with

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THE "DE WITT CLINTON" RAILWAY TRAIN: A REPRODUCTION OF THE FIRST TRAIN EVER IN THE STATE OF NEW YORK, NOW ON EXHIBITION AT CHICAGO.

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booths in which are displayed specimens of the pupils' work. There is as wide a difference in the nature of the displays as in the character of the institutions represented.

More than thirty states are represented in the American display, and ten nations have sent the handiwork of their school children for comparison and examination by the World's Fair student.

Take the primary department. Here bright-colored paper and sharp scissors occupy a prominent place. The students have made wonderful horses and wagons out of the flimsy stuff. There are neckties and pin cushions made of tissue paper of rainbow colors, the work of six-year-old tots—displays that have been pasted upon big cards and framed. Each separate exhibit of the children's skill in the use of the shears has a card attached which invariably bears an inscription like this :

SCHOOL BOARD OF LONDON EXHIBIT.
NAME OF EXHIBITOR, WILLIE RYDER.
TISSUE-PAPER FLOWERS.
AGE, 7 YEARS.

But most of the children have not had their ability limited to paper work. There are wonderful spiders and butterflies made out of vari-colored beads, paper baskets made of pleated straw.

In other portions of the exhibit are to be found piles of paper on which writing and arithmetic exercises bear the stamp of tiny fingers of unlimited patience and industry. Of course such displays are formed of the work of the best pupils in the different grades of the schools making the exhibits, but thousands of students are represented, and the work is all excellent.

In the industrial schools section much space is given to the trades taught the pupils. There are pairs of prize shoes, sets of harness and satchels and trunks made by the pupils in the leather-working department. The wood-workers display carvings, work in joining, inlaying and cabinet work, which would show off to advantage among the art industries on the main floor of the big building. Several industrial schools are represented, and the displays are very similar.

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Probably the most interesting exhibit in the educational section is that made by the different institutions for the education of the blind. A young man attends these displays. He is blind, and excites the wonder of the visitors when he walks about the pavilion and covers up the cases when the sun is shining on them or sits down to his typewriter and makes queer characters on a piece of paper which he says is the blind alphabet. In this pavilion are brooms which have been made by blind students in the industrial departments, fine crochet work and free-hand drawing where big-headed pins take the place of pencils and brass tacks are used instead of shading. Then there are charts that show how the sensitive touch of the educated blind has been developed.

In the deaf and dumb display the exhibit is much the same. Here, however, are found paintings and drawings, while the methods of teaching by the language of fingers is simplified and explained.

In the section devoted to schools for the feeble-minded it is shown how the poor creatu res can be so educated as to lead not only a happy but a useful life. They are taught to do all kinds of useful work.

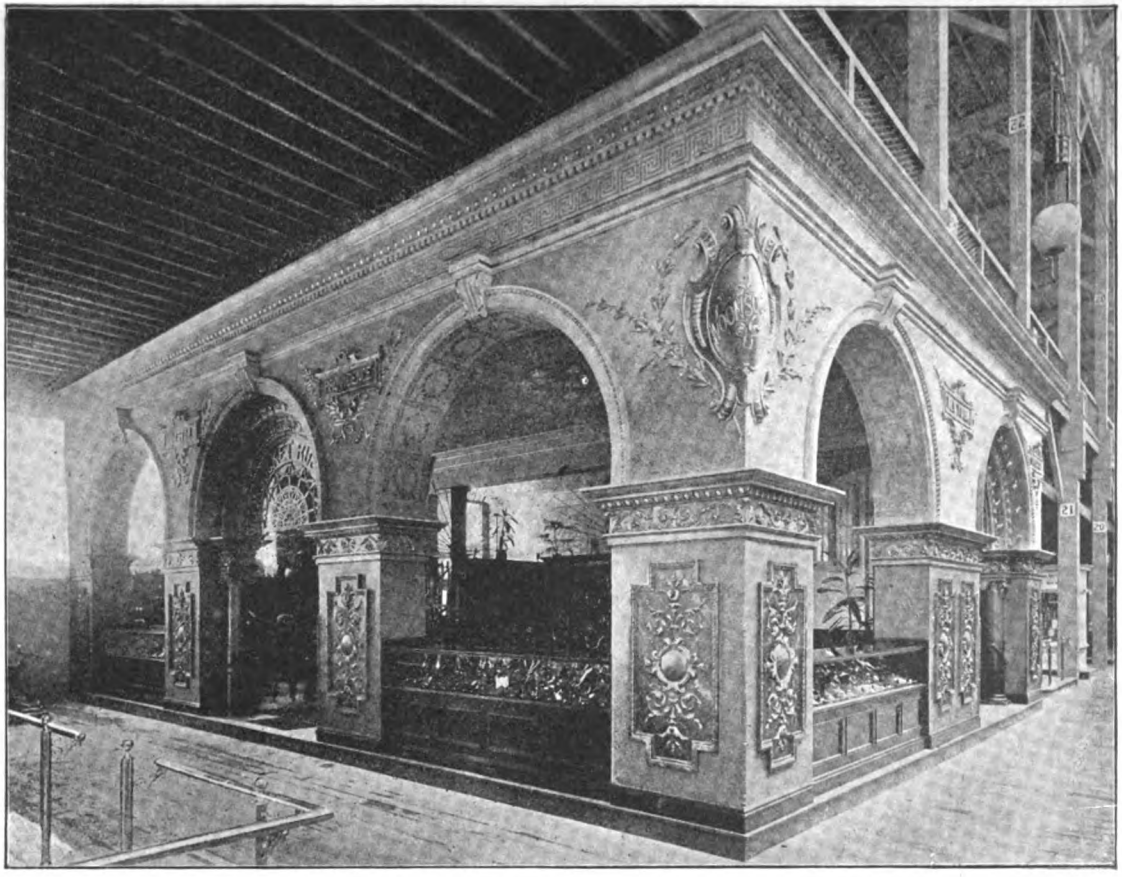
There are fifty colleges represented at the World's Fair. All have built neat booths, and the displays range all the way from the plates showing the relative value of hay and fodder as feed for cattle from the agricultural institutions to theses written in Latin and Greek from the classical institutions.

Selim H. Peabody, the chief of the liberal arts department, is not satisfied with the slight attention which is being paid the educational exhibit. He thinks the public does not realize how close education and the future prosperity of the country go together, else there would be more persons examining the work of the different colleges and schools. He says he saw more people yesterday morning crowding around a dime museum on Stony Island avenue than he has noticed clustered about any one of the many interesting exhibits in the educational section.

FOR MANUAL TRAINING.

In 1888 there died in Finland the founder and rector of a normal school, Uno Cygnaeus, the news of whose death was scarcely noticed beyond the confines of his own country. Although unknown to the world the works of Cygnaeus' life has made a profound impression in

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AN EXHIBIT IN SHOE AND LEATHER BUILDING.

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civilized countries, for he was the father of that practical instruction known as manual training, which is taking its conquering course through the Christian world. A student of Pistalozzi and Fraebel, he evolved a system of education whose chief points of reform consisted in introducing the objective teaching of the former and the occupations of the latter, supplementing both by manual training for more advanced grades. The principles upon which he based his system was, that education of the young must aim not at one-side intellectual training, but at the harmonious strengthening and exercise of man's inborn powers with constant consideration of practical aims in life. It is to Finland that the honor belongs of having recognized before all other countries the pedagogical value of manual training. In the public schools established in 1858 Cygnaeus tested the practicability of his methods, which consisted in choosing work calculated to awaken æsthetic feeling, to develop manual dexterity, and to impart general skill. He included carpentering, the turning lathe, work in iron and basket making, and from the Normal School at Paizene, his propaganda of a new education became distributed throughout the country. The efforts of Uno Cygnaeus bore beautiful fruit in his own country. The law of 1866 made manual training obligatory in all pecuniary and normal schools. The regular instructor teaches it. The system was adopted in the school of technology at St. Petersburg and other schools of Russia, with some modifications, and is known as the Russian system.

The first manual training school in the United States was established in Champlain, Ill., in 1870, and at the Centennial in 1876, a diploma was given to the students of the wood-working department. For some reason the school at Champlain did not advertise the manual training idea, and it was left for Dr. Runkle, of the school of technology in Boston, to spread the news of this novel, educational idea. In 1876, while at the Centennial, Dr. Runkle saw some exercises in metal, a simple method of teaching the rudiments of practical mechanics to boys; it was the illustration of a problem he had long been trying to solve, and he quickly appreciated and utilized the system. In 1877 the mechanic art shops of the school of technology was established, and from this center the manual training idea has developed with great rapidity.

Another phase of manual training, and a very popular one, too, is sloyd—a system of manual work in which the hand training of the

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kindergarten is continued through the intermediate schools till the child is old enough to enter the high school. The word sloyd is a Swedish word; and has no English synonym; the idea which it embraces is the training of the head and hand for educational purposes; that kind of handiwork which best stimulates head work. It is work with the hands and simple tools. The system was originated in Naas, Sweden, through Otto Solomon, who has devoted a lifetime of faithful study to the subject. The widespread interest in the subject of industrial education, which has apparently so suddenly sprung up all over the United States, furnishes a striking instance of the manner in which a new movement, long in unnoted preparation, sometimes displays surprising extent and power. The cases which have led to this interest in technical education had their inception in the wonderful development of resources which began to be a recognized factor in humble life some fifty years ago. The laboratory system by which scientific studies are now pursued in all the best universities and schools of technology is, in its essential methods, one with the new methods already begun and proposed in the public schools. Remote as may at first sight seem, any possible relations between the methods of the kindergartens and those followed by the investigators in the physical laboratories of Yale, Harvard, or Johns Hopkins, they are nevertheless based on the same principles. A careful analysis of the methods of instruction in industrial drawing, of the modifications and developments of this study during the past three years, and of the methods of instruction adopted in the new manual training schools, will show that they are all, both in theory and practice, based on the same general truth.

The great popularity of manual training rests, in a large measure, on the educational principle that alteration of employment is a law of true mental growth, and the advocates of the training school believe the transition from moderate brain work to moderate physical work, to be restful rather than fatiguing. By obedience to the law, securing alteration of employment before interest or force is lessened by intensity of mental application, much time in the elementary schools now wasted, or worse than wasted on bad methods or useless studies, can be economized and given to the new studies of the kindergarten of manual training and sloyd its natural sequence.

Everything in the past few years tends to press upon the attention of the community, with ever increasing earnestness the practical

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SCENE IN MIDWAY PLAISANCE.

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questions of education. The early prejudices against the public schools, regarding them as public charities and a doubtful experiment has long since passed away, and now free instruction is recognized as an obligation due by the government to the public, the true policy of the State is to establish and support by public taxation, such a system of free schools as will produce the greatest benefit to the whole community, and this can be most successfully done by furnishing instruction in every department of useful knowledge.

The manual training exhibit in the educational department of the Columbian Exposition leaves no room for doubt as to the attitude of the public in regard to this new feature in the school course of the youth of the United States. Manual training in some form has been demonstrated as a necessity, as an occasion of mental development that must be embraced in the curriculum of the schools, and those who control their policy are being compelled to recognize the demands of the people for a national course of instruction.

Nearly every State represented has a manual training exhibit, and the special schools in the manual training group are full of interest, for those who wish to make a study of this phase of the new education.

The exhibits of the special schools are along the southern aisle in the Manufactures Building; the space is divided into sections, tastefully arranged, and on the walls, tables and in the cases are arranged in systematic order the projects, drawings and articles made by the students. One of the most complete exhibits—that of the St. Louis, one of the pioneer manual training schools of the United States, established by Dr. Woodward in 1879, is a sub-department of Washington University. None of the work exhibited, of which there is an abundant and pleasing variety, was made for the Fair; selections were made from regular class work, and several specimens of each exercise are presented, so as to show that none of the work is exceptional, and every piece of work is made from a drawing.

The objects of this school, which Dr. Woodward has outlined in a circular of information, are noted in this connection for the reason that they are the basis of every other manual training school, and will be useful in giving an idea of the aims of manual training. "The school was organized to furnish a broader and more appropriate foundation for higher technical education, and to serve as a developing school where pupils may discover their innate capacities and aptitudes, whether in the direction of literature, science, engineering, or

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the practical arts, while securing a liberal elementary training ; to stimulate those who look for industrial life with a suitable preparation; to stimulate the whole boy by cultivating memory, taste, observation, invention, judgment, will and habits of industry, circumspection, precision and exact thought. It is not a trade school, nor a professional school, though it prepares boys for entering either trades or professional study."

It is not modeled after any European school ; it is an American institution. The method of instruction in the use of tools is of Russian origin, but the plan of the school is original. The manual training school is a school for general rather than for special education. It preserves all approved methods of promoting intellectual growth and vigor, but is not limited to them. While it adds a new culture it enhances the value of old ones. Dr. Woodward has been one of the most persistent advocates of manual training in the country; he has aided to a great extent the popularization of the idea in the United States, both by addresses and successful demonstration. The use made of published arguments and programmes of courses of study in the cities and towns where the new movement is first advocated, bears emphatic testimony to the fact of the pioneer services of this enthusiast of the new system.

The Baltimore manual training school has an exhibit which excels in completeness that of any other school. It was established in 1883, and was the first public manual training school in the country. That the school board of Baltimore clearly saw the trend of events in popular education is shown by their report, the following being a characteristic statement : "The public school systems are effecting grand results by the general diffusion of knowlede among the people, but it is the belief of many that even better results can be realized if to their department of language and science and mathematics there be added manual training. It is not intended by the introduction of this department to turn the schools into workshops, but the purpose is the training of the pupils, and not educating them for any special trade. The result of this system of manual training would be the production of a class of skilled artisans in our community who would be able to design and perform much of the work which is done now by foreign artisans. It would foster a high appreciation of the value and dignity of intelligent

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A GERMAN EXHIBIT—MANUFACTURES BUILDING.

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labor, and would remove the prejudice which now exists between professional and mechanical labor."

The sheet-metal working department of the Baltimore school is a feature almost wholly confined to the programme of this school, it is valuable as training in practical geometry, the intelligent understanding of which can be had so well by no other method. Besides the many attractions of this exhibit there is one which attracts much attention because of its beautiful and perfect workmanship, it is a compound marine engine, type A, of the United States navy, which was built by the class of '92.

The Chicago manual training school has a beautiful exhibit, there being much free hand architectural drawings and lettering. The first year's work of carpentry, the second of wood-turning, and the third of machine laboratory work is of a high degree of excellence. The oak stands, desk, case, and pedastal are beautifully made and finished, as are the wrought iron work from the forge and foundry.

The most valuable exhibit of the Cincinnati technical school is a triple expansion steam engine, built by the pupils of the class of '93, the general design being supplied by the teacher, the details and detail drawings marked up and made by pupils.

The Toledo manual training school was the first school to establish a manual department for girls. It has been very prosperous and has grown from a humble beginning in a small room with sixty boys and girls to its present condition in a new four-story building splendidly equipped with steam-power, tools, benches, lathes, forges, and ample drawing-rooms; also a domestic economy department with all the neccessary apparatus for studying the nature and preparation of foods for the table. The Toledo school is one of the model schools of the country, and of it the citizens are justly proud. The exhibit illustrates the work of every department—the drawing, both free-hand and architectural, lettering, modeling and garment making, and is full of instruction for those who desire to become intelligent upon this part of the work of the new education.

Omaha has an interesting exhibit. Its board of education was one of the first in the country to recognize the importance of manual training and engraft it upon the system of public instruction in 1886.

The spirit of Denver is in touch with the times. A splendid new manual training school is in course of construction, and the

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exhibit shows that nothing is lacking to make the Denver school one of the greatest moment in strengthening the belief of the public in schools of this character.

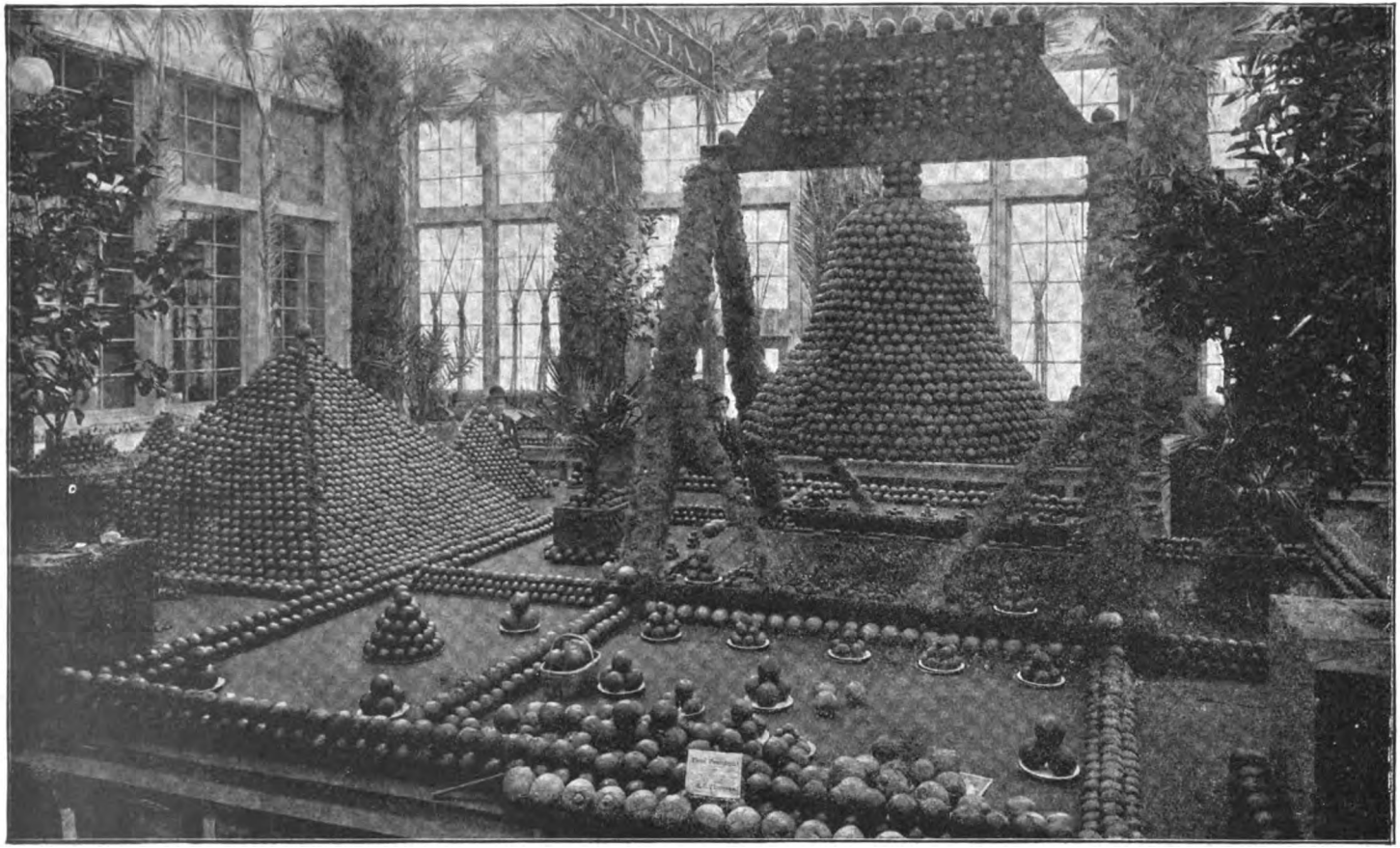
Fargo and Jamestown, of North Dakota, have manual training throughout all the grades. The work as exhibited displays the liberal spirit of the great West.

At Louisville, Ky., and Des Moines, Iowa, the manual training idea is being developed through the generosity of private interests and public spirit. The Louisville school, which has a small but well arranged exhibit, owes its existence to a citizen who made a proposition to the board of education to build and equip a school. The school was opened in October, 1892, and has an enrollment of over two hundred pupils.

St. Paul and Minneapolis have full exhibits of their very superior work in the industrial department of the school curriculum; the sewing is a marked feature, and ranges all the way from the neatest darning and mending to every variety of garment making. The exhibits of the Indianapolis schools are regarded with more than usual interest from the fact that Dr. Rice, in his papers in the *Forum*, criticising the schools of the country, considers the schools of Indianapolis, together with those of St. Paul, Minneapolis and Laporte, the best he has investigated. The work as a whole is very even, and treated with a breadth that shows the intelligent use of philosopical methods. The drawing, which must never be lost sight of as a integral part of all manual training, is of the highest grade of excellence.

The schools of Philadelphia have a large exhibit, in which the manual training idea largely predominates. Philadelphia is the home of the new education, being the first city in the United States to engraft it upon the public school system, through the enterprise of its public school superintendent, James Macalister, the distinguished educator. In about fifty of the grammer schools of New York City manual training has been made a part of the exercises. The instruction includes sewing and cooking for girls, modeling in clay, construction work with pasteboard, and the use of wood working tools for boys. In the many cases about the large department specimens of this work have been so admirably placed that the gradations in the course can be followed with the greatest clearness. Albany and Newburg have each a fine display, the latter city having

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AN EXHIBIT IN HORTICULTURAL BUILDING.

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one of the best public school systems in the State. The exhibit of Massachusetts shows that the constant purpose of the schools is to meet the growing and changing needs of the people. Since the opening of the Whittling school, in 1871, to train boys in the use of wood-cutting tools, there has been a constant advance in progressive methods. The quota of work is well distributed among the cities and towns of the State.

The exhibit of sloyd from the schools of Boston where it has received its most thorough recognition, is a revelation of the educational value of this phase of manual training. Many schools have sloyd in their curriculum, and the idea is rapidly growing in popular favor.

Gustav Sarson has charge and supervises the work in eleven schools. They are partly supported by the board of education and partly by Mrs. Quincy Shaw, the daughter of Louis Agassiz. The industrial exhibit of the Catholic schools is one of the most complete in the educational exhibit. Every school has a fine showing in this department. The Brothers of Christian schools, in close sympathy with the liberal spirit of Father Maurelius, have a good selection, illustrating the methods used in Catholic schools in Europe as well as the United States. St. Michael's Trade School of Paris, has an exhibit of trunks, musical and optical instruments; wood, iron and brass work, map drawing, printing, engraving, and book-binding.

There is no exhibit that teaches such valuable lessons as that of the negro and Indian schools of the Hampton Normal and Agricultural Institute, the Carlisle school, the Atlanta University and Wilberforce. By photographs and articles that the students have made, one can see that the negro and the Indian can be self-supporting, self-sustaining, and that he is demonstrating the economic question of his race. These schools give industrial training in wood and iron work, mechanical and free hand-drawing, printing, farming, cooking, sewing, dressmaking, millinery, laundry work and nursing the sick. The articles that compose the exhibit are of the best workmanship and of artistic finish. The aim of these schools is to make thrifty and industrious men and women who will radiate good influences among their people, to arouse respect for labor, "to replace stupid dungery with skilled hands and to these ends to build up an industrial system, for the sake not only of self-support and intelligent labor, but also for the sake of character."

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JAPANESE AGRICULTURAL DISPLAY.

Agriculture is the occupation of the greater part of the people of Japan. The mountainous and volcanic nature of the country renders large portions untillable. For probably the same reason the soil is not naturally very fertile, but it can be, and is, made so by the abundant use of compost. Moreover, not even half of what is fairly fertile is under cultivation; but the amount of cultivated land is gradually increasing, and the harvests are becoming richer. But it can be readily understood that if, for any reason, the crops fail, severe suffering will be widespread. The prosperity of the country depends upon the prosperity of its farmers.

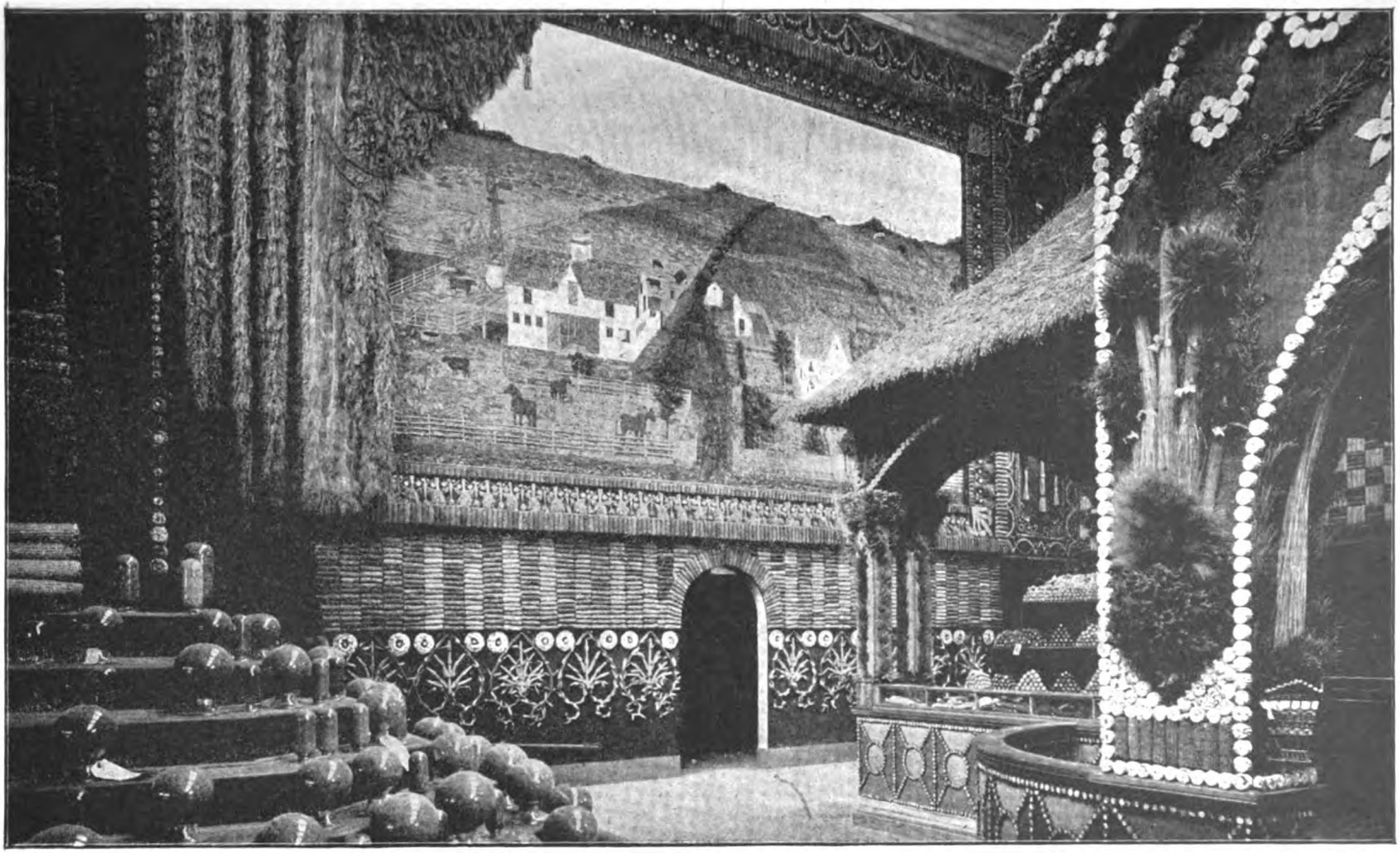
The front entrance is at the south end of the Japanese section. The doorway is constructed of native woods in the style of a native gateway, with a gable roof. Just inside the entrance is a booth devoted to the exhibit of tea from Shizuoka Kem (prefecture).

The Shizuoka tea is of the first quality. Its fine flavor has been developed through the culture of many years. The annual product is 25,000,000 pounds, of which 20,000,000 pounds are exported to the United States. A small sample package of this tea is given away, of which a tiny cup may be had in the Japanese tea house.

Mr. M. Hoshita is the overseer of the Shizuoka exhibits; Mr. T. Watanabe is in charge of the different exhibits of tea, and Mr. K. Tawara is chief of both the fisheries and the agricultural bureaus. These gentlemen are always pleased to make explanations to the visitors. The sample package is put up in paper dipped in the tannic acid of an unripe persimmon to preserve it from moisture. Mr. Watanabe is "purveyor of tea to his imperial majesty's court of Japan."

Just beyond the Shizuoka booth is the exhibit of Ise tea, above which is a series of pictures illustrative of the different stages and kinds of labor employed upon the leaves from picking to shipping. A group of photographs of similar scenes may also be found just over the front entrance. Ise is the name of a province famous for its traditions and its tea. It is the place where, according to Japanese history (unfortunately not credible), Jimmu Tenno, the Japanese Romulus, in 660 B. C., laid the foundation of the Japanese empire. It is now the most sacred spot in all Japan, the seat of the ancient and popular shrines where the ancestors of the present emperor are wor-

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VIEW IN ILLINOIS STATE BUILDING, MADE OF GRAIN.

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shiped. It is also the place where according to tradition, the tea-plant was first discovered and cultivated.

The story goes that one day a very pious old man visited the great shrine at Ise, and after he had completed his devotions ascended a small hill to rest. Feeling also a little thirsty, by chance he picked a few leaves off a small shrub growing near and began to chew them. To his surprise and delight he was greatly refreshed thereby, and calling his wife received from her the suggestion that they take the shrub and and transplant it to their own garden. With careful tending it grew into a beautiful plant, whose leaves furnished a most refreshing beverage. The hill where the old man first tasted the tea leaves is called Uji, which is now the name of a famous and first-class tea district. One-third of all the tea exported from Japan to the United States comes from Uji, in the province of Ise.

Other important agricultural products exhibited by the Japanese are rice, barley, wheat, buckwheat, beans, sweet potatoes (dried), daikon (a large, bitter radish, which is a staple article of diet) and tobacco.

A great many kinds of jellies and sweetmeats are made by the Japanese from vegetable products, and are harmless and delicious. Several varieties of bottled, boxed and canned fruits, jellies and confections are on exhibition. The senibei is a kind of waffle much liked by both natives and foreigners. Many kinds of ame also are exhibited. The advertisement of one is a curiosity :

"AWA-AME AND OKINAKAN.

"The manufacture of the Awa-Ame is perfected by my house with experiments of many years and scientific principles. It contains more nutritive materials. That taste is very sweet. Persons who have tasted it always would taken the cheerful feelings.

"The Okinakan, a cake, is made of the Awa-Ame again. It is most delicate in taste and especially excellent quality for tea-cake. There is no slightest danger for the change of its taste kept long.

"Both are so honorable that obtained medal at each time of national industrial exhibitions.

"Original manufactured by Osugi Kurouimon.

"Pass sixteenth generations to me from the first manufacturer of my house. Continuing about during 270 years."

The Japanese honey industry is also represented at the World's Fair by specimens of bees, honey, beeswax and hives. The Japanese agriculture bureau has published a little pamphlet explaining the

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way of using the hive, the method of collecting honey and giving the names of the plants from which the bees get honey. It is there stated also that one swarm will produce 13,582 pounds of honey and 7,497 pounds of beeswax, and that honey sells for 9 sen (cents) a kin (1,325 pounds), and beeswax at 30 sen a kin.

An interesting feature of the Japanese agricultural section is the exhibit of domestic fowls. One coop contains some bantams, which are kept mostly as pets, though the flesh may be used as food. Another cage contains Siamese game fowl, whose flesh, being almost as delicious as that of turkey, is largely used as food. The cock exhibited is about two years old, weighs almost ten pounds and has never been defeated. A good fighter will command from 20 to 30 yen (dollars). The high coop holds long-tailed fowls. The cock, 4 years old, has a tail measuring 10½ feet in length. The black cock, only 2 years old, has a tail 5 feet long.

The Japanese have likewise on exhibition specimens of their wild birds, both useful and injurious, and of their forage plants. They have published descriptive catalogues of both birds and plants. The former are divided into three classes: The beneficial birds of forest and farm, twenty-one varieties; the birds used for food, thirty-five varieties, and the birds for miscellaneous uses, fourteen varieties. These are numbered consecutively, and are carefully described as to location, characteristics and utility. The forage plants, similarly numbered, are minutely described with reference to duration of growth, height, flowering, seed-ripening and cutting times, produce to the acre, composition and locality.

Last, but not least interesting, are five pictures which hang in the southwest corner of the Japanese pavilion, and represent methods of hunting. One shows the way of catching small birds by hanging cages of decoy birds near bird-limed twigs. Another represents sportsmen, in the early morning or evening twilight, when the wild ducks are flying low, catching them in nets at the end of long bamboo poles. The two pictures at the extremes portray the two allied methods of catching wild duck on Lake Tega in Chiba prefecture. One is by means of bird-limed ropes stretched over the surface of the water; the other is by a number of large spread-nets toward which the ducks are driven by hunters.

The remaining picture illustrates Japanese hawking, which was a very popular sport in former times.

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BIRD'S-EYE VIEW IN MANUFACTURES BUILDING.

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NORWAY'S EXHIBIT.

The 9,000 square feet occupied by Norway is on the east side of the main aisle near the south entrance.

The exhibit is dual, for the liberal arts as well as manufactures are represented. In the rear of the section an elevated platform is built. On it is a full-sized "stabur," or provision house, used in the country. On either side are large paintings of Norwegian scenery, and hundreds of photographs form a border around the platforms. The ski (Norwegian snow-shoe) used for climbing mountains and shooting down the steep incline with race-horse speed, is shown in great variety. Some are elaborately carved, and others, used by athletes, are narrow, long and highly polished.

Three wax figures of sea-skaters, dressed in the costumes used in Norway, add to the attractiveness of this feature. Various forms of push-sleds, narrow sleighs and hand-sleds are shown, as well as the Norwegian karial. This is a two-wheeled vehicle, something like a western road-cart, with a long skeleton body and an extra seat behind. A dozen wax figures of men and women are dressed in peasants' costumes. Two are women from a suburb of Bergen, the head-gear showing one to be married. Both costumes have the accordion plaits, which American women used extensively a few years ago; but the peasant girls of Norway have worn accordion plaits for several centuries.

As interesting as the ski collection is the showing of ancient and modern Norwegian skates. Paulsen, the famous Norwegian skater, astonished New Yorkers by his skates when he raced on the Hudson river, for they were unlike anything seen or used in this country. These shown in the manufactures building have the look of speed in their low, straight, narrow runners, but, according to the American idea, they have one objection, for they are nailed to the shoe and not clamped or strapped. A stuffed reindeer attached to a canoe-shaped sled, a harpoon gun with the wicked looking triple-pronged whale-catcher and a fine collection of furs emphasized the characteristic features of the exhibit from the land of the midnight sun.

To those who think that snow, ice, bleak mountains and fish make up all Norway, the silver-work exhibit will come with a shock of pleasure and surprise. Nothing like it is seen in any other section

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except the Mexican. It is the curious parallel that the tropical and polar countries should find a common art in filigree silver work. The resemblance, however, is only in the work, for the designs of Norway and Mexico are widely at variance. In delicacy, grace and ingenuity, the silversmiths of Christiania and the jeweler of the City of Mexico are peers. Many fine examples of filigree silver are shown. The feature, however, which makes the silver exhibit unique among similar displays, is the silver and enameled work done at Bergen and Christiania.

Two magnificent silver lamps, beautiful in model and exquisite in design, are notable exponents of this art. The frame work of the design is first made in filigree silver. Then the enamel, in various colors, is filled in and the whole burned. The silver is afterward heavily gilded and polished. The vase-shaped shade has translucent enamel, which gives a soft, tinted glow when the light is burning. Jewel cases, trays, spoons and toilet articles are made of the same combination. Many spoons are decorated with Norwegian scenes painted and burned in the enamel. Some of the spoons are copies of ancient originals kept in the University of Christiania. Odd drinking cups in odder designs are placed near the originals, some of them 260 years old. In another case is an old drinking horn with the royal lion in gold on the lid, and ancient scent boxes, which prove that the old vikings were not above tickling their olfactory nerves.

Norway ships a large amount of wood pulp and sulphate for paper making to this country, and this important industry has a display to itself. Boats, tapestries, books, school exhibits, various liquors and wines, with some very fine wood carvings, are other interesting features, while a variety of marble and granite show the value of Norway's quarries.

QUACKAHL INDIAN HOUSE.

Finally the Indians of the Quackahl tribe have one of the houses of their village erected. They do the work themselves, and the heavy timbers must be handled by bodily force with correspondingly slow progress in construction. The home which has been put up was originally built in 1819 on a point of land on the west coast of Prince Charlotte island. It was erected by Clads-au-coona, the great

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A VIEW IN MANUFACTURES BUILDING.

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chief of the Haeidah nation. The name of the tribe means "the people," and they were the most powerful nation in that part of the world. It was built so close to the shore that it was swept away by the storms five different times. Nearly all of the timbers were recovered, and the sixth time it was erected secure from the waves. For sixty-five years it has been known as the Na-ra-keith-laus, which means "tidal-wave house." It is a one-story, one-room structure, and the timbers are massive and roughly hewn. There is but one door. This is hinged with leather thongs at the top, and one entering it must swing the plank door out from the bottom. It is rather a difficult task, as the door is a ponderous affair. A "shut-the-door" sign is not necessary.

The interior is very queer. Light and ventilation come from a hole in the roof. There are no windows. A rough flooring is placed over the ground, except a space of eight feet square in the center, which is covered with sand. A fire is kept burning on the sand. All the cooking is done on it, and the smoke fills the room first and then crowds its way out through the hole in the roof. Around the edge of the room are little wooden boxes, not unlike large dog kennels, raised about a foot from the floor. They are open on one side and are the sleeping quarters of the Indians. The walls are covered with weapons and trophies of the chase. All day one or another of the Indians sits by the fire softly beating a huge skin-gong and singing. This is kept up all the time.

Yesterday these people had a visit from the Penobscot Indians. They cannot understand each other, but it was found that their songs were almost identical so far as they went. The difference was in the words, the peace songs of the Quackahls being the war songs of the Penobscots, and vice versa.

In front of the house are three totem poles. The center one is from the Haeidah nation, and those on either side from Alaska and the Methlkathlan tribe. The Indians who are here are a very interesting people, and have traditions, family trees and aristocracy. Every family has a crest, which is usually some animal or fish with which they are familiar, and the family name is taken from the crest. Inter-marriage between the families is prohibited absolutely. The children all take the family name of the mother and are enrolled in the mother's family. There are eight degrees of rank among these people, the eighth being the highest. They attain rank in a most

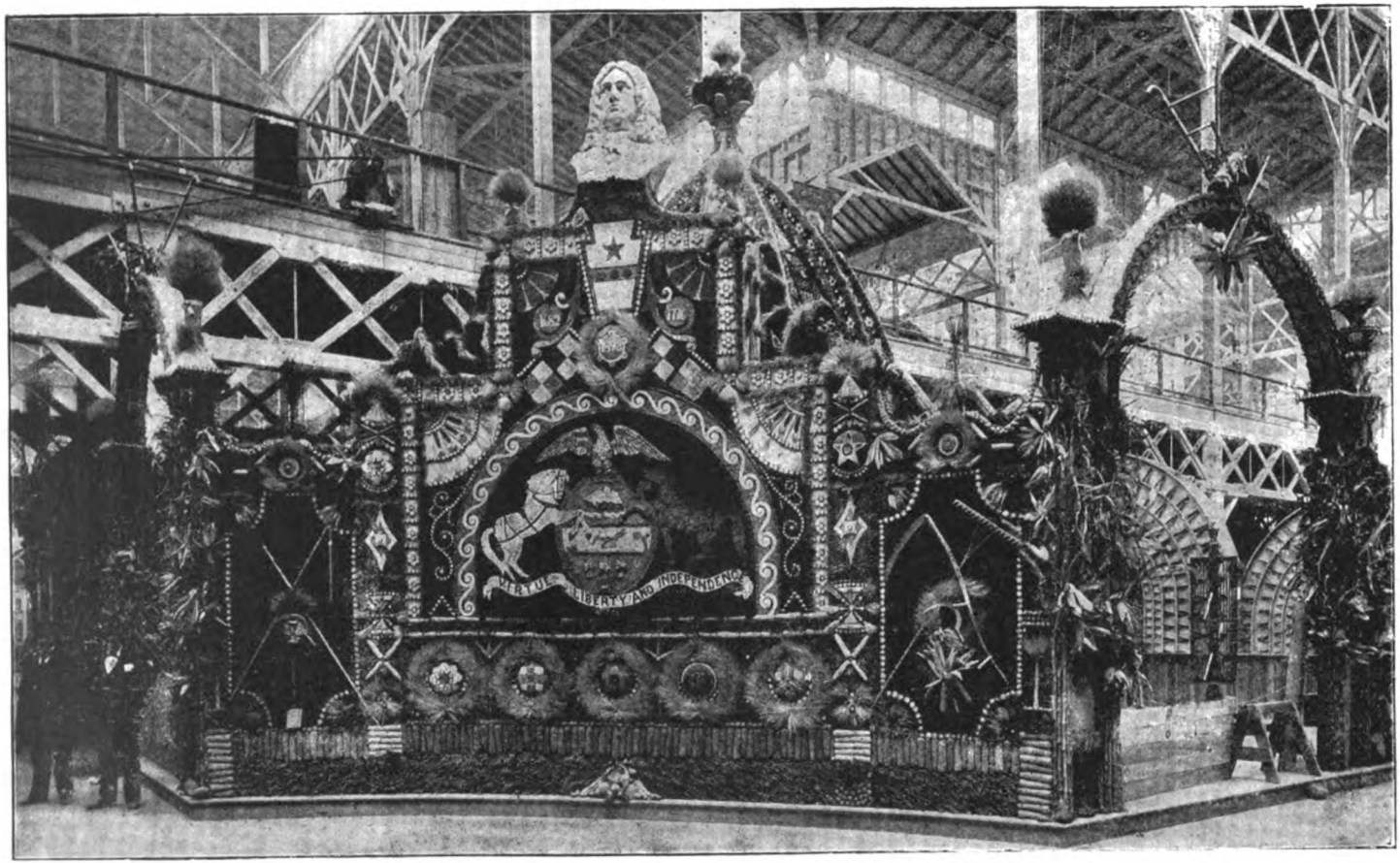
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peculiar way. When a child is born it is given a surname by the chief of the tribe. The name in nearly every instance is obnoxious, often vulgar. As soon as the youth grows up the aim of his life is to get a better name. This can only be done in one way, by giving presents to the chief of the tribe. The very smallest gift that will be accepted is ten blankets or an equivalent. When the first present is given a slightly better name is given the boy, but a name altogether satisfactory is never bestowed until the eighth degree is reached. By this shrewd little bit of diplomacy the chief always has enough and to spare.

The women of the tribe take a much higher standing than is usual among the American tribes. The Methlkathlans, of which there are representatives here, have a very peculiar marriage arrangement. A woman may have as many husbands as she likes so long as their combined rank does not exceed hers. For instance, a woman of the eighth degree of rank may have eight husbands of the first degree, two of the forth or any other combination she chooses. The only danger to the husbands is that if any one of them, by presents to the chief, suddenly becomes in degree equal to his wife, he can tell the other husbands to get out, and they are obliged to go. No other divorce proceedings are necessary.

The Haeidah totem pole is one of the oldest known. Its story is like a family quotation from Burke's peerage. Away back in the early history of Clads-au-coona, as a story goes, one day a little boy wandered out into the woods. He met a bear, and the bear ate him up. This incident, which is not more simple than some recorded in the annals of Europe's greatest homes, was used as the motive for the tribal crest, which is a boy held between the paws of a bear. Just above it is the crest of the chief's wife, a raccoon, as is shown by the rude carving. Above this is traced an imaginary animal known to the Indians as chemoose. It was supposed to inhabit the rivers and inlets of the shore and to smash the canoes of the fishermen. It has been discovered in later years that this imaginary animal was nothing more than a snag washed down by the floods. It was held in superstitious awe by the early Indians and is given a place of honor on many of the totems. The top of the totem is made to represent an old story of the family. It is the tale of Hathlingzo, or Bright Sunshine. She went to the sea to fish one day, and was met by a dogfish who turned her into half fish,

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AN EXHIBIT IN AGRICULTURAL BUILDING.

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half woman. The application of this is that there is danger to fishermen in dogfish and women.

On top of the pole is a curious design which symbolizes the creation of light in the world. The Indians believe that the world was at one time covered with an impenetrable mist. The raven god, Ne-kilst-lass, flew round for centuries and beat the mist down with his wings. The Indians all believe in the theory of evolution, and this is but one of the beliefs. The other totem poles tell similar stories.

That from the Methlkathlans has a story of the way light came into the world which is quite different from the belief held by the Haeidahs. By symbols it tells that the earth was all dark at one time in its history, and that the only inhabitants of the land were frogs and a black raven, which was a glutton. The raven demanded that the frogs give him fish to eat; they refused, and he threatened to break light over their heads. He went to the wigwam of the great Chief, whom the Indians believe in as Christians do in the Deity. He changed himself into the small pine-needles and spread himself over the water where the daughter of the great Chief came to drink. When she saw the pines she threw the water away. But no matter how often she tried there was always one of the pines in the gourd. Here the story takes a feature not unlike the immaculate conception idea of the Christian belief. A child was born who was a great favorite with his grandfather, the great Chief. He was sickly and always crying, and one day his father gave him the ball of light to play with. It had been kept locked up with other celestial bodies in a box in the wigwam. Having obtained possession of the light the raven took on his original form, hid the ball of light under his wing and once more visited the frogs and demanded fish. They refused, and he broke the light over their heads. These and many other stories are told by the totems.

A TIMBER COUNTRY.

If the world does not understand the many attractions of British Guiana after this Fair is ended, it will not be the fault of Commissioner Quelch, who has charge of the showing made by that country. It is worth anybody's time to go over in the northwest corner of the Agricultural Building and spend a couple of hours in looking at the fine exhibit made by this South American country.

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The exhibit is a general one, not an agricultural exhibit, as one might expect from the fact that it is in Agricultural Hall. It is almost the first one the visitor runs against as he enters the big building from the northwest corner. Over the top a big sign reads: "British Guiana." Commissioner Quelch is a believer in having signs plain and plentiful. Every article in the show is plainly placarded, and something told about it so that it is very satisfactory to the curious sight-seer.

There is a great deal to see, and it is arranged in attractive manner. One of the chief industries of the country is the manufacture of sugar, and it is given prominent position in the arrangement of the exhibits. Mr. Quelch is a scientist, a pleasant gentleman, and takes pleasure in telling the visitors what they are looking at and where it came from, what it is used for, how much it weighs, etc.

ABOUT SUGAR MAKING.

He will tell anybody interested in the technical questions of sugar making all about it, but to the general sight-seer it may be well to state in common terms what there is to be seen in that line. In an immense case are arranged in regular order all kinds of sugar crystals. They grade in color from the lightest to the darkest. On each is a card telling what part of the process each crystal comes from. On one it says that it is intended for the American market. It is not a fine grade, and is intended for this market for the purpose of refining. In this case there must be fifty grades of sugar crystals, and the process of making them from the cane is made plain, as well as the process of making rum and other products.

British Guiana is a wild country. It is settled only in coast towns, and it is only a little strip that has been made to yield its natural richness to the uses of mankind. But in its thousands of square miles of territory there are millions of wealth yet to be taken away. Not the least of these fields of promise are the great primeval forests of the finest grades of timber. In the exhibit in the Agricultural Building are samples of 107 kinds of timbers found in abundance in British Guiana. They are almost all of the heaviest and finest varities. Some of them are so heavy that they cannot be floated on the streams, but have to be brought from the forests by floats. The specific gravity of several of these woods is more than 1., and in one case it is 1.04.

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FINE KINDS OF TIMBER.

We do not say that British Guiana has the finest woods in the world, far that were making an absurd claim ; but we do say that we cannot be surpassed. We have the letter wood, one of the handsomest woods for cabinet work found in the world. We have the finest kind of shipbuilding woods, and woods for railway sleepers and similar uses. The shipbuilding woods are particularly valuable, not only for their ordinary purposes, but for the fact that worms will not touch them, so strongly impregnated are they with bitter juices. The greenheart and purpleheart are particularly fine woods, and we have so many that I hardly know of which to speak first.

The names of these cabinet woods are peculiar, and express little to an American who is unacquainted with other than American woods. Each is represented, not by a small piece, but by a log. In some instances they are more than three feet thick, and all might be, as far as the natural supply is concerned. The list is as follows : Eta palm, cabucalli, tooroo palm, kauta balli, yellow sanders, moraballi, towaranero, pakoorie, greenheart, monkey pot, locust, louari, purpleheart, hoobooballi, hackia, crabwood, wallabo, bullet wood, siki siki danna, mamara, mora, lignum vitae, hiawa, pakooru, waibaima, yellow cirouaballi, sayii, tataboo, irriaridum, bania, buhoorada, duka, and many others.

Samples of these woods are in plain sight on the walls, showing them in a polished state, and they are to be seen in a natural condition as well. As there is so little done in the forests of British Guiana at present, there are fortunes in the woods yet for the man who develops them.

GOLD MINING INDUSTRY.

The gold mining of British Guiana has had a wonderful increase in the few years that the gold fields have been worked, and they are still almost undeveloped. The work began in 1884, and in that year 250 ounces of gold were exported. In 1885 939 ounces were exported, and the rate of increase kept up. In 1892 the export was 199,615 ounces. The total for the few years is 355,993 ounces. The diamond fields are only opening and are expected to show large yields. South African diamond men are on their way to British Guiana now to prospect.

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But outside of the exhibits of the ordinary industries there is a great deal to catch the eye in the British Guiana space. In the centre is a set piece showing a jaguar in attack on a tapir. The fauna of the country is quite well shown by stuffed animals of the more prominent types. There are all kinds of brilliantly colored cock-of-the-rocks, magpies, parrots, owls, hawks, king vultures, pelicans, scarlet ibises, purple breasted cotingas, fire birds, humming birds, and many others. There are crabs of several kinds, an alligator, or, as it is called in British Guiana, a cayman ; land tortoises and sea turtles, sword and saw fishes, and a full grown manatee or sea cow. It doesn't look much like a cow.

The collection of monkeys is a large one.

ROAR LIKE A BEAR.

There are shown several "bear howlers." These animals are not large, but they do great work with their throats. They have a peculiar formation that enable them to make a sound louder than the roar of a lion, and when they get at it in the woods at night the sound is something never to be forgotten. Two kinds of ant-eating bears are on exhibition, and a wood deer, a little creature not more than a foot high, very pretty and graceful. Red deer, labba or paca, a common forest rodent, water haas, kinkajou, kibihee, accourie, squirrels, raccoons, two kinds of armadillos, opossums, peccarries, or wild hogs, jaguarondis, an iguana, several oceolots, black-tailed otter, and other animals are in the collection.

In one of the cases is some cassava bread. That is the chief food of the native Indians. It is made from mandivoc, as is also starch. The bread made is very nutritious and keeps a long time.

In the exhibit of cereals is rice in husk, in stalks bleajna, which grows on low swampy land, and other grains. The display of fibers is large. Hemp fiber, palm fiber, silk grass wadara, wadaduri, wina, mahoe, kakarally, and other fibers are in cases, and many of them are of remarkable length.

There is a collection of all kinds of preserved fruits, coffee, molasses, rums, chocolate, cocoa, fish glue, locust gum, tobacco, etc. All kinds of manufactured products of native workmanship are shown. These include, cloth, clothing, and things in general use.

In one corner is a collection of newspapers published in the country. There are several dailies published in Georgetown, the

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capital, and even a trade paper devoted to the gold mining industry, so important has it become. There is a large collection of photographs of scenes in British Guiana, showing native and white peoples.

The exhibit is one that can only be appreciated by careful inspection. It is full of interest, and a visit of an hour to the corner in the Agricultural Building occupied by British Guiana is as near as one can come to a visit to the place itself. Everything is shown as plainly as can be, and the things to be seen are beautiful as well as instructive.

THE OLD LIBERTY BELL.

The journey of the old Liberty Bell from Philadelphia to Chicago was a real triumphal progress. From the hour when it was escorted under military guard, from Independence Hall to the Pennsylvania Railroad station in Philadelphia to that in which it reached its destination it was the object of peculiar homage. At every station along the route it was greeted by multitudes of people, who manifested the utmost enthusiasm and the greatest eagerness to view the ancient and venerable relic. Its reception in some of the larger cities was in the nature of a genuine ovation. In Cleveland it was greeted by thunders of artillery and a great demonstration of the children of the public schools, who stood at points along the route cheering lustily and waving a patriotic salute with tiny American flags. The day was celebrated in the city as a general holiday. At Oil City thirteen little children presented baskets of flowers, emblematic of the thirteen original States, which were gracefully arranged around the bell. In the city of Indianapolis it was welcomed by twelve thousand children, Catholics and Protestants, and all the buildings along the children's march were gayly decked with flags and festooned with bunting. A feature of the reception was an address by ex-President Harrison, who spoke with his usual force and eloquence, of the lessons which the bell conveys. "It is," he said, "only a bell, and a dumb bell at that. It has spoken its great message to the world and is now forever silent. It is not the material thing that we should look upon with interest; it is that which it typifies. It is the enduring thing for which it stands that kindles our hearts and our enthusiasm to-day. I rejoice that there is a renaissance of patriotism in the United States. I rejoice to believe that to our own hearts the flag means more to-day than ever before in our history. There are

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more people who love it; and the generation that is coming on will love it more fervently than that which is passing off the stage. Let us never forget," he added, "that the liberty that this bell rang in was liberty regulated by law; a liberty to do as each one pleased only so far as the rights of others were not invaded." In closing his remarks the ex-President said: "This old bell was made in England, but it had to be re-cast in America before it was attuned to proclaim the right of self-government and the equal rights of men, and therein it was a type of what our institutions have been doing for that great teeming throng of immigrants from all lands who heard its voice over the great waters, and came here subjects to be re-cast into free American citizens."

Upon the arrival in Chicago the bell was received by officials of the city and the exposition, and subsequently escorted by a military procession to the fair grounds, the truck bearing it being drawn by thirteen coal-black horses, representing the thirteen original States of the Union. The bell was accompanied in its journey by a special escort of the Municipal Council of Philadelphia.

THE DE WITT CLINTON RAILROAD TRAIN.

The first locomotive run in New York State was the "De Witt Clinton," which was built at the West Point foundry, at the foot of Beach Street, New York City, in 1831. She was mounted on four wheels 4 feet 6 inches in diameter, there were two cylinders 5½ inches diameter by 16 inches stroke, and the weight of the engine was about six tons. The boiler had thirty copper tubes 2½ inches in diameter.

The engine was run on trial trips on the Mohawk and Hudson Railroad at various times from July 2d, 1831, until August 9th, when the first regular excursion trip was made. On this occasion the following gentlemen rode on the coaches: Erastus Corning, Mr. Lansing, ex-Governor Yates, J. J. Boyd, Esq., Thurlow Weed, Esq., Mr. Van Zant, Billy Winne, penny postman; John Townsend, Esq., Major Meigs, Old Hayes, high constable of New York; Mr. Dudley, Joseph Alexander of the Commercial Bank, Lewis Benedict, Esq., and J. J. DeGraft. The engineer was David Matthews; the conductor was John T. Clark, who mounted a small seat attached to the rear of the tender and gave the signal for starting by blowing a tin horn.

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The fuel used on this trip was dry pitch-pine, coal having been tried previously and not having worked satisfactorily.

As there was no spark arrester, the smoke and sparks poured back on the passengers in such a volume that they raised their umbrellas as shields. The covers were soon burned off of these, and each man whipped his neighbor's clothes to put out the fire started by the hot cinders.

When a stop was made at the water station an attempt was made to remedy the disagreeable jerks resulting from the slack between the coaches by wedging a rail from a neighboring fence between each car and tying it fast by packing-yarn. This plan succeeded, and the train arrived at the inclined plane at Schenectady without accident. After the party had partaken of refreshments at Schenectady they returned to Albany, and thus completed the first regular trip of a locomotive and train in New York State.

The coaches were built after the following specifications, which are a copy of the original proposition by James Goold. under date of Albany, April 23d, 1831:

SPECIFICATIONS FOR COACHES OF THE MOHAWK AND HUDSON RAILROAD CO.

"*To the Commissioners of the Mohawk and Hudson Railroad Company. Sirs:*—I propose and agree to furnish for said railroad company six coach tops—that is, to furnish jacks, jack-bolts, and braces, with thorough braces, and put them on the frames of the company's railroad carriages to support the coach tops, the coach tops to be finished and hung in the style of workmanship generally adopted in Albany and Troy for post coaches, the materials and workmanship to be first quality; a baggage rack and boot to be hung at each end; the length of coach body to be 7 feet 4 inches, 5 feet wide in the centre and 3 feet 8 inches between the jacks. The general plan of the coach to conform to the plan and explanation given by the engineer of the company. To have three seats inside, the backs of the end seats to be stuffed with moss, and all the seats to be stuffed with hair. To have a door on each side; to have an outside seat on each end across the top of the coach with suitable foot-board; also a seat at each end for driver or brakeman, to drop below to a suitable height to make the rack his foot-board. An oil-cloth to be rigged to the centre rod on coach top to cover baggage, and one at each end rolled to the back of the seat to protect it from rain—the whole completed and to be hung on the carriage frames at some point on the line of said railroad as follows: Two coaches to be hung by the first day of July next, and the remaining four by the first day of August next, the work to be subject to the inspection of the engineer of the said railroad company; the whole to be completed as aforesaid for the sum of three hundred and ten dollars each.

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"It is understood that the above coaches are not to be provided with lamps or mud leathers.

"The written proposition is adopted on the part of the Mohawk and Hudson Railroad Company by order of the commissioner. JOHN B. JARVIS,
"Engineer M. and H. Railroad Co.

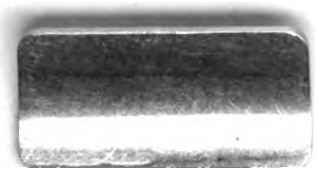
A duplicate of the "De Witt Clinton" train was transported over the New York Central, last week, from New York to Chicago, where it has been placed on exhibition. It was drawn by World's Fair Engine No. 999, just built by the Central. This engine is an eight-wheel passenger locomotive. The drivers are four in number, 7 feet 2 inches in diameter, tire 3½ inches thick by 5¾ inches wide, secured to cast-iron wheel centres by Mansell retaining rings—rigid wheel base 3 feet 6 inches, total wheel base 23 feet 11 inches. The engine truck wheels are 40 inches in diameter, cast-iron spoke centres, tires fastened by Mansell retaining rings, wheel base 6 feet 3 inches. The weight on the four driving-wheels loaded is 84,000 pounds, and on the engine truck 40,000 pounds. The boiler is of the wagon-top type, 58 inches in diameter, at the smallest ring, and has 268 flues two inches outside diameter, 12 feet long. The fire-box is of the Buchanan type, with water arch, and is set on top of the frame 108 inches long by 40 7-8 inches wide. The total heating surface is 1,930 square feet, with a grate surface of 30 7-10 square feet. The smoke-box is extended and is fitted with a deflector and a perforated steel-plate spark-arrester. The stack is straight, 15¼ inches in diameter inside. The exhaust nozzles are double, 3½ inches in diameter. The boiler is designed to carry 190 pounds pressure per square inch. The tender has a coal capacity of 6¾ tons, and carries 3,587 gallons of water. It is fitted with a water-scoop, and is carried on two four-wheeled trucks, each 4 feet 5 inches wheel base, with 40 inch cast-iron spoke wheels and steel tires, the tires secured by Mansell retaining rings. The weight loaded is 80,000 pounds, making the total weight of engine and tender 204,000 pounds. The engine, engine truck, and tender are fitted with the Westinghouse air brake, and the engine is equipped with the air signal whistle. This great locomotive, which will be exhibited at Chicago, made the remarkable speed of eighty-six and three-quarters miles an hour in an initial trip from New York to Buffalo.

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