

OCT 7 1910

2

This issue contains the preliminary illustration and description of
THE NEW YORK IMPROVEMENT AND TUNNEL EXTENSION OF THE PENNSYLVANIA RAILROAD.

THE
 AMERICAN
ARCHITECT
PUBLISHED
EVERY WEDNESDAY
IN NEW YORK

733
692



WITH THIS PUBLICATION
IS MERGED
THE INLAND ARCHITECT

VOLUME
XCVIII

OCTOBER 5, 1910

NUMBER
1815

•TWO •THIRTY •NINE •WEST •THIRTY •NINTH •STREET •

DAYLIGHTING

by the Luxfer System brings the results you want. Luxfer Prisms are not merely window glass, but are made of the finest quality pressed crystal glass by our own special process.

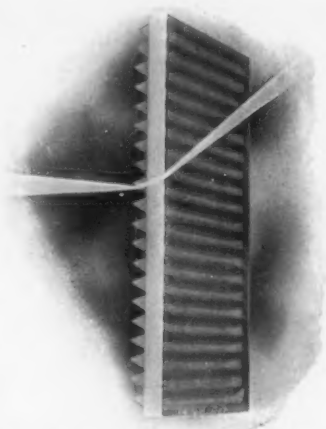


PLATE I. This illustration shows how light rays are bent by means of prism angles.

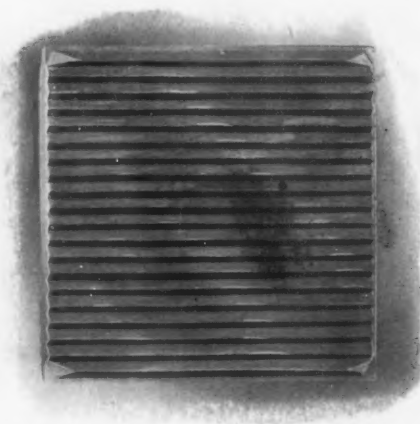


PLATE II. This illustration shows appearance of simple prism square. Note angles on surface.

The operation of *Luxfer* like most scientific successes is extremely simple. In Plates I and II we show the manner in which light is diverted to any desired point. The same principle holds in all the various forms of *Luxfer Prisms*.

We have but to change the angles, and construct our prism to meet conditions.

It must be remembered, however, that this is not a matter of guess-work. We have gone to great expense in securing the services of the world's best specialists in this line and every problem that comes to us whether it involves a large or small expenditure is passed upon by experts in daylight illumination.

It is possible to install so-called "glass prisms" that lessen rather than increase the daylight illumination in a given room. Cases of this kind are by no means rare.

Luxfer brings unfailing results because it is always designed to meet a given condition.

We guarantee that *Luxfer* will accomplish every result we claim for it.

Send for Booklet

AMERICAN **Luxfer Prism** COMPANY

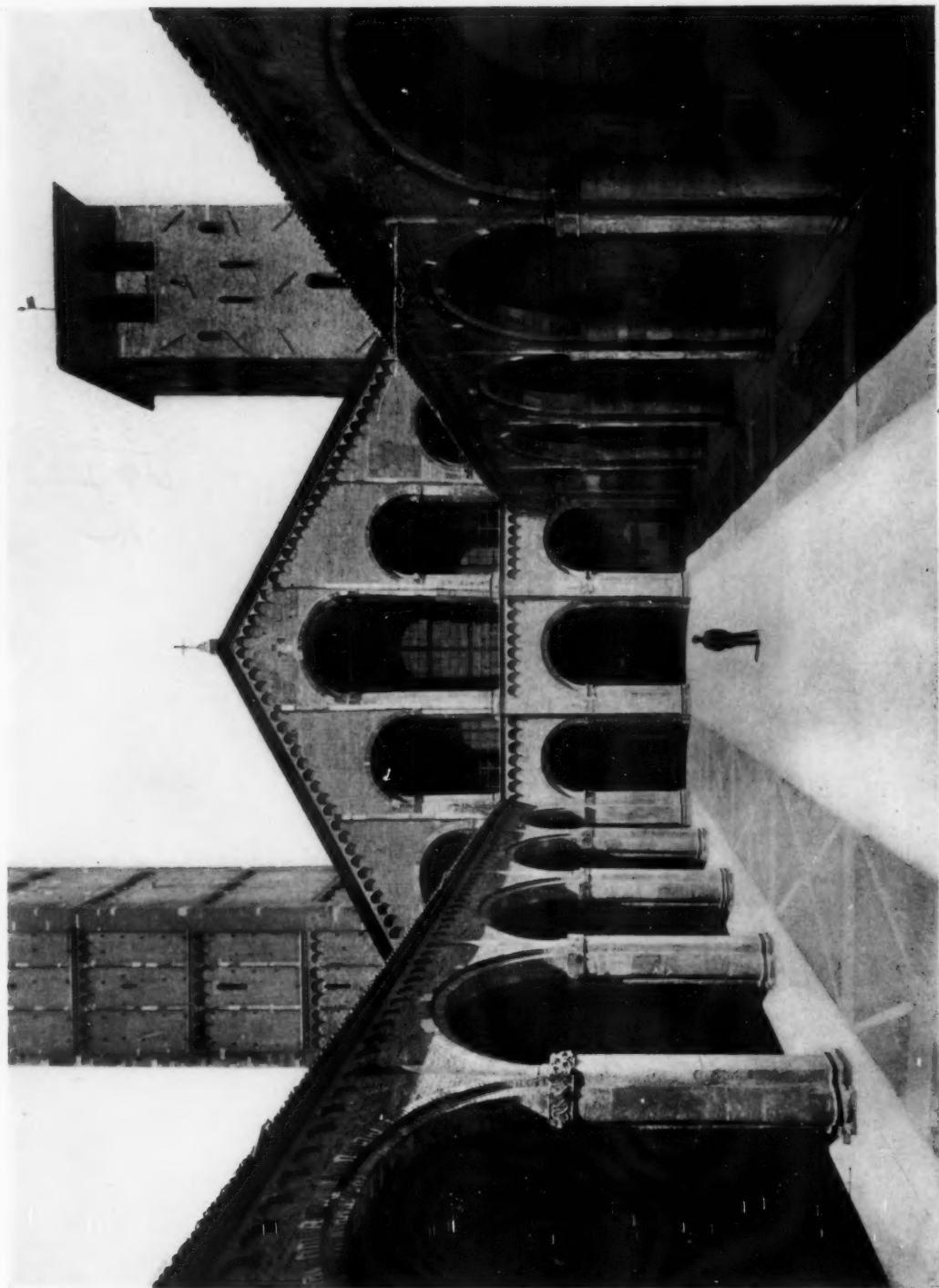
OFFICES

CHICAGO, Heyworth Bldg.
BOSTON, 49 Federal St.
BALTIMORE, 34 Old Builders' Ex.
CLEVELAND, 406 Garfield Bldg.
CINCINNATI, 37 Thoms Bldg.

DULUTH, 106 W. Michigan St.
KANSAS CITY, 948 N. Y. Life Bldg.
MILWAUKEE, 1300 Majestic Bldg.
INDIANAPOLIS, 10 E. Market St.

NEW YORK, 507 W. Broadway.
NEW ORLEANS, 904 Hennen Bldg.
PITTSBURGH, 1022 Fulton Bldg.
PHILADELPHIA, 807 Chestnut St.

ROCHESTER, 38 Exchange St.
ST. PAUL, 615 Ryan Bldg.
SAN FRANCISCO, 151 Tehama St.
SEATTLE, 425 Henry Bldg.
DALLAS, Builders' Exchange.



BASILICA OF ST. AMBROSE, (VIII AND IX CENTURY) FLORENCE, ITALY

B 2111 85

THE AMERICAN ARCHITECT

Vol. XCVIII

WEDNESDAY, OCTOBER 5, 1910

No. 1815



SEVENTH AVENUE FACADE, LOOKING SOUTH

THE NEW YORK IMPROVEMENT AND TUNNEL EXTENSION OF THE PENNSYLVANIA RAILROAD

The New York Improvement and Tunnel Extension of the Pennsylvania Railroad is illustrated and described at this time to gratify the natural professional interest in so monumental a work. It is but fair to say that the structure is not yet in a condition to be presented in a way that does it justice. Another issue of *THE AMERICAN ARCHITECT*, before the close of the year, will contain further architectural aspects of the subject which do not at present show to their full advantage, as well as a full and authoritative presentation of the engineering problems and their solution. For preliminary plans and working drawings see issue of May 26, 1906, No. 1587, Volume 89.

EDITORS OF *THE AMERICAN ARCHITECT*.

TO have consummated, in six years, one of the most extensive and far-reaching of American transportation improvements is a feat claiming the attention of the world. To have achieved a result which is, in every way, in keeping with the magnitude of the operation is a signal triumph for the conceivers of the

project and for those who have been the means of giving it concrete form. It is a great accomplishment for the engineers and no less for the architects, the influence of which is bound to be widely felt. The engineers of the work have mastered constructive difficulties that, only a short time ago, would have been considered insurmountable, and the architects of the station, who have many times proved their capabilities to handle large building projects, have outdone themselves, in this instance, and have presented the best sort of an argument, for the entire profession in America, why the architect is and should be, more and more, a very important factor in all constructive development, besides being one of the most necessary elements of national artistic progress.

As a constructive achievement the Pennsylvania Station is great, but as the solution of a difficult problem in transportation planning and designing it is even more noteworthy. In this connection the comment has often been heard that its plan is simply an adaptation to mod-

ern conditions of Roman Bath motives; a visiting French architect remarked recently that it resembles any other form of public building rather than a busy railway station. Some others have remarked that the architecture is not original and displays the hand of the archaeol-

problem presented to the architects is closely considered. If the explanation is made, in the first place, that the main masses of the building have, of necessity, to act as a bridge for the working parts of the station below, the great track layout, it will be evident that the exterior



THE COLONNADE ON SEVENTH AVENUE FRONT, LOOKING NORTH

ogist rather than the ingenuity of the architect. These opinions a closer acquaintance with the work, it may confidently be predicted, will speedily alter. Suitability to purpose will, perhaps, be the first characteristic of the design to be recognized when the true architectural function of the station is realized, and the nature of the

design can be expressive of the interior workings of the station only insofar as to indicate the entrance to a great underlying transportation system, while from the inside, to arriving passengers, it can indicate the entrance into a great city. This idea of a monumental gateway, it must be admitted, has been expressed in the



ARCADE, LEADING FROM PRINCIPAL ENTRANCE ON SEVENTH AVENUE TO THE MAIN WAITING ROOM

design, though perhaps not to the satisfaction of some of those whose notions of architectural logic are regarded as extreme. The conventional train shed is missing, and logically so, but the greatest number of lines of circulation for the various services have been provided and of the amplest dimensions. Inside, the maximum of waiting and congregating space has been provided in the great waiting room 314 feet long, 108 feet wide and 150 feet high, suggested by the great tepidaria of the Roman Baths it is true, but of which the largest, that in Diocletian's Baths, is so much smaller than this colossal apartment that architectural comparison with its derivatives means very little; the great steel and glass-covered concourse or vestibule from which numerous stairways lead down to the various train platforms is said to be the largest room of its kind in existence; it is 340 feet long by 210 feet wide, and perhaps 90 or 100 feet high. Here is to be seen a successful solution of the use of structural steel without the application of extraneous ornament. In this particular field of design the French are, admittedly, furthest advanced, the machinery hall of the Paris Exposition of 1889, and the Halles Centrales or large public markets, also in Paris, are, perhaps, the most conspicuous early examples, while the train sheds of the railway stations at Frankfort, Dresden and Cologne are more recent as well as more analogous solutions. The concourse in the Pennsylvania Station, while highly successful and a long step in advance over former attempts in this country to use steel idiomatically, it must be admitted, has not the

refinement and delicacy of the best of the foreign work mentioned above, especially of the French. It is, however, a strictly American design, evolved from a somewhat complex contemporary practice, and, therefore, possesses the merit of not being the result of foreign imitation.

If it is still maintained, on other grounds, that the station typifies archæology rather than architecture, those who hold to this view may become convinced that what they mean is rather that the building exhibits, in its planning and its general architectural handling, those first essentials of monumental architectural conception which it was the life work of the late Charles F. McKim to help perpetuate in American architecture, and which the establishment of such an institution as the American Academy in Rome is a step to foster. These principles the firm McKim, Mead & White has constantly adhered to in its work and none of its buildings better represents its efforts to guide American architecture from that chosen starting point than the great railway station just opened in New York. No one will maintain, of course, that the architects have said architecturally everything that could be said in a building of this kind, or, indeed, everything that they might have said, if all associated factors and conditions could have been shaped as they should have liked them. Perhaps they, themselves, would be the first to make the admission that many questions of architectural design and construction in the station proper admit of better solutions than have been

arrived at or that greater interest might have been given to some portions of the vast edifice which may, at times and in places, impress one as needing something to animate, accentuate or terminate certain parts or features in their relation to the composition of the

place among the large contemporary achievements of the firm McKim, Mead & White.

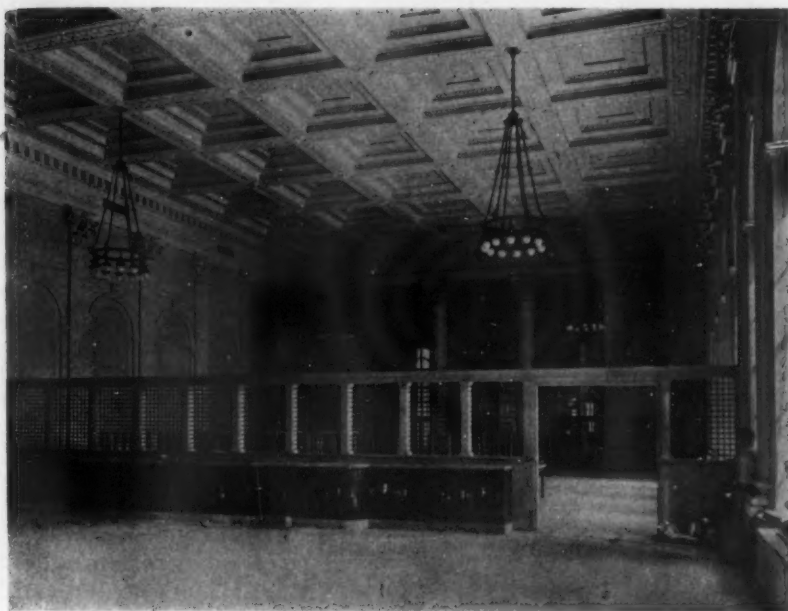
To call attention to some of the qualities displayed by the station which operate to produce the total effect of dignity, and which evince the most conscientious



THE GENERAL WAITING ROOM, LOOKING NORTH.

whole, but it were mere caviling to accentuate unduly such aspects of a notable work. It is a great modern building beset with all the vexatious conditions implied by its magnitude and purpose, and not a project to exercise the visionary's imagination. As an accomplishment of modern architecture it will be accorded a high

study and thorough mastery of the fundamental principles of design, the starting point may be made by a rapid survey of the exterior and interior. The exterior achieves its effect chiefly through two expedients, well-studied massing and the skilful refinement, disposition and modeling of the dominant features. The interior



THE LUNCH ROOM, ON SOUTH SIDE OF CORRIDOR

makes effective use of advantageous lighting to reveal the niceties of simple and harmonious color gradations brought about by the skillful manipulation of relief and the texture of the materials. It will at once be remarked by the architect how well the designers have understood the difference between the scale of the detail demanded by an interior of colossal dimensions and that called for by an exterior façade of equal size and greater extent. The sureness with which the large questions of scale have been handled at once inspires complete confidence in the architects' equipment for a work of this importance.

To return, for a moment, to the exterior, no one but a master of his art would have dared to take the liberties with the orders which are to be found on closer inspection. The nice spacing of the double tier of columns of the central motive is much more the result of a trained judgment than of following a rule of classical architecture. The treatment of this motive with its attic, which, under other conditions than those obtaining in the problem, would be judged too heavy, is not to be found in any book on architecture nor is that knowledge to be got from such a source which led the architects to refrain from repeating, on a larger scale in this feature, the pediments of the terminating pavilions. They fully realized the necessity of similarity of effect with these pavilions and the way they chose of achieving such an effect is interesting and ingenious. That accounts for the heavy attic which does not appear too heavy, and the stepped parapet with the central affronted female figures upholding the clock, and the flanking eagles, producing delicately, but none the less surely, the rising lines necessary to simulate the triangles of the terminating pavilions. A glance at the illustration of the central feature will at once convey the idea.

The vigorous treatment of the main exterior cornice and the way its cymatium rakes up the terminal pediments without unduly affecting the massiveness of the

horizontal portion of the cornice across the pediment is worthy of study, while the circular base-blocks of the middle columns of these motives at once explain the purpose of the building as a busy thoroughfare where obstructions are not to be tolerated. They are, in fact, the passages for the vehicular traffic to and from the station.

One of the most difficult problems in modern monumental architecture is the preservation of dignity and monumental character in spite of mechanical distractions. Instances of such difficulties are to be found in the station, in the main waiting room and in the concourse. In the former, for some, undoubtedly, good reason, a double row of unsightly ventilators had to be placed in plain view along the length of the room. Something, presumably, had to be done with these intrusions into

the architectural scheme of the apartment and the architects' solution of dressing up these features architecturally as pedestals to support ornate lighting standards was a happy thought though by no means as obvious as it appears when done. The practical objection of obstructing the north and south staircases leading down into the room is, of course, not removed thereby.

In another case it was necessary to transmit light through the concourse floor to the levels below and the



SMOKING ROOM ON NORTH SIDE OF CORRIDOR

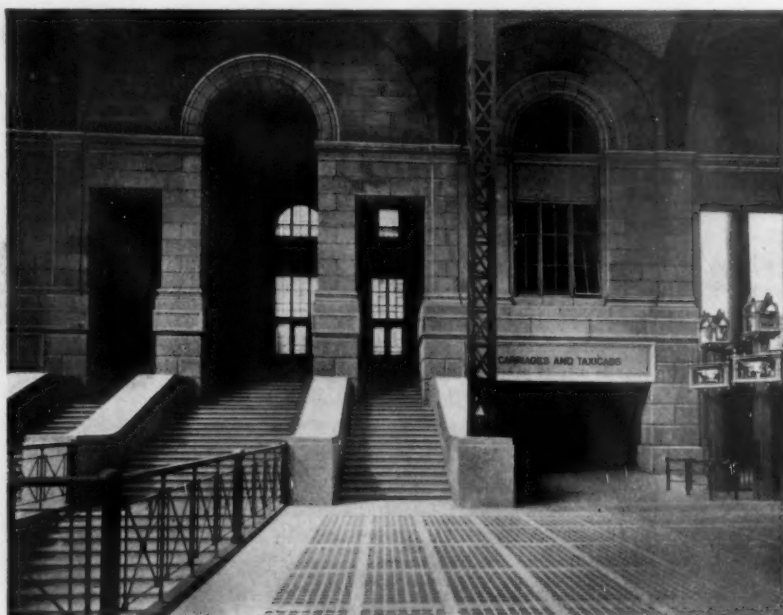


VIEW LOOKING NORTH, ACROSS THE CONCOURSE—EXIT IN FOREGROUND FROM EAST-BOUND TRACK LEVEL

vast area of prisms which had to be used does not help maintain the monumental character of the great steel and glass-covered room with its dignified walls of stone and its border of tiled vaults between steel ribs. There is, of course, no way that could be indicated in which this difficulty could be overcome without materially defeating the practical purposes of the artificial lighting.

As a public improvement the building of the Pennsylvania station is of the greatest importance not only to the world's second largest city, and perhaps its metropolis in the near future, but to a very considerable portion of the entire country. It will ultimately form the most important connecting link between New England and the South and between New England and the West, thus opening up a direct line of business intercourse between those sections through New York, the most important American center of exchange. In view of the great importance, to the City of New York above all, of this vast undertaking by the Pennsylvania Railroad, it is surprising and a matter of regret that the city should have been so completely lacking in public spirit as not to lend the improvement every reasonable assistance. The municipality, it seems, should even have

stretched a point and have prevented effectual closing up of the approach to the station from one of the most important business districts of the city lying to the east, by acquiring sufficient abutting property to open up an avenue of appropriate width from this section to the new station, instead of allowing the pre-emption of the property for private exploitation. Here, clearly, is a wasted opportunity which it may, perhaps, not be able to retrieve in the near future. The station may, of course, be expected to endure for many generations and it is not unlikely that public spirit will eventually be educated to demand that it be given a suitable setting and more adequate avenues of approach to form one of the world's greatest civic centers. The railroad company has fully realized the neglect on the part of the city and has deemed it necessary to establish a private right-of-way by means of a street one hundred feet wide giving access to Thirty-fourth street, the most important east and west thoroughfare passing immediately to the north of the station. The railroad, moreover, has realized the necessity of more ample pedestrian ways in front of the station entrances and has placed the building well back of the lot line on abutting avenues and streets, especially on the main or Seventh avenue façade. The projected subway on Seventh avenue is calculated to afford greatly increased facilities for Pennsylvania passengers, but here again, the city has failed to keep abreast of the times and the construction of this subway still seems at present some years in the future. In the meantime, the transit facilities to and from the station will continue to be unsatisfactory and the surroundings unsightly. When it is recalled how effectually the station has removed one of the most congested centers of population from Manhattan Island it would seem that public opinion might have been counted on to persuade the city to turn a good beginning to an even better advantage by setting a much needed example.



CONCOURSE EXIT TO THIRTY-THIRD STREET

THE AMERICAN ARCHITECT

PUBLISHED EVERY WEDNESDAY BY THE
SWETLAND PUBLISHING COMPANY

239 West 39th Street, New York

H. M. SWETLAND, President, M. J. SWETLAND, Treasurer, E. J. ROSENCRANS, Secretary, G. E. SLY, Advertising Manager.

E. J. ROSENCRANS, Editor.
WILLIAM H. CROCKER, Associate Editor.

SUBSCRIPTION RATES

United States and possessions, Mexico, Cuba - - - \$10.00 per year
All other countries - - - \$12.00 per year

Entered at the Post-office, New York, as Second-class Matter.

October 5, 1910

Vol. XCVIII, No. 1815

CONTENTS

THE NEW YORK IMPROVEMENT AND TUNNEL EXTENSION OF THE PENNSYLVANIA RAILROAD. PRELIMINARY PRESENTATION	113
AN ACUTE CIVIC PROBLEM IN NEW YORK.....	120
TOWN PLANNING IN AMERICA.....	120
EDITORIAL COMMENT	119
The Architecture of the Pennsylvania Station—Design of the Skyscraper to Date.	

ILLUSTRATIONS: The New York Improvement of the Pennsylvania Railroad.

Frontispiece: Basilica of St. Ambrose, Florence, Italy.

THE new station in New York of the Pennsylvania Railroad Company is destined, we believe, to be accounted one of the great modern architectural achievements. To the academically trained man this estimate may, perhaps, seem overdrawn unless he has had the opportunity and inclination of carefully studying the building inside and out. His first impressions will not encourage him to concur in the above opinion. In the first place, the station entirely lacks a setting. In the second place, the exterior, at least, has not the earmarks of that expressive *logique* which the Paris teaching, now a controlling influence in our architectural curricula, considers of the utmost importance. In short, the American architect of French leaning will find it difficult to apply to advantage his criteria of good architectural design. He will find that he must look deeper for a basis of judgment. If he cannot bring himself to admit that a building may be a worthy monument because his school formulæ, as he interprets them, seem to indicate otherwise, then, of course, the Pennsylvania Station will have little interest for him from the standpoint of architectural design. If, however, he is able to admit that there are other criteria, too subtle for linguistic expression, then, we believe, he will discover in the conception of the design a mastery of the principles of composition blended with a degree of good taste which will move him to a careful study of the expedients employed to obtain the result.

The lack of a proper setting for the building he will find, of course, a great handicap and one which can hardly be compensated for in the design. The architects, no doubt, used every means in their power to obtain adequate surroundings and any estimate of the building, as an architectural achievement, which involves so many other equally important issues, should take this into consideration. Perhaps the future recon-

struction of that section of the city may make it possible to remedy this defect, in part at least. But there is another side to the problem, as our hypothetical critic will soon discover; the Pennsylvania Station represents a most difficult problem in railway transportation. Its plan successfully solves the intricate services demanded in the largest way-station of its kind in existence, making provision, on different levels, for the daily handling of many thousands of commuters besides taking care of the prosperous through-traffic of one of America's greatest railway systems. The practical requirements, therefore, were exacting and the architectural results obtained were arrived at only after the most carefully considered compromise with them. The fact becomes evident that the Pennsylvania Station is modern in the strictest sense and must, therefore, be judged on modern architectural standards. The application of such standards, we believe will lead to the conclusion to which we pointed above.

IT is not feasible in architecture to set up any single building as a model solution to be followed in other structures intended to serve similar needs. There are, however, certain gradually evolved principles that may be pointed out for guidance. The present generation of American architects has produced a type involving such principles, in the building of many stories on a restricted area. In this evolution certain problems have been worked out to their logical conclusion. The standardizing of steel-skeleton construction was, of course, the first step, closely followed by the solution of certain mechanical difficulties, such as an efficient heating system, adequate water supply for the use of tenants and for fire protection and an elevator service which should be safe and efficient for any height, speed or capacity. The development of a system of exterior architectural treatment which should, within reason, satisfy the æsthetic sense without too palpably militating against the advantageous use of the floor space, has been and still is the subject of some debate. Whether the solution is to be preferred that treats the tall building as the late Bruce Price did, perhaps, for the first time, in the American Surety in New York, as a column with base, die and cap, with a predominance of horizontal lines, or, as Louis H. Sullivan did later in the Prudential in Buffalo, differentiating only the basement story in an absolute sameness of architectural façade treatment and terminating the top with abrupt flat horizontal roof and cornice to contrast with the strong predominance of continuous vertical lines on the façade will, of course, always remain a debatable question. A feature not entering the first stages of the æsthetic problem was the recognition of the roof as an element of the composition. This feature has lately received considerable attention in the Singer, Metropolitan and Liberty Towers as well as in many other tall buildings of lesser altitude, and seems to have come to stay.

The design of the tall building seems to sum up into a predominance of vertical lines with a tendency rather away from the Roman orders, more liberal concessions on the client's part, promising a more adequate architectural base, a visible architectural roof, and a noticeable economy of interior embellishment.



THE NORTH TRAFFIC-WAY, LOOKING WEST

An Acute Civic Problem in New York

The suggestion made by Arnold W. Brunner, the architect-member of the New York Municipal Art Commission, that a Times Square Association be formed for the protection of that section of the city from unsightly buildings and offensive electric advertisements was made in substance in these columns in our issue of July 13, in which attention was called to the character of some of the new buildings being erected in the vicinity of the Times tower. Now an unsightly tower structure devoted to the display of illuminated advertising signs on Forty-second street in the immediate proximity of the Times tower, is the direct cause of stirring up interest in the subject. We can suggest no more effective measure for dealing with the situation than that made by Mr. Brunner. As has been repeatedly pointed out, public opinion in matters of aesthetics and civic betterment in this country seems more readily to be molded through the influence of co-operating private interests that will give their support to set a good example than by any direct agitation for remedial legislation.

Town Planning in America

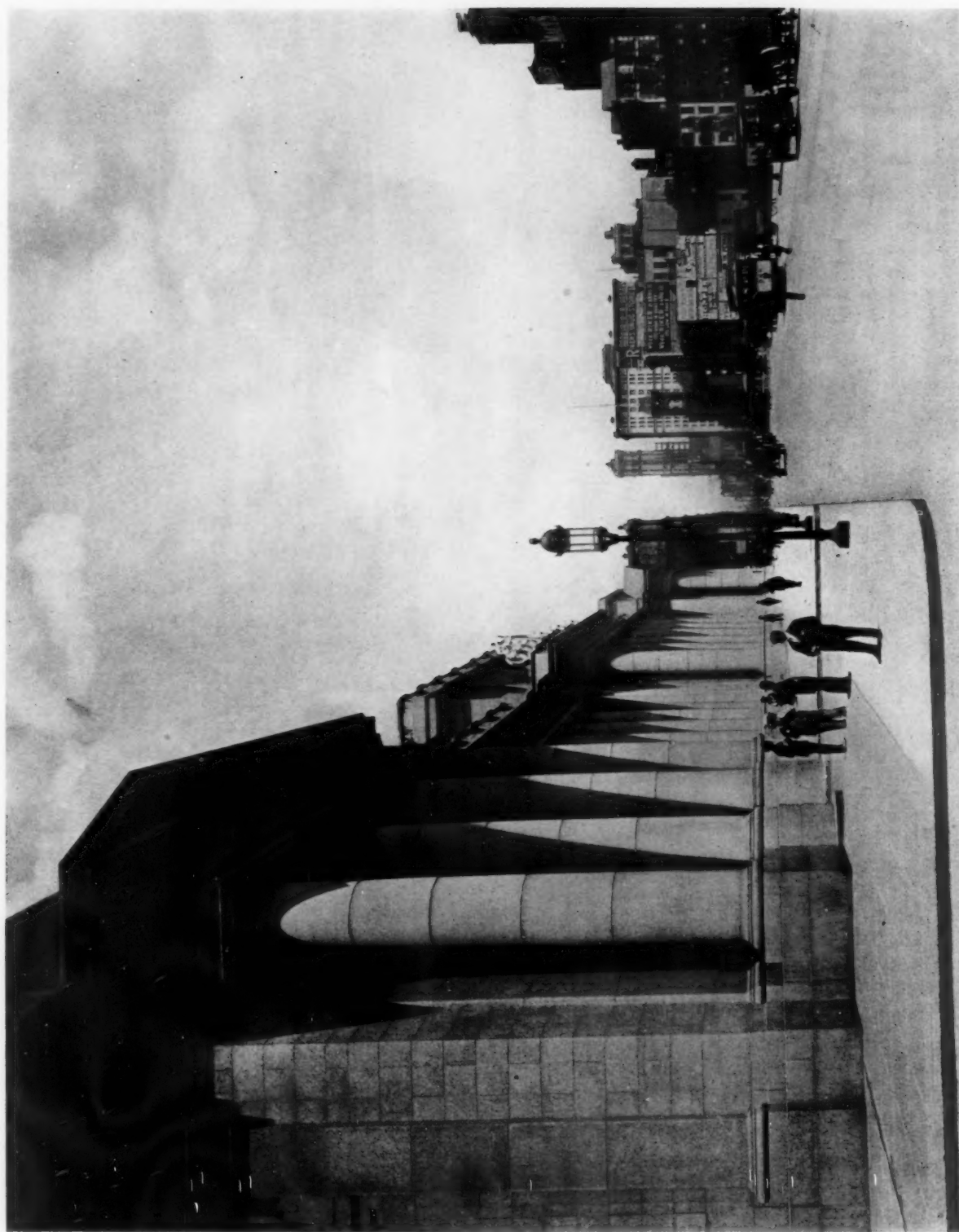
Prof. C. H. Reilly, in a recent paper on "Town Planning in America," said the enthusiasm for this movement in America was not so largely or exclusively devoted to regulating the growth of new suburbs, but took the wider aspect of attempting to determine the character and amenities of the town as a whole. The first and most obvious of the problems which America had to face was the checker plan, with which, at a minimum expenditure of thought in the first instance, most of the towns had been laid out. The monotony of such an arrangement had to be broken up, and most of the town-planners had begun to clear openings at definite points in the block system, and on the sites so formed place groups of related public buildings answering to some definite aspect of the town's activity. Americans were

paying attention to the approach to the town, whether by road or rail. Towns situated on rivers were having their landing places altered in such a way as to give adequate architectural expression of the city's dignity. Where the approach was by rail only, the station itself was not only an architectural monument, but faced a fine open place surrounded with public buildings, so that the passenger felt the importance of the city at the moment he alighted. So strong had public opinion become that in Washington the two railway companies had been forced to combine and build a joint station on a spot to suit the general town plan. There was a further tendency in America to insist that a railway in entering a town should do so underground or in a cutting, a point English cities would do well to copy.

No first-rate American town was content with a single park, however large, or a series of parks. It required a system beginning with small recreation grounds, as they would be called in this country, with public bathing establishments, wading pools for children, gymnasias for adults and playing fields. After them came the ordinary parks in the English sense of the term, and after these large reservations of open country and forest land on the outskirts of the town.—*The Builder*.



VIEW SOUTH FROM TRAFFIC-WAY ALONG EAST SIDE OF CONCOURSE. THIS VIEW SUGGESTS THE DIFFICULTIES TO BE ENCOUNTERED IN PRESERVING THE SCALE BETWEEN STEEL AND STONE ARCHITECTURE



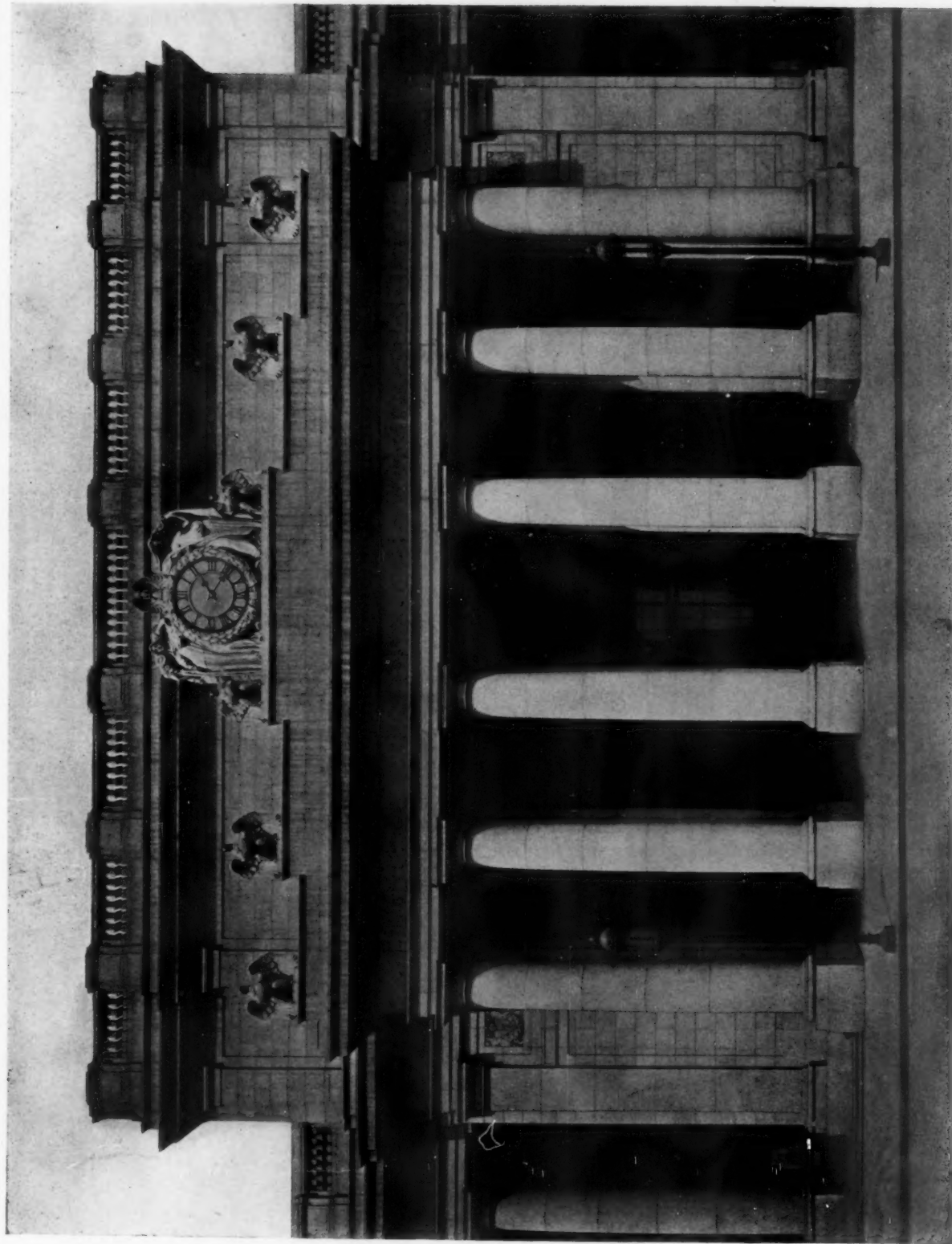
Copyright, 1910, by the Suetland Publishing Co.

SEVENTH AVENUE FACADE LOOKING NORTH FROM THIRTY-FIRST STREET

THE NEW YORK IMPROVEMENT AND TUNNEL EXTENSION OF THE PENNSYLVANIA RAILROAD

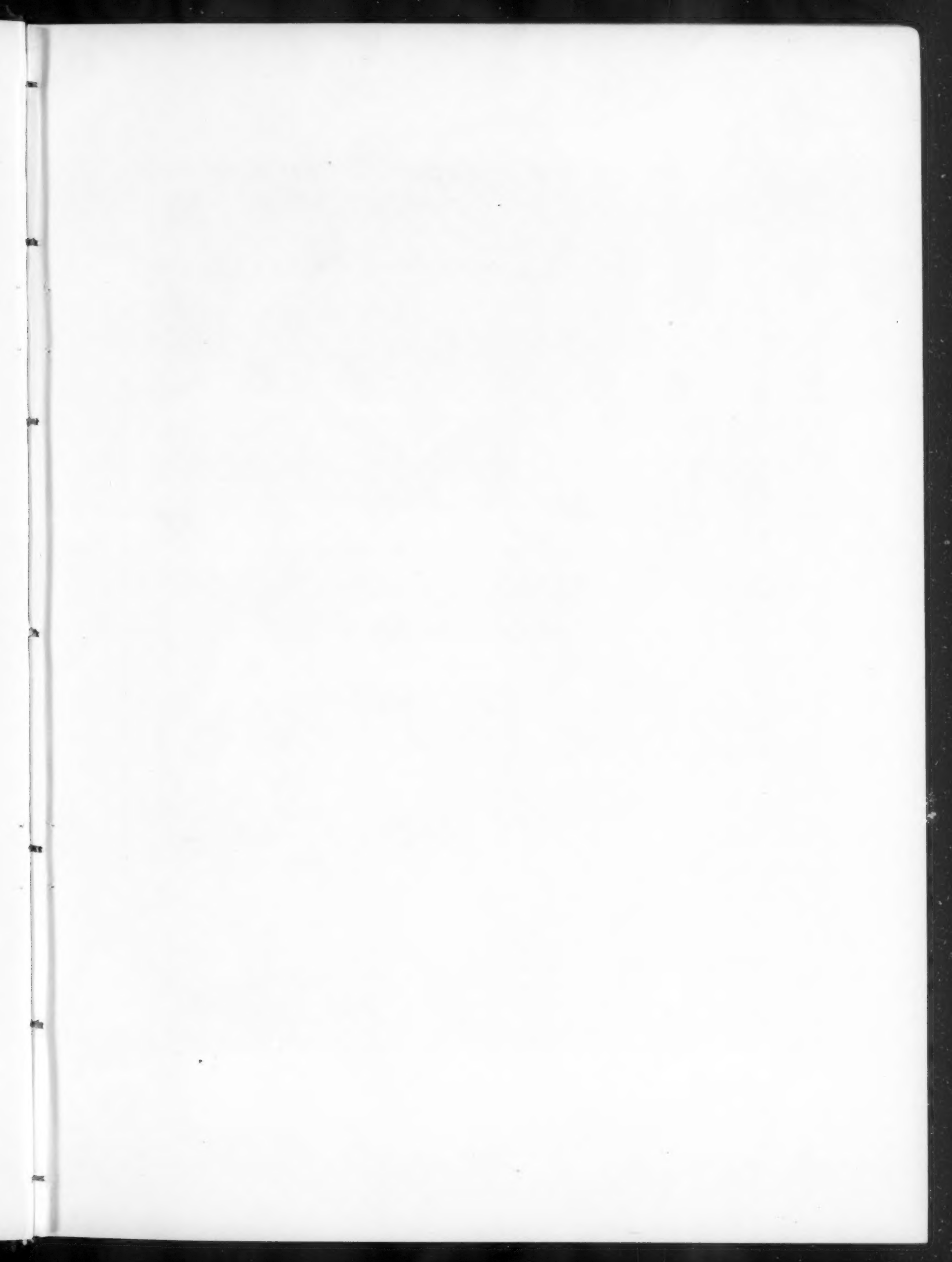
McKIM, MEAD & WHITE, Architects





Copyright, 1910, by the Sweetland Publishing Co.

DETAIL OF PRINCIPAL ENTRANCE ON SEVENTH AVENUE, FACING THIRTY-SECOND STREET
THE NEW YORK IMPROVEMENT AND TUNNEL EXTENSION OF THE PENNSYLVANIA RAILROAD
McKIM, MEAD & WHITE, Architects





LOOKING WEST FROM SEVENTH AVENUE ALONG THIRTY-FIRST STREET FACADE

THE NEW YORK IMPROVEMENT AND TUNNEL EXTENSION OF THE PENNSYLVANIA RAILROAD

McKIM, MEAD & WHITE, Architects

Copyright, 1910, by the Sweetland Publishing Co.





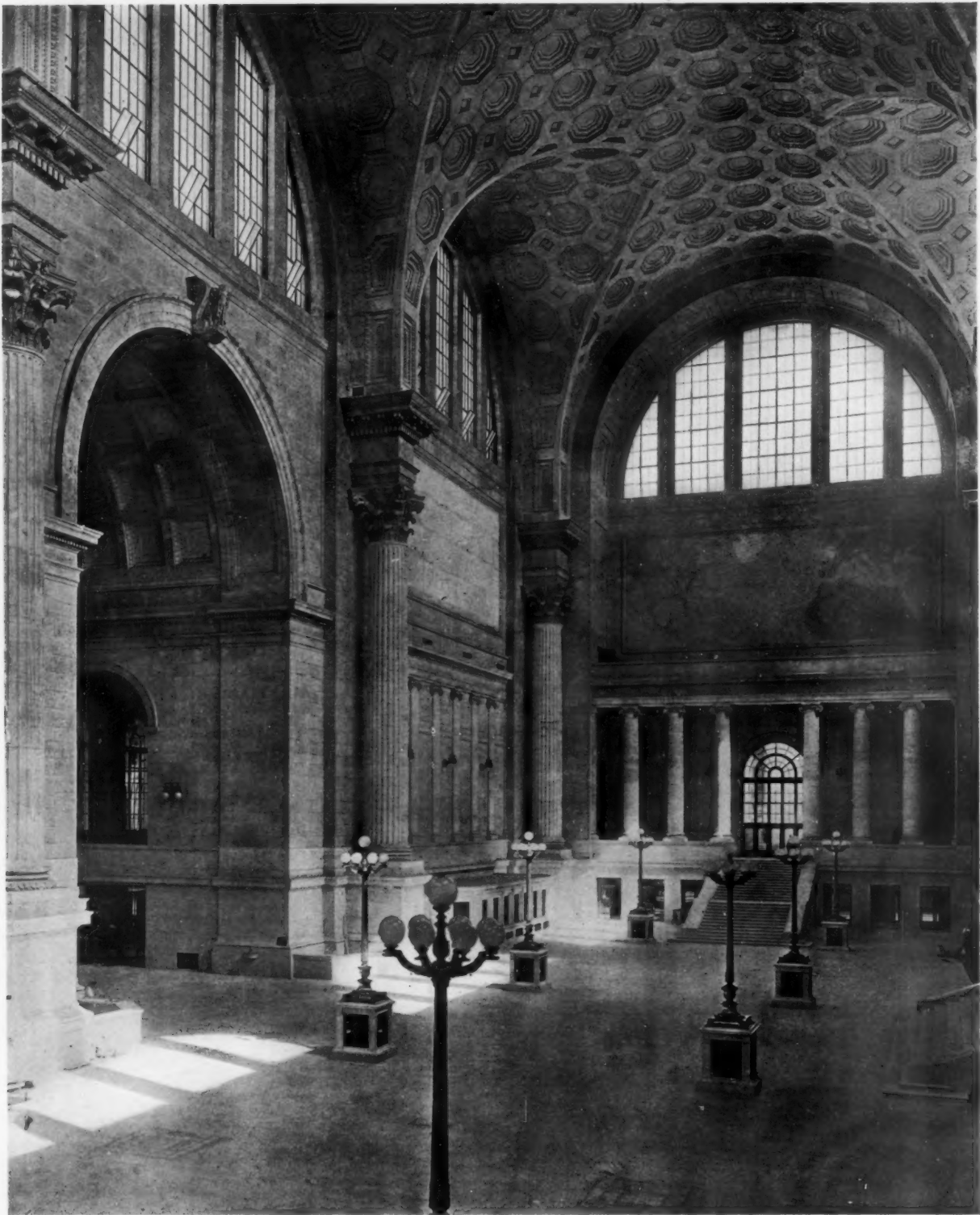
Copyright, 1910, by the Sweet and Publishing Co.

DETAIL OF THIRTY-FIRST STREET FACADE AND ENTRANCE TO GENERAL WAITING ROOM

THE NEW YORK IMPROVEMENT AND TUNNEL EXTENSION OF THE PENNSYLVANIA RAILROAD

McKIM, MEAD & WHITE, *Architects*



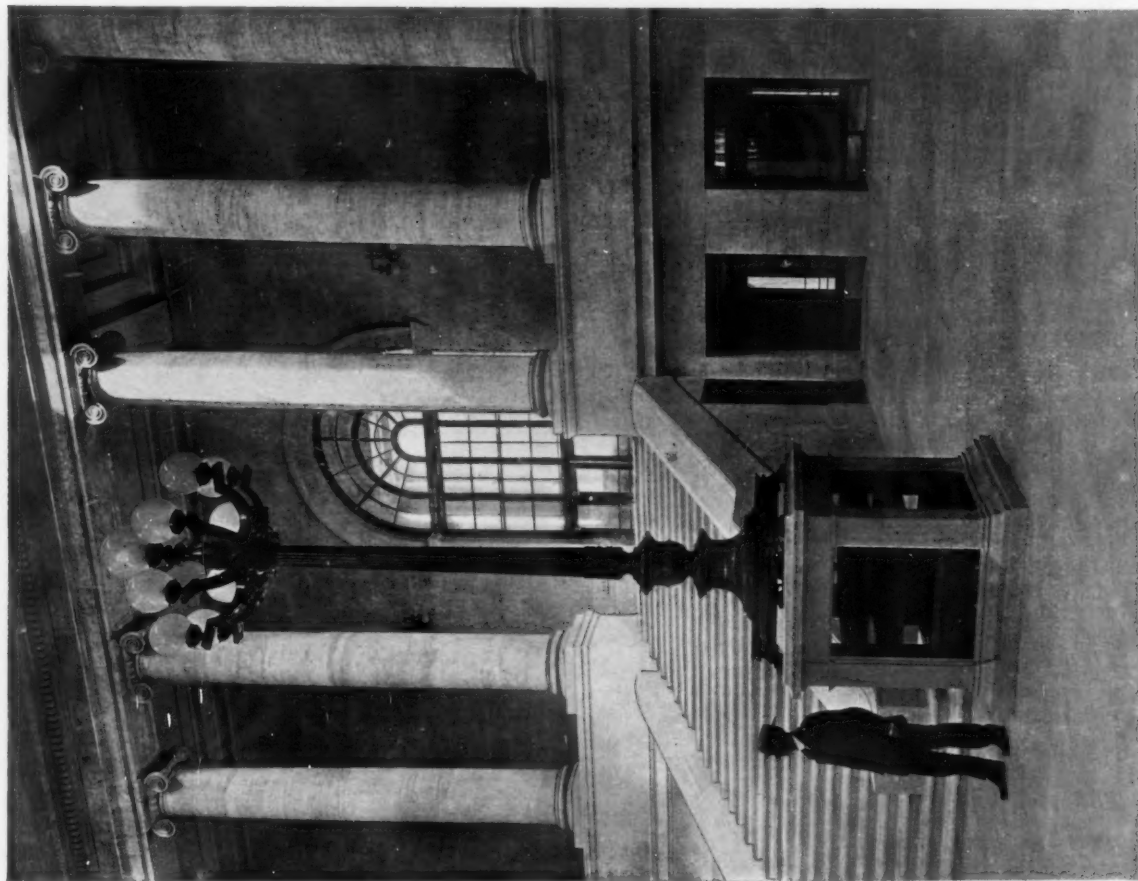


Copyright, 1910, by the Sweetland Publishing Co.

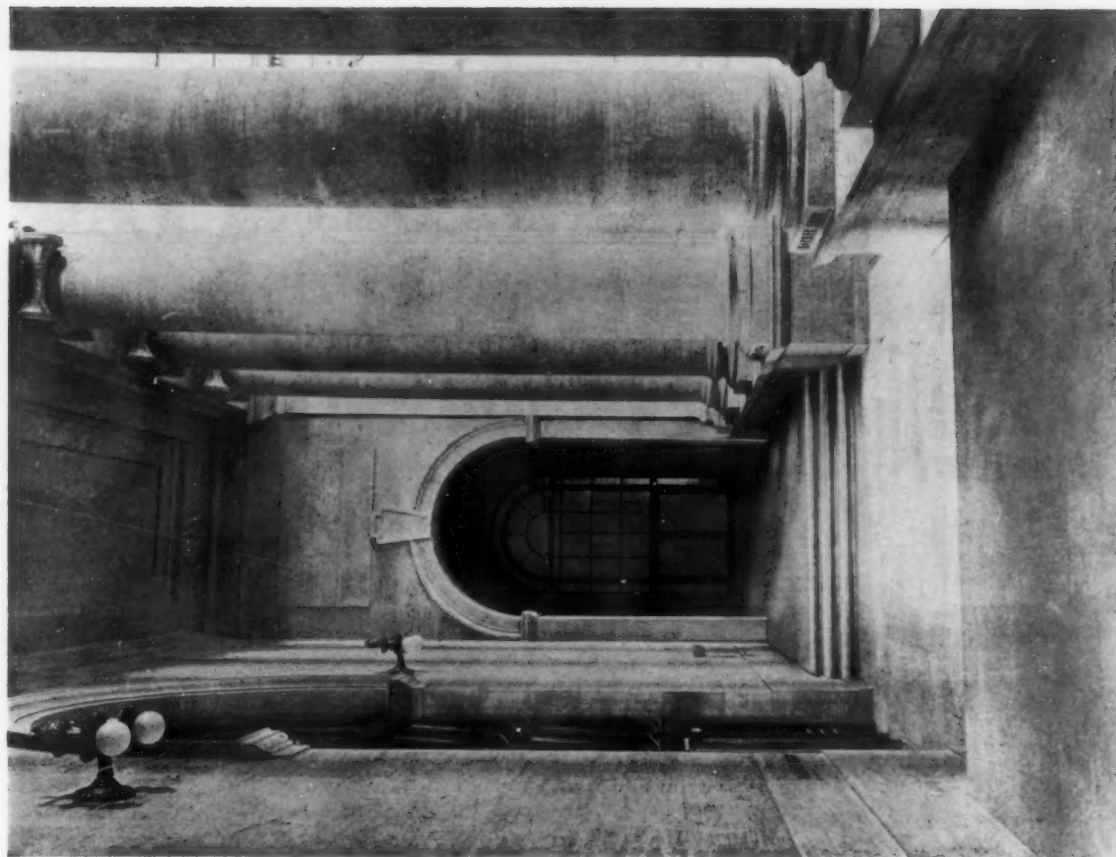
THE GENERAL WAITING ROOM, SHOWING ENTRANCE TO CONCOURSE AT LEFT

THE NEW YORK IMPROVEMENT AND TUNNEL EXTENSION OF THE PENNSYLVANIA RAILROAD
McKIM, MEAD & WHITE, *Architects*





DETAIL OF NORTH END OF GENERAL WAITING ROOM

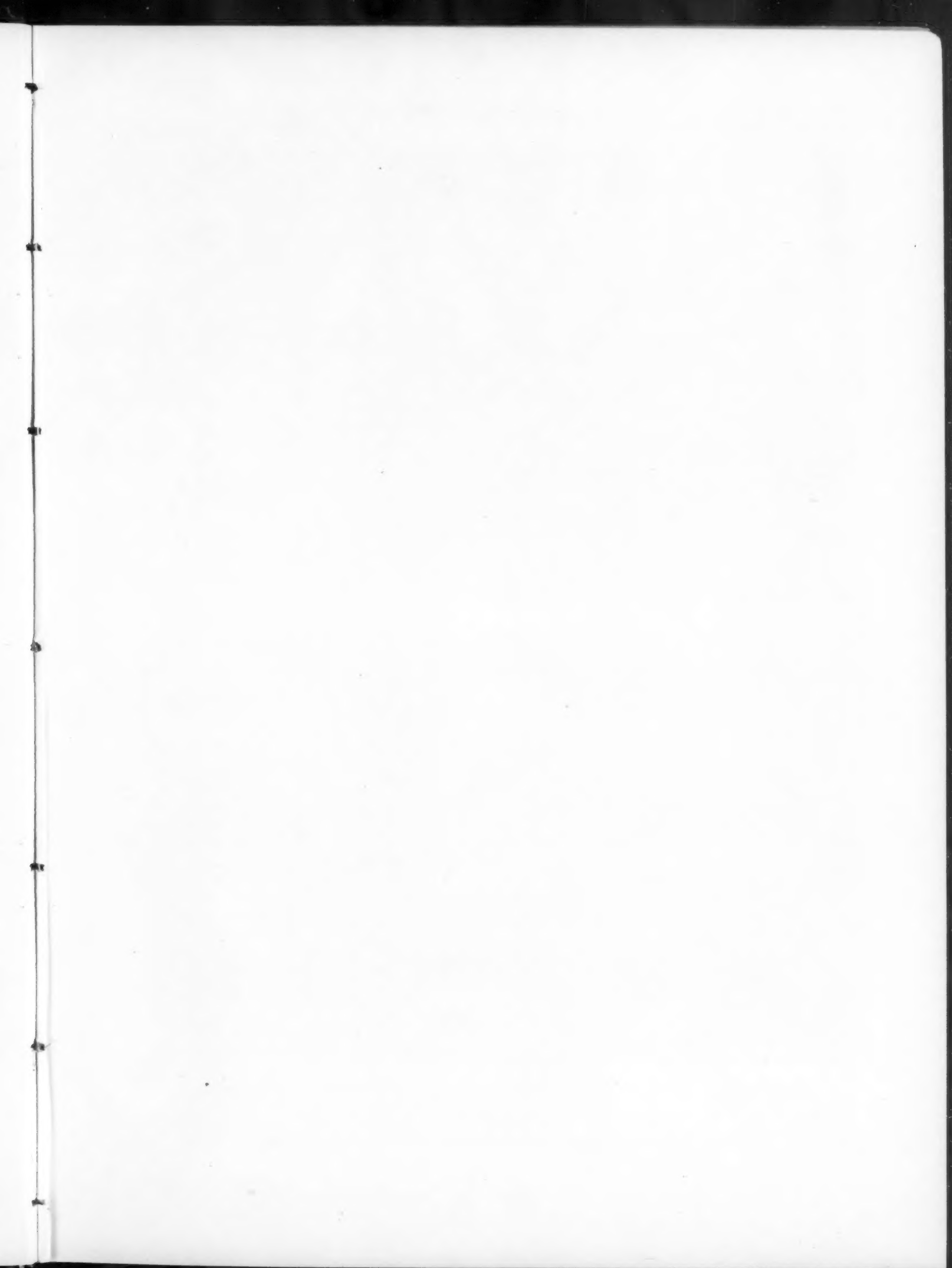


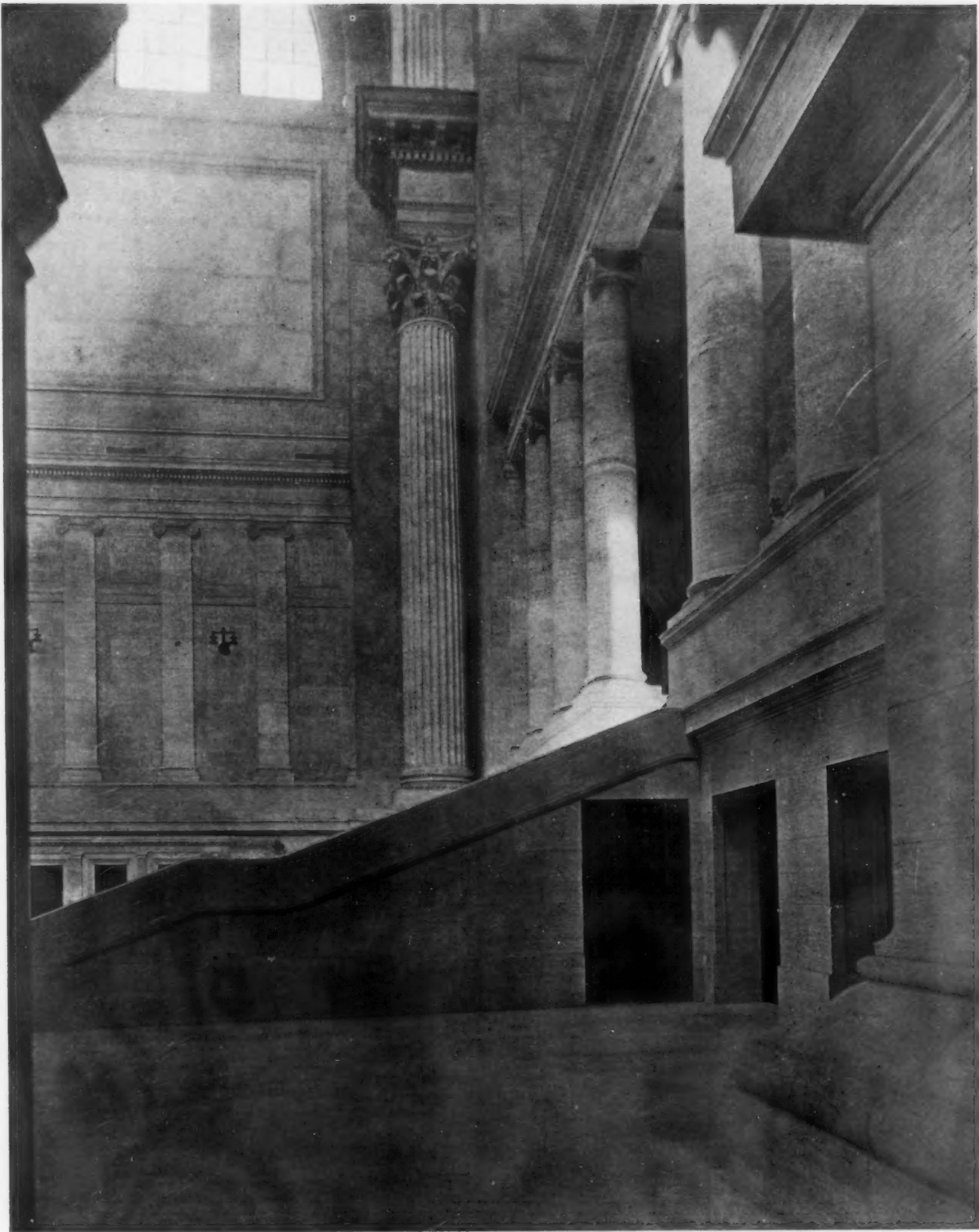
VIEW INSIDE COLONNADE SHOWN AT LEFT

THE NEW YORK IMPROVEMENT AND TUNNEL EXTENSION OF THE PENNSYLVANIA RAILROAD

McKIM, MEAD & WHITE, *Architects*

Copyright, 1910, by the Sweetland Publishing Co.



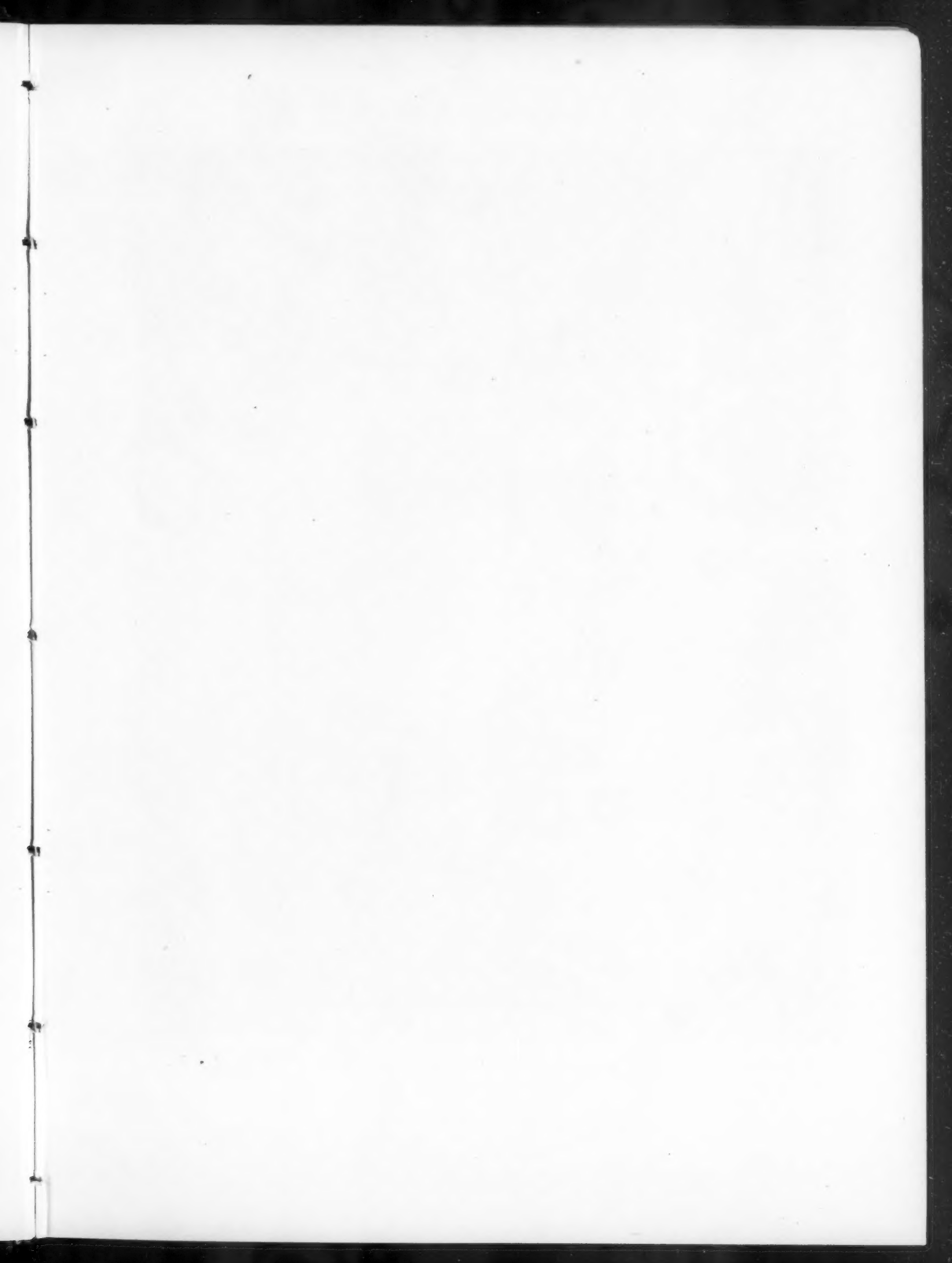


Copyright, 1910, by the Sweetland Publishing Co.

LOOKING ACROSS NORTH END OF GENERAL WAITING ROOM

THE NEW YORK IMPROVEMENT AND TUNNEL EXTENSION OF THE PENNSYLVANIA RAILROAD

McKIM, MEAD & WHITE, *Architects*





Copyright, 1910, by the Sweetland Publishing Co.

DETAIL OF WEST END OF ARCADE, LOOKING TOWARDS GENERAL WAITING ROOM

THE NEW YORK IMPROVEMENT AND TUNNEL EXTENSION OF THE PENNSYLVANIA RAILROAD

McKim, Mead & White, *Architects*



THE TRAFFIC WAY, THIRTY-THIRD STREET SIDE, LOOKING TOWARDS SEVENTH AVENUE



TRAIN LEVEL FOR EAST-BOUND TRAINS

Copyright, 1910, by the Sweetland Publishing Co.

THE NEW YORK IMPROVEMENT AND TUNNEL EXTENSION OF THE PENNSYLVANIA RAILROAD
MCKIM, MEAD & WHITE, Architects



Copyright, 1910, by the Sweetland Publishing Co.

THE CONCOURSE—VIEW LOOKING NORTH ALONG THE WEST SIDE, SHOWING ENTRANCE STAIRWAYS TO WEST-BOUND TRAINS ON LOWER LEVEL

THE NEW YORK IMPROVEMENT AND TUNNEL EXTENSION OF THE PENNSYLVANIA RAILROAD

McKIM, MEAD & WHITE, *Architects*



Copyright, 1910, by the Sweetland Publishing Co.

THE CONCOURSE—VIEW LOOKING ALONG SOUTH SIDE, SHOWING THE THREE LEVELS

THE NEW YORK IMPROVEMENT AND TUNNEL EXTENSION OF THE PENNSYLVANIA RAILROAD

McKIM, MEAD & WHITE, *Architects*



Copyright, 1910, by the Sweetland Publishing Co.

THE CONCOURSE AND WEST-BOUND TRACK LEVEL

THE NEW YORK IMPROVEMENT AND TUNNEL EXTENSION OF THE PENNSYLVANIA RAILROAD

McKIM, MEAD & WHITE, *Architects*

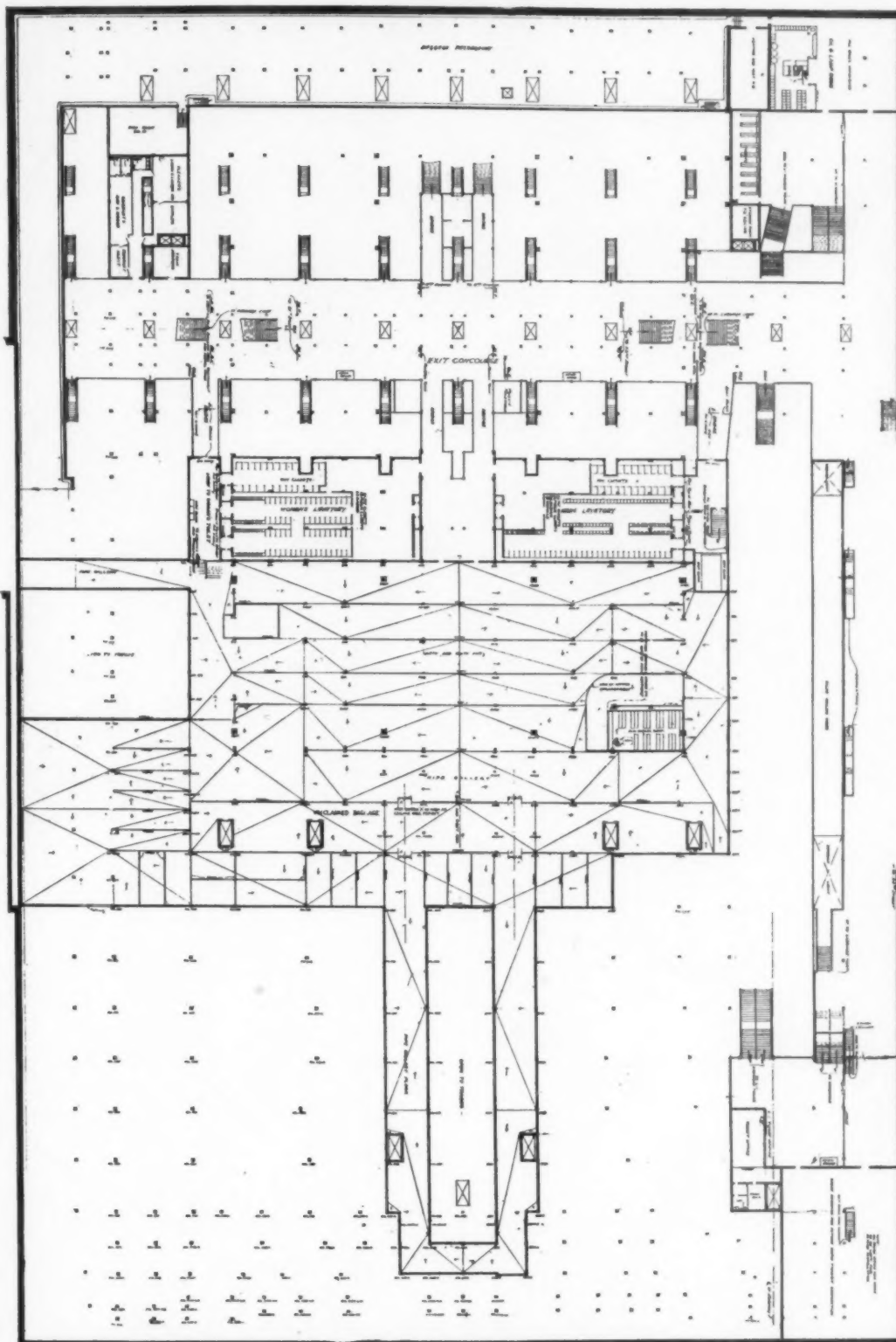


DETAILS OF CONCOURSE

THE NEW YORK IMPROVEMENT AND TUNNEL EXTENSION OF THE PENNSYLVANIA RAILROAD

McKIM, MEAD & WHITE, *Architects*

Copyright, 1910, by the Sweetland Publishing Co.



Scale: 1" = 64' 0"

PLAN AT EXIT CONCOURSE LEVEL

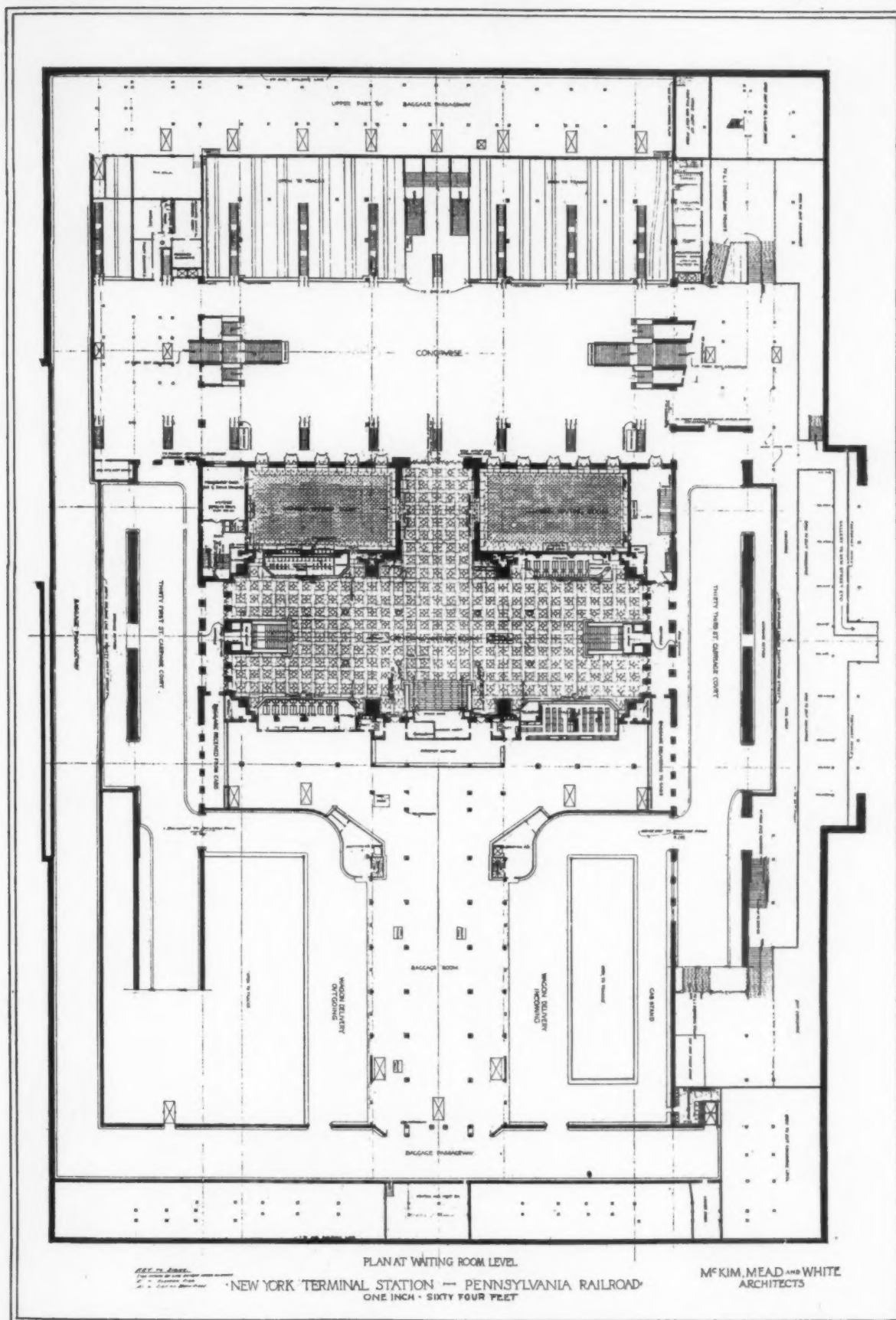
NEW YORK TERMINAL STATION — PENNSYLVANIA RAILROAD
ONE INCH — SIXTY FOUR FEET

McKIM, MEAD AND WHITE
ARCHITECTS

Copyright, 1910, by the Sweetland Publishing Co.

THE NEW YORK IMPROVEMENT AND TUNNEL EXTENSION OF THE PENNSYLVANIA RAILROAD

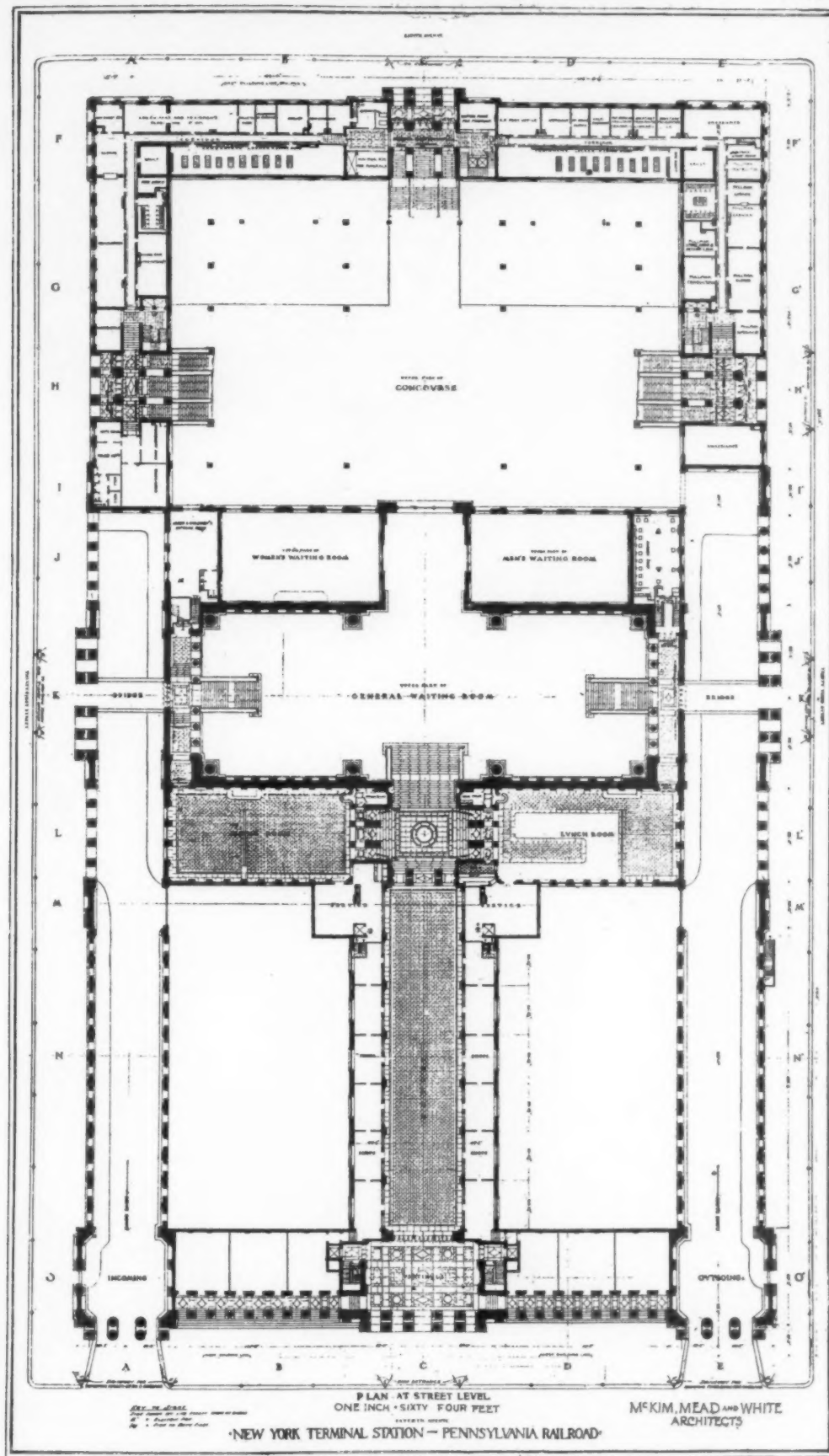
McKIM, MEAD & WHITE, Architects



THE NEW YORK IMPROVEMENT AND TUNNEL EXTENSION OF THE PENNSYLVANIA RAILROAD

MCKIM, MEAD & WHITE, *Architects*

Copyright, 1910, by the Swetland Publishing Co.



Copyright, 1910, by the Sweetland Publishing Co.

THE NEW YORK IMPROVEMENT AND TUNNEL EXTENSION OF THE PENNSYLVANIA RAILROAD

McKIM, MEAD & WHITE, Architects