The
Architectural Record.

VOL. XV. FEBRUARY, 1904. No. 2.

A NEW INFLUENCE IN THE ARCHITECTURE OF PHILADELPHIA.

ARCHITECTURE in Philadelphia is notoriously an affair of extremes. One is rather surprised to find this the case in a city of homes, where, according to the current legend, innovations are born hard. A priori, one would not suppose that the atmosphere of Philadelphia would be favorable to the production of sharp architectual contracts, certainly not to the fantastical, or the bizarre. Rather it is to the West that one would most readily turn for the flamboyant, or, for the profligate, to New York. Yet, if one desires to hunt the truly wild and erratic, or to find the most extraordinary juxtapositions of the good with the bad, it is not to St. Louis or Kansas City or Oshkosh one should go. One cannot be so successful anywhere as in Philadelphia.

Possibly the reason for this is to be found in the fact that in Philadelphia as soon as architecture rises above a certain very humble plane, it is in an extraordinary degree a personal expression. The local tradition—the demure respectable local tradition—runs very smoothly and very well so long as it is confined to the small two or three story red brick domicile with white stone trimmings, which is one of the civic glories of Philadelphia. The local tradition also works well, (only less well, for demureness easily passes into dullness) somewhat higher up the scale when the problem touches upon a more expensive class of residence: nor does it cease to be effective in a limited way in the case of small commercial buildings, factories and warehouses, or out in the suburbs into which the Philadelphian can carry a quiet, homely and colonial mode. Up to this point, there is apparently a sufficiently strong local consensus to operate powerfully upon the Philadelphian expression; but beyond that point—well! Philadelphia plunges, and the student of architecture finds

Entered May 22, 1902, as second-class matter, Post Office at New York, N. Y., Act of Congress, of March 3d, 1879.

that he has passed into a region of unrestricted design wherein the only limitations imposed upon the architect are those of his own temperament and training. The result is one of the most unmitigated spots, architecturally, in the world, where the note of originality, personality, individuality is as prominent in buildings of good design as it is in buildings of wildly bad design. Architecture there resembles the young lady of the rhyme:

ENTRANCE GATES TO THE ESTATE OF P. A. B. WIDENER.
Elkins Park, Pa. Horace Trumbauer, Architect.

"When it is good, it is very, very good, and when it is bad, it is horrid."

To verify these assertions one has only to recall the long and highly admirable series of strongly individualistic designs turned out in recent years by men like Wilson Eyre, Cope & Stewardson, Frank Miles Day & Brother, and then, with those clearly in mind recur for a moment to the extraordinary freaks which front the business part of Chestnut and other streets reminding one more of the grotesques of operatic scenery than structures soberly erected by respectable and influential financial concerns. In other cities even "the aberration" itself maintains some relationship with the traditional and ordinary methods of design, but in Philadelphia

RESIDENCE OF P. A. B. WIDENER—VIEW FROM THE GARDENS.
Horace Trumbauer, Architect.
Elkins Park, Pa.

one is quite at a loss for prototypes and is forced in the end to explain the buildings he sees by some abnormality of the Philadelphian mind operating under some undiscoverable local stimulus. Probably it must always remain a psychological problem how a city that possesses a building like Independence Hall could produce and tolerate a monstrosity like the City Hall, or how the same community could have raised to eminence a designer like Furniss, and trained artists of such high personal distinction as Cope & Stewardson, the Days and Eyre; so that we have on the

RESIDENCE OF P. A. B. WIDENER—EAST VIEW.
Elkins Park, Pa. Horace Trumbauer, Architect.

one hand, buildings like the Record Building and on the other, buildings like the Art Club. An acute architectural observer has endeavored to explain the anomaly. His statement is worth quoting: "In truth it is evident from the look of Philadelphia that there is no constraint upon the architects, either from the professional opinion, which elsewhere keeps designers out of the maddest excesses, or from a lay opinion that betokens an interest in the subject and, though ignorant, is willing to be enlightened. What the aspect of commercial Philadelphia does indicate is a complete architectural apathy on the part of the public and a settled determin-

RESIDENCE OF P. A. B. WIDENER—DINING ROOM.

Elkins Park, Pa. Horace Trumbauer, Architect.

ation on the part of the architects to break in upon the apathy at any cost."

If this explanation of the phenomenon be correct, it may be inferred, safely, that Philadelphia's salvation is to be wrought most speedily by the addition to the professional ranks of a number of well schooled architects, trained in the accepted traditions of the art—men whose education, taste, temperament and energy can be bent to the work of annexing Philadelphia to the general practice of the country at large. In this way, the city on the Schuyl-

RESIDENCE OF P. A. B. WIDENER—PICTURE GALLERY.

Elkins Park, Pa. Horace Trumbauer, Architect.

kill may in time cease to be an outlandish province where genius and eccentricity equally flourish.

In presenting to our readers as an accompaniment to these remarks, the designs of Mr. Horace Trumbauer, it is hardly necessary to point out that they furnish proof that the very conditions which we have set forth above as necessary for the production in Philadelphia of a better state of things architecturally have, as a matter of fact, arrived. The "arrival," however, is recent.* It

*The new era, moreover, is reinforced by recent enlistments in the professional ranks of a number of well-trained younger architects, who will no doubt achieve prominence later.

would have been utterly impossible a few years ago to have made such an exhibition of sane architectural work deriving from Philadelhpia as Mr. Trumbauer's designs provide. Anyone glancing at our illustrations without any knowledge of the origin of the collection would not be tempted for a moment by any mark or sign to differentiate the work from good metropolitan work proceeding from the office of any of the larger architectural firms located in New York, Boston or Chicago. Thus to miss the stamp of locality in the better architecture of any of our larger cities is not a very

COURT-YARD OF BREEDING STABLES OF P. A. B. WIDENER.
Ogontz, Pa. Horace Trumbauer, Architect.
The building contains nine single and twenty-one box-stalls; also house quarters for the stud groom and twelve bedrooms for assistants. The ring stable within is 100 ft. square, and the building over all 175 x 250 ft.

unusual omission, but in the case of Philadelphia it is, as we have seen, notable. It is all the more remarkable and significant because these designs represent the work of a young practitioner, and, as can be seen, his activity has not been confined to any one class of work or to a few clients with unlimited taste and limited opportunities. It shows, moreover, that in Philadelphia as elsewhere there is a large clientele ready to accept the standard, metropolitan and authoritative thing—people who have no desire "to break in upon apathy at any cost." That Mr. Trumbauer has been

able to secure this public for himself or a large part of it and satisfy that public without "doing the Philadelphian," good or bad, is demonstrated clearly by his undoubted success, which has already overpassed local limits and, as is usually the case with architectural firms that obtain a national position, brings him commissions from other parts of the country. To say that this success is based in some measure, or even in greater measure upon business ability than upon purely artistical merit is to state what is probably true of most architectural firms that are working in a large way, or if we

COACH STABLE—RESIDENCE OF P. A. B. WIDENER.
Elkins Park, Pa. Horace Trumbauer, Architect.

may so put it, working on a metropolitan basis. Standardization is almost as necessary here under modern conditions as it is in other departments of production where the output is perforce large and the pressure for time necessarily high. In this environment the artist is inevitably limited, being forbidden all those sources of inspiration, which depend upon reflection and study. Under these circumstances recourse is most likely to be to the formula, to tradition and to the standard. Facility becomes a prime requisite. Common sense and its equivalent in art—good taste—are indispensable. These qualifications with a positive capacity for management, produce the successful architect. Clearly Mr. Trumbauer possesses

RESIDENCE OF THE LATE W. L. ELKINS.

Elkins Park, Pa.

Horace Trumbauer, Architect.

THE RESIDENCE OF THE LATE W. L. ELKINS—THE MAIN STAIRWAY.

Elkins Park, Pa. Horace Trumbauer, Architect.

RESIDENCE OF THE LATE W. L. ELKINS—THE GREAT HALL.

Elkins Park, Pa. Horace Trumbauer, Architect.

RESIDENCE OF MAURICE HOOVER. Horace Trumbauer, Architect.

Wyncote, Pa.

This house was built in 1897. It is 60 feet square, constructed of local stone. Wyncote is a suburb of Philadelphia.

RESIDENCE OF JAMES W. PAUL, JR.
Radnor, Pa.

Horace Trumbauer, Architect.

RESIDENCE OF JAMES W. PAUL,

Radnor, Pa.

These buildings are 178 x 164 ft. on plan, and contain twelve single and nine box-stalls, as well as Coachman's and Groom's Quarters, Tool House, Carriage House, Cart Shed, Machinery Room, etc. They are built of Conshohocken stone.

EW OF THE STABLES.

Horace Trumbauer, Architect.

RESIDENCE OF MRS. E. H. G. SLATER. Horace Trumbauer, Architect.

Washington, D. C.

RESIDENCE OF MARTIN MALONEY.

Spring Lake, N. J. Horace Trumbauer, Architect.

Mr. Martin Maloney's house at Spring Lake, N. J., is a clever adaptation to American seaside conditions of the dignified and effective style known in England as Georgian, inspired by certain elements of Sir Christopher Wren's work. The house is 175 feet long, including the porches, and 90 feet wide. There are two principal stories with a basement and attic. On the ground floor there is a suite extending along the east front, which comprises the Hall Reception Room, Music Room, Dining Room and Library. The principal apartments of these suites are 30 feet square and 16 feet high. Occupying a similar position on the west part of the house are the Billiard Room, Stair Halls, Office, Breakfast Room and Butler's pantry.

On the second floor are ten bedroom suites with dressing rooms and baths, and a private oratory for the use of the many distinguished ecclesiastics of the Roman Church who are frequent guests at "Ballangary."

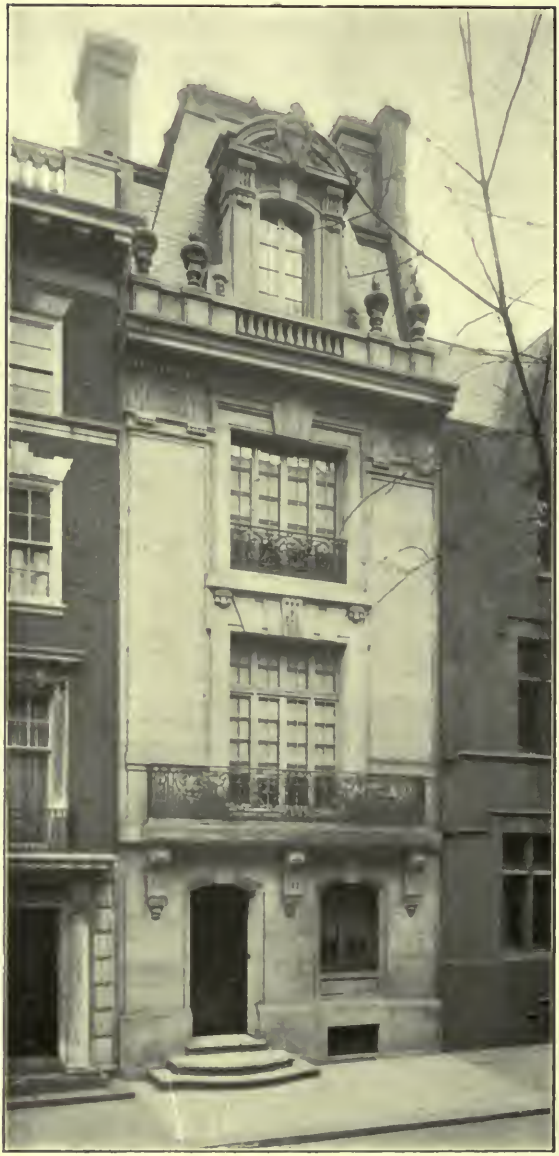
ST. CATHERINE'S CHAPEL.

Spring Lake, N. J. Horace Trumbauer, Architect.

Not far away from Mr. Maloney's house is St. Catharine's Chapel which has been donated by Mr. Maloney to the Diocese as a memorial to his youngest daughter.

ST. CATHERINE'S CHAPEL—INTERIOR.

Spring Lake, N. J. Horace Trumbauer, Architect.



RESIDENCE OF E. C. KNIGHT, JR.

No. 1629 Locust Street, Philadelphia. Horace Trumbauer, Architect.

This residence is 20 x 100 ft. on plan, with a stair hall 20 ft. square, two stories high. The dining-room is 18 x 26 ft. The saloon measures 18 x 30 ft. The principal suite is situated on the second floor. The first floor contains the servants rooms and a reception room adjoining the entrance. The front is of limestone.

RESIDENCE OF GEORGE A. HUHN.

16th and Walnut Street, Philadelphia, Pa. Horace Trumbauer, Architect.

This building is 30 x 95 ft. The principal suite is on the second floor, consisting of drawing-room library, dining-room and stair hall, occupying the entire floor. The house is constructed of limestone.

RESIDENCE OF GEORGE W. ELKINS.

Elkins Park, Pa.

Horace Trumbauer, Architect.

RESIDENCE OF JOHN GRIBBEL.

Wyncote, Pa. Horace Trumbauer, Architect.

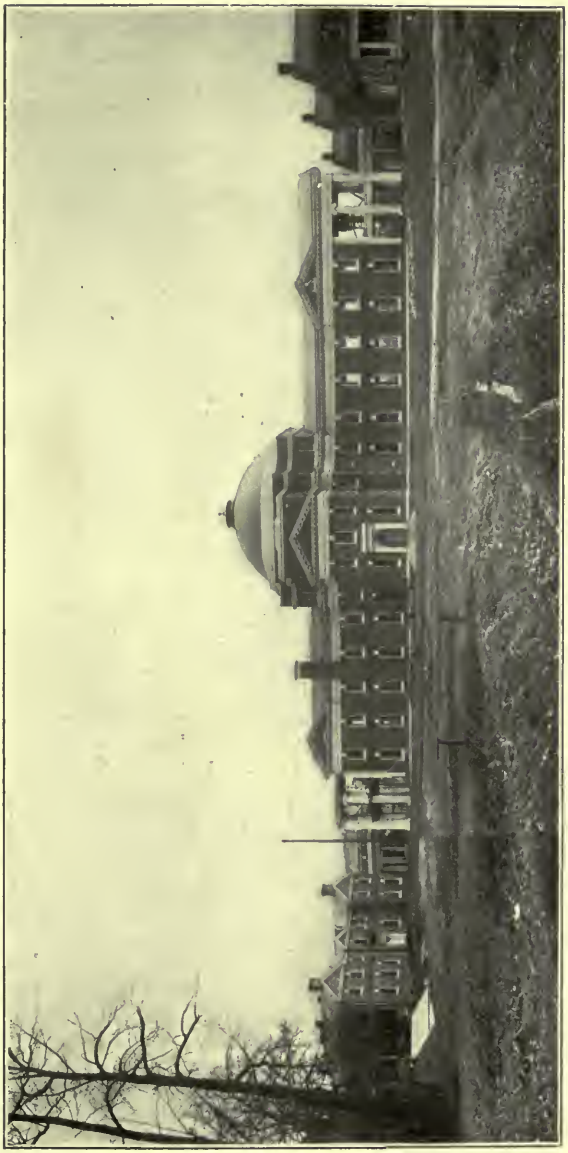
STABLE ON ESTATE OF GEORGE ELKINS.

Elkins Park, Pa. Horace Trumbauer, Architect.

This stable is built around two courts 162 x 110 ft. It contains ten single and two-box-stalls,, a carriage house, cart shed, carriage shed, harness and cleaning room, cow stable, machinery and tool houses and living quarters for coachman and groom.

THE WIDENER MEMORIAL TRAINING SCHOOL FOR CRIPPLED CHILDREN.
Logan Station, Philadelphia, Pa.
Horace Trumbauer, Architect.

This institution is 400 feet square. The main building is 265 feet long by 90 feet wide, and consists of Medical and Surgical Wards, and Classrooms for Manual Training; also elevators for the crippled children. On the north side are two small cottages for boys and girls, one each. The Educational and Industrial Buildings are at the other end of the main building corresponding with the cottages. The object of this Home is to take care of crippled children between the ages of seven and sixteen, give them needed medical and surgical treatment and a business and industrial education so that they may be self-supporting after discharge from the Institution. As soon as a child has learned a trade it is paid wages and charged for board. Such children as are able are employed in the farm and garden and in the poultry raising. No child is retained in the Institution under any circumstances after 21 years of age.



REAR VIEW OR THE WIDENER MEMORIAL TRAINING SCHOOL FOR CRIPPLED CHILDREN.
Logan Station, Philadelphia, Pa. Horace Trumbauer, Architect.

RESIDENCE OF E. J. BERWIND.

Newport, R. I. Horace Trumbauer, Architect.

Built in 1901 on Bellevue Avenue, Newport, R. I., of limestone. The dimensions are 200 feet by 125 feet on plan. The chief apartments are a Ball Room, 40 feet by 50 feet, a Dining Room, Library, Palm Room, Drawing Room,

RESIDENCE OF E. J. BERWIND—THE TERRACE.

Newport, R. I. Horace Trumbauer, Architect.

RESIDENCE OF W. W. HARRISON.

Glenside, Pa. Horace Trumbauer, Architect.

Built in 1894 at Glenside, a suburb of Philadelphia. The house is about 200 feet square on plan, not including terraces. The rooms are large, there being only six family rooms on the first floor and six bedrooms and a Music Room on the second floor. The material used in construction is a grey local limestone. The house is finely situated on the crest of a wooded hill and commands a wide view over the surrounding country.

these qualifications. If his work lacks the very decided individuality which has hitherto marked the better class of work in Philadelphia, it is at the same time free from all eccentricity. It is never crude. It conforms successfully to the prevalent standards of educated architects. His work exhibits the eclectic facility which is one of the characteristics of the modern American architect. Indeed, perhaps, it is this facile response to the current mode as much at home with the "classic" as with the Elizabethan or the Old Colonial that is responsible for the absence of any very strong personal qualities. The note of any leaning or predilection is almost wholly absent from the mass of the work we present. It is extremely difficult in it to catch the designer, so to speak, "at" any of his preferences. That this impersonality, accompanied by the good qualities of sobriety, accuracy and good taste, should have come out of Philadelphia, is not only a matter for astonishment, but for congratulation.

RESIDENCE OF W. STORRS WELLS.

Newport, R. I. Horace Trumbauer, Architect.

This house is 120 ft. square on plan, with a hall 32 x 72 ft., a morning room, library, dining-room, etc. It was built of Indiana limestone, in 1900.

FIG. 10. WAREHOUSE OF I. T. WILLIAMS & SONS.
25th Street and 11th Avenue, New York City.

THE WAREHOUSE AND FACTORY IN ARCHITECTURE.—II.

IN the first part of this article (See the Architectural Record for January, 1903) allusion was made to the evident influence of such great achievements as the De Vinne building and the Hanan building on the design of much less costly and more commonplace warehouses, at least in the city of New York. Such simpler buildings are scattered along the West Side, near the river and above West 26th street, and there are others on the sea-front of Brooklyn and some in different parts of the town, situated here and there. Of the group on the West Side, the most successful is undoubtedly that shown in Fig 10. Of this building, the front with the flat gable, seen on the extreme right of the picture, is evidently a later addition. It is far more in the spirit of those admirable buildings which are shown in our first article, Figs. 1, 2 and 5, and has what they have not, a surprisingly ingenious and attractive management of the gable. It is the best assertion known of the presence behind the walls of a roof of very low double pitch; and is as genuine an architectural effort as the pediment of the Greek temple. Then, too, this front is consistent in a way to gratify the most close-reasoning architectural student; for there is no alternation here of square-head and round-head windows, but a series of segmental arches varied only by the obviously needed great semi-circles of the ground story, and the excusably modified openings of the tier below the gable itself. The deep reveals, too, though not comparable to those of the Lafayette Place building or the other at Centre and White streets, are still sufficiently marked to emphasize the character of the whole front.

As to the older part, the building on the corner, one could wish away the suggested rustication of the two lower stories, not understanding why a good wall of dark red brick should be broken up in that way. Rustication is but a poor device even in stone work, a wretched way of making a flat, dull wall interesting. But in brickwork it seems not to have that excuse which we willingly make for a man who is chiseling the edges of his great blocks of ashlar. The recessed lines are, however, used as part of the color pattern and they are repeated in the recessed and radiating bands of the great archivolts, and again echoed in larger masses by the horizontal lintels, sills and string courses of light stone. It is not a very daring way of giving polychromatic interest to the front, but these attempts should be made as often as occasion serves, until a more brilliant thought occurs to someone and a method of design in red and buff be discovered.

The best thing about the building, after all, its salvation as a design, is in the treatment of the corners with massive and unbroken piers, so broad that the window-pierced wall between does not look too much like a lantern. It is a thing which modern designers are too shy of, this strengthening of their corners, and costly uptown clubhouses suffer from the unnecessary weakening of a wall near the angle. It does not in any way break in upon this system that the farther corner pier, on the right, is pierced with small windows. The necessity of those windows is so obvious, there, in that part of the building which is farthest from the abundant light of the avenue front; and they are so simply treated, that this pier is felt to be at one with those at the other end of the structure. Moreover, the middle pier, wider than the others, helps greatly in this general effect of massiveness.

FIG. 11. NO. 549 W. 26TH STREET.
New York City. C. H. Caldwell, Architect.

Fig. 11, the front, No. 549 west 26th street, depends much more for its effectiveness upon its color combinations. The voussoirs are alternatingly of dark red brick and gray limestone, and the broad band is of the paler material. The openings are fairly combined; but the great groups of windows suffer terribly from having an insufficient reveal — for how should such a window recess, 14 ft. wide or more, pass with only 4 inches break above, and only 8 inches below, where they are the deepest. This thinness of the ostensible wall tends also to destroy the good effect produced by the large, wide end piers. They are pierced with small windows; and this by itself might pass, for we found it to be of no hurt whatever in the warehouse building Fig. 10; but the fact that these windows have 8-inch jambs only, which width again is invaded by the wooden moldings of the frame, deprives the piers of their appearance of solidity.

There is on West 27th street another front almost exactly like this one, and it is clear that the factory and warehouse complete is carried through the block 200 ft. long. The reserved space seen on the right of the building in Fig. 11, is closed at this end with what seems a very cleverly designed gateway wall; but this wall appears to front a low structure, a sort of lean-to attached to the larger warehouse.

Fig. 12, No. 547 West 27th street, is interesting when studied in comparison with the building shown in Fig. 11. In fact, one of the most attractive things about this examination which we are conducting is the necessary comparison to be drawn between buildings so like in character and in the general principle of their design, while they are yet varied so much in distribution in the larger details. That is the way in which a style of architecture has always developed itself—not in bold attempts to break away from all preceding practice, but in slow modification, each man trying to do a little better than his predecessor. No doubt the appearance, now and then, of an innovating genius is necessary to healthy progress, and so it will be found to have been in this matter of the round arched, red brick warehouse, for some one of these interesting buildings must have been a very bold enterprise on the part of the architect who devised it. But the modifications seen here as Figs. 10, 11, 12 and those to follow, and compared together illustrate the growth of the new style we are considering as well as does the study of twelfth century proto-Gothic churches help toward a comprehension of Chartres Cathedral.

FIG. 12. NO. 549 W. 27TH STREET.
New York City.

Fig. 13 is a less attractive building because of the broad surfaces of yellow brick which surround and enclose the groups of windows. When will designers in what is meant for polychromy realize that

they must not use their two colors (when there are only two) in masses so nearly alike in size? The *chainages* treated pilasterwise and dividing the building into three great panels are excellent; in them the due relations of lighter color with darker surroundings are preserved. The larger and the smaller quoins, all having a certain decided projection from the wall, leading up, as a vertical member, to the corbelled overhang above the fourth tier of arched windows, form a capital motive and are almost enough to make a design of the building in spite of other less fortunate features. Evidently the two uppermost stories are an addition, and a badly conceived one, not to be considered as part of the design.

FIG. 13. NO. 500 WEST 30TH STREET.
New York City. Romeyn & Stever, Architects.

Fig. 4, a building on Seventh avenue at the corner of West Sixteenth street, eschews color and brings us back to a gravity of design not to be surpassed by anything that we have consulted in this study. The two show-windows, of course, mar the effect, and this is what the artist lost when he placed his building in a quarter not quite so inaccessible to the shopping world as the buildings we have been considering in this number—Figs. 10-13. It is odd how such a blot will hurt a whole building, even one as grave and dignified as the present one. Let the reader cover those two show-windows with a bit of dark paper and see how the building gains in charm immediately. There is not, however, much novelty of design in the building, as it is. Probably the old abandonment, in what may be called the attic, of the system of eight openings on one front and sixteen on the other divided into two uneven masses, and the substitution for that of a

FIG. 14. FACTORY AT S. E. COR. OF 16TH ST. AND 7TH AVE.
New York City. Clinton & Russell, Architects.

continuous belt of smaller arches is the best thing about the design, grave and restrained as it is in all its parts.

And now we come to some buildings of the plainest sort, buildings as completely devoid of architectural treatment in the common sense as we found last month the Terminal Warehouse on the North River. The great factory building shown in Fig. 15 is in Long Island City on the Brooklyn side of the East River; and in the immediate neighborhood of this are other towering masses of brickwork of very similar design. One cannot but care for these, because every great surface of hard, rough, well-burned bricks of dusky red color is attractive; and there is nowhere in the world more perfect and beautiful material in this way than we use in and about New York city. It has always been excellent, this New York brickwork—its conditions being admitted. The old-fashioned 12-inch party wall was a good brickwall or it would not have carried the floors and roofs of two adjoining 20 ft. houses. When the wall was to be 24 in. thick it was always better built, even in proportion, than when the wall was thinner; nor did the New York bricklayer ever consent readily to the dreadful tricks of country masons in leaving great hollow places in the heart of the rising mass of masonry. The present writer has known well-esteemed contractors in the smaller towns anywhere within the five hundred miles radius who defended the practice of leaving those dreadful gaps in their structure from no matter what fantastic reason; but he never has known a New York builder, boss or foreman, to suggest anything of the kind. Always, if the smooth pressed brick could be got rid of when a facade was in consideration, that same common brick was as effective in appearance as it was solid in reality. Those who cared for rational design thirty years ago used to fight with their employers for the privilege of building the front wall of the same materials as the back; thus in a corner house one would beg for permission to use throughout for the flank and the front as well, the common hard brick, that thought good enough for a wall facing the back yard, and thus to bring the three visible wall surfaces into harmony with one another and everywhere more effective than any one of them would have been if faced up with Philadelphia pressed brick.

So it is that the huge mass seen in Fig. 15 with its buttress-piers dividing the external surface of its walls and suggesting extreme stiffness of construction, and with plain round arched window-openings, level brick cornices marked by a very slight corbelling out in a somewhat ornamental pattern, is extremely effective even in the absence of deep reveals to the windows. The walls must be thick—one is sure that they are thick; and the thought occurs at once that the deep jambs have been given to the interior because

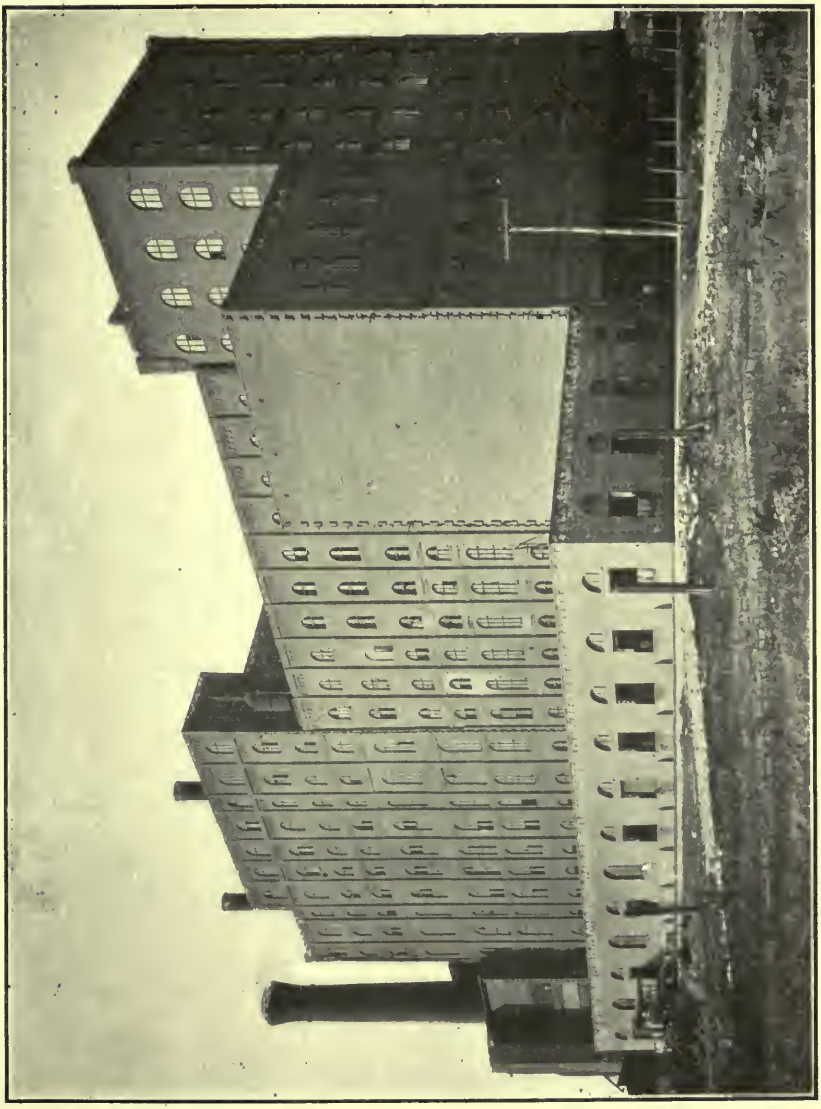


FIG. 15. HAVEMEYER SUGAR REFINERY.

Long Island City.

that additional floor-space was useful, and the panel below the window-sill could also be utilized in each of the working lofts.

With Fig. 16 we reach a factory building in which a wholly different programme has been carried out. This is in Chicago at the corner of East Harrison street and South Franklin street. It is as obviously a brick building as any of the dignified factories that we have been treating in these two articles, but here the spirit of Graeco-Roman art has been strong with the artist, and we have

FIG. 16. CLOW BUILDING.

Chicago, Ill. Holabird & Roche, Architects.

a building of as purely classical type as the circumstances could have been made to allow. There are tombs still standing, in ruin, here and there in the Campagna, in which the same effect is produced, the effect of pilasters and entablatures carried out in brickwork; but in those Roman instances there can be no doubt that the whole was to have been covered with that splendid hard and smooth stucco of which the Roman builders had the secret. So that they must have been intended to look as much like monoliths as an Italo-Greek temple must have appeared when it was coated with its

thin film of plastering and elaborately painted in bright colors. Here, however, the brickwork, square and simple or molded into delicate forms, had to be left to tell its own story. The necessity of making the overhanging cornice of something else than brick is, of course, a weakness of this sort of design. The attic wall seen above the cornice is, again, good solid brickwork with a molded cap or surbase and very properly and skillfully adapted to the purposes of a solid parapet, but the overhanging cornice which the style calls for, and which must perforce project so many feet and inches, is a thing which brick building does not allow of. A bold

FIG. 17. THE BUTLER BROS.' WAREHOUSES.

Chicago, Ill. Jarvis Hunt, Architect.

composition in terra-cotta indeed—but that does not seem to have been admitted or admissable in this case.

With Fig. 17 we are still in Chicago and the twin warehouses of Butler Brothers are made exactly alike in their external treatment, in order that their close connection may be perfectly understood. This, and the placing of the signs at the corners most nearly approaching one another, point to just such an attempt to claim kinship between two great buildings, each of which may be supposed to help its neighbor, as we note in that custom so familiar to students of Venice of springing an arch with a richly sculptured gable or wall-piece above it, across the narrow *calle*

which divides two *case* held by the same family. It is to be noted that here the buildings can be seen from a very considerable distance, namely, across the Chicago river, and from several different points of view; and therefore the use of elaborate patterns of brickwork near the top of the building is in every way justifiable. It is interesting to note that the small squared window-openings suggestion, as in the case of the Garvin Building, illustrated in the January number of this magazine, the idea of great lofts used only for storage, has allowed of great irregularity of arrangement. The windows being once for all set in firm horizontal bands, which bands are emphasized by moulded courses at sill and lintel, it has been thought that their spacing along these horizontal lines was comparatively indifferent—and so it is. One could wish for even a freer use of that obvious plan of securing light where it is wanted. The windows looking on the narrow street dividing the two warehouses are much larger, and are filled with sash of the usual kind, as befits that part of such a building which is in close connection with the business office. But, when it was decided to break the undue height of the building by very strongly marked horizontal bands, it was also an obvious resolve to put these bands near the top, where their effect would be in the not doubtful appeal to persons viewing the whole group of buildings from a distance of six hundred or a thousand feet. It is just within the limits of proper criticism to ask whether it would not have been better to have started the very effective arcade of arches on corbelled-out piers which form the cornice proper from a more solid looking wall than that produced by the two stories which are wrought into a diaper pattern of lozenges with a rosette in the middle of each. It does not do much harm to a wall so evidently massive as this; and yet one wishes the pattern other than that it is—one wishes it a mosaic of horizontals and verticals rather than of interlacing diagonals, which look as if they might slip, each joint rotating on its rivet.

For this reason we find the charm of the warehouse of Kelley, Maus & Company greater than that of the twin buildings just named, and in fact, it is not disagreeable to close this inquiry, for the present, with this most interesting structure. Brick of three colors used with singular judgement has been so employed in a bold mosaic that the small windows, which were all that the warehouse needs, help to make up the mosaic itself; their shadows and their darker surfaces opening into the interior telling as at least two additional terms in the proportion of varying colors. In fact, if one were to ask permission to change this design in any part it would be only to be allowed to block up the furthermost vertical row of windows on the left in Fig. 18 and enlarge by two feet the solid pier at the right hand of the same front. The need of a

massive corner pier is one that has not been thought of at the right time; though indeed when one looks at the building as it is seen in Fig. 17, this pier seems massive enough for anything, as it is at least two feet wide on one side of the angle, if but narrow on the other side.

With this we must close the present inquiry; but there is much to be said about the designs in simple brickwork which are not strictly warehouses nor yet factories, and to these we may be able to give attention at another time. There is something to be

FIG. 18. THE KELLEY MAUS BUILDING.

Chicago, Ill. Jarvis Hunt, Architect.

said for the theory broached now and then by the persons not enamored of our present architecture of mere pretence, that the designers should be restrained to square masses and sharp corners and plain windows for twenty years to come—with sculpture denied them and all the bad architectural forms *tabu*. Then, it is thought by some, a chance for design rightly so-called, might be found in the very inability to misuse the old forms. At all events, there is great delight in watching the attempts of those who willingly take up that course of thought and push it in a sensible way and with energy.

Russell Sturgis.

THE NEW YORK LIFE BUILDING.

Kansas City, Mo. McKim, Mead & White, Architects.

RESIDENCE OF A. R. MEYER.

Kansas City, Mo. Van Brunt & Howe, Architects.

THE DEVELOPMENT OF ARCHITECTURE IN KANSAS CITY, MISSOURI.

IT is said that the moral, social and commercial growth of a people may be traced from a study of its architectural monuments. If this is true, then the progress of events, which in scarcely more than fifty years has raised the community of Kansas City, Missouri, from an insignificant landing-place on the Missouri river to a city of the first class, will be found to have left an indelible imprint on its buildings, both public and private.

In older communities, which have had the good fortune to inherit through a long succession of years the traditions of their forbears, the transitions are less violent and less marked. In the cities along the Atlantic seaboard the story is told which had its beginning a couple of hundred years ago and whose end is not yet, and the architectural development in these cases is often marked by epochs some of which will number as many years of duration as Kansas City can number years of existence. What the latter has done has all been worked out within the lifetime of men who are yet comparatively young, and there are many living within its limits to-day who can easily look back to the time when the site of every business building now standing within the commercial heart of the city was but prairie, swamp or woodland.

The famous and historic Santa Fé trail passed from the old levee at the riverside up the bluff and southward through a ravine now filled with tall brick and stone buildings, and daily crowded with the

busy people of a great commercial center. The old prairie schooner has given place to the cable and electric car, and the water course of the old trail is buried by the grader's cart thirty feet below the level on which these cars run and on which these buildings stand.

In the early days, when there was no Kansas City, and when Westport Landing was all that indicated a difference between this and any other point on the Missouri River, the architecture of the settlement was naturally of a primitive type, and buildings were constructed, barring a few exceptions, with the one idea of strict utility. Perhaps the more important exceptions were the homesteads of the earlier and most prosperous of the inland settlers, who placed their

RESIDENCE OF E. W. SMITH.

Kansas City, Mo. Van Brunt & Sons, Architects.

homes further back from the river and who built after the fashion of the Southern planter. These houses were low, rambling buildings, one or two stories high, with wide verandas, and were flanked by straggling out-buildings; none were beautiful save in that they suggested the idea of home and comfort. These landmarks are rapidly disappearing, driven out by the march of commercial progress and giving way to the "addition" of the real estate operator and to the growth of the smart suburban village.

It is not generally to holders of these properties that Kansas City owes its architectural development, although in some cases these men kept fully apace with the march of the city's progress, and indeed were largely instrumental in directing its course. The constantly increasing volume of the business of Kansas City as the

BOARD OF TRADE BUILDING.

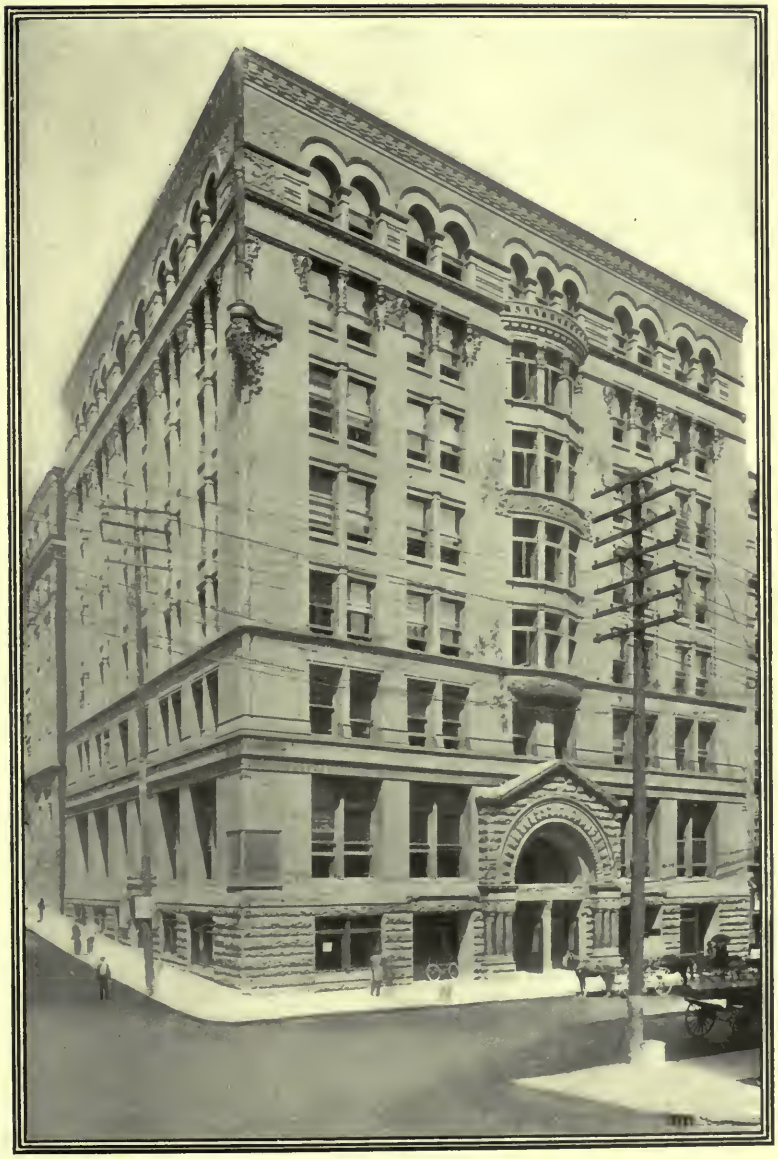
Kansas City, Mo. Burnham & Root, Architects.

Southwest became more settled, and as the commerce of Mexico and the remote Western States and Territories became more active and assured, brought many energetic and enterprising men to this gateway of the Southwest. That which was but a mere steamboat landing became in an incredibly short time a bustling but raw-edged city.

The prosperity which came to the citizens reached its architectural expression in a style, if so it may be called, which finds its prototype even in the earlier and Eastern cities, and which has been called the "American Vernacular." This architecture was almost absolutely free from the limitations of academic tradition, and was mainly the work of the enterprising carpenter, who had not hesitated to add the word "architect" to his shop sign. Vainglorious and pretentious, often very elaborate and costly both in its interior and exterior, styles and "motifs" were mingled in a manner to drive to despair the purist or scholar. Wooden towers of grotesque type, broad overhanging cornices with brackets of the most elaborate of jig-sawed patterns, window-heads, balustrades, porches, balconies, everthing was there that the ingenuity of the carpenter-architect could devise or the most exacting client demand. Examples of the work of this period are scattered through the older portions of the city, and are repeated in every neighboring city along the river. What is written of Kansas City is equally true of St. Joseph, Mo., and of Atchison, Leavenworth and Lawrence, Kansas.

The early topographical conditions of Kansas City, with its ragged bluffs, deep ravines and high ridges, offered about as unpromising a site for a large city as could be imagined. But the enterprise and perseverance of the people have largely surmounted all such difficulties. The process of leveling the hills and filling the ravines has often led to most romantic results, and at one time it was no unusual thing to see a building of the old school perched on top of an embankment 25 or 30 feet above the street level and apparently as inaccessible as though on top of the Rocky Mountains.

Up to about the year 1860 Kansas City was strictly a steamboat town, and it was not until about that time that the first railroad made its entry, bringing with it the conditions for a speedy and radical change in all departments of the city's progress; changes as imporant in its architecture as in its commerce, though perhaps less rapid in the former. It was not, however, until the city had secured an advanced position as a railroad center, and had been well advertised as such, that the architect "in propria persona" made his first appearance. It was at about this time that the people realized that something better could be done than had been so far accomplished, and soon some excellent work was completed. The First Congregational Church is an example—one of the first really good buildings which up to that time had been built. The building was very



AMERICAN BANK BUILDING.

Kansas City, Mo. Burnham & Root, Architects.

carefully studied by its architect, Mr. Adriance Van Brunt, and is to-day one of the best church buildings in Kansas City.

The great commercial prosperity which was found in the Southwest for the ten years prior to 1885 culminated in Kansas City, as it did in most other cities of the West, in a building "boom," which began about that time and lasted four years or more. During this period much of the best architectural work was done in this city and its vicinity. New men had come into the field, many of them better trained and better equipped than most of those in practice there;

COATES HOUSE.

Kansas City, Mo. Van Brunt & Howe, Architects.

money was plentiful, and Eastern capital already seeking permanent investment in the bricks and mortar of Kansas City.

Kansas City needed nearly everything which marks the architecture of a modern city. There was no first-class hotel or office building, no large mercantile houses, only one or two good churches, and not one first-class retail store building. Now her people feel that they are at least as well equipped in all of these particulars as any city of its size in the country.

In 1886 the Board of Trade determined to erect a new building for its own use and for rental purposes. A limited competition of

NEW ENGLAND LIFE BUILDING.

Kansas City, Mo. Winslow & Wetherell, Architects.

architects was organized, all, with one exception, from outside the limits of Kansas City, and the choice of plans fell to that of Messrs. Burnham and Root, of Chicago. From the plans and under the superintendence of these gentlemen the present building of the Board of Trade was built. This was the first fire-proofed building erected in Kansas City, and its progress was watched with great interest by many to whom "fire-proof construction" was but a name. At the time of the conception of this building the Romanesque wave, whose impulse had been given so vigorously by Mr. Richardson, was at its height, and Messrs. Burnham and Root designed their building in that style, adapting it to the exactions of sometimes unsympathetic requirements and to the possibilities of steel and iron. The building is of red brick and red terra cotta, and contains the hall and offices of the Board of Trade, the rooms of the Commercial Club, and much other rental space.

The erection of this first large building by a Chicago firm appears to have called the attention of capitalists of that city to the possibilities of Kansas City, and two companies were organized, one to build the American Bank Building, the other to erect and equip the Midland Hotel. Both of these works were placed by their projectors in the hands of the same firm of architects as were engaged on the Board of Trade, and both were of fire-proofed construction. They are built in local and pressed brick with terra cotta and brownstone trimmings. It was a rather curious coincidence that the first three of the large important and fire-proof buildings should have fallen all at once into the hands of one firm.

While Chicago capital was engaged in these enterprises, other money centers were active. The New England Life Insurance Co. decided to build a fire-proofed office building, and erected it on the northeast corner of Ninth and Wyandotte streets. It is seven stories high, and besides the offices of the company it contains the rooms of the New England National Bank, the New England Safety Deposit and Trust Co. and much other rental space. Loyal to its New England associations, the company built from Massachusetts stone, using throughout the Longmeadow stone. The architects were Messrs. Winslow and Wetherell, of Boston, who chose a free treatment of Italian Renaissance for the style in which to work. The New York Life Insurance Company also determined to build, and after a competition of Eastern and Western architects gave the work to Messrs. McKim, Mead and White, of New York, who erected at the head of Baltimore avenue on Ninth street the present building. It is ten full stories high, the highest office building in Kansas City, built in fire-proof material throughout, with an exterior of local pressed brick, granite and sandstone. It contains 375 rooms besides the great banking rooms on the main floor, cost in the vicinity of

BRYANT BUILDING.

Kansas City, Mo. Van Brunt & Howe, Architects.

$2,000,000, and is the largest and best equipped office building in Kansas City.

The Gibraltar Building, the Bayard Building and the Bryant Building, of which Messrs. Van Brunt and Howe, of Kansas City, were the architects, are good examples of the best office buildings not strictly fire-proofed. The first two were built with Longmeadow stone fronts, and the Gibraltar is in slow-burning construction. The Postal Telegraph Building, Messrs. Root and Siemens, architects, of Kansas City, is a good example of office building dealing principally with a north light where a large amount of glass is

THE HOWE RESIDENCE.

Kansas City, Mo. Van Brunt & Howe, Architects.

essential. The Massachusetts Building, by the same architects as were employed on the New England Life Insurance Building, is an excellent building in slow-burning construction. It is owned in Boston and is built in local bricks and Longmeadow stone.

The Bryant Building was completed this spring; it is said to be one of the best lighted and ventilated office buildings in Kansas City.

The extensive additions to the old Federal Building, which was purchased by the Fidelity Trust Company, of Kansas City, for its own use, gives to Kansas City another absolutely fire-proofed

THE BALTIMORE HOTEL. Louis Curtis, Architect.

Kansas City, Mo.

thoroughly equipped office building, of most substantial character. Its principal interest centers in the great banking room, which is one hundred and ten feet long, fifty feet wide, and twenty-six feet high, finished in marble, bronze, and mahogany. The architects are Messrs. Van Brunt & Howe.

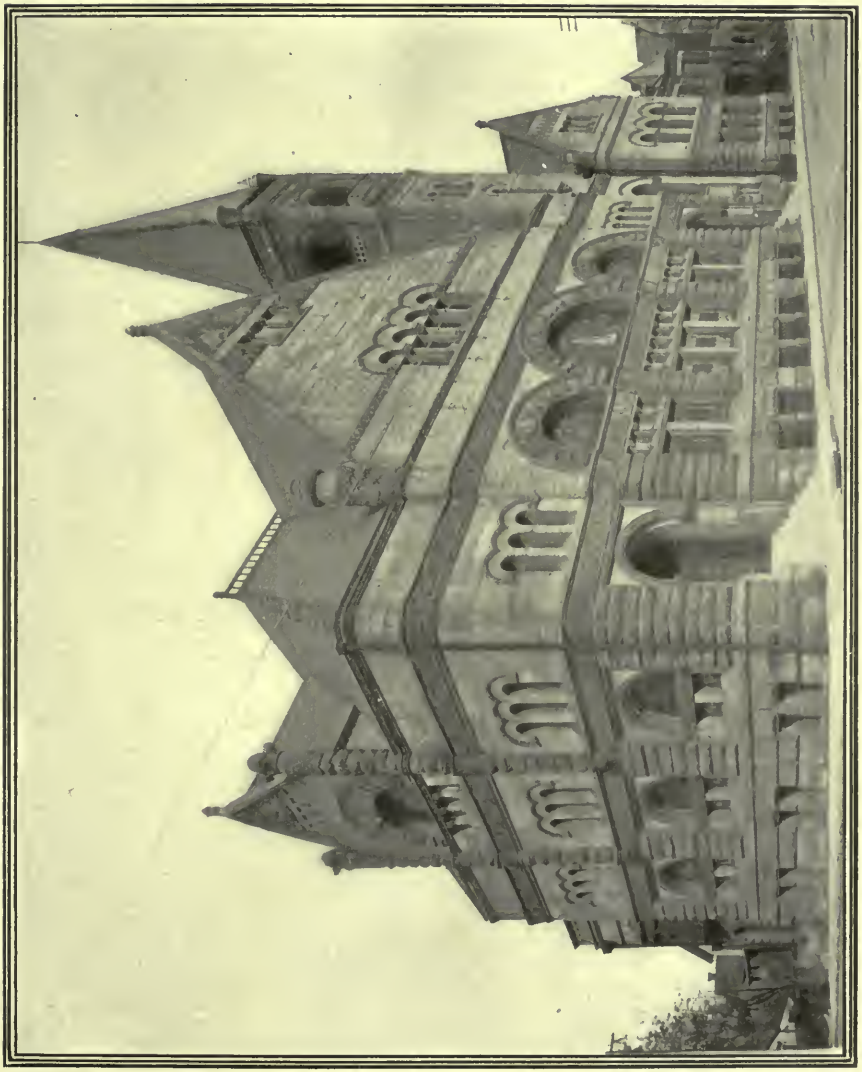
The new steel and masonry office building on Baltimore avenue, known as the Dwight Building, by C. A. Smith, architect, is a seven-story fire-proofed building, built more nearly from the modern methods of steel construction than any building in the city.

Among the mercantile buildings one of the largest and most important is the great retail house of the Emery, Bird, Thayer Dry

HOUSE OF R. L. TAYLOR.

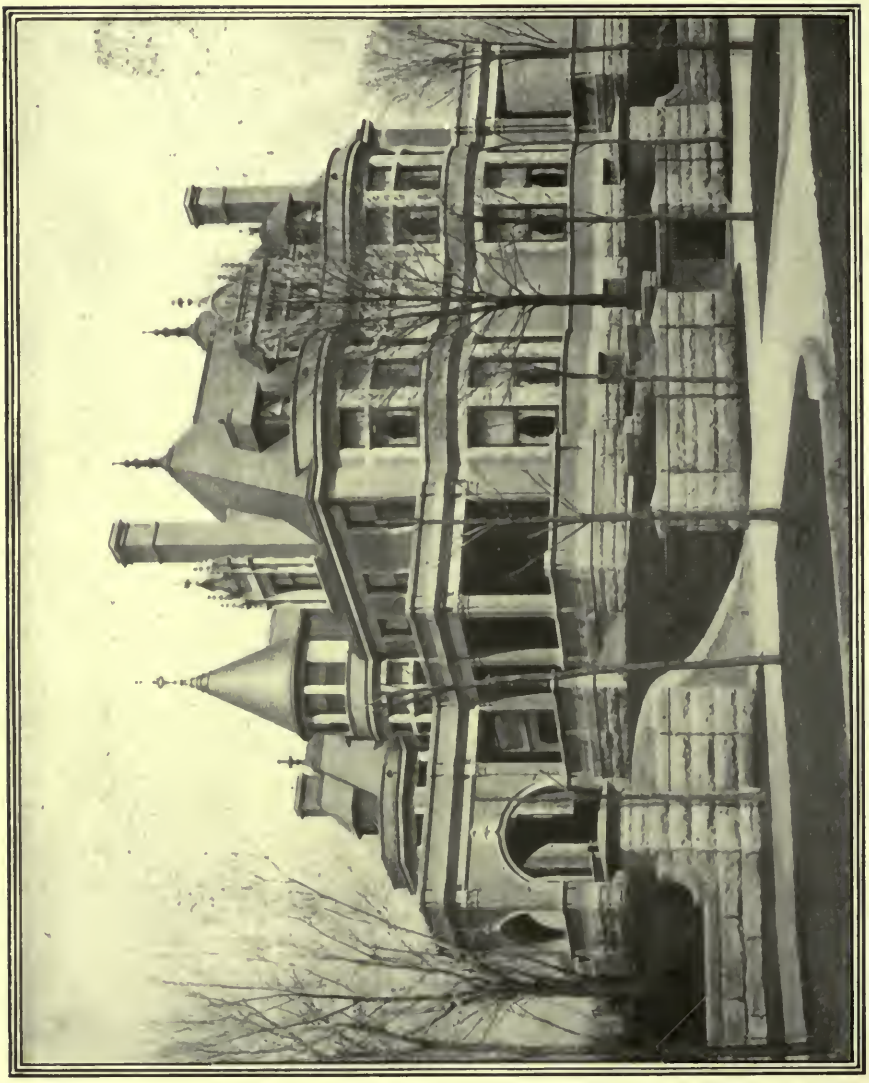
Kansas City, Mo. Root & Siemens, Architects.

Goods Co., Van Brunt & Howe, architects. It has a full frontage on three streets, and runs back to an alley in the rear, making it an isolated building, 125 by 250 feet, six stories high, and is built in local bricks and Lake Superior red sandstone. While not a fire-proofed building, it is protected by all the devices known in "fire-proofed" work. It was one of the first buildings in Kansas City built, so far as its lower stories are concerned, in pier construction, with its actual and theoretical loads carefully adjusted to the soil on which they rest. This soil is generally a fine, hard, yellow clay, very tough and dense and capable of great resistance, but most of the earlier building foundations were laid without much calculation as to loads, the idea being that stonework was cheap and it was only necessary to be sure to get enough of it. A novel feature



CALVARY BAPTIST CHURCH. Edbrooke & Burnham, Architects.

Kansas City, Mo.



RESIDENCE K. D. AMAN. Van Brunt & Howe, Architects.

Kansas City, Mo.

of this building is its open arcade on the three streets, with the show windows set back some six or eight feet from the building line, making a covered promenade where in bad weather passers may examine the displays while well sheltered. So far as I know this is the only large example of its kind in this country, and while there is apparently a waste of room the owners consider the advertisement an ample compensation.

Kansas City has some very excellent examples of wholesale and jobbing houses, among the best of which, perhaps, may be men-

RESIDENCE OF COL. WILLIAM R. NELSON.
Kansas City, Mo. Architects, F. E. Hill, and Gunn & Curtis.

tioned the building of Swofford Bros. and that of Burnham, Hanna, Munger Dry Goods Company; the former, by Shepard & Farrar; the latter by the late Mr. George Matthews.

The great wagon and carriage house and wareroom of the Studebaker Brothers, by Messrs. Root & Siemens, is one of the largest and most complete buildings of its kind in the western country.

The "New Baltimore" is a fire-proofed hotel of 225 rooms just completed from the plans of Louis Curtis, of Kansas City. Its floors and partitions are built in expanded metal construction.

THE WILLIS WOOD THEATRE. Louis Curtis, Architect.

Kansas City, Mo.

The exterior is of red pressed brick with gray brick corners and cornices, and terra cotta trimmings.

The new Coates House is an hotel of 350 rooms, finished a few years ago, Van Brunt & Howe, architects. It was built in sections on the site of the old hotel of the same name, which was one of the landmarks of Kansas City for many years. The south wing was built as an addition to the old building, which was afterwards torn down and replaced by a new fire-proofed structure. This hotel is consid-

RESIDENCE OF A. R. MEYER.

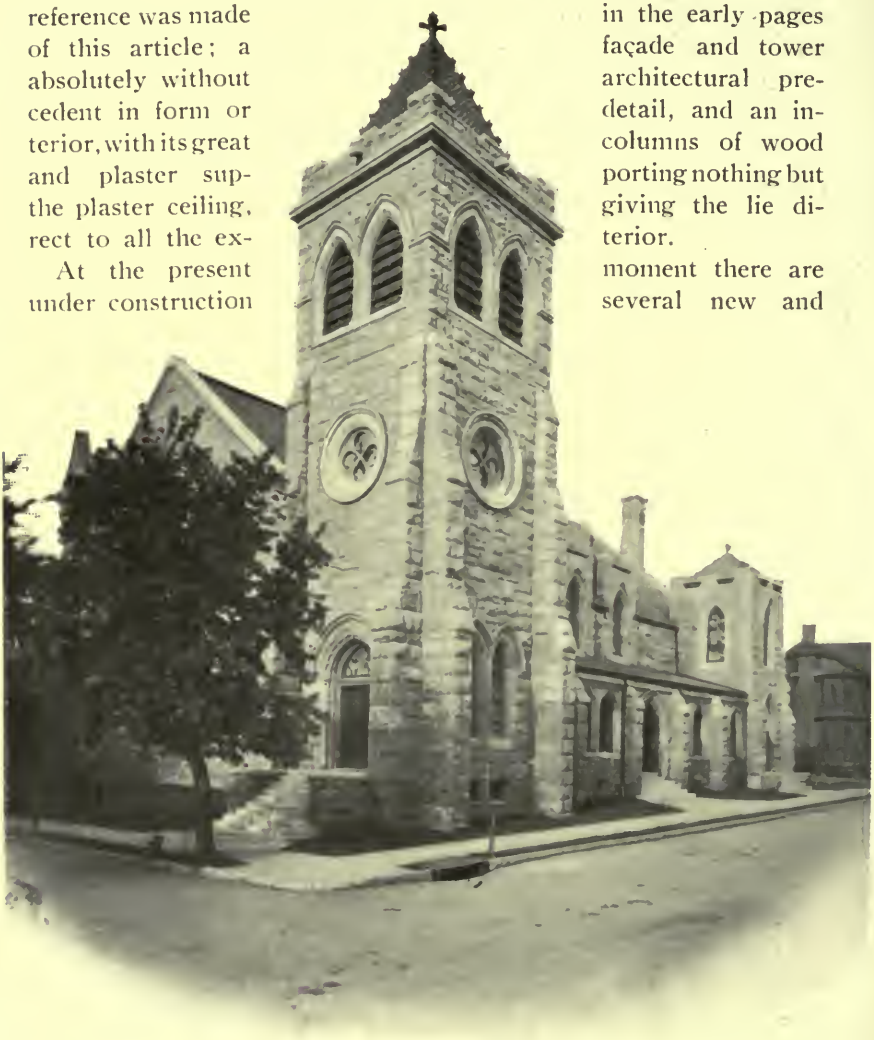
Kansas City, Mo. Van Brunt & Howe, Architects.

ered one of the most popular and attractive in the West, and has some unusual features in its interior planning.

Kansas City is not rich in ecclesiastical architecture. The First Congregational Church, already mentioned, the Calvary Baptist Church, the First Christian Science Church, the Second Presbyterian Church (A. Van Brunt, architect), and perhaps one of two others would complete the list of those worthy of special mention. The Calvary Baptist Church is a Romanesque building of somewhat florid type, in gray stone, and was designed, after a competition of architects, by Messrs. Edbrooke and Burnham, of Chicago. The

Scientist Church, in the English style, is an interesting but modest building by Mr. Matthews. It is a most excellent interior. The Cathedral is remarkable as one of the buildings which one would not like to have done, and it is the product of the period to which reference was made in the early pages of this article; a façade and tower absolutely without architectural precedent in form or detail, and an interior, with its great columns of wood and plaster supporting nothing but the plaster ceiling, giving the lie direct to all the exterior.

At the present moment there are under construction several new and



FIRST CHRISTIAN SCIENCE CHURCH.
Kansas City, Mo. Geo. Mathews, Architect.

and costly churches; among these, the Second Christian Science Church, Frederick R. Comstock, of New York, architect, and the Prospect Avenue Christian Church, Van Brunt & Howe, architects. Both of these buildings are of stone, and both designed in purely academic style.

Of its domestic architecture Kansas City may well be proud, and few cities of even larger growth, wealth and population can make a better showing. The people love and appreciate their homes, and make much of their home life. Small, attractive dwellings in good architectural style are numerous, many of them beautiful without and within. Among the later homes of a more important and striking character, which perhaps illustrate best the architectural growth in these lines, may be mentioned the homes of Mrs. A. H. Armour, Mr. Kirkland B. Armour, Mr. E. W. Smith and Mr.

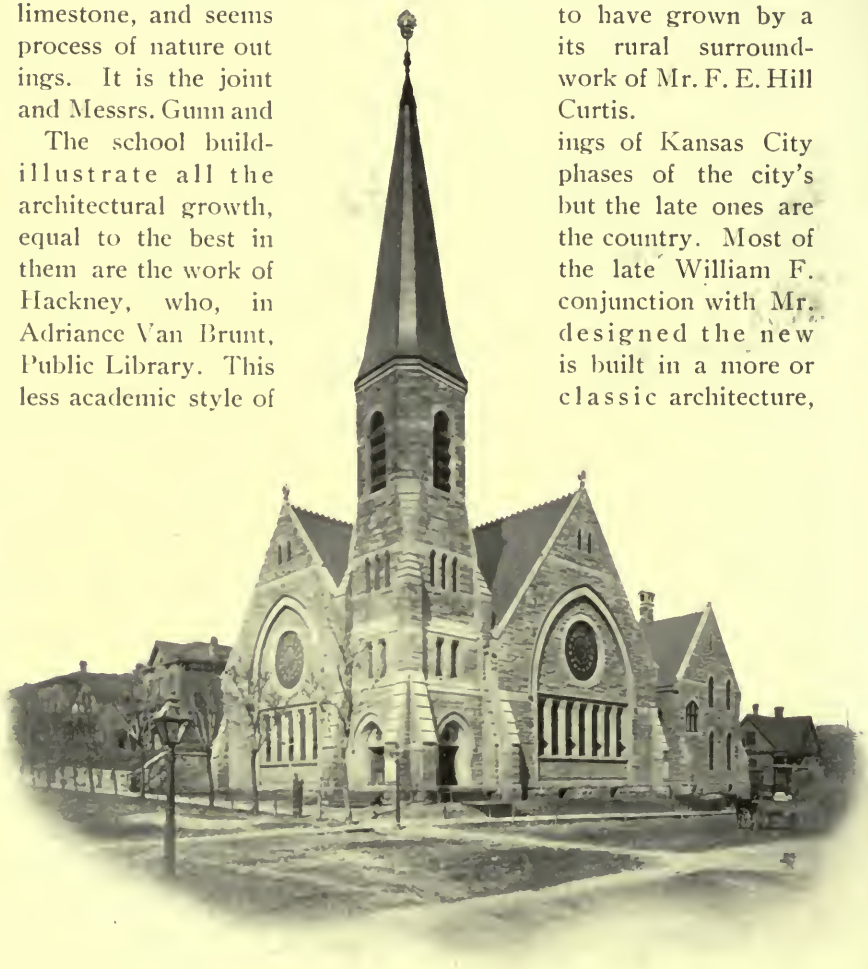
FIRST CHRISTIAN SCIENCE CHURCH—INTERIOR.
Kansas City, Mo. Geo. Mathews, Architect.

August R. Meyer, all in the suburb known as Hyde Park, and all by Messrs. Van Brunt & Howe; the John Perry home, by Mr. F. E. Hill, architect, of Kansas City; the George Jones and L. B. Price homes, both by Messrs. Shepard and Farrar, architects, of Kansas City; the homes of Mr. Langston Bacon and Mr. Robert Taylor, by Messrs. Root and Siemens. The house of Mrs. Armour is a careful study in Italian, while that of her son, Mr. K. B. Armour, is in the late French Gothic. In both cases as much study was bestowed on the interior as on the exterior, that they might be grammatical and consistent. The Smith house is reminiscent of Cambridge, Salem or

Portsmouth, and its details have been carefully modeled from the examples of these old New England towns.

Oak Hall, the home of Col. W. R. Nelson, is a building or group of buildings of no particular style, but full, both within and without, of interesting details and appointments. It is built of yellow native limestone, and seems to have grown by a process of nature out its rural surround-ings. It is the joint work of Mr. F. E. Hill and Messrs. Gunn and Curtis.

The school build-ings of Kansas City illustrate all the phases of the city's architectural growth, but the late ones are equal to the best in the country. Most of them are the work of the late William F. Hackney, who, in conjunction with Mr. Adriance Van Brunt, designed the new Public Library. This is built in a more or less academic style of classic architecture,



FIRST CONGREGATIONAL CHURCH.

Kansas City, Mo. Adriance Van Brunt, Architect.

and is equipped with fire-proof book-stacks and all the require-ments of a modern library. Its material is a Missouri white lime-stone and Texas granite.

The public buildings of Kansas City offer the usual examples of good and bad architecture to be found in every new community of

such a scale as this. The City Hall and Court House are expensive buildings, but not well planned for the purposes for which they were built. The County Jail, near the Court House, is a pleasing exception. It was designed by Mr. Adriance Van Brunt, and is one of the best works from this gentleman's hand. Of the new Government building only a word need be said. It is of the kind of building which for many years the architects of the country have been combating, and it is unfortunate that this new building could not have

SECOND PRESBYTERIAN CHURCH.

Kansas City, Mo. Adriance Van Brunt, Architect.

been built under the recent laws created for the improvement of Government architecture.

One of the public buildings of which Kansas City is justly proud is the Convention Hall. The present building occupies the site of the former building of the same general dimensions, which was destroyed by fire on April 4, 1900. The Democratic National Convention was to meet in this building on July 4 of the same year, and this now seemed almost an impossibility. Before the flames were extinguished on the old building, however, a new one had been pledged, contracts made, and in less than ninety days from the date of the fire the new Convention Hall stood on the site of the old one;

a fire-proofed building, 198x314 feet, with a seating capacity of more than 20,000 persons, under a steel roof which spanned the whole without a column, and at a cost of $350,000.

The Democratic Convention was opened on the Fourth of July, 1900, in a building belonging to the same class as the Madison Square Garden in New York, and which lacked very little of completion. Its exterior is cut stone and brick; its interior fireproofed throughout, and its floor area larger than that of Madison Square Garden. The architect of the original building was F. E.

THE OLD CONVENTION HALL.

Kansas City, Mo. F. E. Hill, Architect.

Hill, who made the plans for the second building, with the assistance of an advisory board of architects. The achievement, from purely a constructional point of view, was one of the most remarkable which has ever been brought to my notice.

Among the most important of the later buildings is the new Willis Wood Theatre, designed by Mr. Louis Curtis, after the modern French school. Its front is entirely in gray terra cotta.

An unfortunate impediment to a more rapid and permanently successful development in architectural lines is the desire on the part of many of those practising their profession here to be original. These

men lose sight of the fact that originality without method, and invention without temperance and a proper and wholesome respect for traditions, may often lead to what is merely grotesque. Kansas City has some startling examples of this disorder, to which space will not admit a fuller reference.

It may be that we are near the beginning of a new building era. We have yet to point to our first sky-scraper, and it is to be hoped that before the time comes we shall have learned the lessons of professional self-control. It is somewhat appalling to think what might happen were it otherwise.

Frank Maynard Howe.

THE NEW CONVENTION HALL.

Kansas City, Mo. F. E. Hill, Architect.

FIRST CHURCH OF CHRIST, SCIENTIST.

Central Park West and 96th Street, New York City. Carrère & Hastings, Architects.

THE ARCHITECTURE OF A CHRISTIAN SCIENCE CHURCH.

SCIENCE and the industrial arts are called upon frequently to invent new terms for new discoveries and inventions. The growing corpulency of our dictionaries attests the energy of the demand. "Ions," "Coherer," "Radium," "Polonium"—to mention the products of the last few days only—evince the rapidity of the collateral movement of language and knowledge.

It is, however, a rare occasion that demands a new expression from Art, and still more seldom arrives a necessity that produces a specific call upon Architecture to embody in its own particular terms, a new social fact. And yet, pondering on the phenomenal increase of the Christian Science sect within recent years, the question may well have occurred to many: "When this persuasion commences to erect places of worship, what shall we find to be the architectural expression for a Christian Science Church?"

"Something synonymous, if not identical, with the Protestant Congregational meeting-house" is, of course, the obvious answer, all the more obvious, indeed, because in so many cases the followers of Mrs. Eddy established themselves at first in buildings originally consecrated to some one of the many forms of "the dissidence of Dissent." And yet, clearly, provided architecture may rightly be expected to suggest if not positively indicate something of the spirit of the faith it houses, it might well be called upon for some utterance more explicit than a mere reiteration of a Baptist or Presbyterian building to express a creed that apparently concerns itself so immediately with the terrestial welfare of man, rather than, as in the case of other religions, only proximately, and as a mere inconsequential detail of a salvation consummated essentially beyond the grave. Nearly all rituals, it is true, have prayers for the sick and the dying, but the health of the body is not one of their chief concerns, hardly one of their interests at all, and a doctrine that addresses itself in no small measure to the constitutional well-being of the individual and not exclusively "ad majorem dei gloriam" with a "fearful looking forward to judgment and fiery indignation," contains a novel element that the architect cannot ignore.

Designs, so to speak, fresh from the source are not to be expected in these days, least of all in the case of a religious body whose John the Baptist even, had not uplifted his voice in the wilderness a decade or so ago. Such an architectural expression as the Catholic faith found in Gothic architecture is, of course, not within the range of contemplation. The opportunity in the present case is insufficient even if the state of architecture to-day did not preclude it. Still, all limitations admitted, there re-

mained room for legitimate expectation that the design of a Christian Science Church should contain much that is architecturally novel and expressive. It is the reasonableness of this expectation that gives interest in the pages of this magazine to the experiment recently finished on Central Park West and 96th street in New York City. The building is not the first erected for a Christian Science congregation, but within our knowledge it is the first capital enterprise of the kind undertaken on a scale so large and with means so abundant that the architectural problem was as-

FIRST CHURCH OF CHRIST, SCIENTIST—INTERIOR.
Central Park West and 96th Street, New York City. Carrère & Hastings, Architects.
Decorations by Charles H. Cottrell.

sured of all the conditions necessary for adequate solution. The site selected was of ample dimensions and excellently located for its purpose. The expenditures permitted were large and sufficient. The exterior design and plan were committed to a firm of architects that is in the opinion of many at the top of the profession, and the interior arrangements, decorations and equipment were placed in the hands of a decorator who is both a competent artist and an active and intelligent member of the church organization. The result is a building of the highest import at least to Christian Scientists. If we may not speak of a cathedral, in this

case, we certainly possess the metropolitan church. We have already discussed in these pages the architectural merits of the design. Our remaining task is to illustrate the now completed edifice and describe its apartments, so many of which will appear unecclesiastical to old notions.

The History of the Church.

The building recently erected by the First Church of Christ, Scientist, at Central Park West and 96th street, is a material representation of that which the church that built it stands for in the realm of ideals. Of enduring material, built for daily service as well as weekly meetings, beautiful within and without, it shadows forth to a degree the thought which created it.

The Christian Scientists of New York connected with the First Church have wandered long in the wilderness of leased and purchased temporary meeting places, but at last they have found for themselves a habitation after the pattern of the vision they have ever been trying to make real.

In the bringing forth of their church home they have spared nothing material that was required to make the spiritual effective among men. Painting and carving and architectural work have been conceived with little reference to financial limitations and the result has justified the effort. Taking council of utility and grace rather than of the traditions of the ecclesiastical elders, many new expedients have been used and the completed work marks a radical departure from other church buildings. To arrive at this end, the growing congregation had followed a long course of self-denial and avoided debt and its limitations by accepting unsatisfactory halls and churches until it could complete the demonstration of the power of right thought over material restrictions.

Sixteen years ago the church was chartered with Mrs. Augusta E. Stetson as pastor, and it is mainly due to her continued faith, understanding and energy that the present building has been made possible. The church was housed the first year in a small hall at the corner of 47th street and Fifth avenue. From this the growing congregation moved to a hall at 138 Fifth avenue; from there is was obliged by growth to move to Hardman Hall at Fifth avenue and 19th street. Later it again removed and occupied what was once the Rutger Presbyterian Church on Madison avenue and 29th street, and there found rest for three years. In January, 1896, All Souls' Church on 48th street was acquired and radically changed in structure, only the walls being left undisturbed. For seven years this building sufficed, but the growing attendance and membership made another change necessary and the land on the corner of Central Park West and 96th street was purchased four

FIRST CHURCH OF CHRIST, SCIENTIST—ENTRANCE DOORWAY.
Central Park West and 96th Street, New York City. Carrère & Hastings, Architects.

years ago. Carrère & Hastings were asked to prepare plans for a building to seat twenty-two hundred.

The building finally produced has been to a remarkable degree a development rather than the fulfilment of a formulated plan. It was thought at that time that $300,000 would be ample to build what was required. When the plans and estimates were furnished, however, it was seen that they would not meet the ideals of those who wished the work done. Not content with brick and Indiana stone, Concord granite was ordered, though the cost of this material in itself, when set and under roof would be $400,000.

It was then found that even at a cost of $550,000 the reading room, Sunday-school rooms and offices for the practitioners and church officials must be provided for in the basement. This did not accord with Christian Science ideas, and though the cost was raised to $750,000 the change was made and the rooms placed above the auditorium and three elevators arranged to meet the needs occasioned by the change.

It was then discovered that a tower of a more expensive design would add to the beauty of the structure and this was also ordered. Finally, all limitations were ignored, new features were added as they were required to make the church more perfect in beauty and utility. Money came in steadily to meet every demand promptly, the twelve hundred members of the church, including the students of the New York City Christian Science Institute contributing all that was necessary without special exhortation other than expressed in a simple request from the platform from time to time for the amount needed to meet the expenses incurred. Each contributor had been healed of some moral or physical defect and all desired to make the church a fitting expression of the thought which Christian Science inspires.

When the dedication took place, the total cost had reached $1,185,000, and there was no debt. Above the cornerstone there is this inscription:

FIRST CHURCH
OF
CHRIST, SCIENTIST,
NEW YORK CITY.
ERECTED
ANNO DOMINI MVIIICXCIX.
A TRIBUTE
OF
LOVE AND GRATITUDE
TO OUR
LEADER AND TEACHER,
THE REVEREND MARY BAKER EDDY,
DISCOVERER AND FOUNDER
OF
CHRISTIAN SCIENCE
AND AUTHOR
OF ITS TEXT-BOOK,
SCIENCE AND HEALTH,
WITH KEY TO THE
SCRIPTURES.

FIRST CHURCH OF CHRIST, SCIENTIST—LOOKING TOWARD THE READER'S CHAIR.
Central Park West and 96th Street, New York City. Carrère & Hastings, Architects.
Decorated by Charles H. Cotirell.

When the structure was planned, it was thought by many that it would be large enough to provide room for all who would attend the church services for years to come, but already the seats are well filled and there is reason to believe that its capacity will soon be taxed to the uttermost.

The church is as large as is convenient and every part has been made as perfect and as permanent as possible. It will stand as a model of modern ideas in church building, and be valuable to those who study church architecture. There has been much discussion as to what type the really American church would be found finally to be, and it is possible that this building, with its elevator service, reading room and offices for the work of helping the sick, the discouraged and the sinning, may have an important effect upon ecclesiastical architecture in this country.

Omen R. Washburn.

Description of the New Building.

New York's newest and most imposing church edifice now greets the eye of one walking or driving in Central Park West in the vicinity of 96th street. Towering some two hundred feet above the curb, it forms a most striking and beautiful picture in glistening silvery white granite; stone, so uniform in color and quality as at once to give one the impresion that the whole must have been cut from one huge perfect block. It is, perhaps, largely due to this granite that the more than ordinary solidity of appearance is obtained. However that may be, this particular stone and the architecture of the building form a most perfect and harmonious composition. The corner cornice stones are 12 feet long, 8 feet wide and 3 feet 6 inches thick, weighing eighteen tons each. Being at the corner of the building and over fifty feet high, where it was nearly impossible to either brace or guy the derricks, the setting of these blocks involved a very pretty piece of engineering.

It may be well at this point to mention the quarries from which this stone was taken, as well as the method of quarrying. The quarry is situated in Concord, N. H. It is one of the few white granite quarries in the United States, the product of which does not discolor by exposure to the air, the tendency being rather to grow more white with age. The quarry is furnishing granite for the First Church of Christ, Scientist, of Concord, N. H., a gift from the Rev. Mary Baker G. Eddy. It is the most difficult stone in this country to work because of its extreme hardness. Its peculiar characteristics make it impossible to cut by saw or machinery, thereby necessitating the use of hand labor for the cutting, which

FIRST CHURCH OF CHRIST, SCIENTIST—THE READER'S PLATFORM.
Central Park West and 96th Street, New York City. Carrère & Hastings, Architects.

is performed by the slow process of chipping until a smooth surface is obtained, thus making the ruin of an entire block through a mis-stroke of frequent occurrence. The stone is quarried in unusually large blocks. The writer witnessed the effect of a single blast in the quarry which sheared a piece of granite 125 feet long, from 55 feet to 100 feet high and from 10 feet to 20 feet thick, almost as clean as though cut with a saw. From this massive block the smaller ones are cut by means of round wedges hardly larger than a man's finger and only about 6 inches long. The wedges

FIRST CHURCH OF CHRIST, SCIENTIST—THE GALLERY.
Central Park West and 96th Street, New York City. Carrère & Hastings, Architects.
Decorations by Charles H. Cottrell.

are spaced in the stone at intervals of about 6 inches and are gently tapped with a hammer until the stone is cleft. This can only be done in the direction of the natural clevity of the stone, which, however, always runs at approximately right angles with the bed of the stone.

To go back to our subject, the building. On closer examination one is impressed by the numerous small windows in the two upper stories, which at once suggest a large number of rooms above the main auditorium not common in ordinary church construction, and shows the honesty of the architectural treatment.

FIRST CHURCH OF CHRIST, SCIENTIST—EAST GLASS WINDOW.
Central Park West and 96th Street, New York City. Carrère & Hastings, Architects.
Jesus and Mary in the Garden after the Resurrection.

The building really accommodates perfectly what might be classed as two independent organizations as to requirements, having separate entrances and plants complete, as well as connecting doors, making it possible to throw the entire building into one when required.

At either side of the main entrance are two large electrically controlled and direct connected elevators of the modern type, capable of carrying twenty people each. No other instance is recorded of the installation of elevators in a church. Flanking the elevators are

FIRST CHURCH OF CHRIST, SCIENTIST—RECEPTION ROOM.
Central Park West and 96th Street, New York City. Carrère & Hastings, Architects.
Decorations by Charles H. Cottrell.

two rather remarkable elliptical staircases. There is no iron used, although the stairs are 5 feet 6 inches in width. The method adopted is stronger, less expensive and less bulky. It also permits of quicker construction, than do other methods in common usage. Passing through to the auditorium by one of the side entrances, you are under a large overhanging gallery, which extends around three sides of the church and is supported by two large marble piers on either side connected by marble arches to the marble side walls and together by marble beams running longitudinally. These piers and beams coming only half way between the side walls and front of the gallery give the impression of a series of niches along

the sides. This effect is heightened by the fact that the main barrel vault of the auditorium ceiling is sprung from the face of the piers instead of from the side walls, and the sides of the piers with the transverse arches connecting with the side walls develop into three transverse barrel vaults penetrating the main vault of the ceiling. By this method a very massive appearance is obtained, the piers appearing to attach themselves to the outside walls. The centre "motif" of each niche is a large stained glass window running interruptedly from 6 feet above the ground floor up back of the gallery, finishing in a semi-circular lead on axis of the niche above.

FIRST CHURCH OF CHRIST, SCIENTIST—THE SCHOOL ROOM.
Central Park West and 96th Street, New York City. Carrère & Hastings, Architects.
Decorations by Charles H. Cottrell.

These windows are very charming in their simplicity, having a warm gray field with a foliage border of soft greens and autumn colorings. In the centre of each of the upper sections is a medallion executed in quiet monotone effect of green and brown framed fittingly in green and amber. The whole effect is heightened by the tone of the woodwork, which is of a most uncommon rich gray brown which effect is obtained by the use of a Circassian, Italian and French walnut, bleached up in such a manner as to produce a very light tone, while at the same time preserving the grain. The delicate fawn color of the Istrian marble is recalled in the coloring of the ceiling, which is used to accentuate the architectural design and modeling rather than as a bit of color decoration.

The organ and reader's platform is placed in the centre of a large perforated plaster niche which is treated in the same colors as the ceiling. The walnut woodwork with its dull ivory and gold mounts, and the organ pipes of Etruscan gold form a most pleasing climax. It may be interesting to note that the modeling of the organ above the keyboard is all done in plaster and toned to the color of walnut to match the wood. The lighting is worthy of note as well as the fixtures, especially the six large chandeliers, weighing over half a ton each and carrying seventy-eight lights each. These fixtures

FIRST CHURCH OF CHRIST, SCIENTIST—THE READING ROOM.
Central Park West and 96th Street, New York City. Carrère & Hastings, Architects.
Decorated by Charles H. Cottrell.

are probably the finest example of a public chandelier work in America.

On the way to the reading rooms above, one is surprised to find a series of rooms worked into the haunches of the arch of the main auditorium. This would have been a comparatively easy problem had it not been for the clerestory windows, which feed light to the perforated sunbursts in the ceiling of the main auditorium. The problem was, however, solved by building light walls over each of the perforations and locating the passages and rooms around the walls, with bay windows into the same. On the top or reading room and Sunday-school floor, a large room has been arranged with dome light thereover. This room is surrounded by smaller rooms for church officials and practitioners.

Charles H. Cottrell.

RESIDENCE OF MR. CHARLES DANA GIBSON.
No. 127 East 73d Street, New York City. McKim, Mead & White, Architects.

RESIDENCE OF MR. CHARLES DANA GIBSON—ENTRANCE HALL.
No. 127 East 73d Street, New York City. McKim, Mead & White, Architects.

RESIDENCE OF MR. CHARLES DANA GIBSON—THE FIREPLACE IN THE HALL.
No. 127 East 73d Street, New York City. McKim, Mead & White, Architects.

RESIDENCE OF MR. CHARLES DANA GIBSON—THE DINING ROOM.
No. 127 East 73d Street, New York City. McKim, Mead & White, Architects.

RESIDENCE OF MR. CHARLES DANA GIBSON—THE DRAWING ROOM.
No. 127 East 73d Street, New York City. McKim, Mead & White, Architects.

RESIDENCE OF MR. CHARLES DANA GIBSON—THE DRAWING ROOM.
No. 127 East 73d Street, New York City. McKim, Mead & White, Architects.

RESIDENCE OF MR. CHAS. DANA GIBSON—THE LIBRARY.
No. 127 East 73d Street, New York City. McKim, Mead & White, Architects.

RESIDENCE OF MR. CHARLES DANA GIBSON—THE LIBRARY.
No. 127 East 73d Street, New York City. McKim, Mead & White, Architects.

TECHNICAL DEPARTMENT.

SAND-LIME BRICK.

AN IMPORTANT factor in the building trades market is the sand-lime brick, a comparatively recent importation from Germany. The claims of the originators of this industry in America only three years ago were received with suspicion, but in this short time it has been demonstrated that a better and a cheaper face or finishing brick can be made from sand and a small percentage of lime than from clay. The entire process of manufacture requires but twelve hours. A number of prominent public and private buildings have been erected throughout the United States from the sand and lime bricks, which not only present a handsome exterior, but recent experiments have shown that the material, instead of showing signs of disintegration, as predicted by some of its enemies, is gradually growing stronger and harder. One great advantage over other material is that the sand and lime product can be made in any color or combination of colors desired, which gives to the architect an opportunity to secure striking effects not possible with clay bricks.

The natural color of the sand and lime brick is a soft grey. By using lime-proof pigments in the manufacturing process, these bricks are colored as desired. The quality of the brick depends to some extent on the purity of the lime, the silica properties of the sand and the process of manufacture.

This product is no longer an experiment, and the time is past for neglecting so strong a factor in the structural market.

We publish cuts of the new High School building at Bennetsville, N. C., built from "Huennekes System" sand-lime bricks, which certainly indicate the high quality of the product.

The fact that the promoters of the enterprise, H. Huennekes Company, New York, have erected over twenty factories in various sections of the country during the past year, demonstrates the remarkable growth of the industry.