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Alphabetical List of Advertisers

Sedden Memorial Technical School Competition

NOTICE TO COMPETITORS

IN THE LAST COLUMN of the programme of competition is a short paragraph which reads: "The total expenditure upon the first and second section may be taken as $150,000." As this total sum seems to be at variance with the estimated price per cubic foot it should be disregarded by competitors and the estimates should be made on the specified basis of twenty (20) cents per cubic foot. Drawings submitted in this competition must be delivered at the offices of the American Architect, Flatiron Building, New York, on or before August 26, 1907.

The American Architect and Building News.

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THE New York *Sun*, a metropolitan newspaper of standing and large circulation, has recently published an entertaining article explaining "how architects get work," and has done it good-naturedly, truthfully, and in a manner that will really interest the general reader. More than this, it may well cause the man on the point of placing a job in an architect's hands to stop and consider how well-advised his action really is, and just what are the motives or whence come the impulses that are guiding his action, and this may cause the loss of a job here and there to a reasonably able and deserving architect; for, often, there is no very good reason for the selection, or rather the selection has actually been forced on the owner by an adroit architect or the still more adroit "promoter" whom he employs. It is in dealing with the promoter that the writer of the *Sun's* article becomes most interesting, for among other things he shows how a certain architectural firm is on the high road to much wealth, and will assuredly arrive at their goal unless their promoter, who is associated with them as a partner, should chance to ruin his health through the drinking of much tea at afternoon functions; for it is through his charming manner, his consummate social address, which finds ample play during his assiduous attendance at social occasions, that he succeeds in knitting the links of the chains that draw wealthy and desirable clients to the doors of the office where his partners, the real architects, are waiting, ready to serve whomsoever may come.

HOW should an architect get his work? It is a serious question that each beginner has to ask himself, one that has been put to us more than once. There is but one answer, and that is: he must be "known of men." But this hardly helps, as it simply causes the query to be changed so as to read: how may an architect make himself known? In a certain number of cases the answer comes naturally, and in course of time: the draughtsman who is of the right stuff to make an architect, and who has proved himself of exceptional value to his employer, is taken into partnership, and his name thenceforward becomes as well known as that of his partner. But the men who become known in this way are usually men who, though capable and well educated, have to depend on their daily wages, and so are rather forced to graduate from the bench, as it were. But there are others willing to take more risks, perhaps, more confident in their real powers, or, happily, possessed of independent incomes, who do not care to wait to be known until middle-age overtakes them, but wish to gain name and fame—and money—while young. How shall these be known? They cannot advertise in a commercial way as can business men, since it would be "unprofessional," and such advertising as can legitimately be done on a door-plate is not likely to be very productive. If they are unwilling to adopt the old-fashioned course of establishing themselves in some new community, growing up with it, becoming known therein by daily intercourse with their fellow-citizens, and satisfying their needs as they develop, then there are only three ways open: To make an alliance with a speculating builder; to seek success by constant participation in competitions of all kinds; or, frankly, to tout for work.

OF these three methods the first is dangerous, as it almost inevitably leads to a lowering of the moral tone and a debasing of artistic and ethical standards; the second is absolutely professional, and, in spite of the manner in which established architects talk against the method, is altogether too good ever to be abandoned. As to touting, there is much more of it done than architects will be ready to admit, for methods of touting are almost as various as men are numerous, and methods one man would employ would be scorned by his neighbor; and yet most of the methods actually used are permissible, decent and professional. The method that is at once the most legitimate and most successful is social touting, which consists simply in mixing with one's fellow-men as often and as widely as possible through membership in one or more clubs, in becoming an active member of a church congregation, and in taking part in such social functions as are accessible. And it is for this reason, we fancy, that Sir Aston Webb reminded the architectural students of the Massachusetts Institute of Technology that they should take care to acquire a broad and general culture, quite as much as skill at the drawing-board. The cultivated man in society will become known—and so draw to himself chances of securing work through and because of his displayed intelligence—in a way quite beyond the grasp of his fellow who has scorned to spend time and means in acquiring knowledge that did not lead by the shortest route to bread and butter.

BUT when all is said, the best agency for becoming known, the one that has had an effective part in the upbuilding of every architectural reputation in these

days, is nothing more nor less than the printing-press. It is the legitimate advertising given, without pay, by newspapers, magazines and professional periodicals that has made familiar to readers in every part of the world the names of architects in association with their accomplished deeds. It is quite common for architects to say that they derive no benefit from the publication of their work in the pages of the professional press, because the circulation of these among the general public, the mass of possible clients, is very limited. This argument is good, so far as it goes; but if the periodical press does not widely reach the general public, it does reach the editors of newspapers and magazines, and informs them as to who is who and what is what, and from that point they carry on the free advertising in a more effective way. In other words, publication in the professional journals is the first step on the pathway of the only form of advertising that is open to the profession. The last thirty years has witnessed the appearance and the disappearance in this country of a bewildering number of architectural journals, and the editors and publishers who have lost health and money in these undertakings are remembered only with pity, if not with scorn; and yet what they did, while they were able to do anything, was really to give substantial aid to the making of the reputation of many an architect who, now that it is made, fancies it is wholly due to his own transcendent genius.

THE modern architect who, touring abroad, gratefully recognizes the chicken under the name of "Sudden Death," so short a time before it appears on the broiler was it gaily running about, and who recalls with derision the ancient advice to sacrifice a cock to Æsculapius, may after all have genuine reason to rejoice that so many men and women pursue the gentle pastime of counting chickens before they are hatched. That nearly imbecile Gallina should be the cause of a discovery of much possible value to architects seems wholly laughable, and yet, after all, the "cock that crowed in the morn" really had something to do with "the house that Jack built." It seems that our own Department of Agriculture, listening to the lamentations and petitions of innumerable raisers of poultry that it should discover some way of preventing the too speedy rusting of the wire fencing, of which so many miles are used in controlling the wandering propensities of the secularly useful fowl, has been conducting experiments, under Dr. Cushman, which have resulted in discoveries and the propounding of theories of the most unexpected nature and of far-reaching effect, and these theories are said to be accepted by "the leading specialists in this field of investigation."

WE will not attempt to give a proper technical account of Dr. Cushman's discoveries, as that is quite beyond us, but he appears to have disproved the theories hitherto entertained as to the rusting of iron, and to have shown that in place of oxygen's being the active principle of rust, it is an ion of hydrogen that is the source of mischief, though each of these elements acts through the agency of the carbonic acid contained in the air and the moisture that is capable of furnishing both oxygen and hydrogen. Further, the experimenter has seemingly established the fact that the action on the metal is electrolytic in its nature, and, having decided this, the next step naturally was to reduce the metal to an inert or negative condition so far as relates to hydrogen. Dr. Cushman, by experimenting, discovered that "active *oxidizing* agents, such as the chromate and bichromate of potash, prevent rusting by polarizing the iron and reducing it to the condition of an oxygen electrode," when it can no longer be attacked by the hydrogen ion. If this brief and imperfect statement may cause those to smile whose knowledge of chemistry and electricity is profound, we can only take shelter behind the greater knowledge of the "leading specialists" and express our belief that, at length, a very good start has been made on the path that will lead to a practicable method of permanently preventing the rusting of structural metal-work, and that it seems to be all the more hopeful, seeing that it is likely to lead to a method of also eliminating the electrolytic action due to wandering currents.

THE Art Commission of New York recently found reason to disapprove the plans submitted to it for a bridge which should cross from the mainland to Long Island in the neighborhood of Hell-Gate, so as to accommodate the traffic of the Pennsylvania and the New York, New Haven & Hartford Railroads. The bridge, as to its engineering features, was designed by Mr. Gustav Lindenthal, a few years ago Commissioner of Bridges for the city of New York, who, as in the case of the Manhattan Bridge, showed his good sense by asking Mr. Henry Hornbostel to attend to the architectural treatment of the structure. His choice seems to have been unfortunate, for, just as in the case of the Manhattan Bridge, where the treatment prepared by this architect has been displaced in favor of that devised by Messrs. Carrère & Hastings, so here it is his non-success that seems to have been the cause of the Art Commission's expressed disapproval, as it has led them to say: "It has been attempted, however, to give decoration to the towers and to the bases of the towers. This attempt has not, in the opinion of your committee, been satisfactory from an artistic point of view." To say this was right, proper and very probably necessary; but it seems to us distinctly regrettable and improper that the report should go on to say: "Your committee cannot approve of these decorative features, as they would have been ready to approve a strictly utilitarian construction." It has been our belief, shared, we imagine, by most people, that Art Commissions were established very largely, if not mainly, to prevent the erection with public funds of "strictly utilitarian constructions." That for one thing and for another, their words, if they mean anything, are clearly an invitation to the engineer to abandon all attempts at beautification, to revert to the strictly utilitarian, and, under the pledge of approval here given, to inflict on New York one more of the hideous bridge structures that American engineers have produced in such quantities. Of course, the Art Commission does not expect or desire this result, and fortunately Mr. Lindenthal is a man of too much sense to take them at their word, as he must feel confident, as we do, that Mr. Hornbostel can amend his design so as to satisfy feelings and opinions that must be satisfied.

Reinforced Concrete Building Construction[1]—III

PROF. LEWIS J. JOHNSON.—I am not often inclined to disagree with Mr. Worcester, but I think there is something to be said on the other side of this question of continuity of reinforced concrete beams.

The question seems to be, Shall we or shall we not count on continuity in the design of slabs, beams and girders? This question proceeds upon the assumption that it is beam action and not arch action which is to exist. This assumption is almost universally adopted and is doubtless correct, unless in cases where ratio of depth to span is exceptionally great. More attention is likely to be given to this question of arch action than has been given to it in the past. But, granting beam action to be the proper basis of design, I cannot see how any one can doubt that it is continuous-beam action that should be provided for. Slabs, beams and girders are continuous beams as built, and for better or for worse are going to act as continuous beams if they act as beams at all.

Objection to recognizing this fact in design seems to be based upon the supposition that designing beams as continuous would lead to mid-span sections good only for positive bending moments of about 1-40 wl^2, a figure which would be nearly correct for a load distributed uniformly over all spans at once, but would be fatally in error in the case of the far more probable instances of unequally distributed load.

Objection of a similar sort is applicable to design upon the basis of discontinuity, where ultra-cautious design for a mid-span bending moment of $\frac{wl^2}{8}$ is accompanied by a more or less complete ignoring of the negative bending moment of the supports. The assumption of simple beam action may thus prompt serious error on the side of danger quite as certainly as similarly improper application of the assumption of continuous action. That trouble from this source has not been more abundant I believe to be due partly at least to the undoubtedly considerable tensile strength of the concrete in the wings of T-section beams and girders. But if it is not safe to count on tensile strength of concrete elsewhere, it is not safe to count on it here.

The logical course to pursue is to recognize that, if the action present is beam action at all, it is continuous-beam action, and to design accordingly. This means careful attention to the extreme values of the flexures at supports as well as at mid-spans due to all possible distributions of the live load. The end sections are then designed to meet these extreme conditions, and so are the mid-span sections. This is standard practice among the Germans and Swiss, and it ought to be in this country, and I believe is going to be. Of course in applying this method, as in any careful design, attention will be given to all important facts, such as stair or elevator wells interrupting the continuity in places; and in cases of doubt, assumptions unmistakably on the side of safety will, of course, be made.

The labor involved in these computations is not so great as it would seem. As a matter of fact, the extreme conditions under uniformly distributed live load will almost always be covered in case of a series of beams and slabs of equal spans by designing for a live-load flexure of 1-10 wl^2 (l being measured from center to center of supports) at the faces of columns and girders, and the same amount at mid-spans; and this, too, regardless of the number of spans in the line. At the column faces flexure would be negative and at mid-spans positive, and in both cases would, of course, be combined with the dead-load flexures. If the spans are short and the live loads large in comparison to the dead, top reinforcement may be required at mid-span to provide for resultant negative flexures there existent.

The similar extreme values for girders subject to concentrated loads have not been so well established, but the need of them is recognized and it is hoped that they may be forthcoming soon.

If a designer prefer, let him use 1-8 wl^2 at the mid-span section, but let him not fail to provide fully for the bending at the faces of the supports.

He must not overlook the fact that top reinforcement over supports is as logical a requirement as bottom reinforcement at mid-span.

Moreover, there is additional justification for top reinforcement in that it is of the greatest possible value in case of weakening of bottom rods by fire. The top rods through cantilever action may carry the load after the lower rods, in the far more exposed position of the two, have failed. In fact, top reinforcement does not seem to have had the attention to which its merits from the fireproofing standpoint would seem to entitle it.

It may be objected that continuous-beam coefficients based upon the assumption of unvarying moment of inertia may be inapplicable to reinforced-concrete beams. This is certainly a fair field for research, but the practitioner may well proceed for the present with his 1-10 wl^2, taking comfort from realizing that the negative bending moment over supports would not rise above $\frac{wl^2}{8}$ even in the extreme case in which the moment of inertia becomes zero at mid-span—the case of two abutting disconnected cantilevers—a case most unlikely to occur. The error in the 1-10 wl^2, if any exist, must be extremely small and unimportant.

For beams under a uniformly distributed load, the top steel at the column faces and through the column may or may not be the same in amount as at mid-span, depending upon the relative depth of the beam at the two points, but I see no escape from the belief that the negative moment of resistance at the column face should be as large as the positive moment of resistance at mid-span. If, as is usual, floors are figured with T-sections, this may call for the German practice of materially deepening the stems at and for considerable distances each way from the supports, to make up for the absence of flanges on what is here the compression side of the beam.

This leads to brackets at connections of girders to columns and of beams to girders. These brackets complicate the forms and are usually unsightly. They can be obviated by making depth of stem at mid-span as great as required at the column faces, proportioning bottom steel at mid-span accordingly. This interferes with head-room and adds to the quantity of concrete required. It may in some cases be practicable to diminish this depth by use of steel reinforcement in the compression lower side of the beam at the support. Though this latter reinforcement would also be effective and necessary reinforcement from the arch point of view, the brackets will in many cases be preferred to either of these alternatives.

But continuous-beam action, I believe, is with us, and with us to stay; is, in fact, unavoidable. It must be reckoned with and patiently and properly provided for in all reputable reinforced-concrete practice. Above all things, let us here as elsewhere adhere to the policy of preparing at all points of a structure for the most unfavorable conditions reasonably to be expected. And, finally, let us not go on imagining that we err on the side of safety when we ignore continuous-beam action.

Turning now to what I came here to say, I wish to place on record some very high and perhaps unprecedented values for unit shears and unit adhesion stresses. These results were obtained in the beam tests of which I had the honor to give you some preliminary account last May. They are results obtained in the actual working conditions of a beam, and computed, as seems clearly proper, by the same methods which one should use in designing a projected beam or girder.

These results were gained from beams 3 in. wide, 9 in. deep over all, and 8 ft. long. The steel reinforcement was 8 in. from the top of the beam, and the amount in all cases was 1 per cent. of section above the steel. The rods included smooth round, cold-twisted square and Johnson corrugated. The Johnson rods were in all cases perfectly straight, but the others were some straight and some hooked up about 3 in. at ends, and some of the smooth round rods had each end bent around a short piece of 1.125 in. rod, which thus formed a somewhat loose anchor. In no case was there an anchor-plate or washer.

A slip sufficient to break an electric contact rang an alarm-bell and the behavior of the rods as to slip was thus carefully watched.

Two grades of concrete were used; one was of proportions 1:2:2 2-3, the stone being scaly trap; the other, 1:2½:5, the stone and sand being in this case of a character to permit a leaner

[1] An informal discussion before the Boston Society of Civil Engineers at its meetings held September 19 and October 5, 1906, published in the "Journal" of the Association of Engineering Societies for June, 1907, here continued from page 46, No. 1650.

mixture. The two grades will be referred to as rich and lean respectively.

In all, twenty-five tests of this kind were made, nineteen of them on rich beams and six on lean, and as might, perhaps, be expected, failure was due *in every case* to slip of the reinforcement, regardless of the kind of rod and the conditions of the end. Consequently the actual shearing strength of the concrete was never realized, and the values given are merely the values of the shearing stress in existence at the time when the adhesion gave out. In none of these twenty-five tests were there stirrups or diagonals or other web reinforcement.

The shear thus developed averaged, in the six tests of lean beams, 470 lb. per square inch, with extremes of 573 and 233; average age, 143 days; age of extreme values, 138 days for smaller, 137 days for larger.

The shear similarly developed in the nineteen tests of rich beams averaged 628 lb. per square inch, with extremes of 750 and 488; average age, 50 days; age of 53 days for the higher value and 50 days for lower.

All of these values may, of course, be taken as horizontal or vertical shears indiscriminately. Considering that these values were in no case ultimate values, and considering that bending stresses were by no means excluded, these results add to the evidence now steadily and convincingly accumulating that the actual shearing strength of concrete has been greatly underestimated. They confirm the growing belief that failures have been attributed to shear that were due to slip of rods or diagonal tension, phenomena closely connected with shear, but still should not be called shear.

The adhesion stresses developed in the six tests of lean beams averaged 774 lb. per square inch, with extremes of 970 and 427 lb. per square inch. The 970 figure was for a perfectly straight unmodified cold-twisted rod in a beam of 137 days old. The 427 for a similarly unmodified smooth round mild steel rod, this last a figure about twice what is usually expected of such rods.

In the rich beams the average of adhesion stresses in the 19 tests was 1,094 lb. per square inch, ranging from 913 for a smooth round mild steel rod with ends hooked up, through 960 for a similar rod without the hook, to 1,367 for a similar rod bent around an 1.125-in. anchor-rod.

The results in detail for lean and rich beams, together with the values of "A" [the distance between the point of support and the nearest end of the beam] in each case, are as follows:

TABLE I

Kind of Rod and Condition of End	Lean Beams		Rich Beams	
	f_a Lb. Per Sq. In.	"A" in.	f_a Lb. Per Sq. In.	"A" in.
Rods Straight and Unmodified:				
Smooth round mild steel	427	4	.....	...
Smooth round mild steel	.....	.....	960	7
Smooth round mild steel	.....	...	1,194	17
Johnson corrugated	.....	...	1,182	7
Johnson corrugated	.....	...	1,232	9
Cold-twisted square	853	4	.....	...
Cold-twisted square	970	4	.....	...
Cold-twisted square	.....	...	1,073	7
Cold-twisted square	.....	...	1,155	9
Cold-twisted square	.....	...	1,161	15½
Cold-twisted square	.....	...	940	12
Rods Turned Up at the Ends:				
Smooth round mild steel	790	4	.....	...
Smooth round mild steel	.....	...	1,266	7½
Smooth round mild steel	.....	...	893	6
Smooth round mild steel	.....	...	913	6
Cold-twisted square	854	4	.....	...
Cold-twisted square	753	4	.....	...
Cold-twisted square	.....	...	1,178	6
Cold-twisted square	.....	...	1,185	6
Cold-twisted square	.....	...	936	4
Cold-twisted square	.....	...	1,102	6
Rods Turned Around at 1.125-in. Anchor-rod				
Smooth round mild steel	.....	...	918	6
Smooth round mild steel	.....	...	988	6
Smooth round mild steel	.....	...	1.135	5½
Smooth round mild steel	.....	...	1,367	6

Hardly less striking than the high adhesion values in all these tests are their comparative uniformity regardless of differences in types of rods and end conditions, and the unimportant difference between the results for smooth and deformed rods. In fact, the last beam of the series would suggest that by a very simple and natural modification smooth round rods may surpass their more pretentious and energetically advertised rivals.

But it must not be forgotten that the conditions in these tests were of an extreme nature, and the inference must by no means yet be drawn that such high results are to be expected under other conditions of loading. These peculiar conditions may include something which would render the method of computing f_a inapplicable, but it is hard to suggest just what it could be. It would seem that such abnormally favorable action as might have been present in these tests would be equally likely to be present in an actual building under similar loading conditions. Possibly a vise action as result of compression of the concrete on the under side of the beam at the support due to the very high end reactions and consequent gripping of the rods may have been in operation, but if this had been the case one would hardly suppose there would have been so great a disparity between the results for the lean and the rich mixtures. The lean would be likely to deform more and lead to a tighter grip, but yet the results do not substantiate this view at all.

More plausible is the suggestion that even with this load, unfavorable as it was for producing deflection, the beams were sufficiently bent to interfere materially with slip. This, however, is a condition of practice, and nothing to invalidate the results from a practical point of view.

It should also be stated that with other and more usual conditions of loading, slip occurred with considerably lower values of f_a than the ones above given.

Whatever the value of adhesive stress actually developed in these 19 rich beams, the fact remains that the *ultimate* strength of the 9 of them which were reinforced with smooth round rods ranged from 4.5 to 6.5 times what our customary methods of figuring and ultimate stresses would have led us to expect.

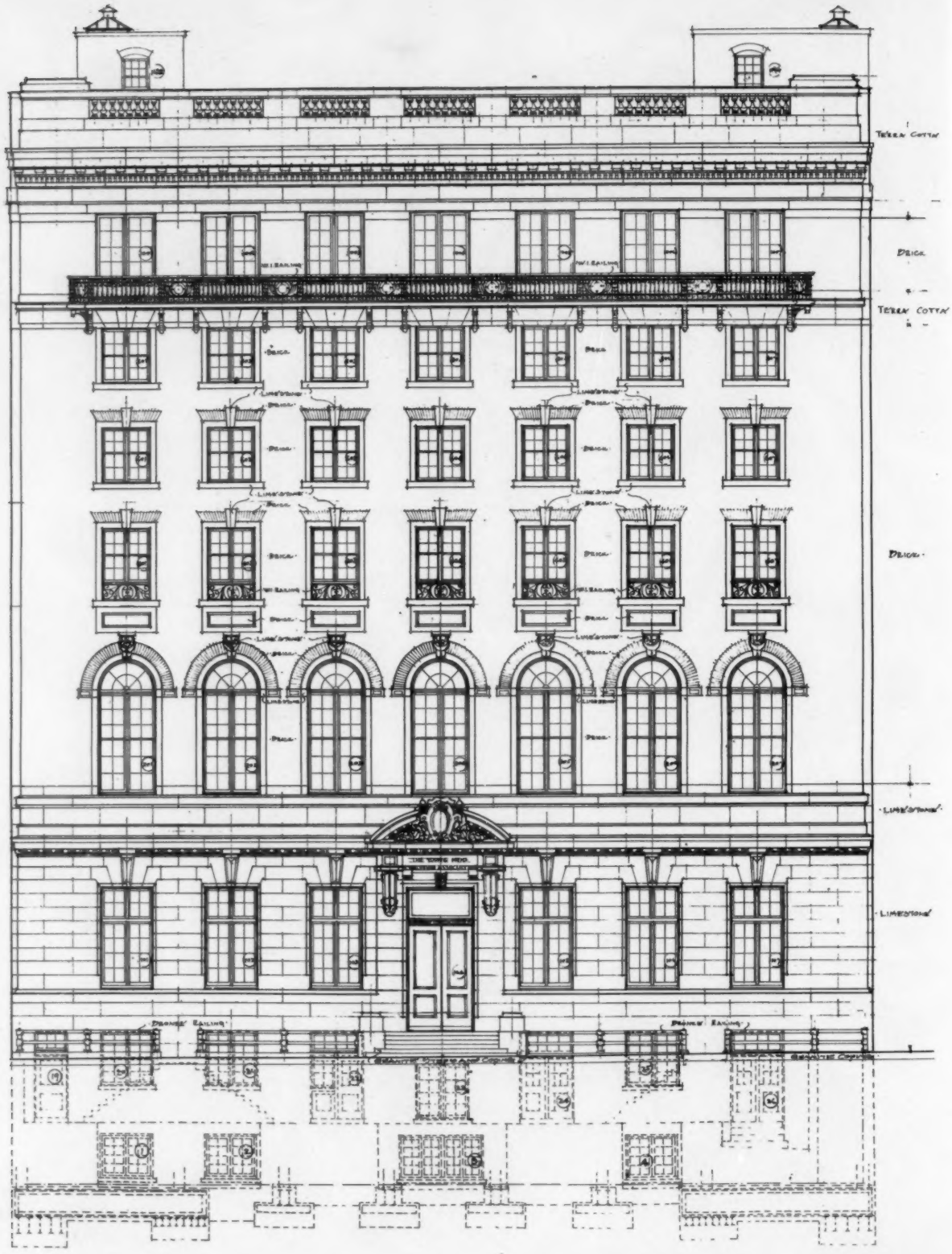
And whether the adhesion stresses as given are correct or not, the 25 beams do afford a fair basis of comparison between the two mixtures of concrete as well as of the rods and their end conditions. What I have called the lean mixture is not believed to be an uncommonly lean one from the point of view of ordinary American practice, and that I have called rich is probably not so rich as the common European mixture as used by the best practitioners. Yet the difference between these two mixtures is striking. The rich concrete results showed 42 per cent. higher average for f_a than the lean, showed very much less variation from the mean, and furthermore were obtained at scarcely more than one-third the age. It is noticeable that the disparity between the smooth round rod and its rivals is vastly greater in the case of the lean concrete than in case of the rich, as was to be expected.

If arch action was the prevailing condition, the advantage in favor of the rich mixture is not so clear as otherwise, because, with the rich mixture the "A" was almost always greater than with the lean.

The nearest recorded approach to these results for f_a, so far as I am informed, are those of Kleinlogel, described in *Beton u. Eisen*, 1904, page 227. His beams were of 1:1:2 mixture, reinforced with smooth round rods absolutely unmodified or bent, without stirrups or mechanical anchorage. The span was 6 ft. 7 in. and the beams were loaded at the quarter points. Size of beams was 6 by 12 in. Age not clearly stated, but was not less than five (5) months. His maximum f_a was 550 lb. per square inch (an average of a set of four beams just alike), and *was not an ultimate value*, but like the shear values above recorded merely values realized when failure occurred some other way. The percentage of steel was 0.094. In Kleinlogel's case the failure was due to stretch of the steel between the supports and subsequent crushing of the concrete. The portion of the beams outside of the loads showed no sign of failure whatever and the adhesive strength had clearly not been reached. It is easy to believe if his beams had been loaded as were the ones in Cambridge, failure by bending would have been deferred until f_a reached as large values as those I have given. His maximum value of shear, f_s, was 470 lb. per square inch, and failure in this case was attributed to diagonal tension.

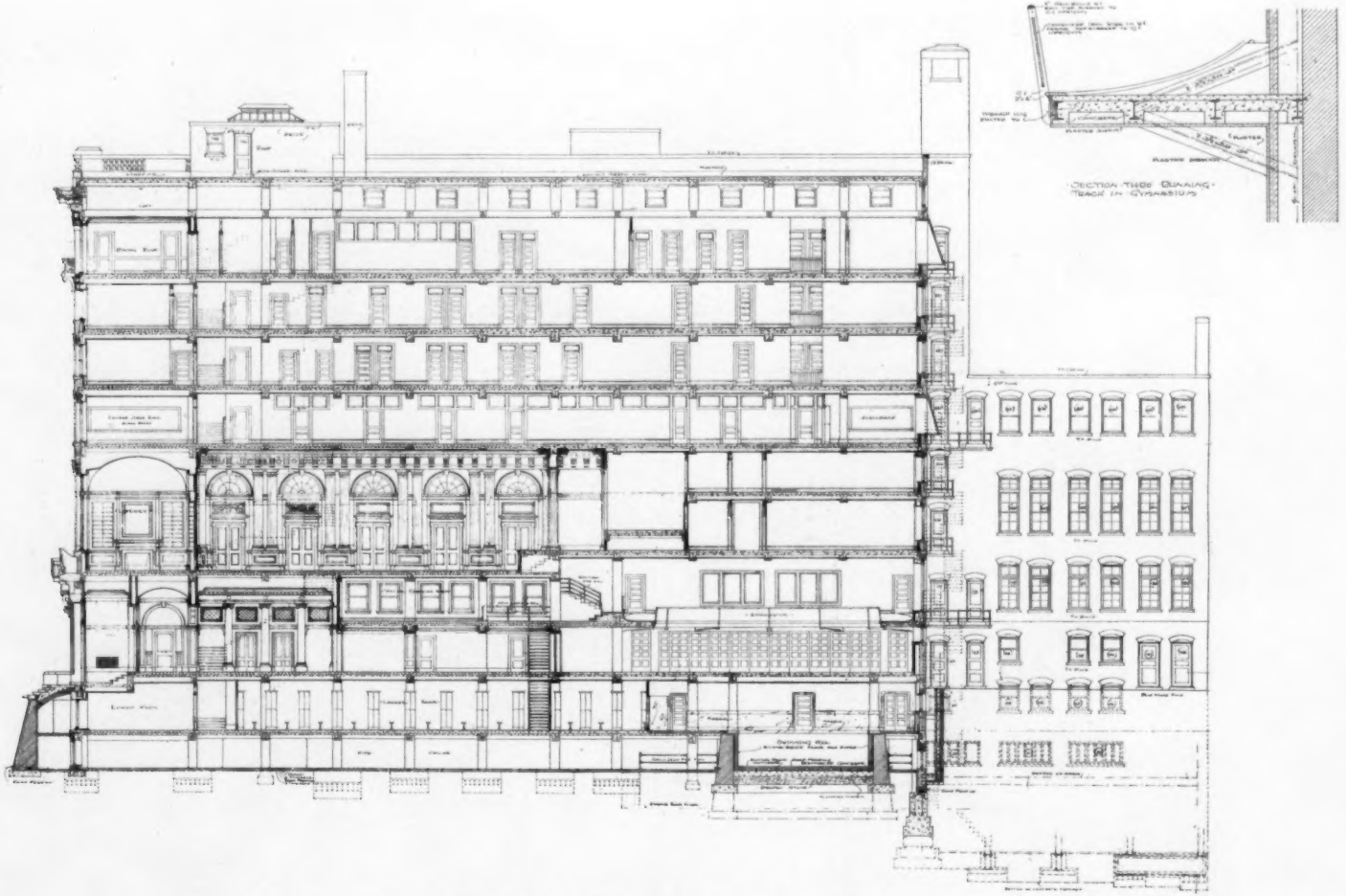
Kleinlogel attributes considerable importance to the deflected condition of the beam (carrying with it, of course, a slight bend in the rods) as increasing the f_a and, very properly I think, deprecates the customary attempt to reason from results from straight pulls of imbedded rods out of blocks to the resisting power of a rod in actual service in a beam.

Professor Talbot's maximum value for unit adhesive stress upon smooth round mild steel rods in his series of 1905 was only 193 lb. per square inch, but this was not an ultimate value, for failure was to be attributed to causes other than slip. His loads



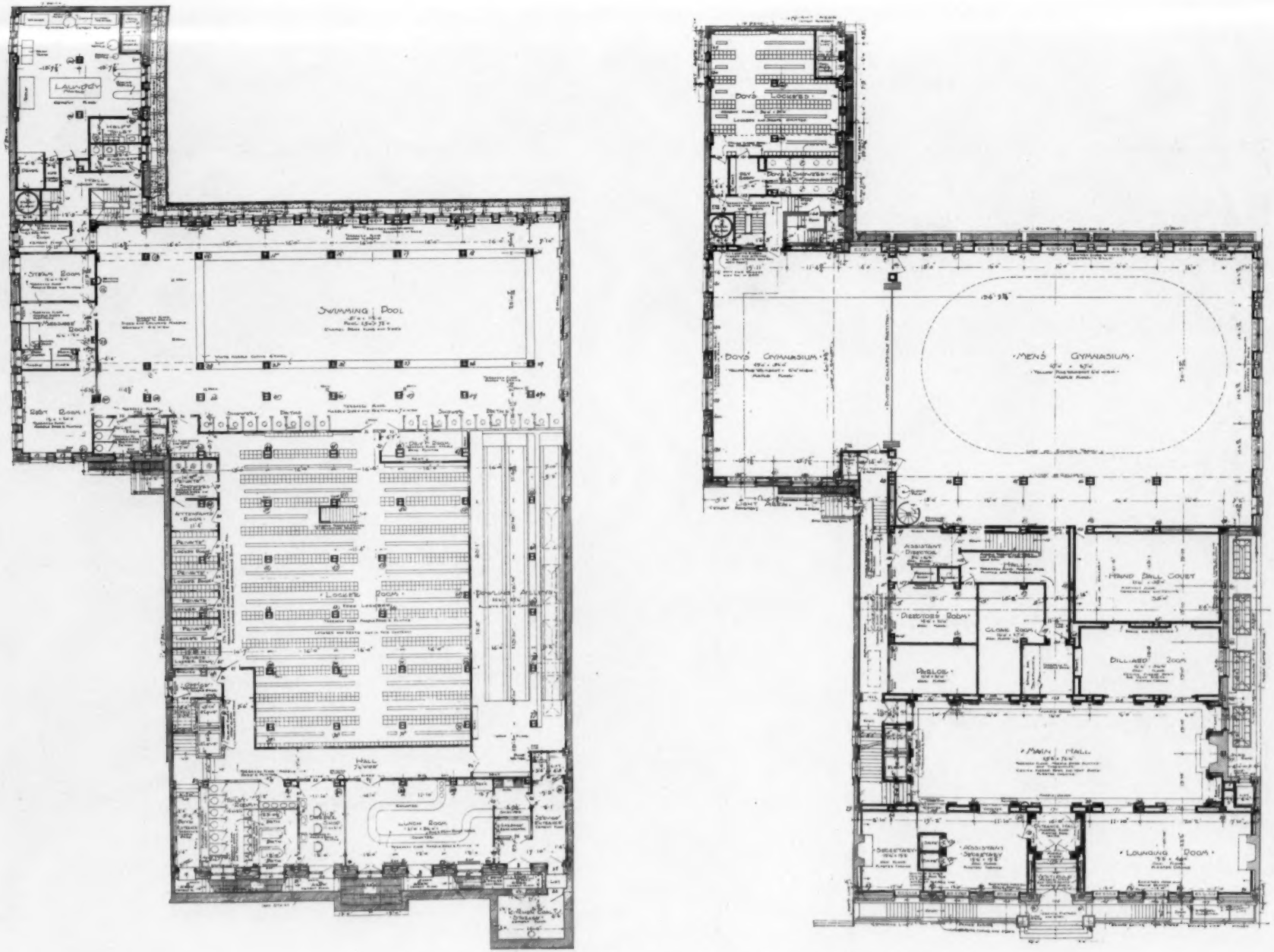
Y. M. C. A. BUILDING, ARCH STREET, PHILADELPHIA, PA.

Horace Trumbauer, Architect.



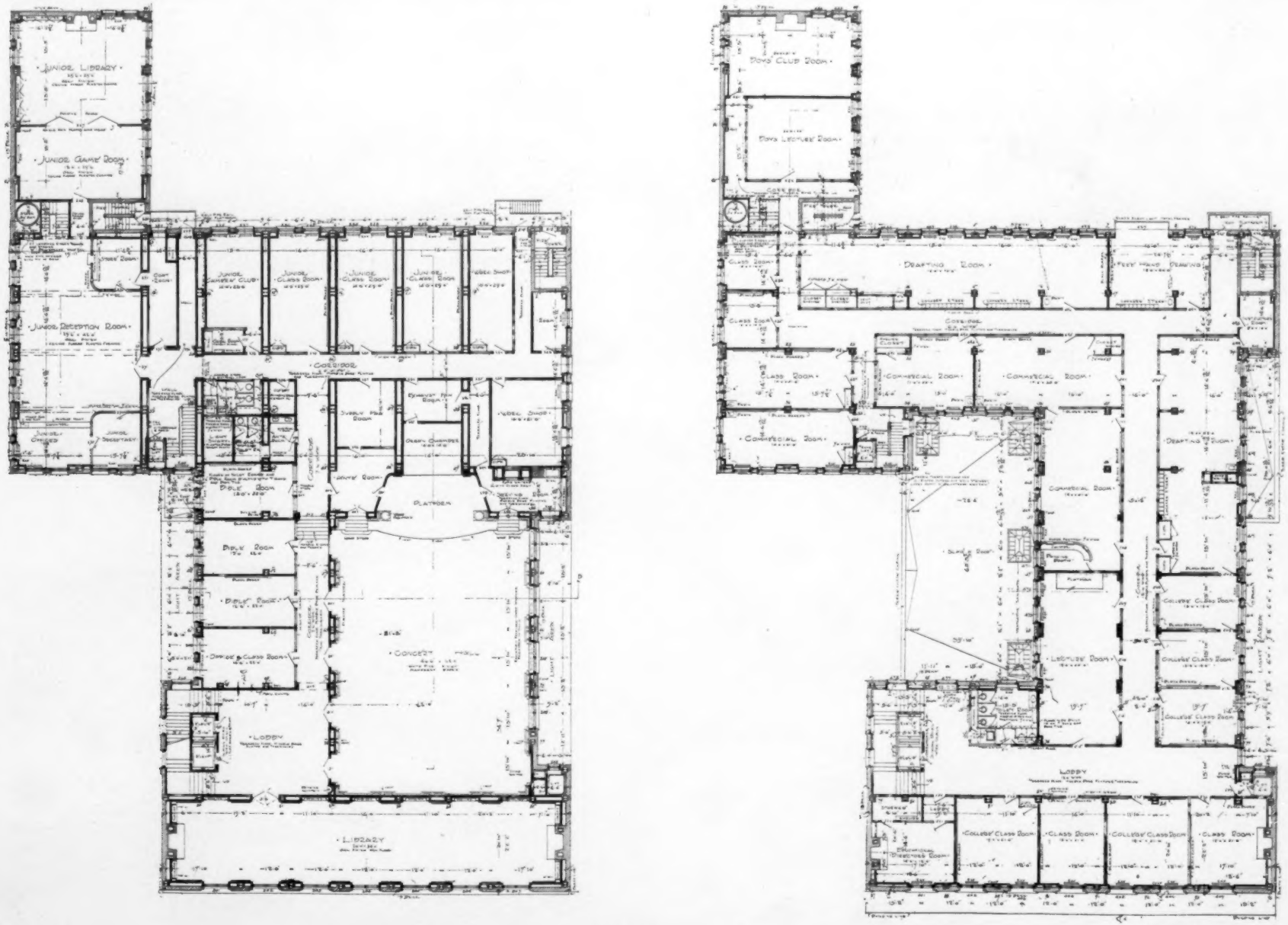
LONGITUDINAL SECTION: Y. M. C. A. BUILDING, ARCH STREET, PHILADELPHIA, PA.

Horace Trumbauer, Architect.



BASEMENT AND FIRST-FLOOR PLANS: Y. M. C. A. BUILDING, ARCH STREET, PHILADELPHIA, PA.

Horace Trumbauer, Architect.



SECOND AND THIRD FLOOR PLANS: Y. M. C. A. BUILDING, ARCH STREET, PHILADELPHIA, PA.

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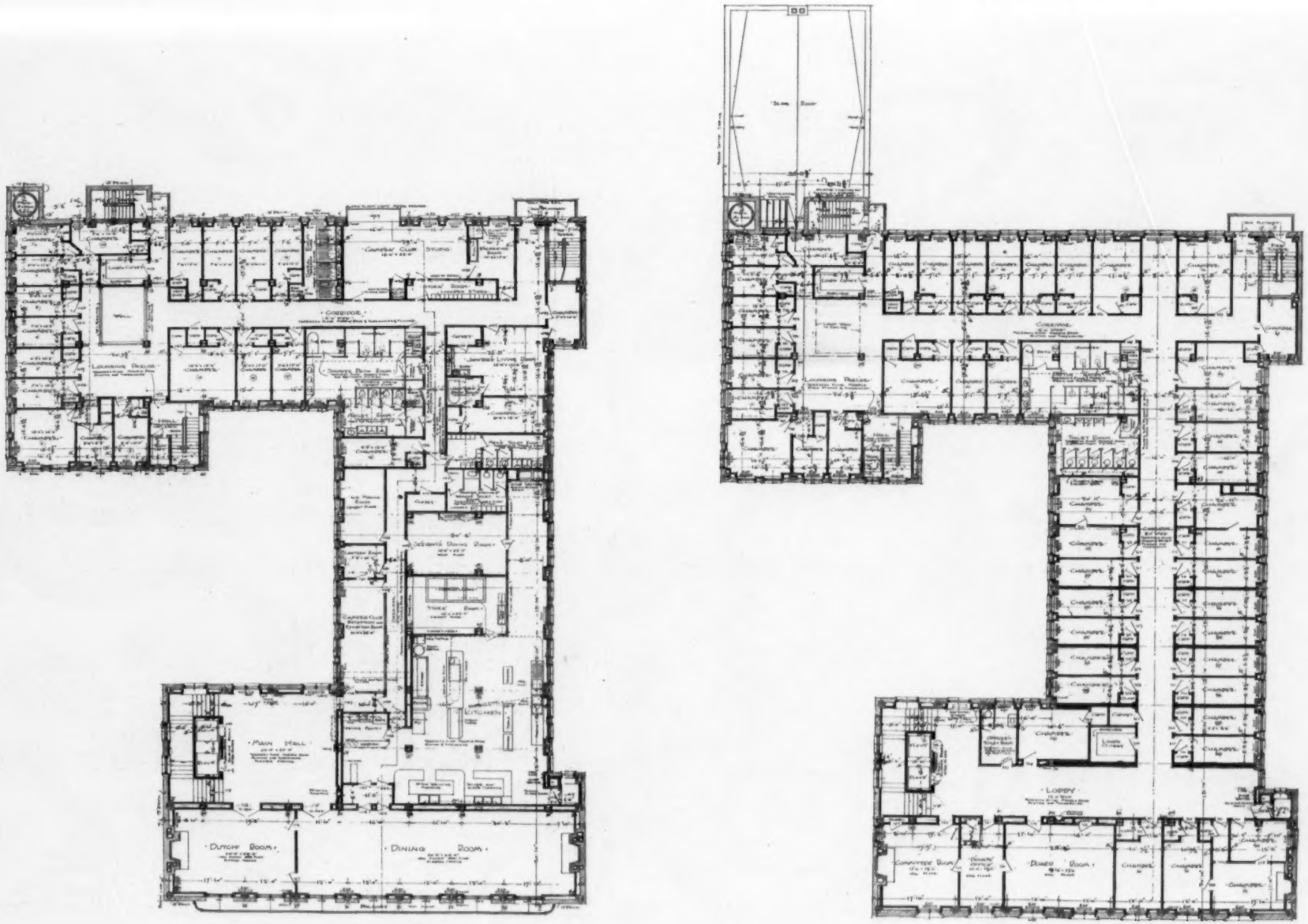

FIFTH AND SIXTH FLOOR PLANS: Y. M. C. A. BUILDING, ARCH STREET, PHILADELPHIA, PA.

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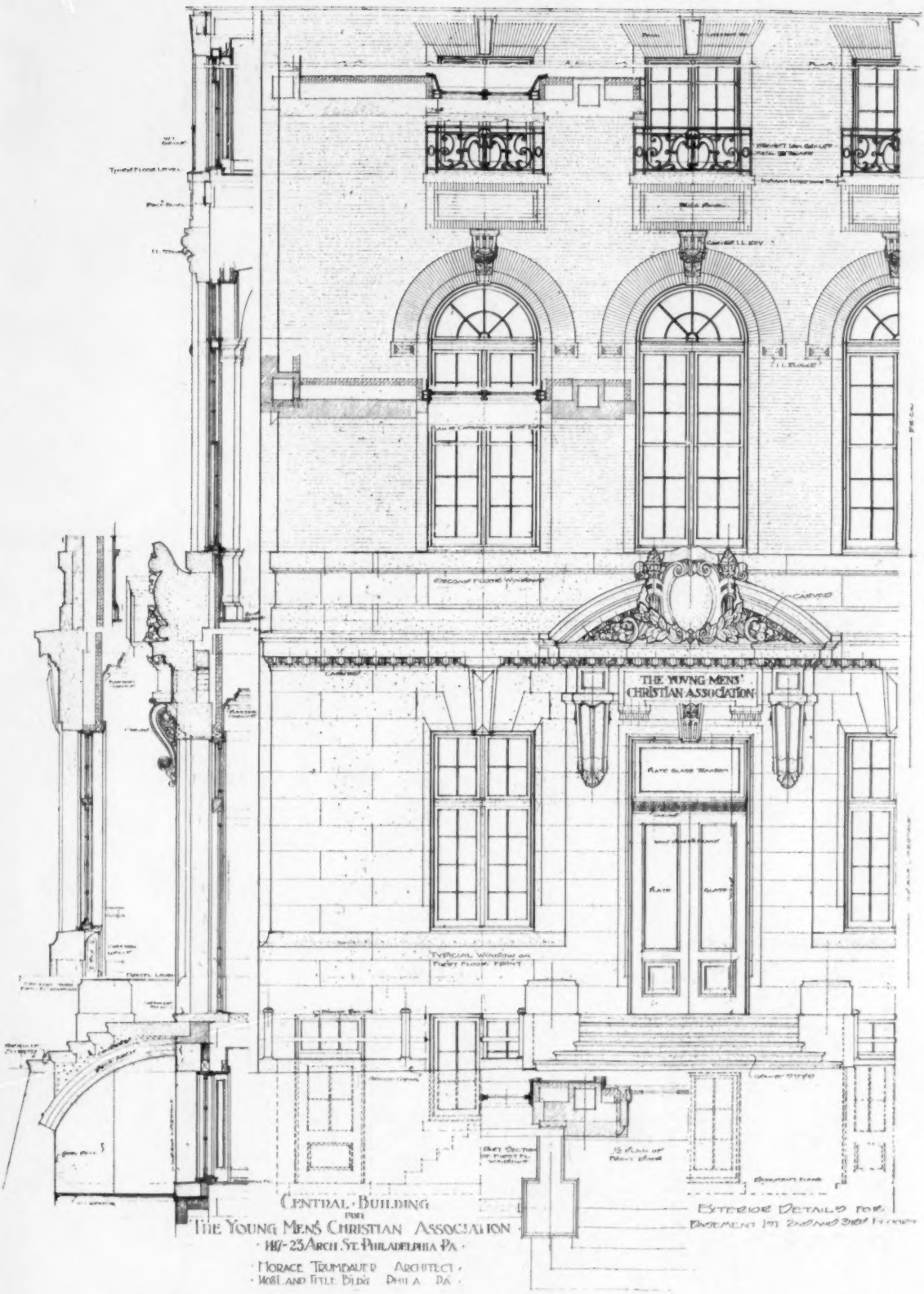


EXTERIOR DETAILS: Y. M. C. A. BUILDING, ARCH STREET, PHILADELPHIA, PA.

Horace Trumbauer, Architect.

HOUSE OF MR. HAMILTON, 1745 JEFFERSON AVE., DETROIT, MICH.

Stratton & Baldwin, Architects.

PHIPPS HALL OF BOTANY, PITTSBURGH, PA.

Alden & Harlow, Architects.

were applied in a way not intended to develop extremely high values of V, while in the Cambridge beams just described of course high values of V were deliberately sought.

These very high values of adhesive stress and shear are presented for record and discussion and I cannot make it too clear that I believe the high adhesive results, at least, may be due, perhaps must be inseparably connected with, the very exceptional method of loading and should by no means be taken as a basis for design until further investigations are made. Either the results are valid as they appear, however, or there are circumstances in which the customary methods of figuring do not apply; if the latter, the reason is yet to be sought. The promising direction for the search, in my opinion, is arch action.

However all this may be, the tests certainly do encourage the hope that richer mixtures will remove much of our reasons for fear of adhesion or shear failure.

So far as verticals or other web reinforcement are concerned, there are results from other beams of that series of tests which have come to light since last spring which are worth reporting briefly at this meeting, pending more detailed publication later. They are as follows:

Some 60 to 70 of the beams of the lean mixture were loaded at the quarter points in a span of 88 in., making the space between loads 44 in. The size and amount of reinforcement the same in general as in the 25 beams loaded as before, except that about half of them had web reinforcement either vertical or diagonal. The vertical consisted of so-called U-bars or stirrups, and pairs of disconnected straight rods thrust into the concrete after filling the moulds, the U-bars and the pairs spaced 6 in. apart measured along the beam. The diagonal consisted of Kahn bars with their wings as well as the bent-up (Hennebique fashion) portions of the main reinforcing rods, in that case smooth round rods.

The rods included round and square smooth rods of low as well as high elastic limits, Johnson corrugated, cold-twisted square, and a variety of end conditions, turned-up ends, nuts and loose washers and ends turned around anchor rods.

In the beams with vertical reinforcement the main reinforcement included all those enumerated in the preceding paragraph, but in those beams the main rods had ends with no modification. The special anchorage of the main reinforcement was in no case combined with vertical reinforcement.

From these 60 or 70 lean beams it appeared that on the whole the best showing, so far as postponing the "first crack" (I mean visible crack) is concerned, came from beams with no web reinforcement whatever, either vertical or diagonal. The rods in some of the best of these cases had nuts and washers at the ends, and the very best had the rod ends turned around another rod. But it is not clear that end conditions were the determining influence, for smooth round rods with nuts and washers were surpassed in cases by similar rods perfectly straight and unmodified. There seemed to be no advantage in high elastic limit over low.

For ultimate strength in the same set of lean beams. the best results come with the web reinforcement, with smooth round rods with nuts and loose washers without web reinforcement a good second.

Unfortunately the rich beams loaded at the quarter points were only five in number, reinforced respectively with smooth round mild steel, smooth square mild steel, smooth square high carbon steel, Johnson corrugated and cold-twisted square, *all* (deformed rods and all) with a nut and loose washer at each end.

The twisted rod led to the highest first-crack result of all, higher than the very best of the lean beam results, and all four others closely bunched alongside the best of the lean beams, with the smooth round rod a little ahead of the remaining three.

The highest ultimate results from this lot of five rich beams came from the high carbon (elastic limit, 71,200), closely followed by Johnson corrugated, next the smooth round, and the twisted square, and worst of all the square untwisted mild steel rod; all rods, be it remembered, had nuts and washers at the ends.

The two best showed much higher ultimate results than the best of the lean mixture, though the latter had web reinforcement and the former did not. The next two were about even with the very best of the lean mixture, and the worst of the five was surpassed by only few of the lean beams. The rich beams were about 103 days old and the lean 150 to 175 days old.

All this would tend to show that a rich concrete, or straight rods with nuts and washers, or both, is the most hopeful means of getting the best results both from point of view of the first crack and of the ultimate strength, and that web reinforcement, whether vertical or diagonal, is comparatively of doubtful utility from these points of view. In lean concrete the verticals at least seem to tend to uniformity of strength, and to slower, more gradual failure.

And it should be carefully borne in mind that the washers used in those tests were the small, thin, standard washers and not secured against the nut except by the concrete as it was packed. Useful as such washers proved, they did not altogether prevent slip except with the round smooth bar, and I believe they would have shown better results still if they had been larger, thicker and secured against the outer nuts.

Richer mixtures than customary, and more carefully designed plate end-anchors and common round rods will accordingly be my next line of study.

I heartily agree with Mr. Wason's plea for uniform figuring of working loads, and I also want to urge the propriety of the general adoption in this country of the practice of the Germans in using what I haven't used until within six months myself, but I am now convinced it is best—and that is a straight line distribution of stress with a ratio of 15. This is a practice thoroughly established in Germany and it gives, as a matter of fact, results almost absolutely identical with the parabolic distribution with a ratio of 10 such as I used to use.

Another point I have had forced on my attention lately is what we want for a factor-of-safety. That is a question that has not been asked to-night, but I think the factor-of-safety a good many times is lower than stated. It seems to me that we ought to insist on a factor-of-safety of 2.5 against the first crack. I think that is a good place to stop—2.5 for the first crack and 4 or 5 for ultimate. The first crack seems to be a pretty serious matter.

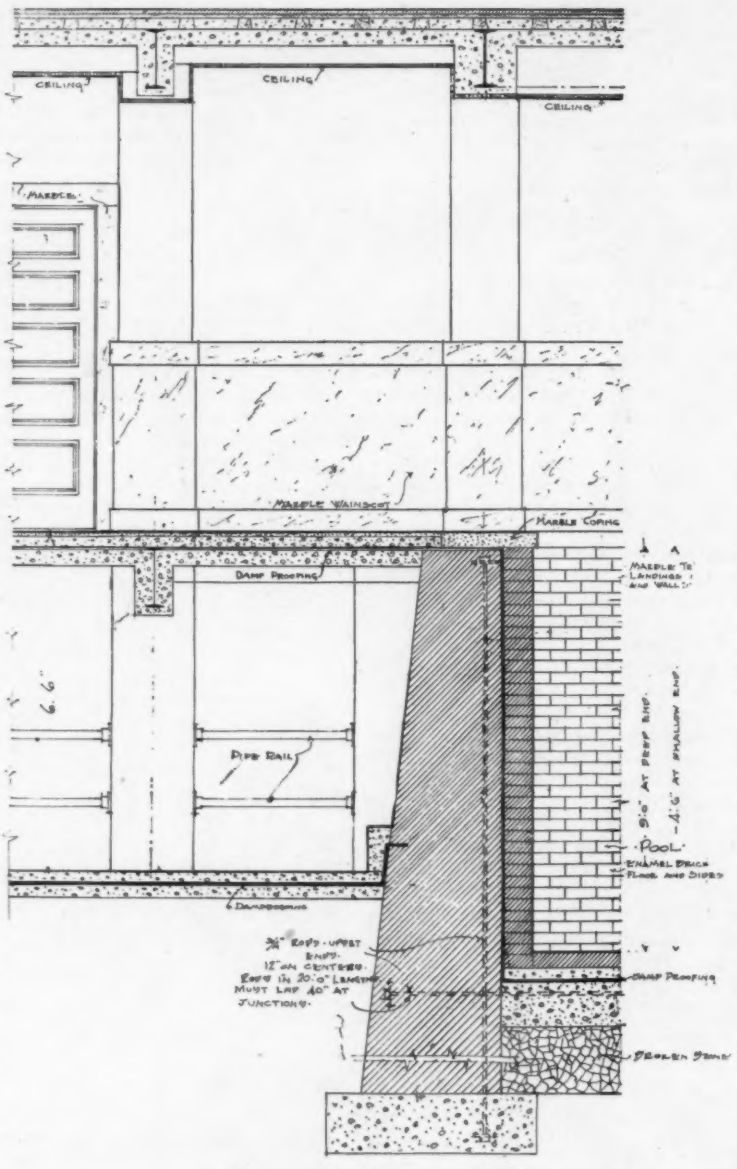
Urban Planning[1]

THE first main distinction between Parisian methods and ours is that in Paris all schemes involving in any way the beauty of the town whether they be for the laying out of new streets, the drafting of new building regulations, or merely the decoration of some public building, are reported on by specially appointed commissions of experts, assisted by the permanent officials. It has become an honor for any artist, whether he be an architect or painter or a sculptor, to serve on these commissions and give freely and without remuneration the best of his ability to the public service. For instance, the Paris building laws were revised in 1896 on the report of a commission which consisted of the following persons: Two municipal councillors, the official who corresponds to our building surveyor, the chief of the department which deals with building lines, the chief engineer, the chief inspector, and the honorary architect to the town of Paris—that is seven official personages. So far it might have been an English departmental committee. But here is the difference; in Paris sixteen other outside architects of distinction were added so as to ensure to the town the best ability, which is not generally willing to submit itself to the trammels of an official position. Such a commission, it will be at once seen, would possess enormous weight. It dared to legislate on many other matters beyond those affecting the health and safety of the public. It imposed a large number of restrictions on buildings which we have not arrived at in England, but it did them with knowledge of the effect to be produced. To take an apparently small matter, but one which has been large in the result. As in Edinburgh and London, though not yet in Liverpool except for domestic buildings, the limiting height of all buildings in Paris is proportioned to the width of the street, but in addition to that the roof is to be

[1]Extract from a paper by Professor Reilly, Director of the Architectural School at the University of Liverpool, read at the "City Beautiful" Congress held at Liverpool, June 27, 1907.

contained within a quadrant of a circle of given radius. The result of this simple regulation has been to bring about a striking uniformity of roofs, which is most important to the regular and monumental appearance of a street, for in a wide thoroughfare it is the masses of roof seen against the sky which are the dominating features of the facades. The Avenue de l'Opera and Rue de Rivoli are good examples of this. Another by-law, more strictly dealing with projections over the public way, has led to the flatter and quieter treatment of town fronts which is so characteristic of a French town. But granting the existence of such a commission as I have related above it is possible for the municipality to exercise a much greater control over buildings than it exercises already, and to definitely prohibit buildings of bad design, as well as to encourage good ones.

In Edinburgh, where the Guild Court, which is largely composed of architects, controls all building operations, the designs for the exterior of buildings about to be erected have to be submitted for approval, together with a statement of the materials to be used. Edinburgh can thus control the appearance of its streets in a way neither Liverpool nor indeed any other English town can. But Brussels and Paris go much farther than this. When a new street is to be opened up they offer definite encouragements to good building by awarding prizes for the best designs for buildings about to be erected in it. Paris even not only gives a prize to the architect, but gives a remission of part of the street tax—that is, of the rates—to the owner of the building. No such direct encouragement to build beautifully has ever been proposed, as far as I am aware, in England, nor would it be much use unless we accepted the system of trusting the awards to juries of experts. In England the building by-laws are drawn up and administered by lay bodies, assisted by officials, who in most cases make no claim to be architects or to have an education in the fine arts.



SECTION THROUGH SWIMMING-POOL: Y. M. C. A. BUILDING, ARCH STREET, PHILADELPHIA, PA.

Horace Trumbauer, Architect.

But if this question of expert advice is necessary in dealing with the details of buildings how much more necessary does it become when a big improvement scheme is projected. For, consider what the cutting of a single new street in a town involves, in addition to the sewering, the lighting, and paving, for which the borough engineers and surveyors are the proper authorities. The intersections the new street makes with every cross street mean important building sites, and the shapes of these sites determine forever the shapes of the buildings to be put upon them. Are they good shapes, conducive to beautifully-shaped buildings? For it is not a sound canon of architectural criticism to say of buildings, as was once humorously said of the University Buildings in Liverpool, that we greatly admire them but much dislike their shape. The ground plan of a building is its most important factor. Will the sites provided make balanced, symmetrical, dignified buildings? These are all questions, I submit, of a purely architectural character, and the City Beautiful of the future depends for its existence on the solutions arrived at, and as such they are as important as those problems of traffic and sewerage which have till now completely held the field.

We are having at this very moment in Liverpool a striking example of the simple disaster which follows the neglect of these questions. The famous George's Dock sites are, it will be admitted, among the most important in the town. They stand at its very gates, and a worthy treatment of them should have the town's first care. Yet the shape and size of these three sites have been determined solely by the carrying through to the river front of Water Street and Brunswick Street, regardless of the fact that the sites so left are of most unequal size and shape. This being so, we are beginning too late to realize that we can never have a balanced composition of the three buildings such as the position demands, and it is consequently rather useless now to complain of one building being higher than the rest. Again, there being in existence no architectural scheme for the whole, we find the Dock Board on one of the *end* sites putting up a building with a very dominant dome, led up to by lesser ones, which is essentially the type of building to form the center of a composition, not one of the wings. I do not know in this case what difficulties, if any, there were in the way of laying out these sites in an architectural manner. If, for instance, it were necessary for Brunswick Street and Water Street to be taken through, why the buildings on the river front could not have been carried over them on arches or by a colonnade; but whatever the difficulties, I feel in France a proper solution would have been obtained even at the cost of a short Act of Parliament. The best architecture can now never make a success of these sites, though beautiful materials and good details may alleviate the disaster.

In London we have recently had an example of the opposite method of dealing with town property—the French method, if I may call it so, though it was the English method, too, from the time of Wren till the end of the eighteenth century. The Crown, in dealing with its Piccadilly and Regent Street property, has formed just such an advisory committee of artists as is com-

missioned in Paris. Two leading independent architects, Sir Aston Webb and Mr. Belcher, were asked to form a committee to join Sir John Taylor, the official architect, in advising the Crown. The result has been that after a century of individualism we are to have once again a complete scheme of harmonious architecture from one end of Regent Street to the other.

Perhaps enough has been said for the establishment of advisory committees of artists. When once established, and if the municipality at its back is endowed with sufficient power, everything becomes possible. To begin with, an ideal plan of the city—ideal only in the sense that it is waiting to be realized—such as Washington and Boston already possess, should be drawn up, towards the ultimate realization of which all improvements should lead. If Wren's for London after the great fire had been adopted how many expensive latter day improvements would have been forestalled. As in Berlin certain districts could be set apart for certain purposes. The development being no longer haphazard the character and consequent value of districts could be maintained. Just as much or just as little variety as the district requires could be allowed to buildings, and not only buildings and streets, but whole districts could be made parts of one harmonious composition. But the possibilities are endless. The one thing necessary for a city, as for an individual, is to have faith, and all else is added to it.

Black-and-White[1]

THE discovery of photogravure has had in two directions an influence on black-and-white art. It has encouraged direct pen-drawing as counter-distinguished from the etching of an earlier day, and almost transformed its character. Pen-drawing has of course always existed; we find numerous examples of it among the Italian masters, though (for the reasons which were explained above) with these it is rarely naturalistic. Rembrandt practised it; but for his own behoof, not as a "public" art. Until the invention of photogravure (this, too, was in the sixties) there were no adequate means for reproducing such work. The other form of black-and-white art which has been directly influenced, almost created, by the new "processes," is drawing by washes in ink or Indian ink. There were no means of reproducing these, and so using them in illustration, until photogravure was invented.

Devotees of any particular branch of art may be expected to exaggerate its merit, and it need not surprise us to find Mr. Joseph Pennell, who is not only a writer on pen-and-ink drawing but himself an accomplished draughtsman after this kind, speak as we have seen he does about the "color," the atmosphere and so forth which masters such as Fortuny and Vierge bring into their pen-drawing. It is natural, too, that he and the special admirers of this work should persuade themselves that it is for the first time realistic. This pen-drawing stands on a different plane from the quasi-realistic etchings of an earlier age. These were subject to certain formulas. Our modern pen-draughtsmen, Vierge for instance, and Mr. Pennell himself (save in so far as he is to be reckoned a mere follower of Vierge) seem to have invented new ones. Their work has a capacity for suggesting wide spaces such as was unknown of old; they have a gift, one may say, of utilizing the unused parts of their sheet. Nor must Gustave Doré be forgotten in this connection: a wretched painter who gained a reputation from the ignorant, he had as a black-and-white artist a good deal of originality precisely in this direction, in the utilizing of blanks, of masses of white or masses of black. With Vierge comes in another element of which we have not yet spoken—the decorative sense. The black priests who officiate in Vierge's processions, the lightly sketched figures looking on, these are contrasted as they could not be in real life. We are then in presence of a new convention: used with what object? To give in the first place a sense of distance contrasting very literally *toto cælo* from those pre-Raphaelite illustrations wherein no atmosphere is found. This is their first object, the second is mere decoration and the distribution of black and white. Let us note, too, the extraordinary deftness of these Spanish masters in pen-drawing, of Vierge, of Fortuny, and of those who have been much indebted to their example, such as Mr. Pennell, which gives to their achievement a separate and æsthetic charm. Yet it must in candor be owned that among modern black-and-white work there is little that is more conventional than theirs.

The average reader of illustrated papers would not probably derive much æsthetic pleasure from another master of pen-and-ink, Caran d'Ache; nor would it appear why a draughtsman whose work appears so rough should be mentioned by the side of these delicate and courtly Spaniards. In the essence, Caran d'Ache's work is anything but rough. His subjects are rude and comic; but few draughtsmen have ever expressed more by the line than he has expressed. Thus the wit of his illustrations lies almost wholly in the draughtsmanship; just as the wit of our most popular caricaturist, Sir F. Carruthers Gould, lies anywhere else but in the drawing, which as drawing is of the worst. Caran d'Ache is supreme when in the simplest outline he gives us a pageful, a whole series of heads, some twenty different types maybe; possibly national types, convincing at the first glance, and yet often far from what we should have guessed beforehand.

As regards one quality spoken of anon—mere decoration—the distribution of black and white in a picture—we have to reckon with a new development of taste derived, as would appear, from the Japanese. From them we have learned the value of the simple balance and arrangement of things. If a Japanese had to place upon a table an inkstand, half a dozen pens, a house-key, a ball of string and a pocket-knife, he would contrive so to distribute these articles that the eye would gain satisfaction from the result. And so with drawing, with the distribution of lines, of masses of black and spaces of white. It is not a very high order of intellect which can gain great pleasure from these arrangements. But it requires a certain artistic sensibility to do so. And just in our time, when special efforts have been made to sequester the artistic sensibilities, to deny any share in them to the toilers and spinners of the world, it is natural that a sort of art should be valued which these artistic sensibilities can appreciate, while it makes the least possible demand upon other intellectual powers. A great deal of black-and-white work, among it some of the types of pen-drawing which we have just spoken of, has profited by the development of this new taste in ornament. The apotheosis of this taste is to be found in the work of Aubrey Beardsley and his imitators: the most unintellectual type of black-and-white production which perhaps the world has ever seen. There was in Beardsley's work also the affectation of a peculiar and individual hideousness in the human forms which he portrayed—if, indeed, they can be called human—which no doubt served the purpose of giving to his admirers a feeling of distinction in the fact that they could see beauty in what to the common man was so hideous. The forms also (let us in fairness confess) have caused both to their author and his followers a more legitimate pleasure of association; for they at once recall the demons on Japanese pictures in colors or in black and white, and in Japanese metal-work. Now almost all Japanese work gives pleasure to the æsthetic sense; but it gives pleasure in spite of, not through, these hideous presentations. In the same way, we may admit that Beardsley's work gained and earned a more legitimate admiration for its deftness and its one great quality, its skill in constructing with a minimum of effort a mere pattern out of black and white. And Aubrey Beardsley has had his direct imitators, not to speak of a much larger number who have been subject to the same kind of influence which affected him—a something in the air. Thus in Germany, and especially in Munich, there has been a whole school of black-and-white artists who have been preoccupied as much as anything, apparently, to get a harmonious pattern on their paper, regarding it partly as if it were in truth a wall-paper. We see specimens of this kind of work in the German comic journals—in *Fliegende Blätter*, in *Kladderadratsch*, or *Simplicissimus*. Sometimes it is a Gothic pattern that the author aims at; yet we may guess that even to him the moving influence has come from Japan.

The extreme of this taste (to give it that word) is found in the French painter Gauguin, who made a public profession that the only art worth studying was that of the Fijians, and who produced both in oils and in black-and-white what seemed to be meant for pictures in closest imitation of his exemplars. Most

[1]Extract from a paper in the "Edinburgh Review" for July.

savage people have in a lesser degree that capacity which distinguishes the Japanese, the gift of arranging harmonious patterns. So that if the mark be to provide the absolute minimum of intellectuality in any form of art, along with some pleasure to the esthetic sense, that mark has been hit by Gauguin.

Of quite another sort is the production of those who work or have worked in washes, that band of joyous and delightful illustrators whom most of us know best and best appreciate when they are engaged with such a worthy text as Daudet's incomparable "Tartarin." J. Girardet, Montégut, De Myrbach, Picard, Rossi are the names of those who collaborated in that special work, among whom De Myrbach and Rossi are the best known.

Widely as all these different productions differ among themselves, it is yet possible to indicate a general current along which all or almost all our art work is being borne at this epoch of time. Work in black-and-white submits to the same influences that have affected painting. Two things seem to distinguish modern art, taken as a whole—its sensitiveness and its unintellectuality. The former is in some fashion the counterpart of the latter. Most modern artists would triumphantly accept the charge of being non-intellectual; only they would translate it into another phrase—non-literary. It is the boast, in many regards the legitimate boast, of modern art that it is not literary, that it does not confound two different arts, that it does not tell stories in its pictures, nor appeal to the vulgar emotion of simple curiosity. And it would claim to be much more sensible or sensitive than was the art which immediately preceded it to those emotions which rightly belong to art, to fine tones of color, to harmonies, to all the elements that distinguish real impression got from outward objects, from what we "know" concerning them. We have seen how modern black-and-white has upon its side freed itself from many bonds which came from literature, has freed itself to a large extent from that tyranny of the line whose title rests much more on its aptness in the giving of information than in the gratification of an artistic sense. One cannot say but that this is a good, if this were all: what is not so good remains behind. For often this artistic sensitiveness degenerates into a sort of hysteria, a sort of delight in all that is intellectually stupid, because it is therefore not outside the regions of art; and then, passing over as hysteria does to the opposite of its first state, it turns into a pleasure in insensibility, in coarse blotchings, in fantastical ugliness and all other kinds of tomfoolery, such as we find in Beardsley and his school.

For the "unintelligence" of modern art, however, that is not so much its special characteristic: it but sadly reflects the unintelligence and unintellectuality of modern life generally—of modern society, which is marked by a decadence in almost every branch of literature. In that field, in place of the greater histories of an earlier time, works which were literally monuments, it gives us "treatises" or handbooks; or else those gossipy, half-informed volumes of which the libraries are full. In the sphere of fiction it has kept us stationary or retrograde, practising a bygone mode beside other nations who are reaching forward to and grasping new fashions of the art; and it has made poetry in England a neglected and a negligible thing. This unintellectuality is reflected likewise in art; and, with all other branches of it, the art of drawing in black-and-white.

ILLUSTRATIONS

Y. M. C. A. BUILDING, ARCH STREET, PHILADELPHIA, PA. MR. HORACE TRUMBAUER, ARCHITECT, PHILADELPHIA, PA.: SIX PLATES.

HOUSE OF MR. HAMILTON, 1745 JEFFERSON AVE., DETROIT, MICH. MESSRS. STRATTON & BALDWIN, ARCHITECTS, DETROIT, MICH.

PHIPPS HALL OF BOTANY, PITTSBURGH, PA. MESSRS. ALDEN & HARLOW, ARCHITECTS, PITTSBURGH, PA.

Additional Illustrations in the International Edition.

ENTRANCE PORCH: HOUSE OF MR. HAMILTON, DETROIT, MICH. MESSRS. BALDWIN & STRATTON, ARCHITECTS.

NOTES AND CLIPPINGS

AN OVER-SEA RAILWAY.—Some eighty miles southwest from the coast of Florida is the small coral island of Key West (*Cayo huesto*, the key or island of bones), once the resort of pirates, but now the site of the chief city of Monroe County, and the most important naval station of the United States. Between the mainland and this isolated spot extends the remarkable chain of islands known as the Florida Keys, about to be linked up by an extension of the Florida East Coast Railroad. The new line will be literally an over-sea railway, for many of the islands are separated by channels several miles in width. Some thirty miles south of Miami, the present terminus, the line passes for twenty miles through the Mangrove Swamps, where there is not enough water to float dredges, and not enough material at hand for the construction of embankments. It next enters a wide expanse of salt-water marshes, across which trestle viaducts are being carried, as the soil is not capable of supporting a solid roadway. About thirty of the islands are to be utilized for short sections of the railway, but after Key Largo has been passed none of them are of any great length, and fully seventy-five miles of the new railway will be carried across the sea. More than fifty miles of rock and earth embankment will be built in shallow water, and in places where the depth is more considerable and the channels are exposed to storms, owing to gaps in the outer coral reef, concrete viaducts will be built with arches of 50 ft. and 60 ft. span, supported on piers rising from the sea bed from 10 ft. to 30 ft. below the surface. Four such viaducts will be required, ranging from nearly a mile to more than two miles in length each. The longest of these viaducts is already in course of construction, some idea of its importance being given by the statement that it will comprise 217 arches rising to the elevation of 31 ft. above high-water level.—*The Builder.*

THE TOWER OF ST. MARK, VENICE.—The committee of artists, architects and engineers which is superintending the restoration of the Campanile, Venice, has issued a report which includes the following items: The committee is perfectly satisfied with the choice of the building material and does not agree with the opinion of Professor Luscardo, which led to the interruption of the work. The brick selected is strong and durable in spite of the efflorescence which is produced by the sulphates it contains. The mortar also has the necessary properties, although the sand is limy and the cement contains, like all cements, a small admixture of sulphates. The report observes that although technically a chemically pure material is desirable, yet the beautiful weathering of brick in Venice is due to impurities in the material, which are not necessarily harmful. The second part of the report deals with the work already executed. The committee is thoroughly pleased with the foundations, which have been built with great care. Since the whole building is to be lighter, its base widened, and its greatest weight at the periphery carried by new ground walls, the pressure per square centimeter has been reduced from 10 to 4.3 kg., hence lessened by a half. The committee sanctions the use of ferro-concrete for the belfry and the steeple, as also the method of placing the angel on the apex. The third part of the report deals with the exterior of the tower. Venice is responsible for the catchword "Where it was, and as it was." The committee is of opinion that "as it was" does not mean that the accidental inclination of the building, the unequal base, the crushed, bad material and the patina on the old belfry shall be reproduced. The form will be the same old form; the material new, albeit matching the old as far as may be, but the evils wrought by time are not to be artificially supplied. Finally, the report sanctions the restoration of the five external steps up to the tower, only three of which remained visible owing to the sinking of the building. The Loggetta is to be built independent of the Campanile, which under favorable circumstances should be completed towards the end of 1909.—*The Builder.*

THE OLYMPIAD STADIUM, LONDON.—As president of the British Olympic Association, Lord Desborough on July 31 raised the first stanchion in the construction of the great stadium that is to be built for the fourth international Olympiad, to be held in London next year. The stadium will hold 70,000 spectators, besides having dressing-rooms and other accommodations for the athletes. The arena in which the games will be held will be 1,000 feet long and 700 feet broad and will have a broad cycle track of two and three-quarter laps to the mile. Inside this will be a running track of three laps to the mile. There will also be alongside the track a huge swimming-pool, with a deep space in the middle for high diving and water polo. It will be over 109 yards in length.—*Exchange.*

CURRENT NEWS SECTION

SOCIETIES.

PITTSBURGH ARCHITECTURAL CLUB.

The special sections of the exhibition to be held here in November will be: No. 1, Special large problem groups, plans, etc.; No. 2, Current good work of the day, consisting of plans, elevations, sections, perspectives and photographs of executed work; No. 3, New monuments of architecture of the United States; No. 4, Landscape architecture, sketches of paintings of decorative subjects, cartoons for stained glass and sculpture; No. 5, Drawings from leading technical schools, universities and colleges; No. 6, Foreign sections, consisting of drawings from the École des Beaux-Arts, England, Germany and Austria. The committee in charge of the affair is composed of Richard Kichnel, chairman; Stanley L. Roush, James M. McQueen, John T. Combs, Benno Janssen and M. A. Vinson.

PERSONALS.

PERTH AMBOY, N. J.—Messrs. Charles Howard Smith and William A. Crowell have formed a partnership to supervise and inspect buildings, drawings and specifications, and have opened their office in Room 4 of the McCormick Building.

LAWRENCE, MASS.—Mr. Henry W. Rowe, of 185 Jackson Street, has opened an office as an architect in partnership with George M. Magee, of Wenham, the firm name being Magee & Rowe. The office is in the Crompton Building, 161 Devonshire Street. Both of the young men are graduates of the Institute of Technology, being members of the class of 1904. After completing their studies at Technology, the two young men were associated at intervals with the architectural firms of Peabody & Stearns, Boston; Shepley, Rutan & Coolidge, Boston, and Chicago, and Parker & Thomas, Boston.

ST. LOUIS, MO.—Mr. J. L. D. McCarthy, a St. Louis architect, was arrested July 30 on a warrant sworn out by F. Oswald, a member of the Illinois Board of Architects, charging him with practising his profession in Illinois without a license. McCarthy was fined $10 and costs by Police Magistrate Grosh. He was told that he must procure a license before he would be allowed to finish the work he has started in Alton.

LOS ANGELES, CAL.—After a critical illness of more than three months, E. F. Kysor, for many years one of Los Angeles's most prominent architects, died here July 24. Mr. Kysor was born at Cattaraugus, N. Y., June 8, 1835. He came West late in 1865, and finally reached Los Angeles in 1868. Eight years later he founded the firm of Kysor & Morgan, architects, and the firm, of which he was head until 1890, designed the buildings of the University of Southern California and several other well-known structures. Since 1890 Mr. Kysor had been retired from active business.

BUILDING NEWS.

(The editors greatly desire to receive information from the smaller and outlying towns as well as from the larger cities.)

ALEXANDRIA, MINN.—Plans for the new Federal Building at Alexandria are now in the hands of Postmaster White and proposals for construction have been invited, to be received in Washington before August 19. The plans show a handsome structure 64x50 feet, one story with high basement. The material specified is gray brick with stone trimmings. The floors and interior finishings will be of hardwood.

ALEXANDRIA, VA.—The Fairfax Apartment Company has awarded a contract to Julian D. Knight for the construction of an apartment house at the northeast corner of King and Columbus Streets; four stories, 50x100 feet, brick with stone trimmings, structural iron and steel, electric wiring and fixtures, sanitary plumbing, heating system, cost about $35,000. Oscar G. Vogt, architect, Corcoran Building, Fifteenth and F Streets N. W., Washington, D. C.

ALLEGHENY, PA.—The Tenth Ward of Allegheny has secured a bond issue of $150,000 to be used for a new fireproof brick school house to have fourteen rooms. Architect has not been selected. D

ASPINWALL, PA.—St. Scholastica's congregation is having preliminary plans prepared for a church. Cost, $20,000. The pastor can be addressed.

ASHTABULA, O.—We are advised that Howard, Inscho & Merriam, architects, of Columbus, O., have prepared plans for a clubhouse for the Elks Club, to cost $45,000. Building will be of brick and stone.

ATHENS, W. VA.—Mercer Healing Springs Co., incorporated with capital stock of $50,000, to build hotel, etc., by R. G. Meador, Joseph Caldwell, R. H. Fletcher and others.

ATLANTA, GA.—Atlanta Athletic Club Building, recently noted to be erected, will be 104x128 feet; frame; three stories and basement; cost about $40,000; architect, H. L. Walker, Candler Building; contractors, Gude & Co.

AUGUSTA, GA.—The City Hall Commissioners reported progress to the City Council last night and they were given acclaim and every encouragement by that body. Through Wm. Lyon Martin, secretary report was made that the commission had agreed upon a $200,000 structure, on the site selected for new City Hall purposes, at Union Station place. They further reported that they had engaged Mr. Lewis F. Goodrich, architect, to prepare the plans

AUSTIN, TEX.—A gymnasium will be erected at the State University at a cost of $100,000. Address T. W. Gregory, Chairman of the Athletic Association, for information.

Proposed improvements in the city of Austin are two large buildings, one to be eight stories high and the other four stories. The eight-story building is to be erected by Scarborough & Hicks, and will be located on the corner of Congress Avenue and West Sixth Street. The four-story building will be erected by John H. Chiles, on Congress Avenue.

BALTIMORE, MD.—It is stated that Baldwin & Pennington, architects, Professional Building, 330 North Charles Street, have completed plans and specifications for large reinforced concrete car barn to be erected at corner Druid Hill and Fulton Avenues for the United Railways & Electric Co. Estimates on construction will be taken.

BEVERLY, MASS.—Cooper & Bailey are the architects for a memorial high school building which is to be donated to the town of Bristol, R. I., by Colonel Colt of that town, and which will cost when finished about $250,000. It is of white Georgia marble. The building will be completed in the early winter.

BIRMINGHAM, ALA.—Plans are being considered for the erection of a wing to St. Vincent's Hospital at a cost of $50,000.

BOSTON, MASS.—The Board of Aldermen has passed the loan bill, which provides for the following: $30,000 for bath house at Charlestown; $140,000 for buildings and equipment at Consumptives' Hospital; $15,000 for fire house and apparatus in Park Hill, and $15,000 for fire house, site and apparatus, in Orient Heights, East Boston.

The Pi Eta Society of Harvard will erect a new clubhouse on the present site on Winthrop Square, Cambridge. The structure, including the furnishings, will cost $40,000.

BROOKINGS, S. D.—The State Board of Regents have purchased a site for the new dormitory across Medery Street from the college campus. The plat is 320x420 feet. The last legislature appropriated $50,000 for the building, and as soon as plans have been decided upon work will begin of the board to have the base completed this fall.

BROOKLYN, N. Y.—Kotzen Realty Co., 230 Grand Street, Manhattan, will build a six-story store and tenement, 50x90 feet, on the northeast corner of Johnson Avenue and Lorimer Street, to cost $50,000. Samuel Sass, 23 Park Row, is architect.

Pomerantz Bros., 159 Heyward Street, will build on the north side of Ellery Street, 250 feet east of Tompkins Avenue, a five-story brick tenement, 50x88 feet, to cost $40,000. R. T. Rasmussen, 30 Graham Avenue, is architect.

S. Millmann & Son, 1787 Pitkin Avenue, are preparing plans for a six-story structure, 100x100 feet, for Samuel Silverstein, 1747 Pitkin Avenue, to be erected at Stone Avenue, northwest corner of Liberty Avenue, at a cost of $130,000.

The Concrete Steel, Tile & Construction Co., 1 Madison Avenue, has received the general contract to erect an eight-story concrete and steel structure, 165x174 feet, for the Mergenthaler Linotype Company, of the Tribune Building, in addition to the company's plant on Ryerson Street and Park Avenue, Brooklyn. Operations have already commenced. Architect Albert Kahn, of Detroit, Mich., prepared the plans.

Preliminary plans have been prepared by Lord & Hewlett, 245 Fifth Avenue, New York, for the proposed municipal building for the Borough of Brooklyn. The structure will be built in two parts, each costing about $3,000,000. It will be ten stories high, constructed probably of marble, about 278x180. Bird S. Coler is President Borough of Brooklyn.

BURLINGTON, IA.—Temple, Burrows & McLane, architects, of Davenport, are preparing plans for the new high school building, to cost $130,000.

BUTTE, MONT.—Bonds to the amount of $750,000 were voted for the erection of a court house in Silverbow.

CALUMET, MICH.—D. F. Charlton, architect, of Marquette, has been engaged to prepare plans for the library and museum building, to be erected at the State College of Mines next year. The contract will be let about April 1. Cost, complete, $75,000.

CAMDEN, N. J.—It is stated that a hospital for contagious and infectious diseases is to be erected here at a cost of $50,000.

CHARLESTON, W. VA.—Judge C. W. Hall, Charleston, W. Va., is at the head of the committee who are looking after the proposed K. of P. building to be erected in this city. Cost, $100,000.

CHARLOTTESVILLE, VA.—Thos. S. Martin will build a residence in colonial style; to cost $50,000.

CHENEY, WASH.—H. M. Shafer, principal of the State Normal School, announces that contracts will be awarded, October 10, for buildings, to cost $60,000.

CHICAGO, ILL.—Postle & Mahler, architects, 204 Dearborn Street, have prepared plans and will take estimates for a warehouse building at Blue Island Avenue and Leavitt Street for the International Harvester Co., 7 Monroe Street. The structure is to be seven stories high, 178x256 feet, built of brick and stone, steel construction, with fireproofing, composition roof. Cost, $700,000.

The International Harvester Co. is reported to have awarded contract for erection of a five-story warehouse, 179x258 feet, at Twenty-sixth and Leavitt Streets, to the Federal Improvement Co., The Rookery. Amount of contract, $200,000. Postle & Mahler, architects, Marquette Building.

Plans have been completed by C. A. Eckstrom, 131 La Salle Street, for a mercantile building at the corner of Wabash Avenue and Eldredge Court for Robert P. Bass, 189 La Salle Street. The building is to be eight stories high, 42x165 feet, built of brick, steel and mill construction. Estimated cost, $190,000.

Samuel Schweitzer is constructing a five-story building at 129 and 133 West Lake Street to cost $75,000. The land fronts 60 feet and has a depth of 155.

Architect J. E. O. Pridmore, 1701 First National Bank Building, 164 Dearborn Street, is preparing plans for a theater building to be built at Halsted and Sixty-second Streets for the Englewood Stock Company. It will be five-story, 84x125 feet, of fireproof construction, with pressed brick, stone and terra-cotta front.

Tom Chamales, proprietor of the Savoy Cafe, 363 Wabash Avenue, contemplates the remodeling, in the spring of 1908, the entire four-story buffet and hotel building, with a frontage of 72 feet, at the southwest corner of Wabash Avenue and Harrison Street. There will be two stores fronting on Harrison Street, and the entire interior of the building will be remodeled. The improvements to consist of new interior wood finish, new plumbing and wiring, considerable marble, tile and mosaic work and general repairs, to cost in all about $100,000.

Architects Huehl & Schmid, Metropolitan Block, 167 Randolph Street, are taking figures on a manufacturing building to be built at Ohio Street and La Salle Avenue for the Home Herald Company, publishers, Frank L. Chapman, manager, 110 La Salle Avenue. It will be seven-story, 100 feet square, of reinforced concrete fireproof construction, pressed brick and stone fronts; cost, $100,000.

Architects William H. Pruyn, Jr., & Co., 4217 Berkley Avenue, is completing plans for another apartment building to be built on the south side of Alexander Place, near Sheridan Road, for Olof and Louis M. Olson, builders, 37 Alexander Place. It will be three-story, have pressed brick and stone front, and cost about $50,000.

The Windsor Park Presbyterian Church, Rev. C. N. Wilder, pastor, corner Seventy-sixth Street and Bond Avenue, contemplates the erection of a new church at the northwest corner of Bond Avenue and Seventy-sixth Street, on a lot 87x150 feet. It is estimated to cost $30,000.

CINCINNATI, O.—Architects Tietig & Lee, 528 Walnut Street, have prepared plans for a four-story manufacturing plant on Second and Elm Streets for Thomas Lee, Second and Elm Streets. Cost, $40,000.

CLEBURNE, TEX.—Architects Sanguinet & Staats, Dallas, have plans for the erection of a new school. The building will be 95x141 feet. Cost, $75,000.

CLEVELAND, O.—Architect Paul Matzinger, The Arcade, has prepared plans for a church for the Calbery Evangelical congregation to cost $30,000.

Architect F. Baird, American Trust Building, is preparing plans and will receive bids August 20 for an apartment house to be erected for the Ingram Realty Co. It will be erected on the boulevard near Wade Park Avenue. Cost, $80,000.

CLINTON, IA.—John Morrell & Son, architects, have completed plans for the Scottish Rite Cathedral for the Masonic Temple Association. It will be four stories, 95x99, pressed brick, Bedford stone. Cost, $100,000.

COEUR D'ALENE, IDA.—The citizens will vote on the question of bonding the city for $40,000; proceeds to be used for erecting a three-story building.

COLORADO SPRINGS, COL.—Work on the new federal building will be started about September 1.

COLUMBUS, O.—The plans for the new five-story business block, corner High and Town Streets, for the F. & L. Lazarus Co., are being worked out at the office of the architects, Richards, McCarty & Bulford. The bids on this work will not be received until about the first of September.

DANBURY, CONN.—Governor Woodruff has signed the bill appropriating $35,000 for the erection of a new building for the Danbury Hospital. Preliminary plans for the building have been made by Philip N. Sutherland, Danbury.

DANVILLE, KY.—Caldwell County College has appointed committee to secure plans and specifications for proposed additional buildings.

DAVENPORT, IA.—The Y. M. C. A. Building Committee, G. S. Johnson, chairman, will erect a building to cost $100,000.

DAYTON, TENN.—City School Bond Commission will open proposals August 12 for erection of school building; drawings and specifications by Bearden & Foreman, of Knoxville, Tenn., and can be inspected at offices of Dayton Bank & Trust Co., in Dayton.

DENVER, COL.—Plans have been prepared by Architect Frank S. Snell, 1517 Tremont, for a syndicate of home buildings, to be erected at Pearl Street and Washington Avenue, Thirteenth and Fourteenth Avenues. Cost, $155,000.

A permit has been issued to Lee Callahan for an apartment building at the corner of Grant and Nineteenth Avenues. Plans were prepared by Architect G. L. Bettscher, Mack Block. Cost, $65,000.

Plans have been prepared for the new public bath and swimming pool to be erected at Twentieth and Curtis Street. Bids will be asked for within two weeks.

Gougar & Todd will build a four-story hotel and store between Fourteenth and Fifteenth Streets, on California. Bids are being taken and the contract will be let soon. Part of the lower floor will be occupied by their store. The three upper stories will be made into a modern hotel, with elevators. Joseph Wilson, in the Ferguson Building, is the architect, and estimates the cost will be $50,000.

Humphreys & Merrit, who recently bought the old church building at Nineteenth and Welton Streets, are planning to erect a business block there in the near future. Cost, $100,000.

City Building Inspector Roert Willison has completed the plans for the new public bath house and swimming pool to be erected at Twentieth and Curtis Streets. Bids will be advertised for the construction work, and as soon as these are in the foundation will be started; $70,000 has been appropriated for the institution to be constructed here.

DES MOINES, IA.—Chas. Weitz & Sons have started work on the grist mill at Sixth and Corning Streets, to cost $40,000.

The Des Moines Brewery Co. has been incorporated, with $400,000 capital, and will erect a plant. The building will be about 185x185, two to four-story, steel and concrete, fireproof. Cost, $250,000.

The Still College of Osteopathy is raising funds with the intention of erecting a hospital in connection with the college. Cost, $50,000.

Proudfoot & Bird will receive bids until August 21 for the contract of four new buildings at the State College at Ames. The buildings will be a dairy farm building, a poultry barn and a feed barn. The total cost of the buildings will be about $40,000.

A new theater is to be erected in Duluth to replace the Metropolitan. Cost, $100,000.

DILLON, MONT.—The Oregon Short Line will construct a modern passenger depot here, a freight depot, park the grounds and make other improvements. Cost, $250,000.

EAST ORANGE, N. J.—It is said that Mr. Frank Leslie, of East Orange and New York, is having plans drawn for a $100,000 apartment hotel, to be erected in East Orange.

ELKINS, W. VA.—Lutheran Church, Rev. W. C. Ney, pastor, will build edifice.

EXETER, N. H.—Messrs. Cram, Goodhue & Ferguson, 170 Fifth Avenue, Manhattan, and Boston, Mass., architects for a dormitory for the Phillips Exeter Academy, Exeter, N. H., have plans ready for figures. Estimated cost about $50,000.

FAIRBURY, NEB.—Plans have been prepared for the $50,000 hotel building for the Boone Co.

FORT WAYNE, IND.—Architect Weatherhogg, associated with another, is preparing plans for the proposed new hotel to be erected here at a cost of $200,000.

FORT WORTH, TEX.—Missouri, Kansas & Texas Railway is understood to have decided upon the erection of freight depot to cost $100,000; A. A. Allen, general manager, Dallas, Tex.

GALESBURG, GA.—At a meeting of the Building Committee of the Sunday Evangelistic Association held last evening in the Y. M. C. A. rooms plans for a huge tabernacle to be used for the Sunday meetings, which will be held here in September, were adopted. The building is to be located on the old Frost lots at the corner of Simmons and Cedar Streets.

GALVESTON, TEX.—A movement is on foot to have the accumulated funds from the State quarantine collections at Galveston reinvested by the State in a brick building in Galveston. The idea is to erect a three-story brick building. There is something like $40,000 in the State quarantine fund.

Improvements to the amount of $50,000 are to be made on the Tremont Hotel here.

GREEN BAY, WIS.—The County Board has invited sketches for a court house, jail and sheriff's residence, to cost $300,000. The designs must be submitted by 11 A. M. October 15.

GREEN CASTLE, IND.—The trustees of Depaw University have ordered plans and will soon ask for bids for the erection of a new library building. Estimated cost, $50,000. Bohlen & Son, Indianapolis, architects.

GREENSBURGH, PA.—We learn through our special correspondent that the Westmoreland National Bank will erect a six-story bank and office building in Main Street, Greensburgh, Pa., from plans drawn by Architects Topp & Blair, Westinghouse Buifding Pittsburg, Pa.

HARRISBURG, PA.—Mrs. R. H. Graupner is stated to have had plans prepared for a six-story hotel to be erected at Fifth and Market Streets, at a cost of $150,000.

HIGHLAND PARK, ILL.—Plans are being prepared for the Home for Aged and Disabled Railway Employees at this place. Cost, $75,000. Address Grand Chief Warren S. Stone.

HOQUIAM, WASH.—Plans have been prepared by Architects Reid & Briggs, of Aberdeen, Wash., for a hotel to be erected here. Cost, $75,000.

JACKSON, MICH.—W. A. Boland, of New York City, has had plans made by Claire Allen, architect, of this city, for a residence to be built at Yonkers, N. Y. The house is to be built of marble.

JAMAICA, N. Y.—The First Presbyterian Church will build a new edifice on Union Avenue, 55x82 feet, to cost $35,000.

JENNINGS, LA.—It is stated that $40,000 school bonds have been sold. Plans for the school have been prepared.

JOPLIN, MO.—The removal of the buildings from the lots belonging to E. T. Webb at the corner of Pennsylvania and Joplin, in preparation for the vacation of the site of the proposed new $75,000 edifice for the Methodist Church, South, has begun.

KANKAKEE, ILL.—The County Board has under consideration the erection of a court house in Kankakee County at a cost of $225,000.

KANSAS CITY, MO.—It is reported that D. Ricksecker has decided to erect a brick store building at Walnut and Ninth Streets, to cost about $100,000.

The permit for the three-story brick and steel addition to the Jones Dry Goods Company Building, to cost $200,000, was issued from the office of the Superintendent of Buildings the past week.

KEOKUK, IA.—Plans have been prepared by Architect H. E. Radcliffe for a church for the Baptist congregation at a cost of $35,000. Rev. J. T. Saunders, pastor.

H. E. Ratcliffe, architect, has prepared plans and will receive bids for a church, 75x100, for the Baptist congregation, Rev. J. T. Saunders, pastor.

KNOXVILLE, TENN.—Plans are about complete for the erection of an addition to the Gay Street building of Daniel Briscoe, Bro. & Co., and work will begin on the construction within ten days. This addition will cost about $30,000. The plans are in the hands of Baumann Brothers, architects, and provide for a building 49x140 feet.

A four-story building will be erected on the property of Mrs. George W. Baxter on Jackson Avenue just opposite the Southern Railway freight depot for the Haynes-Henson Company. Cost, $30,000.

LA CROSSE, WIS.—The Vote Berger Co. will erect a plant to cost $35,000. W. E. Bennett, architect, is preparing plans for a fireproof plant.

Van Ryn & DeGelleke, architects, Milwaukee, will be ready soon with plans for the new $250,000 normal school, but owing to difficulties with the appropriation, the continuation of work may be held up.

LEWISTOWN, MONT.—N. C. Gauntt, architect, North Yakima, Wash., has been engaged to prepare plans for a court house to cost $90,000.

LEXINGTON, KY.—Board of Education contemplates calling an election to vote on issuing $75,000 bonds for erection of school buildings; R. P. Shryock, president.

LONG BEACH, L. I., N. Y.—Plans are contemplated, it is stated, for building a $1,500,000 hotel at Long Beach on the site of the one burned July 29. A concrete walk, five and one-half miles in length, is also to be constructed to cost $750,000, and 100 reinforced concrete houses with steel will be built at a cost of $12,000 to $20,000 each. This whole work is expected to be completed by the spring of 1908. The hotel will be built of reinforced concrete and steel, and will contain 800 rooms, each provided with a bath, supplied with hot and cold, salt and fresh water. The hotel will have salt water tanks in the basement, which will be stocked with fish of all kinds. The block adjoining the hotel site has been bought, and a bathing pavilion and a swimming pool, somewhat similar to the new Casino at Deal Beach, N. J., will be established there. Tennis courts, squash courts and racquet courts will adjoin the tanks. Jason Waters, Windsor Hotel, Atlantic City, N. J., is interested.

LOUISVILLE, KY.—A three-story office building will be erected here by the Louisville Gas Company and Louisville Lighting Company at a cost of about $75,000. D. X. Murphy, architect.

Plans are being prepared for a new court house in Jefferson County, to be three stories; cost, $75,000. G. H. McMillon, County Judge, Pulaski, Tenn.

LYNCHBURG, VA.—First National Bank has accepted plans by Lewis & Burnham for proposed bank building recently mentioned. P. Thornton Marye, of Atlanta, Ga., is associate architect; building to be 37x132 feet; two stories; exterior of Georgia marble; to cost $70,000.

MARSHALSEA, PA.—A new wing will be added to the asylum here. Cost, $50,000.

MASON CITY, IA.—The management of Mercy Hospital, Dubuque, offer to erect a $50,000 hospital here.

MAYAGUEZ, PORTO RICO.—The Insular Government has just let a contract for a Reform School building which will cost, when completed, about $55,000. There is also an approved project for the repair and completion of an iron pier erected by the Spanish Government about 1893. Estimated cost, $36,000.

MAYSVILLE, KY.—Richards, McCarty & Bulford, Columbus, O., have plans ready for bids for a six-story bank and office building at Maysville for the First National Bank.

MEMPHIS, TENN.—Horn Bros., owners, will construct fireproof flat building, 42x145 feet; cost, $40,000.

Plans are being prepared by Architects Hanker & Cairnes, Scimitar Building, for a residence at Central Avenue and Belvidere Boulevard for the Belvidere Improvement Company. Cost, $250,000.

MINNEAPOLIS, MINN.—The International Sugar Feed Co. will erect a plant to cost $100,000. A fireproof building will be erected.

MILWAUKEE, WIS.—Plans are being prepared for an annex to the Milwaukee Hospital between Cedar and State and Twenty-first and Twenty-third Streets. It will be 102x48 feet, and cost $60,000.

The Board of Public Works has purchased a site for a new branch public library and a natatorium in the Eighth Ward.

MONTREAL, QUE.—Plans have been completed for the construction of the new engineering building at McGill University, to take the place of the one destroyed by fire in April. The building permit was granted to the McGill authorities recently. The structure will be fireproof, and it is estimated that the cost will be about $275,000. Percy E. Nobbs, Professor of Architecture at the University, is architect.

MUSCATINE, IA.—Plans have been prepared by Architect J. E. Mills, Washington Arcade, Detroit, Mich., for a court house in Muscatine County, to cost $150,000.

Miss Mira Hershey will erect a six-story building at Muscatine; cost, $160,000.

NEW YORK, N. Y.—Thirty-second Street, 12 and 14 West, for a twelve-story brick store and office building, 33.8x85; Pacific

Realty Co., of 907 Broadway, owner; Rouse & Sloan, architects; cost, $200,000.

It is stated in the daily press that Wm. A. Boring, architect, has prepared plans for a six-story building for the St. Agatha's School for Girls. Building will be of brick and limestone, 62x80 feet, and erected at the corner of West End Avenue and Eighty-seventh Street. Cost, $250,000.

Plans are being prepared by Architects Buchman & Fox, 11 East Fifty-ninth Street, for a twelve-story bank and office building for the Fleischman Realty & Construction Company. Cost, $300,000.

Plans have been filed with the Building Superintendent for a ten-story and basement apartment house to be erected for the Sixty-fourth Street Co. at the corner of Madison Avenue and Sixty-fourth Street. It will have a frontage of 121.8 feet and a depth of 100 feet, and is to cost $800,000. William E. Mowbray, 1298 Broadway, is architect.

It is reported that Thomas R. A. Hall, 39 East Forty-second Street, has commissioned Architect Alexander M. Welch, 11 East Forty-second Street, to complete plans for an apartment house, to be erected on the site of the old Babcock estate, 636 Fifth Avenue, in the St. Regis Hotel district. The plot measures 36.1x131 feet, and is covered by a four-story and basement dwelling, situated at the southwest corner of Fifty-first Street.

Plans have been prepared by Architects Neville & Bagge for two six-story apartment buildings on 148th Street for Emanuel Krulewitch, 145th Street and St. Nicholas Avenue. Cost, $300,000.

Architects Franklin A. Green, 500 Park Avenue, and John A. Van Pelt, 501 Fifth Avenue, have prepared plans for a four-story and basement school to be built at the southwest corner of First Avenue and Fifty-sixth Street for the Roman Catholic Church of St. John the Evangelist, of which the Rev. Dr. J. F. Flood is rector. Cost, $80,000.

Plans have been filed with the Building Superintendent for a five-story Home and Institute for Seamen, to be built at the corner of Jane and West Streets, by the American Seamen's Friend Society, of which the Rev. Charles Augustus Stoddard is head. The interior arrangement will comprise a restaurant and a swimming pool in the basement, an assembly hall and a chapel and reading room on the main floor, and social halls and dormitories on the upper stories. There will also be a bowling alley in an extension. The building is to cost $150,000. Boring & Tilton, 32 Broadway, are architects.

L. F. J. Weiher, 103 East 125th Street, is preparing plans for a six-story tenement for B. Bernetti, 309 East 116th Street, to be erected on the west side of First Avenue, north of 114th Street, to cost $75,000.

The Hall Realty Co., 3078 Broadway, will erect six-story flats at the southeast corner of Broadway and 112th Street, for which Architects Neville & Bagge, 217 West 125th Street, are preparing plans.

The Times Realty Co., 601 West 136th Street, will erect on the west side of Broadway, 90.11 feet north of 122d Street, six-story flats, to cost $175,000. Architects Neville & Bagge, 217 West 125th Street, are preparing the plans.

Wells Bros. Company, 160 Fifth Avenue, will erect an eight-story fireproof studio, office and apartment building, 50x88 feet, for the Gainsborough Studios, a corporation, 307 Fifth Avenue, to cost in the neighborhood of $300,000. August Franzen, Carnegie Studios, Fifty-sixth Street and Seventh Avenue, is president; Barron G. Collier, 210 Fifth Avenue, secretary; Charles W. Buckham, 307 Fifth Avenue, is architect.

Plans have been prepared for a six-story and basement school, to be built at the southwest corner of West End Avenue and Eighty-seventh Street for the St. Agatha's School for Girls, of which the Rev. William H. Vibert is head. It will contain a two-story gymnasium and an assembly hall on the third story and a sun parlor on the roof. Cost, $250,000.

OKLAHOMA CITY, OKLA.—The Presbyterian congregation is planning to erect a $75,000 church. Rev. Phil M. Baird, pastor.

H. P. Harter and Henry M. Scales have accepted plans and specifications for seven-story steel frame and concrete construction office building; fireproof; to cost $100,000; architect, Wm. Stevens, of D. H. Burnham & Co., Chicago, Ill.

OMAHA, NEB.—Plans are being prepared by Architects Fisher & Lawrie, Paxton Building, for an apartment house to cost $50,000.

A building will be erected here which will cost about $50,000 for the Improved Order of Redmen.

J. W. Thomas will erect a modern three-story pressed brick apartment house at Thirty-eighth and Farnam Streets, to cost about $50,000.

W. K. Potter during the past week announced the making of plans for an apartment house at Thirty-third and Farnam Streets, a well equipped three-story and basement structure, 83x74 feet, containing twelve apartments, with janitor's quarters and heating plant in the basement.

In South Omaha the Packers' National Bank has plans prepared for an exclusively banking building to cost about $50,000, and to be built at Twenty-fourth and O Streets.

Estimates are being taken by Lester Heyn for the construction of a three-story apartment house, costing $50,000, on the large vacant lot at the northwest corner of Twenty-second Street and Capitol Avenue, which faces the high school grounds. The lot has a frontage of 132x150 feet, and adjoins the Heyn residence. Plans for the new structure are being prepared with the intention of starting building operations early next spring.

F. A. Henninger, architect, is preparing plans for the new apartment building to be erected at Sixteenth and Yates Streets at a cost of $75,000. Building will be of brick and stone.

PEMBERVILLE, O.—Plans have been prepared by Architect Robert C. Gotwald, Gotwald Building, Springfield, O., for a one-story church for the Evangelical Lutheran congregation, Rev. E. H. D. Winterhoff, pastor, Pemberville. Estimated cost, $40,000.

PENSACOLA, FLA.—Messrs. Carpenter, Blair & Gould, 475 Fifth Avenue, Manhattan, have been preparing plans and will receive estimates about September 15 for a ten-story office and bank building to be erected by the American National Bank, at Pensacola, Fla., at an estimated cost of $200,000.

PHILADELPHIA, PA.—Plans have been prepared by Architects Rankin, Kellogg & Crane, 1012 Walnut Street, for a building to be erected on the west side of Broad Street, south of Washington Avenue, as an addition to the United States Quartermaster's Department. It will be five stories, 80 x105 feet.

Work is being started by the Charles McCaul Co., builders, on the erection of the large new school which is to be built at Emerald and Orleans Streets, from plans and specifications by Horace Cook, architect. It will be a four-story building, measuring 178x72 feet, and cost about $200,000. It will be of reinforced concrete construction, fireproof and have steam heat, electric light, ventilating system.

Maury & Hillerich are preparing plans for a business building, on Fourth Street, between Walnut and Chestnut Streets, for John H. Sale. To be ten stories, 50x204 feet, of brick and stone construction, with modern plumbing, electric light fixtures, furnace heat, etc.; $350,000.

Christian Science Church, Philadelphia, Pa., has commissioned Messrs. Carrere & Hastings, Fifth Avenue and Twenty-sixth Street, New York, to prepars plans for a new church edifice to be erected at Walnut and Thirty-ninth Street, Philadelphia, Pa.

A large hospital for contagious diseases will be built at Atlantic City, from plans and detailed specifications by H. A. Stout, architect. The hospital will consist of administration building and two wings. The administration building will measure 36x 48 feet, and the wings 36x105 feet each. The building will be constructed of brick and stone.

A large business building will be erected at Delaware Avenue and Walnut Street, for Charles J. Webb & Co., woolen merchants. Plans are in preparation and mention will be made when estimates are desired. The same owners are having extensive alterations made to the building at 116-118 Chestnut Street. Work is being done by Wm. Steele & Sons Co., builders.

PITTSBURG, PA.—Architects D. H. Burnham & Co., Railway Exchange Building, 9 Jackson Boulevard, are taking figures on a store and office building to be built at Sixth Avenue and Smithfield Street, Pittsburg, Pa., for the Oliver estate, represented by L. H. Wass, 341 Sixth Avenue, Pittsburg. It will be twenty-five-story, 150x 200 feet, of granite, terra-cotta and steel, and cost $2,500,000.

MacClure & Spahr, architects, Keystone Building, Pittsburg, are preparing plans for

an eight-story business block to be erected on the former Robinson property at Liberty and Oliver Avenues by the Oliver estate, Pittsburg.

The Central Trust Company, Penn Avenue and Twentieth Street, Pittsburg, Pa., is considering the project of erecting an eight-story bank and office building. Cost, $100,000. Address John Coll, care of company. D

Architect Samuel A. Hall, House Building, has prepared plans for a three-story clubhouse for the Knights of Columbus. Estimated cost, $40,000.

PORTLAND, ME.—The gift to the town of Gorham of a library to cost $50,000 by former Mayor James P. Baxter of this city, was announced to-day. It will be situated on the site of the Baxter homestead.

PORTLAND, ORE.—According to press reports, it is planned to erect a $1,000,000 building on the Pennoyer Block.

PROVIDENCE, R. I.—Fontaine & Keument, of Woonsocket, have prepared plans for the new building to be erected by the R. I. Institute for the Deaf and Dumb. Exterior is to be of red brick with granite and cement trim, and roofed with red slate.

RALEIGH, N. C.—Wake County Cotton Association will organize cotton warehousing and holding company with capital stock of $100,000 to build cotton warehouses of modern design and fireproof construction. Walter Grimes, secretary.

RICHMOND, TEX.—It is rumored that a new court house will be built to cost $75,000.

RIDGEWOOD.—Becker & Cohn, 1610 East Parkway, will erect eight three-story brick flats, on Cooper Street, east side, 175 feet north of Knickerbocker Avenue, Ridgewood, to cost $64,000. L. Danancher is making the plans.

ROCHESTER, N. Y.—Nearly a million dollars is the value placed on buildings for the construction of which permission was granted by the proper city bureau last month. Only two or three times in the history of the city has the total for a month exceeded this figure, and it seems probable that the total for the year will be far in excess of that for any other similar period since Rochester began to expand.

ST. JOSEPH, MO.—The school district of St. Joseph will erect a fourteen-room brick building on Second Street, between Cherry and Rosine Streets. Estimated cost, $42,000.

ST. LOUIS, MO.—Permit has been asked for the new nineteen-story building to be erected by the La Salle Instrument Co. at the corner of Broadway and Olive Street, estimated to cost $600,000.

An eighteen-story office building will be erected by the McNair & Harris Realty Co., Eighth and Locust Streets, St. Louis, at the corner of Broadway and Pine Street. The building will have a frontage of 86 feet on Broadway by 127 feet on Pine Street. A glazed white terra-cotta exterior will rise from a base of polished granite. The estimated cost is $800,000. Mauran, Russell & Garden, Chemical Building, are architects.

Arthur C. Dingelstedt and associates will erect on Delmar and Taylor Avenues a building to contain a roof theater, roof garden, roller rink, riding academy, natatorium, cafe and several stores. The building is to cost $300,000. The site fronts 418 feet on Taylor Avenue, extending from Delmar Avenue to Morgan Street, and has a frontage of 142 feet on Delmar Avenue and Morgan Street.

The Board of Public Improvements is considering plans and specifications for a new free bathhouse at Seventh and Soulard Streets. This building will cost less than $45,000, although it will be more elaborate than that to be opened in a few days at Tenth and Carr Streets. The new bathhouse will be equipped with a swimming pool. The Public Recreation Commission yesterday submitted a rough plan for the building, which is now being considered by President O'Reilly.

Walter W. Candy will erect business building to cost $125,000.

The Board of Public Improvements will build an almshouse; 107 feet square; three stories; brick, stone and reinforced concrete; to cost $150,000; architects, Drischler & Elsner.

Knights of Columbus accepted plans and specifications by Baker & Knell for the erection of a club building, 50x145 feet; fireproof; white enamel terra-cotta front; five stories; with stores on ground floor; to cost $110,000.

Plans are being prepared by Architect Isaac Taylor, 318 North Eighth Street, for a four-story municipal building for the Board of Public Improvements, to cost $2,000,000. W. B. Dryden, secretary.

Aaron Fuller, vice-president of the Fuller Dry Goods Company, is reported to be having plans prepared for a residence to cost $50,000.

Architect F. W. Wischmeyer, Seattle, Wash., has prepared plans for a church for the Evangelical Lutheran congregation, George Bang, secretary of the Building Committee, St. Louis. Estimated cost, $50,000.

SAN ANTONIO, TEX.—Harry Landa, of American Bank & Trust Co., is planning to build warehouse or several structures, initial expenditure to be probably $65,000.

A building site has been purchased here by J. Sternenberg, V. A. Petty and S. G. Hurst, of San Antonio, for the erection of a modern five-story business house, to cost $70,000.

SAN FRANCISCO, CAL.—Boardman & Tompkins applied yesterday for a permit to erect a five-story steel and brick store and loft building at the southeast corner of California and Front Streets, to cost $100,000.

Plans have been prepared by Oliver & Foulker, 904 Rialto Building, for a six-story apartment hotel, to be erected at Washington and Hyde Streets, for the Keystone Realty Co. Cost, $350,000.

An application has been made by the Holmes Investment Company to erect a Class A building on the north side of Post Street, east of Kearney Street. Cost, $275,000.

An application for a permit has been made by the Gore Improvement Company to erect a three-story concrete structure at Market and Pine Streets, to cost about $100,000.

A two-story brick building will be erected at the corner of California and Battery Streets for the Babcock Estate Company, at a cost of $102,000.

SCHENECTADY, N. Y.—The Mohawk Golf Club will proceed immediately with the construction of its new clubhouse, for which plans are now in the hand of the special building committee. Architect W. W. Bosworth, of New York, is architect. The bids will be advertised for. The new structure will cost, it is estimated, $35,000.

We learn from local papers that Penn Varney, architect, of Lynn, Mass., has prepared plans for a six-story store and apartment building to be erected on State Street. Structure will be of brick with terra-cotta finish and will cost about $50,000.

SIDNEY, N. Y.—Plans have arrived for the proposed silk mill to be constructed for Julius Kayser & Co., and bids will be received soon for construction. The building will be 192 feet long. It is stated that 80 feet of the building will be two stories high and the remaining 112 feet will be one story high, with a skylight. Bids will be received for the furnishing of the concrete, brick and wood material. Edwin S. Bayer is local representative.

SPOKANE, WASH.—Building permits for July aggregated $477,803. While much lower than May or June, the amount is twenty-five per cent. more than for July, 1906. One hundred and fifty-six permits were issued during the month. Real Estate transfers for July amounted to $1,806,848, an increase of 79 per cent. over July, 1906. The total for the year to date is $12,983,939, as against a total to the same date for last year of $5,185,479.

Mrs. M. A. Beebe has under preparation plans for a sixty-room rooming and apartment house on which work will be begun early next fall. The building, which will cost from $25,000 to $30,000, will be erected on Fourth Avenue, near Monroe Street. It will be three stories in height, with a full basement, and will be built entirely of cement and in the Mission style. There will be no inside rooms. The structures will cover 50x142 feet.

SPRINGFIELD, MO.—Plans are being prepared for a $60,000 passenger station to be erected here by the Missouri Pacific.

STEPHENVILLE, TEX.—A new school building will be erected here at a cost of $31,000.

SUPERIOR, WIS.—Local papers state that Keith Bros., architects, of Minneapolis, Minn., are preparing plans for a seven-story apartment building, to cost $100,000, and to be located at John Avenue and Twelfth Street.

Van Ryn & De Gelleke, architects, Milwaukee, are preparing plans for an addition to the State Normal School in Superior. It will be 45x84, brick, costing $50,000.

Schmidt Bros. & Hill, of Superior, have been awarded the work of erecting steel car works for the Great Northern Ry., in Superior. A building, 115x361, will be erected. Cost, $75,000. Other buildings will be erected to bring the cost to $200,000.

F. L. Young & Co., architects, have plans for the Endion M. E. Church, to be of gray stucco construction. Cost, $35,000.

Work is to be started soon for the construction of an orphanage for the Roman Catholic diocese in Superior. Cost, $50,000.

TACOMA, WASH.—The following items are taken from the local papers. With the building record for the first seven months of 1907 showing an aggregate expenditure of new buildings and repairs of $2,840,887, it appears that a few weeks will find the permits for this year reaching the $3,000,000 mark, which represents the record of 1906, the twelve busiest months in the history of Tacoma building previous to 1907. Building conditions are more favorable at present than they have been at any time the past eighteen months.

The twelve-story building to be erected for Davis, Smith & Co. by Peter Sandberg, at the corner of Pacific Avenue and Fifteenth Street, will be one of the finest structures of its kind in the Northwest. A permit for the erection of the structure has been issued and work on the building will commence without delay. The estimated cost is $218,000.

Work is to commence shortly upon the new home of the Young Men's Christian Association. Plans have been completed for the four-story block to be built on C Street by the Lawler-Walter Company, and work will shortly begin upon the seven-story business block and warehouse to be built by the Hunt & Mottett Company.

Feist & Bachrach are contemplating the erection of a large business block upon their property at the corner of Thirteenth and South C Streets. Although the members of the firm decline to make any definite announcement as to the date upon which the structure will be commenced or the exact expenditure that will be involved, it is understood that plans for the building are now being prepared.

TOLEDO, O.—Architects Bacon & Huber, Spitzer Building, are preparing plans for a 200-room hotel, which will be erected at Toledo Beach, a summer resort about 20 miles north of the city, by the Toledo Railways and Light Company, Louis E. Beilstein, general manager, to Toledo, O. The building will be of frame construction and is to be ready for occupancy by June 1, 1908. The size of the building has not yet been determined. H

Plans are being prepared by Hoggson & Company, of New York City, for a bank to be erected in this city for the Commercial Savings Bank at a cost of $65,000. H

Architect H. W. Wachter, Nasby Building, will be ready in about three weeks to take figures on the new Y. W. C. A. building, which is to be erected here at a cost of $100,000. H

TRENTON, N. J.—Spencer Roberts, architect, 26 South Fifteenth Street, Philadelphia, Pa., has completed plans for the proposed City Hall to be built at Trenton. It will be three stories high, of stone and steel, fireproof construction. Cost, $800,000.

VAILSBURGH, N. Y.—Bids for the new Lincoln School in Richelieu Terrace, in the Vailsburgh section were opened last week. It was found that the total expenditure necessary would be about $46,000 more than the $80,000 appropriated for the purpose. As a result it is possible that the school may not be built this year.

WALDEN, N. Y.—Architects Arthur G. Lindley Co., Schenectady, are preparing plans for a new high school at Walden, N. Y., to cost $60,000.

WASHINGTON, D. C.—Plans are being prepared by the Southern Methodists for a national church at Ninth and K Streets and Massachusetts Avenue to cost $300,000. Address Dr. W. F. McMurry, of Louisville.

Bruce Price & de Sibour, 1133 Broadway, Manhattan, have plans under way for a $300,000 office building, nine stories, 40x61 feet, for W. O. N. Scott, of Washington, to be erected at the northeast corner of F and Fifteenth Streets, Washington, D. C.

Albert R. Ross, 16 East Forty-second Street, Manhattan, has plans under way for a two-story library building for Fairmount College to be erected at Wichita, Kan., to cost about $45,000. W. H. Isely is Chairman of the Building Committee.

WICHITA, KAN.—Plans have been prepared by Architects Badgley & Nicklas, 1273 Euclid Avenue, Cleveland, O., for a church for the First Baptist congregation, to cost $80,000. Fred Highwenger is Chairman of Building Committee.

WILKINSBURG, PA.—The Masonic Temple Association, of Wilkinsburg, has asked for a Pennsylvania charter in order to erect a six-story building for a home for the Wilkinsburg Masonic bodies. Cost, $100,000. The incorporators are: R. L. Collingwood, W. R. Halsey and W. A. Gilleland, all of Wilkinsburg, Pa. D

WILMINGTON, DEL.—Local papers state that permit has been issued to the Y. M. C. A. for a new building to be located at Tenth and Orange Streets. Structure will be 80x100 feet, five stories high. Architects name not stated.

WINNFIELD, LA.—The Board of Directors of the Winnfield High School has accepted plans for a $75,000 building, which will be erected during the fall months.

YANKTON, S. D.—A Catholic hospital is to be erected here at a cost of $50,000.

YOUNGSTOWN, O.—Owsley, Boucherle & Co., architects, 19 Wick Avenue, are preparing plans and will receive bids in about five weeks for a four-story court house, 236 x130 feet, for the Commissioners of Mahoning County. Construction will be of granite and terra-cotta, with copper skylights, reinforced concrete, iron and steel work, fireproof windows. Cost, $900,000.

POSITIONS OPEN.

WANTED—Experienced superintendent to take charge of building; state salary required and experience. Seymour Davis—Paul A. Davis, 3d, Architects and Engineers, 1600 Chestnut Street, Philadelphia, Pa. (1651)

WANTED—First-class architectural draughtsman; state salary and experience. Seymour Davis—Paul A. Davis, 3d, Architects and Engineers, 1600 Chestnut Street, Philadelphia, Pa. (1651)

POSITION WANTED.

ENGLISH DESIGNER in New York office desires change; large experience in ecclesiastical, town and country house work. Address 4-D, care American Architect.

BUSINESS OPPORTUNITY, ARCHITECT.

OWING to the necessity of immediately seeking a milder climate for a member of the family I wish to dispose of my business (architecture) and one piece of improved, well-rented real estate, worth $2,500, in a thriving city in New York State. Business to date this year pays over $3,000, and city needs 500 new houses at once. $1,500 cash needed; balance can be taken from business. Address Texas, care American Architect, Flatiron Building, New York. (1651)

PROPOSALS.

Treasury Department, Office of the Supervising Architect, Washington, D. C., August 5, 1907.—Sealed proposals will be received at this office until 3 o'clock p. m. on the 23d day of September, 1907, and then opened, for the construction (except elevator), of an extension, remodeling, etc., to the U. S. Post Office and Court House at Cedar Rapids, Iowa, in accordance with drawings and specifications, copies of which may be had at the office of the Custodian at Cedar Rapids, Iowa, or at this office, at the discretion of the Supervising Architect.—James Knox Taylor, Supervising Architect. (1650-1651)

Treasury Department, Office of the Supervising Architect, Washington, D. C., August 5, 1907.—Sealed proposals will be received at this office until 3 o'clock p. m., on the 19th day of September, 1907, and then opened, for the construction complete of the U. S. Post Office at Muscatine, Iowa, in accordance with drawings and specification, copies of which may be had at this office or at the office of the Postmaster at Muscatine, Iowa, at the discretion of the Supervising Architect.—James Knox Taylor, Supervising Architect. (1650-1651)

Treasury Department, Office of the Supervising Architect, Washington, D. C., August 5th, 1907.—Sealed proposals will be received at this office until 3 o'clock p. m., on the 17th day of September, 1907, and then opened, for the repairs to stonework, miscellaneous repairs, alterations and painting at the U. S. Mint Building, San Francisco, California, in accordance with the drawings and specification, copies of which may be had at the office of the Superintendent of Construction and Repairs, 403 Post Office Building, San Francisco, California, at the discretion of the Supervising Architect.—James Knox Taylor, Supervising Architect. (1650-1651)

Treasury Department, Office of the Supervising Architect, Washington, D. C., July 31, 1907.—Sealed Proposals will be received at this office until 3 o'clock p.m. on the 16th day of September, 1907, and then opened, for the construction (except elevators), of the U. S. Marine Hospital, at Buffalo, N. Y., in accordance with drawings and specifications, copies of which may be had at this office or at the office of the Custodian of the Site at Buffalo, N. Y., at the discretion of the Supervising Architect. John Knox Taylor, Supervising Architect. (1650-1651)

Treasury Department, Office of the Supervising Architect, Washington, D. C., July 31, 1907.—Sealed Proposals will be received at this office until 3 o'clock p.m. on the 16th day of September, 1907, and then opened, for the construction (except elevators), of the U. S. Marine Hospital, at Pittsburgh, Pa., in accordance with drawings and specifications, copies of which may be had at this office or at the office of the Custodian of the Site, at Pittsburgh, Pa., at the discretion of the Supervising Architect. James Knox Taylor, Supervising Architect. (1650-1651)

THE GREENWICH PRINTING CO., 186-190 W. 4th St., N. Y.