THE
WESTERN ARCHITECT

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THE WESTERN ARCHITECT
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FRED'CK KEES, Minneapolis, Minn., President.

F. A. GREENLAW, Treasurer and General Manager.

ST. PAUL, 904 Globe Building.

AN INTERESTING VISIT.

The visiting delegates to the convention of the Architectural League of America, recently held at Pittsburg, were driven about that city in carriages as the guests of the Standard Sanitary Manufacturing Company. A thorough inspection of the plant of this extensive concern was one of the features of the entertainment of the afternoon. The Standard company manufacture porcelain baths and plumbing goods, and the delegates and their friends were shown the construction of these articles from the time the molten iron is placed in the molds up through the various stages until they are turned out a finished white enameled product. The process of enameling and decorating was of particular interest to the architects. The entertainment culminated in a photograph of the entire group, taken upon the top floor of the new factory and warehouse which is about completed, and an appetizing luncheon served in the anteroom adjacent to the offices of the concern. The delegates unanimously extended a vote of thanks to the Standard Sanitary Manufacturing Company for their genial hospitality.

An attractive souvenir in the shape of a wash bowl, with miniature faucets and marble slab complete, was presented to each visitor upon his departure.

MERCHANT AND EVANS CO.

The leading architects of America can never forget the honorable part played in the tin market by the house of Merchant & Co. For many years the tin business was in a chaotic state, and architects were sorely tried by the conditions that existed. Prices and quality varied so much whenever a considerable order for tin was to be placed upon architect's specifications, he could easily be gotten into hot water by this or that dealer in tin, and we well remember how the firm of Merchant & Co strove, under great difficulties, to maintain the standard of their stamped and guaranteed metals, and to put quality first and price second. The architectural profession, be it said and remembered to its honor, appreciated the work of this firm, and gave them a patronage that rewarded their honesty.

The firm now changes name, but the men who were trained in those trying times as employes and associates of the old firm now become the directors in the new, and they do not propose to throw away or decrease by one jot the best asset of the old firm, namely: the reputation for old-fashioned, downright honesty.

Merchant & Evans Co., of Philadelphia, with branch offices in New York, Chicago, Kansas City, etc., is entitled to, and will have in the fullest measure, the confidence of the architectural profession, and this confidence will beget orders, with the assurance that both client and architect will be served faithfully.

DRAUGHTSMAN WANTS SITUATION.

An experienced architectural draughtsman wants a good permanent position in a first-class architect's office. Can do anything required except designing. Best of references. Answer Western Architect, Minneapolis, Minn.

SPECIAL ANNOUNCEMENT.

THE METAPHONE.

THE ROOF.

The 1905 Boiler List of the Kellogg-Mackay-Cameron Co. is hand as a fresh reminder of the wide range of goods made by s house to meet the needs of those who require anything in way of steam or hot water heat.

Cast-iron heaters, in all sizes, are listed of nearly every ap-oved type, but as put out by this house, of much improved tterns. Their "American" series, based on the "Gold" type, worth the careful study of any one looking for heaters of the rtical section sort. Their "Model" series is also attracting ich attention from heating men. This house, it must not be rgotten, makes the "Spence," which is perhaps the largest ler in the West. The "Perfect" is also among their makes, nd where well known, it is hard to supplant this heater with y other.

They also list several of less power, ranging from heaters itable for a small house down to tank water heaters.

At the other end of the line, if one may use the expression ey are prepared to fit out the customer with an assortment of diators which, for beauty and adaptability, will challenge ything to be seen on the market. Their "Kewanee," "Acme" d "Federal" radiators are making an enviable record through-t the West.

The business of this house has become so extensive in the est, that they distribute from Chicago, Minneapolis, Kansas ity and Seattle. Their new price list on boilers will be sent all architects, plumbers and heating men upon application.

THE KIMBALL ELEVATORS.

Kimball Bros. Co., of Council Bluffs, Iowa, as will be seen the subjoined letter of a prominent New York architect, are hieving a national reputation for their passenger and freight evators, which is resulting in the factory of the concern being nstantly enlarged and crowded to its full capacity to meet e increasing business from every state in the Union.

The illustration here presented is of one of their direct evators, which can be stopped in three seconds while it is going the rate of three hundred feet per minute. This is the result an automatic device which is exclusively applied and owned the Kimball Bros. Co.

Builders and architects should send for "Catalog H" and udy the many features of the various Kimball elevators that e confined to the make of that firm, and that possess special atures of merit in many ways that cannot be crowded in this ort notice.

The following letter is certainly appreciative:

W. G. PIGUERON,
ARCHITECT AND BUILDER.
32 Union Square, Reliance Building.
NEW YORK, May 2, 1905.

Messrs. Josselyn & Taylor,
Cedar Rapids, Iowa.

GENTLEMEN: I enclose a letter I received from Messrs. Kimball Bros., and in reply to same I beg to say that I have used six or seven of their elevators in my buildings. The buildings are from seven to nine stories high and require thoroughly first-class elevator service. I have found Kimball Bros.' machines to be satisfactory in every respect and can recommend them as being reliable and not subject to getting out of order—in fact, I have found them much better than several other makes I have used.

In one of my highest buildings I was foolish enough to give the elevator work to a very large concern in this city who promised to put in machines superior to any I had used before, but I have had nothing but trouble with them since, both as regards to speed and efficiency.

I expect to use more of Kimball Bros.' machines, so I don't think you would make any mistake in installing them in your proposed hotel.

Any information you may desire I shall be glad to give you.

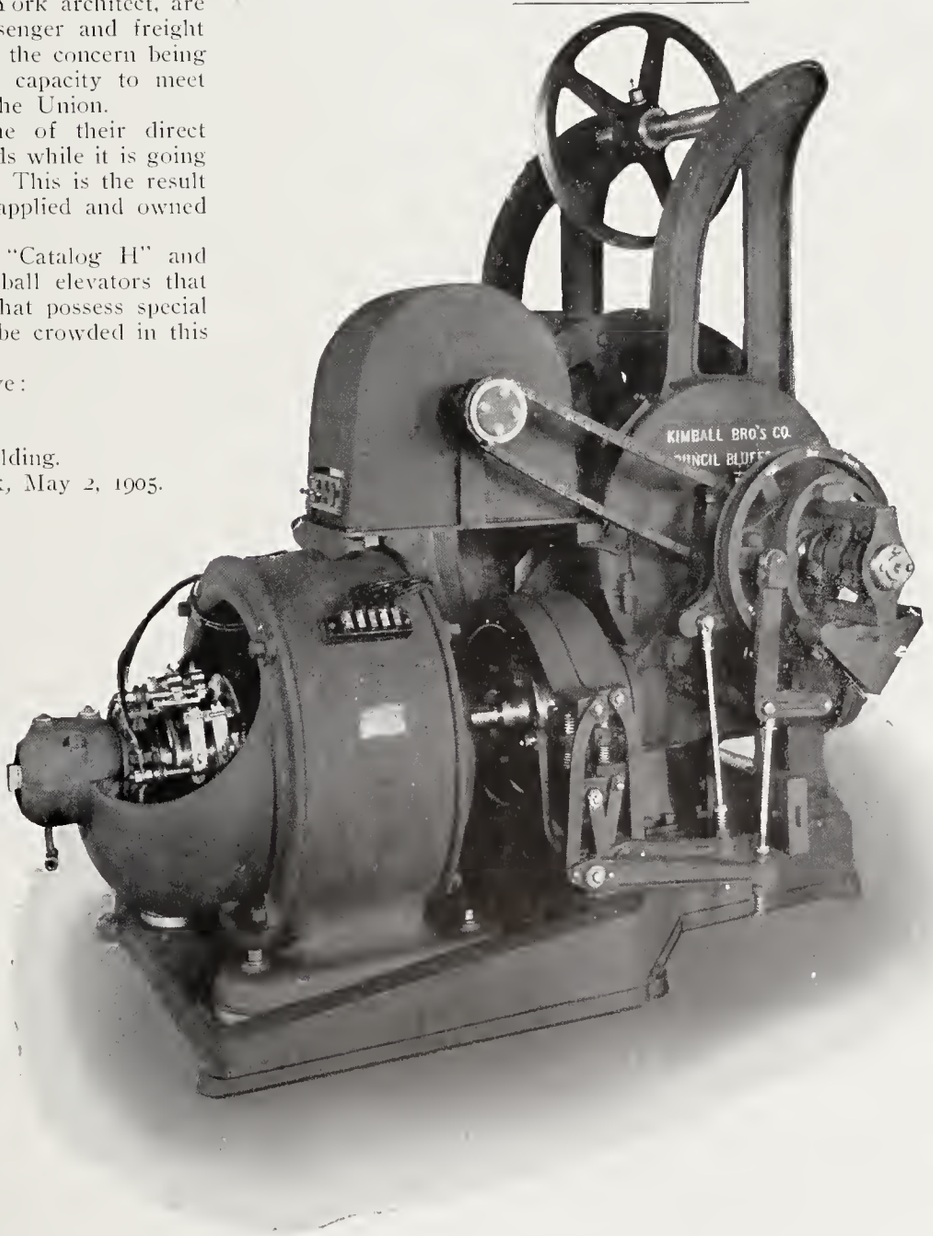
Yours very truly,
W. G. PIGUERON.

OPENING A BRANCH IN MINNEAPOLIS.

The W. J. Daly Company, who have been the leading plumbing, steam and hot water heating concern in Northern Iowa for many years, have opened a branch office in Minneapolis, at 1343 Nicollet avenue, where they will be pleased to receive correspondence relating to plumbing and heating, and where they will also gratefully give estimates on both new and old work. They guarantee all work which they do to be satisfactory in every particular.

The Willer Mfg. Co., of Milwaukee, Wis., has recently secured an order from the United States Panama Ship Canal Company for 2,700 of their screen doors, made with solid bronze wire-cloth, for the Aucon Hospital building at Colon, on the Isthmus of Panama. This is an unusually large order for screens for any one building, and was secured against the strongest kind of competition on the strength of the merits of their goods and the reputation of the Willer Mfg. Co. for keeping all agreements to the letter. They have also furnished screens for the W. H. Graves Latter Day Saints' Hospital, at Salt Lake City, Utah. There seems to be an ever increasing demand for the Willer screens wherever civilization and comforts of life are considered.

In consequence of the remarkable increase of their business, the H. W. Johns-Manville Co. have found it imperative to establish more branches in order to facilitate the handling of their business, and as a convenience to their customers. The new branches are in the far West—San Francisco, Seattle, Kansas City, Los Angeles, Little Rock and Minneapolis. With these in addition to the old branches, New York, Milwaukee, Chicago, St. Louis, Boston, Philadelphia, Pittsburg, Cleveland, New Orleans, London, Paris and Brussels, the company now has eighteen branches, covering the entire United States and Europe.



APRIL BUILDING OPERATIONS.

Building operations throughout the entire country have been very satisfactory so far and no doubt will continue in the same strain through to the end of 1905. Although it will require an immense amount of building construction to pass the record of 1804, the prospects are that this will be done in the present year. The following table of building statistics from a number of representative cities, compiled by The American Contractor, Chicago, from official reports show considerable activity although in some cases a slight falling off which is, very likely, a temporary setback. Quite a number of cities which had heretofore been classified otherwise, passed the million-dollar line last month, among these are Cincinnati, Detroit, Milwaukee and Minneapolis, with Rochester and Kansas City, Mo., a close second.

CITIES—	Year 1905	Year 1904	Increase. Per Cent.	Decrease. Per Cent.
Atlanta, Ga.	255,129	243,068	5	....
Alleghaney, Pa.	128,575	193,575	....	34
Buffalo, N. Y.	662,456	782,789	....	15
Canton, Ohio	56,875	48,590	17	....
Cambridge, Mass.	255,250	237,000	8	....
Chicago	7,298,200	4,287,250	70	....
Cincinnati, Ohio	1,004,285	689,310	46	....
Columbus, Ohio	689,730	427,050	62	....
Davenport, Iowa	138,089	55,360	150	....
Dallas, Texas	171,991	149,052	16	....
Denver, Colo.	560,050	362,125	55	....
Des Moines, Iowa	122,491	105,300	16	....
Detroit, Mich.	1,007,600	690,600	46	....
Duluth, Minn.	117,253	103,710	13	....
Evansville, Ind.	76,587	36,370	111	....
Grand Rapids, Mich.	360,872	144,895	150	....
Harrisburg, Pa.	191,840	189,520	1	....
Hartford, Conn.	358,073	255,110	40	....
Indianapolis, Ind.	553,628	388,081	43	....
Kansas City, Kan.	110,000	85,200	29	....
Kansas City, Mo.	992,865	814,150	22	....
Knoxville, Tenn.	105,790	113,980	....	7
Louisville, Ky.	517,868	253,188	105	....
Lowell, Mass.	54,400	56,950	....	4
Manchester, N. H.	53,105	63,772	....	17
Milwaukee, Wis.	1,011,467	1,385,833	....	27
Minneapolis, Minn.	1,572,625	898,005	75	....
Nashville, Tenn.	194,136	124,192	56	....
New Haven, Conn.	155,205	237,288	....	34
Newark, N. J.	824,935	1,429,674	....	42
New Orleans, La.	239,055	234,569	....	....
New York—				
Manhattan	11,667,507	8,698,030	34	....
Alterations	1,437,932	828,280	....	....
Brooklyn	6,260,695	6,368,021	....	....
Bronx	3,601,935	2,076,465	73	....
Alterations	81,370	87,950	....	....
Omaha	314,235	151,170	108	....
Peoria, Ill.	223,983	136,320	64	....
Philadelphia, Pa.	3,310,740	3,485,697	....	....
Paterson, N. J.	128,669	99,401	29	....
Pittsburg, Pa.	2,192,793	1,573,715	39	....
Rochester, N. Y.	942,662	764,112	23	....
St. Joseph, Mo.	97,630	78,012	25	....
St. Paul, Minn.	642,940	441,080	46	....
San Antonio, Texas	37,535	7,255	159	....
Scranton, Pa.	174,575	67,501	159	....
South Bend, Ind.	191,285	98,690	94	....
Spokane	767,265	404,515	47	....
Topeka, Kan.	116,750	60,278	94	....
Toledo, Ohio.	306,902	201,203	52	....
Terre Haute, Ind.	121,181	64,095	89	....
Washington	2,147,870	874,854	145	....
Worcester, Mass	306,816	247,665	24	....
Winnipeg, Man.	1,636,500	1,191,850	37	....

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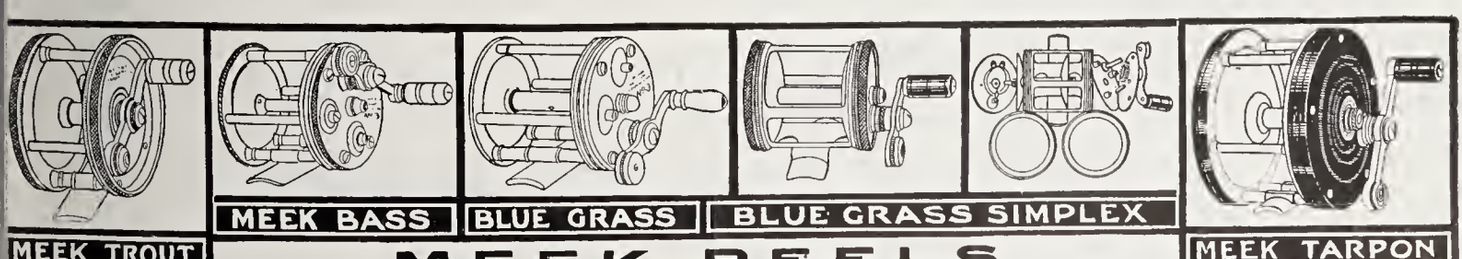

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DEVOTED TO ARCHITECTURE AND ALLIED ARTS

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CHICAGO again shows her old-time determination to fill the public eye. While her wise men are searching for a symbol of learning that shall supplant the lamp of her college seal, her women have placed themselves in the forefront of the new crinoline propaganda.

MR. DAN BEARD is said to be slated for the editorial chair of "Recreation." This is timely, for if he is allowed to keep on illustrating such skits as "How Westport Came by 3-cent Fares" with his "Restitution Libraries" and "Restitution Hospitals," there is no telling how soon he may become obnoxious to building interests.

THE union plumbers of Minneapolis who went out on strike some weeks since, after attempting to impose a most remarkable set of rules upon the employers and the public do not appear to have cut much figure in local industry since that time. The rules, some of which we published at the time, were so extreme as to unite the employers as they had never been united before, so extreme as to make a compromise difficult and unlikely. The ranks of both parties to the contest, have suffered little from defection since the falling out, but the contractors continue to take and do work and get along as they can. So far as known it is the sentiment among them that they would not take back the men, even on the old basis.

ACCOUNTS of late discoveries at Bismaya—the site of a pre-Babylonian city that flourished in an irrigated desert—tell of the exhuming of bronzes, terra cotta work, marble lamps and a marble statue of a certain King David, that is supposed to antedate any other discovered work of like degree of perfection by the matter of one or two thousand years. These discoveries disclose the life of a people who had reclaimed a home from a most forbidding desert and had unmistakably become skillful in the arts, when writing was not yet fully emerged from hieroglyphics, when machinery was not yet hinted at, when perhaps the bow and arrow were unknown, and the piles of round terra cotta balls for the sling point to the most formidable means of offense and defense, a means still honored by a historic David of some thousands of years later.

UNLESS some unforeseen influence creeps in it is fairly safe to predict that building operations in New York will this year suffer less from labor troubles than for some time past. The agreement made between workmen and employers since our last issue is a "closed shop" affair, union men having a monopoly of employment, but all disputes are to be referred to a board of arbitration, the secretary of which is to be the joint employe of both parties to the agreement. Strikes and lockouts are prohibited by the agreement, and if this feature is adhered to the board will have decidedly autocratic powers. The arrangement, if carried out in good faith by both parties, may easily lead to enough of a monopoly to make this deal very burdensome to the public, or it may place the parties in better position to compete for work which they might not be able to get if obliged to include in their estimates a fair allowance for insurance against strikes. The causes of strikes in large cities are often so obscured by politics and the needs of large interests, that they do not reach the public ken, but the cost of them is apparent enough, and it is also apparent that popular sympathy with them is not as easy to get as it was once. Prices of fuel since the great coal strike may have something to do with forming this sentiment, but it is certain that strikers must have a pretty good cause nowadays in order to get ready public support. Public sympathy with strikes is in fact pretty badly worn in these times, and organizations contemplating strikes, the success of which is dependent on it, had probably better defer them until a more convenient season. Strikes and life insurance seem to be in the same class just now in the public estimation.

THE surmise that turpentine prices are being affected, favorably to the consumer, by distillations from pine stumps in the Northwest is hardly borne out by the facts, unless the industry is carried on with unusual secrecy. A very little work of this sort is reported, but it seems to need the presence of Norway pine stumps, and as a further stimulant, fairly good agricultural land. Favored by both these conditions, it is said to pay, at the prices offered for the stumps, to haul them five or six miles to the place of manufacture, but the farmer seems to be paid in part by getting his land cleared of the stumps, which are probably much more persistent than those of deciduous trees, resisting decay much longer. In the Northwest the combination of good land and plenty of Norway pine stumps is not so very common as to encourage a great many of these tar and turpentine stills.

THE pamphlet issued by the Alumni Association of the Massachusetts Institute of Technology to former students under date of April 25th, gives the pros and cons of the proposed arrangement between the institute and Harvard University, as set forth by spokesmen for both sides. President Pritchett of the "Tech" is the chief spokesman in favor of the merger, and his argument is almost wholly general and emotional in character, but a few words being devoted to comment upon the real problems which will come up for solution. The following is not an unfair specimen of President Pritchett's attitude toward the specific questions involved:

"Sec. XV. The Department of Architecture has been omitted from this tentative plan for the simple reason that Harvard has buildings which can be used only for instruction in architecture. If agreement in all other points can be reached, it was thought that some satisfactory solution of the architectural problem could be found later."

The president's plea is for courage rather than fear, and his assumption that courage is to be found in the change and fear in a continuation of the present independence. He also sees greater freedom in the proposed arrangement, as it will bring freedom from the competition which he would have us think is now taking place between the Lawrence school and the "Tech."

Briefly outlined, it is propsed that the Institute shall sell out, buy land three or four miles up the Charles opposite Harvard, between the Brighton gas works and the abbatoir, and there, out of its own wealth, rebuild to accommodate itself (except its architectural department) and such part of the Lawrence Scientific School as can properly fall under the head of applied science. What is to become of the architectural department, or of the "background" which the president quotes Mr. Hamilton Mabie as saying must be taken into account in any endeavor to understand the history or spirit of any great college, no one seems to know, but the projectors of this peculiar merger, whatever their notions of the department, are at least wishing well for the "background." The new accommodations would need to be reckoned on the basis of 2,000 students and to take over 16 Lawrence professors, and must run heavily to dormitories, lunch counters and the like. Under the proposed merger the name of the Institute would be retained for such part, at least, as is not, like the architectural department, left out of the deal; and the governing machinery would be so far preserved as to have much of its present appearance. The new Institute would in time have the benefit of some Harvard moneys, probably a part of the Gordon McKay endowment when that becomes available. It is estimated that this endowment may under the most favorable circumstances yield $124,000 by the fourteenth year, The Tech. has now a little more than $1,000,000 free capital yielding interest, and the treasurer estimates that $800,000 of this will be used in making the change of location. This would, at 4 per cent, mean a loss of $32,000 annual income. The institute has long enjoyed a grant of $25,000 yearly from the state which it does not hope to have continued in case of the change. Opponents of the change assume that the institute will gain much more by gifts if independent than if merged. Of a total of nearly $5,000,000 in gifts and bequests to the institute in 44 years, more than one-half have been received within the past 10 years. The committee of alumni have secured $43,000 a year for the next five years, and believe that much more can be secured for the institute alone than for the school as a part of Harvard.

These are a few of the arguments for independence to be derived from the treasurer's report. The debate on the educational probabilities in the proposed arrangement, also given in the pamphlet, our space forbids republishing; but Art. XV. of the tentative scheme, which we print elsewhere, leaves one wondering if architectural education is to be left to itself down Boston way.

PORTIONS OF THE TENTATIVE AGREEMENT FOR THE UNION OF THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY WITH HARVARD UNIVERSITY.

The organization of the University, the organization of the Institute, and the title of each to its property and funds shall remain unaffected by this agreement, as shall also the rights and duties of each in investing and managing its funds.

The institution for the combined work of promoting and furnishing education in industrial science, which it is the object of this agreement to establish, shall retain the name of the Massachusetts Institute of Technology; it shall be under the direction of an Executive Committee, and the instruction therein shall be given by a Faculty, which two bodies shall be constituted as herein below provided.

The said Executive Committee shall consist of nine persons, to be designated by the Massachusetts Institute of Technology, of whom two shall be the President of the Corporation of the Institute and the Treasurer of the Institute, and three shall be members of the Corporation of the University.

The Faculty shall consist of all the present professors, associate professors, and assistant professors of the Institute, and all professors, associate professors, and assist-

it professors of the University who now give courses instruction leading to degrees in industrial science, and ich officers hereafter appointed as said Executive Committee may designate. The present professors, associate rofessors, and assistant professors of the University as oresaid shall not be removed nor have their present laries reduced without the consent of the Corporation the University.

The site of the institution shall be in Boston on the ght bank of the Charles river, as nearly as practicable pposite to Harvard Square, and the Massachusetts Institute of Technology shall there erect, furnish, and equip uildings having the capacity of at least its present buildngs. But the Institute shall not be required to proceed ith such purchase and construction until it shall have old a sufficient part of the land which it now owns. Provided, however, that this agreement shall be avoided at the end of four years from the time when this agreement goes into effect the Institute shall not have purhased said land and proceeded to a substantial extent ith such construction.

Within three years after the Massachusetts Institute f Technology begins the construction of such new buildngs, if the Institute is then prepared to give in its new ocation to the students of the Lawrence Scientific School ll needed instruction in industrial science, the Lawrence Scientific School shall be discontinued as a separate school f industrial science so long as this agreement remains n force.

Male students in the Institute shall have the same rivileges as students in Harvard University in the use f the playgrounds, museums, and libraries of the Uniersity.

The Department of Architecture in the University nd in the Institute respectively are not included in this greement, but remain unaffected hereby.

* *

How strange it is that some business men regard the building up of a reputation and good name through advertising as different from investing money in other ways in that they expect to secure immediate returns from a one-time advertisement. When a new building is erected, it cannot pay for itself in a month, and is not expected to. If you build a new factory you figure out that in the course of time it will pay for itself and prove a profitable investment. After a month or a year has elapsed you do not go around with a long face because that factory has not paid for itself.

It is the same with advertising. The result of intelligent advertising is an edifice of public patronage founded upon the rock of satisfaction, and growing more valuable and profitable, year after year. Such an edifice cannot be built in a day, nor will it pay for itself in a month. An attractive advertisement in a proper publication, carefully attended to and kept in repair, as it were, will be effective, and prove the most profitable investment that can be made, not at once, perhaps, but in the end will justify itself and product returns that will satisfy the most optimistic.—St. Louis Builder.

SPECIAL ANNOUNCEMENT.

We are pleased to announce that beginning with our next issue the editorial management of this journal will be in charge of Robert Craik McLean, for many years editor of the Inland Architect. As the editor of that journal, Mr. McLean has been connected with almost every architectural movement in the United States for the past twenty years, and has acquired an acquaintance with men and things architectural, greater than that of any other individual connected with architectural publications. While his work through the latter journal has had much to do with the betterment of government architecture and with such movements as the establishment of a municipal plan for Washington and like projects that tend toward a more enlightened and progressive art, his service to the profession in association organization and work, from the establishment of the Western Association of Architects to the present, has made his name familiar to architects in all parts of the country.

It is Mr. McLean's ambition to make the Western Architect all that the profession desires and all that its representative journal should be. He can accomplish this only with the hearty co-operation of the entire profession, and this he earnestly solicits. Thus aided, his experience is certain to make the journal fill a place in the field of architecture not hitherto occupied by any other professional journal.

The publishers of the Western Architect will give him a free hand and earnest support in this direction, and the architect, painter, sculptor, mural painter and landscape architect will each find the best in illustration and description that these arts produce. The vast field of design and the interests of the draftsman will also be carefully and thoroughly conserved, their enthusiasm aided and their emulation excited and sustained through the pages of the publication by contributions, pictorial and descriptive, from the greatest designers and writers. In fact, the Western Architect, under the editorship of Mr. McLean, aims to become the conservator of all contemporaneous art in its highest expression and broadest interpretation.

We are especially pleased to have Mr. McLean come to us at this time, for his individual services in the preparation of our August issue will be invaluable, not only to this journal, but to the profession. We propose to make that issue the most beautiful single number ever issued of an architectural journal, and we shall be able to do so, first, because the number will illustrate and commemorate the most beautiful public building in America, the new state capitol of Minnesota, and, secondly, because we shall have in our work the hearty co-operation of Mr. Cass Gilbert, who may well be called both the *artist* and the architect of the building.

Paris will soon have one more church steeple which may be compared in artistic lightness to that of Sainte Chapelle. It is the steeple which is being rapidly finished at the American Chuch, in the Avenue de l'Alma, and is designed by an English architect, Mr. Street.

SIXTH ANNUAL CONVENTION OF THE ARCHITECTURAL LEAGUE OF AMERICA AT PITTSBURG.

REPORT OF COMMITTEE ON EDUCATION.

BY MR. PERCY ASH, WASHINGTON, D. C.

The committee on education of the Architectural League of America has the honor to make the following report:

There is no question more vital, nor one deserving of greater attention by the architectural profession, than the education of its prospective members. If, as is generally conceded, the influences which surround the student during the formation period of his character, yield in after years an abundant harvest, is it not necessary, therefore, that during this critical period these influences be made as exalted and pure as possible?

With the architect, if he is to be worthy of the name, the development of a correct taste is most essential. An early familiarity with the best examples of painting, sculpture and architecture is necessary to develop the taste and critical faculties. With this developed taste, critical faculty should be coupled, a mind carefully trained to observation and study, and an imagination stimulated by the best that our literature has to offer. This should be the foundation, if the architect is to be the man of broad culture that his duties demand, on which the superstructure should rest.

Is it necessary to remind a body of architects of the necessity of looking carefully to the foundations?

The subject of this paper naturally divides itself into two heads:

First.—That relating to the education of the student, who has his entire time to devote to his studies,—the college man.

Second.—That relating to the education of the student whose entire time is not his own, the architectural draughtsman.

The first division of this report deals with the educational facilities that are offered at our architectural schools and colleges. In this respect the system of architectural education in this country has undergone a complete change during the past twenty years.

Up to the seventies and eighties the architectural student began his technical training by entering the office of some practicing architect, practically as an apprentice. In this capacity he ran errands, traced, and made himself generally useful, and as a reward for good conduct was allowed to draw out the orders, provided his patron believed in them. In the course of time the embryo architect builded a very flamboyant educational superstructure, or, in many instances, a very insecure architectural foundation.

The first forward step was taken in 1866, when an architectural course was established at the Massachusetts Institute of Technology. Similar courses soon followed at other institutions. These early courses were, however, usually affiliated with the schools of engineering. As the requirements of the two professions widened, the architectural course became independent of its related engineering course, still retaining its classification as a division of arts and sciences. With the establishment of a number of traveling scholarships, such as the Rotch, Columbia, McKim, University of Pennsylvania, John Stewards, etc., and the increased number of Americans who became students in or graduates of the Ecole du Beaux Arts, the question began to be asked whether the adoption of the atelier system and the consequent transference of the subject of architecture to a division in a college of the fine arts, would not produce more beneficial results. It is not that the work done in our universities has not been good. It was more with us a question of method in order to obtain the very best.

Who will not concede that however excellent has been the work accomplished by us, the work in design, of the average graduate of our colleges, is far short of that of the average student in the great Paris School of the Fine Arts?

Before advocating the adoption of the French atelier system by our colleges and universities, it will be well to remember that we have in our institutions no "ateliers" nor any prospect of having any. No students of mature years, such as the French system of governmental patronage is able to retain at the Ecole de Beaux Arts. As Professor Ware says, "The Ancients" are the backbone of the whole French system.

Those now in charge at Columbia have evidently overruled Professor Ware's objections, as the atelier system is to be tried there in the near future. Referring to the circular relating to the organizing of the architectural course under a faculty of the fine arts, received from Professor Hamlin, we find the following statement:

Official Studios. The university maintains three studios or draughting rooms for the instruction in design; one under the direction of Mr. Charles F. McKim; one under the direction of Mr. Thomas Hastings, and one at the university under the direction of Mr. W. A. Delano (advanced and post-graduate design), and Mr. A. H. Gumser (elementary and intermediate design). The student may elect the studio which he will attend, subject to the limitations of the capacity of each.

Private Studios. Students of advanced and post-graduate design are also at liberty to pursue their work in design at any private studio recognized by the university. At present the studios conducted by Mr. H. F. Hornbostel at 123 East Twenty-third street, New York, and by Mr. Donn Barber at 147 East Forty-second street, and by Messrs. Blair and Van Pelt at 122 East Twenty-third street, are thus recognized by the university.

This seems to your committee to be a radical departure from the established custom of university education in this country and one that will be watched by the profession with considerable interest.

The table which accompanies this report is compiled from information furnished your committee by the professors of architecture in the leading institutions in the country.

PERSPECTIVE DRAWING OF HOTEL CROSS KEYS, MARIETTA, PA.
By Henry L. Reinhold, Jr., Architect, Philadelphia, Pa.

PERSPECTIVE DESIGN FOR A RESIDENCE

David C. Myers and Mahlon L. Fisher, Associate Architects, Williamsport, Pa.

DESIGN FOR RESIDENCE FOR MR. E. A. WADHAMS, MILWAUKEE, WIS.

Chas. D. Crane, Architect, Milwaukee

Made of Artificial Stone

Supplement to
The Western Architect

May. 1905

PERSPECTIVE DRAWING OF HOSPITAL BUILDING FOR DR. WM. F. MALONE, MILWAUKEE, WIS.
Chas. L. Lesser, Architect, Milwaukee

The conditions revealed by this table are most encouraging and should be received by each member of this society with satisfaction.

Massachusetts Institute.—Organized in 1866; 124 students enrolled: 13 professors and instructors; a course in architectural engineering since 1897; a course in landscape architecture since 1898; degree given, B. S.; number of units of work per week, 3-hour day to equal 1 unit, 24; no evening course; no traveling scholarship.

Cornell.—Organized in 1871; 72 students enrolled; 7 professors and instructors; course in architectural engineering; no course in landscape architecture; degree given, D. of Arch.; number of units of work per week, 3-hour day to equal 1 unit, 17; no evening course; traveling scolarship, $1,000.00, 2 years.

University of Illinois.—Organized since 1871; 90 students enrolled; 5 professors and instructors; course in architectural engineering; course in landscape architecture; degree given, B. S.; number of units of work per week, 3-hour day to equal 1 unit, 18; no evening course; no traveling scholarship.

Columbia.—Organized in 1881; number of students enrolled, 72; course in architectural engineering; no course in landscape architecture; degree given, B. S.; number of units of work per week, 3-hour day to equal 1 unit, 20; no evening course; traveling scholarship, McKim-Columbia.

Pennsylvania.—Organized in 1890; 110 students enrolled; 8 professors and instructors; course in architectural engineering; no course in landscape architecture; degree given, B. S.; number of units of work per week, 3-hour day to equal 1 unit, 19; evening course; traveling scholarship, alumni scholarship.

Harvard.—Organized in 1893; 98 students enrolled; 9 professors and instructors; no course in architectural engineering; course in landscape architecture; degree given, B. S.; number of units of work per week, 3-hour day to equal 1 unit, 22; no evening course; a traveling scholarship.

George Washington.—Organized in 1894-1905; 30 students enrolled; 4 professors and instructors; no course in architectural engineering; no course in landscape architecture; degree given, B. S.; number of units of work per week, 3-hour day to equal 1 unit, 20; evening course; no traveling scholarship.

Washington.—Organized in 1902; 25 students enrolled; 3 professors and instructors; course in architectural engineering; no course in landscape architecture; no degree given; evening course; no traveling scholarships.

Drexel Institute.—32-60 students enrolled; 4 professors and instructors; no course in architectural engineering; no course in landscape architecture; no degree given; evening course; no traveling scholarship.

Penn Academy.—Organized in 1902; 25 students enrolled; 4 professors and instructors; no course in architectural engineering; no course in landscape architecture; no degree given; evening course; Cresson scholarship, $2,000.00.

The second division of this report deals with the educational facilities that are offered to the architectural draughtsman who has not had the opportunities for a college education or foreign travel and study. And it is to these not so fortunately placed young men that your committee feels that this league is particularly interested. Would not increasing the facilities for the education of the great body of architectural draughtsmen be a worthy field in which to direct the activities of this society?

There are at present two channels through which this class of students may supplement their regular office work, one by the correspondence schools (which have no influence on design), and the other is through the ateliers organized under the auspices of the New York Society of Beaux Arts Architects.

This society has become a great factor in developing the standard of draughtsmanship and design in this country, for in addition to the ateliers in New York City, already mentioned by Prof. Hamlin in the extract quoted above, ateliers have been established in the following cities under the direction of the following architects:

Theodore Pietsch, Architects diplome par le Gouvernement, Washington, D. C.

Paul P. Cret, Architecte diplome par le Gouvernement, T Square Club Atelier, 1204 Chancellor street, Philadelphia, Pa.

D. Despradelles, Architecte diplome par le Gouvernement, Massachusetts Institute of Technology, Boston, Mass.

M. Prevot, Architecte diplome par le Gouvernement, Cornell University, Ithaca, New York.

Prof. Frederick M. Mann and Louis C. Spiering, Architecte diplome par le Gouvernement, Washington University, St. Louis, Mo.

E. B. Homer, Rhode Island School of Design, 11 Waterman street, Providence, R. I.

Prof. Percy Ash, George Washington University, Washington, D. C.

B. E. Holden, 175 Dearborn street, Chicago, Ill.

Claude Fayette Bragdon, Cutler building, Rochester, N. Y.

Charles Peter Weeks, 510 Montgomery street, San Francisco, Cal.

Paul B. Tuze, 1114 Madison avenue, Baltimore, Md.

By reference to the table given under section No. 1, it will be seen that only three universities in addition to the Pennsylvania Academy of the Fine Arts and Drexel Institute, offer opportunities for evening instruction in architecture, but as this evening instruction is given in two out of the three colleges through the affiliated Beaux Arts ateliers, the draughtsmen must rely, as already stated, on the correspondence schools and on the Beaux Arts Society for systematic instruction.

It is to supplement and indorse this excellent Beaux Arts system, which had already had such marked influence on the development of the architectural draughtsman of this country, that your committee makes the following recommendations:

Each club in this league is requested to organize, where a Beaux Arts atelier is not already in operation.

to elect the best designer, and one acceptable to the Beaux Arts Society, in the club or community as patron, and then to make application to the Beaux Arts Society for the problems in design issued by them. The results of the adoption of this recommendation by the clubs composing the league would mean an increased number of students, working on *live* problems, solving these problems, thoughtfully, truthfully and rationally, developing the elevation, logically, from the plan and producing designs in harmony with the great twentieth century in which we live. Your committee feels that a marked improvement in American architecture would surely result from such an extension of this system.

The Beaux Arts system may have its faults, all human systems and fabrics have, but at least it stands for what is modern. However beautiful a piece of archaeology may be, it is not logically a modern. To be modern is to be alive; and it is not good for art, any more than for the members of this society, to be mediaeval or dead.

Respectfully submitted,

PERCY ASH,

Chairman Committee on Education.

Extract from Report of Executive Board, Relating to the Establishment of Annual Scholarships.

Third Recommendation.—In order to stimulate interclub competition and render the league more valuable to the individual members of the club, it is recommended that the league appoint a committee to consider the advisability of the establishment of a League Traveling Scholarship.

There was a committee appointed, to which was referred all reports of all committees. This committee was called the "Committee on Committees." It reported on each committee report, and the report on this particular recommendation was as follows:

"A recommendation that the Architectural League of America establish and maintain an annual traveling scholarship to be competed for by representatives of each constituent organization of the league. Representatives to be selected by preliminary competition in each club. This to be designated as the Traveling Scholarship of the Architectural League of America, and the necessary funds to finance the same to be raised by popular subscription in the various cities represented by the constituents of the A. L. A."

There was a discussion of this recommendation, after which it was adopted.

Banquet of the Architectural League.

At the banquet held Tuesday evening, C. G. MacClure of Pittsburg was the toastmaster. Wm. B. Ittner, N. Max Dunning, Wm. S. Eames, Jos. Lauber, J. P. Heinz, E. Z. Smith, Dr. John S. Brashear, John T. Comes and Director Arthur Hamerslag of the Carnegie Technical Schools, were among the speakers. Mr. Smith, who represented the Art Society of Pittsburg, said in his speech, "I think I can safely promise on behalf of the citizens of Pittsburg, that the court house, which is the greatest creation of the world's greatest architect, will not be changed in any line or story." Mr. Hamerslag, of the Carnegie Technical Schools, told the delegates the purpose of the institution in relation to architecture. Three types in architecture will be taught in the curriculum and special emphasis will be laid on the molding of the character of the young men. John Molitor, of Philadelphia, spoke on the relation of mural painting to architecture. He made a plea for the use of more color in outside decoration, stating the architecture of our buildings was too solemn and that architects appeared to be afraid of colors. The menu card bore on the front page a picture of the court house, and on third page was the picture of the architect, under which was the following inscription: "We owe it to the memory of Henry Hobson Richardson to preserve this masterpiece in all its beauty, dignity and grandeur for the mental health, power and pleasure of the coming generation."

EVEN THE WEATHER PROTESTS AGAINST THE ARMY "RESTORATIONS" AT FORT SNELLING.

There is joy again within the ranks of the Minnesota State Historical society, now that the assurance has come from the army officials that the cement and plaster, which now destroys the historic appearance of the old round tower at Fort Snelling will be scraped off.

Letters were read, at the meeting of the society last evening in the old capitol, from Col. O. J. Sweet, commandant at Fort Snelling, recommending that the cement and plaster be removed from the round tower and the old hexagonal tower which overlooks the Minnesota river.

Gen. C. C. Carr, commander of the department of the Dakotas, in a letter addressed to the president of the society, states that he indorses the movement started by the society to retain inviolate, the historic landmarks of Fort Snelling. The matter will be taken up with the war department at once and a favorable decision is now assured so that within the next week or two, workmen will start to scrape off the cement and plaster which now obliterate the historical appearance of the two towers.

The cement coating of the tower was put on a year ago, and a cry of remonstrance went up from citizens all over the state as the old date line of 1823, crumbling with age, was effaced by the dull grey of modern cement and the vines which have been clustered around the tower ruthlessly torn away to aid the workmen in destroying history.

Thanks to the elements, the cement which was placed on the round tower, crumbled before the frosts of late fall. It was at this point that the movement to restore the ancient appearance of the landmarks was begun.—Minneapolis Tribune.

THE ARCHITECT.

BY FLORENCE ETHEL CROSBY.

There are no such beautiful buildings as in India. The warm climate permits architects to leave a great deal of open space in structures, and this enables them to make designs with that lightness which causes the buildings to resemble the abodes of fairyland.

There was once an Indian king who was ambitious to excel all other kings in the beauty of his palace. He therefore called upon all the architects of his kingdom for designs, offering a prize so desirable that it could not fail to stimulate some mighty effort of genius. The king had but one child, a daughter. He gave out that the successful competitor should have his daughter to wife and reign with her after his own death.

Now, there was a young architect of the capitol, Abdul Kerim. He had been employed to rebuild a wing of the palace containing the princess' apartments, and the two had met and loved. Abdul Kerim, on hearing of the prize offered, was overjoyed and set to work with high hope to make a design that would give him the girl he loved. Three years were given in which to hand in drawings, and during these three years Abdul worked night and day, designing, throwing away his work, starting it again, till at the expiration of half the allotted time he had produced a plan that satisfied him. Then he occupied the remaining half in perfecting it. Stimulated by love, he evolved a structure which when built would far exceed anything of its kind in India.

When the king saw the design he was delighted. But he had never intended to keep his word by giving his daughter to the successful competitor and now trumped up a charge as an excuse for not doing so. He accused Abdul Kerim of being in league with a conspiracy against the government discovered at the time and threw him into prison.

When the princess heard of this she was inconsolable. She sent one of the women to the prison where her lover was confined, who, by bribing the guard, was permitted to enter and console him by assuring him of her mistress' unalterable love. Kerim told the woman to tell the princess to be of good cheer; that the king would be forced to keep to his agreement, because an architect is the best person to superintend his own plans, and he believed he would sooner or later be called upon to build the palace.

There was in the kingdom a quarry of stone, tinted like the opal, which when polished had a beautiful, iridescent effect. It had been reserved by the king for the new palace. Great care was to be taken in getting out the stone and shaping it into the individual parts which were to make up the palace, for there was but enough of it to make one such building, and if any serious blunder were made by which it should become necessary to use other stone the king's hopes would be blasted. Among Kerim's plans were a description and diagram of every stone to be used in the construction, and the king decided that it would be safer to get out the material and shape each stone in accordance with this description. After all had been hewn it would be a simple matter to set them up in place. But the king was desirous of having the work superintended by the designer of the building, and indeed this was the only safe plan. He sent a messenger to Abdul Kerim in prison to say if he would accept the position and see that the building was erected in accordance with his plans he would pardon him for his alleged part in the conspiracy and give him a handsome sum besides.

Kerim could do nothing but consent to the agreement. He was placed in charge of the work, and as every stone came from the quarry and was shaped it was marked in accordance with a system devised by Kerim himself. During this time he was at liberty and was not even watched, for no one knew of any reason why he should wish to escape or fail to do his work to the best of his ability. At last the stones which were to compose the building were finished, the quarry meanwhile having been exhausted. Then Kerim astonished the king by refusing to superintend the erection of the palace. His majesty was about to order the architect's head stricken off when it occurred to him that he must first get the marking of the stones. So he sent to Kerim for it. Kerim replied that he did not have it. Then the king ordered him to produce it on pain of instant death. Kerim refused. The king was in a quandary. Unless he could get the marking from the architect the palace could not be built. He directed Kerim to be brought to him and accused him of bad faith in breaking his agreement, whereupon Kerim reminded the king that his majesty had first broken his agreement and stoutly refused to go any further with the work except on the original terms. Then the king ordered him put to the torture to extort what was necessary, but directed that his life should not be risked. Kerim was tortured till it was plain he would die if the torture were continued.

It was now plain that the king must either give up his palace or fulfill his condition. He sent for his daughter and told her of the situation. She confessed that she and Kerim had secretly loved each other and said that it was this love which had produced the wonderful design.

Then the king saw that to obtain the palace he coveted, built of the beautiful, iridescent opal stone, he must keep to his agreement. He satisfied the architect that he would do so by a public declaration, and the palace was built. But the wicked king was published for his duplicity, for he died just as the work was finished, and it was the architect, who as king took possession.

The Japanese ambassador to France is said to have recently made this comment on the modern world's estimate of what constitutes civilization: "We Japanese have for many generations sent to Europe exquisite lacquer work, delicately carved figures, beautiful embroidery; but the European nations described us as uncivilized. We have recently killed some seventy thousand Russians, and every nation in Europe is wondering at the high degree of civilization we have attained."

CONCRETE CONSTRUCTION AND CONSISTENCY IN REINFORCEMENT.

A Paper Read Before the Northwestern Railway Club. April 11th, 1905.

By LOUIS F. BRAYTON,

President of the Brayton Engineering Co., St. Paul, Minn.

In Two Parts—Part 1.

The subject of concrete and its general use is so large a one that the writer feels his inability to treat it properly, even if time and space permitted. The uses to which concrete has been put and the possibilities still open to it are almost numberless.

Only within the last couple years, a new field has been opened to it in the shape of the concrete building block. Two years ago its use in moulded blocks as a substitute for stone was a mere rumor. To-day there are in the neighborhood of two hundred companies in the United States, whose business is the manufacture of machines for the moulding of concrete blocks.

Blocks can be made in an infinite number of forms appropriate to the material, or in imitation of stone.

In connection with this particular point, it seems sad that there should be so much *imitation* and so little attempt to produce an article which would not proclaim all over its face the fact that it is supposed to be something else. Great quantities of so-called "rock faced ashlar" concrete blocks are being manufactured and used in the construction of foundations or for the facing of buildings. The rock-face is clearly intended to have the appearance of stone, but the deception is an utter failure.

Why should this be? Why should not blocks be treated like the concrete from which they are made? For instance, if a concrete contained, as an aggregate, crushed granite, or marble, possibly varied in colors, or if gravel of various types was used, a surface having all the rustic advantages of rock face, but at the same time the characteristics of the material used, would be produced by the brushing out of the mortar slightly on the surface and leaving exposed the pieces of broken stone, gravel or sea-shells, as the case might be. Concrete blocks using this feature or some other method of treatment appropriate to the material would be far more popular than those now produced, and at the same time no more expensive.

The use of concrete and its general fitness for heavy masonry structures is a subject which we feel it is unnecessary to treat here, because of the general acquaintance of all with this class of work.

The subject of reinforced concrete is, however, one of specialty and is well worthy of careful study.

The range of possibilities in reinforced concrete is simply limitless.

Bridges of astonishing grace and strength have been built of it in every portion of the civilized world. Buildings in part, and as a whole, from the reinforcel piles to the cornice, have been and are being built in reinforced concrete. Commercial buildings, flat buildings, warehouses and hotels have been built, ranging in size from the one-story affair to the sixteen-story sky-scraper, and consisting throughout the construction of their columns, beams, girders, floor slabs and walls, of reinforced concrete.

Round houses for the storage of locomotives are being built of concrete with the greatest success, reinforcement being used in every portion from the foundation to the roof.

Grain elevators and storage tanks, in which the loads and pressures become enormous, are now as easily designed and built in the reinforced concrete as are the far more expensive and less fire-proof steel structures.

There have, however, been some bad errors made in getting the experience necessary to properly accomplish the results above referred to, and it is our purpose to set forth here in brief a few of the principles which the engineer, architect and owner should observe when they are called upon to exercise judgment in regard to the reinforcement of concrete. No matter whether the reinforcement lies in a beam or slab or truss, the general principles are the same. No matter whether the slab be used as a light floor in a flat building, or in the roof of a round house, or whether it be standing on edge and resisting the horizontal pressure of grain in a deep bin, the strains are there just the same and they must be resisted in the same consistent manner.

In order to make the matter perfectly clear, perhaps it would be best to start at the beginning.

WHAT REINFORCED CONCRETE IS.

To define what reinforced concrete is, a comparison will be made with a familiar object, a railroad bridge of the Pratt type.

We all understand, in a general way, the action of the various members in the trusses of a bridge of simple span. The top chord is in compression, and the bottom chord is resisting a corresponding amount of tension, the end posts and intermediate posts are in compression, while the diagonal members of the web are carrying a tensile load.

Concrete we know to be strong in compression. Is it not easily conceivable that if the steel truss assumed were entirely imbedded in concrete, the steel compression members might be removed and the concrete would supply the required resistance to compression? This would be entirely feasible and the result would be nothing more or less than a reinforced concrete truss. In brief, reinforced concrete means the placing of steel within the concrete, in such a way that a truss will be formed by the combination of the materials, in which the steel carries all tensile loads and the concrete does the work of compression.

THE VALUE OF DEPTH.

Suppose that in a truss the size, or capacity, of the top chord were fixed, and it were required to increase the capacity of the truss, the immediate conclusion would be that the distance from the top to the bottom chord

must be greater; in other words, the effective depth must be increased so that the stresses in the chords will have a greater advantage, and the required strength be attained.

This is the exact case in concrete-steel construction. A slab being a solid body of concrete, has a definite capacity to take compression, and if additional strength is required, it must be by thickening the slab until the proper effective depth is reached.

It will be seen that depth is a requirement in reinforced concrete as well as in any other material.

A short time ago, the writer in discussing the construction of round houses of reinforced concrete, with a railroad official, was confronted with the remark, that if a concrete slab were used for the roof, the present form of expensive steel trusses might be entirely omitted, a remark which if it had been considered on a scientific basis would have been found entirely inconsistent. Depth is essential to any form of construction, and it can always be depended upon that the strains required to be resisted will always be inversely proportional to the depth.

THE VALUE OF SHEAR MEMBERS.

To illustrate the inconsistency of most designs in concrete-steel, we refer again to the previous example.

Suppose that in a railroad bridge one of the diagonal web members should become disconnected at the upper chord, what would be the result? There would be a collapse as disastrous to the structure and to its load, as if the chords had failed to do their duty. In other words, the web members required to take care of the shear in the structure are as essential to its stability as are its chords.

Now why should not reinforced concrete be treated with the same consistency? Is it simply because the friction in the concrete is sufficient to care for part of this shear, and buildings are standing in which no other provision is made? That is not sufficient reason why we should throw away what we know to be correct construction and continue to trust to something which a settlement of the building or a bad spot in the concrete may destroy.

There are fire-proofing companies placing their goods upon the market to-day, who make no pretense at provision against shear until compelled to by the building departments. There are many more companies who place the shear members in such a way as to be equivalent to the pin-connected truss without the pins in place; in other words, the members are there, but there are no means provided to make the connection to the concrete, and, consequently, no possibility of developing the strength of the member. With these features lacking, how is the load on the floor slab going to be carried onto the beam; what will prevent its shearing off and precipitating the load into the floor below? Worse yet, how will the beam with its accumulated load ever resist the shear at the girder, if the steel shear members are not securely fastened to both? Then, again, how can the girder with its load of beams and their loads, transmit its load to the column, when the shear members imbedded in it are depending upon the adhesion of the concrete to the steel, to resist the enormous shearing strains at the end of the girder

These points are brought out merely to emphasize the necessity of consistency in the design of reinforced concrete.

The chords must be of sufficient strength, and they must be properly secured, or they will not do their duty. The web or shear members must also be of sufficient strength, and they must be properly fastened to the chords, or they will be a menace to the structure, from the fact that they give a false sense of security.

THE SECURITY BOND AS A SUBSTITUTE FOR GOOD DESIGN.

The use of reinforced concrete has progressed so rapidly that except among technical men who have devoted special study to the subject there is a lack of knowledge decidedly to the advantage of the material. Even among architects, the men who have to specify its use and who must determine the relative values of the various systems, there is so little real knowledge of the subject, that they are inclined to waive all responsibility and try to make the construction stand up by placing the contractor under a bond.

It is needless to say that the less real knowledge a fire-proofing company may have of the subject, the more willing it will be to sign a guarantee, imbuing its system with supernatural powers and blinding the eyes of the owner, with a money security, to the possibility of a collapse which may send him and his associates into eternity. What good will a bond do then? It may replace the building. It surely will not replace the loss of life due to incompetent design.

Why should this risk be taken? Why should an owner consent to place himself and his associates under the shadow of a reckless design?

It is for two reasons, the love of the almighty dollar and the lack of appreciation of the risk being taken.

Two fire-proofers may be asked in a general way, "What does your system of fire-proofing cost per square foot?" The answers, because of the variation, are a surprise to the owner.

One man quotes a standard price. He uses the same construction, regardless of span or capacity, and offers to give a bond that his floor will have the required strength.

The other takes more time to consider, figures out accurately the quantities of material required to do the work in a scientific manner and quotes a price consistent with the design.

The work is awarded to the first, he being the lower bidder, and the owner moves his business into quarters which are a continual menace to public safety.

He is simply letting apples be shot off his head and feeling that he will not be hit because the marksman has had pretty fair success picking apples heretofore, and he has put up a bond to shoot straight this time.

A SERIOUS PROBLEM.

In talking to an architect a few days ago, the writer dropped a few remarks about the probabilities of a col-

lapse in concrete-steel construction and the desperate chances some people are taking.

"Well," said the architect, "you are the last person on earth I expected to hear talking that way," and he spoke the truth. He has had concrete-steel men pumping concrete impossibilities his way until he expects them all to be prevaricators of the rankest nature.

Concrete is subject to all of the faults of building materials, and a few more. Every ingredient must be perfect. Mixing and placing must be perfect. It must have the proper time to acquire its strength. Any one of these points failing, it is no better than so much mud.

The question arises, if a material hazardous in itself must be used, should not the reinforcement be placed in such a way as to reduce to a minimum the possibility of a collapse?

There can be but one answer, do the reasonable thing, *supply in steel what is lacking in the concrete, and do it consistently throughout the design from the center of the slab to the base plate.*

Concrete-steel is like all other good things. It is common sense from the beginning to the end. If reason calls for a certain thickness of slab, then it should be used, for to cut down in so essential a feature is taking a responsibility for the lives of others. If common sense says, place reinforcement here or there, then it should be so placed in spite of the cost in excess of that design neglecting it.

A prominent engineer once said to the writer, "If your design does not look symmetrical, common sense, logical, consistent to you, then keep on until you get it." Every word was true and it has been the greatest aid in the design of structures, to feel when the conditions were attained, a kind of self-satisfied confidence that the design would fulfill the conditions of those words.

THE DUTY OF THE OWNER.

In consideration of the conditions outlined, what is the owner to do in regard to the fire-proofing of his building?

In the first place he is to realize that the fire-proofing is the most important part of the construction, without exception, upon which it is his lot to pass.

In the second place he, in conjunction with the architect, should settle beyond a doubt the exact form of construction which he proposes to pay for.

Far too often is a general contract signed in which no provision is made in regard to the fire-proofing to be used other than that it should fulfill certain tests, when with proper attention the best might be had without additional cost.

The result is, that the contractor, not being bound to any particular system, is free to take such bids as he sees fit.

The well designed system, upon which he may have *originally based his bid,* is unable to meet the price of reckless competition and it is crowded out to give its place to one deficient in thickness of slab, or quantity and correct design of reinforcement.

The reputation of the architect, and his own personal interests, demand in every way that only such a system be used as is fully consistent with the requirements imposed upon it, and above all things, when *an owner* buys fire-proofing, he ought to get what he wants, for it is his head it is going to hang over.

Summing up, the following points may be noted as worthy of thought:

A chain is no stronger than its weakest link. No matter how strong the longitudinal reinforcement is, the shear member may prove the weak link, causing the wreck of the whole. Be consistent from the load to the support.

A bond will not contribute to the strength of the design, nor will the fact that one panel has stood a strenuous test be any criterion that the next will do the same, if the design is not logical and consistent throughout.

The man who wants the best must select it for himself when he pays the price, or he will get a substitute, carrying with it a continual menace to business and human life.

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The chief feature of the twentieth annual exhibition of the Architectural League in New York was the exhibit of plans and drawings for this improvement by the New York City Improvement Commission to Mayor McClellan on December 14, 1904. The plans and drawings held the place of honor on the north wall of the Vanderbilt gallery and were flanked on either side by the plans of the new Grand Central station, the public baths and the Buffalo public buildings.

As a result of the failure of congress to pass the public building bill, Supervising Architect James Knox Taylor of the treasury department, announces that there will be a reduction of 60 per cent in the technical force of that office. About sixty draughtmen and computers will be let out.

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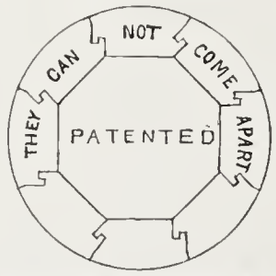

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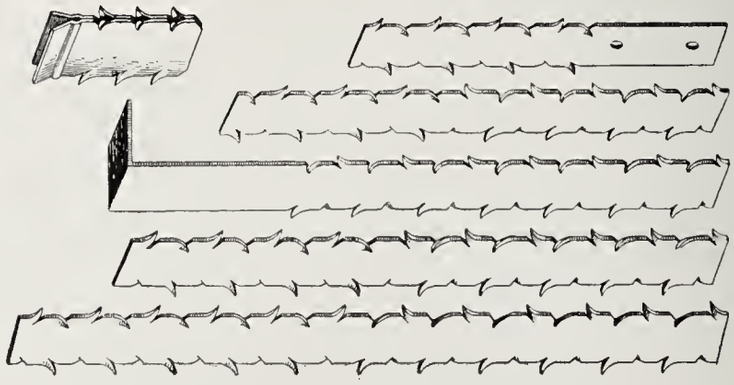

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