

THE WESTERN ARCHITECT

VOL. II. No. 1.

MINNEAPOLIS and ST. PAUL, January, 1903.

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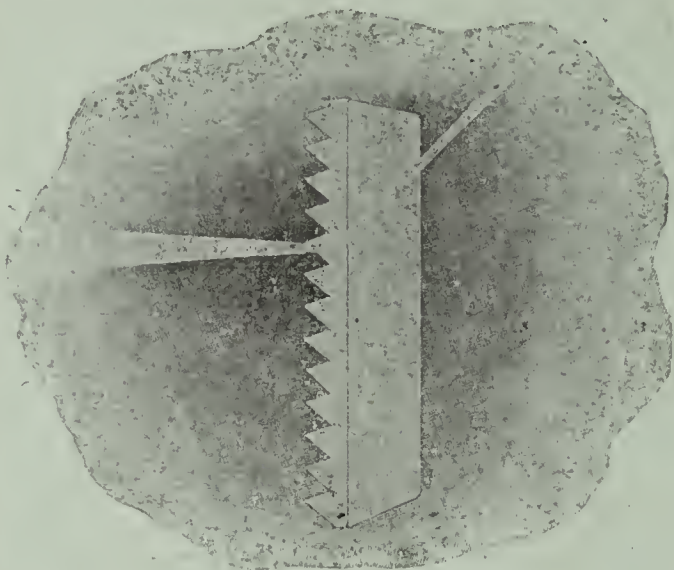
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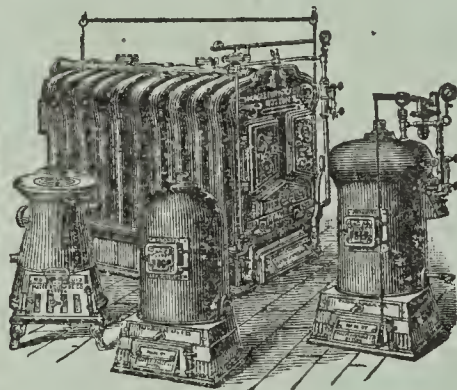
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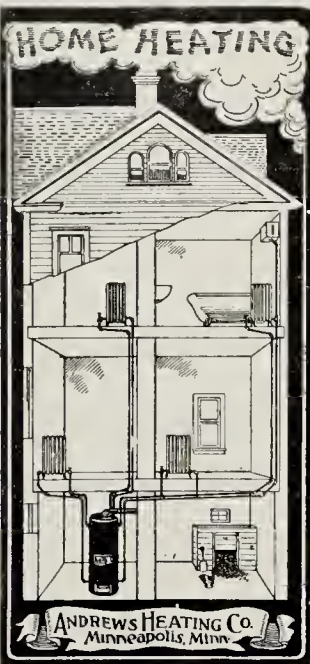
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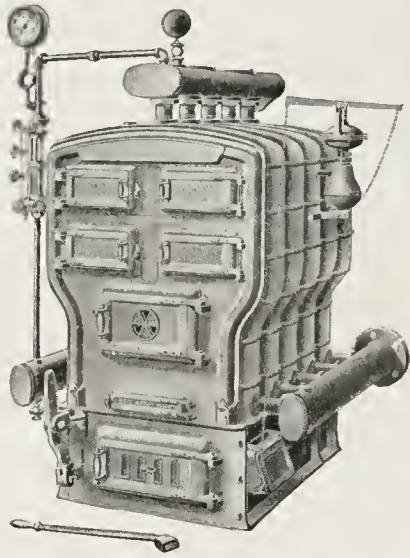
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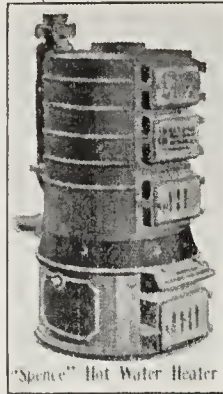


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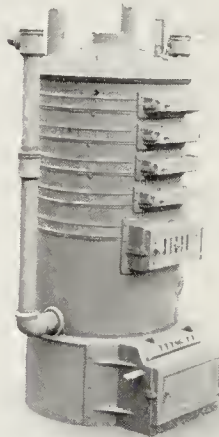
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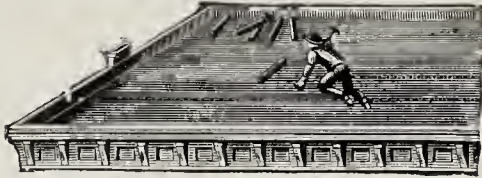
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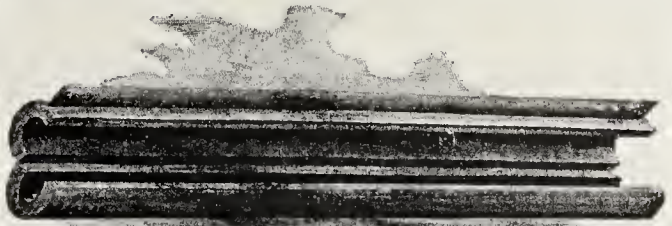
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THE WESTERN ARCHITECT

IS PUBLISHED THE 15th OF EACH MONTH BY

THE WESTERN ARCHITECT PUBLISHING COMPANY.

FRED'CK KEES, Minneapolis, Minn., President.

J. WALTER STEVENS, St. Paul, Secretary.

F. A. GREENLAW, General Manager.

Insurance Exchange Building, MINNEAPOLIS, MINN.
St. PAUL, Commercial Building.



TAKE HEED TO YOUR STEPS.

The American Mason Safety Tread Co. began business in October, 1895, in a small way, the Safety Tread having been in use in England, France and Germany some years earlier. The claims made for the non-slippery and durable properties of the Tread were at first received with incredulity by architects and owners of buildings. Almost the first contract of any magnitude secured by the American Company was for the equipment of the stairs of the Brooklyn Bridge, and this was soon followed by an order for Safety Treads for the stairs of Boston Subway stations. This exhibition of confidence in the merits of the Tread by engineers of eminence quickly led to other orders, until now the business of the company has increased to an enormous volume. Agencies are maintained in all the large cities to receive orders, and, when required, to install the material.

The Safety Tread has won the confidence of architects and engineers and justified every claim made for it. The addition of the Safety Sidewalk or Vault Lights, Coal-hole Covers, and Car and Wagon Steps was in consequence of an evident demand.

The Mason Safety Tread is composed of a base of steel or delta metal (hard brass), with lead strands firmly held in dovetail grooves. The hard metal resists wear, and holds the soft metal firmly in place to prevent slipping. V-grooves are cut in the hard metal between the lead strands. The walls of these grooves are not intersected, but continuous, thus holding the lead so that it cannot be pushed over or worn faster than the steel that confines it. Dirt deposited on the Tread is not held, but may be easily swept out.

The Safety Treads are applied to wood, iron or stone, and are equally desirable for new work or repairs. The steel Tread is electro-galvanized when required. It is made in certain standard widths, with and without a nosing. They curve the Treads, when required, to any given radius or pattern, also punch and countersink all necessary screw-holes. They furnish blue prints, special drawings, and standard specifications to illustrate the method of use by the best architects.

Many attempts have been made to devise a substitute for the Mason Safety Tread, but without success, as it is made in the simplest form possible, after years of study and experiment, involving large expenditure. This Tread is today the only one in the market combining the elements of safety, durability and cleanliness.

The Mason Safety Sidewalk Light has strands of lead embedded in grooves between the rows of lenses, giving a level, smooth, non-slippery surface. It is strong and water-tight, and has a large lighting area.

Mason Safety Coal-hole Covers are made on the same principle, with and without lenses.

Another excellent use of the Mason Safety Tread is shown by the following:

Under Horses' Hoofs.

Philadelphia, Pa., Nov. 2, 1903.

American Mason Safety Tread Company.

I am pleased to state that we have used your Mason Safety Tread in no less than twenty-four of our fire stations, police stations and patrol stations, on stairs and on floor in front of apparatus and patrol wagons, and find the material all you claim for it.

From over four years' use we find it non-slipping and un-wearable and on floor where horses stand we find it of great assistance in giving the horses a sure foothold in starting the heavy apparatus, besides preventing the mutilation of the floor from the sharp caulks of the horses.

Very truly yours,
(Signed) GEORGE G. PIERIE,
Chief, Bureau City Property.

In many buildings the Safety Tread has been, by direction of the architect, applied to all stairs at the time of construction; in others it has been attached as repair material to worn stairs and thresholds, giving a level surface, preventing further wear, and furnishing a reliable safeguard against slipping.

The popularity of the Mason Safety Tread is growing throughout the United States; there now remain but half a dozen of the more remote and thinly populated states where the Safety Tread has not been introduced. In most of the large cities and in many smaller places the Safety Tread is well known and a recognized necessity for those who are making plans for new buildings or undertaking repairs. It has very largely superseded rubber treads, stamped brass plates and other make-shifts, as it is superior to any other device for the purpose of preventing slipping on stairs. Its durability has been proved by many years of use under the severest tests that could be given—the stairs of elevated road stations in Boston, New York and Chicago.

Where Western Architects May See It.

The entrance to the Minneapolis Journal Building, Minneapolis, is equipped with Safety Tread, having been in use for three years. It has given such perfect satisfaction that the management had Safety Tread placed on the main stairway, leading to the second floor. The outside steps are iron, the inside stairway is wood, so that in the same building two uses of the material are demonstrated. Western office is at 419 Boston Block, Minneapolis, in charge of A. G. Kelley.

Mr. Hyser, proprietor of the Hyser Hotel, is a firm believer in Safety Tread, and has it placed on an inside stairway. Mr. Hyser in his own words, says, "You can't say too much in its favor."

Mason Safety Tread is in use on the following buildings in Minneapolis, besides the above mentioned: Milwaukee Station, corner Third and Washington Avenues South; Bemis Bros. Bag Co., Sixth Avenue South and Fourth Street; Power's Dry Goods Co., on elevator thresholds; Minnesota Loan and Trust Building, on an inside stairway.

In St. Paul you will find Safety Tread on the Globe building, and the Minnesota Club.

In Duluth on the American Exchange Bank.

We will be pleased to correspond with any architect who can not call at our office, 419 Boston Block, Minneapolis, and will give you any information you may desire. All quotations free of charge. Samples and catalogues may be had at the office of the Western Architect.

AMERICAN MASON SAFETY TREAD COMPANY

40 Water Street, Boston, Mass.

TEMPERATURE REGULATION.

The first successful attempt to control temperature in artificially warmed buildings was made eighteen years ago.

Prof. Warren S. Johnson, then occupying the chair of physics in the Normal School at Whitewater, Wis., devised a thermostat, which responded to the rise and fall of temperature, and which by means of electrical wires, controlled the furnace dampers. The invention proved a success, but the subject of temperature control simply had its beginning here.

Improvement upon improvement followed. The electric wires were discarded and pneumatic tubing took its place. The regulation was extended from a one-room system to a system that controlled the temperature in large buildings—with hundreds of rooms. More than that—the system was improved until now the temperature can be kept at different degrees in different rooms, according to the wants of the occupants.

This achievement promptly met the recognition it so justly deserved. Schools and colleges were soon equipped with temperance regulators. Hospitals and sanitariums, hotels and club houses, theatres and churches soon followed until thousands of public and private buildings are now equipped with temperature controlling devices.

The advantage of an accurate automatic system of temperature control is obvious. It is established that fully 25 per cent is saved in fuel expense, thus earning the first cost of the system in a few years. Thereafter every dollar saved is that much earned.

The second advantage derived by temperature regulation, and one which is regarded by most men as the most desirable, is the protection it affords to the health of the occupants of a building. Both temperature extremes are injurious to the health. When the temperature is too low, colds are contracted, while an overheated room is equally dangerous, especially when the occupant, while in perspiration, goes out doors—or seeks relief through an open window.

A modern building, be it a school house or a hotel, an office building or a sanitarium, includes, necessarily, an automatic temperature regulation system. The progressive architect not only recommends it, but strongly insists upon installation.

Thus, temperature regulation for buildings, designed for occupancy by man, is a fixed factor. It has reached its highest stage of perfection and will, in time, be commonly demanded by owners of buildings, as one of the essentials of a properly equipped structure.

PALMER HOLLOW BLOCKS.

Concrete as a building material is coming more into general favor every day. Its numerous uses would fill volumes. Among the latest is the hollow concrete building block, which has surely come to stay. It is being largely used in the Eastern cities, and is now being manufactured in this market by Harold Johnson, the well-known building material dealer and hollow tile fire-proofing contractor, and some fine-looking samples may be seen at his offices, 216-17 Lumber Exchange, Minneapolis.

The principal advantages of hollow concrete blocks, as made under both the Harmon S. and Noyes F. Palmer patents, are strength, durability, hollow walls with absolute non-conducting properties, making a warm house in winter, and a cool one in summer, giving an entirely dry basement, economy in erection, and fine exterior appearance, any good masonry being reproduced, such as rock-faced, saw-tooth, sand-rubbed, draft-edge, etc., which can be furnished at the cost of common brick work.

Mr. Johnson has secured the state right for Minnesota to manufacture this block, and would be glad to give further particulars to those interested.

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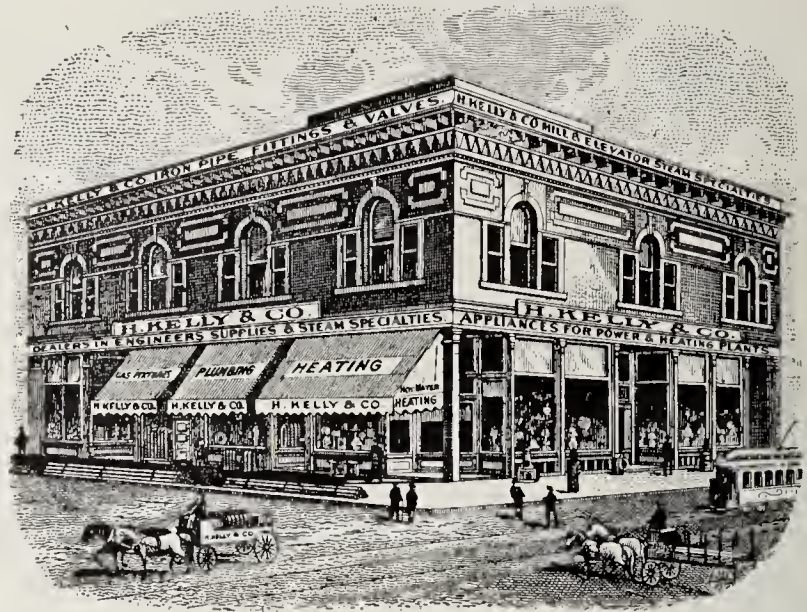
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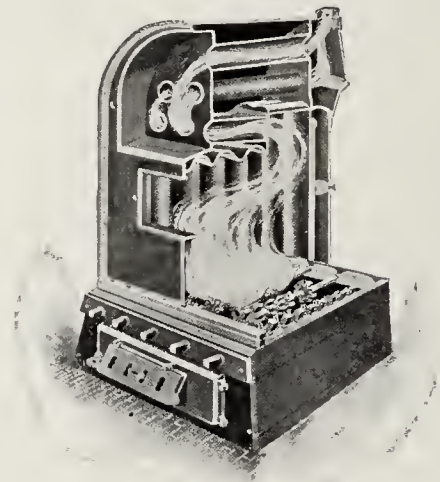
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According to tables compiled by the Chicago Underwriter's association, the people of that city have paid over \$100,000,000 in fire insurance premiums since the great fire of 1871, and have received in losses paid some \$65,000,000. Insurance men say that the difference is not large enough to show a profit, as it has cost \$40,000,000 of the premiums to get the business, which, if true, is a commentary on the necessity of advertising in a competitive business.

But a very few years ago it was estimated that the fire losses of the United States and Canada had reached the total of \$100,000,000 annually and very severe commentaries were made upon the conditions that permitted such waste. Records kept by the New York Journal of Commerce show fire losses for 1902 in the same countries to have been \$149,260,850, against \$164,347,450 in 1901, and \$163,362,250 in 1900. This falling off came in conjunction with an increase in insurance rates, and must have made the situation more tolerable to the insurance companies, who have, as a whole, been losing heavily of late.



So much wind finds its way into the preparation of New Year's recitals of old year's doings that they come out very frothy at first. But blow the froth from the too fresh records of 1902 and a goodly residue of performance is left. The surprising business activity of the United States and Canada for the year past has scarcely been equaled before, but very different stories come from Europe, where the business world finds itself very blue at the change of years, for in addition to a long list of business evils, a great shortage of harvests has to be reckoned with. In our "Land of Unlimited Possibilities" discovery has not been idle, while development of resources has been pressed, it would seem, to the full capacity of the workers. Gigantic engineering has made its mark, here and abroad. Marconi's marvel of wireless long-distance messages has passed from the experimental to the working basis. Importations have been enormous, but exports have fallen off markedly. Railroad building has revived considerably, reaching to nearly half the record figures of 1887. The call for rolling stock has been more than the workers could supply, and this call has been an index to internal commerce. Building has proceeded at a great pace, despite high prices and shorter hours, which have, however, swelled the building records to

somewhat false proportions as compared with performance. In some quarters high prices have checked and discouraged improvements noticeably, but between unusual losses of time by frequent rains that have prevailed over wide areas and the general adoption of shorter hours in the building trades, wages have been well maintained as a whole.

Not only was 1902 a year of mighty performance, but there has been much getting ready for greater things. This getting ready has in fact been no small factor in the great demand for things that has made the past year such a busy one. Two items will show something of this great preparing. When the Steel Trust was formed, it was proclaimed as pretty much the whole thing. It has, perhaps, restricted its own capacity somewhat since its formation, but the Iron Trade Review shows the following condition to exist now:

	Gross Tons.	Sheets. Tin Plates.
U. S. Steel Corporation's mills....	474,000	535,000
Independent mills (built and building)	500,000	200,000
Total production, 1901.....	500,000	400,000

The following, from Canadian official sources, will show what they are doing over the line to supply themselves with one latter-day necessity. In 1891 Canada produced 2,033 barrels of Portland cement and in 1901, 350,660 barrels.

	Barrels.
Approximate capacity of Canadian works, 1901	445,000
Approximate capacity of Canadian works, 1902	815,000
Approximate capacity of Canadian works, 1903	1,515,000



The secretary of the Maple Flooring Manufacturers' Association sends us interesting facts and figures about that comparatively youthful industry. Architects well remember what a time they used to have in getting a good hardwood floor down. In the first place, it was a long hunt to find the kind and grade of lumber wanted; then, even if machined with unusual care on the best molding machine to be found, it was far from uniform, owing, it was said, to the fact that the harder woods in passing through caused the machinery to give in some way, so that if one cut off an end of a given piece that appeared all right, it was a chance if it matched well in the other end of the same piece. But after all this, when a workman undertook to complete the dressing process begun by the machine, it seemed as if the troubles had just begun,—the cost of laying and dressing smooth by hand would perhaps nearly double the cost of the flooring delivered at the building. So, therefore, when the maple flooring, thoroughly dry and well finished by special machinery, was placed on the market it made its way very rapidly. It was true, squared at the ends and so well dressed that no plane need be used after laying, a touch with the

cabinet scraper here and there being all that was required. This improved way of placing the goods on the market originated in the west, and the growth of the industry is shown in another column.

Well-made hardwood flooring was at first to be found in maple only, but now several kinds of hardwood are in use. Oak, which is very desirable for house floors, was sometime in finding its way into the market in this form, if we remember, but now oak is to be had with the rest, and much birch is used, while beech is finding its way into stocks to some extent. Statistics as to output of "maple flooring" probably cover all these varieties, and all thicknesses. Originally most of the output was "7/8" stuff, but now quite a bit of "3/8" is sold for laying over old house floors, and although this is tongued and grooved, those who lay it recommend it as not weakened thereby so as to give them trouble in putting it down. However, "1/2" flooring is making its way into the market, and it will be readily seen that if skillfully tongued and grooved this thickness should prove very desirable for house work, for while it would have little durability in soft or loose-grained woods, one would chance it to wear many years in maple. Some 90 per cent of all flooring sold in the Northwest is "2 1/4" face, while Eastern states, Ohio, and the export trade, use most of the "3 1/4" face. One large concern makes "1 1/2" face from strips that will not make "2 1/4," and sells it at about the same as the "2 1/4," but a demand for the narrower in large quantities would raise the cost to something like \$5.00 per M. above the cost of "2 1/4."

Maple appears to stand at the head of the list for real wearing qualities. It is averse to dampness, and there are places where white oak would stand much longer. Opinions differ as to relative durability of the maple and birch in damp places and beech is too little known to say how it would behave in damp situations. Oak stains easily, but the experienced housewife has most likely learned that she can have the stains removed from oak more easily than from the others. Owing also to its more open grain, marks and scratches show less in its surface than in the smoother and closer grained woods, while its color is a great advantage to its appearance in house floors. We would guess that beech trees would furnish flooring of more uniform color when laid and finished than either maple or birch.



When the Anglo-Saxon takes up his abode in the Antipodes he seems to cut loose from old traditions concerning government, and not only does he do a lot of thinking, but if his thinking leads him to conclusions which appear quite radical to the relatives he left behind him, he puts his new conclusions to the test just the same. This department has commented upon the action of one Australian city,—the same, by the way, that introduced the now world-famous secret ballot—requiring that all public school buildings should be models of good architecture. In New Zealand, where

governmental experiments seem to be more rife than anywhere else, they are testing, to some extent, the system of raising revenues from taxing land values without reference to their improvements or the revenue derived from them—about the same system that has been advocated on this side of the world under the name of the single tax, and everywhere strenuously preached by the disciples of the late Henry George. New Zealanders have gone about testing this method in a very sensible way, and have left their bridges in good condition in case it does not work to their satisfaction. A city, or smaller community, may elect to make a trial of this way of providing revenue, and if, after three years they are dissatisfied, they may return to their old ways. Accounts do not tell whether or not during this time they continue to derive revenue from excise, from licenses, from public service corporations, etc., but if we are correctly informed, there are few or none at all of the latter, the state or municipality rendering the services so commonly with us turned over to corporations. Of the communities which have, on petition of a lawful percentage of the voters, passed upon this question by ballot, it seems that a very large majority have decided to give it a trial, the city of Wellington being among the number, but the only city thus far to make trial of the method. Country communities seem to take more kindly to the system than cities, and thus far are reported as liking it, as it appears to discourage the holding of unimproved land by speculators. In Wellington, however, the fear is expressed that the system will lead to over-crowding, "because, when the land bears the whole of the tax burden, but few can afford space for ornamental gardens." The quotation being taken from a consular report.

Overcrowding is a term used somewhat carelessly in our time. Writers on social topics are fond of quoting figures of population per acre, here and there, as if that were the end of the subject. In fact, modern improvements in building and sanitation have it about them to make the item of population per acre one of the least significant. Overcrowding is mainly a question of good or bad air, and by this standard it is not unusual to find that of a small family living on a large farm, the women at their housework all the time and the men, when not out in the fields, are overcrowded. The house is more or less surrounded with foul stables, farm-yards, sink-holes for drainage, and other things that render the air of the whole vicinity bad, except, possibly, when relieved by frosts. The air of such farm houses is vastly more unwholesome than that of a well-regulated factory or a sky-scraper, whose numberless tenants would show a population per acre never dreamed of a few years since. So insignificant an invention as the window screen may be said to upset all figures on overcrowding. But a few decades have passed since there was no sleep to be had in fly and mosquito infested parts without closing windows, which done, one sleeper soon overcrowded a large room. Then the invalid or restless child, if so unfortunate as to have no

watchful nurse to brush away insect pests, must sleep in an enervating atmosphere or have no sleep. Nowadays city people, as a whole, probably suffer more from overcrowding in going to their work and home again, packed in closed street cars, than they do either at home or at work.

No one will deny that building regulations, so frequently to be met in European cities, limiting heights of buildings and the proportion of city lots that may be covered by them, are most salutary, and every one wishing well for American communities would like to have such rules, with reasonable modifications, in force here. Yet a city with rigid limitations as to height and area of buildings is hopelessly overcrowded if not kept clean, while another city with twice the population per acre, but with well-planned and well-kept buildings and surroundings, need not suffer half so much from overcrowding. Comparative vital and health statistics relating only to the fairly well-to-do middle class—to people who are busy and fairly remunerated for their activity—some living in the country and others in well-kept modern towns, are not attainable, but if one will take the pains to make such a comparison, so as to include a sufficient number to make the inquiry of value, odds may be offered that the result would favor the people of the cities.

Or, suppose a section of a city peopled with this class, each family with a separate house and lot. Then suppose another section in which the same number of families are housed in two-story double "flats" of practically the same accommodations. The single houses might be of wood and the money that would be required in their building and in the extra cost of street improvements, to say nothing of land, might be expended in building the "flats" of brick, with brick partitions, with tiled roofs so strong and so sound that the dwellers of the second stories might romp and build their roof-gardens thereon, where the graceful parapet and even the pergola might be indulged. Allow this section far more in the way of parks and playgrounds, and yet there would be twice as many to the acre. With the knowledge and skill at the disposal of modern architecture, does any one think that this latter group need suffer more from the evils of overcrowding? Expend like sums on the housing of a family in each section, and it is more than likely that the latter section might be so housed as to be immune from fire losses. A community so housed would be at a great advantage in going to and from town, in all the items of cost of maintaining house and street improvements. There is no telling but the substitution of a system of taxation that would discourage land speculation might lead to a system of housing urban populations that would tax brains for something greatly in advance of present custom.

A simple and rapid plan for estimating the cost of any building is by comparison. If carefully done, it will give figures that can be relied upon to a great extent.

DISCOURSES ON ARCHITECTURE VI.

By GEO. EMIL BERTRAND.

I. DORIC.

The Doric order is to architecture what the Iliad and Odyssey are to poetry. The Greeks especially loved this style and notwithstanding the fact, now well established, that the Doric style had its origin in Egypt, they refined it and cultivated it so that it became, in the time of Pericles, their noblest expression in constructional form.

There is this most important thing to be said of the Doric order: It is the most simple, logical and satisfying constructionality of all styles. In this respect it is like all that is greatest in any art, whether poetry, sculpture, music or painting. There is something suggestive of the Doric style in the orations of Webster. There is that in them which immediately inspires admiration and confidence from their very force and directness and makes reasoning unnecessary.

If a style in architecture could be said to have gender, it might be said that the Doric is essentially masculine, in the sense of possessing that symmetrical angularity and virility which are essential attributes of the physically powerful man.

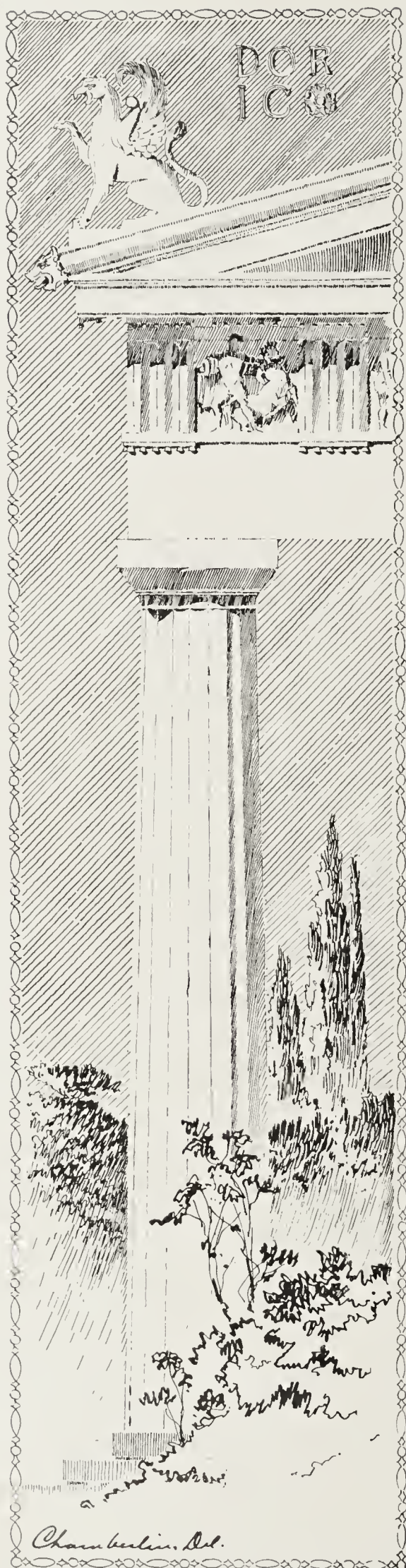
The simple fundamental principle of construction, that of vertical supports with their superimposed horizontal load, was the one in common use among the Greeks. The more complicated and involved construction of arches, trusses, resisting buttresses, etc., were very sparingly used among the people of the antique civilization, and it was the character of the ornamental treatment of this simple principle which gave it its individuality or peculiarity of expression which is designated as a style.

The mere placing of stones or bricks one upon the other does not necessarily produce a work of art. Primarily there must be a true relation between pressure and resistance not only in fact but in appearance, so that the sense of physical equilibrium may be satisfied without an effort of reasoning; that is to say the column must be in true relation with its entablature and vice versa. In other words, an architectural composition must appeal to the universal sense of cause and effect.

Thus far the composition will appeal to the instinct for physical symmetry of all reasoning minds, whether cultivated in the more delicate subtleties of the art or not. This requisite may not make it in the highest sense a work of art, but there can be no truly great work of art without it.

II THE NEW MAN.

It is the absolutely necessary basis to which are added the infinite variations of ornament and refining accessories that intellectualize the physical expression; the rhythm and measure that idealize the prose of constructional form. Whether it is the serene majesty of the Doric of the Parthenon or the sumptuous patrician



elegance of the Roman Corinthian, and while a composition fulfilling this requirement, although devoid of ornamentation, might be a work of art, yet a composition lacking in this element and still clothed in the most beautiful and appropriate embellishment would surely fall short of being a work of art in the true sense of the term.

In future times, when the history of the nineteenth century in America is written, it will be recorded as a period of great material progress, of prolific invention and discovery in the domain of the sciences; an age in which the physical condition of mankind was greatly ameliorated by innumerable labor-saving appliances unthought of by the ancients, and in which the persistent general tendency in man to moral and physical erectness received a marked impulse. But it may well be doubted if as much will be said in regard to its progress in the fine arts. It certainly never will be written that the true artistic sentiment was the common pabulum of the masses. But the reason seems very simple, when it is considered that for a hundred years the people have been engaged in a great commercial rush, incident to the development of the immense natural resources of the country.

Merchants, business men and professional men have worked early and late with the rapidity and precision of machines, and the tremendous pressure of haste has become a national habit, giving comparatively little time, if any, to the consideration of harmony and beauty in the accessories and environments of everyday life, which, if they were thought of at all, were looked upon as superfluous ornamentation, or at least unnecessary to the main object in view.

Not that Americans are less susceptible to the artistic sentiment than other people; on the contrary, the future will show that they are far more so, but they have been too busy getting rich to allow its development. It is safe to say that the most distinguishing characteristic of the American people is common sense, and no better definition could be given of great art, art that has stood the test of ages, than to say that it is common sense idealized.

Americans during the present century have been no idealists. Under such circumstances it is not strange that the greatest art—greatest because it idealizes and beautifies that most common necessity of man, his shelter, and from making necessity beautiful, in the end makes beauty a necessity—namely, architecture, has languished, at least since the colonial period. From that time to the year of the centennial, the architecture of America was uninteresting and meaningless, and practically without intelligent motive. But from the Columbian exposition dates the great forward movement which may well be termed the renaissance in America.

It is interesting to note that with the partial disappearance of the ugly in architecture, is disappearing the bizarre in costume and the discarding of that which impedes healthy exercise, which means strong and active bodies, which means strong and active brains,

and that, with proper cultivation, means healthy and logical ideals in art.

Of recent years the American has commenced to breathe again, and in the open air. He is sailing, swimming, running, leaping and boxing, like his ancient prototype of Salamis and Marathon. He is shaking the thick atmosphere of the counting-room, when possible, and regaining his normal virility of body and mind under the sun and sky. Simultaneously, as his vision is becoming clarified, he is becoming wearied of the tiresome monstrosities of boom architecture. He is learning to realize that a classical column and entablature is a bold and strong and beautiful thing, in the same way that he feels that the symmetrically developed man is a strong and beautiful thing. Power and beauty, strength and grace, the marriage with true and reciprocal equality of the physical and intellectual. The shade of a delicately wrought classical portico is more refreshing to him than that of the old-time porch, with its profusion of ugly jig-sawed brackets. What delicacy in the subordinated ornament, always enhancing and emphasizing the sentiment of strength. What dignified repose and decorous elegance and unquestioned propriety; and above all the poetry of form, which, in the severer style—namely, the Doric—as exemplified in the ancient temples of Greece, becomes epic in its grand simplicity.

OLD FORT SNELLING TO BE RESTORED.

When the army goes about "restoring," it comes pretty near to beating swords into plow-shares. The following press account of things to be hoped for at the confluence of the Mississippi and Minnesota will bring cheer to thousands of civilians at any rate, but it is to be regretted that it gives no promise of the rebuilding of the old round fort at the angle of the bluff formed by the meeting of the valleys. This was removed some twenty-five years ago by some commanding officer, with whose view from his quarters farther back, it interfered, and was a piece of vandalism that did more to destroy the picture than all the other neglect and destruction have accomplished:

"The old barracks, or 'lower post,' at Fort Snelling will be restored during the coming year in accordance with plans now in course of preparation at department headquarters, St. Paul.

The fortifications built about 1820 upon the top of the bluff overlooking the junction of the Mississippi and Minnesota rivers were laid out in diamond shape, a tower being erected at each point of the diamond and the four towers being connected by walls. The one-story stone barracks were built along the inside of these walls. Two of the towers are still standing. One is on the side toward the Minnesota river and the other is the "old tower," or round tower, familiar to all visitors.

These towers will be preserved. The round tower will be provided with skylights, steam pipes, electric light and other conveniences overlooked in 1820, and will be used as an adjutant's office. The walls connecting the four original towers will probably be rebuilt. The barracks buildings will not be repaired to resemble their original pattern, but will be made over in imitation of the old Spanish missions of California. A second story will be added. It will project over the first story towards the courtyard and will be supported by a colonnade. The walls of the building will be coated with stucco tinted yellow. The roof will be of red tiling."

ARCHITECTURAL LEAGUE COMPETITIONS.

General Circular of Information.

Eighteenth annual exhibition, 1903, The Architectural League of New York, building of the American Fine Arts Society, 215 West Fifty-seventh street, New York City.

Last day for reception of exhibits—Thursday, February 5th, 6 p. m.

Press View—Friday, February 13th, 9 a. m. to 4 p. m.

Annual Dinner—Friday, February 13th, 7 p. m.

League Reception—Saturday, February 14th, 8 p. m.

Public Exhibition—From Sunday, February 15th to Saturday, March 7th, inclusive. Hours, 10 a. m. to 6 p. m., 8 p. m. to 10 p. m.; Sundays, 12 m. to 6 p. m.

Public Lectures—Wednesdays, February 18th, 25th and March 4th.

Pay Days—All Tuesdays and Thursdays; admission, 25c. All other days free.

Exhibits Discharged—Monday, March 9th.

Competitions to be held under the auspices of league.

Season of 1902-1903 are:

The 16th Annual Competition for the Gold and Silver Medals—A small Country Church.

The Henry O. Avery prize of Fifty dollars (\$50.00) will be awarded for the best design for a model of Sun Dial for a country garden on a base of three strips.

The President's Prize (open to members of the League only)—A brass medal for the best design for a Mural Painting representing Music.

Fuller information of the terms of these competitions may be obtained from the officers of the League, or at the office of this journal.

FUTURE FUEL PRICES.

People who build will find little in the great coal strike investigation to date to induce them to relax their efforts to build warmly. It was told at first how this was to teach the belligerent interests that the public was also an interested party, but thus far we have seen only the hardships put upon labor shown by one side, while the other side show the hardships that organized labor brings upon other labor that doesn't refrain from labor at such and such times. Efforts to show the monopolistic and illegal character of the operating corporations were ruled out by the commission as promptly as the United States senate ruled out a resolution requiring the attorney general to lay before congress evidence of the same character that he is known to have had in his possession for months, while he was assuming the new role of builder of bills for congress to ratify. Whether the public ever learns to whom the coal standing in cars on railway sidings belongs or not, it will doubtless learn that if the labor monopoly gets anything out of the operator's monopoly in the end, the rise in wages will be paid for several times over by the consumer. With such truly good men as Mr. Baer to indicate to the operators the wishes of his Providence, not even college endowments will be needed to suggest the raising of prices.

The Doctor Unearths an Archaeologist.

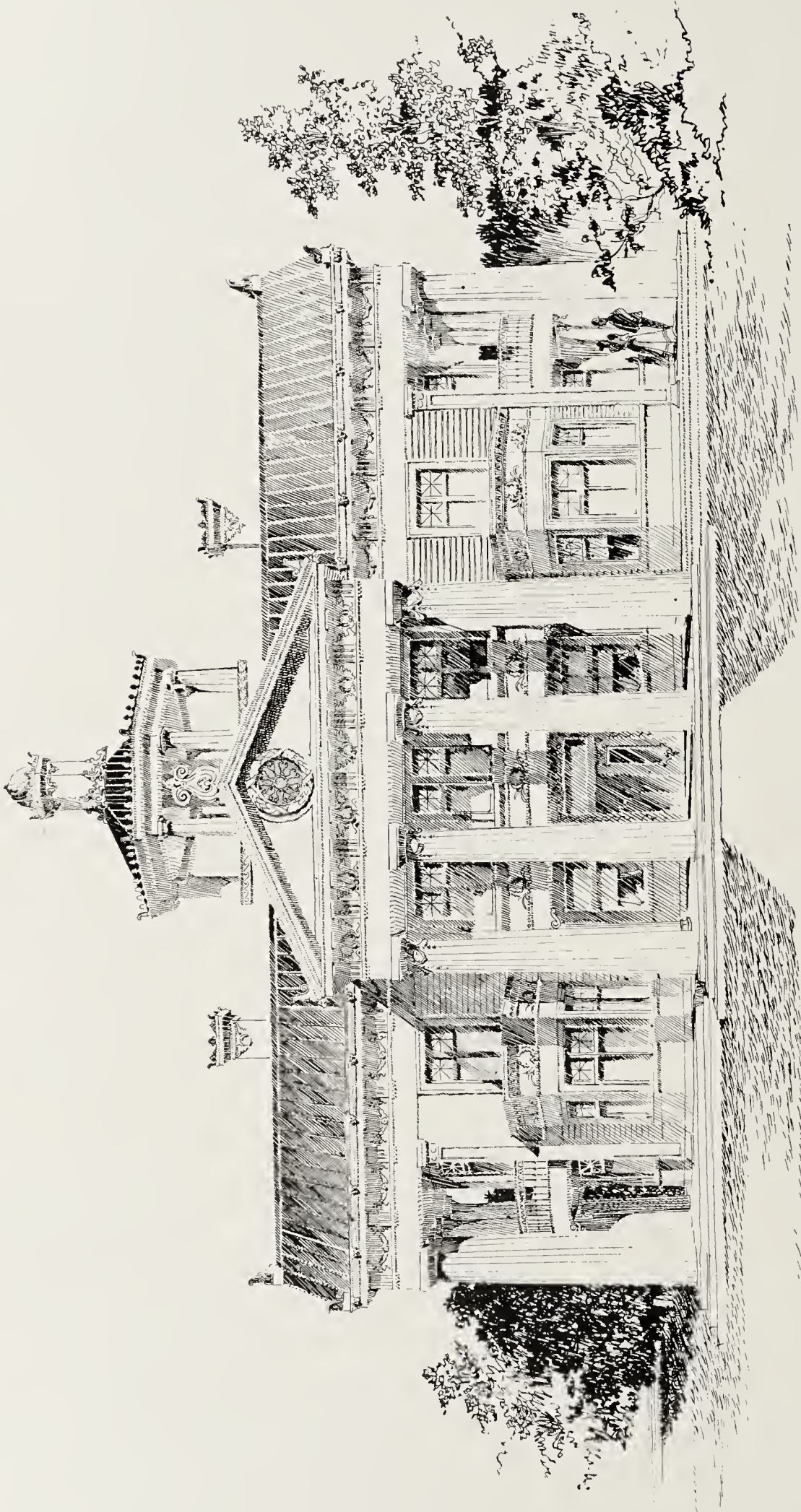
Pecksniff Nearly Makes a Disclosure.

The Doctor is one of those fellows that is always rubbing up against something that is worth while, so when we were up to the Library the other day and he took me into one of the book rooms of the Athenaeum and asked the attendant for a couple of old volumes, I was eager to see what he had dug up. They proved to be some sumptuous old folios issued with the idea of informing the select reader on the glories of the Roman remains of Palmyra and Baalbec. They were profusely illustrated with copper or steel plate engravings, but it took no time at all to see how different our way is from that of a century or even half a century ago. I stepped out and brought the numbers of the Western Architect with Mr. Doolittle's articles and the Doctor and I had a good time checking up on his ancient archaeologist. The comparison very soon led us to restoring his method of work, as he had undertaken to restore the remains of the glorious past; and odds may be offered that we came nearer to it than did the author to showing what he undertook to show. All that he appeared to have done that would pass nowadays for the real thing was to give the ground plans with their measurements, which he did with tolerable accuracy. Then he doubtless made a few more notes and went complacently back to London with them, where he put his draughtsmen and engravers at work, not forgetting to tell them that the "order" was Corinthian. The delightful freedom pervading the result is only excelled by its stupidity. It is made clear that in London in those days, Corinthian was Corinthian. It was not indebted to the Corinthian of Greece or of Rome, or even that of Inigo Jones for anything in particular. It was Cockney-Copperplate-Corinthian of the times, and what more could you ask.

When they came to preparing the plate showing the inside of the wall of the smaller temple, at Baalbec, that where two stories of canopied flat niches are so beautifully worked in between the fluted half-columns, they omitted the columns altogether; and having the idea that the upper triangular pediments forming the canopies of this row of niches were not in the best taste, proceeded blandly to show segmental and triangular canopies alternating, as honest London renaissance had taught should be done in such cases. When it came to this plate, the Doctor said, "Well, morality owes a whole lot to the camera nowadays, doesn't she?"

When I began telling this to my cousin, young Westlock,—he is a pretty good fellow, and had until the first of the year about the same position with Pecksniff that my father held with Mr. Boz's ditto—he listened only a little before he invited me to cut it while he told me something of real interest. "There's a place in St. Paul," said he, "that treats a fellow about right, and the other evening I was in there taking a little lunch, when who should come in but Pecksniff. See

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A·LAKE·MANSION·IN·THE·DORIC·STYLE· BERTRAND AND CHAMBERLIN ··· ARCHTS·

Supplement to
The Western Architect.

January, 1905

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*Residence for W.A. Stead
Carl Barthausen Archt.*

Of THE
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WAREHOUSE FOR THE DEERE & WEBBER CO., MINNEAPOLIS.

Kees and Colburn Architects.

Supplement to
The Western Architect,
January, 1903.

Brick—Gray Hydraulic Pressed Brick Co.
Terra Cotta—American Terra Cotta Co.



OLD STATE CAPITOL BUILDING, IOWA CITY, IOWA.
Now used by the State Agricultural College.

January, 1903.

Supplement to
The Western Architect

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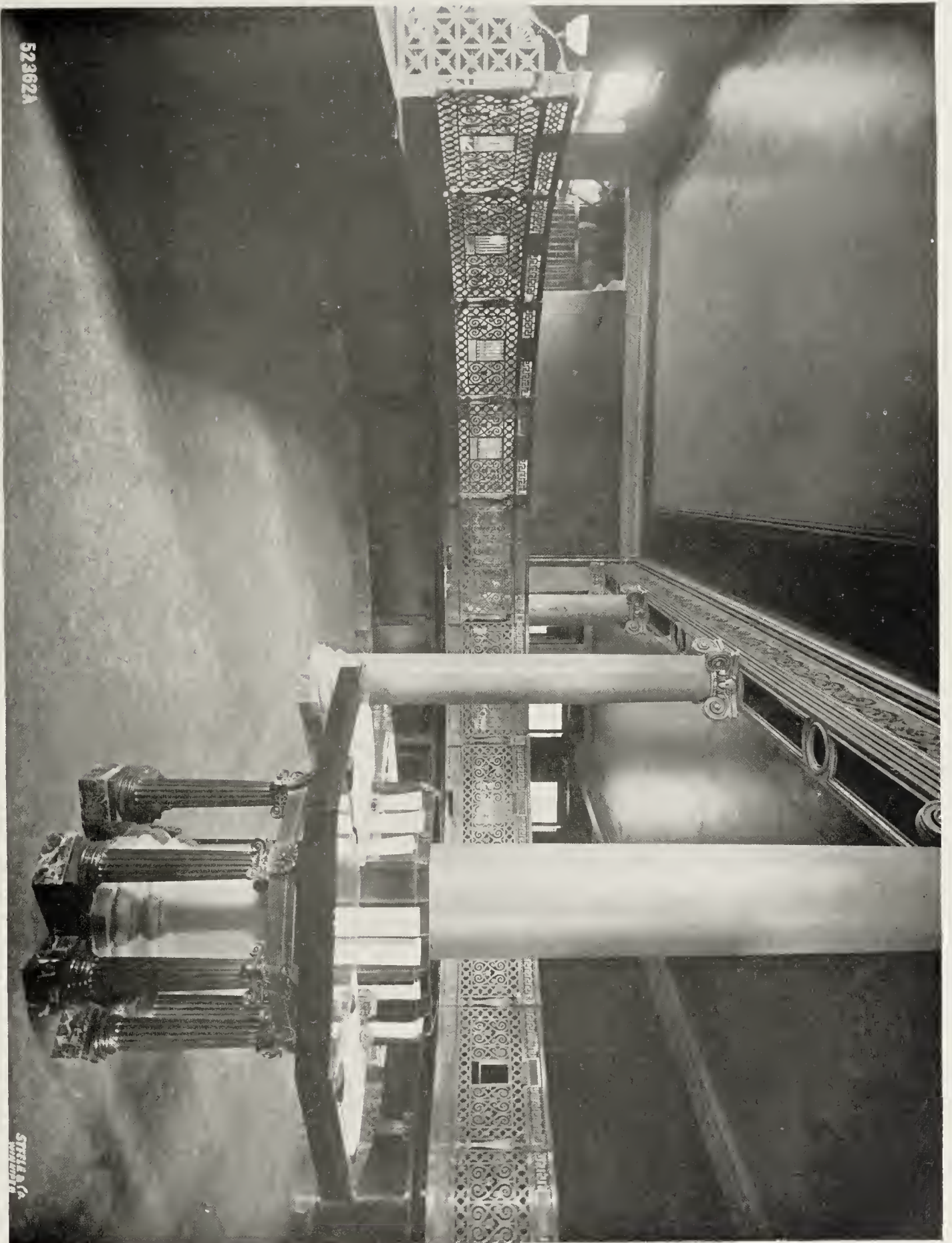


Supplement to
The Western Architect,

RESIDENCE, LOS ANGELOS, CAL.

January, 1903.

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52362A

STRIEGLER & CO.
WISCONSIN

INTERIOR OF BANKING ROOM OF THE BANK OF HAMILTON AT WINNIPEG, MINN.

D. D. Dick, Architect, Toronto.

Equipped by the
St. Paul Furniture Company.

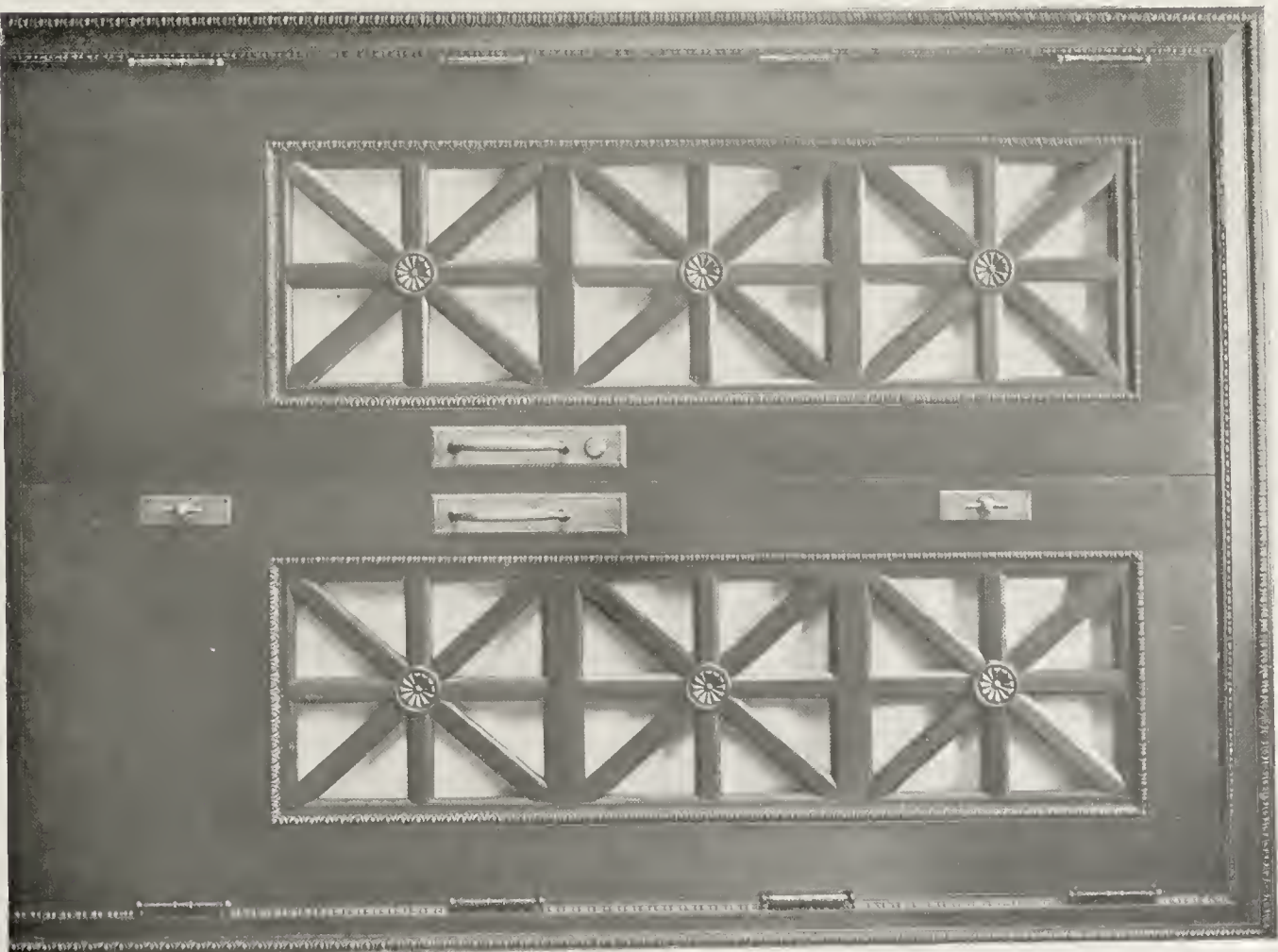
Supplement to
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ENTRANCE TO DEERE & WEBBER CO'S BUILDING.
 Kees & Colburn, Architects.

Supplement to
 The Western Architect,
 January, 1903.



ENTRANCE DOORS FIRST NATIONAL BANK, ALBERT LEA, MINN.
 H. W. Jones, Architect, Minneapolis, Minn.

Made by the Fireproof Door Co.,
 Minneapolis, Minn.

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RESIDENCE OF MRS. S. S. WELCH, ST. PAUL, MINN.

Clarence H. Johnson, Architect.

Supplement to
The Western Architect.

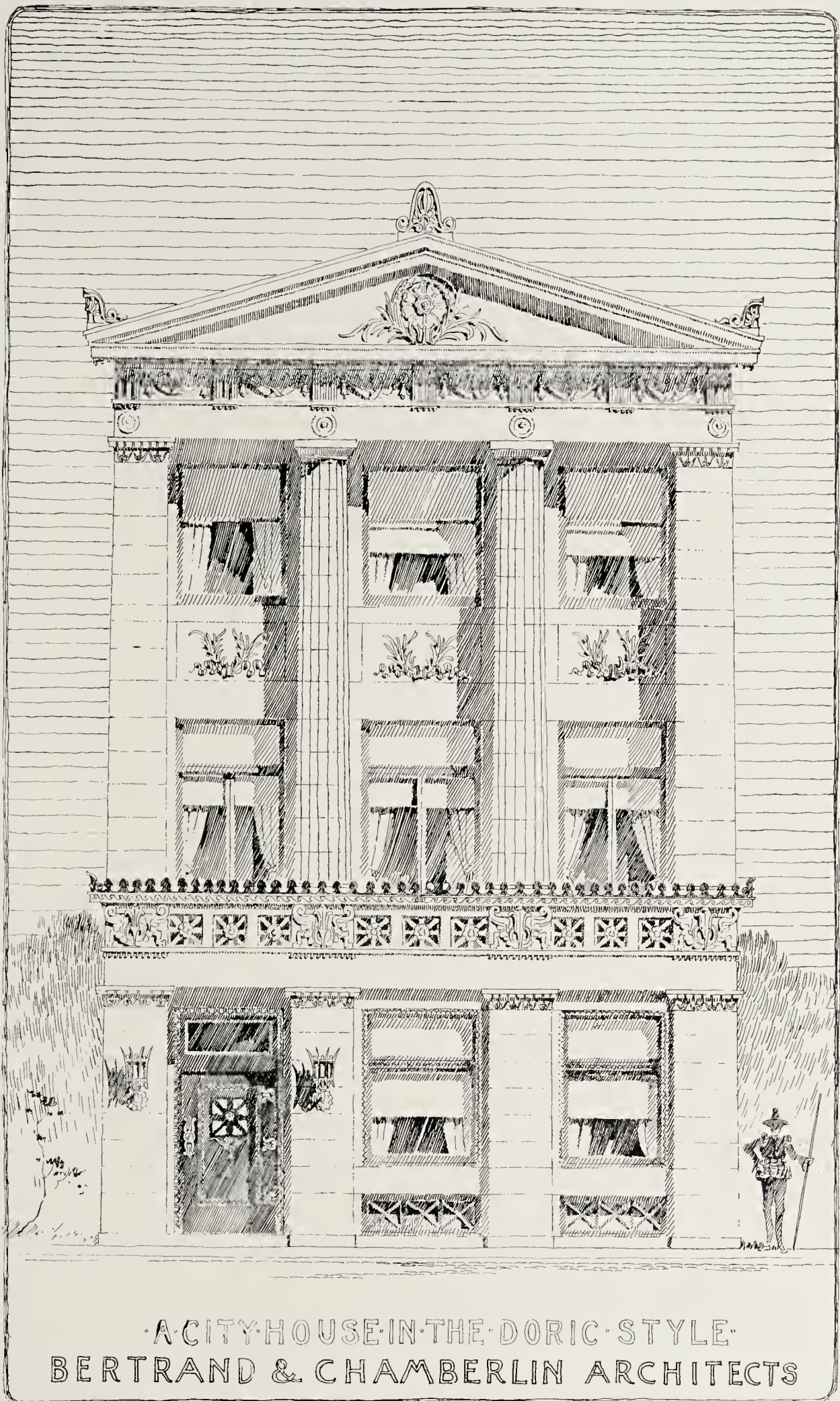
January, 1903.

LIBRARY
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HOUSE ON WAHL AVE
FOR
JOHN F. KERR
CRANE & BARKHUSEN ARCHTS
291 WISCONSIN STR



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A CITY HOUSE IN THE DORIC STYLE.
BERTRAND & CHAMBERLIN ARCHITECTS

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ing me and a claret bottle, he came and sat down cordially by my table. I asked him what I could order for him, and he said, 'Nothing, my dear Westlock. I dined too recently; nothing they have can tempt me; but my dear Westlock, wouldn't it be as well for you if you were to order another glass'—any one could see that he had been about a good deal, trying to find out what they had in St. Paul that was least odious to him. His throat was well cleared, and there being some delay in the arrival of the extra glass, he entertained me something like this: 'My dear Westlock, this is a noble profession of ours. I will maintain that sentiment with my last breath! A noble profession, sir! But, my dear Westlock, many of us are too conservative, and as a consequence, the world doesn't know us as it should. Success is a thing of details, sir, or maybe a thing of proportion, as that new book would tell us. Now, my dear W., take the question of inks. How many of us think of any other than the different kinds of india ink. Generations of architects have thought of no other than india inks, and yet we live in the day of printer's inks; and what right have they, above other men, to expect success except through printer's inks. There is that beautiful little poem about the man and his wife and the architect, and the design No. 637 that he sold to him. I didn't see all there was to it at first, but if the architect had only published the Hints for the Home, how many more of No. 637 he could sell.'

The waiter now came with a glass. The warm room and the talk seemed to have affected Pecksniff's throat, for when he resumed he was less fluent. 'Westlock,' said he, 'I'll show them what a man of action is. There was my old partner, E. George,—I wanted the firm to be styled E. George & P., but he wouldn't consent,—he left some good hints for homes in the office. I will have them worked up by the boys and numbered. Then I'll get one into that ladies' paper that comes so high. What do they call it Westlock? Zer Ladies' Humer Hum-er-wat-za-call-it, Westlock?'

"I left him with his head on the table and his mind made up. That was the night before the day I advised you fellows to be hunting up new jobs.

—Mr. Pinch, Jr.

RETAINING WALLS MADE TO MOVE ON.

Subways in great cities furnish the engineers in charge with plenty of food for thought, and that now building in New York seems to be no exception. The engineers, on their part, seem so far from being called on for all their ideas, that they now and then experiment where one would think the necessity does not exist. In one case some two hundred feet of the tube had been finished, so far as constructing the retaining wall and floor, when it was decided to widen this section to accommodate a third track. Instead of tearing out the retaining walls and rebuilding, it was decided to excavate behind them and move each retaining wall five and one-half feet to the position of the new wall, and this was done without apparent injury to the walls, and at a marked saving in cost.

MODERN MAPLE FLOORING.

Maple flooring as manufactured today is fast winning its way into popularity as being the most durable floor manufactured, as is demonstrated by the fact that the industry in the last few years has increased from an infant to one of proportions. In 1893 there was consumed 40,000,000 feet; in 1902 it increased to 220,000,000 feet, an increase of 550 per cent in nine years. This increase has been made upon the merits of maple, not only as being the longest lasting wood that is put into flooring, but also on account of its present modern manufacture, polished and end-matched as it is, which makes a flooring that has no competitor. It is extensively used from New York to California and from the Great Lakes to the Gulf, and is also largely exported to England, Ireland, France, Germany and Canada.

Maple that enters into the manufacture of flooring is known as sugar or rock maple; and grows in, comparatively, a very limited territory, principally in the northern portion of the lower peninsula of Michigan, the upper peninsula of Michigan and the northern part of Wisconsin. While it would seem that, with the industry growing as fast as the maple flooring industry is and with the territory in which maple grows so limited, it would no more than get into general use before it could not be had, yet there is enough standing maple in the limited territory mentioned to furnish floors upon the 1902 basis for at least twenty-five years, as forests where maple is found are almost exclusively maple, with but a small per cent of other woods.

We may naturally expect a greater rate of consumption in the future, but it may be met in part by supplies from other sources and in part by other woods.

NEW APARTMENT HOTELS IN NEW YORK.

A remarkable feature of the great building growth of New York for two years just past is that of apartment hotels of the more expensive sort. Suites in these usually contain two rooms and bath, and are leased by the year unfurnished; but larger suites are to be had, while now and then a single room and bath is worked in some odd space. There may be a hotel dining room, but preferably meals are served in the apartments. In 1900 plans were filed in the Building Department for such to the value of a trifle over \$2,000,000, in 1901 the business in this line was supposed to amount to \$15,000,000, while in the first ten months of 1902 plans were filed for 44 of these structures, estimated to cost over \$20,000,000. The Architectural Record estimates that these will house as many as 15,000 people and that after making all possible allowances for the motives of people who move into them, it indicates the abandonment of home life in the better sense by a large percentage of the tenants. "While the apartment hotel is the consummate flower of domestic co-operation, it is also, unfortunately, the consummate flower of domestic irresponsibility. It means the sacrifice of everything implied by the word 'home.'"

THE ARCHITECT AND THE PUBLIC.

By HARRY W. JONES, Architect.

There is no profession which is so little understood as that of architecture. Only a small portion of practitioners in this country conceive of the possible extent of their functions and influence, or the necessity for the acquirement of that knowledge which is so essential to a reasonably intelligent practice. In Europe, for centuries, it has been impossible for men except of highest learning and culture, to attain any success in its practice. Students in the offices and ateliers of Europe, work for years as such, first paying tuition for what experience they may pick up and for any suggestions they may receive from their patron, and afterward with a small remuneration, ever regarding their position as a fortunate one, and then upon being admitted to one of these government schools, they are so drilled in the technical branches, that on entering upon the serious practice of their chosen profession, they are well qualified to do so.

America, after a hundred years of oft-times very vigorous experience in building operations, demands knowledge and skill in this line as in every other, and the shrewd man of affairs is awaking to the fact that he must have the best of architectural service in whatever building he may undertake. Only within the last fifteen or twenty years, has this country known an educated profession, because we have had no schools. The Massachusetts Institute of Technology established an architectural department at its inception, combining the fine arts as taught at the Ecole des Beaux Arts in Paris with the technical features of the English and Russian polytechnic schools, thus uniting the esthetic and constructional elements. The Columbia College erected a department in connection with its School of Mines, and the University of Pennsylvania now has a very creditable department. Cornell, the University of Illinois, and one or two other colleges profess to give instruction in architecture, but, like the attempt of our own State University, it is so superficial as to be worse than none at all, for its influence tends to belittle the real great needs of education in this line.

I am often asked what steps a young man should take preparatory to becoming an architect. In the first place he should complete a good high school course, paying special attention to general mathematics and geometry. French is essential and the sooner and the more proficient he makes himself in its mastery, the better for him. Free-hand and mechanical drawing may occupy what time he can spare. After leaving high school, he had better get into a good office, even if as in England he has to pay for the privilege, for while he may and probably will think he knows a good deal, he really knows just about enough to make a nuisance of himself in the well-regulated office of a busy architect, and there is practically nothing he can do of service to it other than to run errands and keep the rooms dusted. He may be given exercises in drawing and the use of instruments, which, by the way, should not be of the best at first, until he gets over the idea that they may be used for making holes in the drawing boards. After some practice in the use of instruments, he may be intrusted with making office copies of full size detail drawings, then of tracing drawings for the use on the building, great care being taken that he is impressed with the necessity of exactness in every line and figure. In this sphere, if he is observing and takes note of the meaning of each line which he traces or copies, he may soon be able to make certain drawings himself, by referring to others of like nature, and so become of value in the office.

After two or three years service he will realize how much he doesn't know and what he needs to know and he is then ripe for the professional school. It may be well for him during the latter part of his stay in the office, to take up free-hand drawing outside, in a life class if possible, also conversational French, for in the best schools now, composition of plan and design is taught by Frenchmen, graduates of the Ecole des Beaux Arts, who are liable to give much of their instruction and criticism in French, so that it is essential that a student understand something of that language by ear as well as to read, two quite different accomplishments.

After his course at a professional school, he should again enter an office for a year or two before going to Europe, which in turn is a needed part of his education. When there, authorities differ somewhat as to the best course to pursue, but the man by this time has decided tastes and preferences for styles as existing in different parts of the Old World, and he can go where he pleases, making measured drawings of such work as is good and thus familiarizing himself with the proportions of detail, a subject of very great importance, for often a building may be very well planned and in a mass; well composed, but spoiled because of disproportion in cornice, roof, openings and other parts.

The men who have taken time for such training in general as I have outlined, have in the past decade come to constitute a "new school" as distinguished from that of those older men whose early training was exclusively in the shop or office of some carpenter who has ambitiously assumed the title of architect. He who rightly assumes this name in the year of Our Lord 1903, must be a man who knows—not everything, for it would seem that he must be verily a God who is an expert in all branches of architecture—but who possesses fairly good abilities as a man of affairs, who shall successfully plan and design and supervise the erection of any building which the exigencies of a new country may demand. He cannot be an expert civil engineer, mechanical engineer, heating, sanitary or electrical engineer, nor can he be an expert artist in the sense of being a painter, whose daily familiarity with colors and pigments makes him authority as no one else can be, neither a sculptor skilled in the use of chisel and clay. He must know something of all these arts and he will depend upon these artists to assist him, the one and only way in which a most satisfactory result may be obtained.

This state of things, it is true, is more feasible in a metropolitan city where he may have large practice and under which conditions he can regularly retain in his employ these experts.

No architect, unless of extremely limited practice, can personally undertake to supervise his own work. He may be able to pay an occasional or even daily visit, but such must be of so short duration, the amount of poor labor or material used may be enough to ruin the structure. He should keep one man exclusively for that part of the work, who shall be well posted upon the plans and specifications and otherwise qualified for the position. When such service as outlined comes to be that expected and that given, and not till then, will the sphere of the architect be appreciated and become one of the most necessary factors in the upbuilding of this great republic, which in the very nature of things he should be.

The leading members of the profession in the larger cities are many of them in this category now, having their chief of construction and various engineers, well known sculptors, make plaster models of the ornament in stone and wood, and other artists for the entire

scheme of interior decoration. Gas fixtures, furniture, and sometimes even carpets are selected by the architect, and frequently designed by him or his assistants, especially for the place where they are to go. In this way at the hand of a master can harmony or interior and exterior construction and decoration be acquired. Alas! how often the poor architect, finding himself reasonably successful, at the last moment discovers his idol worse than obliterated by some outlandish Japanese or other heathen design of its interior by some alleged decorator, or its exterior daubed with some extraordinary green-blue paint, where cream color should have been used.

In domestic architecture the charm of a house lies in its expression to a great extent, of the character and tastes of its occupants, and the architect may be of service in adapting these conditions one to another, for no doubt many have experienced that indescribable sense of something lacking in a new home, not knowing just what it was. The architect, like a physician, should, after continued contact with his client, be able to diagnose his taste and wishes, and in the selection of new furnishings suggest that which will supplement his work and at the same time be a complement to the old furniture and bric-a-brac which were formerly possessed in the old home, but are to be used in the new.

So in ecclesiastical architecture, the plan and general contour are entrusted to the man who alone is supposed to know how to combine the two at all effectively, and who strives to give that peculiar feeling of sanctity which should cause even a child to tread softly upon entering the confines of God's house, when, lo! and behold! the omniscient building committee select some crazy-quilt glass windows and employ some sign painter to decorate the walls until the final result is about as far from the ideal of the architect as the Witch of Endor from the Venus de Milo.

In England, there is a class of the more artistically minded or romantic architects, mostly young men, who believe that the artistic designers of buildings should cut themselves adrift from the common-place men of business, making a distinction between the architecture of art and the architecture of practice; but it is an assured fact that the man of affairs thus complained of is precisely the kind of architect the American public generally desire to have at their command, and this class of romantic brethren here will soon find themselves playing the role of lieutenants to the general-in-chief, who, if he prefers to rely upon such qualified assistant, nobody cares. The foremost of all considerations with the typical American is that the building transaction, as a whole matter of business, shall be conducted in a proper way commercially, that is, with all the satisfaction attaching to a good plan, economy of outlay, substantial building and smooth sailing with the addition as regards the graces of appearances of just such an amount of elegance as shall be unostentatious and, indeed, a little reticent, and thus creditable to the good taste of the owner, the architect, and the public. In a word, business is to be business throughout and the artistic dressing, like all other kinds of dressing, must be kept within bounds.

I trust that in what I have said the implication has been plain that the architect and engineer should be not only allied, but dependent one upon the other, for it is true that the architect with the multiplicity of branches to his art cannot, unless as a specialist, be entirely qualified to serve as an engineer. Is it not also true that the engineer may more often avail himself of the esthetic services of the architect in the embellishment of the structural parts of his productions, both in

general and in detail, and so these two complementary branches of the arts be more beneficial and helpful to each other?

In this century of invention and progress, when each day reveals the discovery of some new material or mechanical contrivance, it is not possible for any but those who are expert in the knowledge of mechanical art to be even in touch with the latest developments along their especial lines, and familiar with the continually changing best methods to be employed. I take it the engineer finds this very difficult, no matter how industriously he keeps his eyes open and however alert he may be in discovering and becoming acquainted in detail with the improvements which unceasingly call for his attention and investigation. So the architect, being farther removed from the action, is much less able to discern and avail himself of these best and most improved processes which he most needs to employ in his endeavor to unite economy and strength of material and so should ever keep in touch with his most valued ally, the engineer.

On the other hand, how multitudinous are the examples around us of the engineer's work, where general contour and outline in both mass and detail are disregarded in examples which might easily be made attractive to the eye and at little or no additional expense, were the architect consulted and his suggestions sought. There are few structures built which will not yield certain general lines of beauty if rightly handled and as the adage, "A thing of beauty is a joy forever," is generally admitted, why is it not worth the while to endeavor to make all our efforts yield fruitage in this direction and at the same time be a greater credit to ourselves?

We doubtless are a unit in seeking the highest perfection in our lines. Let us look for that aid and sympathy from each other that may yield the best results in our chosen life work.

HIGH-GRADE FIRE CLAY FOUND.

The highest grade of refractory fire-clay ever reported officially in this or foreign countries, as shown by the clay bulletins published by the government, has been recently found in sight of Smithland, Ky., in a stratum four to eight and ten feet thick. About 10,000 pounds have been shipped to different clay workers, and every thorough test so far has shown the analysis to be correct.

Analysis shows the Smithland clay nearly twice as high in silica as the noted German glass pot clay, which is used so generally because it is not known that we have better at home. The clay is clearest of hurtful ingredients, too, none except .41 of 1 per cent ferro-oxide, and almost anhydrous, because it carries less than 2 per cent of moisture.

A Mr. Moody has interested some practical clay workers, who will join him in erecting a large plant probably at Paducah to manufacture high grade goods, such as crucibles, tank blocks, fire brick, etc.

NOTES ON THE TIMBER SUPPLY OF THE FUTURE.

Much New England land proving too poor for agriculture has, as every one knows, been gradually abandoned and quite a respectable new growth of forest has again asserted itself. This is now threatened, along with the primeval growth of such hilly parts as could not profitably be reached by old-time logging operations. These formerly depended for their success up the "mill by a dam site," but now the portable steam saw mill is prowling about, seeking what it may devour.

The "lumber-jacks" may be Canadian, Slav, Hungarian, or even Italian. Pine, hemlock and chestnut seem most prominent among the varieties cut.

The following from the Boston Globe is probably a pretty fair statement of the general timber supply of the country:

"The most heavily-timbered state now is Oregon, next comes California, then Washington. They are each far ahead of any other state. Of the states east of the Rockies, Arkansas has probably more timber than any other state, though exact information is lacking. Following it more or less closely come such states as Louisiana, Mississippi, Minnesota, Wisconsin, Maine, Pennsylvania, Texas, North Carolina and Florida.

"The most valuable tract of timber under one control comprises over 1,000,000 acres in east Texas, which is worth upward of \$25,000,000. A syndicate in Kansas City has holdings running over 1,000,000,000 feet, mainly in Arkansas, Louisiana and Texas. The largest syndicate in the country has more than 1,000,000 acres in Washington, on which there are upwards of 20,000,000,000 feet of lumber, and its holdings will very likely cut out double that amount.

"The strongest argument in favor of the preservation of timber lands is the influence they exert upon the health of communities. The effect of forests upon temperature conditions has long been recognized. The moisture from the woods makes the general temperature more uniform. Destroying trees increases river freshets. This destruction and forest fires have also made irrigation necessary on western lands. Singularly enough, on the Atlantic coast, the forests have gained on the open fields because of emigration from the East to the West.

"If there is only 43 years' supply of timber ahead, it is vitally important that the national government and also states and cities, should make strenuous efforts to preserve woodlands. They certainly deserve as much attention as our harbors, rivers and lakes. The national health should not be imperiled by any short-sighted money-making."

The 1,000,000 acre tract in Texas referred to, is that mentioned in a former issue, to which the owners propose applying scientific forestry methods.

FUTURE OF APARTMENT HOUSES IN CITIES.

Within the past few years several large apartment houses have been erected in Minneapolis and St. Paul, and many more will be constructed during the coming year. It has taken quite a while to educate the people

to the apartment or flat system, but, now that the system has been thoroughly inaugurated, it is safe to say that those who have invested their money in them find it a good investment. Desirable flats do not go begging for tenants; the people are not hunting houses; they want a flat and are willing to pay a little more for it.

The flat or apartment house of today is a vast improvement over what it was when first introduced to the community. And the flat of the future will likewise be an improvement on that of today.

The new flat or apartment house will have its roof garden, and the management will furnish music for the occupants. There will be telephones in each flat. There will be supply stores from which the tenants can purchase anything from a spool of cotton to an automobile. In short, the flat house of the future will be one large department store, capable of accommodating every want.

People will then have to be paid to occupy a house. The newly-married couple will no longer go house-hunting. They will seek a flat which contains all the comforts of home at a reasonable cost.

One of the chief bothers about housekeeping is the coal bin. The wife in the winter time is always worried about the amount of coal on hand, and the dread of a rise in the price of that necessary article. She does not have this worry in the flat or apartment house. Steam heat is supplied; you have hot and cold water all year round. The grocer or butcher takes your order through the speaking tube, your goods are delivered to you by your dumb-waiter, and you have your private letter boxes, electric bells and lights.

You have no stairs to climb—the elevator takes you almost to the door of your department. There is no reason to doubt that those apartment houses and flats will prove for their investors that their money has been well spent, and they will have no trouble in renting every apartment in them.

The people now realize the fact that for what you pay for a house you can have six or seven rooms and bath, with all modern improvements, in one of these apartment houses, and when taken into consideration the small amount of labor attached to the housekeeping, they will rather have the flat than a house.

HOW THE OLD OPEN FIRE WORKED.

One would think that the following item must give the old fashioned open fire credit for working over time:

From the Northampton Gazette: Speaking of wood for fuel, just think of the enormous quantities of wood used in old times to keep the minister and his family warm. Trumbull's History of Northampton records that in the winter of 1740-1 Rev. Jonathan Edwards was supplied by the town with 75 loads of wood; in the year following he had 82 loads; the next year, 78 loads, and the next year, 95 loads. These loads must have been such as a yoke of oxen usually hauled, as all team work was then done by oxen. The wood was probably hauled sled length and cut up for use in the fireplaces in the wood-yard. It is safe to estimate these loads at three-quarters of a cord each. At that rate it required about 60 cords of wood each year to heat the house of the great preacher.

If it took 60 cords of wood per year to warm Jonathan Edwards then, how much—but probably nobody cares enough about it.

TESTS FOR LINSEED OIL.

Although known to many, it is not so generally realized as it should be, that most of the waste, perhaps we should say swindle, in paints and painting is due to adulterations of the oil used in the mixtures. The knowledge of this enables those makers of mixed paints who work for a future to make a reputation for their goods, furnishing paints that will last, while often the painter who, with equally good motives, buys his oils and pigments and mixes them, finds the results disappointing, he couldn't tell you why. We give below some tests for purity of oil given by G. D. W., in Patton's monthly, from which selections may be made that are very likely within the means at the command of most house painters.

"The oil in paint is the more important part of the composition. We paint with the oil. The pigment requiring the most oil, other things being equal, will make the best paint. Some pigments, such as white lead, when used alone, will react on the oil, destroying its life and durability, and at the same time being themselves destroyed as far as permanency and brilliancy are concerned.

"Linseed oil is the best oil as a paint vehicle known to the trade. Scores of linseed oil substitutes have been tried, but progressive men who value their reputation, whether they be painters, paint makers or varnish makers, all have discarded the so-called substitutes and returned to the use of the pure, unadulterated article."

In testing linseed oil for purity:

1st. Note its general appearance, with special attention to color. Pure raw linseed oil when placed in a vial or flask should have a clear yellow color, neither tending toward the brown or green. However, in cold weather or immediately after transportation it usually has a turbid appearance and for this reason it should be allowed to settle in a warm place before making the test.

Mixed with fish, cottonseed or corn oil the color will be no guide, but with rosin oil the color will be much browner. With heavy mineral oils it will have a darker, bluer cast than that of pure oil.

2nd. The Bloom (A blue-gray coloration).

The presence of mineral oil in linseed, even the "debloomed" grades (and it is usually these that are added) can be readily detected by holding against a dark or black background a vial of the suspected oil beside a vial of pure oil to which the light has free access, preferably sunlight, and looking at the oil from the light. A very small percent of mineral oil will give it a bloom which will be very marked and cannot be mistaken. If the oil be mixed with an equal quantity of ether, the bloom will show up still more distinctly.

Another method to reach the same result as the above, and which is nearly as satisfactory, is to pour on a glass painted on the back with lamp-black a few drops of the suspected oil and beside it a few drops of a pure oil and examine with the light shining full upon it.

3rd. The Taste.

Pure raw linseed oil has a peculiar taste of its own, which is best learned, not from a description but from practice. It may be described, however, as a bland taste finally producing an irritation. If mineral oil be added the taste will remain in the mouth for some time and will create a sensation similar to that produced by inhaling the odor of crude petroleum. If rosin oil the taste will be somewhat similar, but more approaching that of pine tar. If corn oil the taste will be rather sweet and more or less pleasant. If cotton-

seed oil the taste will be something like lard only less pleasant. If fish oil the taste becomes very nauseating.

4th. The Odor.

Pure raw linseed oil when briskly rubbed between the hands emits the characteristic odor of linseed meal. Mixed with mineral and rosin oil it will emit their characteristic odors. With corn oil the odor of corn meal will be plainly distinguished. With cottonseed oil the lard-like smell cannot be mistaken. With fish oil the extremely nauseating smell will be apparent, and will not be removed no matter how carefully the fish oil has been deodorized. We might add, that to get the full effect from fish oil it must be well warmed.

5th. The Specific Gravity.

In finding the specific gravity the best practical method is to pour the oil in a cylinder and lower into it a hydrometer graduated from .900 to .950.

The standard temperature at which the specific gravity of oils is taken is usually that of 20 degrees Centigrade, or 68 degrees Fahr. This standard is used simply for the sake of convenience, rooms in which the specific gravity is taken being more nearly 20 degrees than any other. If it is inconvenient to regulate the temperature the correct results can be obtained by multiplying the difference between 20 degrees Centigrade and the actual temperature of the oil by factor .00065 for Centigrade, or .00035 for Fahr., and if the temperature be high add this to the reading of the hydrometer, and if low subtract it.

The specific gravity of pure raw linseed oil at 20 degrees Centigrade will vary from .931 to .934. A specific gravity below .931 would point to the presence of, first, turpentine or benzine (indicated also by the odor); second, heavy petroleum oils; third, corn or cottonseed oils. A high specific gravity would indicate the presence of, first, rosin or other resins; second, rosin oils.

6th. Rosin Test.

A simple test for rosin is that known as the Lieberman Storch test.

One of the best methods for performing this test is to add to two or three drops in a watch glass some acetic anhydride and heat it for a few minutes, or until the oil dissolves clear. Cool to the temperature of the room and allow one drop of concentrated sulphuric acid to drop on the watch glass and run under the dissolved oil. The watch glass should be above a sheet of white paper. The presence of rosin will be shown by a purple red or violet color, quickly changing to brownish red. This is a reliable test and will not lead to erroneous conclusions if a person will first satisfy himself as to the characteristic color by applying it to pure linseed oil in comparison with rosin oil or rosin mixed with linseed oil.

7th. Flash Point.

For results sufficiently close to determine the purity of linseed oil a simple apparatus which can be operated very easily may be employed. This consists of a porcelain basin or tin cup, a gas or alcohol burner and a thermometer registering .350 degrees Centigrade or 600 degrees Fahr.

The flash point is determined by heating about 50 oz. 50 c. c. or 2 oz. of the oil in the basin or cup, constantly stirring with the thermometer and from time to time bringing a small flame over the surface of the oil. The temperature is noted as flash point when there is a slight explosion or "flash."

Pure linseed oil will not flash below 500 degrees Fahr. or 360 degrees Centigrade, and more often 550 degrees Fahr. or 288 degrees Centigrade. When adulterated with any mineral or rosin oil the flash point will be much lower. Cottonseed and corn oil will flash at nearly the same temperature as linseed.

PROGRAMME

For a Competition for the Memorial Continental Hall

TO BE ERECTED BY

The National Society Daughters of the American Revolution,

IN THE CITY OF WASHINGTON, DISTRICT OF COLUMBIA.

In accordance with the authority given by the National Society Daughters of the American Revolution, during Annual Congress, held at Washington, D. C., Saturday, February 25th, 1899, and Saturday, February 23rd, 1901, the following Competition is announced by the Committee on Architecture, a Sub-Committee of the Continental Hall Committee:

THE BUILDING.

The plans shall be for a fire-proof structure to cost \$300,000.00.

ELIGIBLE COMPETITORS.

The competition shall be limited to those who are invited or introduced to the Committee on Architecture by members of the Society.

FORM OF COMPETITION.

Two competitions will be held—an Informal or Sketch Competition (of which this is a programme), and a formal competition.

The object of the first competition is to choose three architects, or architectural firms, who may compete in a second and Final Competition.

Only those who have competed in the Informal Competition will be invited to compete in the Final Competition.

RIGHT TO REJECT.

The committee reserves the right to reject any or all sketches or drawings submitted.

Committee also reserves right to consider experience and general ability for design, detail and construction in executing the building.

AWARDS.

There will be no financial compensation in the first competition, but the architects chosen by the undersigned committee to compete again will receive \$500.00 each for their work on the second competition. The \$500.00 paid to the successful competitor to be considered as payment on account of his commission.

The architect receiving the first place in the second competition will be appointed to execute the building, and be paid for his services according to the rate established by the American Institute of Architects.

DRAWINGS SENT.

Drawings must be sent by express to MRS. WILLIAM LINDSAY, D. A. R., CARE MR. CHARLES J. BELL, PRESIDENT AMERICAN SECURITY AND TRUST COMPANY, WASHINGTON, D. C. None will be received in Washington later than January 25th, 1903.

JUDGES.

The first competition will be decided by the Committee on Architecture, subject to the approval of the Congress of the Society, and with the advice of an expert.

DRAWINGS UNSIGNED.

Drawings shall be unsigned, and all assumed names, devices or insignia of any description shall be omitted.

Enclosed with each set of drawings shall be a sealed envelope, containing the name of the competitor.

When the drawings are unpacked, a member of the committee will number each set of drawings; corresponding numbers will be placed on the sealed envelope containing name of competitor. These envelopes will not be opened by the jurors until after they have rendered their decision.

DRAWINGS RETURNED.

Drawings will be returned to competitors at their expense within ten days from the date of judgment.

QUESTIONS.

Any questions relative to this programme which may be raised by the competitors, may be addressed in writing to MRS. WILLIAM LINDSAY, CHAIRMAN OF THE COMMITTEE ON ARCHITECTURE, D. A. R., THE OSBORNE, 205 WEST 57TH STREET, NEW YORK CITY; provided these questions are submitted two weeks before close of competition.

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(MISS) ELIZA TITUS WARD.

Committee on Architecture, a Sub-Committee of Continental Hall Committee, N. S. D. A. R.

SITE.

The property owned by the Society and upon which the building is to be erected, faces a public square; the lot is 210 feet 9 inches, fronting on Seventeenth Street; and 161 feet, 11 inches, on C Street; and 170 feet, 10½ inches, on D Street. Slope of lot, North to South, fall of 4 feet, 4 inches. Elevation 14.6-10 to 19 feet above tide water. Map will be furnished to competing architects.

CHARACTER OF THE BUILDING.

It is intended that this building shall be a monument to the heroic men and women of the Revolution, as well as an administrative building for the Society, and the treatment of the design should be in keeping with this idea.

The style of architecture to be classic.

While stone is to be preferred as building material, the design should not be excessive in cost.

REQUIREMENTS.

As the space is limited, the committee does not deem it necessary in this programme for the preliminary competition, to definitely state the exact seating capacity of the Auditorium, said capacity, however, not to exceed 2,000. The Auditorium to be the main feature of the building.

Thirteen columns symbolic of the thirteen original Colonies shall also be a feature of the building.

Rooms must be provided of sufficient size for the following officers, and for the purposes designated below:

President General and one clerk.
Vice-President General in charge of Organization of Chapters and three clerks.
Recording Secretary General and three clerks.
Corresponding Secretary General and one clerk.
Registrar General and four clerks.
Treasurer General and four clerks (this room to include a steel-lined vault).
Historian General and two clerks.
Editor and Business Manager of Magazine.
A Board Room to seat eighty.
A Museum for Revolutionary relics and pictures.
A Library.
Several Committee Rooms to accommodate from five to fifty members.

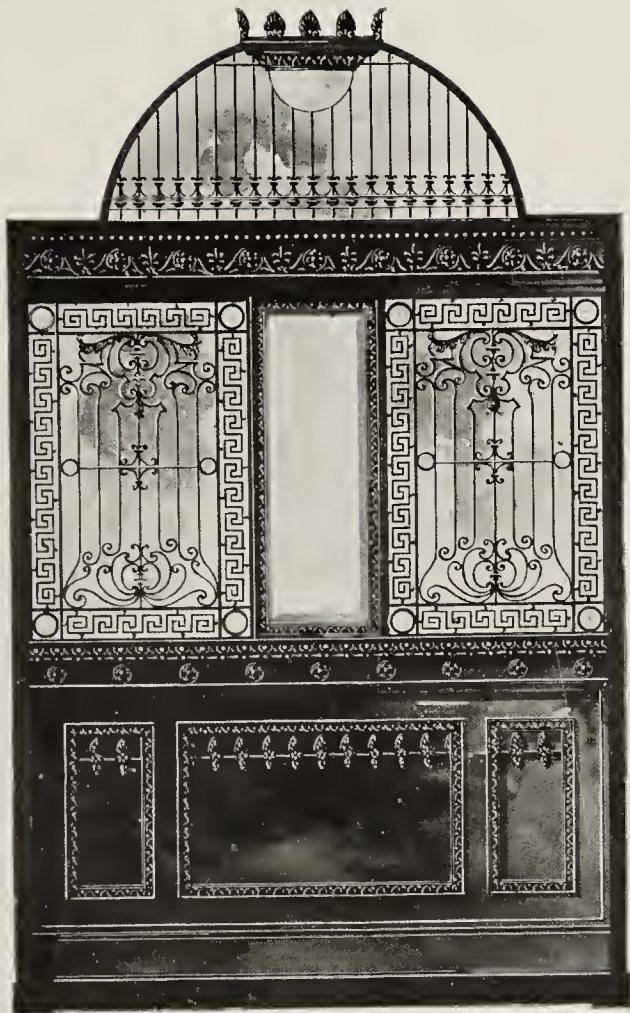
A Room for Curator.
The top floor for Dining and Kitchen purposes.
Arrangements shall be made for Heating, Ventilating and Lighting Plants, Cloak Rooms, Room for Janitor, Store Rooms, Elevators, Lavatories, etc.

The following drawings will be required in this Preliminary Competition:

A basement, first, second and third floor plan, and one section and two elevations, one of side facade, and one of front facade, at eighth scale, and a perspective sketch at eighth scale.

These drawings are to be made on Whatmann's paper, or white paper equally durable, with no landscape or other accessories, except in the perspective sketch; all to be in black and white, and to be submitted unmounted in pasteboard portfolios.

Finally, no other drawings than those required will be allowed, and the committee will throw out of competition the drawings of any competitor who disregards the conditions in this programme.



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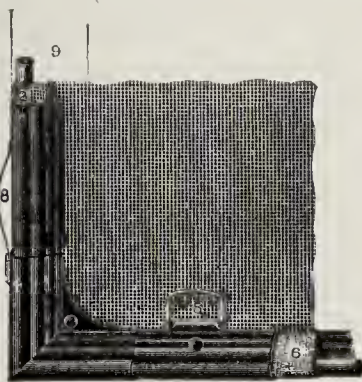
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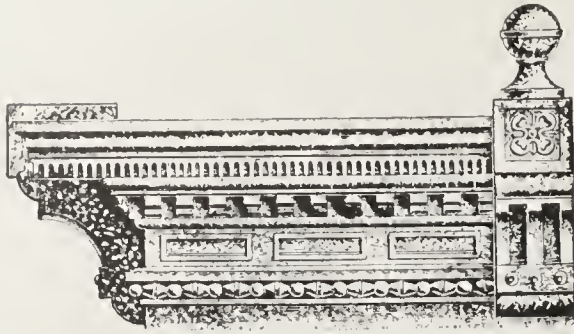
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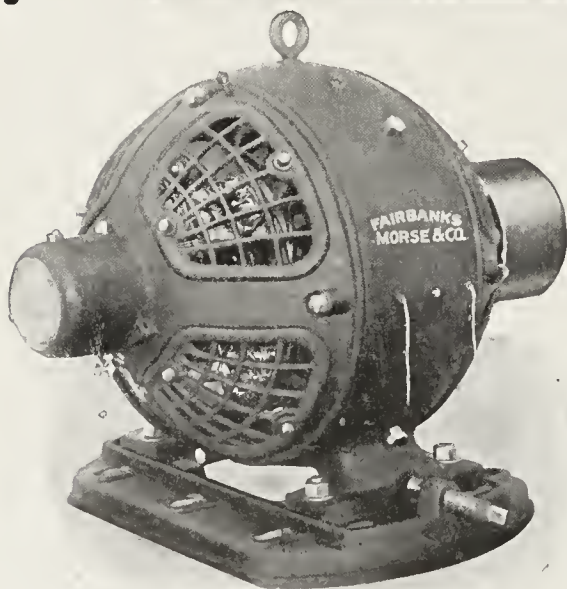
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There are three trains daily from the Twin Cities, which are installed with complete electric plants, that not only furnish electric lights for reading purposes, but also furnish power to run the electric fans for the sleeping, dining and parlor cars, which are so thoroughly appreciated on a hot day, or sultry night.

For scenery, nothing better can be had anywhere in the country than the view of over one hundred and fifty miles along the bluffs and banks of that majestic old stream and "Father of Waters"—the Mississippi river. Besides passing by such entrancing sights, after crossing the river at La-Crosse, this superb and luxurious train goes through such beautiful and well-known summer resorts as Sparta, Kilbourn, magnificent Oconomowoc, Nashotah, Hartland and Pewaukee, Wisconsin, when it reaches Milwaukee, "the town that made _____ brewery famous," and reaches Chicago at 9:25.

For the business men of the Northwest, there is a train which leaves Minneapolis & St. Paul early in the evening and arrives in Chicago at seven o'clock next morning. This train offers all that could be asked for in the way of comfort and rest, and one may go to sleep in St. Paul at night, and wake up in Chicago invigorated and refreshed ready for a good day's business when the train arrives in Chicago early the next morning.

The world's famous train, the Pioneer Limited, leaves the Twin Cities later in the evening and arrives in Chicago at 9:30 a. m. The equipment of this magnificent train excels anything on wheels, either in this country or abroad.

TROUBLE FINALLY AVOIDED.

The superlative adjectives employed by railroad advertising men are going to hold a meeting to consider their grievances. It is claimed that Adjectives Best, Most Sumptuous, Luxurious, Beautiful and others are being worked overtime. An official of the Chicago Great Western Railway stated that it was a difficult matter to aptly describe the new "Great Western Limited" without the use of these words; but that for the present they would merely urge travelers between Chicago, St. Paul, Minneapolis, Des Moines, St. Joseph and Kansas City to try this train and compare it with any other.

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The Chicago Great Western Railway is now running a through Pullman sleeper on its Kansas City train, leaving Minneapolis at 10 a. m., arriving at Kansas City the next morning at 6:50. For further information inquire of L. C. Rains, agent, corner Nicollet avenue and Fifth street, Minneapolis, Minn.

MILWAUKEE'S NEW TRAIN.

It has been announced by the Milwaukee road that beginning the first week of 1903 a new train will be added to the present service given by the company between Chicago and Omaha, and at the same time the through car service between Chicago and California by way of the Union Pacific and Southern Pacific will be established.

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Railroad building was more active last year than at any time since 1888, and nearly half as much new road was built in 1902 as in 1887. Greater activity was to be found in the new Southwest than in any other section. Oklahoma building 570 miles, Texas 496, Arkansas 371, Indian Territory 363, and New Mexico 279. This last, however, was exceeded by Georgia, where 336 miles of new road were built and neighboring states all made quite a showing. Pennsylvania led the Eastern and Middle group with 200 miles, while with the exception of Maine, with 85 miles, none of the New England states built new steam railroad mileage worth mentioning. The above reckoning does not include trolley lines.

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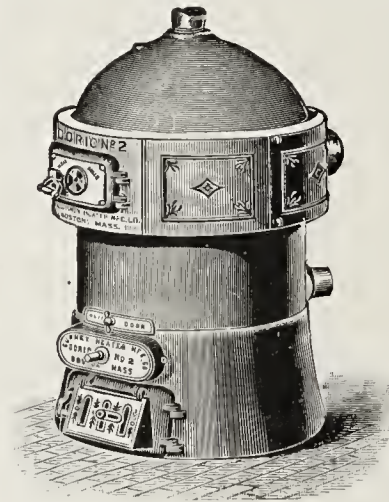
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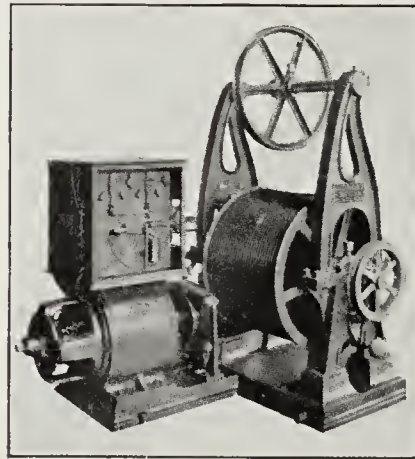


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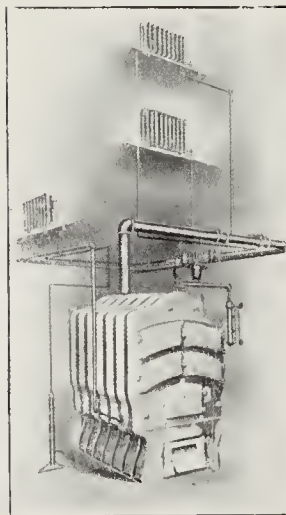
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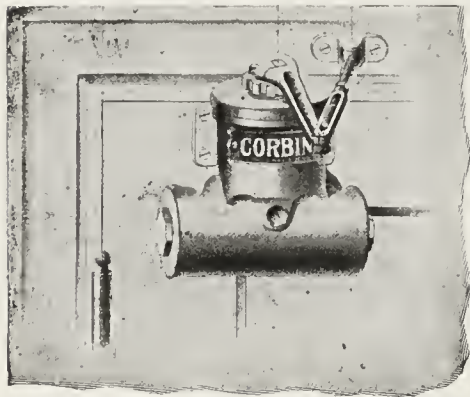
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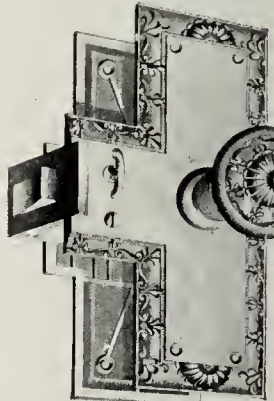
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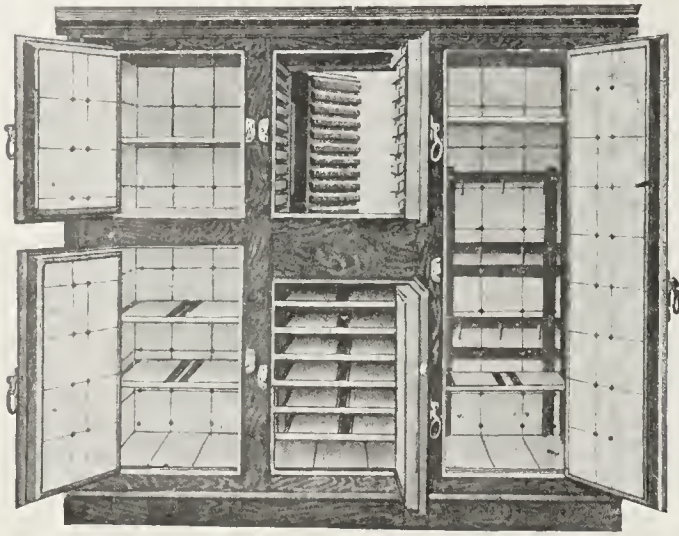
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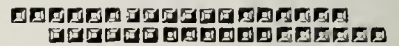
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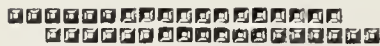
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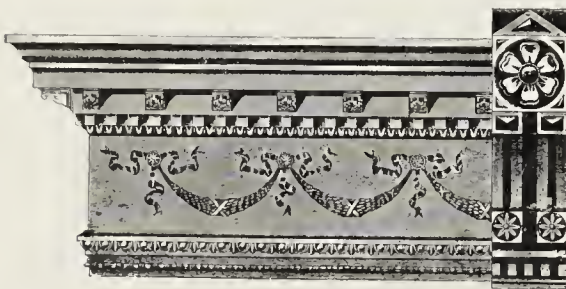
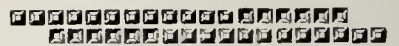
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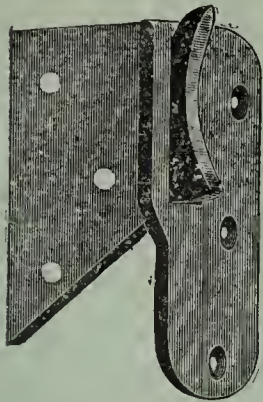
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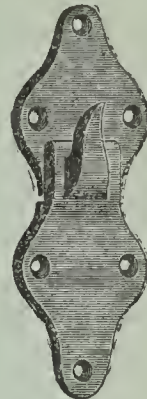
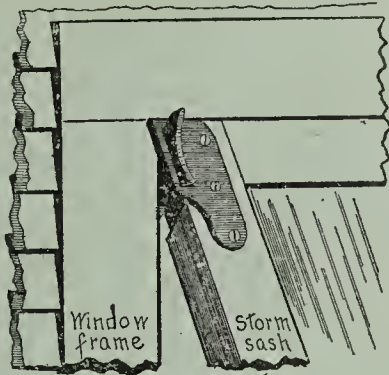
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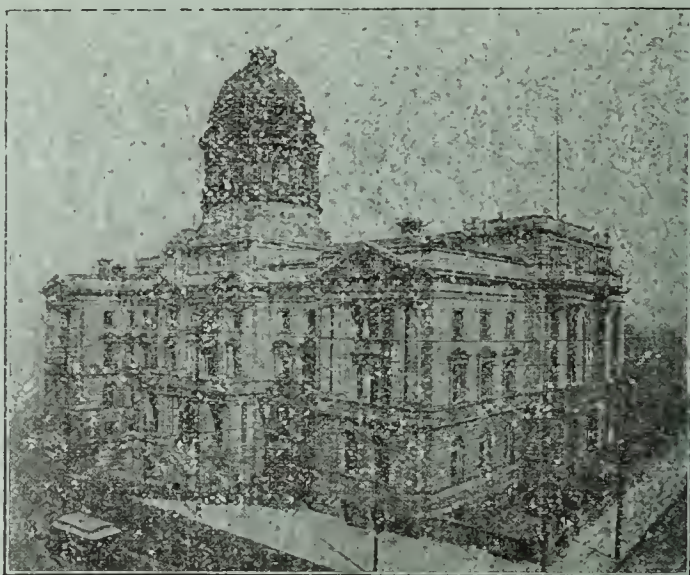
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


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