

THE WESTERN ARCHITECT

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MINNEAPOLIS and ST. PAUL, September, 1902

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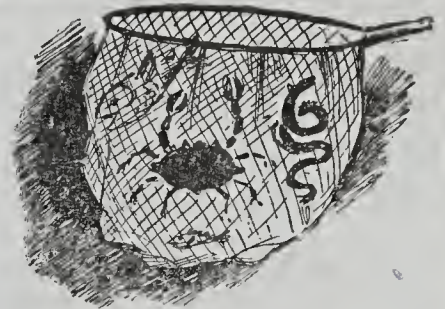
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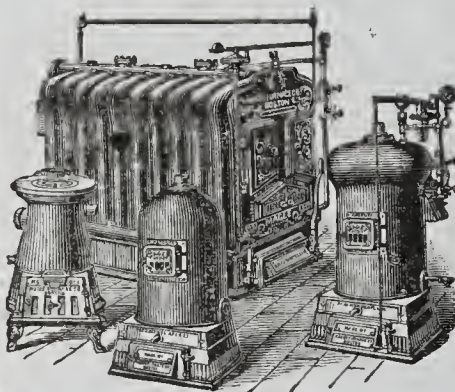
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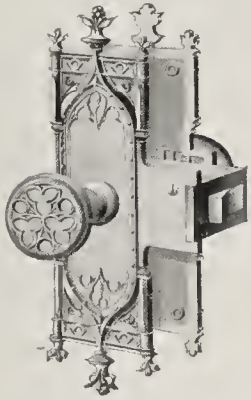
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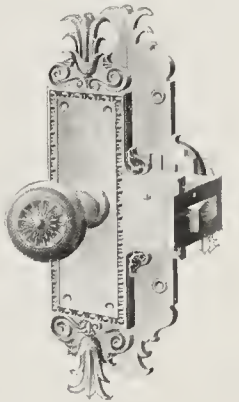
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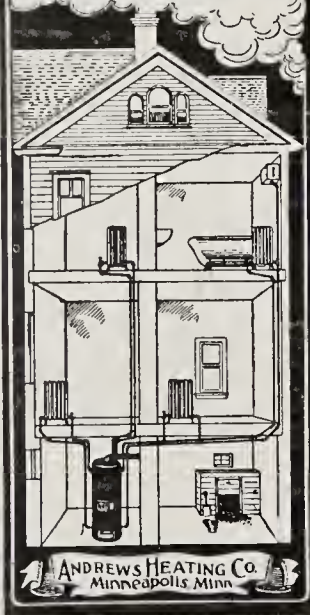
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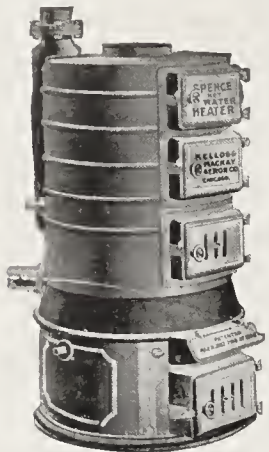
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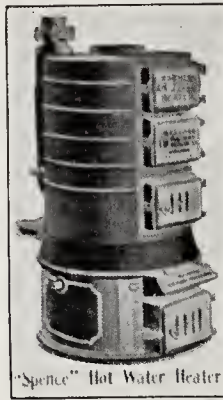


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Chicago is to have a new theater, a palace of amusement. It is to eclipse in magnificence, so it is said, any theater in that city. It is to have an Indian name—The Iroquois—and will cost over \$400,000, and be up to date in everything. The front of the theater will be in modern French style, with a base of polished granite, and the rest is glazed terra cotta. Twelve spacious doors will lead into a vestibule finished in white Vermont marble, inlaid with mosaic frieze, illustrating the theatrical development of Chicago, commencing with a picture of the first theater in the city and ending with the Iroquois itself.

We have received from The Herendeen Manufacturing Company of Geneva, N. Y., an advance copy of a little booklet of 24 pages, entitled "Warmth—In Ways Diverse." This is a handsome publication, dealing with the various methods of warming houses, from the open fire and stove to the modern steam and hot-water systems, profusely illustrated and giving a large amount of useful information. The cover is handsomely illustrated in colors representing the spirit of warmth.

It is mailed free on application by The Herendeen Manufacturing Company, Geneva, N. Y., who also manufacture the celebrated Furman Steam and Hot-water Boilers.

The city of St. Joseph, Mo., began the construction of an electric light plant for municipal street lighting twelve years ago. The system has been extensively added to at various intervals since, so that the average of the works is less than ten years. Now experts have condemned the plant as obsolete, and it is necessary to rebuild it entirely in order to make it at all satisfactory. Poor services, good offices for political henchmen, an obsolete plant only ten years old, and the necessity already for reconstructing it, with the fat pickings which that includes! This is an example of municipal ownership which should be a warning to other localities.



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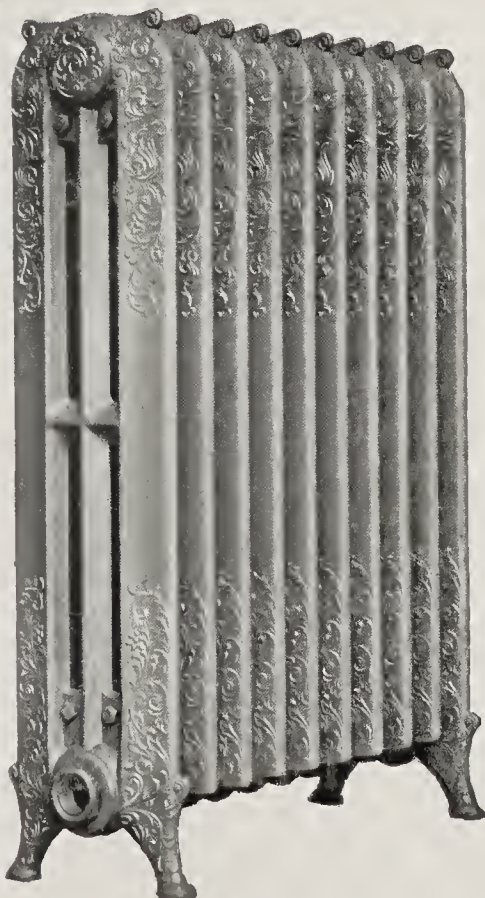
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THE *Western Architect*

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DEVOTED TO ARCHITECTURE AND ALLIED ARTS

VOL. I.

SEPTEMBER, 1902.

No. 2.

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IS PUBLISHED ON THE 1ST OF EACH MONTH

BY

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THE daily press has lately learned from an "expert" in high building construction that the safe proportion of height to base in these structures is about thus and so,—not so very different from that of some well-known ancient columns and monoliths. This is something like assuming a tall structure of honey-comb to be equal in stability to the same if made in solid bees-wax.



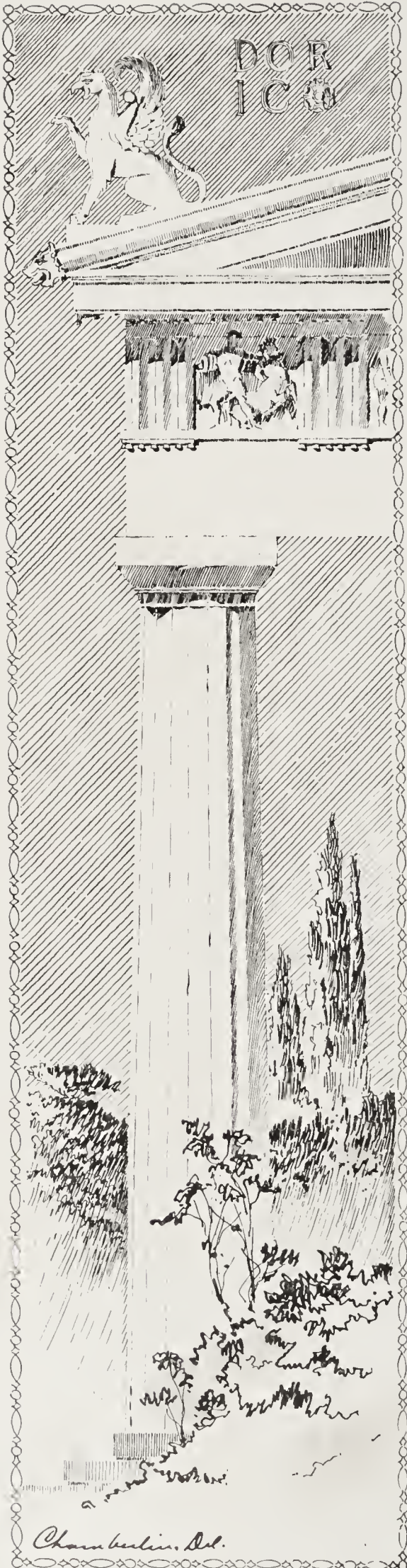
How nice it would be, if, taking heart from the success of the "kangaroo" balloting system, which,—much to the disgust of politicians,—came around the world to us from the antipodes some time ago, American communities would try another innovation started in the same Australian city that gave us the balloting system. They don't build even so much of a public building as a school-house there without first satisfying themselves that it is to be a model of good architectural form. And they probably class this notion as educational,—they can hardly have the temerity, living where they do, to think it a mark of civilization.



Some one has suggested that, in view of much of the art criticism encountered here, there would be plenty of trouble in store for the American community proposing officially to say what is and what is not good architecture. This was said in connection with a peculiarly dreadful specimen lying at the door of, let us say Mr. Ghent's "benevolent feudalism,"—a library building recently donated to one of our smart towns and widely advertised in the daily press as a specimen of "pure classic" architecture. But we are not to forget that Americans learn readily enough, as recent changes in the character of government building bears witness. Those who recall how much that salutary change was due to concerted efforts on the part of architects ought not to be without hope for better things in store for lesser communities. The art commission idea should be greatly extended.



POSSIBLY public opinion on the character of the mass of legislation of the day is reflected in the fact that where states have adopted biennial legislative sessions,



and short ones at that, there appears to be little clamor for a return to the old annual sessions. However, there is one class of legislation—that relating to just weights and measures and purity of goods—which might be extended to other fields with advantage. Laws of this class when tolerably well followed up with good administration, are observed to do a great deal towards relieving the public from swindlers; and a wise extension of them into the field of building might bring comfort to architects and others. How much pleasanter it would be for him if, in buying a heating apparatus, for instance, the architect might be confident that the maker or dealer who misrepresented its working surface, thereby made himself liable to good stiff penalties,—placed himself in the legal class with the retailer of food who uses false weights. It is true that the architect often seeks to protect the client by exacting a guarantee of efficiency in extreme weather, but that weather may not come for two or three years, by which time the guarantee may have become pretty cold, too. It is also true that many contractors have, in the face of their own liability for the adequacy of a heating plant, an easy-going habit of taking the say-so of manufacturers for the effective surface of goods. Nor is this habit confined to contractors, for every now and then an architect is found in the same boat.



“Fireproof,” the new Chicago Monthly, although somewhat lurid in picture and text, and as sincerely devoted to certain materials and constructive systems as a trade journal, is going about its work in a way not unlikely to tell if the pace is kept up. Its so-called “specials,” reciting conditions in prominent building enterprises here and there, will stand a fair chance of re-acting on the owners by way of properly increased insurance premiums. Insurance people have of late generously shared losses with owners of these doubtful enterprises, until last year witnessed more insurance companies go out of business than for a long term of years previous, and the Western Architect welcomes any worker who directly or indirectly persuades the survivors into a less self-sacrificing course in taking risks on these dubious improvements.

The effort to make good its title, however, seems to carry “Fireproof” a little beyond the limitations of prudence, for that journal is not disposed to discriminate between the proper use and the abuse of building systems not according with its notions of fire-proofing. Certainly there must be merits in building methods which have preserved to us whole mediaeval towns with their wooden floors and roofs. When, therefore, Mr. Edward Atkinson and his co-workers adapted this system to modern factories and store-houses with such degree of foresight and good sense that, after sufficient experience for a basis of scientific comparison, it was shown that the insurance tax had been reduced four-

fifths, they rendered a service. And the work done by these gentlemen furnishes "Fireproof" with no good reason for trying to make Mr. Atkinson appear as sponsor for every hare-brained building scheme that now masquerades under the name of "slow-burning." "Fireproof" is surely not in ignorance of the fact that a six or eight-story building covering an acre, with stairs and things running at will through "slow-burning" floors, would stand no chance whatever of being admitted to insurance in the companies with which Mr. Atkinson is connected.



THE business of bill-posting has reached such proportions as to cause outcry here and there from people who might, but for the enormous signs staring at them everywhere, take some pleasure in suburban and country rides. The nuisance flourishes particularly along suburban trolley lines, since the introduction of which it has grown tremendously. It is but a few days since the country, upon opening its daily paper, was comforted by the assurance, by way of Chautauqua, that there were now no monopolies, save only patent monopolies; but on turning the page it was learned that in a badly bill-boarded-and-pasted-community the local manager of the National Bill-Posting Association had graciously consented to limit his boards to such properties as were without objecting neighbors, retaining the privilege of posting such as caused protest for the benevolent purpose of preventing others from posting them. By which, it would appear that if this worthy man had not secured a monopoly of the bill-posting space in those parts, he was at least well posted in the gentle art of bluffing. At the same time comes word that in a community of some half million souls the authorities revealed a purpose to curb the exuberance of the local bill-posters, who, in turn, stepped aside that the authorities might better listen to the derisive remarks of the National Bill-Posting officials as they laughed at the notion that public officials could put a stop to the billing of private structures or prevent the erection of boards on private property after the consent of owners had been obtained. These artists claim that, once having the consent of property owners for their purposes, they are limited only by the laws relating to nuisances, that a building lettered over and painted in all the colors of the spectrum is no more of an obstruction to light and air and no less sanitary than it was before, or that an enormous bill-board across a vacant lot is smaller and less of a nuisance on a lot than a building is likely to be.

The hopeless part of it is that the people who employ this variety of decorators find profit in it, or they would discontinue advertising in this way, showing that the greater public is so indifferent to the practice as to buy the goods thus advertised, instead of applying proper and practical resentment by refusing to purchase all such

goods. Where the crusade that will prevail against this nuisance will have its beginning is not easy to predict.

Perhaps the great kodak and camera makers will be forced to head the rally, by way of preventing every prospect that pleases the camera enthusiast from being spoiled by the bill-poster. A case comes to mind where a gentleman, having traveled a thousand miles to the home of his boyhood, which had passed from the ownership of the family, secured the services of a photographer at a convenient village, and drove over with his mind filled with the views he would have made and distribute to relatives scattered far and wide. Arriving at the old home, he found it in the charge of a tenant who had thriftily subleased about every bit of surface of walls and roofs that would support signs to the enterprising agents of the great bill-posting trust, which was not letting any of its privileges run to waste.



THE third annual lightning stroke proved too much for the fine spire of the large Congregational church in S. E. Minneapolis in the storm of Aug. 29th, although the "stroke" itself did not seem to shatter things badly, but the fire that followed was not visible in the fierce storm until well under way, and was not one that the department could handle to any extent. The metal work about the structure seems not to have been very efficiently "grounded," electrically, yet the stonework of the tower supporting the wooden spire seems to have suffered little from the bolt itself, while it withstood the toppling over of the wooden structure with less damage than one would look for.

Instead of "Lightning never strikes twice in the same place," read "If your building has safely survived one encounter with lightning, prepare for more." This is more in accordance with experience. Whether or not certain select spots on the earth's surface have periods when they are peculiarly active in contributing to the "donnerwetter,"—as seismic activity locates itself in certain places for periods,—it is true that here and there places will be found peculiarly subject to electrical disturbances of the sort. A few years ago, passing along a short section of highway which followed the watershed between two streams, the burnt ruins of a building on either side of the road, and a dozen or so splintered poles supporting a telegraph line, led the passer-by to make inquiry, from which it was learned that the displeasure of Zeus had not spent itself in destroying a farmhouse on one side of the way, but had returned to wreak itself on the barn during another storm, while the poles had been splintered at still another storm,—all three during the same season.

The soothing theory that the modern town is so criss-crossed with wires that lightning keeps out of it anyway, was also made light of by the the storm of the 29th, when a building on the grounds of the University, a half mile from the church spire above cited, was also burned out as a result of the storm.

How long will it be before the habit of calculating the strength of timbers by the actual instead of list sizes becomes universal in architects' offices? A few years ago specifications calling for joists 2x16, would be filled by joists averaging 2x16, while now the joists furnished under such a specification will perhaps average 1¾x15½, a shortage in strength of more than one-sixth. What good legal reason is there for the immunity of the lumberman who cheats in this way that can not be argued in behalf of the dairyman who dilutes his milk? The practice seems to have begun with the lumbermen by a desire to save freights on long hauls,—dressed boards being so much lighter,—why not try surfacing timbers and joists and see how they will be received? Retailers, finding that consumers in general failed to see anything in the arrangement beyond a small reduction in price, fell in at once. Manufacturers who continued to saw and ship lumber of full size awoke to a new sort of competition, one akin to that which the honest dairyman encountered in the pump in the days before the law took up that question. The manufacturer who adopted the new discovery could deliver a lot of lumber to a dealer at 10 per cent less cost to himself, board measure, than if he sawed to the sizes listed. There was nothing else for him to do soon, if he stayed in business. Nobody would pay him according to the actual amount furnished. Unluckily, there never was any law to punish him for the cheat, and often there was no supervising architect to require, or none that did require, that the shortage be made up. The owner, if he happened to profit in purse, did so only at the expense of the strength of his building. The wise architect, being driven a few times to require that timbers be re-spaced or doubled up, to make up for the shortage in size, betook himself to his office, and thenceforth specified enough larger timbers to compensate for this swindle of the saw. These are not the only instances where this peculiar competition reaches into building affairs,—where the things furnished are not the things listed,—but they are somewhat conspicuous illustrations of swindles that might well come under the eyes of the law.

BUILDING inspectors might do something to head off these new trade peculiarities that affect the stability of buildings, but do they? We recall a case in court where it was shown by evidence that the lessee for whom the building in question was erected, had consented to a substitution of floor timbers of different variety and thickness from those specified, "provided the interest of the lessee be not thereby injured." But according to the building ordinance of the city in which this occurred, the joists used if of the size named, would have been but 64 per cent. as strong as those first specified, while the sawing had reduced them to about 51 per cent of that strength, carrying them 7 or 8 per cent. below ordinance requirements, without deducting anything for weight of floors and ceilings. This was a case in which the ordinance required a cer-

tain reckoning for the timbers used, according to which, had they been of the sizes agreed to be furnished, they would have met ordinance requirements by a close shave, but as built, they would fall far short of it.



PEOPLE have hardly resigned themselves to this age of steel when from all quarters come signs of rebellion, incited by all manner of causes. Not long ago every daily newspaper was quoting a noted engineer as predicting early disaster to the sky-scrappers of the steel-frame sort—and nearly all of them are covered by the classification. We confess inability to see where Mr. Soosmith's grounds for prophecy are well founded. If correctly quoted, he expressed greater fears for the steel of these superstructures than for that of the foundations, even where the footings consist of steel grillage in concrete—in fact he was not alarmed for the metal when bedded in cement. But while Portland cement is probably a good preservative of steel,—it contains some free lime, and quicklime certainly is a good preserver of iron,—it is not so certain that steel imbedded in cement mixed with all sorts of stuff and kept in a wet place will never corrode. All sorts of curiosities in concrete come to light in these days, and if Portland cement will save them all it is certainly a good building material. But what seemed to give our authority greatest uneasiness was the steel in the building above ground. This is in some way to be destroyed by the corrosive work of gases. The steel framework of buildings, all incased with masonry and what-not, is not to escape the trials of the roof-trusses of the railway train-shed. It may be noted in this connection that this is a pretty safe field for prophecy, because nobody will permit the anatomy of his building to be exposed by way of proof. The owner of a good steel-frame structure is about as apt to be frightened into permitting that frame to be uncovered and tested for corrosion as is an apparently healthy man to permit his bones to be stripped and tested with drill and saw in response to somebody's prediction that they are unsound and are due shortly to collapse with his weight.

But if anybody is being made miserable by the prediction of early disaster to steel frames, it is well to recall that the construction is not so new as supposed at first thought. For a generation before the metal framework took its place for the support of entire structures, it was in use for the support of the floors of the interior; for, although in the thinner forms of sheets and pipes, there seems no doubt that "iron" is far superior in lasting qualities to "steel," in the heavier forms of I-beams, column sections, etc. No one would expect the old rolled-iron goods to outlast their steel successors under the conditions in buildings, where all are well painted, and generally well preserved from atmospheric influences by a cover of masonry. While nobody expects the sky-scraper of to-day to withstand time as did ancient stone

buildings, it is probable that they will last long enough. However, the investigations to be made by the Massachusetts Institute of Technology into the durability of steel in service will, it is understood, be largely devoted for a time to the condition of the steel frames of buildings, and its reports will be looked for with interest. No doubt places will be found where plumbing leaks, or electric action, or both combined, threaten the structure, but that ordinary city atmosphere is appreciably corroding these steel frames is hardly conceivable.

It is to be hoped that the Institute will not neglect a field that is of vastly more importance to the building public, the evident inferior lasting quality of latter-day steel in sheets and pipes as compared with the iron which it has displaced in the market. Losses from this cause reach thousands, where the premature decay of a skyscraper affects one owner.

Pagan and Christian Temples—Gothic Cathedrals.

(SECOND PAPER)

By GEORGE EMILE BERTRAND,
of BERTRAND & CHAMBERLIN, Architects.

In contrast with the clear, mild, pacific harmony in nature along the Mediterranean coasts, imagine the inhospitable climate, humid forests, the frowning snow-capped mountains of northern and central Europe; a country of violent contrasts in temperature and natural features; a country with marshy coasts and heavy, misty skies.

In this rugged country the primitive barbarian found the support of life an incessant struggle against the elements as well as ferocious animals. During a large part of the year he must be protected against the biting cold and the driving snow storms. His daily life was full of violent contrasts. He lived by the chase and fed mainly on the flesh of wild animals. He was either starving in pursuit of his prey, or drowsing away the effects of his animal feast. By incessant contact with the violence of the elements, his nature became violent, his emotions excitable. All the impressions he received from nature were those of excess, turbulence, unrest. Extremes of heat and cold; storms, floods, avalanches; the rush of swollen torrents from snow-laden mountains; the black forests of pointed firs against the blinding white flanks of the mountains; the broken jagged lines of nature; the leaden storm clouds above their slanting streaks of rain—all of these wrought upon his poetic temperament.

His habits of living would adjust themselves to the fitful influences of his environments. He would frequently be forced to remain inactive in his rude shelter with the sighing and moaning of the wind, the howling of driven animals, and the fearful sounds of the bending and cracking forest, playing upon his excitable fancy. On the other hand, his activity would be ex-

cessive. There would be the felling of trees, the hunting of wild animals, the pursuit by wolves, the adventurous excursions along treacherous coasts, the stemming of torrents.

He would be cradled in the gloomy shade, among the giant and gnarled trunks of the forest. His earliest childhood impressions would be from vivid accounts of adventures among wild beasts, vengeful spirits of the mountains and lakes, the fairies of the woods, and wonderful escapes in storms and floods. Every fiber of his being would be wrought upon by these influences, and after generations they would become reflected in his physique, his actions, his facial expression. It could not be otherwise than that his passions, his emotions, his sentiments of love or hate, of depression or exaltation would become fitful, violent, uncontrollable. His language would become abrupt, rude, forceful, passionate.

These were the characteristic traits of the peoples, commonly known in history as the Gothic and Teutonic barbarians, who invaded Italy and Gaul in the early centuries of the Christian era. There these sturdy, adventurous men, with their violent temperaments and their souls full of the gloomy mysteries and strange legends of their own country, first came into contact with the uplifting thought of Christianity. Such a race would naturally be dominant in the midst of a people who had become enervated by centuries of corrupt living and who were the lagging representatives of the Roman classical system, which had rounded out its course. Whatever character was given to the form of expression of a new sentiment, it would inevitably be marked by the imprint of the most salient traits of these strong invaders.

In the souls of these stalwart, daring barbarians was the mighty chaos of the Alps, the vertical lines of abysses, rocky towers and pinnacles. There was the somber gloom of dense forests. There was the romance of danger among violent elements and ferocious animals. There were weird and fearful legends of superhuman beings who haunted the mountains and forests and river depths.

When the pathos, and love, and beauty, and grandeur of the story of the crucifixion took firm possession of such minds, it may well be imagined with what extravagant force and intensity their feelings would find expression.

In whatever medium they gave vent to their deepest emotions, it would be an interpretation of their dominant traits of character. If they built a temple in which to celebrate the mysteries of what to them took the form of a sublime epic, it could not be a broad, simple, logical expression of form, with the predominating horizontal lines of solidity and composure. There would be the tumult of crowding, uplifting emotions expressed in the multiplicity of vertical lines, mounting upward and culminating in pinnacles and pointed

windows. There would be the daring construction of spires reaching into the heavens, with their buttresses supports and their grotesque ornamentations of animals and foliage. There would be the overpowering majesty of height; the dim, rich gloom of great soaring vaults; the glamor of long shafts of light filtered through the gorgecus harmonies of the vestments in painted glass of innumerable saints and angels; the long ranks of clustered shafts, with their radiating branches meeting far up in the dizzy heights.

All this would be the idealism in carven stone of rugged countries; of lofty mountains, with their beetling cliffs, their inaccessible, storm encircled peaks, their caverns peopled with ghostly myths by the fervid imagination of the poetic barbarian; of the mysterious gloom of dense forests with their giant columns supporting their canopies of rustling foliage. It would be the idealism of lives full of daring and unrest, and crowded with adventure; of souls filled with the mysterious suggestiveness of their wild environment and fed upon the weird legends of the spirits of the earth and air.

The Gothic cathedral was the logical result of the time and conditions. It was the manifestation of a great devotional impulse, coupled with the personality of a rude, rugged, imaginative race of barbarians full of the sap of nature. They received from the Latins the gift of Christianity and borrowed from them their skill in building, which was reached down from classical times; but they impressed upon these their own greater virility of character and their stronger, more poetic imagination. The Gothic cathedral was as truly the expression of the religious impulses and race traditions of the middle ages in western Europe as was the Grecian temple the expression of the impulses of the time of Pericles.

GOOD ROADS

The rumor that Mr. Pecksniff is not the man his father was, had become so common that as soon as my pocket had closed over the pass that the W. A. gave me, I went boldly to him, and, sure enough, obtained a half day off. And when I reached the grounds, whom should I bring up against but the Good-Roads-People, showing how to do it. Now, every man with a half a notion of how to build things is always wondering how it is that so many poor roads are built with good-road material, and the very best thing that he can do is to send along all these poor-road-makers he knows to see these good-road-makers that are touring the country with their train. They can't take along with them just

such machinery as would be best to use for work on a large scale, especially to prepare materials for long distance shipment, but they have such as is pretty good to tackle local conditions, and to pass along the road to the next handy source of supply.

Some of our good friends that have quarries, the refuse of which has been worrying them so long, will get something out of this, because people will be set thinking about the good things in broken-stone roads, and they will look around to see what quarries will furnish them with what they want; and our friends will put in crushers and clean up their quarries at a profit.

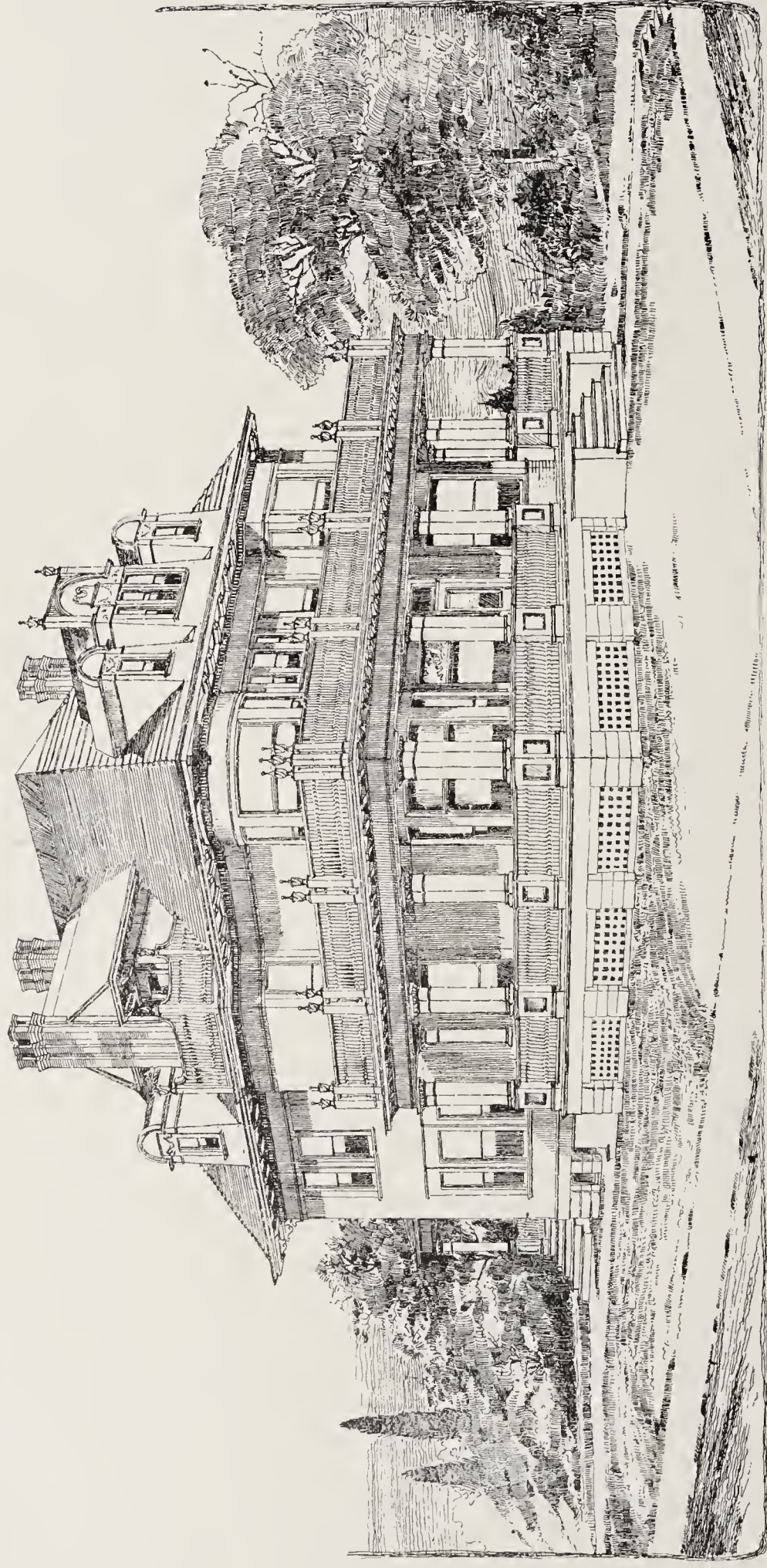
And people are not going to stop with thinking about broken stone for country roads alone: they will think about it for a whole lot of residence streets and others with light traffic in cities. They have been watching the asphalt experiment in the Northwest till they are tired, and they conclude that if you want it to stand awhile, you have got to put it in little-used and much-shaded streets. The next thing heard from these people will be that there are a great many miles of city streets of this kind that can be neatly surfaced with broken stone at just about one-third the cost of asphalt. Three miles of fine broken stone street or one of asphalt,—Which will you have for the money? You are not asked to take a street of any old stone broken up and dumped in the mud and rolled down, but a street well graded for drainage, rolled, then covered with broken stone in the right way, and rolled so smooth and hard you'll think it's all one; and if the stone at hand is good to stand frost, but not wear, you can have it surfaced with granite from St. Cloud or trap-rock from Taylor's Falls. And how thoughtful it was of these Good-Roads-People to have some of these hard stones to show. Is there anything in the stone line that is tougher and stronger than this trap-rock? Nature must have split it up so before she let it get hard. How will the wear of a residence street make dust of it?

So much thinking is going on now about broken-stone roads that a reliable company is offering to fit up and supply hard, broken stone for surfacing, at reasonable prices, on such scale as cities may demand for street work.

Now, a good broken-stone road will not take away anything from the merits of a good brick road or a good sand-stone-block road, for there will be plenty of places where such will be required, but it will give us many a mile of good road where we now have bad road. And if it makes the crushing of stone a more common calling among us, why will it not be easier to get material for concrete than it is now even?

MR. PINCH, JR.

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Supplement to
THE WESTERN ARCHITECT

RESIDENCE OF MR. JAMES CLEARY, St. Paul, Minn.
E. J. DONOHUE, Architect, St. Paul.

September, 1902

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RESIDENCE OF
S. HARRIS ESQ.
BERTRAND AND
CHAMBERLIN
ARCHITECTS

Supplement to
THE WESTERN ARCHITECT.

RESIDENCE COR. VINE PLACE AND FRANKLIN AVENUE, Minneapolis, Minn.
BERTRAND & CHAMBERLIN, Architects, Minneapolis,

September, 1902



Supplement to
THE WESTERN ARCHITECT

Reception Hall in Mr. F. B. SEMPLE'S Residence, Minneapolis
F. B. and L. L. LONG, Architects.

September, 1902

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M.C. Fowler
Photo.

Supplement to
THE WESTERN ARCHITECT

Residence of Mr. P. C. STOHR, Grand Ave., St. Paul.
CLARENCE H. JOHNSTON, Architect, St. Paul. (See floor plans on page 17).

September, 1902

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Supplement to
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Residence of W. H. ELSINGER, Summit Ave., St. Paul.
CLARENCE H. JOHNSTON, Architect, St. Paul.

September, 1902

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Supplement to
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Residence of HOWARD S. ABBOTT, Minneapolis.
WILLIAM M. KENYON, Architect, Minneapolis. (See floor plans and description on page 19)

September, 1902

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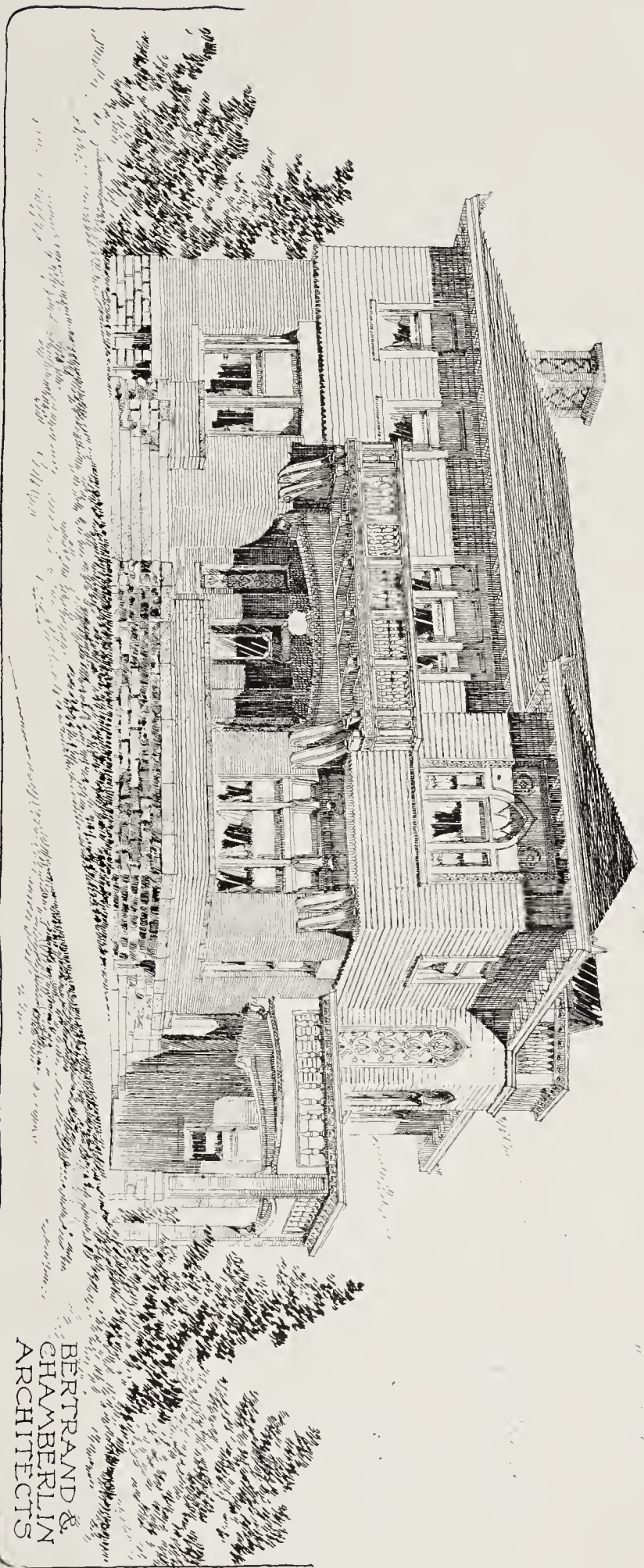


Supplement to
THE WESTERN ARCHITECT

Residence of SAMUEL C. STICKNEY, St. Paul, Minn.
General Manager Chicago Great Western R. R. (See floor plans on page 16.)
J. WALTER STEVENS, Architect, St. Paul.

September, 1902

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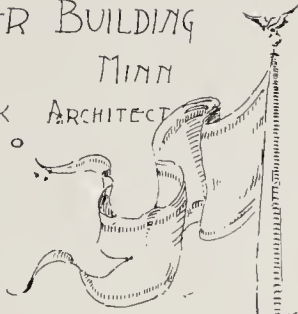
Supplement to
THE WESTERN ARCHITECT.

A HOUSE FOR CLIFTON AVENUE, Minneapolis, Minn.
BERTRAND & CHAMBERLIN, Architects..

September, 1902

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THE DESCHLER BUILDING
MINNEAPOLIS MINN
MARK FITZPATRICK ARCHITECT
1900



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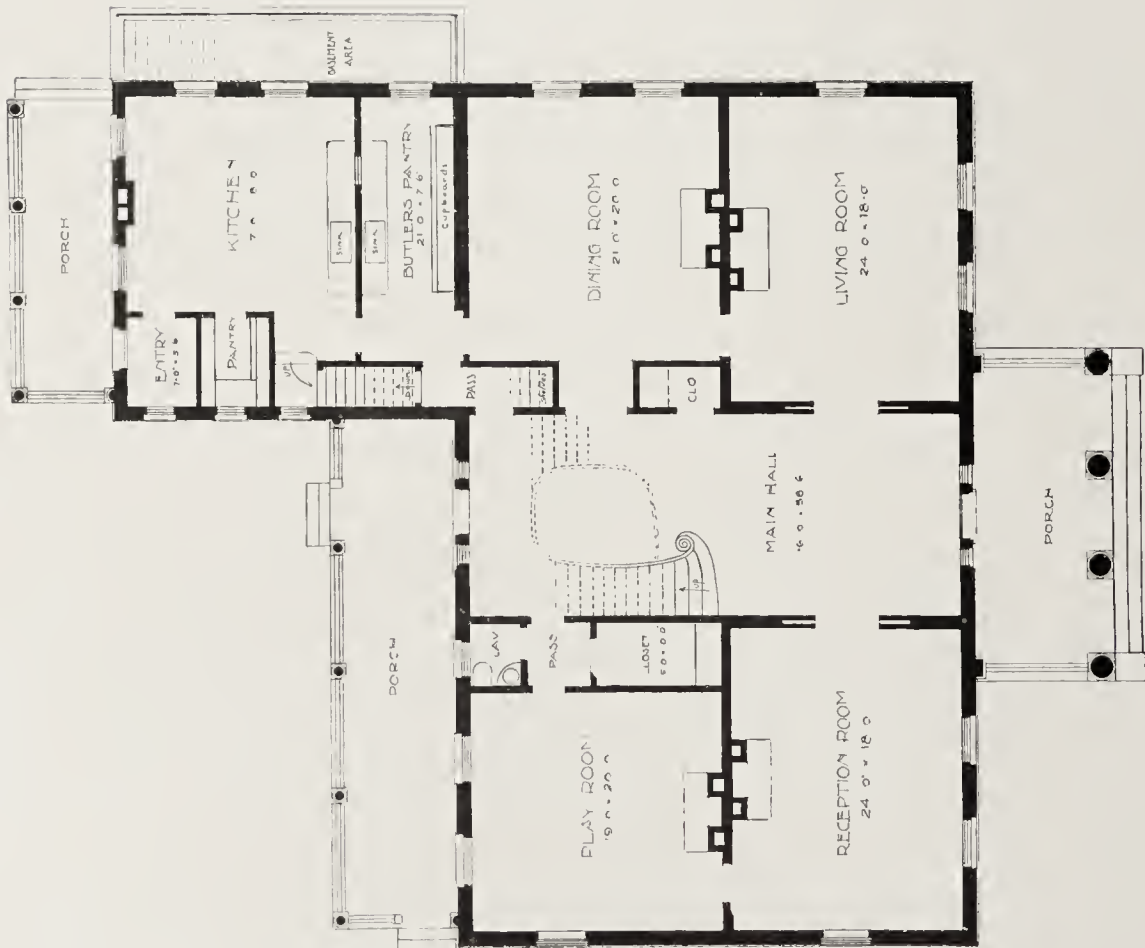
Center-piece in the Altar of St. Michael's German Catholic Church, Chicago.

Designed and Carved by Andrew Gewont, Sculptor,
Minneapolis, Minn.

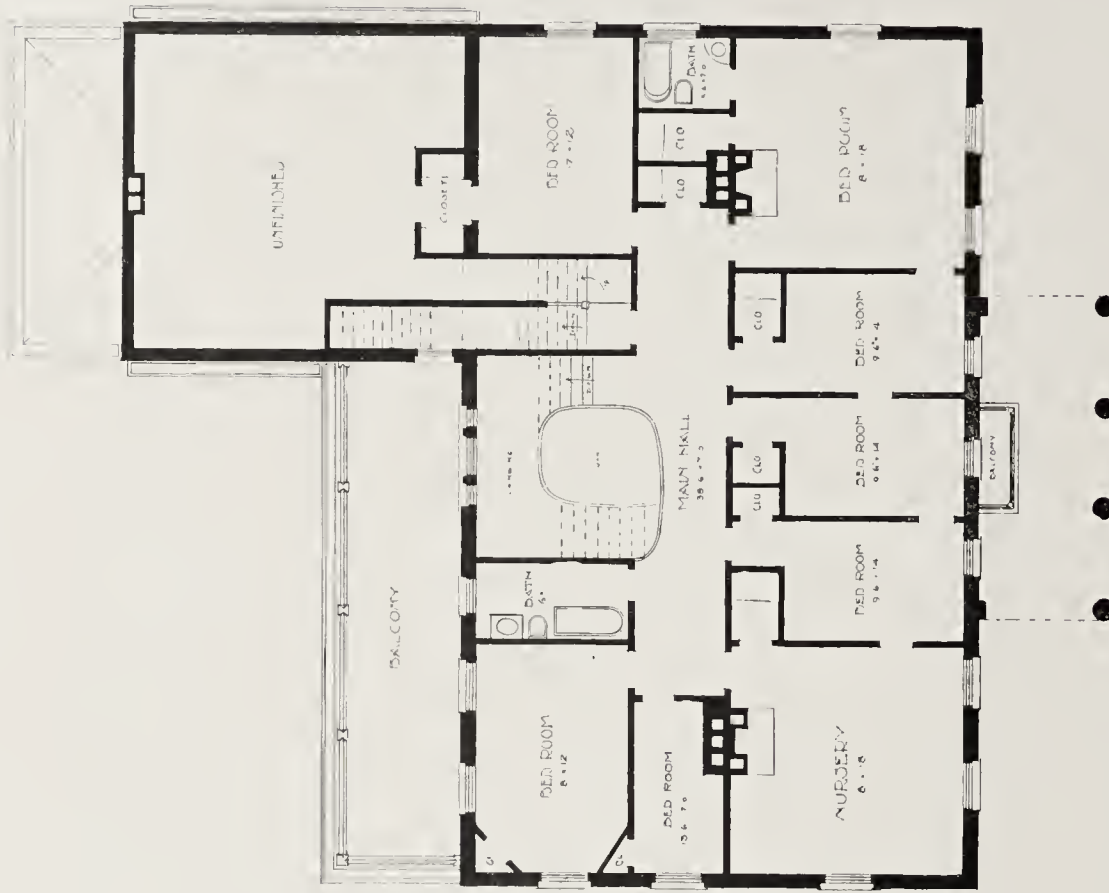
We take pleasure in illustrating this beautiful piece of work by a Minneapolis artist, who has been honored with the commission to design so important a decoration feature in a large Chicago church.

The photographic art shows our readers, better than words, how well the commission has been executed; and all we need add are a few details as for dimensions, etc. The main figure of this altar-piece is eight feet high, and the angels at either side are six feet in height. The height of the entire piece of sculpture is sixteen feet. It is carved by hand in wood, and will be decorated in colors.

Mr. Gewont is a native of Poland, and was educated in the Art Schools of Austria. He is about thirty years of age, and has been in America ten years.



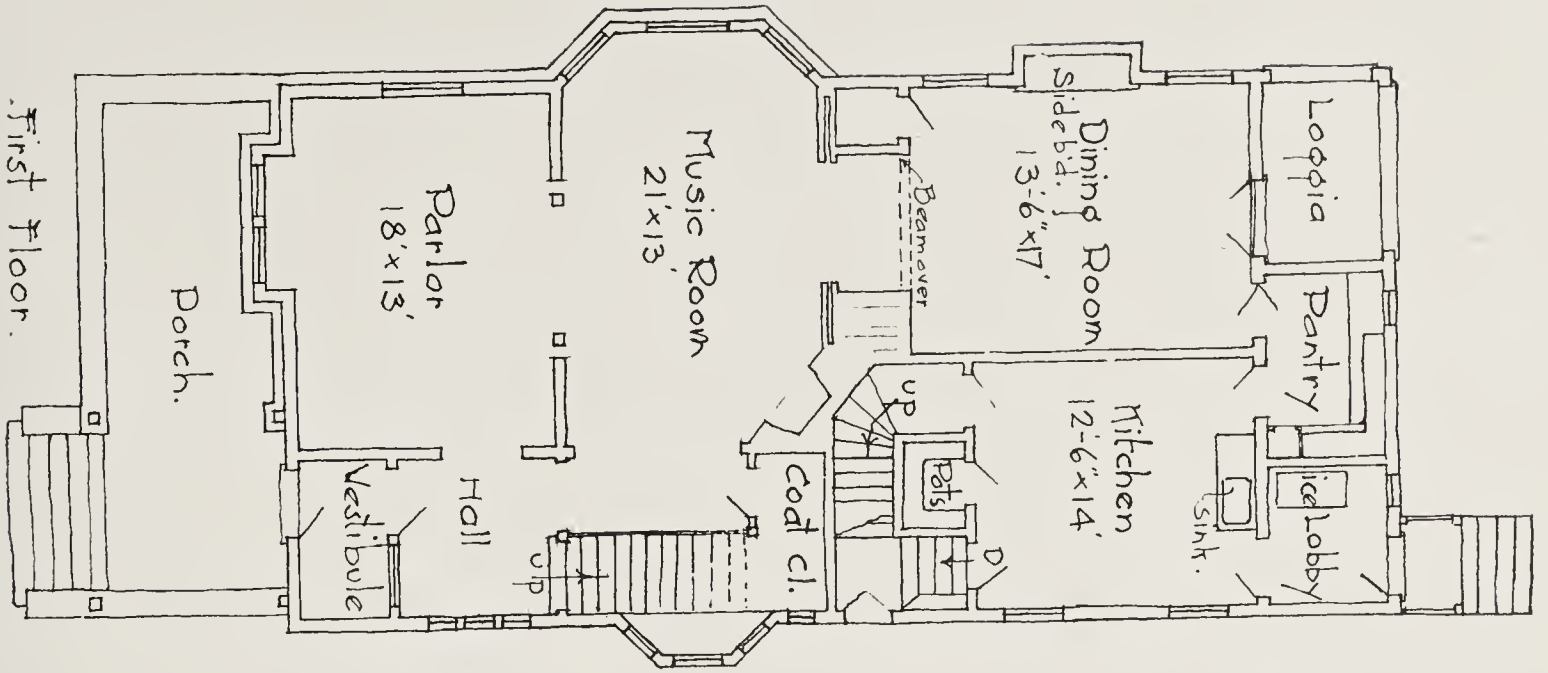
FIRST-FLOOR PLAN



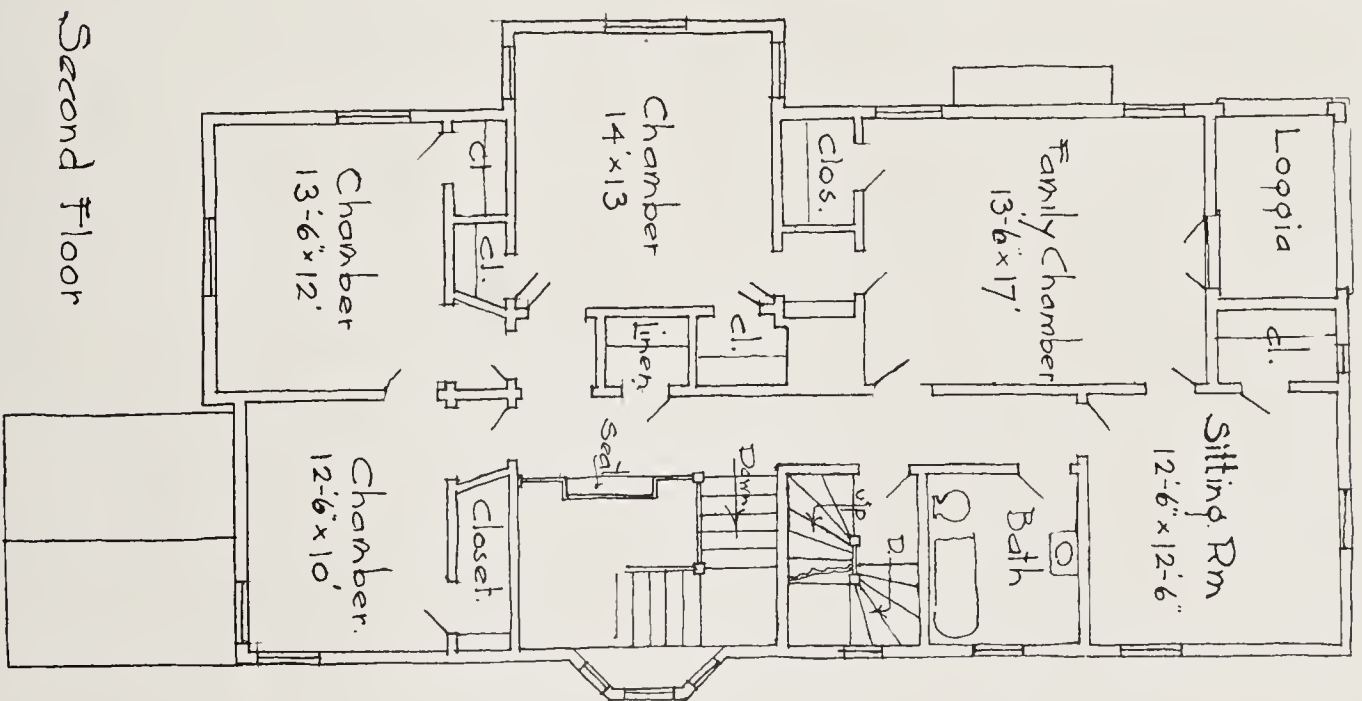
SECOND FLOOR PLAN

FLOOR PLANS OF RESIDENCE OF SAMUEL C. STICKNEY, ST. PAUL, MINN.

J. WALTER STEVENS, Architect.



First floor.

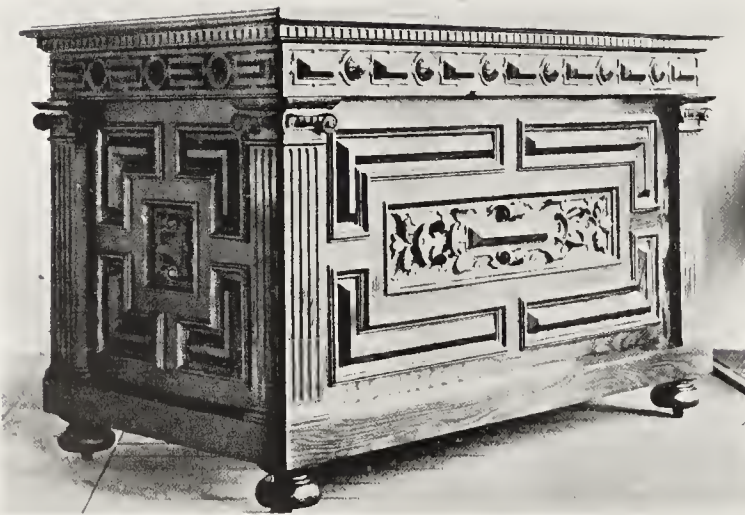


Second floor

FLOOR PLANS OF MR. P. C. STORER'S RESIDENCE, ST. PAUL, MINN.
C. H. JOHNSON, Architect, St. Paul, Minn.



HALL CHAIRS, designed and executed by WILLIAM YUNGBAURER,
St. Paul, Minnesota.



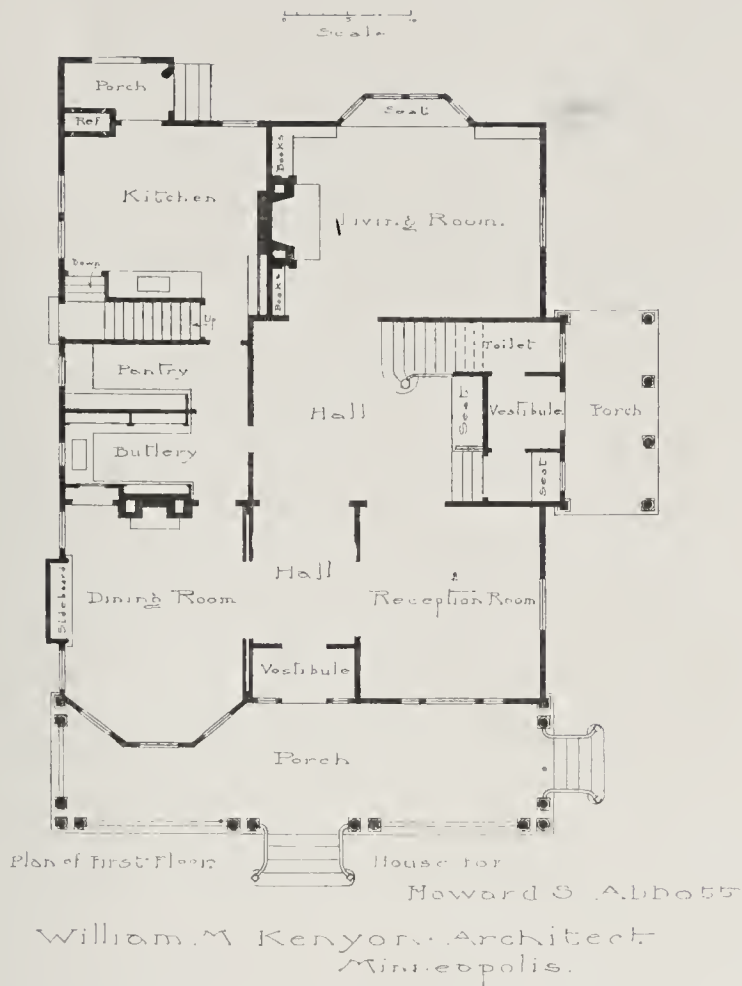
HALL CHEST, designed and executed by WILLIAM YUNGBAURER,
St. Paul, Minnesota.



HALL TABLE, designed and executed by WM. YUNGBAURER,
St. Paul, Minnesota.

BEAUTIFUL HALL FURNITURE.

The accompanying illustrations show some beautiful specimens of furniture for the hall. They are designed in the old German renaissance style, and were made for Mr. Jacob Dittenhofer, of St. Paul. They include hall chairs, hall chest and cabinet, and hall table, and are all hand carved. They were designed and executed by William Yungbauer, of St. Paul.



The exterior of this house is in the style now called modern colonial. It adheres, however, more closely to the original type than most of the colonial work now being executed. The exterior is painted in white, with a slight touch of cream color, the roof is a very dark green, almost a black. The chimneys are built of buff brick.

The house stands on a large corner lot, with entrance on both sides. The side entrance is under the landing of the main stairs and is provided with a toilet-room opening from the vestibule. The principal entrance has a wide oak door, with the typical colonial side lights. The vestibule and entrance hall are 8 feet wide, with a reception-room at the right and dining-room at the left, the former being 14x15 feet and the latter 14x19 feet. The stair-case hall, which is finished in very dark quartered oak, is 14x24 feet in each story.

The dining and living rooms are finished in cherry with heavy beamed ceilings, the latter is 15x21 feet, with a large window seat and fire-place, with book-cases on either side. Back of the dining-room are the butlers' and cooks' pantries, and back of these are the rear stairs and kitchen. The kitchen has side and rear entrance and is provided with a large built-in ice-box. The main hall in the second story is as effective as the lower hall and has four bedrooms opening from it. The room over the living-room has a large window-seat and fire-place, and is used as an up-stairs sitting-room. The two front bedrooms are connected by a dressing-room.

Aside from the main hall no attempt has been made to carry out the colonial idea, although the details follow this style more closely than any other. The floors

throughout are of hardwood with simple borders. The reception-room and all second-story rooms are finished in white, and the latter have wood cornices. The facings and hearths of the fire-places are of unglazed red tile.

Col. M. W. Powell, of Chicago, in writing to one of our leading journals, gives some points that may be of interest to owners, architects, insurance companies, and the general public at large. He says:

"I was assistant engineer of the Chicago fire department for seven years, a fireman fifteen years, and have been in the building business fifty-one years, and have paid the closest attention to the construction of buildings.

"An important point that has come to my notice is that, owing to the manner in which buildings are constructed, when a fire breaks out in the lower stories it takes but a few moments for it to reach the top stories. As the outside walls are all furred, flues are formed. The fire creates a draft and spreads so rapidly through the furring spaces, between the floors and ceilings, and through all the partitions, that the whole building is set on fire almost at one time. This gives the firemen no chance to control it, as the smoke drives them out of the building, and they cannot get water at the fire until it burns through. By this time it has gained such headway that it is next thing to impossible to get it under control.

"To overcome this, all furred walls, where the joists enter, should be plastered flush with the furring strip, from the bottom of the joist up. This would prevent an upward draft, also a draft between the ceiling and the floors.

"All partitions throughout the building, especially in flat buildings, should be made air tight wherever they join the floor, and all partitions extending from the ceiling of the upper story to the roof should be plastered and made air tight to prevent any draft.

"With the present method of constructing buildings the fire concentrates to the upper stories, gets between the roof and the ceiling, there being a space of three or four feet, and if a flat is 200 or 300 feet long the flames have free access to go from one end to the other. If the partition walls between the ceiling and the roof were plastered the draft would be cut off.

"I am thoroughly convinced that if buildings were built according with the above suggestions, insurance companies would make double the amount of money and could make their rates 50 per cent less. In past years we have seen nearly every large flat building that caught fire burn to the ground, and this was because the whole building was full of flues, allowing the flames to spread from one story to another. In a building constructed as above suggested the fire department could confine the fire to one story and almost to one room. With the present construction it is difficult for the tenants to get out of the burning building, owing

to the flames spreading so rapidly, thereby causing loss of life.

"In my opinion the common council ought to make an amendment to the building ordinance and have this great evil remedied, whereby I am satisfied it would save millions of dollars each year to property holders and insurance companies."

A lumber concern in the Northwest has recently made a number of tests to demonstrate the relative advantages and cost of narrow and wide flooring, especially in the matter of shrinkage. They claim to have demonstrated that the wider the board the greater the shrinkage and the wider the opening, and as a consequence the narrower the board the less the shrinkage and the smaller the opening. The narrower the board the more the tongue or lap divides the shrinkage. The narrower the board and the more the spring the quicker it is possible to make a matching, and the narrower boards are laid faster. In the narrow boards the grade defects are smaller. The narrower the boards the less the waste in cutting and trimming. In covering a certain amount of space it requires a little more of the narrower stock, but the differences are easily made up in saving of waste in cutting and trimming.

The company have made a number of experiments to determine the cost of putting on the narrower widths as compared with the wider. Two carpenters were employed to cover the same amount of space with the different widths of dressed and matched stock, on studding 16 inches apart. The results enabled the company to accurately figure the comparative cost. The first test was on blind nailing flooring and showed that the total cost per 1,000 feet for laying the 4-inch was 31 cents more than the 6-inch. As 8-inch stock would have to be double nailed, they estimated that it would cost \$1.29 less to lay 4-inch than 8-inch. In a test of single nailing 4-inch, double nailing 6-inch and 8-inch flooring, drop siding and ship-lap, the cost per 1,000 feet was 58 cents less on the narrower width than on the 6-inch and 96 cents less than the cost of double nailing 8-inch stock with tenpenny nails. In a test for single nailing and double nailing alternate pieces of 4-inch, and double nailing 6-inch and 8-inch drop siding and sheathing the cost per 1,000 feet was only 17 cents more on 4-inch than on 6-inch, and 20 cents less than in double nailing 8-inch stock.

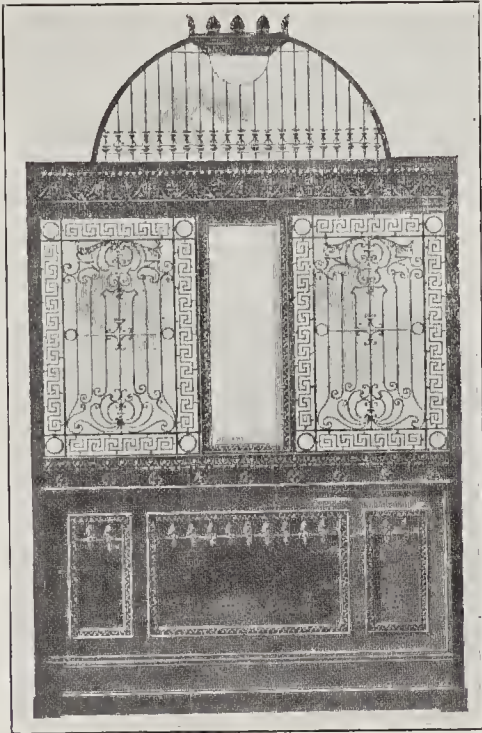
Contractors and builders will be pleased to know of the extent and magnitude of construction which the federal government has in hand, particularly in the west.

The office of the supervising architect of the treasury at Washington has an unprecedented amount of business on hand. No firm of architects, no dozen firms combined, ever had so much to do or so great a responsibility as now rests upon James K. Taylor, the head

of that office. During the last session of congress he was commissioned to erect 185 public buildings, at a cost of \$52,000,000. Of these buildings 125 will be erected after competitive designs; the competition being open to all architects of the country, but the sixty smaller buildings will be designed in the architect's office, because there is not enough in them to justify a competitive test. The architect's office, under the direction of Assistant Secretary Taylor, has already commenced to acquire the necessary lands for the erection of the new buildings, the first lot bought being at Greenville, Tenn.

In addition to these, the government will erect at Washington a new agricultural building, at a cost of \$2,500,000, the plans for which have already been adopted by competition, a new building for the national museum, of fireproof steel and brick, to cost \$1,500,000; a municipal building for the District of Columbia, which will cost \$1,500,000; a building for the new war college, to be erected on the arsenal grounds by McKim, Mead & White, to cost \$250,000, and several other buildings of lesser importance in the district.

The news that the famous London bridge is to be enlarged ought to be of great interest and value in this country, as it is a demonstration that the people of olden times knew much more about building permanent bridges and roadways than do the engineers of the twentieth century. In this country we are busy talking about the unsafe condition of the famous Brooklyn bridge, a steel structure which has been in existence less than a quarter of a century, and the trustees are talking about spending \$1,000,000 in repairs, while in England they are preparing to enlarge a bridge that has stood for nine centuries. Until a century ago the London bridge was the only structure crossing the Thames, and for hundreds of years it accommodated all the traffic, but now that two-fifths of the people of London live on its southern side, the bridge is unable to handle the traffic, even with the help of the new Tower bridge, thirteen other bridges, a public ferry and a tunnel. An average of 22,000 teams and 100,000 pedestrians still cross the famous old bridge every day, and as its 53 feet of width is severely taxed to furnish accommodations, it has been decided to build out the sides and increase the width to 66 feet, no changes being made in the old stone foundations, and no steel entering into the construction of the new part. Steel rots and rusts in a few years, but granite and vitrified brick last forever, and these will be used in building out the "corbelings" or cantilevers that will support the extensions. It is a lesson America has been slow in learning, but many of the railroads of the country have seen the light and are using nothing but stone and vitrified brick for their bridges wherever possible, and city and county governments will soon take similar action.



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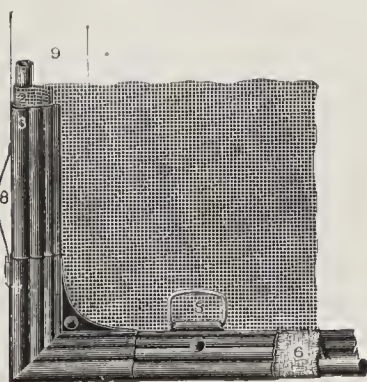
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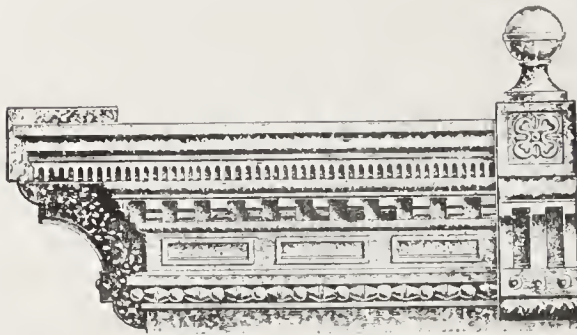


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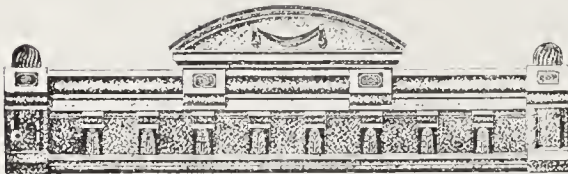
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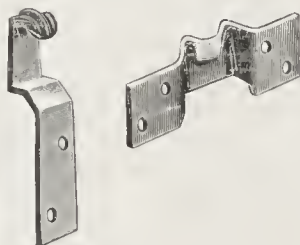
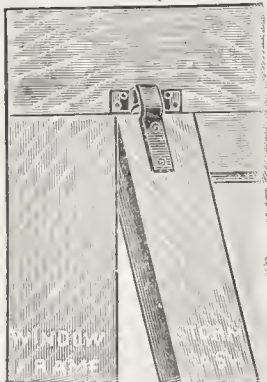
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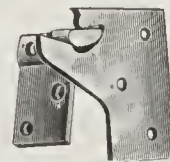
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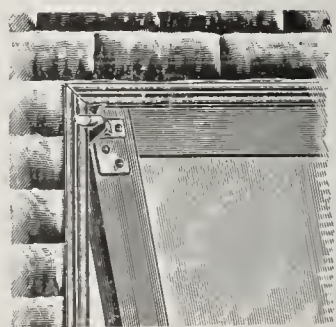
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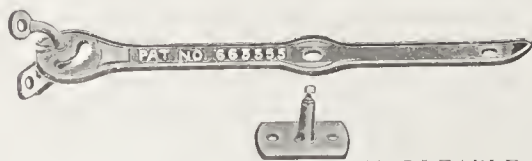


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RAILROAD NOTICES

The Omaha road resumes its through tourist car service to California Tuesday, Sept. 9th, leaving Minneapolis at 9:30 a. m.; St. Paul, 10:00 a. m., and arriving at Los Angeles Saturday at 1:00 p. m. Also during September and October the one-way second-class rate, Twin Cities to various California points, will be \$32.90, a reduction of \$15 from present rates. For further information call at ticket offices, Pillsbury building, Nicollet avenue and Sixth street, Minneapolis, or 382 Robert street, St. Paul, or address T. W. Teasdale, General Passenger Agent, St. Paul.

The Burlington Route runs compartment sleeping cars on their limited train, which leaves Minneapolis at 7:50 p. m., and arrives in Chicago at 9:20 the next morning.

These cars are 70 feet in length and contain seven state rooms and two drawing rooms. Each is a separate room in itself, complete with all toilet facilities, and furnished and decorated in the highest style of art. Upholstery and carpet materials are of different pattern for each.

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For information as to ticket rates, or berth reservation address A. B. Cutts, General Passenger and Ticket Agent, Minneapolis & St. Louis Railroad, Minneapolis, Minn.

FORTLAND CEMENT.

The following regarding Portland cement has recently appeared in one of our leading exchanges, and we deem it worth reproduction:

Strong Portland cement is heavy, weighing 112 pounds per bushel. Weak cement is light. Strong cement is of a greenish gray color and sets slowly. Weak cement is of a brownish color, has too much clay in it, and sets quickly. The longer it is in setting the more its strength increases. The cleaner and sharper the sand, and the stiffer it is gauged—i. e., the less water used in working it up—the better. Salt water is as good for mixing with Portland cement as fresh water. It is of the greatest importance that the bricks or stone with which the cement is used should be thoroughly soaked with water. If under water in a quiescent state the cement will be stronger than out of water. Whatever concrete is employed under water, care must be taken that the water is still; otherwise a current will carry away the cement and leave only the clean aggregate.

Portland cement, if preserved from moisture, does not, like Roman cement, lose its strength by being kept in casks or sacks, but rather improves by age. This is an advantage when it has to be exported. Therefore Portland cement should not be used fresh. Neat Portland cement has a tensile or cohesive strength of 400 pounds per square inch seven days after being made up and immersed in water during that period. At the end of one year 1 cement and 1 sand has three-fourths strength of foregoing, 1 cement and 2 sand has one-half, and 1 cement and 3 sand has one-third.

Roman cement, although about two-thirds of the cost of Portland cement, has only one-third of its strength, and is therefore double the cost, measured by strength. Roman cement is ill adapted for mixing with sand and loses strength.

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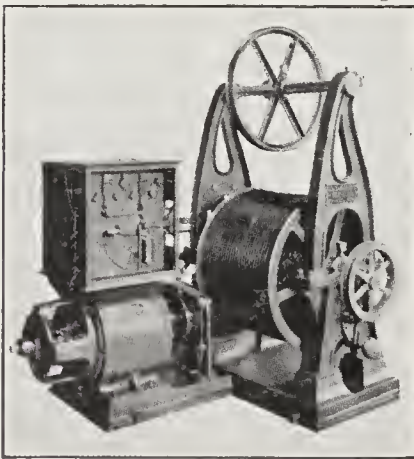
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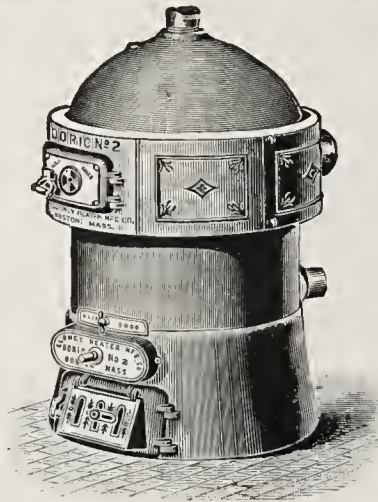
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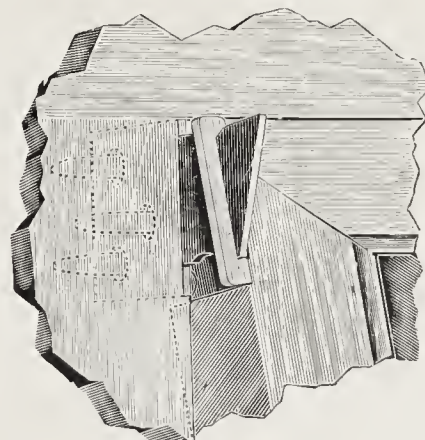
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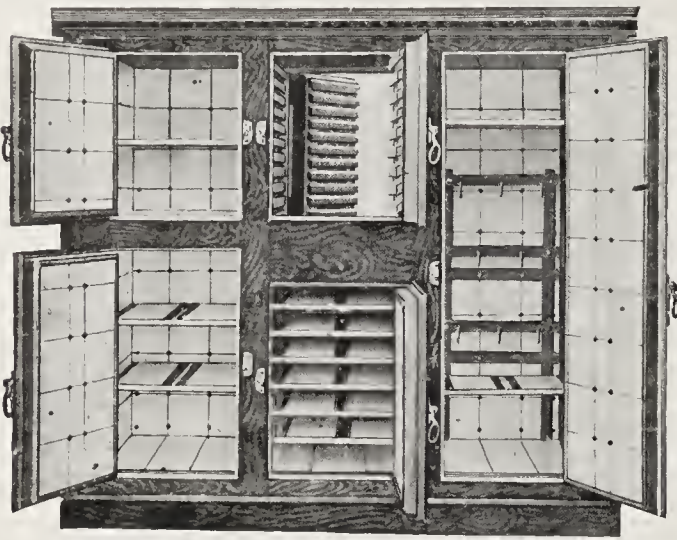
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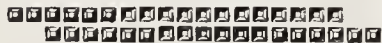
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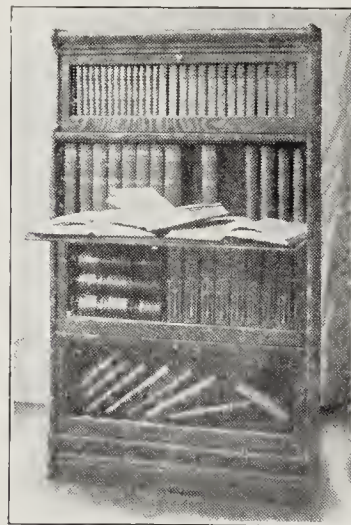
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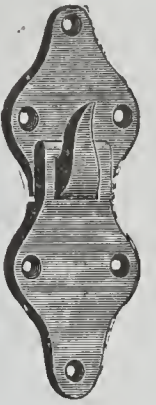
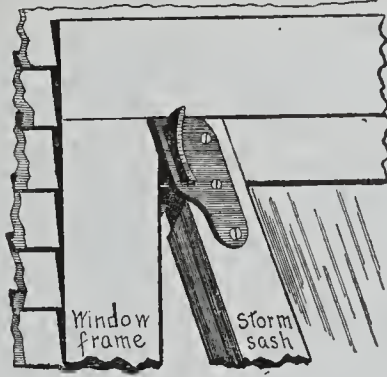
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