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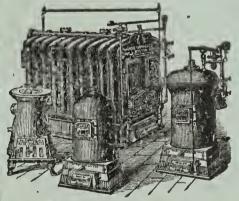
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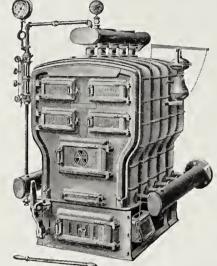
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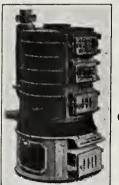
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F. A. GREENLAW, General Manager.

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

#### A NEW FIRM.

McInery & Burke is the name of a new firm in the plumbing and heating business that has located at 215 South Seventh st., Minneapolis, and whose card appears on another page in this issue. Individually the members of this new concern are not strangers to the citizens of Minneapolis, as Mr. McInery has been working at the plumbing and heating trade in this section for more than eighteen years, two of which was with the well-known house of H. Kelly & Co. We trust that this new firm will receive the recognition it deserves from the building public.

#### A MODEL HARDWARE ESTABLISHMENT.

Minneapolis as the great metropolis of the Northwest thoroughly maintains her supremacy in almost every line of trade, having both wholesale and retail houses that compare favorably with any in the United States, and the citizens of this section of the country can well congratulate themselves on the enterprise and reliability of the Warner Hardware Company, retail hardware dealers, located at 11 S. 4th st., Minneapolis, and much credit is due to this house for the share it has taken in the commercial and building interests of this locality.

The name Warner has been familiar to buyers of hardware in Minneapolis since 1875, when R. L. Warner first started in business in East Minneapolis. Later on, F. R. Warner joined him, forming the firm of Warner Brothers, which grew to be one of the greater factors of the retail hardware business of this section. Since that time the business has been carried on with numerous changes of name, and some changes in the personnel of the firm, until at present the Warner Hardware Company (incorporated), located at above number, are carrying on a wholesale and retail business.

As Minneapolis agents for P. & F. Corbin, the Warner Hardware Co. are offering the finest of up-to-date finishing hardware for all kinds and classes of buildings.

The store itself is an excellent one, being stocked to its utmost capacity with a full and complete assortment of building hardware and tools, embracing as it does, everything from the lowest prices, to the best and more expensive trimmings in the hardware line. The high standing established has secured for it the very best patronage both with the owner, architect, and contractor. Being careful of the wants of all patrons, and reasonable in its prices, it has won a trade which extends all over the Northwest. The rapidly increasing demand for the highest grades of building hardware, has impelled the Warner Company to open up and furnish a special room with the handsomest designs of door plates, locks, hinges, etc., from the most renowned manufacturers of builder's hardware in the United States. That these are artistically and handsomely arranged may be seen by a glance at the illustration given below.



SAMPLE ROOM-Warner Hardware Co.

Leon C. Warner, as builders' hardware specialist, has charge of this department and with the convenience of this exclusive lock sample room, is enabled to show in the most approved manner the best there is to be had in fine finishing hardware.

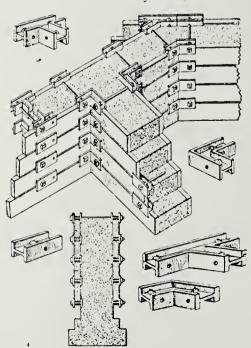
The Warner Hardware Company are calling particular attention to the Corbin Unit Lock, a beautiful piece of mechanism in the way of cylinder lock work, applicable for both inside and outside doors of residences, stores, offices, and public buildings. The main features of the Corbin Unit Lock are its easy mode of application, the swinging anti-friction latch, simplicity of night latch mechanism and convenient location of keyhole in the center of the knob.

The present officials are Leon C. Warner, president; R. L. Warner, secretary and treasurer, and S. E. Kirk, vice-president.

In wishing this model hardware store a continuation of the great success which it has attained in the past, we feel assured that we but express the sentiment of all who enjoy their acquaintance.

#### A VALUABLE INVENTION.

Thomas C. Farrell, builder, of this place, has recently designed a very efficient arrangement for constructing coment walls, piers, columns, and the like, which he has had the forethought to patent in all the leading countries. In speaking of it the Scientific American recently said:



"As the illustration shows, the mould for the concrete wall is made of planks set on edge, the combined boxcap and shoeplank holder for these planks comprising vertical sides connected by a horizontal web giving the construction an H cross-section. The webs have small spurs which firmly engage the planks. The combined boxcap and shoeplank holders are connected in transverse pairs by tie-bolts.

"The combined boxeap and shoeplank holders thus constructed may be given any desired form. The T-form is useful at the end of a wall; the straight form is employed to join together the meeting ends of two of the planks and also to strengthen the planks at points between their ends; the L-form is used when the rectangular branch of the wall is to be made; the obtuse angled form is designed for use at the inside of a branch to or bend in the wall; and the Y-form is to be used at the outside angle of an obtuse bend.

"In building a wall, four or five courses of planks are placed on top of one another—sufficient to give the foundation its proper strength. The lower planks are then taken out and used again at the top of the wall, the concrete being filled as before. The wall may therefore be built to any desired height without the use of continuous sheathing.

"By means of the invention any intelligent, practical builder can construct a fireproof dwelling without the use of timber, iron or steel, quarried stone or bricks, as building material."

Full particulars relating to this builders' mould can be obtained from the inventor, Thomas C. Farrell, Washington, N. J.—From The Washington (N. J.) Star.

#### REMOVED.

George H. Lawes & Co., who for many years has been located at 49 East Fifth st., St. Paul, and who is the Northwestern sales agent of "Cabot's Shingle Stains," "Celadon Roofing Tiles," "Higgins Metal Window Frame Screens," "N. W. Expanded Metal," "Swezey's Dumb Waiters." "King's Automatic Weather Strip and Window Stop," "The Union Brick Bond," and other reputable building specialties, has moved to Room 34, Gilfillan Block. St. Paul, where he will be pleased to meet all of his old acquaintances, and new ones as well, who are any way interested in matters pertaining to building.

Mr. K. F. Lott, the popular and well-known building material supply man of the Twin Cities, has recently taken the agency of the Northwestern Terra Cotta Co., of Chicago, for this section of country.

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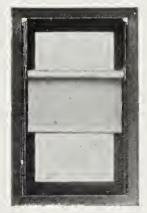
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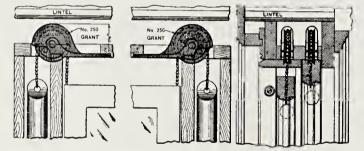
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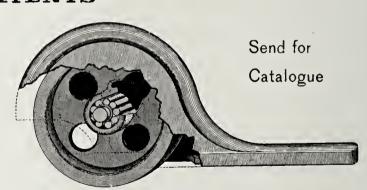


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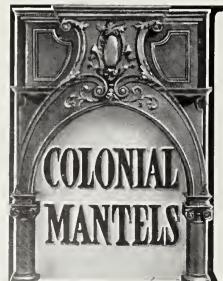
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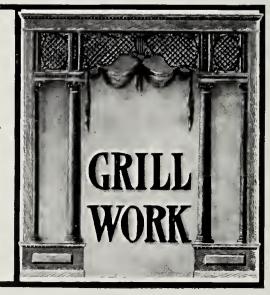
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DEVOTED TO ARCHITECTURE - AND ALLIED ARTS

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The Minnesota legislature continues to be indulgent to the capitol commission, and if the building is not finished according to the wishes of the latter body it will not be for want of money. The public which pays the bills shows no sign of being the less pleased because the building is costing way beyond first estimates—as is the wont of such—and it is a good wager that the close fisted taxpayer promises himself compensation in the pride with which he will point out its somewhat too lavish and exotic splendors to his guest in days to come.

A LOOK at Sir Christopher Wren's street plan for the rebuilding of the burnt district of London first has the effect on one of marking up his reputation several notches above the level earned in building St. Paul's, and second of begetting the wish that most American cities might burn down in order to give a chance for a little display of good sense in re-platting them. The great fire cleared four hundred and thirty-six acres. and Wren was put to work to devise a new street plan for rebuilding this section, which he did with admirable skill, obtaining the backing of the king for the project, which, however, failed because of expense. Since that time London has expended great sums in straightening and widening her streets. Late in the eighties a commission reported having expended more than fifteen millions sterling on less than sixteen miles of London's two thousand miles of streets, and very costly changes are now under way.

Americans are just beginning to realize how shockingly bad the plans of most of their cities are, and how impossible it is to find a suitable place for a prominent public building in most of them. Perhaps the worst possible plans are those imposed on cities by the government surveys and the platting of "additions" to townsites by private owners. The course of thoroughfares in older cities are supposed to follow the cow paths of the earlier pastures, but these had the merit at least of leading from place to place—there was some notion of circulation and going somewhere about them. Even this much is lacking in the plat of our Western towns based on government surveys. The streets simply lie north and south or east and west, and if you want to go in any other direction you zig-zag along, traveling maybe ten blocks to make the distance of seven. What might Chicago be now, if only she had had a Wren after the great fire!

#### F. B. LONG



Mr. F. B. Long, the subject of this sketch, was born at Brainbridge, N. Y., on March 3, 1842. In 1859 he moved to Illinois, and in 1867 he began the study of architecture in the office of Cochrane & Pecrqunard, at Chicago; later he formed a partnership with one of his fellow students, and opened an office in a five-story building on La Salle St., in that city.

At this early day, elevators in buildings were practically unknown, even in Chicago, which is certainly quite a contrast to the buildings of the present time in the western metropolis, which have, in some instances, as many as sixteen elevators constantly on the move with their loads of precious human freight climbing up to dizzy heights and lowered again to the ground floor without taxing in the slightest degree the strength of the visitor or occupants of these buildings.

At this period, owing to infirm health, Mr. Long decided to move to Minneapolis, on account of the benefit which he hoped to derive from the climate which has proven very beneficial, his health now being much improved because of the change. He was about to seek a larger field of activity when the project of erecting the old City Hall in Minneapolis came up. As he secured the commission for this work he delayed his departure. Before the completion of this building, he had invested in property on what is known as Lowry Hill, and then he bought a house which he modeled into one of the most attractive and convenient residences in the city, and here he has made his home for the past thirty years.

During his long residence here he has naturally been identified with the most important work in the architectural development and growth of Minneapolis and the Northwest.

Mr. Long and the firm or firms of which he has been a member, have designed and superintended many of the largest and finest buildings crected in Minneapolis, and this is the same as saying that he has been connected with much of the best and largest work in the building line done in the west. Notably among the buildings is the new City Hall and Court House, the Public Library, the Lumber Exchange, the Andrus Building, the Syndicate Block and Donaldson's Glass Block.

**34** 34

lf cement manufacturers were to any great extent dependent on building for their market, they might well pray to be delivered from their fool friends. This department has from time to time expressed its astonishment at some of the new concretes and some of the uses being made of them, as well as of some very remarkable projects for the use of concrete and steel. Within the past few months the returns have been coming in steadily from different places, mostly in the Middle West, where these vagaries seem to have flourished most. Nearly every one of these wrecks seem to have run aground with Folly at the helm, with the likelihood that a careful scrutiny of the crew would have shown Rascality to have been among their number.

.x .x

Prices of Portland cement are about fifty per cent above this time last year, and although present figures represent very large profits to well equipped manufacturers, the claim that the demand warrants the prices asked is probably good. The mill cost, to owners of the better modern plants, is said to be well below a dollar per barrel, and one is quoted as saying that it can be sold at a profit in the Twin Cities at \$1.30 per barrel, but that none but large up-to-date mills could long survive such prices. In spite of the great economies in production introduced within the past five vears, the best equipments are said to be wasteful of fuel and susceptible to great improvement in that item. Capacity of mills will have increased enormously, both in this country and Canada by another year, and some prominent makers predict a fall in price in consequence that will drive the poorly equipped to the wall. Such an outcome may, however, be delayed by demands from new quarters not reckoned on. While concrete has been used for many purposes foolishly of late, as was inevitable, yet the building public have only fairly begun to understand its legitimate uses. While it is rapidly displacing stone for footing courses, its value as material for foundation walls, particularly in clay soils, has hardly occurred to builders generally. In these, careful excavation may be made, the earth making the outside of the mold for the concrete wall, which not only reduces the cost of planking below grade onehalf, but lets the wall fill solidly against the earth, thus doing away with the annoying leaks that inevitably follow the laying of stone foundations in clay soils. Here concrete may displace stone walls, fewer cubic feet of materials producing far better results. Again, the Portland cement tile for floors has only begun its invasion of buildings.

WHILE at least one journal in the glass trade speaks lightly of the new glass-blowing machine about which so much is heard, rating it as a "bugaboo," there are others who look upon it as an assured success. An account, which has the appearance of coming from one versed in the trade, and which, if issued in the way of promotion, conceals its purpose with success, concedes to the new process not only great saving in labor, but greatly improved quality as well. It says that the saving in labor is such that were the very high wages of glass-blowers to be reduced to the level of common unskilled labor, it would not enable the factory operated in the old way to compete with one equipped with the machines. The account then describes with minuteness the differences between the old and new processes, and argues that the new product will be of greater brilliancy with greater uniformity in thickness and structure than it is possible to produce in the old way. Photographic dry plate glass, now said to be entirely imported, will be readily made by the new process, if we are to believe the promises held out. The new machine process has the advantage in the beginning of seizing at one time all the molten glass needed for a cylinder, while the glass-blower is obliged to begin with a small lump, adding thereto and reheating several times. This insures for the machine made goods, it is claimed, much more evenness of output, freer from waves and cutting more smoothly. Naturally larger cylinders may be made by the machines, but there may be less in this advantage than one would think at first, for as large sheets are made by the old process as can be safely or economically handled.

An almost tragic element in the situation is the depriving of some thousands of skilled people of a means of livelihood, or at least throwing them into the scuffle with ordinary unskilled labor, for many of these glassblowers have reached an age unfitting them for acquiring a new trade. The history of this particular trade is such that they are likely to receive little sympathy, however, for no other labor organization has been so "cocky" as they in their relations to the trade, to politics and to the consumer. Indeed, less than a year has elapsed since the Knights of Labor are said to have prepared a petition to congress praying for the removal of the duty on window glass, referring therein to "this greedy monopoly of manufacturers and blowers, who are a detriment to the industry and a curse to the country."

Such tragedies among skilled trades are not, however, so uncommon as one not stopping to consider might be led to believe. Others differ from this one in lacking such dramatic setting, and are therefore overlooked. Every now and then Dame Fashion steps in and silently points the finger of doom to a whole handicraft, leaving its skilled workers to shift for themselves. One has only to recall the fate of cut stone in building for the last decade or two to see how true this is. Plain and ornamental terra cottas have in some localities so far displaced cut stone within that time

that probably not more than a tenth as much of it is used, relatively, as was used twenty years ago. Quarries which were then called of great value and were actively working are now abandoned, while in cities the stone cutter is fortunate if he has the skill in modeling to give his services value in working the plastic materials that have shouldered out cut stone.

*y y* 

From the Clergue interests on the Canadian side of the "Soo" is heard an appeal which sounds familiar enough on our side. These interests having at lavish expense equipped themselves to do, with some of the horse power running to waste at the outlet of Lake Superior, all the heavy work worth while, now proceed to pass the hat. The Canadian authorities are being enlightened about the prosperity in store for the Dominion if only they will raise the tariff rates on the things which these interests intend to produce at the Soo. Long practice by our own tariff infants—who have been pleading the cause of infant industries so long that one of Lowell's men supposed a second childhood must be meant-has hardly taught them more about the needs of infant industries than these Clergue people know already. Nor can it be doubted that this appeal will prevail, as the Canadian government has usually been very liberal with favors of the sort, and as iron manufacture is posing as the infant.

Our own iron industries, by the way, still require fostering and tender care by congress. The steel trust came through the trying ordeal of the late session with its tariff favors undisturbed, and has been rapidly removing a certain class of home competition ever since. They have, it is said, bought up about every rival concern of consequence owning valuable mines, so that with the acquisition of the Jones & Laughlin properties the trust will have its "feet on the ground" indeed, for they will have a practical monopoly of the cheap and good ores of the country. With this condition established we need not expect a return to former prices of structural steel unless the unforeseen happens.

There is certainly no early prospect of the withdrawal of tariff favors from any of the big combines, and all must have noticed that the era of lowering the cost of iron by improvements in its manufacture preceded the era of great capitalization and combination.

\* \*

IF THESE people with German names who are threatening us with bricks of sand and lime can manage to give us some with a porous or cellular, lava-like structure—like the porous terra cotta, only much more sowe can use them to advantage in many situations as heat-savers. Some one may yet produce bricks of this cellular quality, but of material so hard and glassy as to be impervious to storm and grime. Imagination finds but a step from this to a brick for light outer walls that shall have the further quality of translucence; but imagination can hardly enumerate half the uses that would be found for such a building material.



#### THE COLONIAL STYLE.

By George Emil Bertrand.

The revival of colonial forms among many of the best eastern and some of the western architects has lately been so marked that a discussion of the merits of the style and the causes of its return into favor seems appropriate at this time.

The architecture of a period is the concrete expression of the moral and intellectual attitude, the political and religious sentiment of that time. It is a mould, as it were, in which may be recast the social customs and private and public life of a past generation. The manner of speech, of salutation, of gesture, the carriage, the style of dress, the character of amusements, the social relations, the religious observances, the cast of countenance, are all manifestations which spring from the same inward impulses as the style of architecture of a given period.

It would be impossible to imagine Washington or Jefferson or Adams with their measured language, dignified manner and simple habits, living contentedly in one of the crazy, begabled so-called Queen Anne houses of twenty years ago. Their classic souls would have revolted. They must have surroundings in harmony with their aspirations. That indiscriminate affinity of form and color and sound with sentiment must ever be present with finely organized minds. And accordingly as the elevating impulses of a people are blunted and nerveless, their art will be incongruous and insipid.

Perhaps there is no better criterion of the architecture of a period than a just estimate of the general excellence in all phases of the life of that time; that is to say, the beauty and decorum of social customs, sweetness and simplicity of domestic relations, purity of motives and ambitions in politics. All of these sentiments will be reflected in the tone and color of their environment. What man with the least delicacy of sentiment would not be shocked at seeing H. W. Longfellow blazoned in gilded letters over the doorway of the old mansion in Cambridge?

If, as a careful study of the history of all art in all times seems to prove, that the handiwork of a people is in harmony and in sympathy with its moral and intellectual impulses, then it must be admitted that the architecture of the first years of the republic is the noblest sentiment which our country has produced.

It would have been inconsistent that the signers of the Declaration of Independence should not have drawn their inspiration from the purest springs of social and moral philosophy, in their promulgation of the most humane and unselfish theory of government that history has yet recorded; and that their environment, the houses they lived in, and all the accessories of their everyday existence, should not have been stamped with the same simple, lofty and refined sentiment.

The moral and intellectual history of a period cannot be separated from the history of its art. All revivals of art in all countries have been accompanied with corresponding revivals in other domains of thought. A man's house, like his physiognomy, if he have any depth and force of character, will be the immediate reflection of his fine or dull sense of color, of grace, of form, of harmony, of dignity, of order; his generosity, hospitality, industry, his social and domestic habits, the governing motives of his life. It is in his biography when he is dead.

But this is not all. He is one of the many who have drawn all these traits from the same source. house will be one of the many of the same character. The architecture of a homogeneous people will be homogeneous. It will be gloomy in proportion as the national religion, the prevailing thought, is gloomy. The somber and enduring monuments of the Nile are the petrified sentiments of a people awed and subjected by the hidden mysteries of their religion. The temples of Greece are the embodiment of physical beauty and strength. None but men fired with the traditions of mighty heroes could have created the Parthenon. The Gothic cathedral, with its endless profusion of towers and pinnacles and enrichments, tells the story of personal sacrifice, of unquestioning zeal, of total subjection of the masses to the overpowering mysticism of that age. The living impulse in thought and art which was felt in the south of Europe after the new order of things had become firmly established on the ruins of the Roman empire is expressed by the vigorous style, the ambitious motives and half primitive sculptures of the Romanesque churches of France and Spain.

The English colonists who represented in later times another step in the advancement of religion and politics, were purists in architecture as well as religion and politics. The affinity between the social characteristics of a people and their art is as inseparable as the affinity between thought and speech. The white architecture of the colonists, with its clear, distinct, simple and unaffected style, most fittingly exemplifies the directness, candor, simplicity and purity of motive of the framers of the constitution.

There is a marked similarity between the first struggle of our republic and the strength and virility of the best Greek period. Both periods produced types of powerful and independent thought and unflinching manhood. No art so nicely balances and weds the logical with the aesthetic as that of the Greeks. No art has made the physical and intellectual so reciprocal, and manifestly necessary to the perfection of either. Their heroes in marble are easily gods by the simple yet marvelous effect of a pose or a gesture. They are naturally and unconsciously puissant. The simplest

and most natural methods were employed in the construction of the Greek temples, yet they represent the most suitable principles in composition. Colonial architecture might properly be called the Puritan renaissance of the classical feeling divested of its physical element, in the same measure that the religion of the Puritans was less physical than that of the classic pagans.

To the zealous student of architecture his creation is not the final end of architecture. It is to him what eloquence is to the orator, what sound is to the musician, what color is to the painter. It is a medium, a mode of expression through which he transmits his feeling. His vocabulary consists of lights and shadows, solids and voids. But his education, his traditions, are the same as those of his fellows, he merely speaks in another medium so that the idea he expresses is that of the community in which he lives. It is no mere coincidence that the direction of national thought should be expressed in its architecture.

With the gradual revival of physical culture, which is at present noticeable in this country, will come a style of architecture founded on the same lofty ideals of beauty. A vigorous age in brawn and brains usually culminates in a vigorous architecture. The age of Pericles is the proudest proof of this fact. The highest attainment of intellectual perfection must ever be attended with physical perfection. It is safe to suppose that the great architects and sculptors and philosophers of Greece were not dyspeptics.

As indicated by the tendency of the best men of the day, the coming style will be classical in sentiment. A return to classical forms indicates a finer balancing of the physical and intellectual forces in the nation. The coming architecture will be simple, dignified and erect, because the age will be sane and strong and cool of nerve, and free from the feverish restlessness peculiar to unhealthy bodies. It will not be a servile copy of any preceding style, because nature produces no exact duplicates, but it will be classical in spirit, because it will be an interpretation of the same ideals as those of the colonies.

#### DATED AHEAD.

Civilization is passing over the face of the continent as resistlessly as the movement of glaciers, denuding it of forests, killing wild animals and birds, blotting out every touch of natural beauty, degrading the grandeur of nature's handiwork, straightening out streams, squaring ponds and bays, leveling hills and valleys and diverting cataracts to power tunnels.

Even the cataract of Niagara will soon be chasing its tail in a turbine wheel like a caged squirrel. Progression is the law of the race. If the destruction of the Niagara cataract can make a town grow up that grew up somewhere else before or would otherwise have grown up somewhere else; if it can so modify the struggle for existence that some will be able to lie abed a little longer in the morning while others will

have to rise a little earlier, the achievement will be hailed as a success.—Toronto Globe.

## FIREPROOF CONSTRUCTION AFTER TWENTY YEARS.

An interesting fact developed with the wrecking of the Emilie building, at Ninth and Olive streets, St. Louis. At the time of its erection, about twenty years ago, the floors above the boiler room were constructed of concrete fireproof construction. The concrete was made of Portland cement and what is known as "breese," consisting chiefly of fine particles of coke or partly consumed soft coal. In this instance the wood flooring had been nailed directly into this concrete construction without the mediation of the usual floor strips. When this flooring was taken up it had been worn through nearly one-half; the nails all remained in the concrete, that is, pulled through the flooring, although the part of the nail in the floor was badly rusted, the part of the nail in the concrete was but little rusted. Either because the floor was damp or because the escaping steam from below communicated moisture through the concrete, is the explanation of the rusted nails. But what is more remarkable under these conditions is that the concrete enveloped carrying beams (12-in. I) were entirely unaffected by any sign of rust, and came out after a use of twenty years perfectly intact; this instance is of much interest just now when concrete construction is entering so largely into modern fireproof building construction.

The quality of the concrete after twenty years and the condition of the iron embedded have both made a deep impression on the building profession.—The Builder, St. Louis.

#### WHAT ST. LOUIS THINKS OF IT.

Of course President Francis should not be expected to be everywhere at the same time, but his little jaunt to Europe has cost us a fine allegorical statue of the Mississippi now being finished in Carrara marble, the finest in the world, by Larkin G. Mead, the American sculptor at Florence, Italy. Minneapolis took advantage of us while Our Dave was loafing around thrones to grab this remarkable statue, and our opportunity is therefore lost. The statue was originally ordered eighteen years ago, and was intended as a private gift to New Orleans, but financial reverses prevented carrying out the contract. The figure is that of a recumbent man, with flowing beard, in the style of an Egyptian figure of Osiris, the Nile god. It is made from a forty-four ton block of marble, weighs ten tons and is nineteen feet high. Prof. Mead has been at work on it for seventeen years. It would have been a fitting adornment of Twelfth street, in its improved state, as now contemplated, and in losing the statue St. Louis has indeed lost something of much value.-The Builder.



CLASS ROOM, Farwell School House, Charlestown, N. H.



FARWELL SCHOOL HOUSE, Charlestown, N. H.

# THE Western Architect

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#### A MINNESOTA STONE

NOW BECOMING FAMOUS

Throughout the United States COMES FROM THE

# KETTLE RIVER QUARRIES Sandstone, Minn.

An Interesting Description of this Magnificent Product.

In carrying out the purpose of the Western Architect to place before its readers from time to time information at first hand about the available building resources of the West, we are privileged in this issue to describe a very successful quarry which is rapidly getting and holding custom over a wide field.

In making up the part of the world about the headwaters of the Mississippi and St. Lawrence drainage systems, Nature kept in mind the needs of future builders, taking good care to supply them with stone of different sorts. Granites, sandstones and limestones of many kinds are pushed up to view here and there in three great states and more, even breaking the monotony of the vast prairies at more than one place.

A dreamy person, listening to the professors, might carry away the impression that out of the abundance of sand used in the early stages of making the country that stretches some hundreds of miles from the border of Lake Superior to the south and west, Dame Nature had picked out a bit here and there just to show samples of her handiwork. What other reason could she have had for pushing up through all subse-



LIBRARY BUILDING, UNIVERSITY OF ILLINOIS, Champaign, III.

quent dirt, at two such widely separated places, two such specimens of desirable stone as are found in the corner of Minnesota and South Dakota, and again about half way between Duluth and the Twin Cities?

The man who never listened to the professors would never believe them to be related, for that thrust up and out amid the prairies appears to him as compact and as hard as anything that could be made from silica—a quartzite, a jasper, he hears—harder than granite, too hard to be wrought with tools except the hammer.

But go back to the outcrop at Kettle River and there he will find stone of the same formation, as purely silicious, but which Nature quit work on just in time to leave of greatest value to the builders of our day.

There is no poor stuff in its makeup; all the cementing material is as sound as the clean grit that it cements.

Quarry it and place it where you will, it will not be corroded nor will its color be turned by any new compounding with the sulphurous air of towns. It will take in a small percentage of water, but build it into wall or set in curbstone or pavement and soak it and freeze it and not a grain in it will loosen, for limes and clays take no part in its make up.

Only a few years ago one might hear in the building world grave discussions about quarries, and the wise ones discoursing as to whether or not there was any value in that at Kettle River as an investment. That the stone was strong and that it would stay where it



RAILROAD BRIDGE, Piers Built of Kettle River Sandstone.

To be a success in these days, a quarry must meet several requirements. A well-sustained output cannot depend alone on the whimsies of Fashion. It should be able to meet the demand for large stones and



GENERAL VIEW OF KETTLE RIVE

was put, all would admit: "But then, you know, there is that grit about it, it is so hard on tools: and there are so many other quarries that are stratified and can be worked with so much less waste, and some of them are nearer to a market for rubble to take their waste, etc." Yet within those few years many a sandstone quarry, flourishing by the favor of Fashion, has closed down through the caprice of that fickle mistress, while this at Kettle River has done a steadily increasing business.



RAILROAD CULVERT
Built of Kettle River Sandstone

the material would be in favor by engineers as well as architects. Then it must be of a nature to be quarried economically, and there should be a demand for all sizes. Of course it must be shipped, and ready access to boat or rail must be had. After all these, it must be known that a badly managed quarry cannot hold its own in this part of the world at this time.



ENTRANCE TO LIBRARY BUILDING

Kettle River stone was first quarried for shipment in 1885, being at that time hauled by train 10 miles to the R. R. Station at Hinckley. In the course of time a spur-track was put in the quarries and the stone became known to the world by such buildings as the Illinois University Library at Urbana, the Foreman residence in Minneapolis, the Des Moines Public Library building, and such important foundation work as that of the Minneapolis Court House and the Minnesota State Capitol at St. Paul; and such engineering works as the Wing Dam at St. Anthony Falls, the Wagon Bridge between Duluth and Superior, the U. S. Government Bridge across the Mississippi at Rock Island, the bridges over the Missouri at Sioux City and Omaha, and prominent railroad improvements scattered over a wide territory.



ARMOUR RESIDENCE, Kansas City.



UARRIES AT SANDSTONE MINN.



ENTRANCE TO BENSON COURT HOUSE, Benson, Minn.

These contracts came largely because of the strength and staying qualities of the stone,—because a stone that crushes at from 17,500 to 19,000 pounds per square inch, that is almost pure silica, cementing material and all, and put together so as to resist frost completely, is hard to find.

But the delicate color of the material attracted other contracts from even greater distances. Its good looks has made a place for it in church interiors at Worcester, Mass., in Philadelphia, and other places; in a mantel in Geo. Vanderbilt's "Biltmore" at Asheville, N. C., and in other interiors here and there.

In '94 the equipment consisted of a few horse power derricks and a very small sawing capacity. This equipment has grown until it will compare favorably with that of any quarry in the United States. Here are to be found the most modern and powerful derricks, a compressed air plant, a large modern saw mill, a crushing plant, a locomotive crane for loading and switching cars, besides a multitude of lesser conveniences.



COURT HOUSE, Benson Minn.

Shipments beginning a few years ago with a few cars of rough and irregular stone reached in 1902 a total of nearly 7,000 cars in all stages of finish.

Some notion of the usefulness of this stone may be had from the great variety of shipments included in this total. From finished building stone including mantels and church interior work, through all grades of heavy masonry, such as bridge piers, dam and reservoir work to curbstones and paving blocks is a wide range, but market is found for this stone for all these uses.

Besides these, some curious "odd jobs" are found for it. It stands heat so well as to make a respectable substitute for fire-bricks. It is a success at glass grinding



OTTUMWA, IOWA, HIGH SCHOOL.

and makes fine "pulp stones" for grinding pulp in many paper mills. These latter uses are made possible by the peculiar texture and grit of the stone, qualities which make it of such exceptionable value for flags, outer steps and paying.

Properly laid paving of Kettle River stone actually loses roughness by wear, and its non-slipping qualities renders it the best pavement for the horse that is known. It is also much less noisy than brick or granite, and horses make far less noise on this pavement than on asphalt.

Architects and engineers who have had experience with this stone readily find places where they want to use it again, but to remove the doubts of practitioners to whom the stone is new, we take occasion to refer to reports of the state geologist of Minnesota, Mr. N. H. Winchell, which shows a crushing strength twice as great as we look for in a good sandstone, coupled with other qualities that cause it to rank even higher among building stones than its crushing strength alone would warrant. That strength has been given above as averaging more than 18,000 pounds per square inch, and it is well to recall that many a sandstone is doing



UNITED PRESBYTERIAN CHURCH, Worcester, Mass.

duty in heavy work that would crush at less than onefourth that weight; while a dolomite or lime stone that would meet such a test would be accepted for all kinds of heavy work.

Again the output of these quarries is so great that no difficulty is found in getting any amount of it that is satisfactory in size and color.

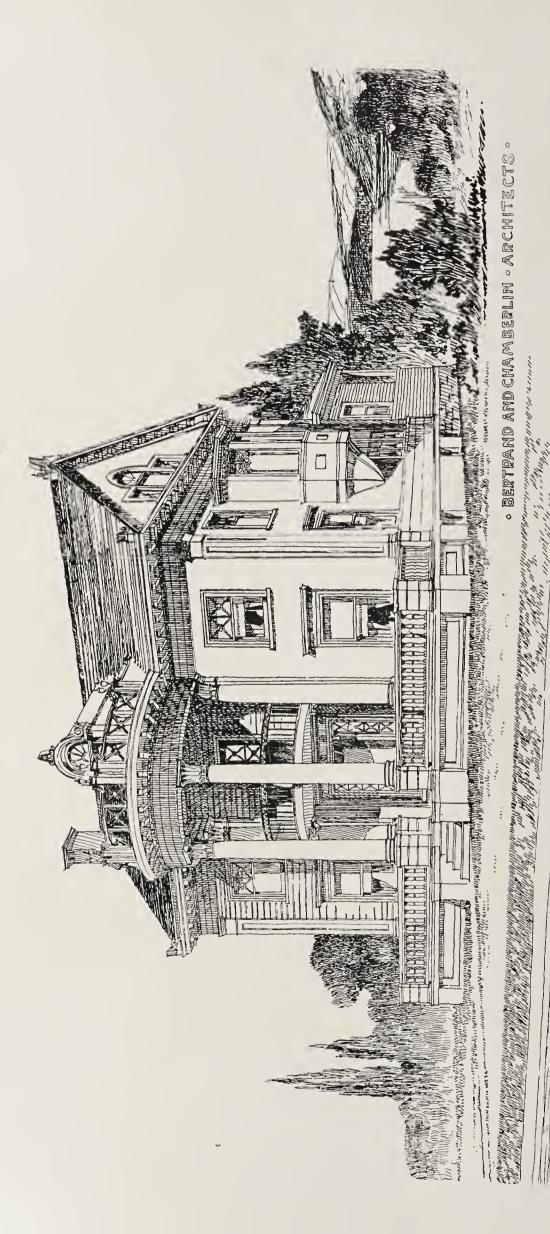


DMINESTLA OL VINNES OL LHE TIBLASA

SKETCH FOR A RESIDENCE

OF THE TIBERRY

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RESIDENCE OF MR. W. D. BOUTELLE, KENWOOD, MINNEAPOLIS Bertrand & Chamberlin, Architects, Minneapolis

Supplement to The Western Architect.



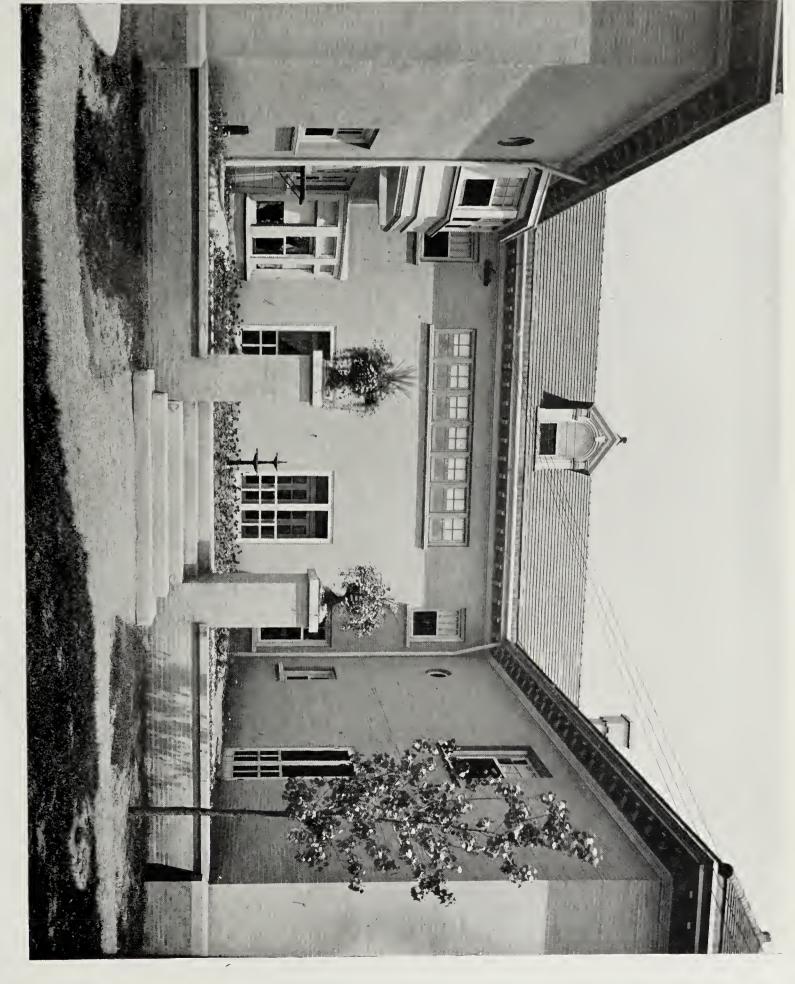
FRONT VIEW OF MR. GEO. E. WEST'S RESIDENCE, No. 3952 ELLIS AVE., CHICAGO
Benj. H. Marshall, Architect. Chicago

ANIMERSIES, OLE D'VINERIS OL LHE TRESVER



DETAIL VIEW OF FRONT OF GEO. E. WEST'S RESIDENCE, CHICAGO
Benj. H. Marshall, Architect, Chicago

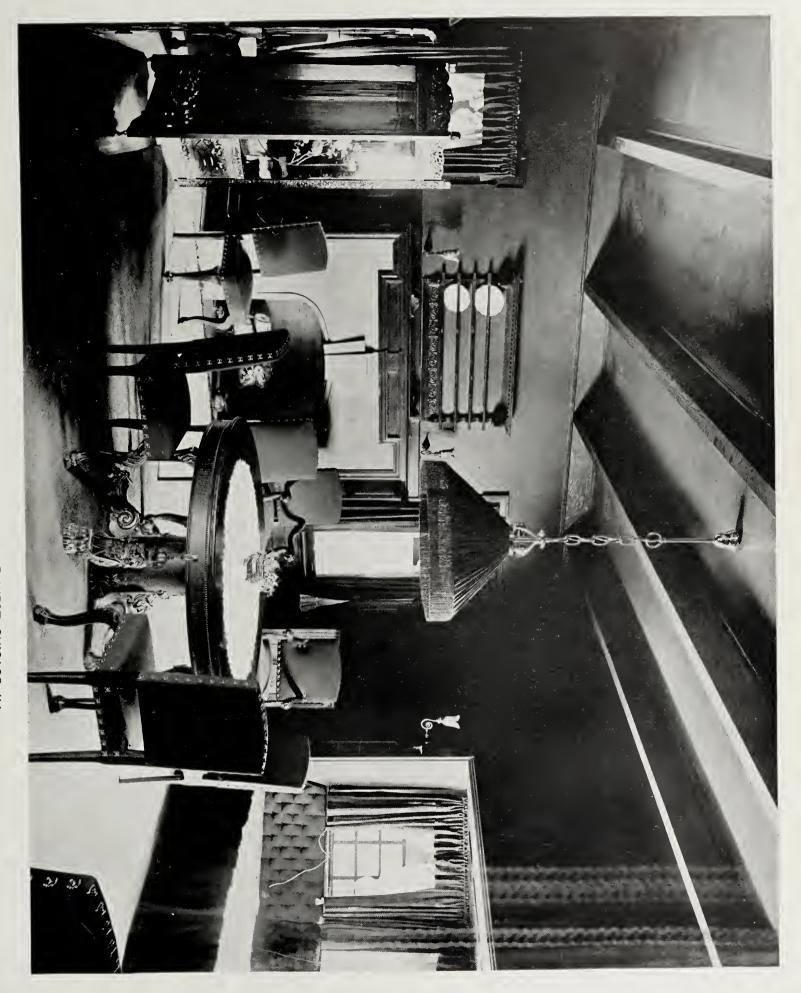
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VIEW OF COURT AND GARDEN IN REAR OF GEO. E. WEST'S RESIDENCE, CHICAGO

Benj. H. Marshall, Architect, Chicago

OF THE OF PTIMORS



DINING ROOM IN RESIDENCE OF MR. GEO. E. WEST, CHICAGO, ILL.,
Benj. H. Marshall, Architect, Chicago

UNIVERSITY OF HALIMANS



FIREPLACE IN J. H. HOWARD'S SUMMER COTTAGE, LAKE BLUFF, ILL.,

Made of light brick with stained woodwork and rough plates above, and clock dial
painted and gilded with brass figures with leaded glass centre.

Webster Tomlinson, Architect, Chicago



SUMMER COTTAGE FOR J. H. HOWARD, LAKE BLUFF, ILL. Webster Tomlinson, Architect, Chicago

UNIVERSITY OF MILMONS



CHENONCEAUX APARTMENTS, CHICAGO

No. 5434 Indiana Ave.

John E. Youngberg, Architect. Chicago

OF THE WALKERS



EPWORTH M. E. CHURCH, EDGEWATER, CHICAGO
F. B. Townsend, Architect, Chicago

UNIVERSITY OF A LINKONS



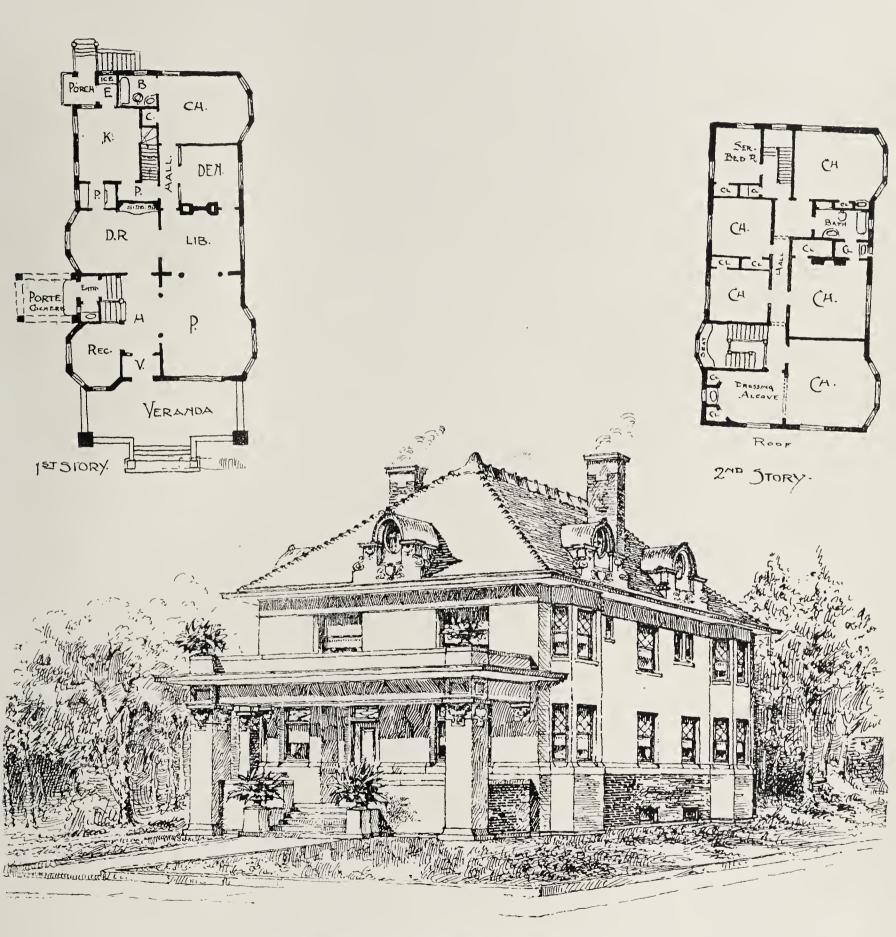
Supplement to The Western Architect.

THE GLUEK BUILDING
6th Street bet. Hennepin and 1st Ave. No.,
Minneapolis, Minn.
Boehme & Cordella, Architects, Minneapolis

Winkle Terra-Cotta furnished by J. C. Landers & Co.

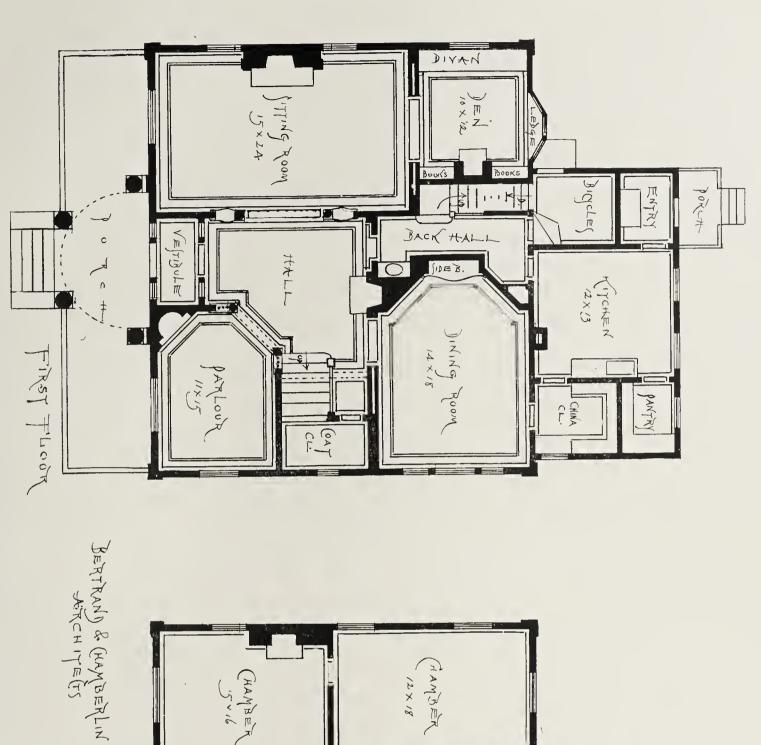
April, 1903

LIBRARY
OF THE



RESIDENCE OF MR. S. J. DUNKLEY, KALAMAZOO, MICH.
Turnock & Ohrenstein, Architects, Chicago

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HALL

(HAMBE)

FLOOR PLANS OF W. D. BOUTELLE'S RESIDENCE, KENWOOD, MINNEAPOLIS

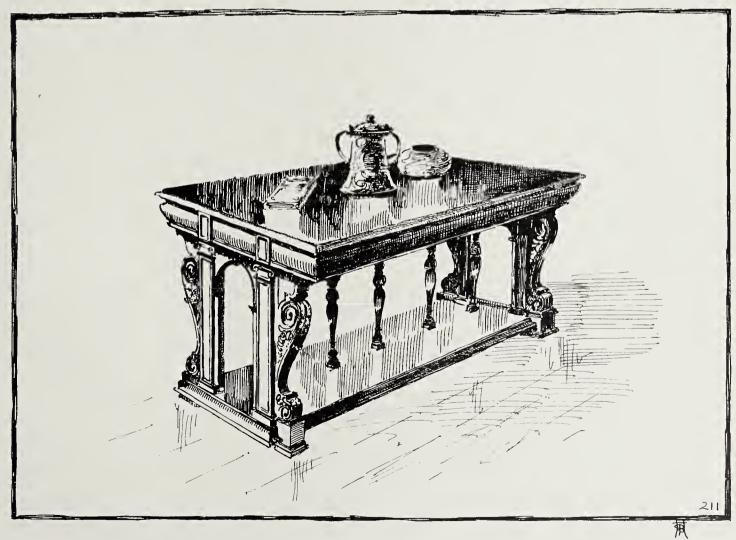
Bertrand & Chamberlin, Architects, Minneapolis

SE(ON) FLOOR

OF THE BUILDING



RECEPTION ROOM SUITE, Style Louis XIV, 2d Period. Covered in French Brocade. Designed and Executed by William Yungbaurer, St. Paul

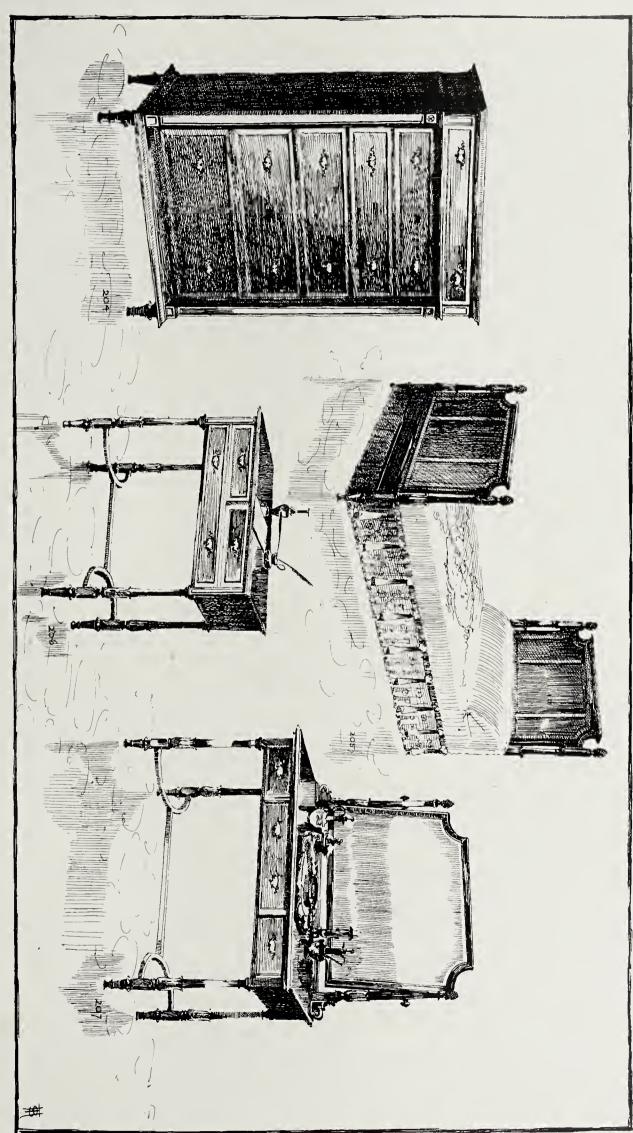


HALL TABLE IN WALNUT
After Specimen in the Cluny Museum, Paris
Designed and Manufactured By W. A. French, St. Paul



HALL CHAIR IN WALNUT

Designed and Manufactured by W. A. French, St. Paul



WALNUT BEDROOM SUITE, Style Louis XVI
Designed and manufactured by W. A. French, St. Paul

#### WHAT IS SAID OF THE WESTERN ARCHITECT.

#### "The Western Architect," Devoted to Modern Methods in Building.

Citizens of Duluth who are contemplating the erection of new homes or the remodeling of old ones on artistic lines are manifesting an interest in a new publication, "The Western Architect," which is an enterprise of the Twin Cities.

The Western Architect is devoted to modern methods in high grade building, and is an exemplary journal in its class. The second issue, which is now before the public, contains beautiful illustrations of some of the magnificent residences of Minneapolis and St. Paul. It is the purpose of the publishers to include pictorial descriptions of some of Duluth's handsome homes in the next issue.

The president of the Western Architect Publishing Company, which issues the Architect, is Frederick Kees, of Minneapolis. Walter Stevens, of St. Paul, is the secretary, and F. A. Greenlaw general manager.—Duluth Daily Tribune.

#### The Western Architect Keeping Up Its Reputation for Doing Things Handsomely.

The second number of the Western Architect made its appearance today. The number, if anything, is an even better production than the first, which had to all appearances reached the highest notch in typographical and general make up.

The issue has fifteen full pages of advertisements. It has ten full page half tones of floor plans, interiors and fine dwellings of Minneapolis and St. Paul from original plans by Twin City architects.

A page is devoted to hall furniture designed by William Yungbaurer of St. Paul for Jacob Dittenhofer. A reproduction is given of the centerpiece in the altar of St. Michael's German Catholic church at Chicago, designed and carved by Andrew Gewont, the Minneapolis sculptor. George Emile Bertrand, of Bertrand & Chamberlain, this city, contributes his second paper on "Pagan and Christian Temples, Gothic Cathedrals."—Minneapolis Journal.

#### The Western Architect.

Is the name of a handsomely illustrated monthly journal published at Minneapolis and St. Paul, Minn. The last number of this publication has just come to our desk, and we bespeak for it a cordial welcome by the architects.

The paper is well edited and the illustrations are handsome. It is devoted to architecture and the allied arts. The board of associate editors and consulting board of architects on subjects for illustration are all well known professional men whose judgment will make the paper a success.—Architects' and Builders' Journal, Baltimore, Md.

#### Western Architect Issues Fine Second Number.

The second number of the Western Architect has been issued, and is a very neat and attractive periodical, devoted to the interests of architects and the architectural art.

It contains five half tone supplements, showing especially attractive residences, both in St. Paul and Minneapolis. Besides these there are several zinc etchings and interior plans.

The number contains editorials on the bill posting nuisance, the corrosive possibility of steel structures, and on other matters of interest to architects and builders.—Minneapolis Daily Tribune.

#### February Number Beautiful Example for Typography and Illustration.

The Western Architect for February presents this mouth one of the finest publications of its kind in the United States. Not only in beauty of form and aesthetic taste, but also in composition of its various articles and its large list of fine illustrations it is a model of its kind.

The leading article, entitled "Highcroft," by F. H. Nutter, describes in detail the country house of the late F. H. Peavey at Minnetonka, and is illustrated with four full page engravings of the house and gardens, with several smaller cuts.—Minneapolis Sunday Tribune, March 8th, 1903.

#### One of the Best.

The Republican and Herald is in receipt of the first number of "The Western Architect," an illustrated monthly journal devoted to architecture and allied arts. The journal is one of the best of this class of magazines that has reached our desk, and it is our best wish that it may succeed and fill the vacancy that has heretofore existed in this field. It is published the 15th of each month by the Western Architect Publishing Co., of Minneapolis.—The Winona Daily Republican and Herald.

#### Handsome Trade Journal.

The Western Architect, published in Minneapolis and devoted to the interests of architecture and building, is one of the handsomest trade journals that has found its way to the exchange table of The Builder. No doubt it will receive, as it deserves, the hearty support of the people in whose interest it is published.— The Builder, St. Louis.

"I like to read American advertisements. They are in themselves literature, and I can gauge the prosperity of the country by their very appearance."—William E. Gladstone.

#### AN ATTRACTIVE COUNTRY SCHOOL HOUSE.

The "little red schoolhouse" in the glowing periods of the stump speakers and platform orators has been located on most of the hilltops of the northern states, but however much pride we may have in its many graduates, we must still admit that in its architectural features and outward environments it rarely offered much to arouse enthusiasm or love for the beautiful.

A welcome change is now being wrought in this respect as in many others, and even the "deestrict skule" is advancing with the rest.

We show elsewhere an exterior and an interior view of a schoolhouse erected in a New Hampshire village, by his children, as a memorial to one of their citizens who, starting as a pupil in a much less pretentious edifice, rose to a high position in town and state.

The present building is constructed of rough ledge stone from a neighboring mountain, with trimmings of cut granite. It contains two school rooms, with hall and vestibule, and the big "bay" is utilized, as shown, for a fine school library and a valuable collection of geological and mineralogical specimens, arranged in cabinets built beneath the sills of the high windows.

The interior finishings are not extravagant, but neat and in good taste. Modern desks and equipments make the class room a pleasant place indeed.

With its yard, shaded with native trees, the New Hampshire hills in the background, and overlooking the valley of the Connecticut river, this building is the pride of the community, and it is to be hoped also an inspiration to those who in other localities may be tempted to "go and do likewise."

#### MINNESOTA STATE ASSOCIATION OF BUILD-ERS.

The leading builders of St. Paul, Minneapolis and Duluth recently perfected a State Association, at which the following officers were elected: President, J. W. L. Corning of St. Paul; first vice-president, C. W. Higgins of Minneapolis; second vice-president, C. E. Evans of Duluth; third vice-president, J. W. Nelson of Minneapolis, and secretary and treasurer, A. V. Williams of St. Paul.

The executive committee consists of George J. Grant of St. Paul, W. F. Porter and A. F. Peckham of Minneapolis, G. J. Lounsberry and H. D. Bullard of Duluth.

In the evening of the day the State Association was organized, 250 of the members enjoyed a banquet at the "Commercial." Among the toasts were "The Builder," to which response was made by William Porter; "The Manufacturer," responded to by T. A. Abbott; "The Material Man," by J. F. McGuire, and "The Builders' Exchange," by A. K. Pruden.



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Chas. F. Loren	zen & Co	XV
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Celadon Rootin Merchaut & Co RADIATORS. Kellogg, Marks South Park Four ROOFERS AND Ludiwici Roofin Celadon Roofin Deetz & Co Lelebvre Roofin George F. Boel Geo. H. Lawes Northwestern Merchant & Co W. S. Nott Con Scribner-Libbe Selden Roofing St. Paul Roofing St. B. Waugh C SHELLAC MANU Standard Varni Slate Black Roas S. A. Berkemey STATIONERY. John A. Schleng E. R. Williams STAINED GLAS Pittsburgh Plat R. T. Giles & CSTONE. The Breen Ston Kettle River Q Wm. Penn & CSHINGLE STAIN Geo. H. Lawes Samuel Cabot . VARNISHES. Standard Varni Twin City Varn WINDOW SCRE The Higgin Mi WINDOW SCRE The Higgin Mi WINDOW SCRE R. Llohnson & Shat Window Shade R. R. Llohnson	g Tile Co.  Ay Cameron Co.  Indry & Machine ROOFERS' MAT  Ing Tile Co.  Ing & Cornice Co.  Ing & Cornice  Ing & Cornice  Ing Co.  Ing & Cornice  Ing Co.  Ing Co.  Ing Cornice & Ornice  Ing Co.  Ing Co	XVI   XVI

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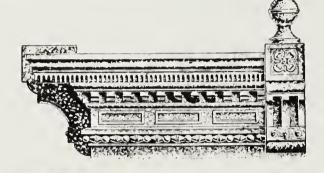
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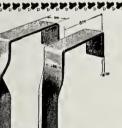
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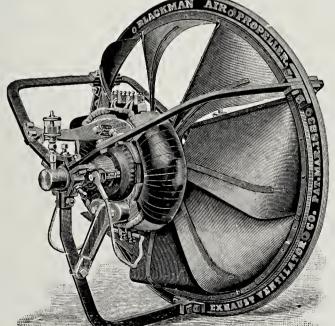
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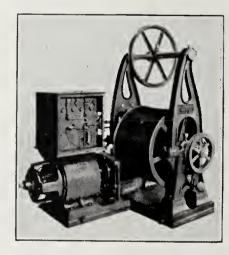


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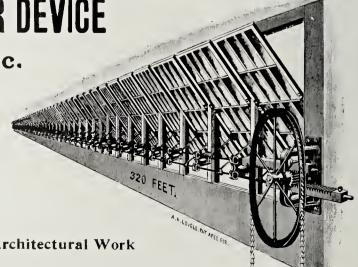
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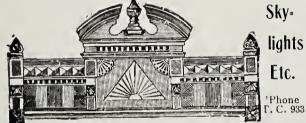
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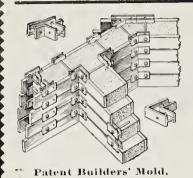
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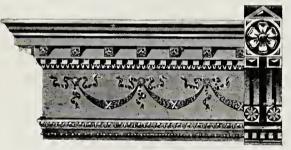
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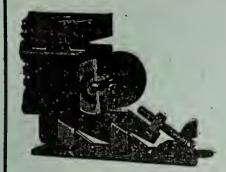




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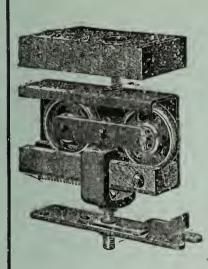
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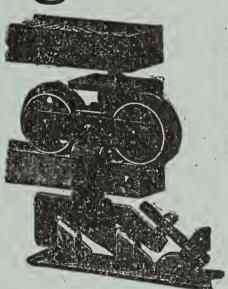
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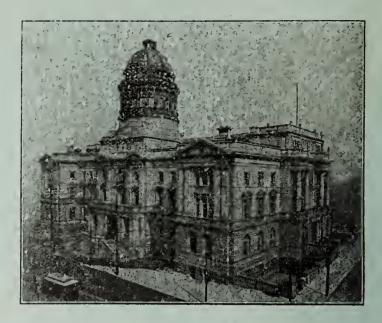
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