

THE WESTERN ARCHITECT

VOL. II. No. 5.

MINNEAPOLIS and ST. PAUL, May, 1903.

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 Brick Walls
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Absolutely Prevents Dampness.

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YOUR
ENTIRE
SATIS-
FAC-
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"Lith
Boards"
Patented

Are a better and cheaper medium of insulation and deadening than Cork, Hair Felt, Pumice or any other material on earth. Made from ROCK FIBRE WOOL, formed into sections 4 ft. by 18 inches, and any thickness desired. These boards are almost as rigid as though made from wood. Let us send you tests made by expert engineers, among whom are the Starr Engineering Company, of New York City.

We can also prove that

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Furnish 30 per cent. better insulation and deadening than Hair Felt, besides being entirely antiseptic and odorless. The same material, only thinner, is called

"Kelly's Flax Fibre Building Felt"

Used for building warm houses. It is cheaper than heating cold ones. The extra cost will be saved many times over in coal and doctor bills. Avoid the danger, discomfort and expense of a cold, draughty house by lining yours with this material, as it is absolutely the warmest sheathing made, ten times warmer than building papers.

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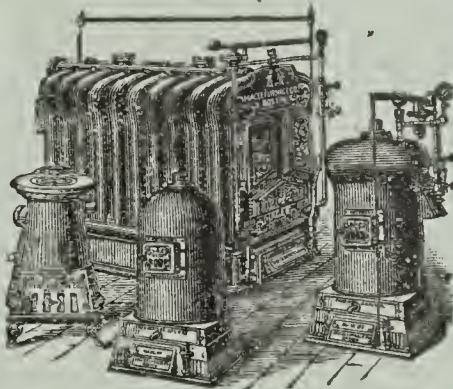
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and CONTRACTORS

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ASPHALT ROOFING**

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Guaranteed Pure Trinidad Asphalt.

**Iron Brand 2-PLY 3-PLY
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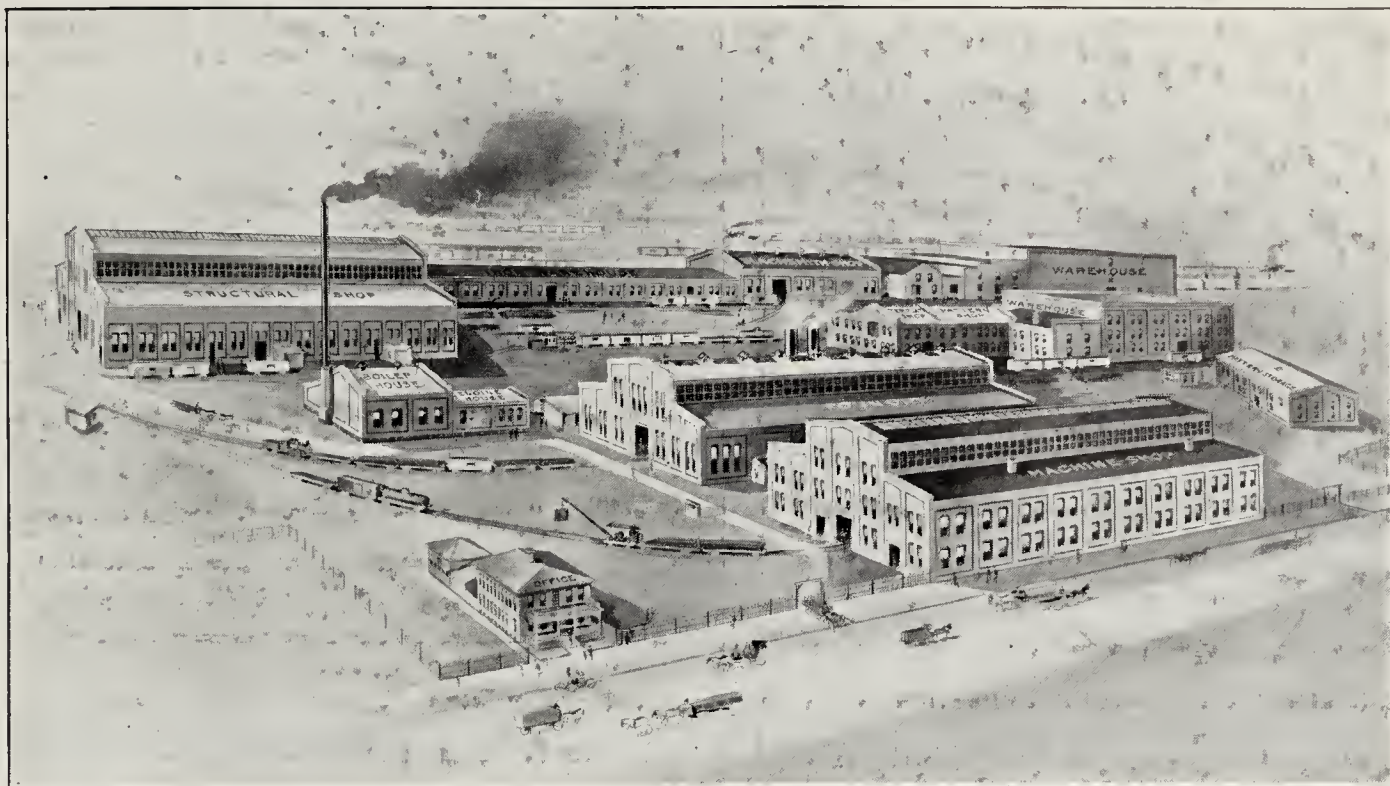
Made from long fibre wool felt, saturated with Coke-oven Tar and the plies cemented together with Coke-oven Pitch. The only Coal Tar Roofing possessing absolute merit.

We Carry a Complete Line of Building Papers

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Engineers and Builders of Steel Structures
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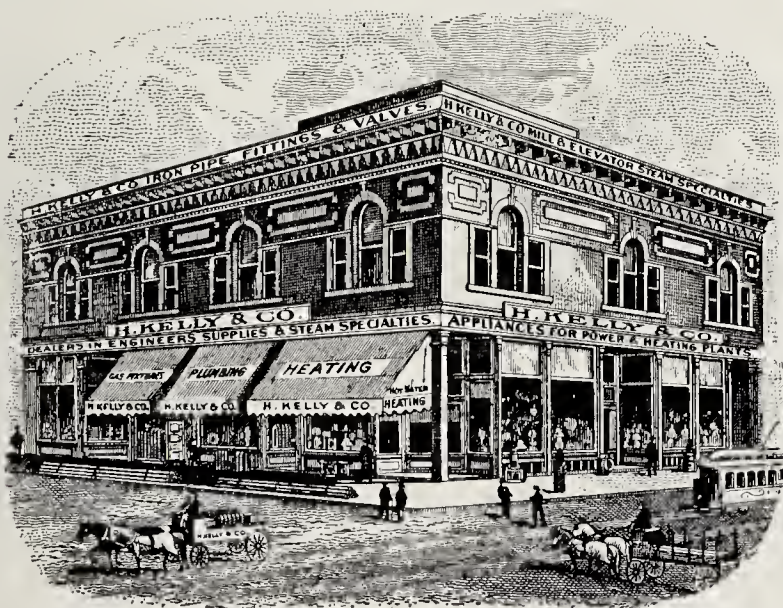
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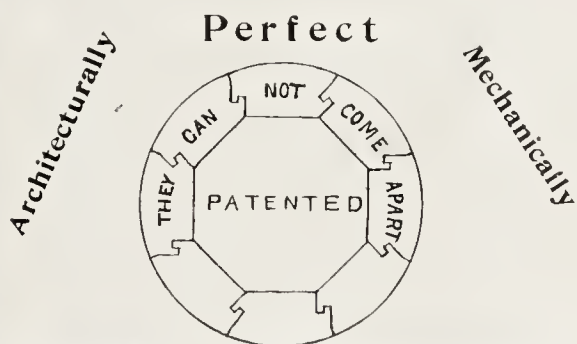
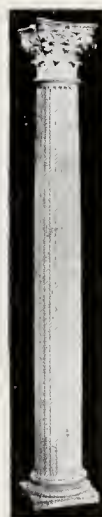
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"AMERICAN" BOILER FOR STEAM HEATING

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Heating Supplies of Every Description

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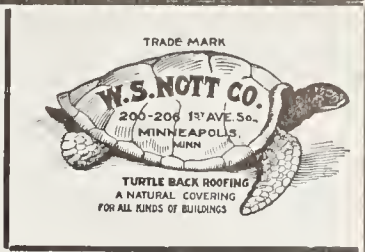
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Fireproof Plaster Boards

For wood construction.

Write for prices and estimates.

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Carey's 85 per cent Pure Magnesia Pipe Covering

The Deere-Webber Co., the largest Implement dealers in the entire Northwest roofed their immense 8 Story Warehouse in this city, with

Carey's Magnesia Cement Roofing

the lightest, most servicable and least expensive first-class roofing now manufactured.

KEES & COLBURN, Architects of both Buildings.



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SOLE NORTHWESTERN AGENTS AND CONTRACTORS,

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THE WESTERN ARCHITECT

IS PUBLISHED THE 15th OF EACH MONTH BY THE WESTERN ARCHITECT PUBLISHING COMPANY.

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

J. WALTER STEVENS, St. Paul, Secretary.

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

GRANT OVERHEAD PULLEYS.

The growing demand for overhead window pulleys has caused the Grant Pulley & Hardware Co. to seek larger quarters, consequently after May first they will be pleased to receive their customers and friends at 25 Warren street., N. Y. City, one door west of their present location.

Their advertisement appears in these columns, and for references they would refer you to the following buildings, in which their pulley has been used, and the architects:

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- Yale Dormitories, New Haven, Conn., C. H. Haight. Annapolis Cadet Quarters, Annapolis, Md., Earnest Flagg. U. S. Postoffice, Oakland, Cal., J. Knox Taylor. U. S. Postoffice, Wilkesbarre, Pa., J. Knox Taylor. N. Y. Telephone Building, New York City, C. L. W. Eidlitz. Mutual Life Ins. Co., New York City, Clinton & Russell. Century Building, New York City, Bruce Price. Boston Public School, Boston, J. Warren Gould. Brooklyn Telephone Building, Brooklyn, W. B. Chaffin. Carnegie Public Library, Easton, Pa., Jardine, Kent & Jardine. Carnegie Public Library, N. Y. City, Babb, Cook & Willard. Elizabeth Court House, Elizabeth, N. J., Ackerman & Koss. East Side Settlemen House, N. Y. City, Howell & Stokes. Carnegie Public Library, N. Y. City, Lord & Hulett. Babcock residence, New York City, Hess & Weeks. Irving Bank building, New York City, Horgan & Slatterly. Factory, Newark, N. J., Earnest Green Knickerbocker Truss Co., N. Y. City, McKim, Meade & White. Higgerman building, N. Y. City, Rossiter & Wright. Hotel Belmont, N. Y. City, Warren & Witman. Aeolian building, N. Y. City, Thompson & Starrett. Phipps residence, N. Y. City, Trowbridge & Livingston. The Republican Club, N. Y. City, York & Sawyer.

The many advantages of this pulley can be ascertained by referring to their catalogue, which may be obtained upon application.

FOR YOUR OWN PROTECTION.

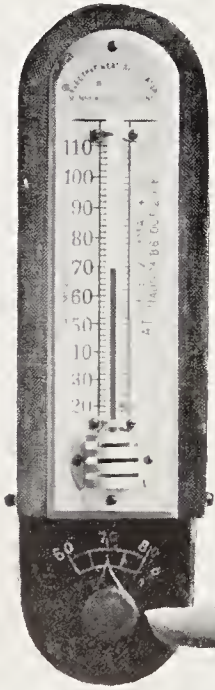
Send postal card for free booklet of patent claims relating to Hollow Concrete Building Blocks and machines for their manufacture, to the Harmon S. Palmer Hollow Concrete Building Block Company, Washington, D. C., owners of patents, or one dollar for full copies, including drawings and specifications in bound form; thirty-five pages 8x11 inches. Beware of infringements, several suits already filed. New Patents, Adjustable Machines.

Uniform Temperature.

The Minneapolis Heat Regulator

Is applicable to furnace, steam or hot water apparatus. Can be applied to old plants as well as new. Automatic-

ally controls the drafts, a change of one degree at the thermostat, located in living room, is sufficient to operate the dampers. The device is as simple as a clock. Gives perfect satisfaction. Has been upon the market for twenty-two years. Booklet for the asking. Specified and recommended by leading architects. Sole under an absolute guaranty with free trial.



Adjust here

Three testimonial boxes with dates and names: February 4th, 1903, Jacob Schreiner; New York, January 5th, 1903, Harry T. Schriver; January 14th, 1903, F. E. V. Shore.



It's Automatic

Correspondence with Architects Solicited.

Special price on our Device for Architect's personal use on their own plants.

Electric Heat Regulator Co. Fourth and Phoenix Sts., MINNEAPOLIS, Minn.

**SEALED PROPOSALS.
NOTICE TO CONTRACTORS.**

Sealed bids will be received by the Board of Education of Brightwood Independent School District No. 1 until June 10, 1903, for the erection and completion of a brick addition to the Hankinson High School building, according to plans and specifications now on file in The Hankinson News Office, Hankinson, N. D., Schuler Bros.' office, Wahpeton, N. D., and the office of the WESTERN ARCHITECT, at Room 303 Insurance Exchange Bldg., No. 15 No. 4th street, Minneapolis, Minn. Bids must be accompanied by a certified check for five per cent of the bid. The board reserves the right to reject any or all bids. Address all bids to the Secretary of Board of Education.

By order of the Board of Education of Brightwood Independent School District No. 1.

Dated Hankinson, N. D., May 6, 1903.

W. S. ANDREWS, Pres.

J. J. JONES,

JOHN GREEN,

W. C. FORMAN, Jr., Sec'y. Board of Education.

Mr. Chas. L. Pillsbury, the Consulting Electrical Engineer, mentioned elsewhere in this issue as the designer of the electrical features of the Chamber of Commerce building, has severed his connection with W. I. Gray & Co., and has transferred his business interests to St. Paul. Mr. Pillsbury has purchased the good-will and business of the well known Northwest Engineering Co., which has been successfully conducted by Mr. W. J. Bonwell, who now retires from the electrical field. Mr. Pillsbury also succeeds Mr. Bonwell as District Manager of the Northern Electrical Manufacturing Co., of Madison, Wis.

OTIS ELEVATOR COMPANY,
NEW YORK-CHICAGO.
Passenger and Freight
ELEVATORS.

"The Standard of the World."

TILE AND MOSAIC FLOORS
TILE WAINSCOTING AND CEILINGS

WOOD MANTELS



GEORGE H. REESE,

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Lewis & Kitchen,

(American Warming and Ventilating Co.)

Heating and Ventilating Engineers and Contractors.
Sanitary Apparatus.

Public Buildings a Specialty

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**MORE
J. W. REEDY
ELEVATORS**

used in the Leading industries and Business Houses throughout the WORLD than any other make.

The J. W. Reedy Elevator Mfg. Co.

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PORTAGE RED STONE

In Blocks or Sawn from the Quarries of

**TRAVERSE BAY
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**CALUMET,
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(LAKE SUPERIOR)

Send Plans for Estimates. We Pay Express

W. C. WYCKOFF, AGENT.

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Samples Sent When Requested.

Many PROMINENT ARCHITECTS are now specifying

Johnson's Window Shade Adjuster For upper LIGHT and VENTILATION

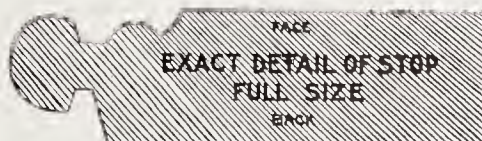
It works perfectly on a special detail of window stop. See cut. Costs no more than any good stop. Send for free sample of stop and sliding shade. Bracket sent with Booklet.

Furnished by leading Shade Houses.

R. R. JOHNSON,
168 Dearborn St., CHICAGO, ILL.



The Shade Roller is Easily and Perfectly Adjusted to any position in Window.



Control Your Temperature

The Johnson System

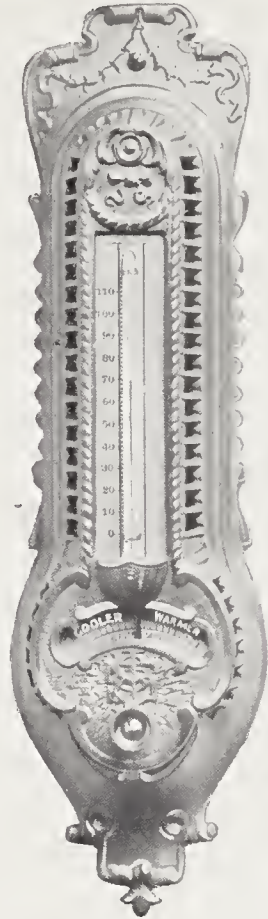
of Temperature Regulation is an absolute necessity in a well equipped, modern building.

It saves its own cost in a short time.

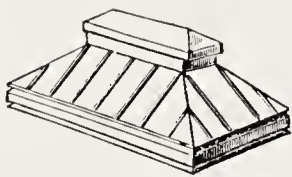
Promotes the physical well-being of the occupants.

Thousands of buildings equipped with our system.

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Monuments and Headstones.

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Portage Entry Redstone. Port Wing Brownstone. Kettle River Sandstone. Bedford Limestone. Berea, Ohio, Sandstone, etc. Mill and Office Tower Bay Slip.

SEND IN YOUR PLANS FOR ESTIMATES.

Our Specialty is Shipping Cut Stone by Rail.

West Superior, Wis.

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Fine Bank Fixtures
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Largest Manufacturers in the World of
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Railroad Settees, etc.

For 36 Years Manufacturers of
Everything for Schools
School Furniture
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Blackboards, etc., etc.

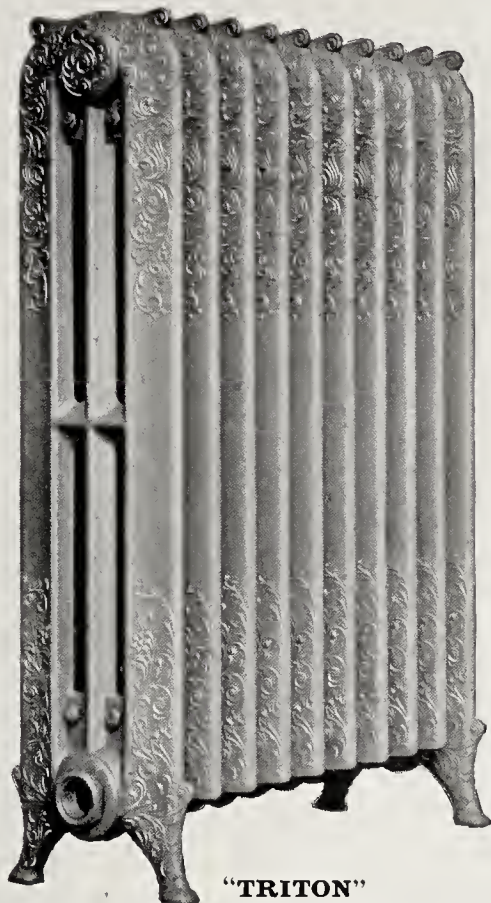
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We are exclusive manufacturers of
1, 2, 3 and 4 Column Radiators of the
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All Heights.

Write or call for Catalogue of complete and most efficient line of Radiators. Prompt Shipments : : :

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Samples and full particulars will be sent upon application.

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Cabot's Sheathing Quilt

A SCIENTIFIC non-conductor of heat and sound. Not a mere felt or paper, but a soft, resilient cushion of dead-air spaces, giving the most perfect conditions of heat insulation or the absorption of sound-waves. Indestructible by moths, vermin or decay and uninflamable.

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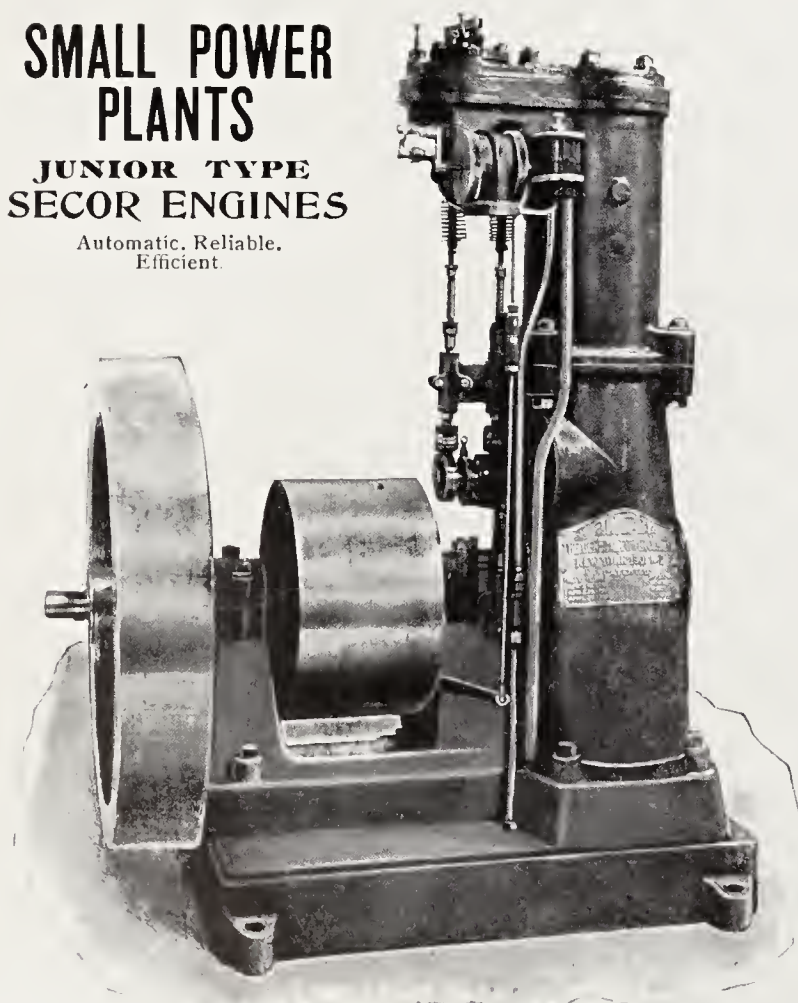
the only sheathing made that is heat, sound and fire proof.

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JUNIOR TYPE SECOR ENGINES

Automatic. Reliable. Efficient.



The General Power Co.
81-83 Fulton Street, New York City Write for Circular B.

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The Economy and Benefits of Using
The Paul Heating System
of Circulating Steam without Back Pressure
If Not Address or Call on
The Automatic Heating Co.,
ENDICOTT BUILDING,
St. Paul, Minn.

For Priming or First Coating.

S. V. W.
STANDARD



For priming coat on all classes of natural wood, Dries sufficiently Hard Over Night to admit of being sanded. Forms a hard non-porous coating, which effectually prevents suction of the varnishes applied over it and holds them up to a remarkable degree.

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London.

Standard Varnish Works,
29 BROADWAY, NEW YORK.

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 J. C. Landers & Co. X
 Harold Johnson XII

ARCHITECTURAL DECORATIONS.
 Harold Johnson XII

AUTOMATIC HEAT REGULATORS.
 Automatic Heat Regulator VII
 The Automatic Heating Co. IX
 Johnson Service Company VIII

BALL BEARING PULLEYS.
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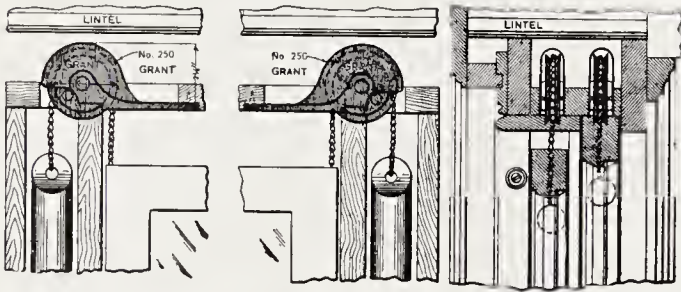
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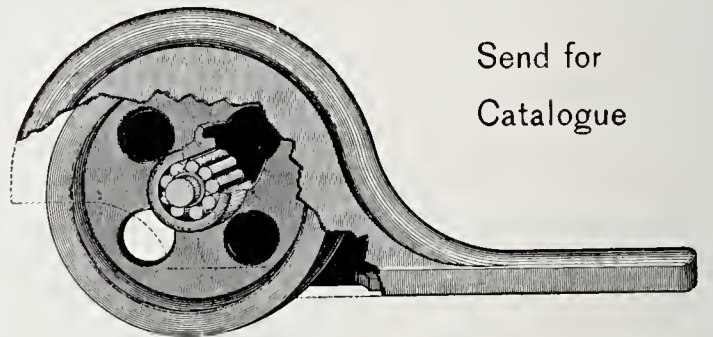


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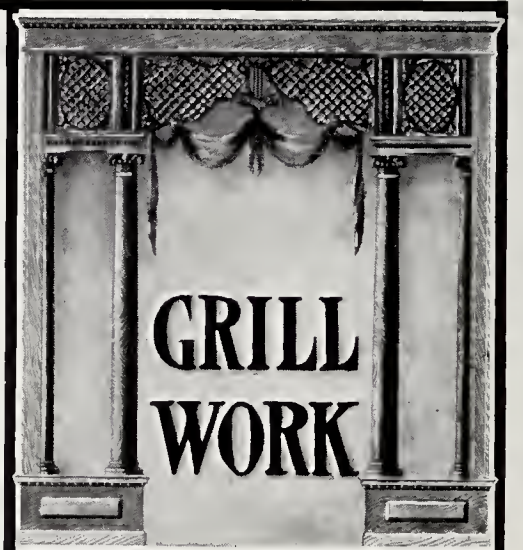
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AN ILLUSTRATED MONTHLY JOURNAL
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INCREASE IN PRICE.

WHILE the regular price for single copies of the WESTERN ARCHITECT is 50 cents, our readers, we are sure, will see no injustice in our asking \$1.00 for copies of this issue, which is so much enlarged and so expensively gotten up.



SURE signs are to be seen that the public is feeling a quickening of the long dormant interest in the looks of things belonging to the public. A late one is the announcement that the Minneapolis School Board has appealed to the Park Board for the professional help of the Landscape Architect in the employ of the latter, placing the designing of the approaches to some of its school buildings in his charge.

Some teachers have inspired pupils and janitors to very creditable efforts of this sort heretofore, but such results as they have produced were understood to be voluntary free of expense to the Board.



THE East is taking its turn at suffering from forest fires. The Adirondacks, in spite of what the state of New York and wealthy private owners have done, do not escape. Of course weather conditions must be propitious (or unpropitious) when these great destructions of conifers occur, the winds carrying the fire through the tops of the trees. It may be that practical forestry will one day involve planting belts of deciduous trees for fire breaks at suitable intervals among the conifers.



OF NEARLY 80,000 workmen in different parts of the country reported as on strike May 2d—mainly for shorter hours—nearly half, or more than 37,000, are reported as belonging to the building trades. If to this we add the portion of the 30,000 "excavators" in New York which should be credited to building industries, we can get a notion of the importance of building operations, or at least of what a lot of kickers are bred by these operations.

Geographically speaking, we have little fault to find with these strikes—they seem mostly to have located about as far from the West as they may and stay on land.

FREDERICK KEES.



Frederick Kees came to Minneapolis some twenty years ago from Baltimore, where he had previously practiced his profession. He arrived in this city at the time when there was a tremendous demand for new buildings and he soon found himself engaged on some of the most prominent structures. One of his earliest designs was the Syndicate block, which is still recognized as one of the handsomest buildings in the city.

For a number of years he was associated with F. B. Long in the firm of Long & Kees, and while in this partnership the firm erected the public library, Masonic Temple, the new Court House and City Hall, the Wyman, Partridge & Co., wholesale warehouse, and hundreds of other business and residence structures in this and other cities.

Shortly after the dissolution of this partnership, the present firm was formed.

RETURNS keep coming in from concrete superstructures here and there—about such returns as those interested in rival constructions would wish. Explanations of the causes of the numerous collapses in this sort of buildings are about a score to the collapse. Little is said about one thing that is noticeable in cement work oftener than builders wish. Cracks occur—some say by reason of swelling, others by reason of shrinkage—but cracks occur, and nobody seems to have taken the pains to anticipate and give direction to these cracks when designing these new concrete ventures.

S. M. COLBURN.



S. M. Colburn is a native of Connecticut and has lived in Minneapolis for the past twelve years. Kees & Colburn have planned many of the recent Minneapolis buildings of notable size and original characteristics. Among them are the Advance Thresher company's building, the J. I. Case Implement company's building, and the Bement-Darling company's building—all in a group at Third street and Seventh avenue So., and the Powers Mercantile company arcade, the Deere & Webber company building, at Washington and Eighth avenues N. The firm is now engaged on the Donaldson Glass Block building, a costly residence and stable for C. M. Harrington on Park avenue, and the new Northwestern National bank building, which will stand on First avenue S. near Fourth street. Their work is attracting attention all over the country.

S. H. Nealy, the architect who was sent to Peking, China, to supervise the erection of the new United States legation buildings, has written back a letter describing the difficulties attending the work. These arise chiefly from the impossibility of procuring efficient labor. The Chinese carpenters and bricklayers, who get 20 cents a day for wages, and the laborers, who get 12 cents, are industrious and patient, but unskillful and painfully slow. Mr. Nealy thinks that, as a European city a mile long by half a mile wide is going up in the very heart of the old Tartar city, and is likely to spread, a few first-class working bricklayers, plasterers, carpenters and tanners could make a small fortune there during the next few years.

WHITTLINGS.

BY F. W. FITZPATRICK.

The Western Architect has done me the honor to invite me to contribute something to its pages. It is a most flattering invitation, for while in spirit I am still of the West, the flesh has been so long East I thought my old associates west of the Mississippi had entirely forgotten me. Most of them certainly have scant reason to remember me lovingly. My chief function toward them, in those old times, seemed to be to rake them over the coals, to criticise their work, to growl at their methods and poke them up generally. Who of the architects who flourished in the early '80's but that got a lambasting or ripping-up by the "Whittler" in the old "Northwestern Architect" some time or another? They "jawed" back and we had lively times; still it was all good natured, there was no malice, and we've all grown older, and I hope wiser and better and more liberz1.

Now let me see: What is there that I know anything about that may interest those old friends? National architecture, perhaps! Yes, for it may materially effect them by and by.

Oh, materially! that's the word that strikes the right key, that goes right home to most of us. Something from which we may derive some tangible results, otherwise called \$'s!

Incidentally and while I think of it let me tell you that never before in our history has national building been so much a part of or controlled by the Northwest as it is just now. Assistant Secretary of the Treasury Taylor, (lovingly called by every one from out of the West "Hod" Taylor), through whose hands must everything departmental pass that in any way relates to public buildings, is a Wisconsin man. Supervising Architect Taylor is a St. Paul man—he was formerly of the firm of Gilbert & Taylor—and the chief computer, the one who directs how and of what material buildings will be built, is an old Minneapolis man, J. C. Plant—formerly of the firm of Plant & Whitney. Then there are many of the designers and subordinate officers who are men of the West, and last and least is not the Whittler one of you also? And has he not some little to do with the national architecture?

Whatever the cause the fact remains, whether it is owing to western influence or not, that there has been a tremendous stride made, a very marked improvement indeed in our federal or national architecture during the past ten or a dozen years. Why, I remember what miserable specimens of buildings the government used and put up about that time, not only hideous in design but clumsily built, poorly heated, catch-as-catch-can affairs that were the butt and scorn of every architect.

Then there was a sort of awakening, not a very thorough one, but a propitious sign, nevertheless. The government began to feel the all-pervading Richardson

influence. It figuratively chopped off a piece of that master's Pittsburg court house and made stock rolls therefrom, and for years afterward, whenever a building was needed, so many yards of those rolls were unwound and cut off and there you were, lovely little Richardsonsque abortions planted all over this wide country of ours. And, confound them, they were built so solidly, albeit clumsily, that there's no hope of the blooming things falling down or being otherwise gotten rid of.

Then in '95 congress took a notion and directed that a special architect design the big Chicago post-office, seemingly even the honorable gentlemen were weary of the Romanesque crudities. And about that time some politics was squeezed out of the department and younger and more artistic blood was injected into its veins.

Since then the growth has been rapid and thorough. Not only is the department building artistically, but it is doing it well and scientifically, its corps of structural engineers is unexcelled and its mechanical branches, in charge of Maj. Powell, do work in heating, ventilating, lighting, etc., that becomes standard for private practioneers.

True, the supervising architect's office is subject to the same whims and fads as is ordinary flesh, it is running to classic these days as is every one else. Post-office, cow-barn, chicken-coop or cathedral, all has to be columnated, fluted and academic in design, but it is well done, consistent, studied for each particular location, really designed. Such a contrast to the old way of so many yards of building chopped off!

As a matter of fact I realize that the office has grown so that it no longer follows the fashion, but is really setting the pace. Take in this St. Louis Exposition layout, for instance. The government building is not only good, very good, but one of the three best buildings there, if indeed not the very best of the whole group, and it is being imitated right and left. It is a most scholarly, dignified and consistent composition and approaches the just proportions of poor Atwood's art palace at the Chicago's World's Fair nearer than anything I've seen done of late.

Within the last three or four years the department has carried out the Tarsney act—that has been optional with it—in connection with some of its bigger buildings throwing these into competition, buildings of a million dollars or thereabout; the New York custom house, the Baltimore, Indianapolis, Cleveland and other buildings of that class. The results have not been startling, and none of the designs received so far would set the river on fire. They compare favorably with what the department has done by itself but certainly do not excel. In one case the office had prepared preliminary designs for a building that was subsequently thrown into competition. It was, of course, put away until all the designs were in, but had it been placed alongside of those "masterly efforts" of the outsiders I am convinced it would have won out hands down.

All in all, through capable management, the infusion of new blood, the incentive of outside competition and other causes, government architecture has reached a really high plane, stands well by itself and gives us reason to hope for really great things.

But the American Institute has kept on hammering persistently at the department, clamoring for no very well-founded reason, I submit, for all the buildings to be open to competition, except it be its commendable purpose to provide more work for its members. Secretary Shaw and Supervising Architect Taylor have conferred and decided to try the Tarsney act in wholesale lots for awhile anyway. The Atlantic City building is the first under the new order of things. Forty or more will follow, for you know congress has been liberal lately and given out building appropriations with a lavish hand. In this first what may be called minor competition, seven architects have been invited to submit designs; no other designs will be considered and in every case will it be a limited and comparatively local and invited affair.

Messrs. Davis and Davis, Albert Kelsey, Wm. C. Pritchett, John T. Windrum, George B. Page, E. V. Seeler, all of Philadelphia, and Harold F. Adams of Atlantic City have been invited in this case and none others need apply.

The supervising architect's office will see that the accepted design conforms to what is required; it will superintend the work, attend to payments, etc., etc., essentially a "supervising" office hereafter. Really the successful architects in these competitions will have comparatively little to do for their five per cent, and there will be no cutting of rates (!) no fussing with feminine clients, not half the bother and worries of general practice. These jobs are worth going after and it behooves all ye of the West in whose vicinities government buildings have been provided for, to get a "hustle on" and have your congressmen labor with the department to the end it may invite you to participate at the feast.

I can see many snags ahead. The department if not the architects has its troubles before it, vexatious delays and what not too numerous to mention, beside being impolitic for me to touch upon here and now, but I feel convinced the experiment will not be a success, and before many years the department will resume attending to its own business itself. Its organization is very complete, it is in good working order and it seems too bad to cut off its usefulness just when it is in such splendid shape to do and is doing such good work. But if we never try anything, how are we to know when we have the best? So let the experiment begin, but, between ourselves, I am deuced glad some one else is supervising architect than yours truly.

* * *

You have heard much about and seen much illustrative of the projected "redemption" of Washington. You know there was a very swell commission appointed that after a little junket into Europe and a few lunches and other consultations labored and brought forth a scheme of parks, new streets, government buildings, etc., etc., a general beautifying and fixing up of the capital city, which by the way, is pretty nice as

it is. Much criticism was heaped upon that commission's plan, few who really know things fully concurred in it, and those of us who had first started the movement to systematize affairs and had pretty well defined ideas of what ought to be done, and who were so absolutely ignored by this mighty commission which came in at the eleventh hour and decided things in such an off-hand and easy way that we had been scuffling over and studying for years, thought, very naturally if not with absolute justice, that the scheme was all planned, poor, indeed very poor. Strange how our temper, our bile, our digestion, our feelings influence our judgment!

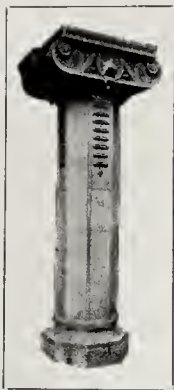
Of course, in this case, I can't be impartial. I have too well defined prejudices in favor of another and dearer scheme, but with as little prejudice as possible I will say that that commission's plan is too academic, too much on paper with too little regard for how it will appear in execution, too servile an imitation of old European ideas without consideration of the vastly different conditions, climate and people here. I may sum up by saying it's too scholastic, more what you would expect from a student at the academy than from men who know and fully appreciate conditions, times and all that goes to making a modern city.

This is the first word of adverse criticism I have uttered. However, I am so pleased that some plan, any system has been adopted that I have been loud in its praise. Something, however imperfect, is much better than nothing.

They had gotten so here that they slapped down buildings, statues, fountains, etc., in a most haphazard and startling way, regardless of anything facing anywhere, really in an idiotic manner. Nothing has been done and no expense incurred toward putting the commission's plans into execution and nothing will be done in that direction that way, save that when a government building is decided upon now, or a new street is projected or any improvement inaugurated in the regular course of affairs people get those plans and fix that building fountain or street so that it fits into the general scheme. Now, there is where the joke comes in and the advantage lies, for while that very influence tends to systematize things a bit, everything that has been done or is projected or thought of for some years to come, fits that particular plan but, fortunately, gets into such shape that several other and much better general plans can wiggle things about these completed or fixed affairs and the already old buildings in such a way as to blend the whole without very much change and get into a general scheme the honorable the park commission never dreamed of!

But here am I prattling on as if I had all day to write and your good people had the patience of Job to read me through. There is much to say about government building and national affairs that interests and is vital to the architects and I will not promise to hold any place for much more than a month at a time, but for the nonce and not to wear out my welcome I will leave you in peace and contentment, and may Heaven's choicest blessings be showered down upon you all. Amen!

THE NEW CHAMBER OF COMMERCE, MINNEAPOLIS.



IN this home of trade, built and owned by the Minneapolis Chamber of Commerce, we have so interesting an example of a great business building, and of such special interest as showing what and how many things need to be brought together and adjusted to make the whole of a great business building in what is known as the West, that it has seemed a fitting subject for the exclusive illustrations of this issue of the *Western Architect*.

In this building, Minneapolis has added to her group of modern business structures one which is entirely creditable to the city. It is a handsome, modern, up-to-date, substantial and complete office building. More than this, it is unquestionably the best building yet erected for the uses of a grain trading organization; not the most costly or largest, perhaps, but the best adapted to the uses of such a body of men and certainly the most modern of all the exchange buildings of the country.

Minneapolis people are not probably generally aware of these facts. The building has been under construction for about two years, but the work has gone on quietly and without any fuss or "puffing" by the press. From time to time something has been said about the New Chamber of Commerce, and there has been pride in the fact that the city was to have an excellent building for its chief commercial organization, but the conspicuous merits of the building have not been greatly enlarged upon.

The building covers a piece of ground 157 feet on Fourth ave. So. by 132 feet on Fourth street So. Its general shape is that of the letter "E." It rises ten stories from the sidewalk, with a commodious basement below the street level. The walls are of gray pressed brick with gray terra cotta trimmings, the latter furnishing the only ornamentation to be found on the exterior. This ornamentation is mostly about the doorways, which are in the center of the Fourth avenue and Fourth street sides. These entrances are directly from the sidewalk; the architectural effect of a raised first floor and flights of entrance steps has been sacrificed to the obviously utilitarian plan of a street level entrance. For such a building it is most desirable.

Large as has been the experience of the architects, Messrs. Kees & Colburn, if they were to be asked to tell off-hand the number of contracts represented in the complete building, it is to be doubted if they could name half of them. They evidently set out to design a building that should express, before anything else, that solidity and straightforwardness which all business men prize so highly. But modern business, conducted in the simplest and most forward manner, demands a host of facilities and conveniences, and although it need not be ostentatious, it must not be

niggardly. So, therefore, to meet the needs of this great trading center, this plain and substantial building must have every known labor and time-saving device, as well as everything that can contribute to the comfort of the tenants. Decorations must be free from the theatrical; they must not obtrude, neither must they on the other hand carry a hint of the tight purse.

The general verdict is that these desirable things have been pretty nearly accomplished in this building, and it is the purpose of this article to give credit to those who have assisted to bring about the happy result.

As a matter of course, there first came the surveying of the ground, which was done by J. E. Egan, of Minneapolis, who was formerly county surveyor. After this, the excavating for this mammoth building was begun by H. N. Leighton & Co., whose name is familiar with not only the people of Minneapolis, but of the entire Northwest.

The foundations were laid with special care by Pike & Cook, of 416 Fifth st So., Minneapolis.

"Z" bar columns were the type selected and used in this building and among the important features of the steel frame work are three heavy box girders and five plate girders, each with a span of 80 feet 6 inches, and each will safely support a load of over 600 tons.

These girders, made by Jones & Laughlin, of Pittsburgh, weigh 24½ tons each, and to place them in the building at a height of 85 feet from the sidewalk required Washington fir poles 16 inches diameter at the top and 102 feet long.

The assembling of the steel frame at the building was done by C. F. Haglin, the general contractor, whose patent concrete steel system of floor filling was adapted and used throughout.

The exterior is furnished in terra cotta made by the American Terra Cotta Co., of Chicago, for which S. J. Hewson & Co. are the Minneapolis agents.

The Norman Pressed Bricks were manufactured by the Columbus Brick & Terra Cotta Co., of Columbus, Ohio, and were furnished by J. C. Landers & Co., of Minneapolis, both the terra cotta and brick being of a warm, drab shade.

The Enameled Brick is the product of the Tiffany Enameled Brick Co.'s plant at Momence, Ill., which were also supplied by J. C. Landers & Co., who are their local agents.

The fire-proof partitions which are shown so clearly in one of our printed plates, were supplied by the Mackolite Fire Proofing Co., through S. J. Hewson & Co., as well as the Marbleitic Flooring, which came from the Marbleitic Floor Co., of Dayton, Ohio. S. J. Hewson & Co., of No. 10 3rd St. North, Minneapolis, are the Northwestern representatives of both of these concerns.

The entire walls of the building are plastered with Zenith plaster furnished by the United States Gypsum Company, whose Northwestern offices are located in the Lumber Exchange.

The Crittenden Roofing Co., of Minneapolis, manufactured and supplied the roofing material, as well as the metal window frames and sash.

The hardware and trimmings were furnished by the well-known house of W. K. Morison & Co., of Minneapolis, and were Yale & Towne's best construction. They were finished in "Bower-Barff" and provided with a special dead-locking office latch, with the Yale armored front and a patent triplex spindle. The butts are self-lubricating and are self-closing through the aid of the "Blount Check."

The window sash locks and lifts, as well as the door checks, were also made by the Yale & Towne Mfg. Co., and are in keeping with the general character of the building.

Italian marble is liberally used about the elevators, stairs and corridors. In the trading room, the wainscot and telegraph counters are of scagliola, an artificial imitation of colored marble and cluster work, and this makes an attractive beginning for the decorative scheme.

Marble also forms an important part of some of the office fittings, noticeably to the Washburn-Crosby offices. The marble contracts were placed with the N. W. Mantel Co., of Minneapolis, except the artificial marble, which was furnished by the Henry Marble Co., of Chicago.

The ornamental iron work about the elevators and stairs was furnished by the Winslow Bros., of Chicago, while the office counters and railings were manufactured by the Flour City Ornamental Iron Works, of Minneapolis.

John S. Bradstreet & Co. assume responsibility for the wall decorations of the great trading room, which is 75 by 130 feet on the 4th floor, and 35 feet high, to its deeply coffered ceiling, as well as for the ornamentation of the first floor corridor. The general impression one gets from the finished work is of a bright, cheery room, richly but serviceably finished, without pomp or cheap advertising,—a decorative scheme calculated to preserve the spaciousness of the room—to make one rather buoyant rather than to depress.

To get a notion of how very well this room has been furnished, one has only to see it and then imagine how it might have been dwarfed and hushed by the substitution of some of the deep and somber colorings so much affected in these times. A series of wall paintings call up visions of how very differently the grain trade is handled elsewhere.

Other very interesting things by John S. Bradstreet & Co. have been done in the building, noticeably in the smoking-room of the main trading room, and in the private offices of Watson & Co.

The general painting of the building was performed by the Harry B. Cramer Co., the well established painting concern of Minneapolis, which constituted a contract of no small proportion.

The beautiful entrance on the Fourth ave. So. side is provided with the latest pattern of revolving doors, which were made by the St. Paul Furniture Co., and every window is fastened with the H. K. Whitner Patent Safety Window bolts.

The Electric and Power Plant.

An important part of the service equipment of the building is the electric lighting and power plant which furnishes current for the electric motors that drive the great triplex power pumps of the hydraulic elevators, for the numerous electric motors which operate the exhaust and blower fans of the indirect heating and ventilating system, and for the thousands of incandescent electric lamps thickly studded throughout the building, which form the sole illumination, save at the elevators and stairways in the main corridors, where gas jets are also provided for emergency use.

The plant consists of three Westinghouse vertical compound engines of the latest type, two of 125 and one of 80 horse power directly connected to three Westinghouse compound wound engine type generators. Each generator is mounted direct on the extended shaft of its respective engine, and the engine and generator rest upon a single iron base, making a generating unit of very compact and pleasing design.

The three generating units are placed in line along the Fourth St. side of the engine room, and space has been provided and provision made for a fourth unit which may be added later.

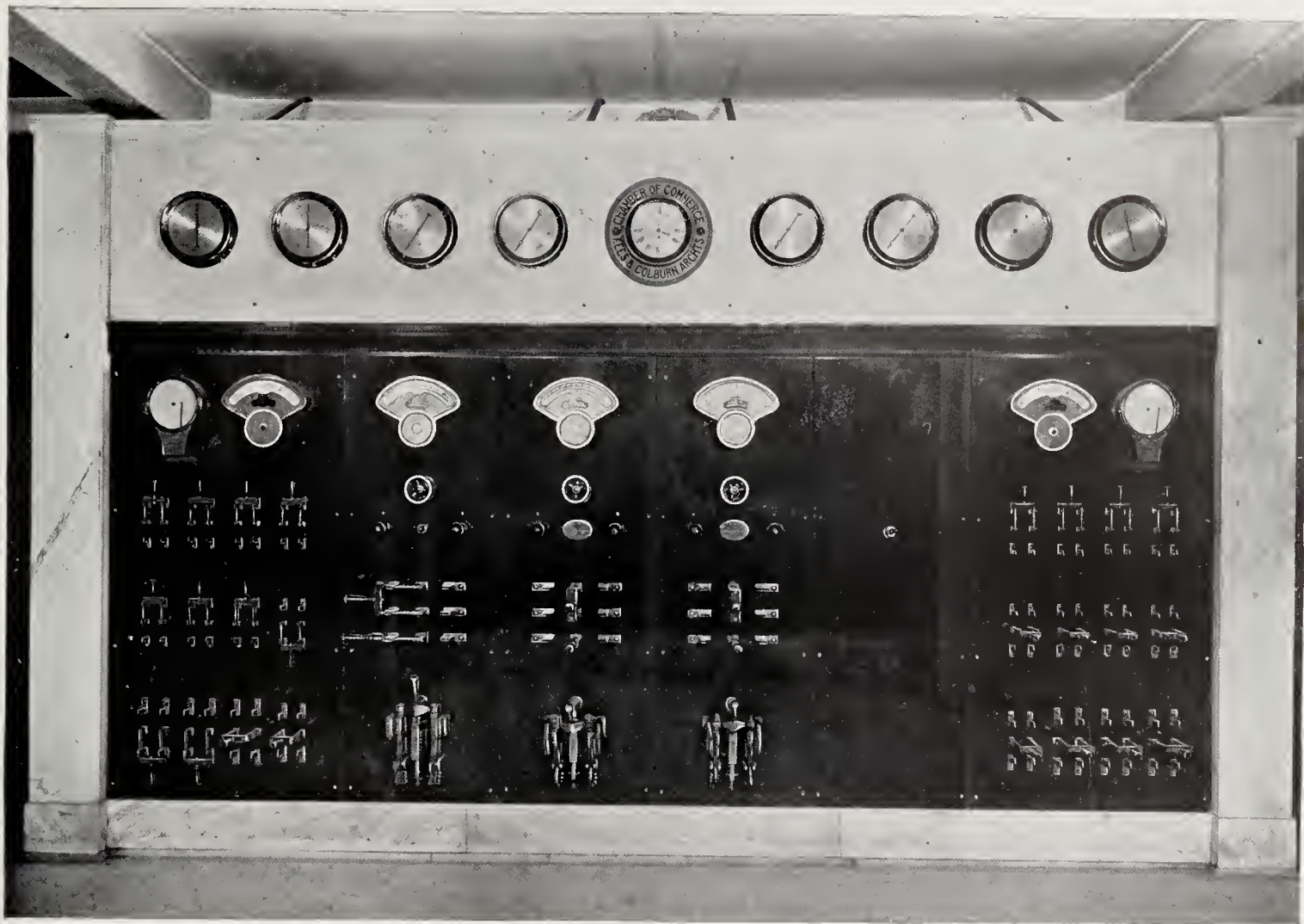
On account of the fact that the exhaust steam from the engines is used for heating the building during the winter months, the use of compound engines was rendered practicable only by the installation of the Paul vacuum system, which prevents any appreciable back pressure above the atmosphere.

The current at a pressure of 230 volts, which is the voltage used throughout the building at all lamps and motors, is carried to the main switchboard by means of heavily insulated cables laid in an iron conduit underneath the tile floor of the engine room as shown herewith.

The switchboard proper, shown in the accompanying cut, consists of six panels of genuine black marble, each about thirty inches in width and about six and one-half feet in height.

The two feeder panels are placed at the ends of the board with four generator panels between. The feeder panels are similar and contain the switches and protection devices for the various feeders of the lighting and power system, as well as instruments for measuring the electric pressure and for recording in ink on daily charts the total current used at all times for lighting and for power purposes separately or the total out-put of the plant as desired.

The four generator panels in the center, one of which is left blank for the future generating set men-



FRONT VIEW OF SWITCHBOARD.

tioned above, contains the instruments, switches, circuit breakers, etc., for the control and protection of the respective generators. The entire front of the switchboard is perfectly symmetrical in design and the instruments and devices finished alike in polished copper, present a handsome appearance against the black marble back-ground.

This switchboard is supported in a white marble base between two white marble columns, and is surmounted with a white marble gauge board, upon which are placed the steam and air gauges and the master-clock.

It is not usually the best practice to mount steam and water gauges over the electrical connections of a switchboard on account of the danger of leakage, but in this case it was almost absolutely necessary to so place the gauges, and all danger of leakage has been eliminated by means of a special copper catch basin running the entire length of the rear of the board with drain pipes at the ends.

This main switchboard is not crowded near the wall as is the usual custom, but is set out about ten feet, and the black and white marble work is carried back on both sides similar to the front, thus making a three-sided board and giving ample room in the rear for careful inspection and maintenance of the complicated copper bus-bar work and the renewal of the enclosed fuses which protect the various feeder circuits.

The side panels are utilized for the basement lighting switches, bus junction and central station breakdown service switches, and for the various wattmeters which are enclosed in glass cases and mounted on the fronts of the panels. Wattmeters are provided for measuring the total monthly current generated by each generator, the current taken from the city central station for break-down service, and the current taken separately by the elevator motors, the heating and ventilating motors, the public corridor lights, etc., thus affording in connection with the volt and ampere-meters and recording ammeters, above referred to as mounted on the generator and feeder panels, the most complete records of current consumption enabling operating costs to be accurately computed.

Two of these side panels are left blank for the instruments and devices of an auxiliary storage battery plant which may be added later if found to be desirable.

The connections are so made that the power and the lighting service may be entirely independent of each other, or operated as one system as desired, and any or all generators may be connected to either of the two sets of bus-bars, or to both at one time, and all power and lighting feeder switches, as well as the generator switches are double throw, so that they may be thrown on either set of bus-bars to provide for any desirable division of the load.



REAR OF GENERATOR AND FEEDER PANELS OF MAIN SWITCHBOARD.

The rear of the switchboard is the most interesting part from an engineering standpoint, and has been worked out with great care, and the polished copper bus-bar work presents unusual symmetry and excellence of design.

Connections are so made that if the storage battery is added, a differential battery booster will be connected between the bus-bars, so that there will

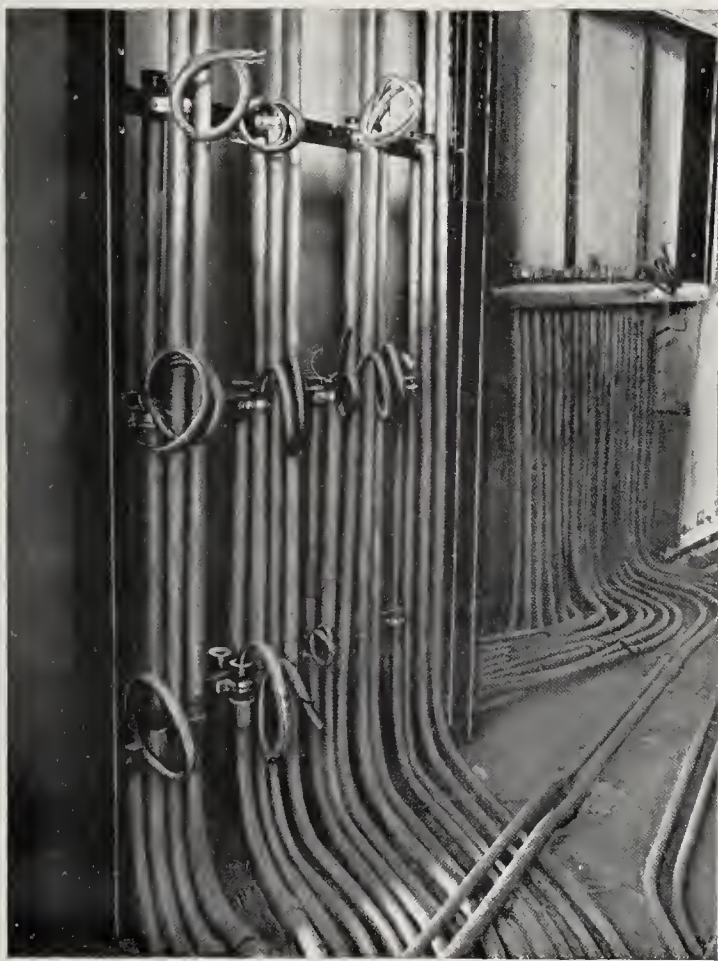
be no flickering of lamps, no matter how the power load may fluctuate.

The electric light wiring of the building comprises over one hundred and fifty thousand feet of rubber-covered copper wire, encased throughout in enameled and electro-galvanized iron conduits which are laid in the walls and under the floors, and provided with an iron terminal or outlet box at every point where the wires emerge for fixture connections.



CONDUIT AND OUTLETS FOR ELECTRIC LIGHT WIRES IN PARTIALLY COMPLETED MACKOLITE PARTITIONS.

As the wires are thus entirely enclosed in iron, practically all danger of fire from this source is eliminated and the wires are fully protected against mechanical injury. A further gain by the use of this iron conduit system, and a very important gain, too, is the accessibility of the wires. As the entire conduit system was first installed without wires or fish strings of any kind, and the wires not inserted until the building was practically complete, it is evident that at any time in the future defective wires may be withdrawn and perfect ones substituted. In this building the electric lighting service is not furnished free, but a very nominal charge, sufficient only to cover operating expenses is made and all tenants pay for the light they use at this nominal rate, the current taken by each tenant being recorded by a wattmeter, just as is the case of central station service.

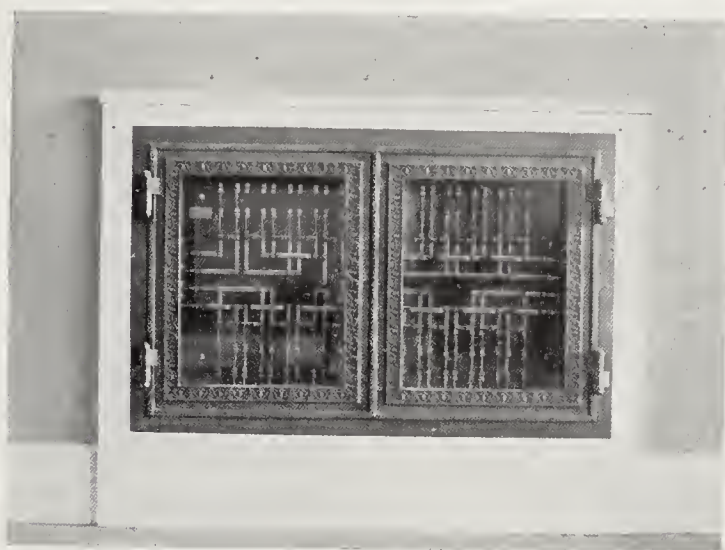


CONDUIT CONSTRUCTION AT ONE OF THE 10 METER AND JUNCTION BOARDS (Slate Fronts Removed.)

All meters of each floor are mounted on a black marbled slate meter-board located in the meter room on that floor, and the electrical connections are so made that various combinations of circuits may be fed through the meters, so that the tenant's lights may continue to be metered, even though the distribution of floor space may be materially changed.

About forty switch and cut-out cabinets are required for the control and protection of the individual lighting circuits. In most wiring jobs these "cut-out" cabinets are rough and unsightly, and are therefore hidden away in the more or less inaccessible places where they often become sources of great inconveni-

ence and even danger. It is not so, however, in this building; here the cabinets were recognized as important features of the service equipment and were very properly located in the most accessible places in the main corridors, and were therefore so designed and constructed that instead of being objectionable, they are recognized as features of especial interest and attraction. Each cabinet consists of a miniature black marble switchboard with polished copper bus-bars, switches, etc., set in a black slate frame and in an iron box the whole surrounded with a white marble trim, and provided with heavy plate glass doors with ornamental iron frames of especially neat design.



ONE OF THE 40 DISTRIBUTION OR "CUT-OUT" CABINETS FOR ELECTRIC LIGHTING.

A unique feature of considerable interest in connection with the wiring system, is the provision made for future additions. Although an abundance of outlets have been provided, there being over five hundred floor and baseboard receptacles alone to which cords and plugs may be attached for desk and portable lamps; yet, recognizing that it is impossible to foretell all of the necessary locations for lights, a special moulding has been carried around each wall of every room to facilitate extensions and additions. This moulding is so designed and so connected with the lighting conduit in each room, that in a few minutes' time, without marring the building, a light may be obtained at almost any point on the wall by means of a flexible steel covered cable concealed in the moulding.

The Chamber of Commerce building naturally contains many miles of telephone and telegraph wires and cables. For these wires, an iron conduit, similar to that used for lighting, and a special wood moulding have been provided so that the instruments may be placed at almost any desired location without disfiguring the rooms and corridors with unsightly wires.

A private telephone system has been installed between the offices of a number of members and the Trading room, and an electric light signal-board running across the entire end of the room over the main blackboard, automatically and noiselessly informs the member on the floor who may be wanted at his private telephone booth.

All of the electrical construction work of the building, including the main switchboard, cabinets, signal systems, etc., was installed by W. I. Gray & Co., of Minneapolis, from plans and specifications by Chas. L. Pillsbury, Consulting Electrical Engineer.

The Westinghouse engines and generators above referred to were furnished by Westinghouse, Church, Kerr & Co., of Chicago, and the motors mentioned elsewhere which drive the various exhaust and blower fans of the heating and ventilating systems were built and installed by the Electric Machinery Co., of Minneapolis and equipped with Cutler Hammer Universal Motor Controllers under specifications made by Mr. Pillsbury.

Heating and Ventilation.

Limitations of space will admit of but brief mention of the many interesting features of the heating and ventilation which, in this building, take both comfort and hygiene into account to an unusual extent. Indeed as one is shown the very complex and efficient plant in operation in the building he is convinced that the heating and ventilating must have been made a sort of pet by the building committee, their architects and the engineers who installed the many devices necessary to bring about the results to be seen; for certainly it would not be an easy matter to find another building containing so complete and so well designed apparatus as is to be found here.

Different parts of the building are treated according to their needs. Tenants of other supposedly first-class buildings, where heat is supplied in the ordinary way, and where such fresh air as is to be had struggles in through open doors and cracks and crannies of the lower stories, and after depositing its burden of dust and soot finds its way out of the upper stories somehow, are astonished to learn that offices in the Chamber of Commerce are supplied with warmed fresh air at a uniform temperature—that the amount of air and its temperature are automatically controlled, and that the air is washed and delivered to the rooms free from the dust and soot and organic matter so inevitable in down-town districts in manufacturing towns of any size.

The corridors are sufficiently warmed with direct radiators and enough fresh air finds its way to and through them by means of the opening and closing of the doors at the streets. What little heat is required in the toilet-rooms, is also supplied by direct radiators; but here any attempt at fresh air supply, other than from the corridors is avoided; in fact every precaution is taken to make the air from the corridors move swiftly into and through the toilet-rooms. To that end, air is being continually exhausted from the toilet-rooms; and this again—to prevent the circulation of disagreeable odors within the rooms—is done at and through the toilet fixtures themselves.

Offices are supplied with fresh, thoroughly washed warm air at a temperature high enough to maintain a temperature of 70 degrees Fahr. throughout the rooms through registers situated about 8 feet above the floor, and after doing its appointed work is exhausted through other registers situated in the base-boards. Flues in the Mackolite partitions bring this fresh air from the plenum chamber in the basement, where each room has its own indirect radiator, the steam supply for which is under the automatic control of a thermostat. Other flues discharge the vitiated air into the attic where it is removed by mechanical means.

The precaution is taken to supply rooms with air at something above normal pressure, so as to constantly exclude the unwashed air that might otherwise find its way in through the corridors and around the windows. In the large trading room the warmed air supply is first led to the space above the coffered ceiling and distributed by passing through 17 registers so deftly contrived as to appear a part of the ceiling decoration.

The air of the room is exhausted through 24 registers placed around the walls just above the floor level, and is taken thence by flues to the space between ceiling and roof, from which space it is hustled out by a fan and electric motor through a specially constructed, fire-proof fan house. The heating and handling of the air supply for this great room is separated in the basement from that of the offices. Air may be supplied to this room, which is 76 x 128 feet and 35 feet high, and contains above 340,000 cubic feet, in controllable quantities, equal to from 4 to 8 times its cubic contents per hour. About the same variable air supply, viz. from 4 to 8 times the capacity of the room, is to be had by each office room of the building.

To move all this vast air supply as needed, requires as many as 8 electric motors aggregating more than 100 h. p. and seven steel plate blowers and two fans of the propeller type, situated at points best adapted to the work they have to do.

So nicely calculated is the power plant to the necessities of the case and so well adjusted are all the parts, that the contractors make the broad claim of being able to heat and ventilate all parts of the building as desired independent of outside weather conditions.

Probably no other part of this complex mechanical installation excites so much curiosity as the part devoted to cleansing the incoming atmosphere. This supply is taken from the court at the rear of the building, as this location was deemed less apt than any other to furnish air laden with street dust and other impurities. Entering through an opening 120 sq. ft. in area, at which moveable louvre slats control the volume, the incoming air is drawn through the tempering coils of steam pipe and the temperature raised above the freezing point. The steam supply to these coils, however, is under automatic control, as it is desirable in cold

ADVERTISERS' SUPPLEMENT TO

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DEVOTED TO ARCHITECTURE AND ALLIED ARTS

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St. Paul, Commercial Building.

THE JOHNSON WINDOW SHADE ADJUSTER.



The Johnson Window Shade Adjuster, of which we present an illustration herewith, has been adopted very largely by architects, and is found to give universal satisfaction. Architects are especially interested, as it is made by any factory and costs no more than any other stop. The sliding shade roller brackets work on a special detail of window stop. It is adopted for use in school, office buildings, hospitals and residences. Its simplicity and perfect working are its great commendations. By its use you can have an adjustable shade without the use of rods, wires, chains or any cumbersome fixtures in your windows. It is easily put up, and does not get out of order. It is manufactured by R. R. Johnson, No. 167 Dearborn street, Chicago, Ill., and has received the endorsement of a large number of prominent architects. A booklet and sample of stop with sliding bracket will be sent on application. It was adopted in the Wells office building, Milwaukee, Wis. The Chicago and Rock Island and Lake Shore railroad depot and office building in Chicago; St. Anne's Hospital, Chicago; The Engineering Building of the Iowa State College at Ames, Iowa, and the Carnegie-Stout Free Library at Dubuque, Iowa, as well as many other large buildings designed by the leading architects of the country.

In another column will be found an advertisement of the above firm, which will interest all.

A STRONG CONCERN.

Another new heating concern has recently opened up a place in Minneapolis under the name of the Craigo-Baker Co., for the purpose of doing a general steam, hot water heating and ventilation business. The company is composed of W. Craigo, G. Craigo and C. J. Baker, and their location is at 212 Fourth street south.

Mr. Baker, one of the members of this new company, is an old resident of Minneapolis, while his associates are from the state of Wisconsin.

That the firm is a competent one in every respect so far as heating and ventilating business is concerned, may readily be seen by reading the following indorsements:

April 21st, 1898.

The Pond & Hasey Company.,
Minneapolis, Minn.

TO WHOM IT MAY CONCERN:

This is to certify that Mr. Charles Baker has worked for our concern more or less for the past seven years; he was with us constantly about three years; he has had charge of putting in some of the largest jobs which we have done, notably the Central Power Plant, and two of the largest buildings at Fergus Falls Insane Asylum. This job comprises the setting of Heine boilers, engines, pumps, reduction valves, grease traps and all appliances used in connection for a thoroughly modern, first-class power and heating job.

We wish to say that Mr. Baker has been one of the most reliable men we ever had in our employ, thoroughly capable, honest, strictly sober, and whose mind is on his business, whatever it may be. We heartily recommend him to any position within the scope of his trade.

POND & HASEY CO.,
C. E. Hasey.

Twin City Rapid Transit Company,
Minneapolis, Minn.

April 22d, 1898.

TO WHOM IT MAY CONCERN:

This is to certify that Mr. C. J. Baker has been in my employ most of the time during the past four years as steam fitter and assistant engineer, and for the last nine months as night engineer. I have found him to be strictly sober, industrious and a capable man in the management of steam plants, and will recommend him for any position he may desire.

Yours very truly,

WM. KEWLY, Chief Engineer.

Archambo Heating & Plumbing Co.,

Minneapolis, Minn.

July 16, 1902.

TO WHOM IT MAY CONCERN:

This is to certify that the bearer, Mr. C. J. Baker, has been in our employ for several years, and the writer has known him continually since 1884. We have always found him honest and trustworthy, and thoroughly competent as a steamfitter and engineer.

Yours very respectfully,

THE ARCHAMBO HEATING & PLUMBING CO.,

H. J. Archambo, Prest., Gen. Mgr.

The above testimonials will speak for themselves, requiring no further mention by us, except to say that this company asks the privilege and opportunity for figuring upon all work in the above line from the readers of the Western Architect.

THE LOVELL WINDOW SASH APPARATUS.

The G. Drouve Company of Bridgeport, Conn., have placed on the market a new device for operating sashes and shutters called the Lovell apparatus, which is meeting with a truly wonderful success and architects everywhere have accepted it as the best device yet found for operating long lines of sash from one station and are specifying it very freely in their work. With this apparatus a line of sash 500 feet long can be operated from one station if desired. Owners of mills and factories have long been looking for a system which would give perfect ventilation and permit of being operated quickly and easily and the "Lovell" possesses more of the essential features of a perfect opening device than any thing yet invented. It is strong, durable, easily erected and has a good appearance.

The accompanying illustrations and explanation give a good idea of the apparatus and should be of interest to our readers and all architects generally.

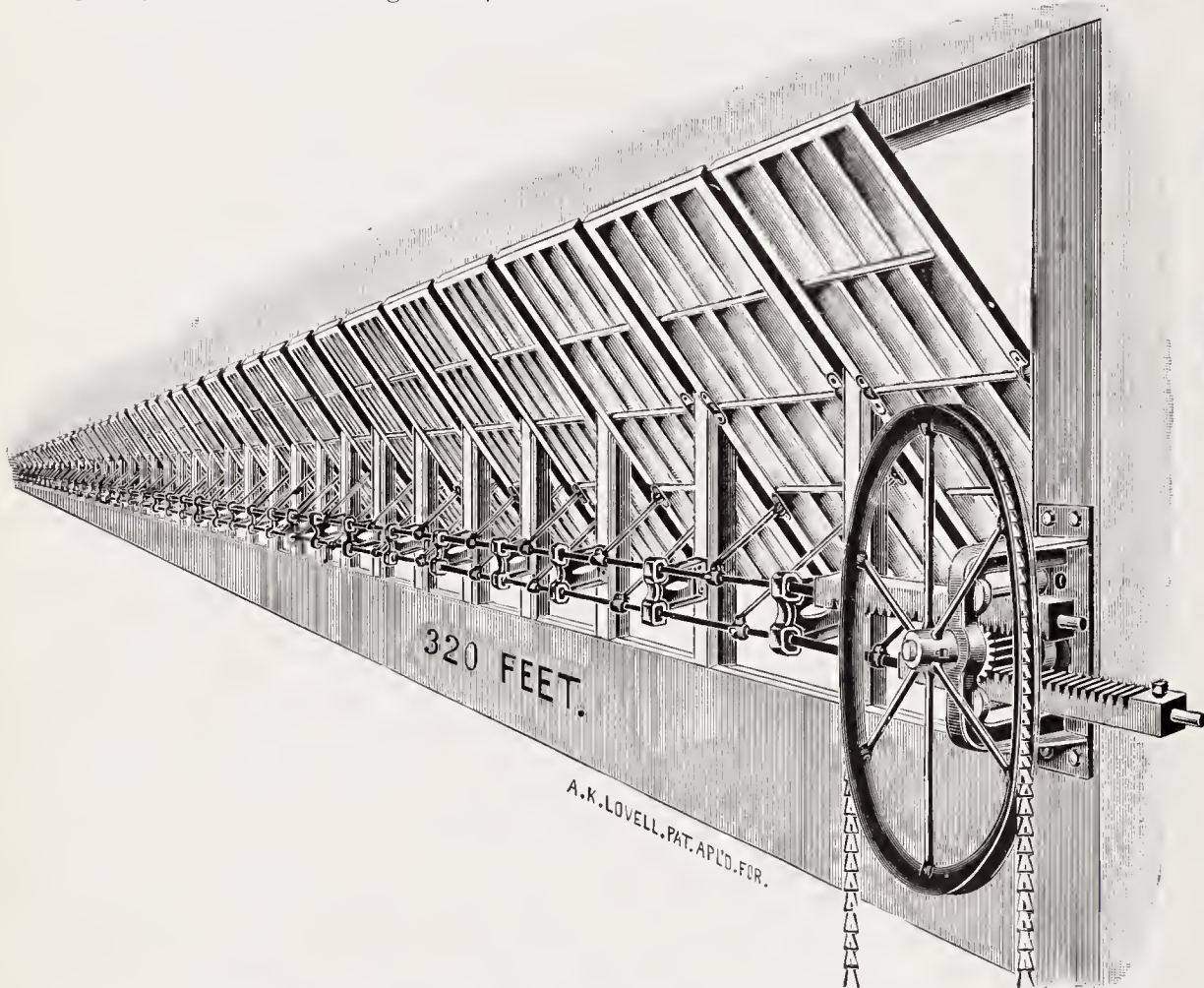


Fig. 1.—Represents a perspective view of the device operating a line of windows, said windows partially open.

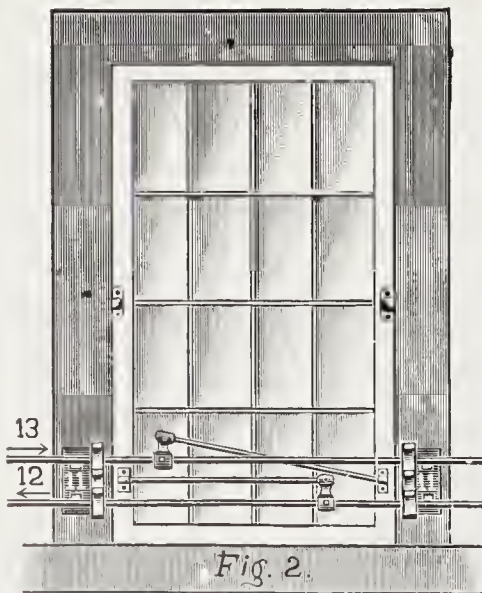


Fig. 2.—Is a front elevation of one of the windows closed, and a broken view of the operating rods adapted to move in the direction shown by the arrows.

Fig. 3 shows a broken view of link-arm 1 whose forward end is pivotally supported to the U shaped clip which clip is swiveled to the sash plate 3. The other end of the link arm is swiveled on the headed pin 4, which pivotally connects said arm link to the U shaped clip 5. 6 is another U shaped clip swiveled on the collar 7 by the headed pin 8. These two clips are also pivotally connected by the pin 9. 10 is a set screw for securing the collar to the operating rod 12 and 13 shown in fig. 2.

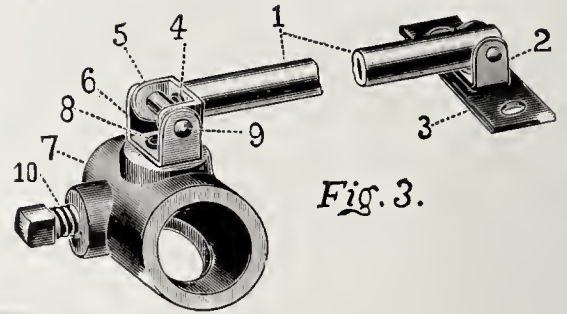


Fig. 3.

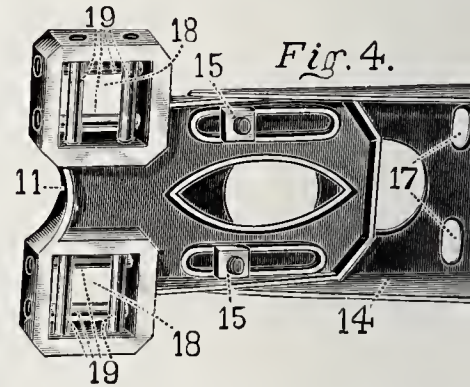


Fig. 4.—Represents one of the adjustable hangers 11 for supporting the operating rods 12 and 13 shown on fig. 2. This bracket is adjustably connected to the base 14 by the bolts 15. This base is adapted to be secured to any convenient place, either by means of the holes 16 in the foot, or the holes 17 in the face. The operating rods 12 and 13, shown on fig. 2, pass through the openings 18 and are supported in the brackets by means of the anti-friction rollers 19.

The Western Architect,
Insurance Exchange Bldg., Minneapolis, Minn.

Gentlemen:—

We would be pleased to have you announce in your trade publication that the F. P. Smith Wire & Iron Works, 100-106 Lake street, Chicago, manufacturers of ornamental and structural iron, art brass and wire work, have been appointed sole agents in Chicago, and several other states adjacent thereto for the Columbus Steel Rolling Shutter Co., manufacturers of Rolling Steel Doors for freight houses, car barns, warehouse etc.

Owing to the large number of inquiries coming in from all over the United States and foreign countries, from engineers, architects and builders, who have been impressed by the unique improvements in the "Columbus" door, such agencies are being established in all the large centers as far as desirable representative firms in architectural or engineering construction work can be found.

Thanking you in advance for this mention, we beg to remain. Very truly yours,

THE COLUMBUS STEEL ROLLING SHUTTER,
Per H. F. Miller, Manager.

Dict. H. F. M.

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Supplement to
The Western Architect

NEW CHAMBER OF COMMERCE, MINNEAPOLIS.

Kees & Colburn, Architects, Minneapolis.

C. F. HAQLIN,
Contractor.
May, 1903



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NEW CHAMBER OF COMMERCE DURING CONSTRUCTION

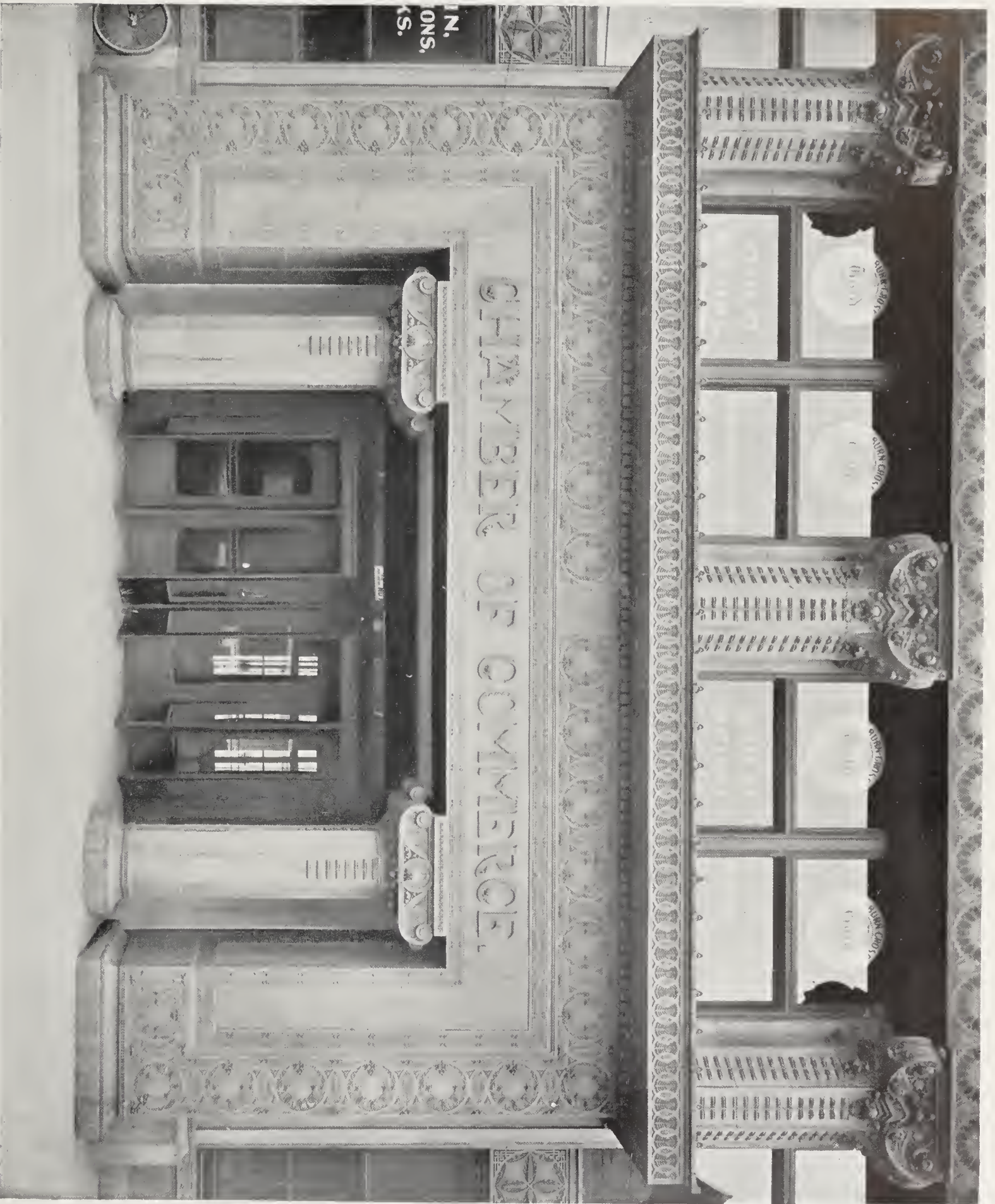
Kees & Colburn, Architects, Minneapolis

C. F. HAGLIN,
Contractor.

May, 1905

Supplement to
The Western Architect.

LILLY
OF THE
UNIVERSITY OF ALABAMA



IN,
ONS,
S.

Supplement to
The Western Architect

MAIN ENTRANCE, NEW CHAMBER OF COMMERCE

Kees & Colburn, Architects, Minneapolis

C. F. HAGLIN,
Contractor,
May, 1903

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Supplement to
The Western Architect

ELEVATOR FRONT, MAIN ENTRANCE NEW CHAMBER OF COMMERCE
Kees & Colburn, Architects, Minneapolis

The Five
Otis Elevators.
Elevator Enclosures Made by
The Winslow Bros. Co.

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CORRIDOR (Second Floor) NEW CHAMBER OF COMMERCE, MINNEAPOLIS
Kees & Colburn, Architects, Minneapolis

Supplement to
The Western Architect

Marble Wainscoting by
N. W. Martel Co

MAY, 1923

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COUNTER OF WASHBURN-CROSBY CO.'S OFFICE
Kees & Colburn, Architects, Minneapolis

Supplement to
The Western Architect.

Iron Work by
Flour City Ornamental Iron Works,
Marble Work by
N. W. Mantel Co.
May, 1903

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Supplement to
The Western Architect.

TRADING ROOM IN NEW CHAMBER OF COMMERCE
Kees & Colburn, Architects, Minneapolis

MAY, 1905

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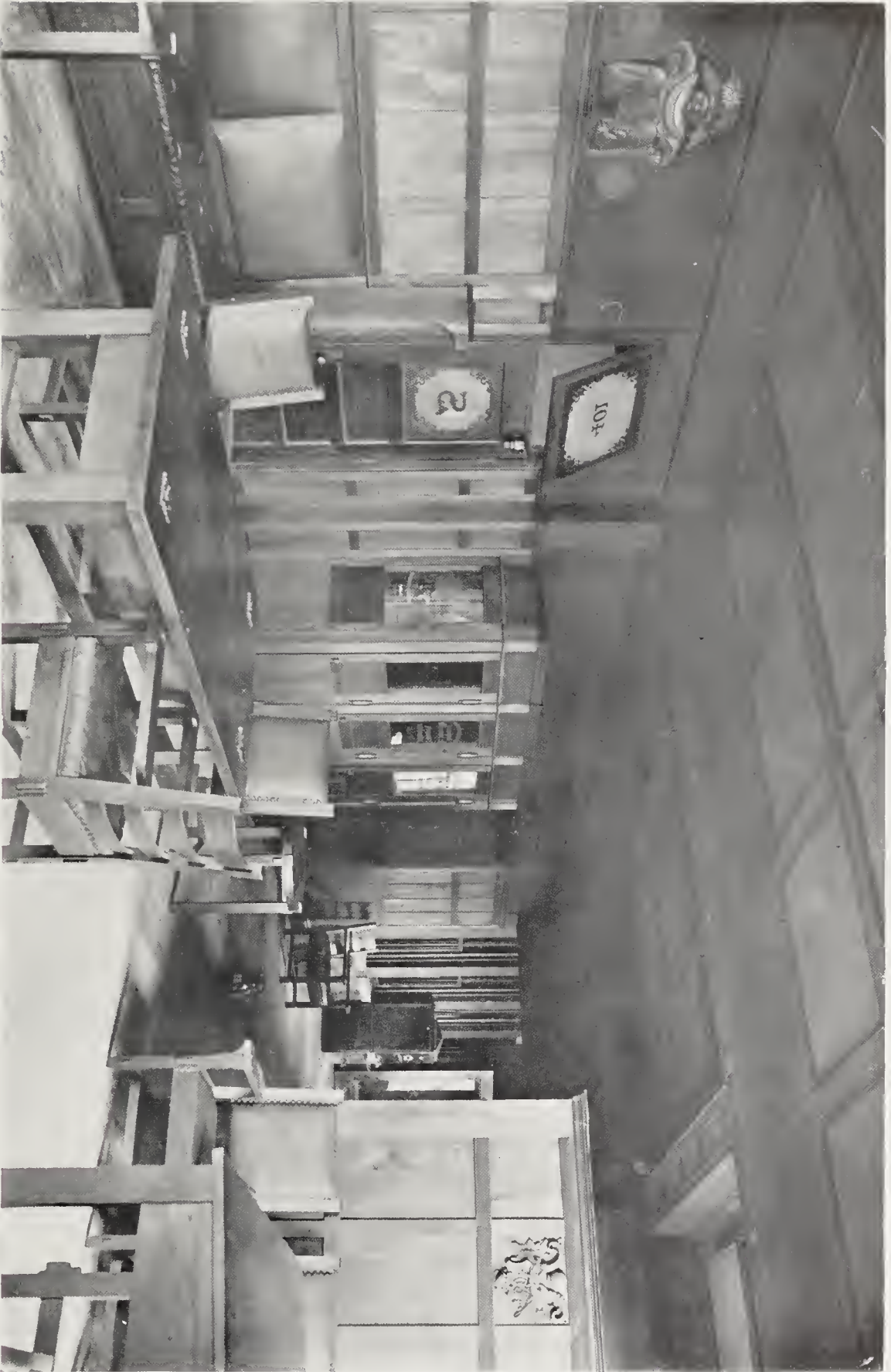


Supplement to
The Western Architect.

DETAIL OF BOARD ROOM, in New Chamber of Commerce
Kees & Colburn, Architects, Minneapolis

Decorations by
John S. Bradstreet & Co.
May, 1903

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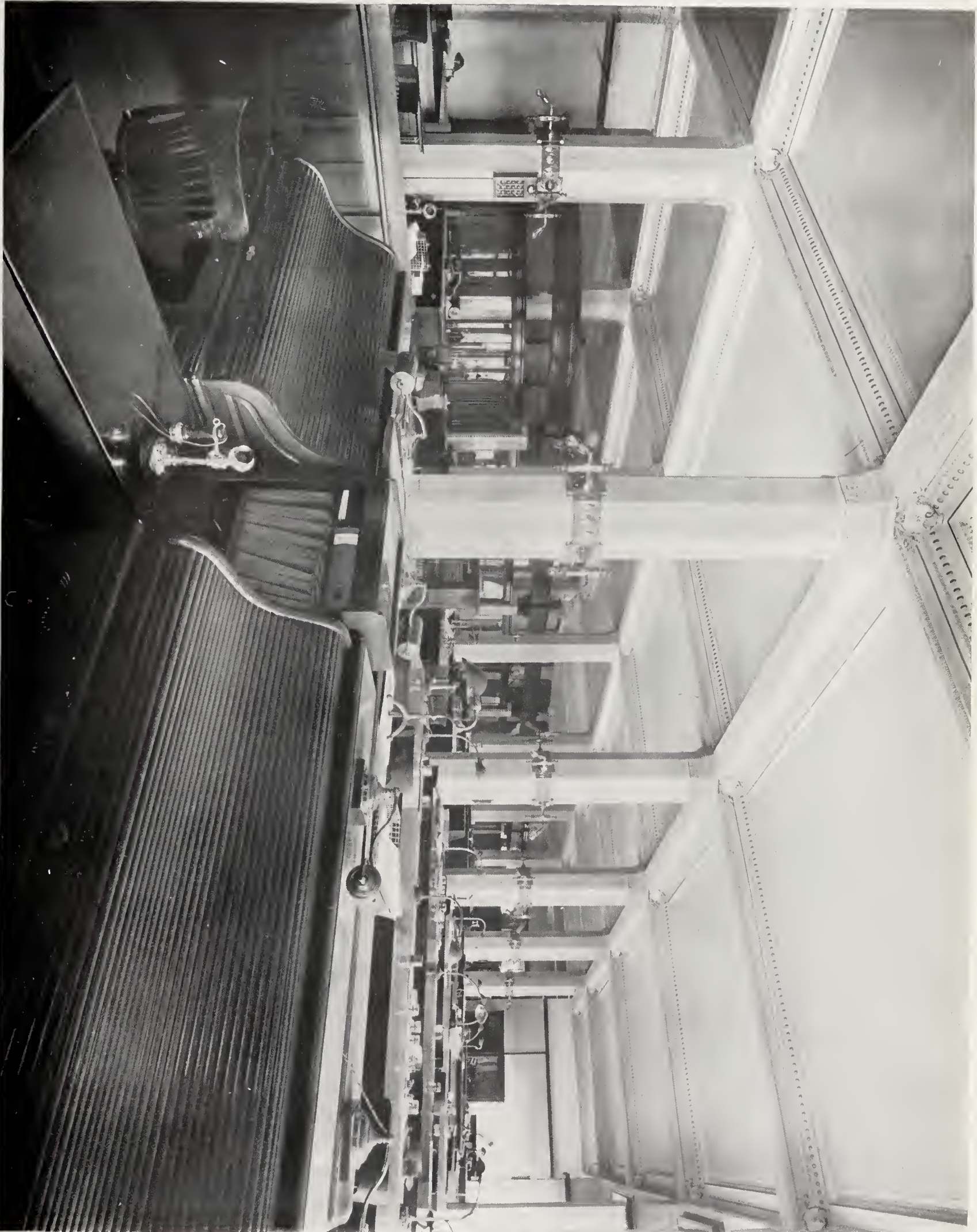


Supplement to
The Western Architect

SMOKING ROOM, in New Chamber of Commerce
Kees & Colburn, Architects, Minneapolis

Furnished by
J. S. Bradstreet & Co.
May, 1903

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Supplement to
The Western Architect.

INTERIOR OF WASHBURN-CROSBY CO.'S OFFICE IN NEW CHAMBER OF COMMERCE
Kees & Colburn, Architects, Minneapolis

Office Fixtures
by L. Paulle.
May, 1903

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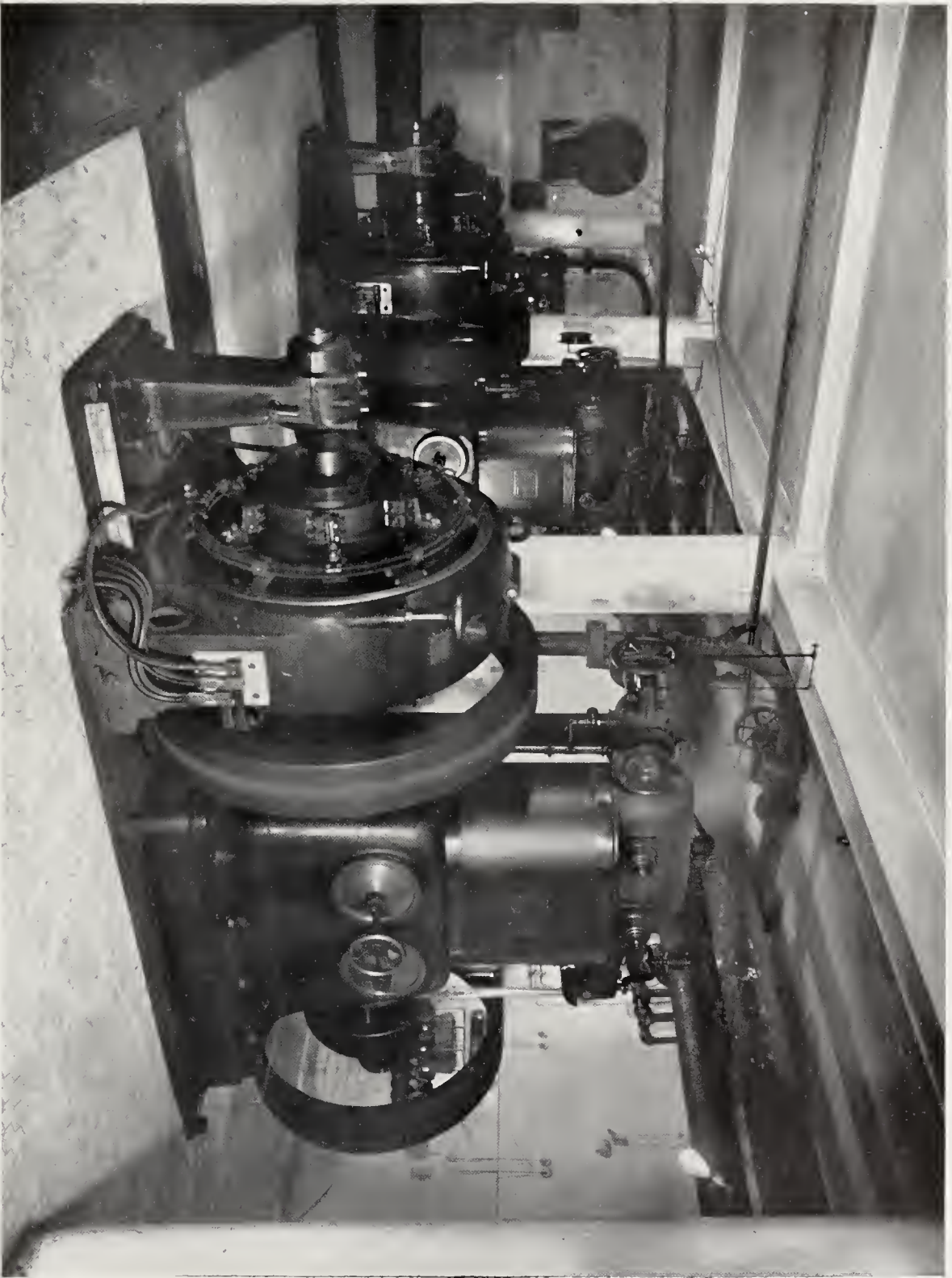
PRIVATE OFFICE OF WATSON & CO.



INTERIOR OF WATSON & CO'S OFFICE in New Chamber of Commerce
Kees & Colburn, Architects, Minneapolis

Furnishings by
John S. Bradstreet & Co.

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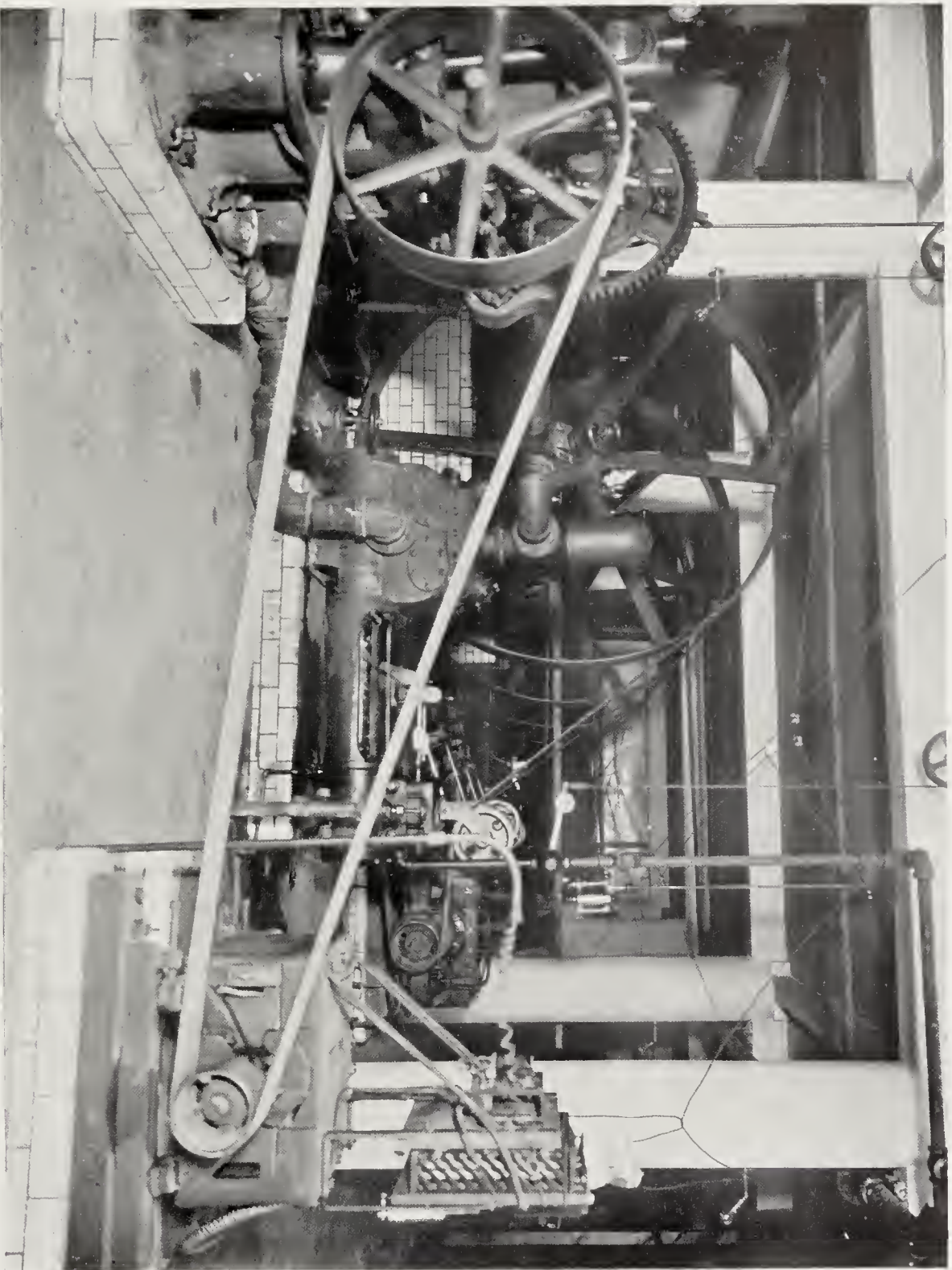


Two of the Three 125 H. P. Westinghouse Dynamos, and Westinghouse
Engines for Lighting and Power Purposes.

Supplement to
The Western Architect

MAY, 1905

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Supplement to
The Western Architect.

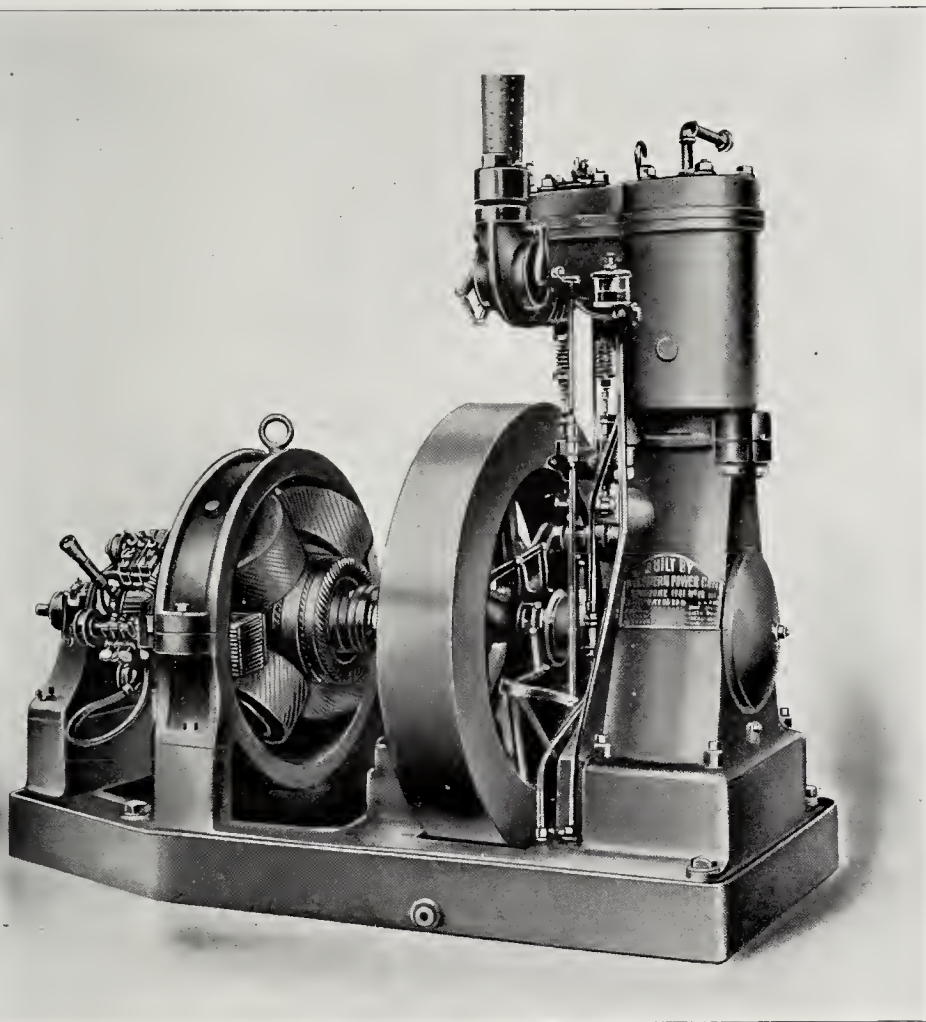
View Showing Small Electric and Small Steam Pump; Also Portion of
The High Pressure Pumping Plant as Installed by the Otis Elevator Co.
For the Five Hydraulic Passenger Elevators.

MAY, 1903

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THE SECOR ENGINE.

To obtain power directly from fuel by means of a practical process embodied in a self contained automatic machine, requiring neither boiler nor fireman, is a problem that has baffled the ablest engineers. The General Power Company offers the Secor Engine as its practical solution. Criticism from the steam engine view point shows, unquestionably, that this engine combines the industrial advantages of the steam engine with the thermodynamic, and labor saving advantages of the gas engine. Its marketability is further enhanced by its capacity for utilizing low cost fuels, especially the universally obtainable kerosene oil. It is the only engine which combines industrial adaptability with fuel availability and low operating cost. In mechanical design and construction it is fully equal to modern steam engine practice. It can be easily, promptly and positively started. It ranks with the steam engine in mechanism, methods and performance. The superiority of this engine is well in-



GENERAL VIEW OF THE SECOR ENGINE.

dedicated by its governing efficiency. When used for electric lighting it has no necessity for multiple cylinders, nor a fly-wheel on its dynamo, nor an over-head jack-shaft fly-wheel, nor a governor controlled or flexible coupling between the engine and dynamo.

The engine is self-contained; that is to say, it does not, like the steam engine, require a boiler and a considerable amount of storage room for fuel; nor does it, as in the case of the gas engine, depend constantly on a supply of natural or manufactured gas of uncertain quality from the street main or from a special gas plant. In the Secor Engine the fuel control is a function of the engine itself, the fuel being taken from a connecting reservoir which constitutes an integral part of the equipment. It has special advantages which accrue from its fuel and fuel method. Its cheaper fuel reduces the expense of operation below that of either steam or gas engines; its availability exceeds that of any other existing power, by reason of the world-wide facilities for obtaining kerosene oil, and it is obvious that the increased safety due to the Secor method of using the fuel is advantageous alike to the user and the underwriter. As the basic

idea of this engine includes and harmoniously co-ordinates all factors essential to high commercial efficiency, it is considered desirable to combine in its design the important elements of simplicity, reliability, strength, durability, compactness, interchangeability of parts, moderate weight and ready accessibility to all wearing parts. The simplicity which subordinates quality to cheapness is not considered desirable, for among the factors that contribute to its superiority are the mechanical excellence of its design and construction.

Every mechanical detail is the result of prolonged study and exhaustive working tests, the mechanism as developed being equal to the best steam engine practice. It can be started as easily and certainly as an electric motor by means which automatically prevent an excessive supply of fuel. Regulation by variable pressure—every impulse stroke being effective—supersedes the inefficient "hit or miss" method. The fuel supplying mechanism constantly maintains correct relations between the fuel and air under changing load; the quantity of combustible mixture being micrometrically proportioned to produce the exact mechanical energy required to keep up the rated engine speed. This insures complete combustion, efficient regulation and avoids fuel waste.

The special design, constructive and fuel feed methods used in Secor Engines are fully covered by design and construction patents.

Although electricians and manufacturers of internal combustion engines have appreciated the great utility of producing a uniform electric current by means of a self-contained plant, consisting of a single cylinder gas engine solidly connected to a dynamo, its accomplishment was considered impracticable. The single cylinder plant reduces to a minimum the number of parts and the opportunities for trouble. The Secor Electric Generating Plant is actually directly connected; that is to say, solid coupled, using none of the appurtenances heretofore required by the gas engine for overcoming irregular voltage.

Wireless telegraphic apparatus operated by oil engines manufactured by The General Power Company, was in continuous use during the army and navy maneuvers of 1902. Tests made by the Signal Service of the United States War Department demonstrated that the regulation was perfect, although the entire electric load was being constantly thrown on and off.

The remarkable automatic regulation of the Secor Oil Electric plant is shown by its ability to maintain absolutely steady voltage under constant load, as well as by its ability to respond to violent load changes between the extreme limits of one per cent and one hundred per cent. The storage battery is, therefore, an unnecessary adjunct to obtain constant voltage. These units have also the ability to operate as well in multiple as singly, even when there are several units of different sizes; accumulators are, therefore, of no advantage in installations where the usual electrical load differs greatly during definite periods of the day, although essential with internal combustion engines heretofore. Storage batteries may be used to advantage where wide variations above the maximum capacity of the plant occur for short or indefinite periods, or where an electric output far below the normal capacity of the smallest generating unit in an installation is continued for several hours, or where service is required during hours when an attendant is not present. When batteries are used the Secor Oil Electric Plants have distinct advantages over all other means of charging. They are arranged so that the current may be taken from the dynamo or from the battery, or from both together, up to their combined rated capacity, with equally automatic regulation; and the battery may be charged from the same dynamo without employing boosters or other expensive adjuncts.

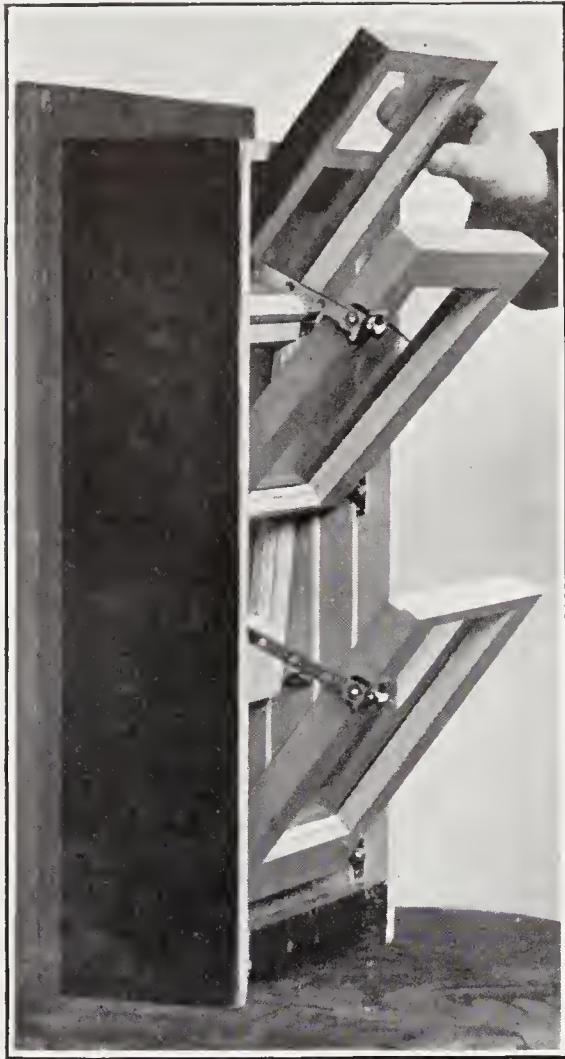
This engine solves the problem of lighting country homes. Its simplicity and reliability insure good light all the time. It can be cared for by the gardener or stable man. Its use of kerosene oil for fuel makes it safer than any other means of procuring artificial light.

When not used for generating electricity the engine can be employed to pump water, saw wood, or perform any other power work.

The Secor Engine is manufactured by The General Power Company, 81-83 Fulton St., New York City.

AN ORIGINAL AND VALUABLE DEVICE.

The illustrations we give herewith are made from photographs of a rather crude model of a window and its frame, to illustrate what seems to us a very valuable device.



CUT I.

In cut I the upper and lower sash of a window are shown open and held in position by a very simple device. The inner or storm sash is here being taken out by a person who stands in the room. The storm sash is divided into two parts, and is hinged together in the middle. This permits the sash to be put into position or taken out with great ease, and from the inside of the room.

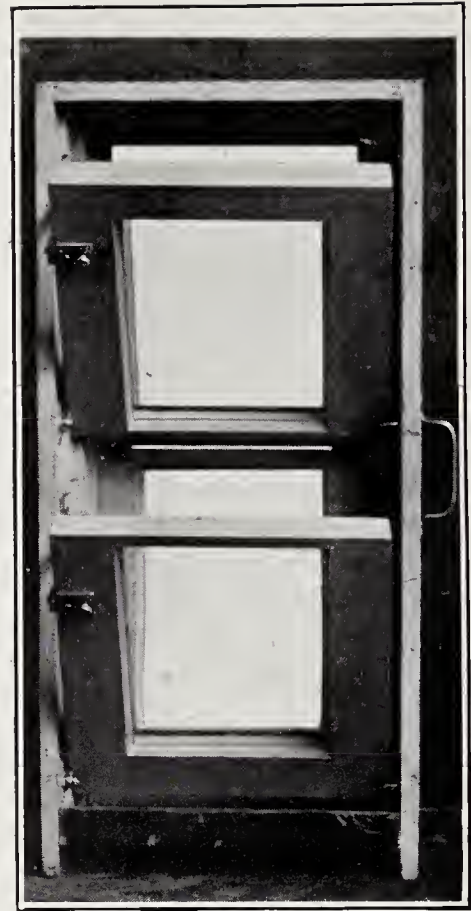
Cut II also shows the inner sash open, and it should also show the upper half of the storm sash as attached to the upper half of the inside sash with sliding rods, and therefore opens with it. Thus it will be seen that the device accomplishes at nominal expense a three-fold purpose.

1. It permits the upper or lower half of the inside sash to be opened in such a manner as to prevent any draft upon the occupants of the room, however close they set to the window.

2. It permits the putting up of storm sash from the inside of the room.

3. It permits the opening of the upper half of the storm sash with the same part of the inside sash, and deflects the cold air thus admitted toward the ceiling.

Now, we undertake to say that no school-house, no hospital, no office building, no hotel, to say nothing of residences, ought to be built without the means of furnishing pure air, without a draft, in both summer and winter; and we know of no device that accomplishes this purpose so well as this simple and inexpensive device.



CUT II.

It will be apparent to our readers that the saving in fuel by the use of storm sash would pay the cost of such sash in a single month in any of our large office buildings in this climate. But this is not all of the saving. By the use of a well fitted sash, especially on the exposure and cold side of a building, the capacity of the heating plant may safely be reduced 25 per cent, and this means a large initial saving; but storm sash cannot be used unless they can be put on from the inside, and can be readily opened for ventilation and to cool off the room on warm days. No other device known to us will permit this; and so we may safely say this is a very valuable patent. We are confident our readers will agree with us in all we say of it.

This patent is owned by Otto Lofgren, 30 and 32 South Fifth street, Minneapolis, and is for sale, as Mr. Lofgren is engaged in another line of business.

LAKE SUPERIOR RED SANDSTONE.

Lake Superior red sandstone has proven to be one of the most satisfactory and serviceable materials for all kinds of construction and styles of architecture, and the demand for it is steadily increasing. The Traverse Bay Red Stone Company, Calumet, Michigan, in 1901, secured control of some very valuable red Sandstone quarries, which bid fair to excel any of the Lake Superior quarries heretofore operated, both as to quality and quantity of stone. During the season of 1902, which was their first in the outside market, 75,000 feet of this stone was shipped throughout the Northwest, and Southern Michigan, and it met with the utmost approval from architects, contractors and owners who used it. The stone is guaranteed against damage from the weather under all climatic conditions, whether seasoned or unseasoned. During the past winter several thousand feet were sawed at the quarry mill, shipped to Detroit, and put into the new Plaza building, all in the coldest weather, without the least damage from freezing.

The quarries are located nine miles from Calumet, Mich., near the shore of Lake Superior. A thoroughly modern mill has been erected, and sawed stone can be furnished in any quantity. The stone is of a very lively red color, being a trifle lighter than the Portage Entry stone, which Mgr. Wyckoff, of the above company quarried and handled for fifteen years prior to 1901. Samples and prices can be obtained by addressing the Traverse Bay Red Stone Co., Calumet, Mich., or W. C. Wyckoff, Western representative, Suite 304, Kasota Blk., Minneapolis, Minn.

weather to carry the air through the washing chamber at about 40 degrees Fahr. In this way the washed air does not carry such an excess of vapor as would be the case if it were heated to its final temperature before washing. After leaving these tempering coils the air is passed through the washing and purifying apparatus where it is thoroughly sprayed and cleansed in a chamber provided for that purpose.

Minneapolis is so situated with reference to the river from which it derives so much power, that she is by no means a smoky town, as western towns go, yet the amount of dirt and soot that is washed from the air supply to this building would surprise a layman. The water for spraying the incoming air after being used for a time, becomes so laden with soot as to require renewal and the tank must every now and then be cleaned. A centrifugal pump run by an electric motor is the type selected for accomplishing this spraying.

Not the least of the advantages of this air washing system is the cooling which it creates in summer. The claim is made that the reduction of temperature affected by this device varies from 10 to 30 degrees Fahr. When one stops to think of it, it will be seen that the hottest and driest atmosphere will, when passed through this spraying device, evaporate most; and consequently the largest amount of heat, relatively, will be absorbed and pass off in latent form. Thus this air washing contrivance becomes in summer a sort of automatic temperature controller as well as purifier.

But there is still another contrivance for completing the purifying of the air supply and for removing any excess of moisture that may be carried from the spraying chamber. This is known as the "eliminator," and after passing through it, the air is passed into a fresh air room containing massed coils of steam pipes to further raise the temperature as desired. An ingenious arrangement of dampers here, controlled by thermostats, shifts the currents through or past the coils so as to add the desired quantity of heat. But before passing from this room to the offices, the supply for each is taken through a galvanized iron inclosure containing an indirect reheating steam coil, the steam supply for which is automatically controlled from the office to be heated. This heat supply is controlled independent from the air supply, and the temperature of the rooms is maintained uniformly at approximately 70 degrees Fahr.

The engineers installing this very complex system believe that they have reached the limit of uniformity in results and of automatic control, while they have not lost sight of the flexibility needed to meet unusual requirements. Thus at times when the building is not occupied, provision is made for circulating the air within the building itself through the heating coils, instead of going constantly out of doors for a fresh supply. They have calculated all this so as to secure satisfactory service when the outer air is as low as minus 30 degrees Fahr.

In addition to what has been sketched above, the same contractors are now installing forced draught apparatus for the boilers and are arranging for the cooling and ventilating of the boiler room.

The exhaust steam from all steam engines and pumps is utilized for heating, and the condensed water is returned to the boilers without grease or other undesirable accumulations.

The "Paul Vacuum System" is used to circulate steam through all parts of the heating system at less than atmospheric pressure.

The blower and fan equipment consists of seven steel plate blowers and exhausters and two disc fans, one 108 inches with vertical shaft and one 36 inches.

The electrical motors that are installed consist of one 2 h. p.; one 3 h. p.; one 5 h. p.; one 7 h. p.; one 10 h. p.; one 20 h. p.; one 30 h. p.; and one 40 h. p. Two of the large steel plate blower wheels are on one shaft and are run by one motor. The forced draft blower will be run by a steam engine.

The blowers, fans and massed steam heating and temperature coils, were made by the Andrews & Johnson Co., of Chicago, Ill. The electric motors were furnished by the Electrical Machinery Co., of Minneapolis.

The cast-iron direct and indirect radiators were furnished by the American Radiator Co., who have a branch office in Minneapolis.

The steam separators, oil and grease extractors were furnished by the Detroit Separator Co., of Detroit, Mich.

The steam traps, pressure regulating valves, back pressure valves and automatic water feeders were supplied by the Western Kieley Steam Specialty Co., of Chicago.

The tanks for the different part of the plants as well as the boilers were furnished by the Wm. Bros Boiler & Mfg. Co., of Minneapolis. The Boiler Feed Pumps and pumps for handling the hot water of condensation are known as the Marsh Steam Pumps, which are made by the American Steam Pump Co., of Battle Creek, Mich., while the house pump is a Deane, made at Holyoke, Mass.

The Automatic Heating Co., whose home office is in the Maritime Building, Battery Park, New York City, and with their Northwestern office located in the Endicott Building, St. Paul, Minn., secured the contract for the installation of the "Paul Vacuum System."

All the pipe covering is what is known as Carey's 85 per cent. pure magnesia pipe covering, W. S. Nott Company, western selling agents, while the boiler coverings are of Keasby & Mattison's standard products.

The Johnson Service Co., of Milwaukee, Wis., furnished and installed the Automatic Heat Regulation in the New Chamber of Commerce.

Prof. J. H. Kinealy, formerly of the Washington University, of St. Louis, Mo., now in Boston, Mass., was the consulting engineer called in by the Chamber's Board of Directors, to report on the system of heating and ventilation.

The handsome plumbing supplies, closets and urinals were of the manufacture of the J. L. Mott Iron Works, of New York and Chicago, Peck Bros., of New Haven, Conn., and the Standard Mfg. Co., of Pittsburgh, Pa.

H. Kelly & Co., of Minneapolis, were the contractors for the following branches of work in this handsome structure: Heating and Ventilating, Plumbing, Gas and Electric Fixtures, High and Low Pressure Steam work and Pipe Coverings.

All provisions have been made and the connections will soon be in place so that the Old Chamber of Commerce building, which is separated by an alley, will be heated from the plant in the New Chamber.

In relation to all of this intricate and scientific work, we must not forget to mention the fact that it was installed under the supervision of the architects, Kees & Colburn, of Minneapolis.

The Chamber of Commerce will cost complete about \$600,000. Notwithstanding the excellence of the material and equipment which have gone into it, this figure makes the cubic foot cost not more than some buildings in Chicago and other eastern cities which have less to show in the way of modern equipment.

An architect tells the following about a contractor for painting and hardwood finishing, who was born under a lucky star.

He was always taking contracts for less than the work was worth, but as certainly some turn of the wheel would let him out even or better. On one occasion he had undertaken at a very low price a considerable job of hardwood finishing under a specification which required the wood to be filled, the surfaces cleaned, then three coats of varnish, each to be rubbed down to a true surface before applying the following, and the final coat to be rubbed to a fine eggshell finish.

The contractor had got as far as to apply the second coat when along came the owner in a happy frame of mind, and seeing the work, congratulated the contractor upon the appearance of the finish. Thereupon the latter explained that the work was not finished and how the gloss would have to be rubbed off, another coat applied and this in turn rubbed and left without any such gloss as was now visible. "Young man," said the owner, "do you know who I am?" "I understand that you are the owner." "Well, then, do you know who is paying for this work?" "Why, you are, to be sure." "Well, then, I will give you to understand that this suits me exactly, just as it is, and you need not spoil it with any such foolishness as you describe. You just leave it precisely as it is."

And all the explanations and arguments of the architect availed nothing with this owner. He insisting that the work suited him and consequently he would take no further chances by having it changed in the least.

MENTION OF THOSE WHO DID THE WORK IN THE NEW CHAMBER OF COMMERCE.

Our report on the New Chamber of Commerce would not be complete, without going into further detail of the assistance of those who in any manner contributed to the result of the erecting, as well as the furnishing of such an important building, which we do in the following manner:

H. KELLY & CO.

Representative in its line not only in Minneapolis, but in the Northwest as well, is the plumbing, steam fitting, steam and hot water heating concern of H. Kelly & Co., located at the corner of 3rd St. and 3rd Ave. So. Expert skill and excellent equipment are here found in a superlative degree, and had this not been the case, there would have been little opportunity for this establishment to have secured such an enormous and valuable contract for the heating and ventilating, and high pressure steam work, plumbing, gas and electric fixtures of the New Chamber of Commerce of Minneapolis.

They make a specialty of high pressure steam work plumbing and the heating and ventilation of large buildings, such as school houses, churches, office buildings, court houses, etc., constantly employing from fifty to sixty high-class steam and gas fitters, plumbers, etc., besides regularly employing the services of an expert scientific engineer in the person of Wm. W. Ensign, who has charge of their engineering department. Mr. Ensign has been actively engaged in the business for thirty years, and has prepared plans and specifications, and has installed plants in prominent public and private buildings in almost every state in the Union.

This concern's reputation for responsibility is second to none in their line anywhere in the country.

The showrooms, which are the finest west of Chicago, are located as above mentioned, where they keep in stock a beautiful line of gas and electric fixtures, steam heating supplies and plumbing goods.

Here they take pleasure in showing some handsome samples of fine enameled and porcelain bath tubs, as well as a fine display of toilets, including the wash downs and syphons, with both high and low tanks, besides a particularly fine exhibit of lavatories, fittings and marble slabs.

As a complete and exhaustive description of their work in Minneapolis' New Chamber of Commerce may be found elsewhere in this issue, there is no necessity for going into detail here regarding the large contract for the heating and ventilating of the building, which this prominent house were so fortunate as to secure.

THE MARBLE WORK.

The Northwestern Mantel Co. is the oldest and most prominent concern in their line in the Northwest. Nearly all of the larger class of work is supplied with the marble and mantels from this well-known house. Their work in the New Chamber of Commerce, which is a

special feature of our May edition, included all of the interior marble work, such as the wainscoting, steps, toilet-rooms, magnificent barber shop, etc.

The company makes a very handsome display of their work in the spacious room now occupied by them at 419 and 421 Sixth Street South. While marble and tile work are their specialties, they do all kinds of mantel work, also bank and office fixtures, and they show many exquisite and dainty pieces in their show room that anyone interested in building will be glad to see.

The company also does an extensive monument business, and there is perhaps not a cemetery in the Northwest where one may not see some handsome specimens of their design and manufacture in marble and in granite and other native stones.

The company has done the largest part of the marble work in all the handsome office structures and residences in Minneapolis. We take great pleasure in mentioning a few of the leading buildings aside from the magnificent Chamber of Commerce in which this reliable firm has done the marble work as follows: The Tribune Bldg., the Dayton Block, the Hennepin County Court House, and numerous other larger structures. The uniform courtesy which they extend to anyone interested makes it not only pleasant to visit their office and show rooms, but also pleasant and agreeable to conduct business with them.

W. I. GRAY & COMPANY,

The development and growth of the great Northwest has resulted in there being established in the Twin Cities, specialists in all lines of work, and as the line which engages the attention of W. I. Gray & Co. demands science and skill beyond that called for in the usual channels of business, it is logical that they should establish themselves in the Metropolis of this great section which affords them such an excellent field of operation, besides being a very central point of location.

The business of this company comprises the installation of electrical plants in large office and public buildings, as well as for municipal lighting and electrical street railway plants.

They installed the electrical plant in the new Chamber of Commerce Building, the description of which can be found elsewhere in this issue, and have the contract for the entire mechanical equipment of the new State Capitol building at St. Paul, which contract includes the power house building and tunnel, boiler and steam power plant, electric generator plant, electric wiring and conduit system, plumbing and heating and ventilating plant.

They are general western selling agents for several prominent concerns in the electrical line.

Their responsibility and financial integrity are unquestionable, and any work undertaken by them may be depended upon to be carried to completion in a thorough, business like and scientific manner.

Their offices are on the eighth floor of the Sykes Block, at 245 Hennepin avenue, Minneapolis, Minn.

THE TERRA COTTA, FIRE-PROOFING AND FLOORING.

Messrs. S. J. Hewson & Co., of No. 10 North Third street, Minneapolis, Minn., secured several large contracts in connection with the new Chamber of Commerce, among which may be mentioned the terra cotta manufactured by the American Terra Cotta Co., of Chicago, which can be seen in an illustration of the main entrance; the marbleitic flooring, from the Marbleitic Floor Co., of Dayton, Ohio; and the Mackolite fire-proofing, from the Mackolite Fire-Proofing Co., of Chicago.

TERRA COTTA.

A good idea as to how the Mackolite Fire-Proof partitions look when set up may be had by examining one of our half tone illustrations, which appears in this issue. In a leading building of this character, the fire-proofing is a very important feature, though usually it is not much in evidence after a building is once completed.

The flooring, however, is always "under foot," and attracts the attention of the visitor at every step. Messrs. Hewson & Co. are the oldest and among the most reliable firms of the Northwest that is connected with the building trades, and they do a very extensive business, as they have furnished various kinds of materials for prominent buildings in all the local cities of the Northwest, all the way to the Pacific coast, and as far south as Texas.

Among other high-class materials which they handle and furnish are the Menomonie hydraulic pressed brick, the St. Louis pressed brick, Alpha Portland cement, the Peerless mortar colors, and many other equally well known building products, aside from those mentioned in the beginning of this article.

It is always a pleasure to commend a house that is so universally respected and known to be so thoroughly reliable as the S. J. Hewson & Co.

THE INTERIOR DECORATION.

One of the most artistic specimens of decorative work west of New York is that of the New Chamber of Commerce by the well-known firm of John S. Bradstreet & Co., at 208 So. Seventh St., Minneapolis.

Mr. Bradstreet, the senior member of the firm, has a national reputation as a man of culture and artistic temperament. He is thoroughly conversant with the best of decorative art throughout the world, and in their finely appointed studios and shops at the above address are to be found the best specimens of Period Furniture, Japanese Ware and Bronzes, and decorative art, collected with great care during the many years of world-travel by Mr. Bradstreet, who is at the present time visiting Japan and Korea to replenish their stock of merchandise.

Much of this firm's output consists of furniture, interior wood-trims, office and bank fixtures specially

designed and manufactured by hand in their own shops. Another special feature of this firm's work is the artistic treatment of certain woods, called Jindi-sugi, (meaning very old) a patent for which has been applied for. Fine specimens of this treatment may be seen in the Smoking Room adjoining the Trading Chamber, and also in the offices of Watson & Co. The entire furnishings and decorations of these rooms have been designed and manufactured by this firm.

A notable feature of the decoration in the Trading Room is found in the seven semi-circular panels containing pictures representing the development of flour milling and the manner of its introduction into various countries from Biblical times up to the time of the first mill at St. Anthony Falls.

Among the many offices decorated and furnished by The Bradstreet Company may be mentioned those of Washburn-Crosby Co.; Van Dusen-Harrington Co.; Peavey & Co.; C. E. Lewis & Co.; Gregory-Jennison Co.; Sheffield-King Co.; Geo. C. Bagley & Co.; Whalon-Case Co., and many others which we have not room to enumerate.

W. S. NOTT COMPANY.

The projectors and builders of the New Chamber of Commerce, and the grain men of Minneapolis, under the able and sound counsel of that eminent firm of architects, Messrs. Kees & Colburn, and after exhaustive tests as to durability, purity and non-porosity decided to entrust the covering of the heating and power plant of the building with W. S. Nott Company, exclusive Northwestern selling agents and contractors for Carey's 85 per cent pure carbonate magnesia pipe and boiler coverings, relying on this long established and well known firm to produce one of the most artistic and workmanlike jobs of pipe covering ever executed in the West. It was the neat appearance of this work together with the superiority of Carey's 85 per cent magnesia coverings that aided materially in influencing the Capitol Commission and their architect, Mr. Cass Gilbert, to decide to use this same covering in the new Capitol building in St. Paul.

The "Covering Department" of W. S. Nott Company comprises, as well as pipe and boiler coverings, the celebrated Carey's magnesia flexible cement roofing, known across the continent, and used extensively by railroads, mills, elevators, public and private buildings everywhere; asbestos products of all sorts; building and insulating papers, tarred felts and general roofer's supplies; K'Sene cold water paint and the new interlocking indestructible rubber tiling for floors. This tiling is flexible, noiseless and furnished in all designs and colors.

It is not generally known that this enterprising firm recently erected at Eighteenth avenue northeast and Central, Minneapolis, a machine shop 150x500 for the manufacture of steam fire engines, fire apparatus, hose

carts, chemical engines and department supplies of all kinds, and have been awarded steamer contracts by New York City, Lima, Ohio; Shreveport, La.; Pasadena, Cal.; St. Paul, Minn., and other cities.

The largest and most complete leather belting factory in the west is kept busy supplying the mills and factories of Minneapolis and the Northwest, while rubber beltings, mill supplies, packing, hose, and hose supplies, rubber boots and shoes, mackintoshes and storm coats, and leather, rubber and asbestos goods in varied and extensive lines are well represented by the firm of W. S. Nott Company, 200-6 First avenue South, Minneapolis, Minn.

THE NORTHWESTERN LIME CO.

While the Chamber of Commerce in one way is distinctively a Minneapolis institution, still there was so much required for such an immense structure of this kind, that it is not surprising that the architects and the contractors had to go outside of Minneapolis for some of the things that entered into its construction.

In one order at least a St. Paul firm was favored, that was when the contract for all the Portland cement used in the building went to the Northwestern Lime Co. But when you come to take into consideration the responsibility and the promptness of shipments made by this concern, it was no special wonder that they were the favored parties.

The Northwestern Lime Co. are dealers in not only lime and cement, but they also handle Portland cement, white lime, stucco, patent wall plaster, common brick, fire brick, fire clay, chimney flue pipe, drain tile, Ruberoid roofing, asphalt granite ready roofing, and many other materials. They are the largest of the kind in that city, have a heavy retail trade and make a specialty of car lots. Their stock is always complete and customers never find themselves hampered by delay in the filling of orders.

It is only quite recently this concern has taken the agency for the Asphalt Granite Ready Roofing, which is considered an extremely economical roofing material because of the great saving of labor in putting it on.

This roofing material is coated with a heavy layer of asphalt, and into this while hot is rolled an even coating of fine crushed granite. This coating is applied much more evenly than could be done by hand, and makes a roof that is free from bare spots on which the elements can find a point of attack. They claim it is thoroughly fire-resisting and is a non-conductor of heat. In cases where buildings have been burned great patches of roofing have been found unharmed by the flames, although everything beneath them had been totally consumed. Where the source of the fire comes from above, such as sparks or cinders falling on the roof, asphalt granite roofing will be found an efficient protection against fire. Buildings covered with it are rated by insurance companies the same as if covered with metal. It may be used on any roof, no matter whether flat or steep.



Examples of the Hardware Trimmings Used on the
New Chamber of Commerce Furnished by
W. K. MORISON & CO.

From Special Designs Manufactured by the Yale &
Towne Mfg. Co.

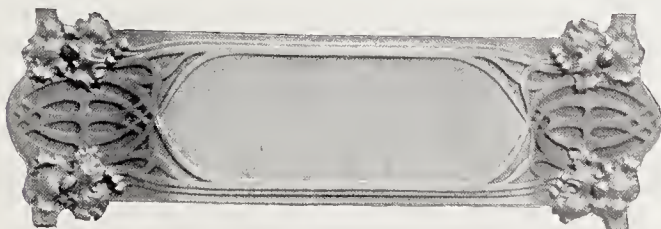
The building committee for the New Chamber of Commerce invited the representatives of all the leading hardware manufacturers to submit samples and enter into competition for furnishing the door and window trimmings, and although the bid of W. K. Morison & Co. on Yale & Towne hardware was considerably in excess of that of any other the contract was awarded to them solely on the merits, taking into consideration both quality and design.

The ornamental design on the escutcheons, as shown by the illustrations, harmonize with the general ornamentation used about the building. The locks are all special, combining several new features never before used: special dead locking latch, armored fronts, patent triplex spindles, etc.; finish "Bower-Barff" only made for satisfactory use by Yale & Towne Mfg. Co. Butts self-lubricating. Blount Checks on the principal doors.

W. K. Morison & Co. are the direct successors of ex-Gov. John S. Pillsbury, who started in the hardware business in 1855. They are the leaders in their line, having the finest fitted up store in the country, with a beautiful sample room where architects can take their clients to select their house trimmings.

They are headquarters for good goods in all lines and have a reputation for reasonable prices and fair dealing.

Hardly a prominent public or private building has been erected in the city of Minneapolis in the past fifteen years for which they have not furnished the hardware.



PAINTING, GRAINING AND VARNISHING.

If a building is to be and remain attractive inside, more perhaps depends upon the men who do the interior painting, wall painting, and general finishing than upon any other class of workmen, for poor painting and varnishing is an abomination, and once put on, no amount of after-work can quite undo the harm.

The contract for this work was eagerly sought by many reliable firms, for they knew that the best work would be demanded, and would be highly rewarded in the praise of the occupants, as private individuals would give, to a firm whose work thus commended itself to them. The contract for the very large amount of this kind of work in the New Chamber of Commerce was awarded to the Harry B. Cramer Co., and the manager of the company, Harry B. Cramer, gave the work his personal attention.

This firm, or, rather, company, is one of the largest and oldest in Minneapolis. For over twenty years, in

good times and in dull times, business has been gradually, and at times rapidly increasing, until its magnitude is now appreciated by few. The company employs hundreds of men in exterior and interior decoration, in the form of painting, paper-hanging, fresco painting, etc., and some of the men are artists drawing very high salaries.

The company began business in a very modest way, but it now occupies very commodious quarters at 215 So. Sixth St., a view of which is shown herewith.

The motto of the company has always been that the best material and the best workmanship are the cheapest, and the man who lets contracts to the Harry B. Cramer Co. may feel assured that he needs no iron-bound contract to fit what he needs and what he bargains and pays for, as the company's reputation is a first-class guarantee that anything they undertake will be executed in a first-class manner.



INTERIOR OF H. B. CRAMER CO'S. STORE.

THE AIR IS PURIFIED.

Nearly all the industries as well as professions connected with the building trades are represented in the handsome New Chamber of Commerce, in Minneapolis but none who had anything to do with this mammoth building has contributed so much for the welfare and healthfulness of its occupants as those who have been instrumental in the purification of the air that the thousands of inhabitants and visitors to this building are compelled to breathe.

It is a well-known fact among intelligent people that many of the "so-called" air purifiers do not purify. They are sometimes nearly correct in theory, but always very poor in practical use.

Viewed in the light of the various methods and appliances in vogue, for the purifying of the air, we think it is the duty of every architect, engineer and property owner to rigidly investigate all these devices now in use, and adopt only those which are the most serviceable and most perfect.

In this respect we desire to say that there is at least one air purifier that gives universal satisfaction wherever used, and a love of comfort as well as a desire for health both plead its cause. We refer herewith to "Thomas' Acme Air Washer and Purifier and Cooler," which is manufactured by Thomas & Smith of 14-16 No. Canal St., Chicago.

The primary object which is sought and attained by the inventor of the "Acme Air Washer and Purifier," was the removal of all dirt, dust and foreign particles from the air which is introduced into a building and which we are breathing daily. By the use of the device above mentioned, all the air after passing through a washing apparatus is thoroughly cleansed and purified, all substances and impurities being entirely eliminated by a special apparatus known as the "Eliminator," besides creating a healthy degree of humidity that is maintained irrespective of the atmospheric changes out-of-doors. The air in summer is also cooled so that all air entering the building through the fans will be at about 74 degrees.

The outside air, before it enters the ventilating fans, passes through a spray chamber containing a number of nozzles that are placed in such a manner that no air can pass through and into the building without being washed, then it strikes the "Eliminator" which is made of what is known as "baffles." These baffles, or rather metal plates catch all the dirt and refuse, which together with the moisture adheres to the baffles, then the air passes on through and into the building in an absolutely clean and pure condition.

It is understood that the engineer of the building or his assistant is to turn a stream of water on these metal plates, which are part of the "Eliminator" at least once a week for the purpose of washing off all the dirt that has accumulated in its operation of cleansing and purifying the air.

AMERICAN RADIATOR COMPANY.

The radiators used in heating the New Chamber of Commerce Building are "American Radiators," manufactured by the American Radiator Company, whose general offices are in Chicago, who have numerous branch houses and factories in this country as well as throughout foreign countries. The radiation used in the New Chamber of Commerce Building was largely of the "Sterling" indirect pattern, over 30,000 square feet of this radiation having been used in connection with the new and elaborate system adopted for heating this immense building.

In addition to this large quantity of "Sterling" indirect radiation, direct radiators of the "Rococo" and "Perfection" patterns were used in the halls, corridors, etc. Many of these radiators were made especially for this building, being special shapes adapted to the particular requirements of the spaces available for radiators.

The Local and General Northwestern Office of the American Radiator Company are situated in the Guaranty Loan Building and are in charge of F. R. Mason, Manager, and R. B. Flershem, Assistant Manager. This company has a very large warehouse at Fourteenth Avenue North and First Street, Minneapolis, in which they carry throughout the busy season hundreds of thousands of feet of "American Radiators" for both steam and hot water heating, and in scores of heights, sizes and designs.

They also carry a liberal stock of "Ideal Boilers" of their manufacture, which, like their radiators, have a world-wide reputation.

THE ELECTRIC INSTALLATION.

The application of electricity to useful purposes was the most noteworthy feature of invention and industrial development during the last years of the past century. It seems difficult to conceive that the electric light has been in actual use but more than a score of years, now it has become a very common feature of the modern town or city, and in connection with all electrical operations throughout the civilized world the name of Westinghouse stands at the head.

The Chamber of Commerce Committee, with the Architects and Consulting Engineers, after giving thorough consideration to all machines, decided that the Westinghouse Companies offered the most favorable proposal. One of the half tone plates in this number clearly shows two of the three 125 H. P. Westinghouse dynamos direct connected to Westinghouse Vertical Compound Engines.

The Westinghouse Companies are now equipping many of the large undertakings throughout the world. Some of the most notable being the Underground Roads of London, England; the Manhattan Elevated Railroad in New York; the Subway in New York; the Pennsylvania Railroad Tunnels from Jersey to New York and through to Long Island; and the great Ontario Power

Company plant at Niagara. This company has also the contract for all the electric machinery for the World's Fair at St. Louis.

A careful study of plants throughout the country shows the remarkable fact that Westinghouse has installed ninety per cent of the mammoth electric installations.

This company have been the pioneers in long distance electric railways and their apparatus is operating the great network of lines in Ohio, Indiana and Michigan. Their new long distance railway system for the Baltimore, Washington and Annapolis Road, was the foremost electric invention of the age. Minnesota, with its vast resources, is particularly well suited for such roads.

The Westinghouse Electric & Mfg. Co. employs 15,000 men in their lately enlarged factory and sold last year in electric machinery nearly \$30,000,000.

This company has district offices in many of the large cities. In Minneapolis at Suite No. 515 Guaranty Loan Bldg., is located the General Northwestern Office, with Mr. T. J. McGill as Manager.

THE FINE OFFICE FIXTURES.

Elegance in commercial fixtures receives its initiative in the large cities of our country, and especially is this true in connection with the leading and wealthy grain concerns who are located in Minneapolis' great commercial Temple, the new Chamber of Commerce. But notwithstanding the demands made for this expensive and elaborate product by the occupants of the New Chamber, they did not have to go outside the city of Minneapolis for the goods desired, as the Flour City contains at least one bank, office and store fixture establishment which fully met all the demands of these wealthy millers, brokers, grain and elevator men. The office fixture concern to which we refer is known as the L. Paulle Store & Office Fixture Co., whose general office and factory is located at the corner of Fifth street and Third avenue south, opposite the new Court-house.

Bankers, merchants and professional men who are more than ordinarily prosperous, or who have found it to their interests to appear prosperous, have had their respective places of business fitted up with everything that is the latest in vogue in the above line at L. Paulle's, who not only has an excellent reputation, but also has facilities second to no other place in the entire West for the manufacture of this product.

It is a pleasure to go through this ideal plant and see the line of show cases, office, store, drug, bank and bar fixtures that is manufactured there. Among some of the more notable offices in the New Chamber which Mr. Paulle has fitted up with the necessary equipments, may be mentioned the following: Washburn-Crosby Co., Commons & Co., Osborn & McMillan, Lamb & McGregor, The Albert Dickinson Co., Imperial Elevator Co., Great Western Elevator, St. Anthony & Dakota Elevator Co., St. Anthony Elevator Co., Wells & Case, and The Sheffield-King Milling Co. They also designed and manufactured the handsome table in the director's room, as well as the frame for the Chamber of Commerce branch of the U. S. Weather Bureau's office in the building.

He makes to order fixtures according to suggestion from the owners, or from designs by architects, or he

will furnish an original design from his own designers, together with the cost thereof already put in place.

In nearly all of the leading office and public buildings one can find specimens of Mr. Paulle's work, for he has been located right in Minneapolis for more than 20 years, and has a large and profitable reputation that extends all over the Northwest.

THE LANGDON STONE CO.

A firm that has been recognized as a leader in the production and shipping of crushed limestone, as well as in building and dimension stone, is the Langdon Stone Co., whose offices are located at 501 New York Life Bldg., Minneapolis.

It was this company that furnished the crushed stone for Minneapolis' New Chamber of Commerce. This company also furnishes a large amount of material for outside work in their line, as they operate the most important crushed stone mill in the West, consequently they are identified with nearly all of the large contracts for this kind of material that are given out in the Northwest.

Just how our legislatures come to leave the records they do is among the very hard things to explain. One might easily be led to believe some legislatures elected to contribute to the mirth of the nations. As when, for instance, in the days of the old State Association of Architects, the Minnesota legislature refused to make the successful passing of a mild examination as to knowledge of construction and sanitation a requisite to the practice of architecture in the state. While the barbers of the state afterwards succeeded in getting passed a barber's license act. Perhaps the latest joke by the same august assembly is the introduction of a gallon hitherto unknown in the state. Its usefulness is to be confined to beer and milk only. Now the thinness of milk is limited by law in the states so that the new measure may be no joke to the dairy man, but with a skilled tender at the tap, what matters the size of the measure.

The detailed report of the United States Steel corporation for 1902 is enough to cause eyes to open wide in amazement. It is necessary to make some comparisons to grasp the greatness of this gigantic industrial organization.

Its total assets are put down at \$1,546,000,000, or nearly twice the assessed valuation of the entire state of Minnesota and about four times the capitalization of the Northern Securities company. The total capitalization is \$1,300,000,000, of which \$500,000,000 is commonly counted water.

Its gross receipts were \$560,000,000, or almost exactly the same as those of the federal government, and more than ten times those of the Dominion of Canada. Except the United States, no government in the world has receipts as large as those of this single corporation.

Its net earnings alone were \$133,000,000, or more than seven times the entire amount of money raised by taxation within the limits of Minnesota for every purpose.

HOT WATER AND STEAM HEATING.

In discussing the relative advantages of a steam or hot water heating plant, a writer in Rays of Light presents the following views. They are reproduced, not because they are considered as authoritative, but in the belief that they will prove useful in helping our readers to crystallize their own ideas on the subject. The paper follows:

One of the points not credited to the water system is the fact that the hot water can be carried lower than the water line of a steam plant, which in many cases is a valuable point, as the boiler or heater can be located in one of the rooms to be warmed, thus saving all the heat that the fuel produces. The question is sometimes asked, "Which is the better heating apparatus, steam or hot water?" This question cannot be answered positively or in a word.

First, the matter of expenditure. The first cost of steam heating apparatus is somewhat less than that of hot water, owing to the fact that for hot water circulation larger pipes are required, especially for the returns; and also a larger amount of radiating surface is commonly, though not necessarily, used to compensate for the lower temperature at which hot water apparatus is usually operated. If the matter of first cost is then the most important factor, the decision must be in favor of steam.

On the other hand, the cost of fuel is an important consideration. This is in favor of hot water apparatus, especially where low temperatures are used. There are two reasons for this economy of fuel, the first being that in the fire box of a hot water boiler the products of combustion are in contact with the fire surface, which is at a temperature considerably lower than is the case when in contact with a similar surface of a steam boiler, say from 20 to 50 degrees less; from which it results that the products of combustion part with proportionately just so much more heat to the boiler, and are discharged into the chimney at a much lower temperature, with a corresponding less waste of heat. The second reason is that in consequence of the high specific heat of water, heat from the fire not immediately wanted can be stored up in the apparatus to be given out later as required, instead of being wasted in the chimney.

As to the danger of freezing, preference is to be given to a steam apparatus. It is undeniably true that if a hot water apparatus is neglected so that the fire is extinguished and any part of the apparatus is allowed to fall below 32 degrees F., such part of the system will be frozen and probably destroyed; and a similar result will happen if any radiator of such apparatus is entirely shut off and then exposed to extreme cold. This point militates against the use of a hot water apparatus in office buildings where part of the offices may be unoccupied, and so also in country houses, where indirect radiators which are thoughtlessly closed may be exposed all night to extremely cold weather; a hot water apparatus must be used with caution, while the steam system under similar conditions is less liable to freeze and break radiators.

If hot water be adopted, it should not be forgotten that there is justly raised objection to its use from the slow way in which radiators cool when shut off. The radiator is usually shut off when a room is too

warm, and this is naturally just the time when it is desired to cool the quickest. Owing, however, to the high specific heat of water, it takes an hour or two for it to drop to the temperature of the room and heat thus retained gives annoyance or is wasted. If steam is used, the radiators cool more quickly, for the steam in them is condensed, and the only heat they hold is that of the iron, of which the specific heat is low compared with water; and all the radiating surface when shut off, therefore, ceases giving heat much more rapidly.

Hot water requires less skill and care in operation, as it dispenses with the gauge, gauge cocks, etc., and there is no water line in the boiler to be maintained or over pressure to be guarded against. In fact, the manipulation of a hot water boiler is almost exactly like that of a furnace. That is, if one wants more heat the fire is quickened; or if less heat is needed, the draft is closed and the force of the fire checked. A hot water apparatus is usually left to the care of the ordinary house servant without apprehension of inconvenience or danger. It should be said, however, that a steam apparatus is just as easily controlled after the person in charge has been instructed and cautioned.

Not long since the department store was the object of a sort of crusade of sympathy for smaller traders. It seems to have pretty well outlived this, perhaps because it is now known that there always were department stores, and perhaps because it is seen that present enterprises of the kind, pay their bills as well as other people do. Had the department store been the object of less of this emotional attention a few years since, it might have been required to house itself more in accordance with civilized notions, and we would not now see it such a nuisance in the neighborhood as it commonly is. The near neighbors are prone to pay their increased fire premiums in the hope that the department store will compensate for causing them by bringing more trade to the neighborhood, and dwellers at greater distances think it no concern of theirs. La Crosse people may think differently for a while. It is to be hoped that their city council will at least exact the ordinary decencies in housing future ventures of the kind. Perhaps a good department store fire would help the Minneapolis city council to restore the building ordinance to at least as good condition as it was before the council tore it wide open to let in the folly at the corner of Nicollet avenue and Seventh

An attempt is being made in St. Paul to minimize the danger from electrolysis. It is reported that the street car railway company will shortly abandon its Hill street power station, which is one of great magnitude, and divide the machinery among a number of small power stations to be located at convenient points throughout the city. It is stated the company has discovered that where the current is distributed through more than one central station the loss is considerably less. Tests made by experts, it is stated, show the loss of current at Hill street station to be nearly 60 per cent. The natural law is that the current must return to the point from which it emanated and the loss is in the return. It will be recalled that the current from the power station has been playing havoc with the water mains at St. Paul during the past year and as a result the water board brought suit against the street railway company for \$60,000.

ARCHITECT VS. BUILDER.

It is a fact that cannot be easily disproved that there is a gulf between the professional architect and that portion of the people who build ordinary houses and business blocks—a gulf which should be obliterated by a better acquaintance with one another. On this point, an exchange says:

“Architecture should be kept near to the people, without being made their diversion or jack-trade. We often hear architects offer objections to having their valuable designs illustrated, claiming that the result will be their reproduction by merely copying. At the same time it is forgotten that the prospective builder whose ambition is to design and superintend the erection of his own house, can easily obtain the desired with blue prints ‘all ready for building,’ for the small sum of a few dollars. He is told that with these drawings and a foreman he has all that is necessary or required. He is therefore educated to regard the services of an architect as a luxury to be indulged in only by the very wealthy classes, and not at all to be employed in the erection of ordinary buildings. He is so ignorant of the nature of the services that an architect renders that he imagines that with his ready made plans and his own knack of being ‘handy,’ he can entirely dispense with the architects. And yet if this same man was asked if he could make a coat that would fit himself, he would at once admit that he could not. He is confident that he is capable of erecting a house providing in the highest degree for the comfort, convenience, beauty, cheapness and all the requirements of heating and ventilating, and yet he realizes that he cannot make a garment that would impart the air of respectability to the wearer. The difficulty seems to be that the skill of an architect and the work he performs in ordinary buildings is not brought close to the people generally. They have been educated to recognize it in fine buildings, but not in the homes they occupy. While the architect is hesitating about bringing out the good points in his design publicly for fear they will be copied, the public employs ready made plans because they are not conscious of the superior merit of the designs of the regular architect. There should be an educating process, the object of which would be to inspire a better appreciation of the skill and training requisite to competency in the most ordinary house designing and building.”

AMERICAN CONTRACTOR ABROAD.

James C. Stewart, the American contractor, who went to Europe a little over a year ago to build the Westinghouse Works at Manchester, and who completed them in one-fifth of the time that English contractors offered to do it, has been offered, since this work was done, contracts amounting to nearly \$40,000,000, among them being the Midland Railroad hotels, the extension of the Savoy Hotel (the contract for which he has accepted) and also a large Coliseum that is to cost over \$2,000,000. Persons just returning from London state that the city of London will be entirely rebuilt in the next twenty years. These same persons further state that several prominent banking-houses in London have offered Mr. Stewart all the money he will require for a large construction company to undertake all new buildings offered, and it is understood that he will accept one

of the propositions offered him to organize a \$25,000,000 company—£2,000,000 preferred stock and £3,000,000 common stock. Mr. Stewart is to get \$50,000 for superintending the work on the extension of the Savoy Hotel, and it is understood that he has made over \$400,000 in just this kind of work in the past fifteen months, taking no risks himself whatsoever. James C. Stewart was the head of the James C. Stewart Construction Company, of St. Louis.

AMERICAN PLASTERING.

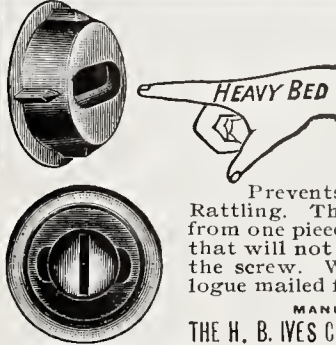
M. Deller, one of the members of the Moseley Industrial Commission, who visited America last year, has put into words his impressions on the subject of plastering in this country. Mr. Deller is secretary of the National Association of Operative Plasterers of Great Britain. He is one of the most critical of all members of the commission. He inspects with the eye of the practical mechanic the plastering of every building he visited. He says that “there is no denying the fact that on the whole more ground is covered by plasterers in America than at home, but I question whether more labor is expended in production than is done here. To use an Irishman, the reason why they do so much more is that it is not more than half done.” He says that the Buffalo postoffice is a fine building, with plenty of plastering of fairly good design, but executed in such a manner as to make it a standing disgrace to the trade. In going around Pittsburg he discovered some “slum property that would even make some of our own look, comparatively speaking, like palaces.” On visiting Washington for the purpose of having an audience with President Roosevelt, he states that even in the room where he was received “the plastered walls were very poorly finished, although it is only fair to say that some decent work was to be found in the Congress house and the library.”

The impressions set forth in the foregoing are contained in the report of the industrial commission of the United States which has just been published. This commission consisted of the secretaries of the trades’ unions of the principal industries of Great Britain. They visited this city during the last three months of 1902 at the expense of Alfred Mosely, who, as stated in the introduction of the reports, was impressed by the fact that as a manufacturing country America was forging ahead with a pace hardly equalled by either British employers or workmen. He, therefore, came to the conclusion that it will be necessary for the workers themselves to have some insight into this development and for that reason he invited the secretaries of the trades’ unions to accompany him on a tour of investigation of the industrial situation on this side of the Atlantic.

There’s indignation among the architects of Philadelphia, and it is based on substantial reasons. John Wanamaker, who has coined millions from the pockets of the people of the Quaker City, is to construct a mammoth \$5,000,000 store with which he hopes to gather in more Philadelphia dollars. Strange as it may seem, Mr. Wanamaker has gone to Chicago for his architect when it is a recognized fact that some of the best architects in the profession make Philadelphia their homes, and it is more than probable that many of them have contributed their share toward Mr. Wanamaker’s financial success.



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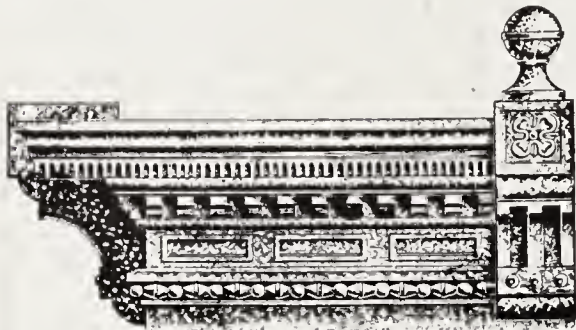
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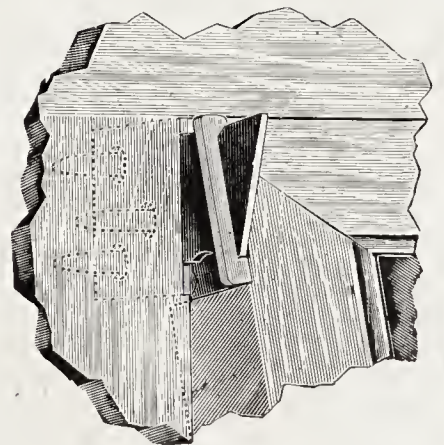
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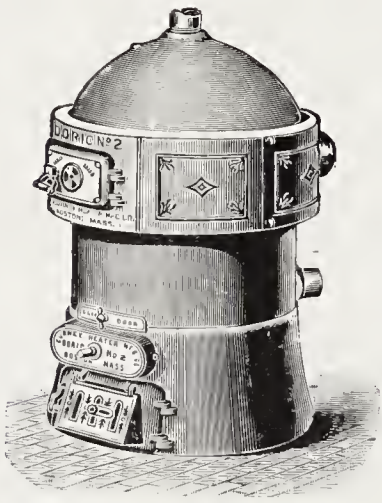
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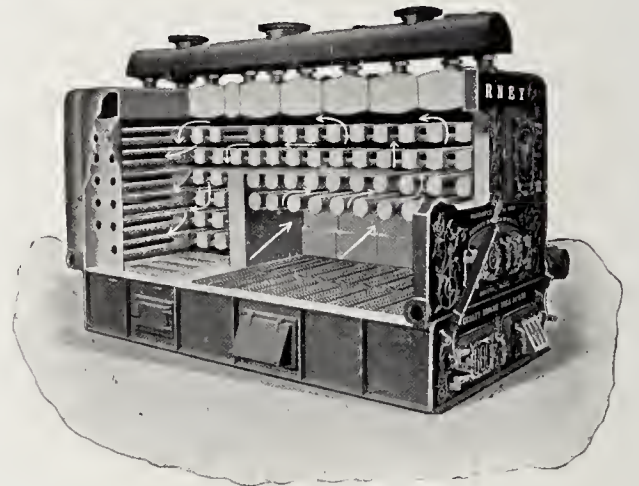
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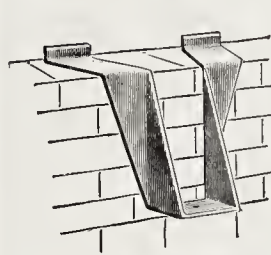
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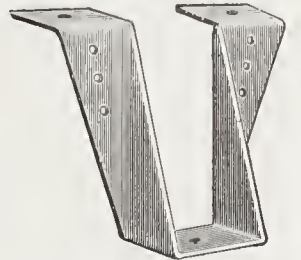
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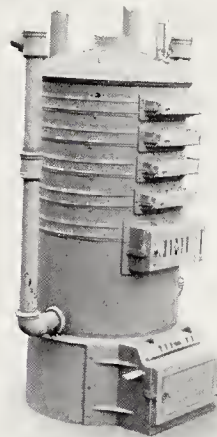
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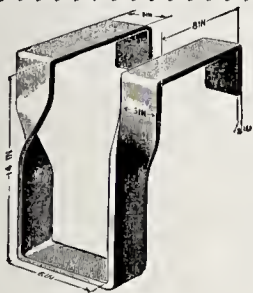
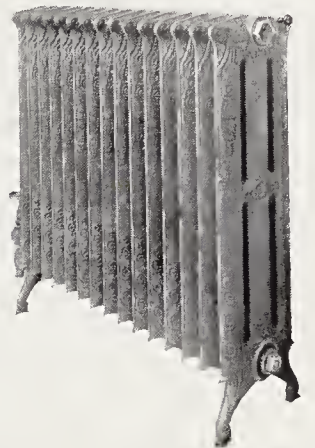
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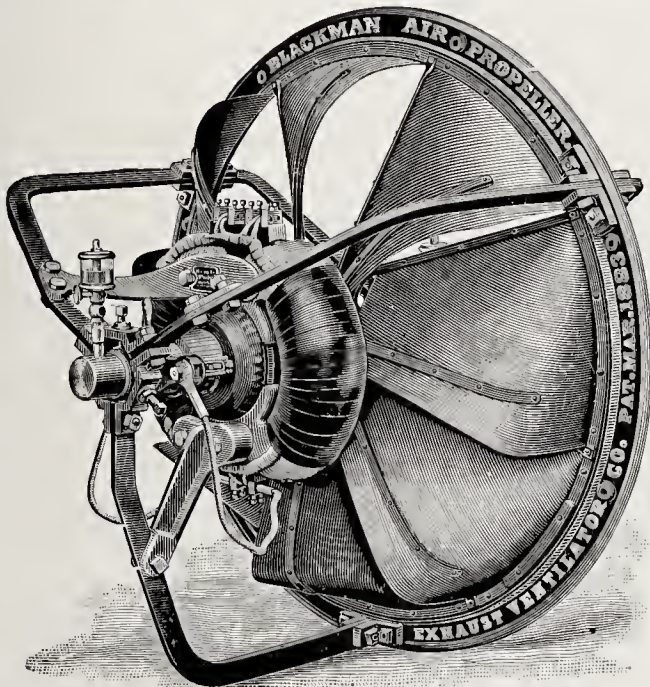
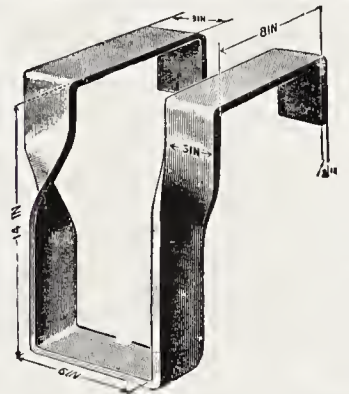
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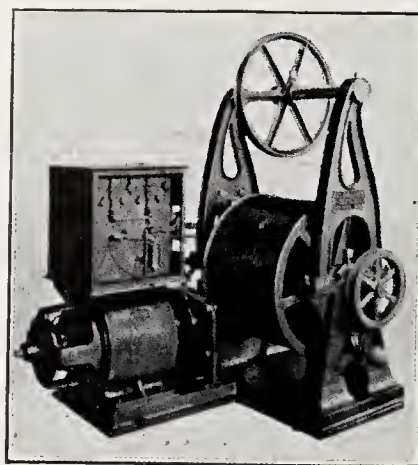


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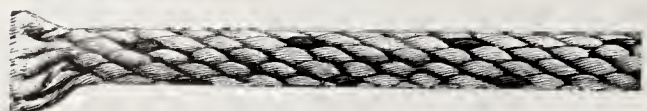


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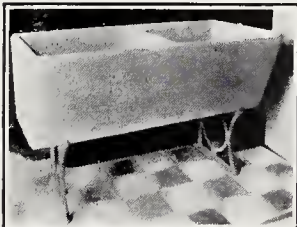
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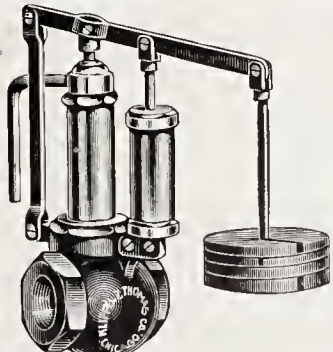
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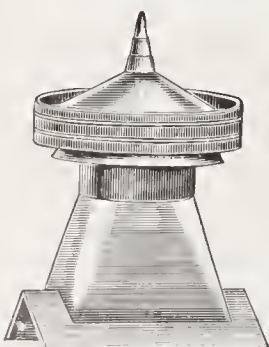
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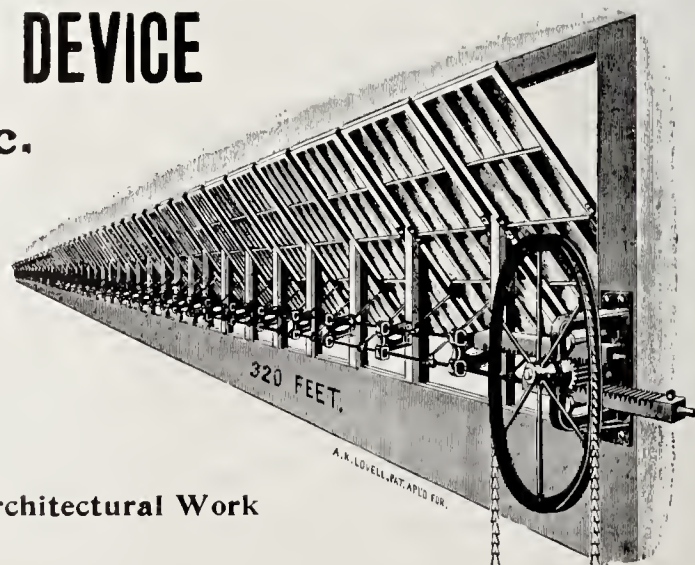


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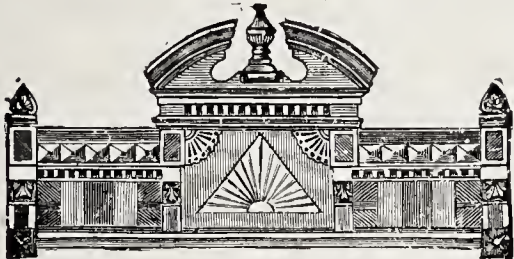
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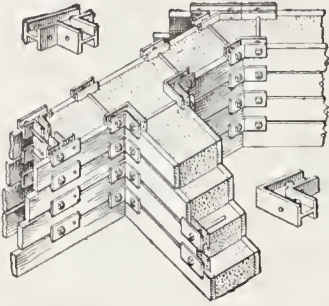


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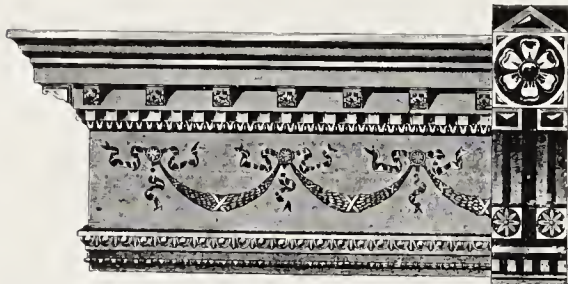
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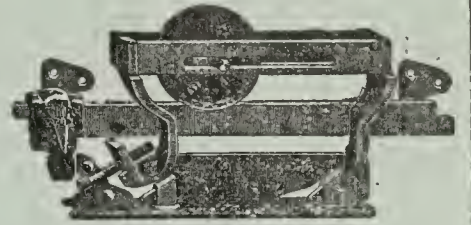
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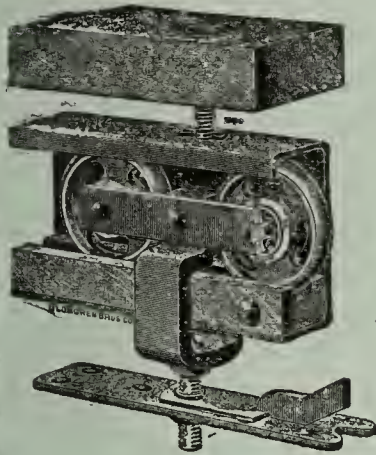


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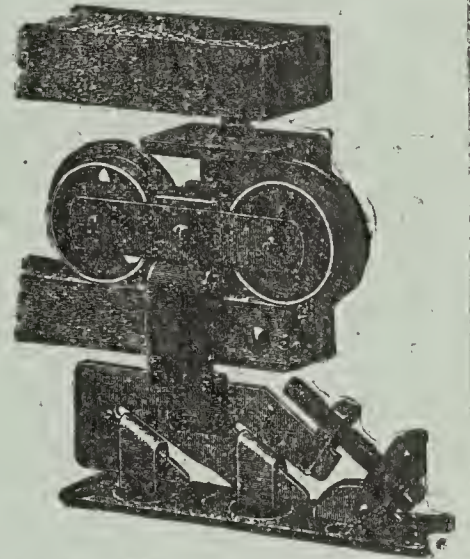
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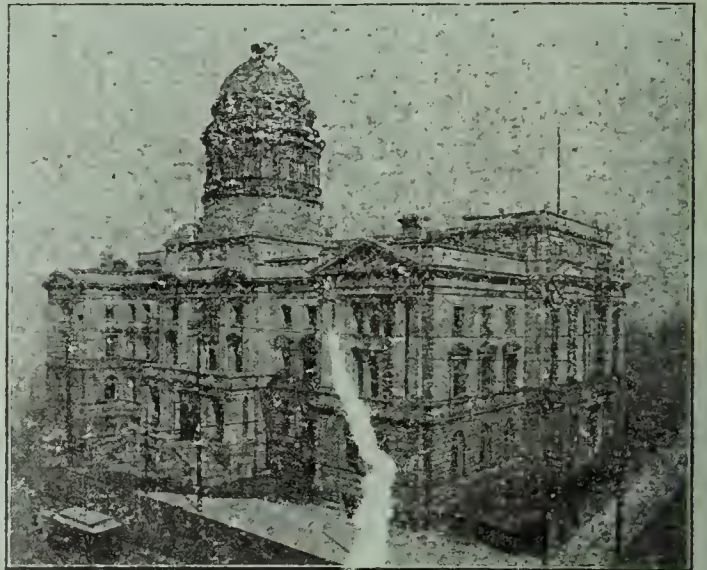
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