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# CONSTRUCTION

A · JOURNAL · FOR · THE · ARCHITECTURAL  
ENGINEERING · AND · CONTRACTING  
INTERESTS · OF · CANADA



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Barn, Wharf, Warehouse,  
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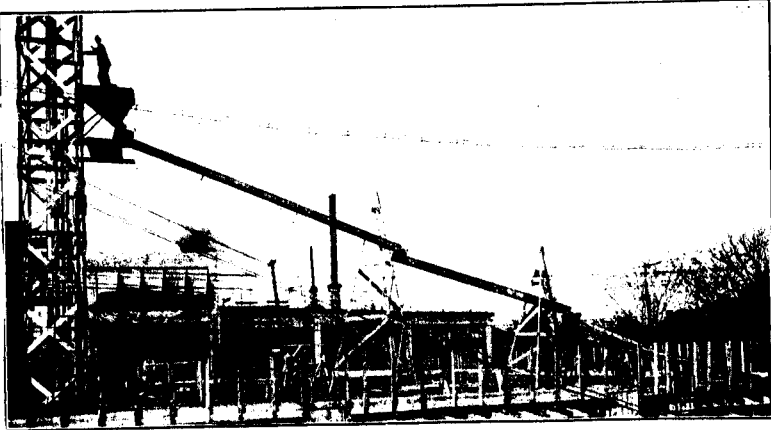
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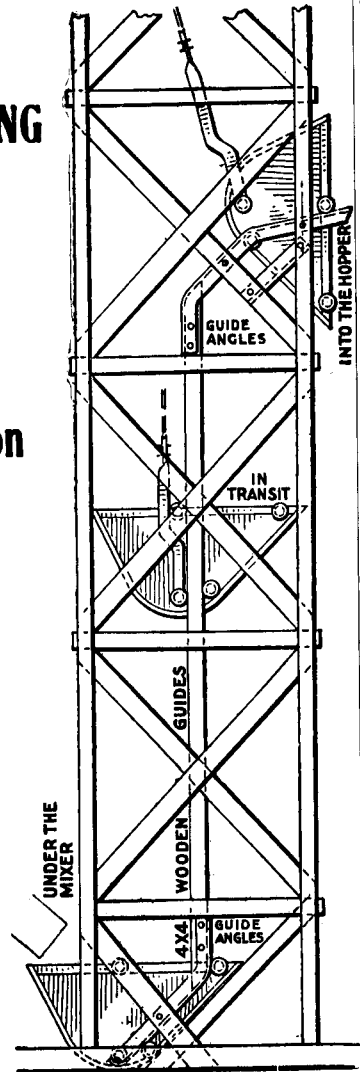
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# Use UP-TO-DATE METHODS For Handling Your Concrete



Insley Spouting Plant

INSLEY'S  
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Simple  
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Yet they Increase Your Output.

The **INSLEY METHOD** of Concrete Distribution includes:

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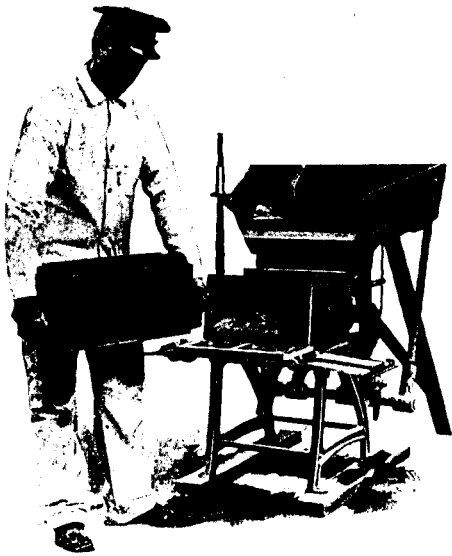
**Concrete Cannot be Placed With Greater Economy**

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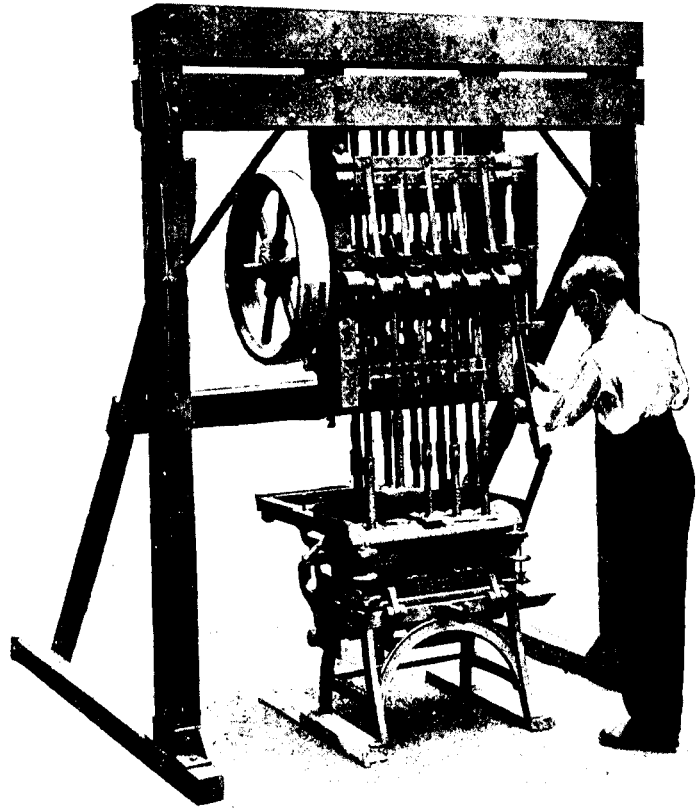
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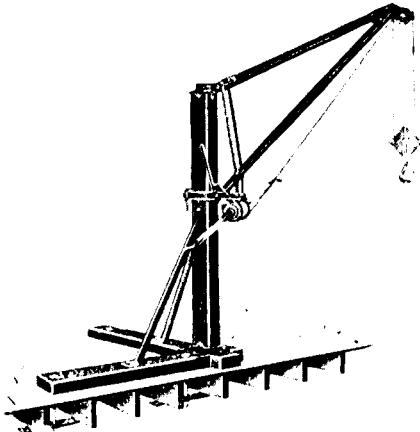




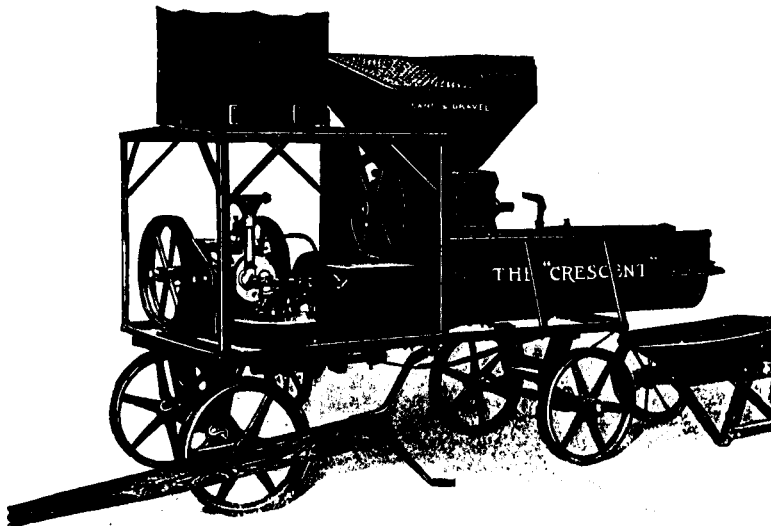
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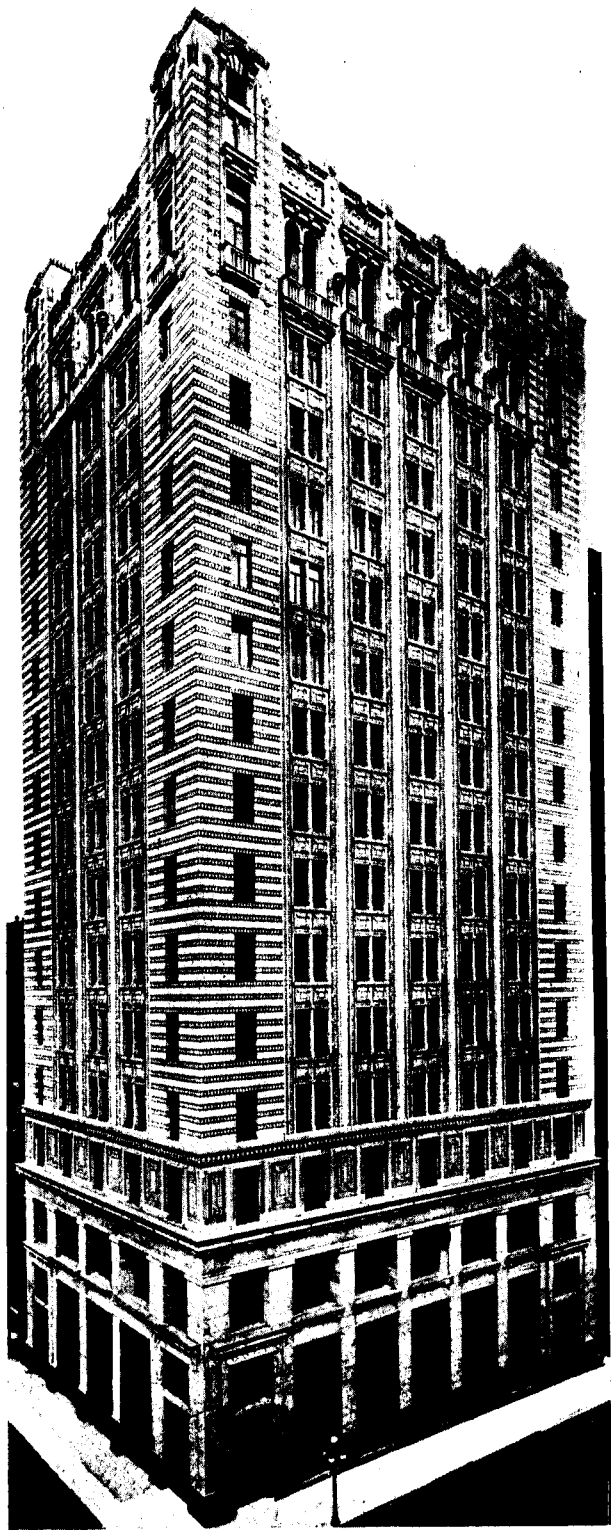


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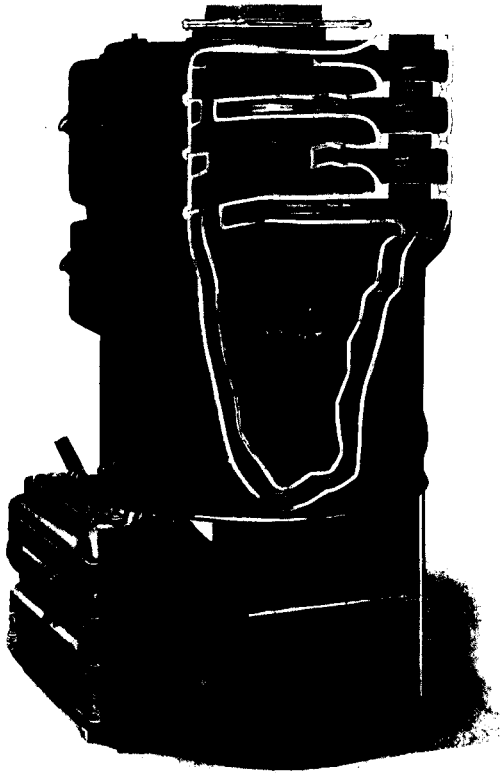
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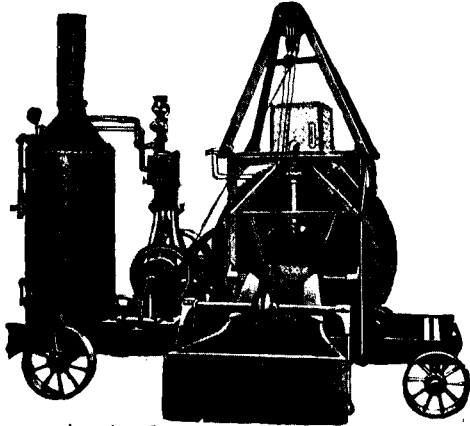
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London Standard Drum Batch Mixer.

are built  
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**STYLES**  
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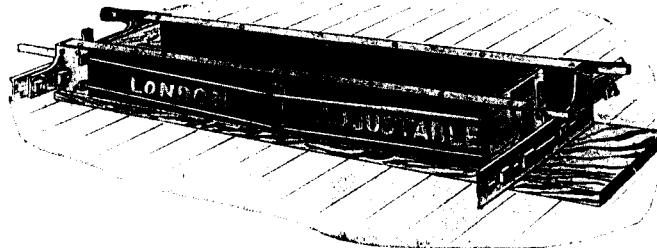
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Every machine  
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**STRONG**  
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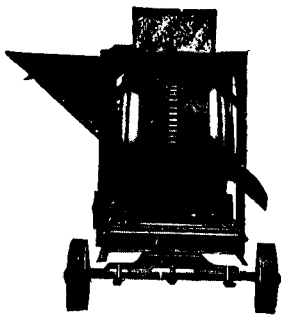
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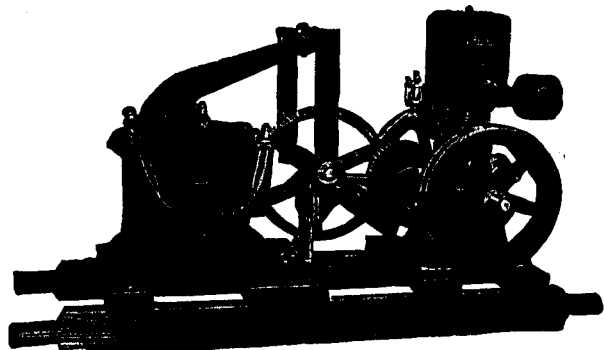
We Manufacture a Complete Line of  
**CONCRETE MACHINERY, CEMENT WORKING TOOLS,**  
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We are the Largest  
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That is why we can sell  
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Power Diaphragm Pump, operated with gas.

Producing in Large Quantities Reduces the Cost of Production.

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Quick delivery is an important point. Complete delivery of your whole order is even more important. Canada Cement mills have sufficient capacity to completely fill all orders promptly.

Write for "Factories and Warehouses of Concrete."  
It will interest you. Enclose 12 cents in stamps for postage.



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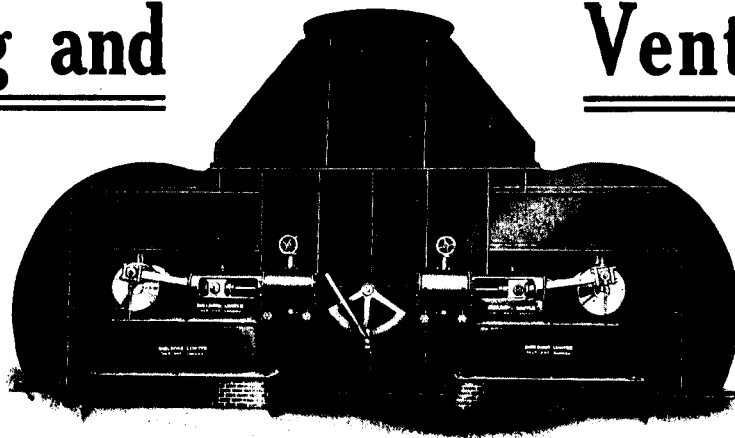
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## Heating and

Twin  
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## Ventilating

Made for  
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Actual experience alone has proven that the SHELDON Heating and Ventilating Apparatus cannot be surpassed. The principles of design are such that they give the utmost satisfaction to the manufacturer and contractor. Built by the most up-to-date methods, as well as the most economical, they give an even temperature of any desired degree, under perfect control night and day.

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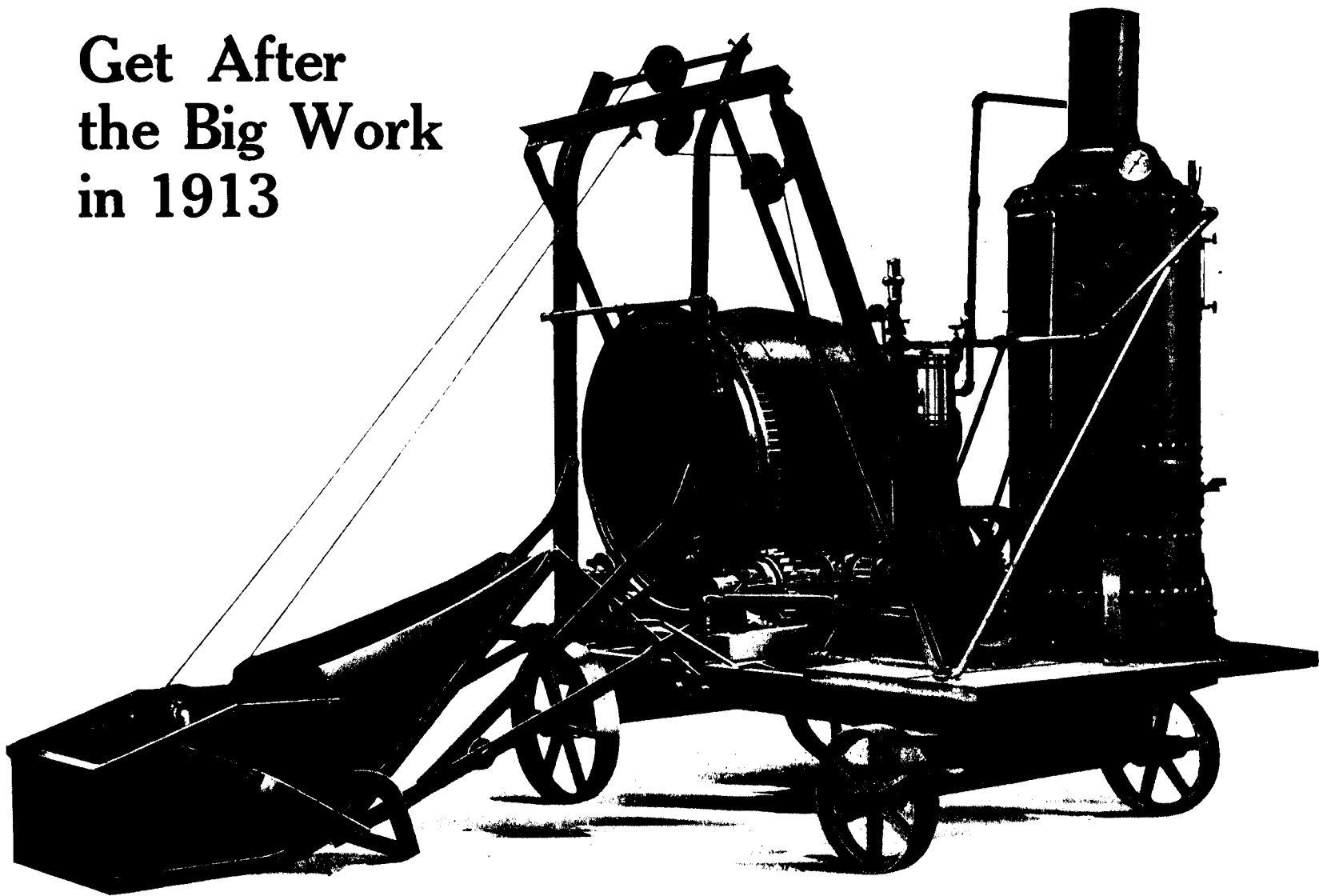
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**WETTLAUFER  
HEART-SHAPED  
MIXER**

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*"The Mixer that Delivers the Goods."*

**Get After  
the Big Work  
in 1913**



In order to successfully handle large contracts,—the kind that pay, you must be able to do the work just as cheaply as the other fellow, or just a shade cheaper. Here is the mixer that cuts down your operating expenses on every job. The Wettlaufer Heart Shaped Mixer mixes faster and more thoroughly than any other type. This means that you can produce a cubic yard of concrete when using it, at a less cost than with any other machine. It also means that you can do better work, with no danger of come-backs from a defective mixture.

The machine is so strongly built that it will do a whole season's work without laying up for repairs and the mechanism is so simple that one man can operate it.

With the Wettlaufer Heart-Shaped Mixer your men are kept working at full speed all the time; you are enabled to do the work thoroughly and with a good profit to yourself.

Call at any of our showrooms at any time. We want to show you how it works, and its many points of advantage.

Send for our Catalogues on Hoists, Pumps, Stone Crushers, and Tile, Block and Brick Machines

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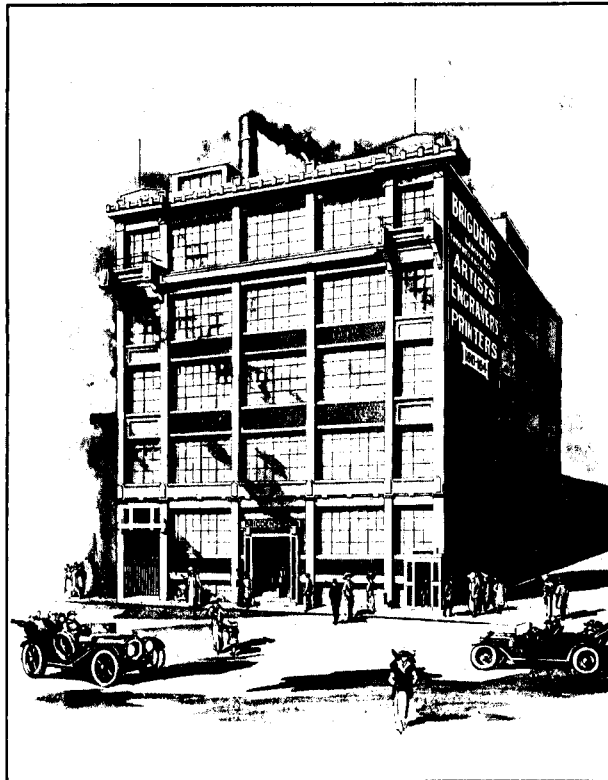
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Equipped with Turnbull  
Elevators.

BUILT FOR PASSENGER OR FREIGHT SERVICE.

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**207 to 219 Spadina Avenue**  
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Wholesale dealers in

**Plumbing, Steamfitting, Lead and  
Mill Supplies.**

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**A**N INTER-PHONE system of communication has become one of the luxurious necessities in high class residence work.

Provision for its installation, if noted in the preliminary plans, is one of those helpful little things that aid in bring-

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The Northern Electric Inter-Phone System has been developed to the highest point of efficiency for residences, as well as for apartment houses and office buildings. We will be glad to cooperate with you in every way to make its installation a source of added credit to your plan and design.

*Write us for full descriptive Bulletin on the subject.*

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Manufacturer and Distributor  
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TELEPHONE APPARATUS  
ELECTRICAL SUPPLIES AND  
FIRE ALARM APPARATUS  
For Every Possible Need.

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LIBRARY



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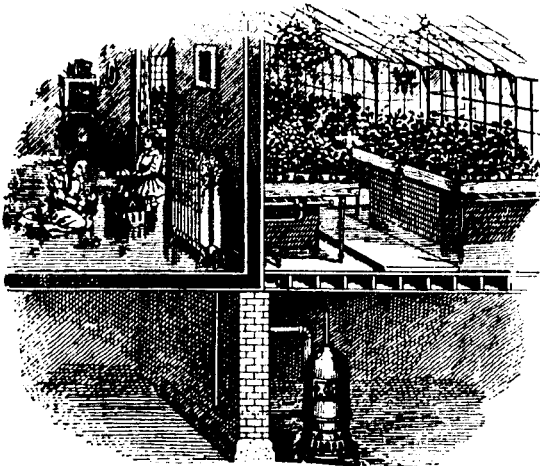


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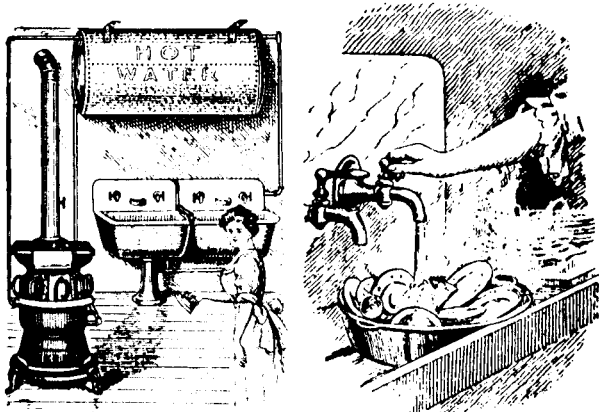


LIVING ROOM

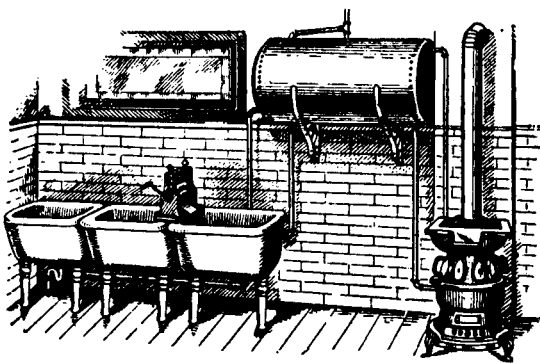
# How to Improve Your Heating in the Depth of Winter



"Little Giant" Hot Water Boiler Supplying Radiation for a Conservatory and Living Room



Plenty of Hot Water for Domestic Purposes Supplied by The "Little Giant"



How the "Little Giant" Hot Water Heater makes the Laundry Comfortable and Handy to Work In

IT is quite possible to improve the heating of your home, in the depth of winter, without letting the fire out or experiencing the slightest inconvenience while the improvements are being made.

All that is required is the installation of a "Little Giant Boiler." It is a small, auxiliary hot water boiler with a tremendous heating capacity—for its size.

The "Little Giant" is installed in the cellar, not connected with the main boiler, and it will carry radiation to the conservatory, sun-parlor, spare room or kitchen in your house that cannot be comfortably heated, in really cold weather, from the main boiler.

There is also a "Little Giant steam" boiler of the same pattern.

And a "Little Giant Hot Water Heater" that takes the domestic hot water service off the main boiler and thus greatly improves its heating capacity.

The "Little Giant" is surprisingly cheap—uses little coal and will burn any kind of fuel.

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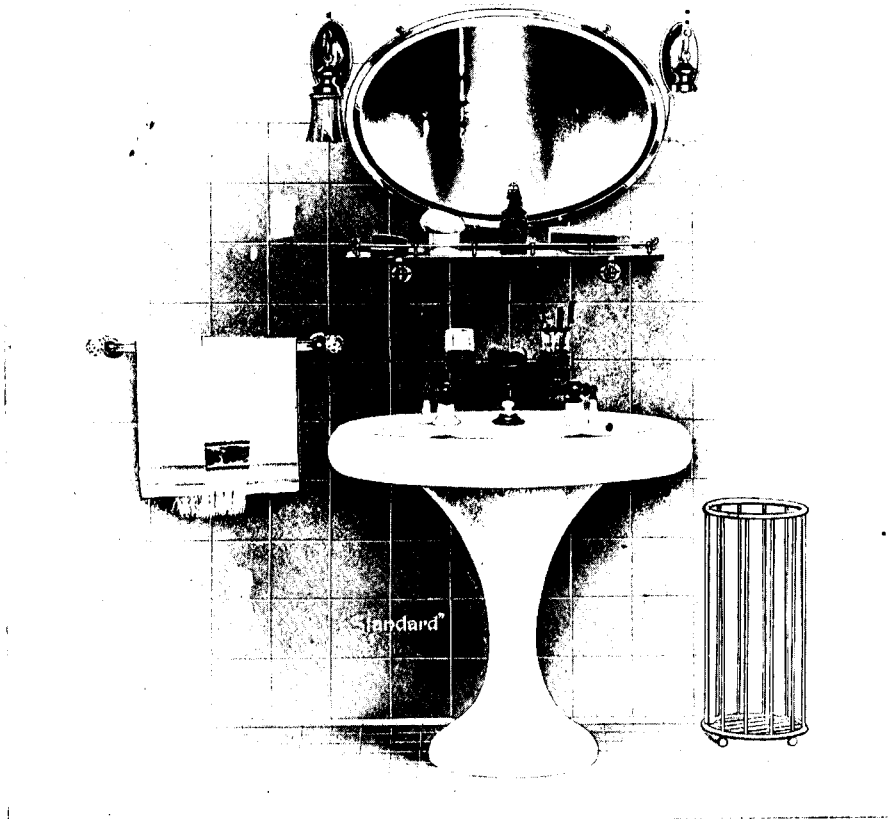
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The installation of a “Standard Sanitary” Lavatory means that a fixture has been provided which cannot be excelled in quality for any price. And, no matter for what purpose the Lavatory is to be used, a more suitable pattern than that selected from the complete line of “Standard Sanitary” designs, cannot be found.

Both in material and workmanship, great care has been exercised to make “Standard Sanitary” Lavatories the highest possible quality.

The “Standard Sanitary” Green and Gold Label, which identifies every “Standard Sanitary” Lavatory, is an assurance direct from the manufacturer that both quality and efficiency are of the highest order and a guarantee against defective material and workmanship.



“Narova”—Plate P 3010 x

“Standard Sanitary” Porcelain Enameled Narova Design Lavatory with Slab, Oval Bowl with Rear Outlet and Apron all in one piece; fitted with P-10401 “Imperial” Waste, P-10278 “Torrance” Faucets, ½-inch P-10427 Supply Pipes and 1½-inch P-10463 “P” Trap. Supported on Porcelain Enameled Pedestal. Lavatory furnished enameled all over only.

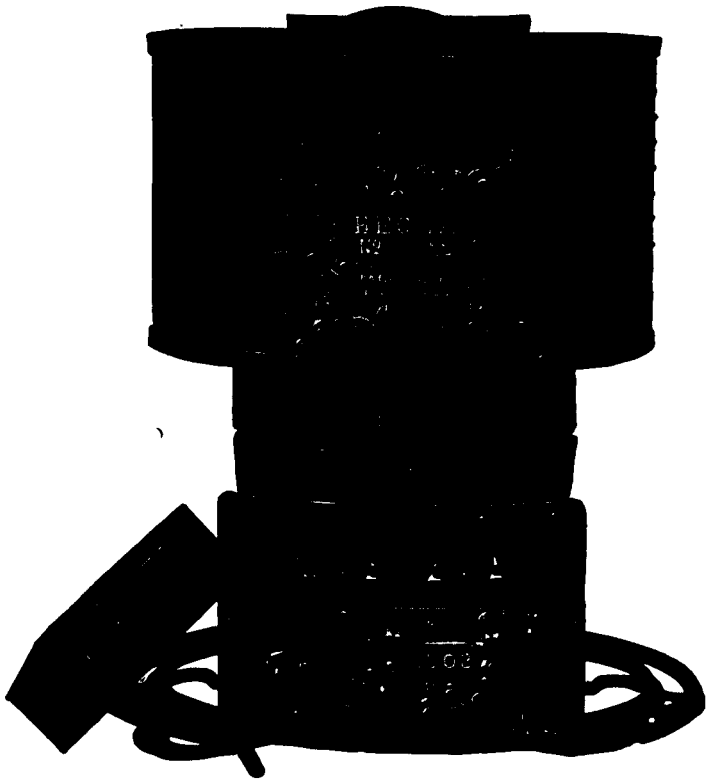
**Standard Sanitary Mfg. Co.**  
LIMITED

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## FOR COAL OR WOOD




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The requisite for a successful Warm-Air Heating System is a good furnace; one that will not only supply an abundant quantity of pure warm air; but will, in addition, be economical in the consumption of fuel, easy to operate, safe from dust and smoke, and that will give the greatest length of service. Some cheap furnaces fulfil one or more of these conditions, but the furnace you want must fulfil all. That is what the HECLA does.

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### "HECLA" FEATURES

- Automatic Gas Damper prevents gas puffs.
- Gravity Catch locks door every time you shut it.
- Double Feed Door for convenience when burning wood.
- Damper Regulator enables you to operate the dampers without going to the basement.
- Dust Flue carries all the dust up the chimney.
- Water Pan in the best position for effective service.
- Large Ash Pan with handle.
- Double Tin and Asbestos Lined Case to prevent the loss of heat in the cellar.

**STEEL RIBBED FIRE POTS**  
**INDIVIDUAL GRATE BARS**

**PATENT FUSED JOINTS**  
**CAST IRON COMBUSTION CHAMBER**

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# Clare Bros. & Co., Limited

## PRESTON, ONTARIO

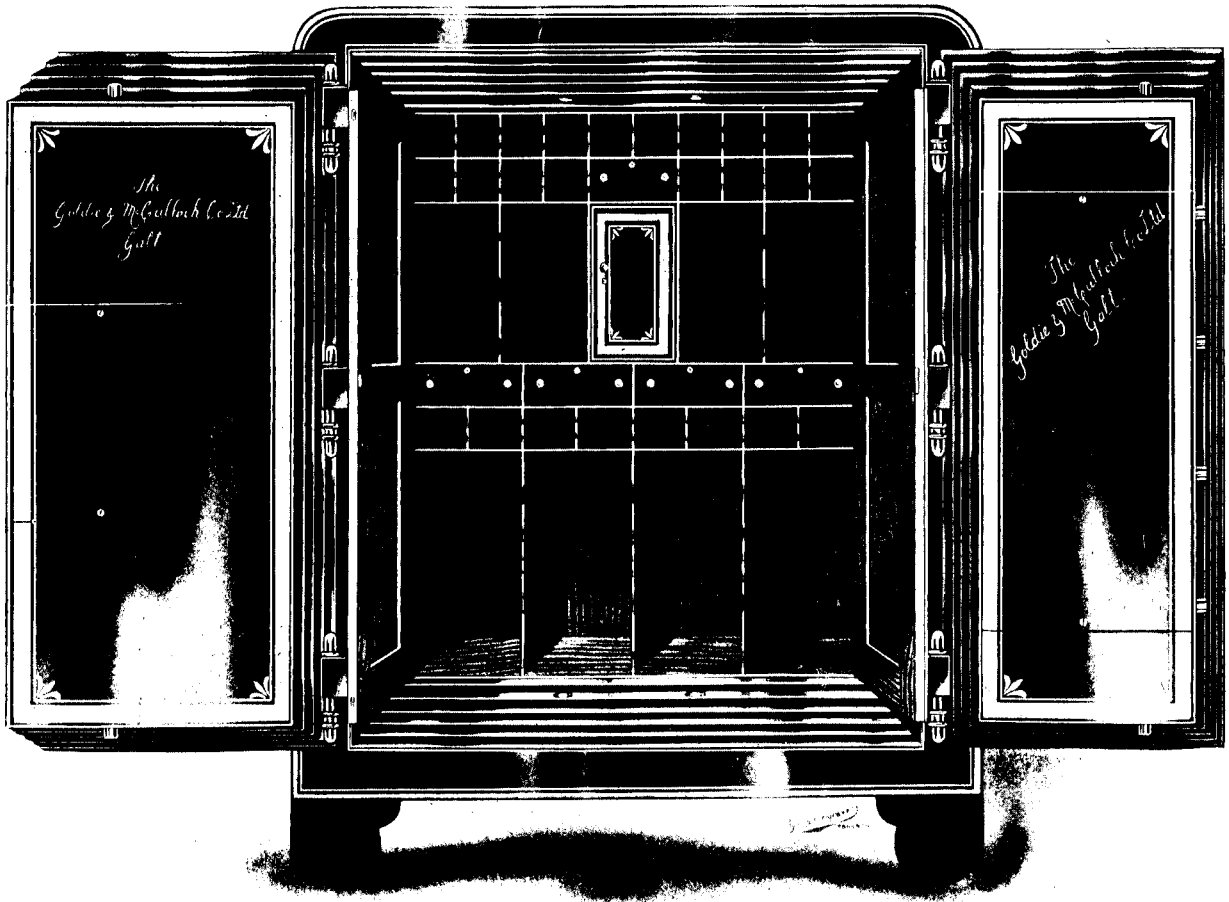
VANCOUVER

WINNIPEG

Suppose Your Place of Business

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would your Books, Business and Family Records, Policies, Bonds and other valuables, be liable to destruction? Most certainly not, if protected by a GOLDIE & McCULLOCH FIRE-PROOF SAFE. A good safe is not an expense but an investment, and a good one. Can you afford to be WITHOUT THIS PROTECTION?



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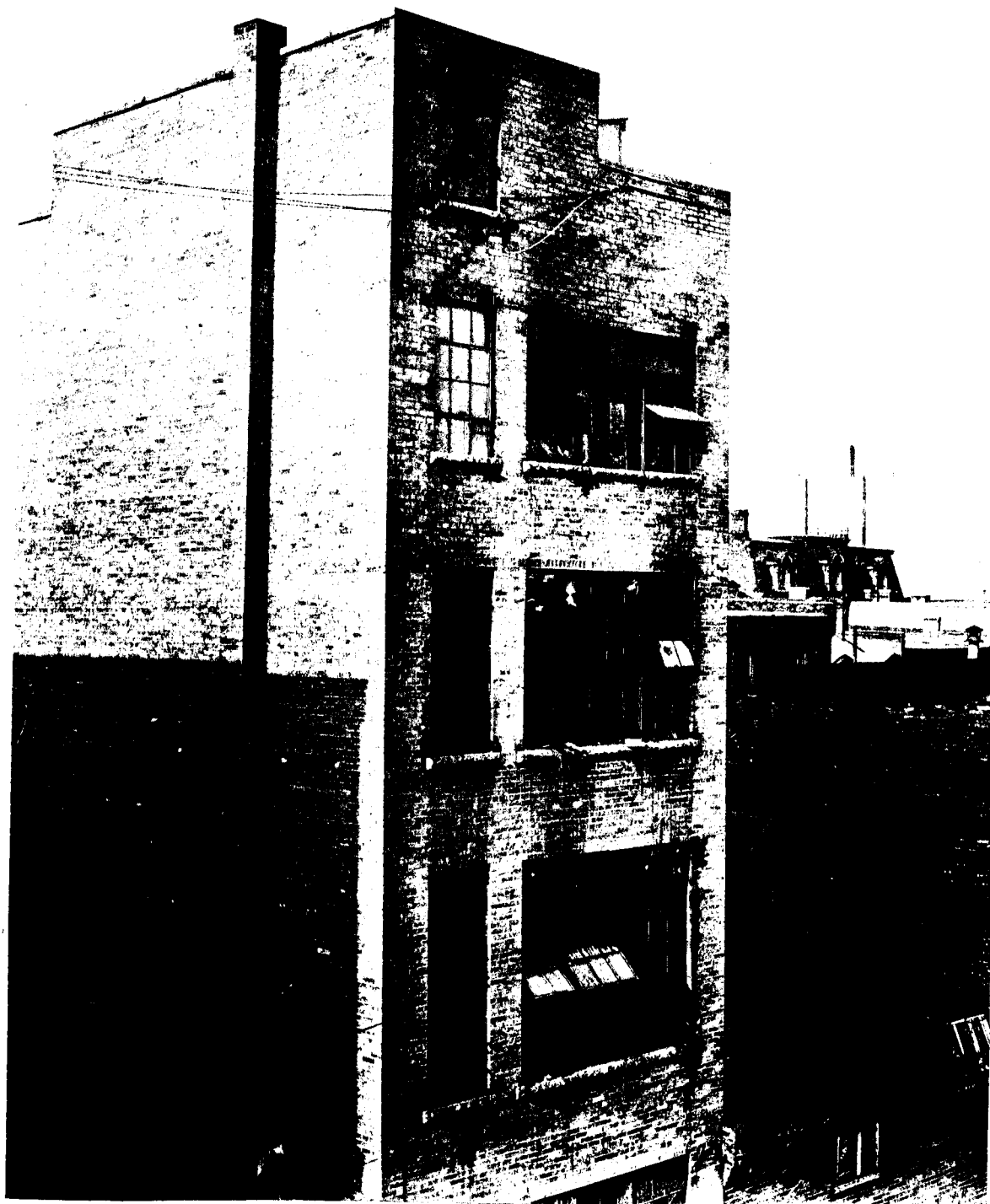
## The Roman Stone Co., Ltd.

504 TEMPLE BUILDING, TORONTO

WORKS AT WESTON

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## was put to a Severe Test



Rear Elevation of building of Art Metropole Co., 241 Yonge Street, Toronto, dealers in Engineers', Architects' and Draughtsmen's Supplies. Messrs. Mitchell & White, Architects.

Read this letter  
interest

The cost of re  
this sash in pe rfect  
was only Two Do

"Fenestra" So  
construction is  
this fire resisti ng

The "Fenes tra"  
sembled in su ch  
that it absolut ely  
any parting, e ven  
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ART TORONTO  
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December 9th, 1912.

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Dear Sirs:-

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To illustrate the great heat to which these sash must have been subjected, we would say that two of the Steel I-Beams on the top floor about 6" from where the sash were placed buckled and bent.

We would be obliged if you would have your man repair the damaged ventilator at the earliest possible moment.

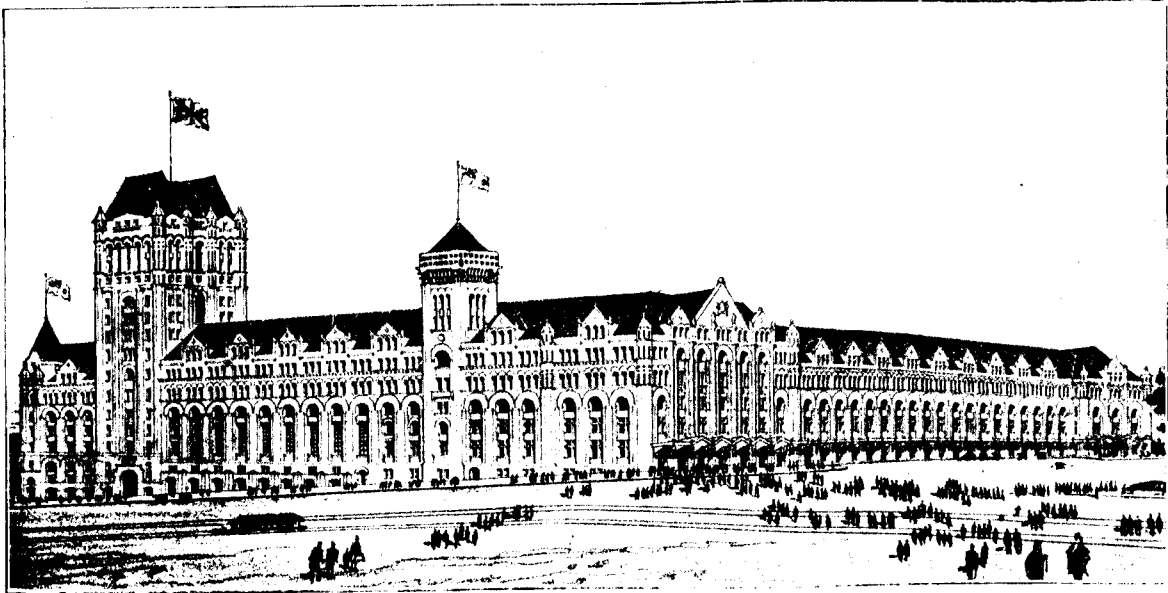
Yours very truly,  
  
THE ART METROPOLE  
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MEDUSA HAS MANY IMITATORS BUT NO COMPETITORS.

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D  
U  
S  
A  
  
W  
A  
T  
E  
R  
P  
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G

is a dry powder, not a wash.

makes concrete absolutely impervious to water.

prevents discoloration and efflorescence.

does not effect strength or set of cement.

can be used under heavy water pressure.

is used by the foremost architects and engineers in this and foreign countries.

M  
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T

is used the same as ordinary Portland cement, from which it differs in no respect except in its pure white color.

should be mixed with white sand or ground marble to produce white concrete.

is being extensively used for

Building Ornamentation

Stucco

Concrete Building Blocks

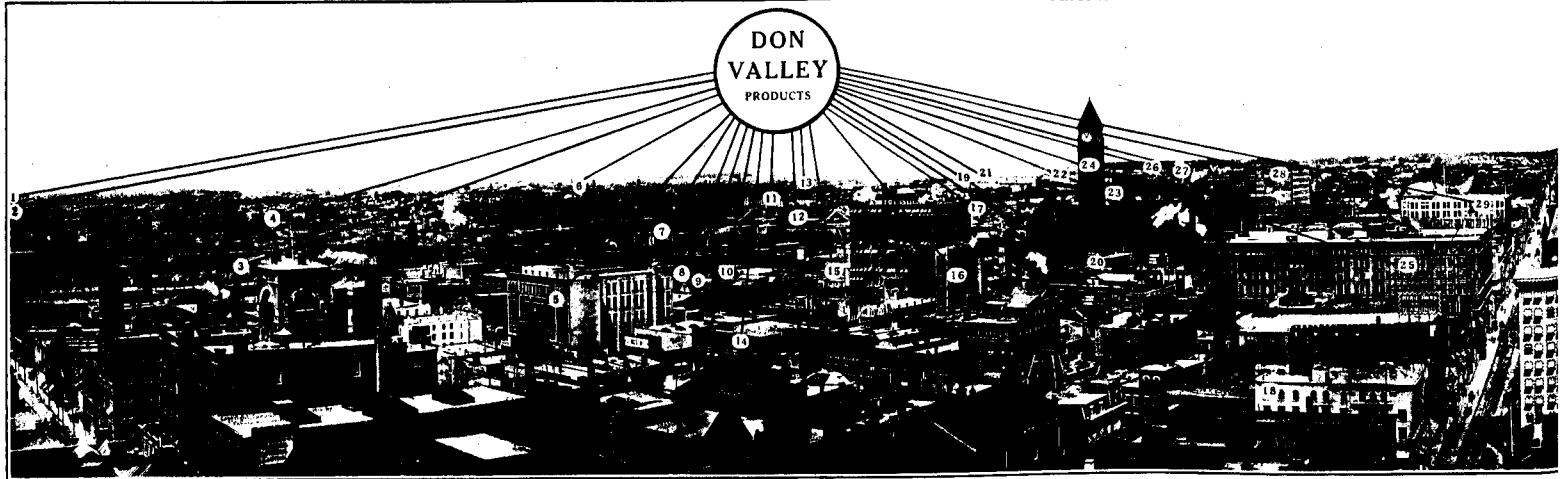
Interior Decorations

Stainless mortar

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# Panoramic View of Section of City of T Where DON VALLEY



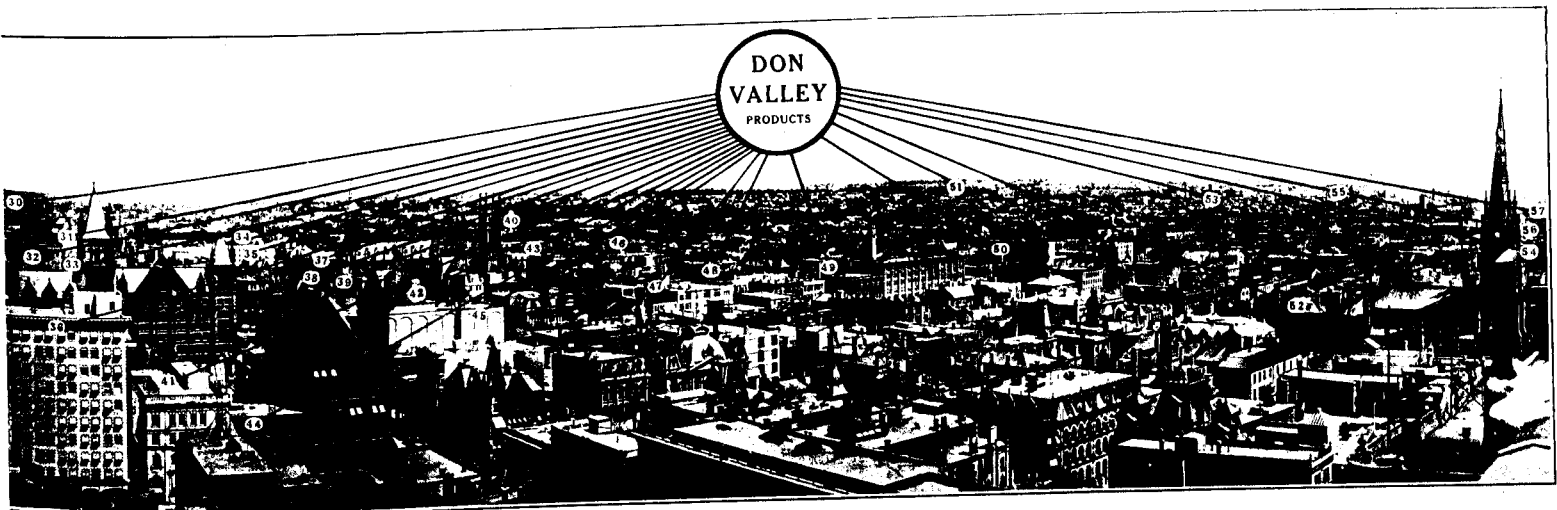
- 1— B —Darling Building.
  - 2— B —W. J. Gage Building.
  - 3— B —Adelaide Street Fire Hall.
  - 4— B —Phoebe Street Public School.
  - 5—AB —Bell Telephone Building.
  - 6— B —Canada Foundry Co.
  - 7—AB —Osgoode Hall (New Addition).
  - 8— B —Ford Motor Co.'s Building.
  - 9— B —Schacht Motor Co.'s Building.
  - 10— B —Russell Motor Car Co.'s Building.
  - 11— B —St. Patrick's Church.
  - 12—AB —Armouries.
  - 13— B —Dental College.
  - 14— B —Stair Building.
  - 15—AB —Gayety Theatre.
  - 16— B —Continental Life Building.
  - 17— B —Manning Chambers.
  - 18— B —Holt-Renfrew Building.
  - 19— B —Physics Building, Toronto University.
  - 20— B —Gerhard Heintzman Building.
  - 21— B —Convocation Hall, Toronto University.
  - 22— B —Engineering Building, Toronto University.
  - 23—AB —General Hospital.
  - 24— B —City Hall.
  - 25—A —Robert Simpson Co. Building.
  - 26— C —Sir Henry Pellatt's Stables.
  - 27—A —Parliament Building.
  - 28—AB —T. Eaton Co.'s Factory.
  - 29—AB —T. Eaton Co.'s Store.
- A—Porous Terra Cotta Fireproofing.  
B—Brick. C—Enamel Brick.

THE buildings indicated here are but a few of the many notable buildings erected in Toronto within the last few years, in which Don Valley products were used. Every street has buildings built of Don Valley Bricks, or fireproofed with Don Valley Porous Terra Cotta. They are specified by architects and used by builders because of the uniform high quality merits that years of service have shown them to possess. Toronto has been called a "brick city." Not only the stores, factories, and commercial buildings, but also over 90 per cent. of the residences are built of brick, and as Don Valley products are used greatly in excess of all other makes, it can be safely inferred that to their unfailing reliability, brick owes much of its popularity in this city.

Montreal Agent  
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# DON VALLEY

# Toronto Showing Some of the Buildings PRODUCTS Are Used



ARCHITECTS and Builders who are erecting buildings of brick construction have two big requirements that their material must fulfill. It must be up to the accepted standard for quality, and they must be assured of speedy and regular deliveries. The Don Valley Brick Works are so situated that they can deliver their products to any part of the city on the shortest notice, and the plant is of such an extent that the largest contracts can be undertaken with ease.

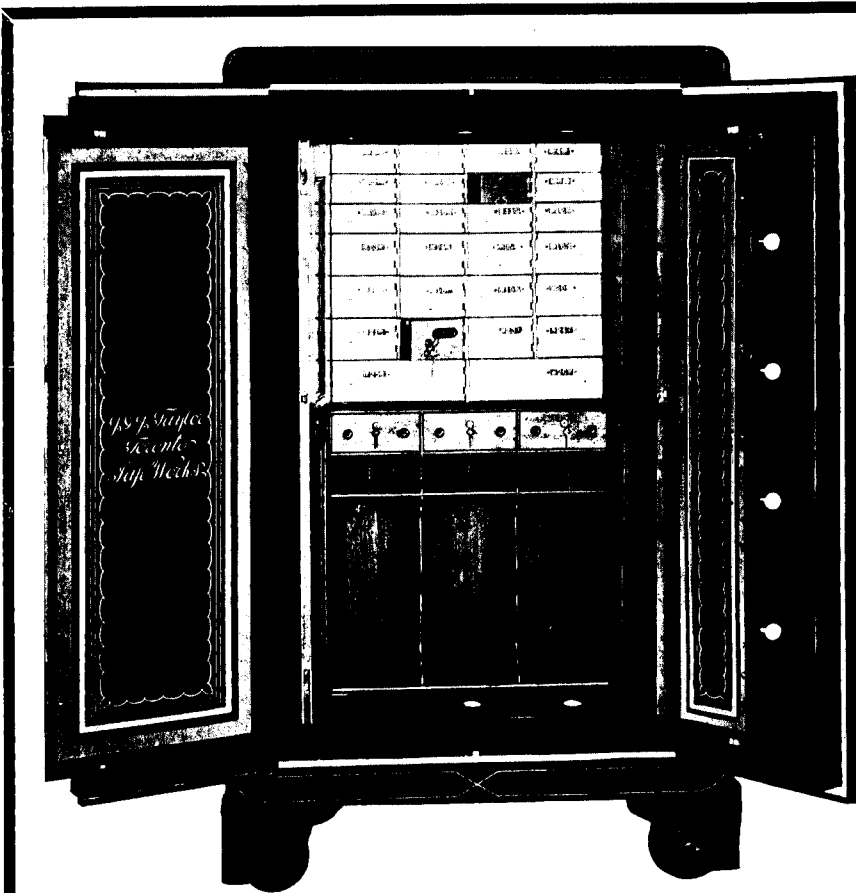
The other requirements mentioned, that of quality, is most amply fulfilled. The clay beds operated by this company are unrivalled for the making of bricks and Terra Cotta Fireproofing. In color and structural stability Don Valley products are the first choice of those who wish to get the results their building plans call for.

- 30—AB —Traders Bank Apartments.
- 31— B —Massey Hall.
- 32—AB —Heintzman & Co.'s Building.
- 33—ABC—McDonald & Willson Co.'s Building.
- 34— BC—Holy Blossom Synagogue.
- 35— B —Macmillan Publishing Co.'s Building.
- 36—A —Lumsden Building.
- 37— B —St. Michael's School.
- 38—AB —St. Michael's Hospital.
- 39— C—Vokes Hardware Co.'s Building.
- 40— B —Palm House, Allan Gardens.
- 41—AB —Birkbeck Building.
- 42— C—Orr Brothers Building.
- 43— B —Arena.
- 44—AB —Toronto Electric Light Co.'s Building.
- 45—AB —Shea's Theatre.
- 46— B —King Edward Apartments.
- 47—AB —McLaughlin Carriage Co. Garage.
- 48— B —Bennett & Wright Co.'s Building.
- 49— B —Robertson Bros. Building.
- 50— B —Fred Victor Mission.
- 51— B —New Government House.
- 52—AB —St. James' Parish House.
- 53— B —Sheet Metal Products Co.'s Building.
- 54— B —Christie, Brown Co.'s Building.
- 55—AB —Reinhardt Brewing Co.'s Building.
- 56— B —Gendron Mfg. Co.'s Building.
- 57— B —House of Providence.

A—Porous Terra Cotta Fireproofing.  
B—Brick. C—Enamel Brick.

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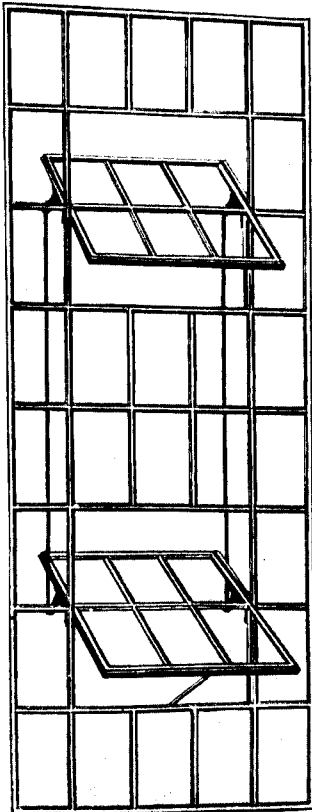
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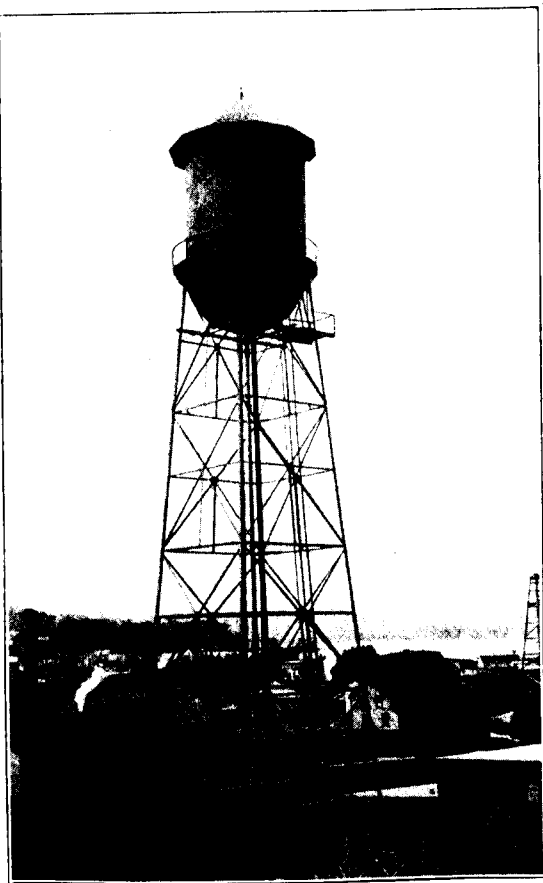
"Galt" Lath is becoming more and more popular. Plasterers are finding out that it takes less mortar, has a better key and is more reasonable in price than any other kind.

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**The Only Water-proof,  
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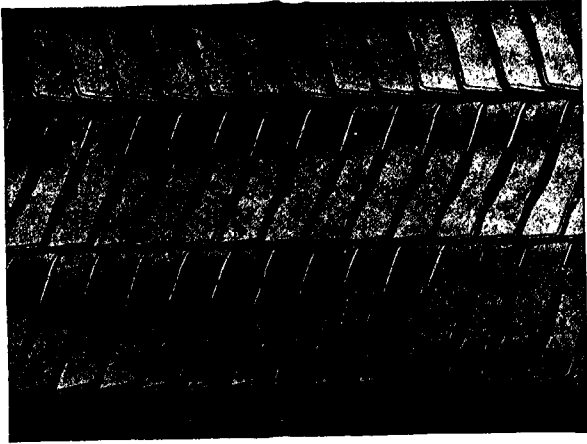
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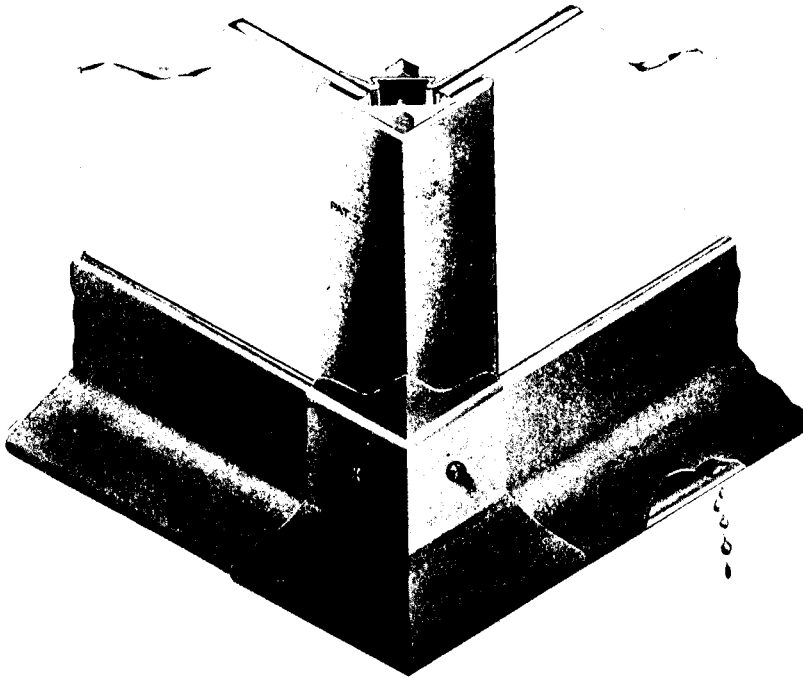
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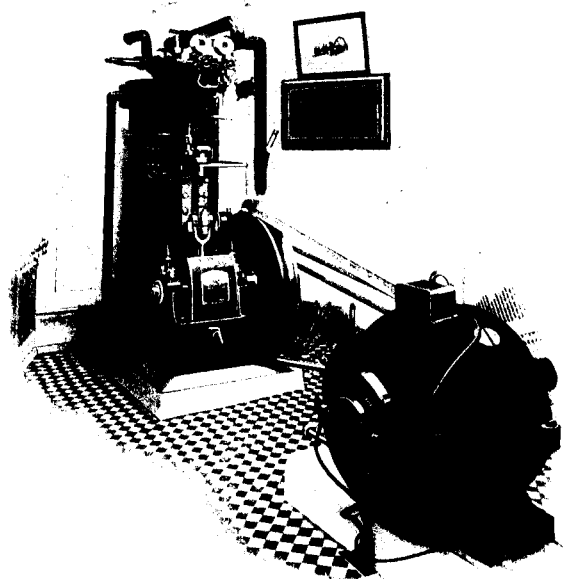
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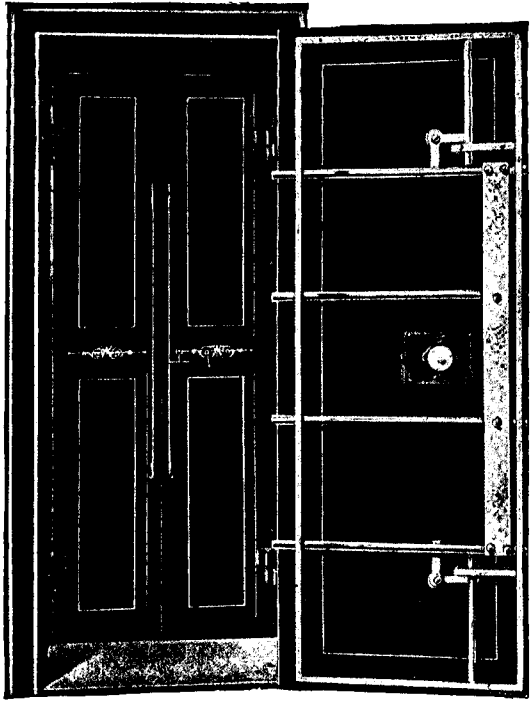
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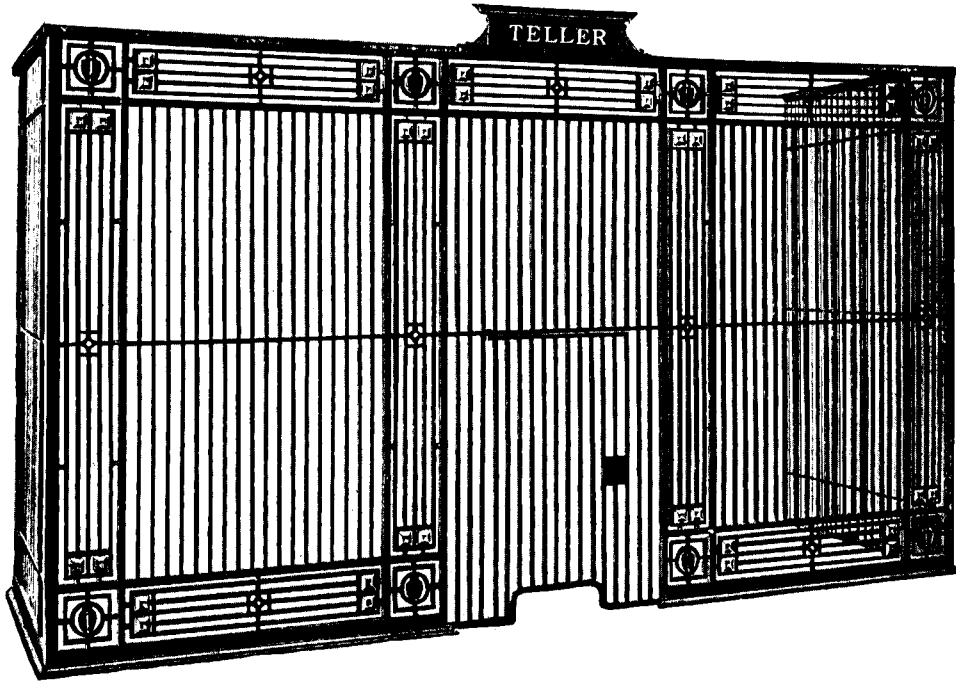
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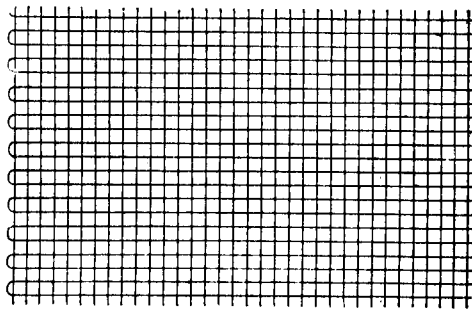


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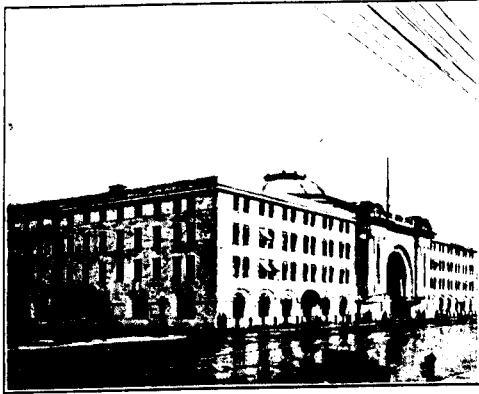
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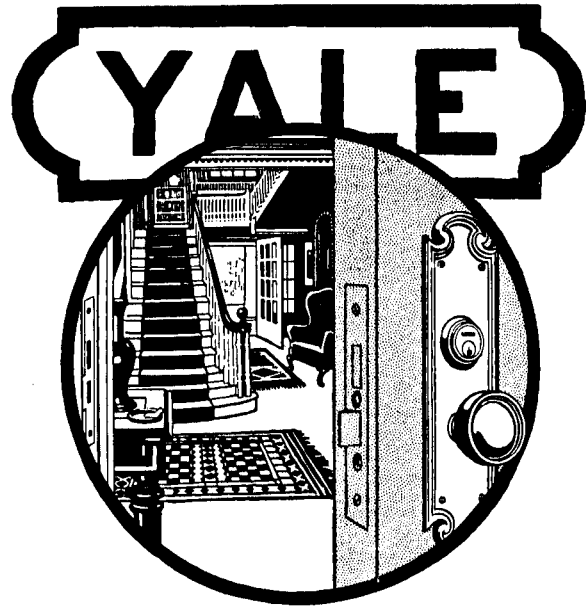
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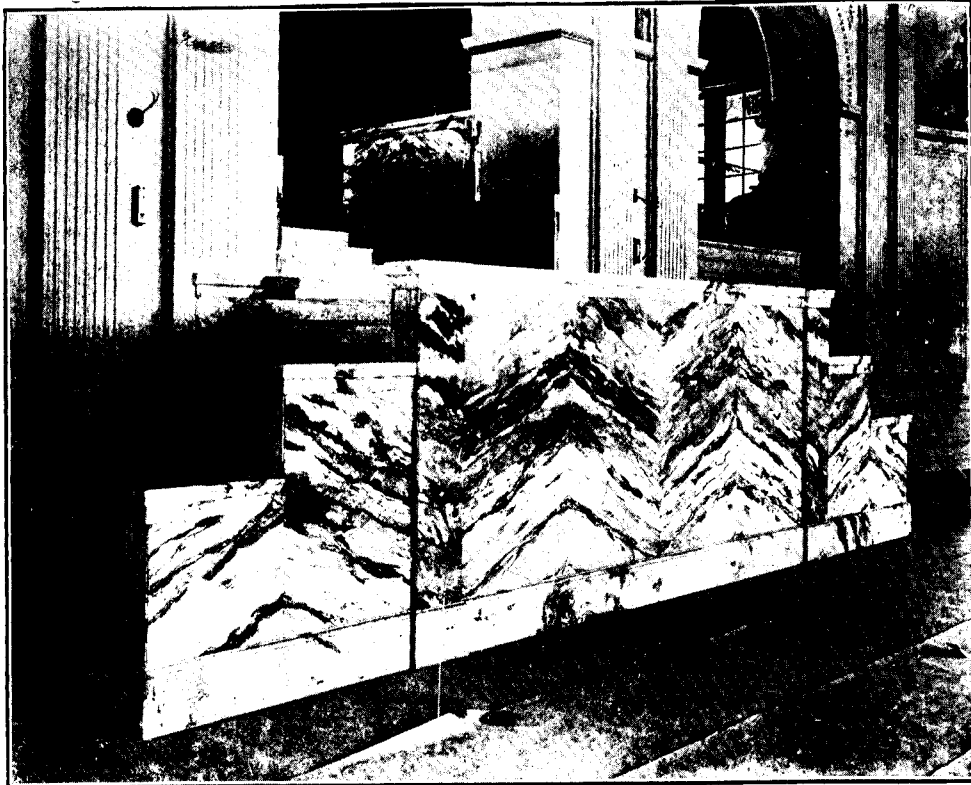
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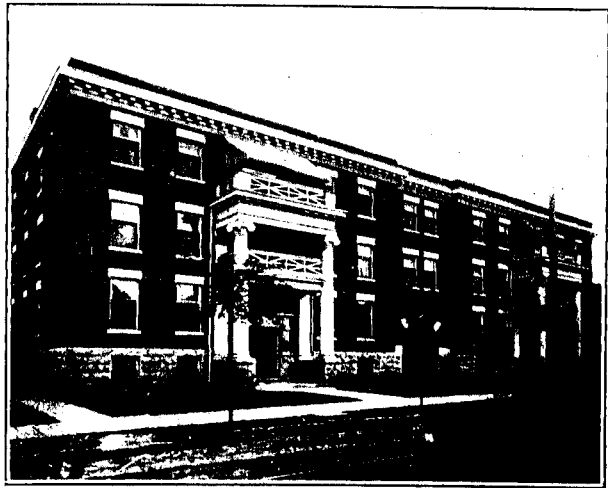
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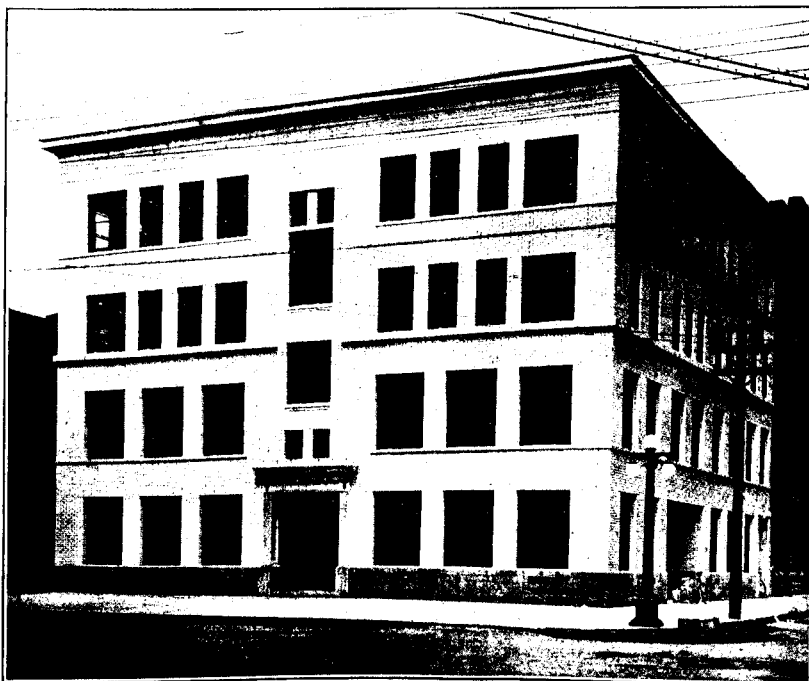
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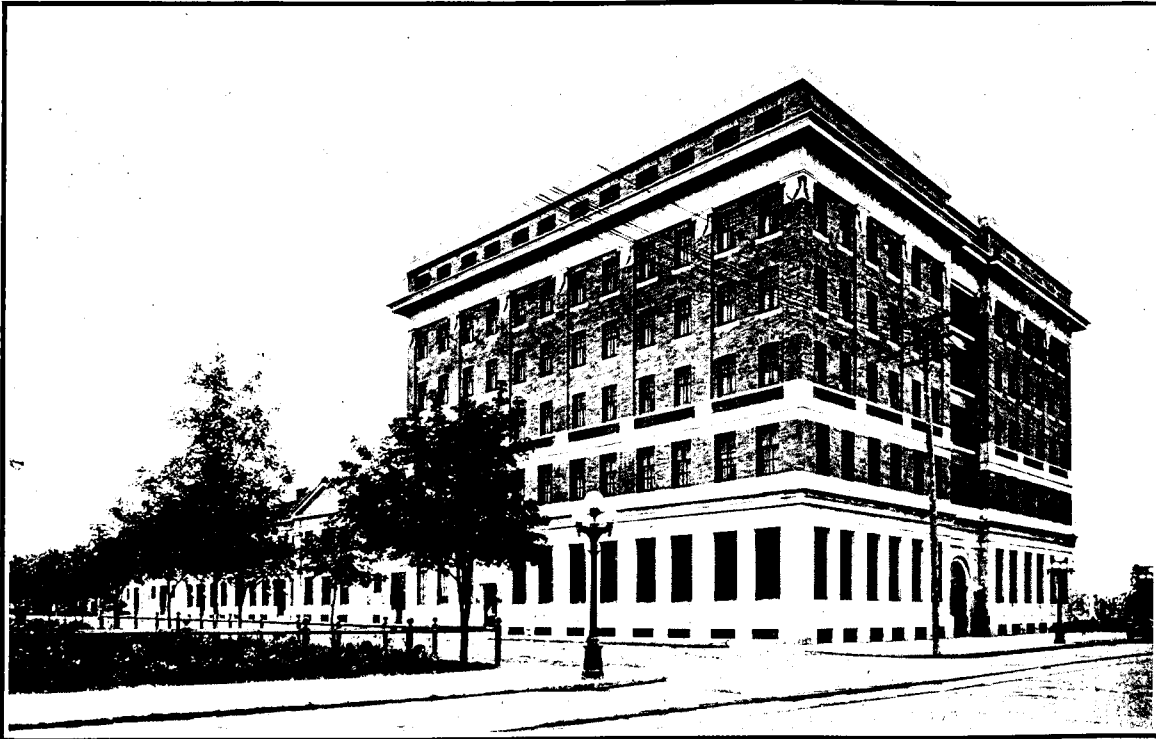
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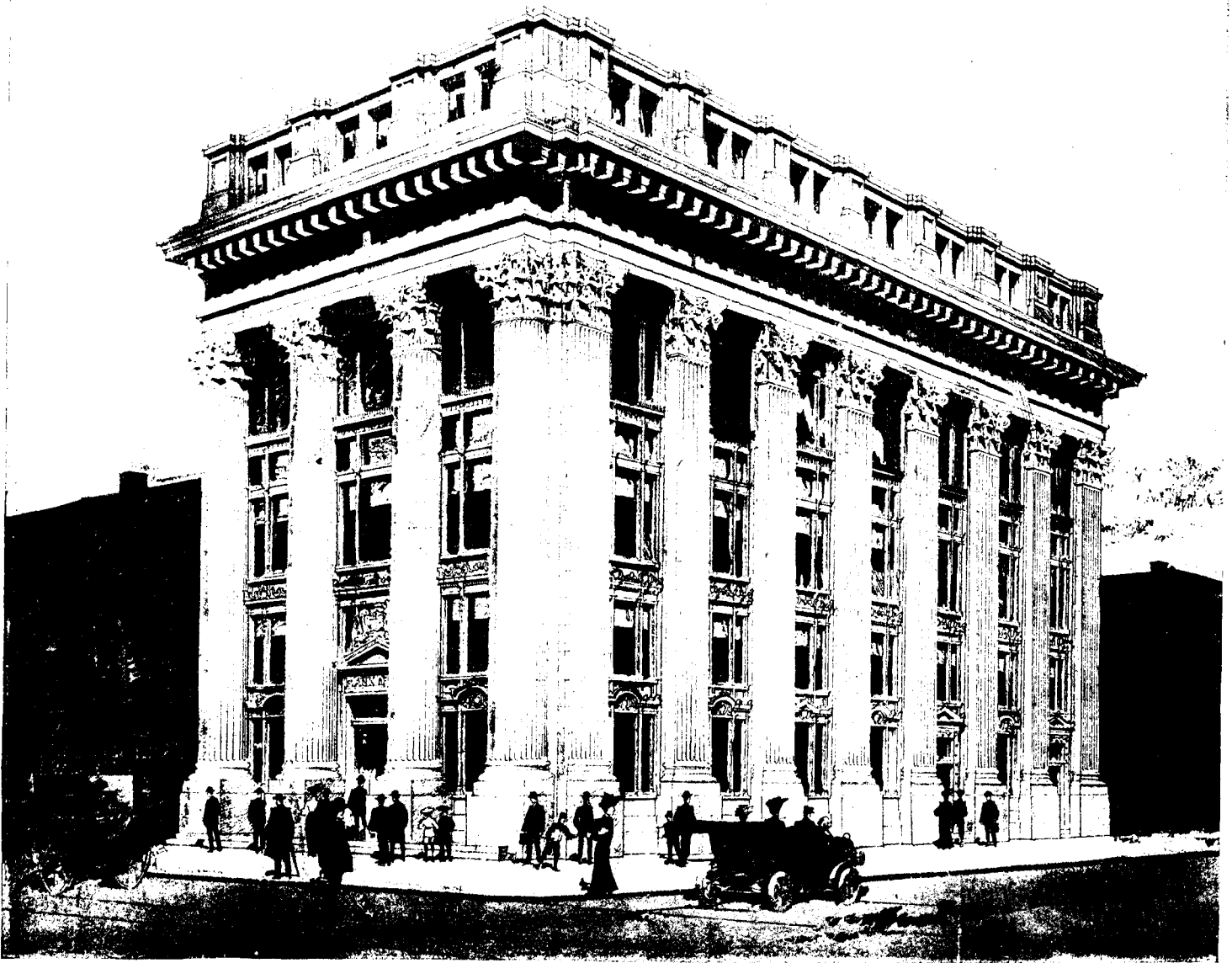
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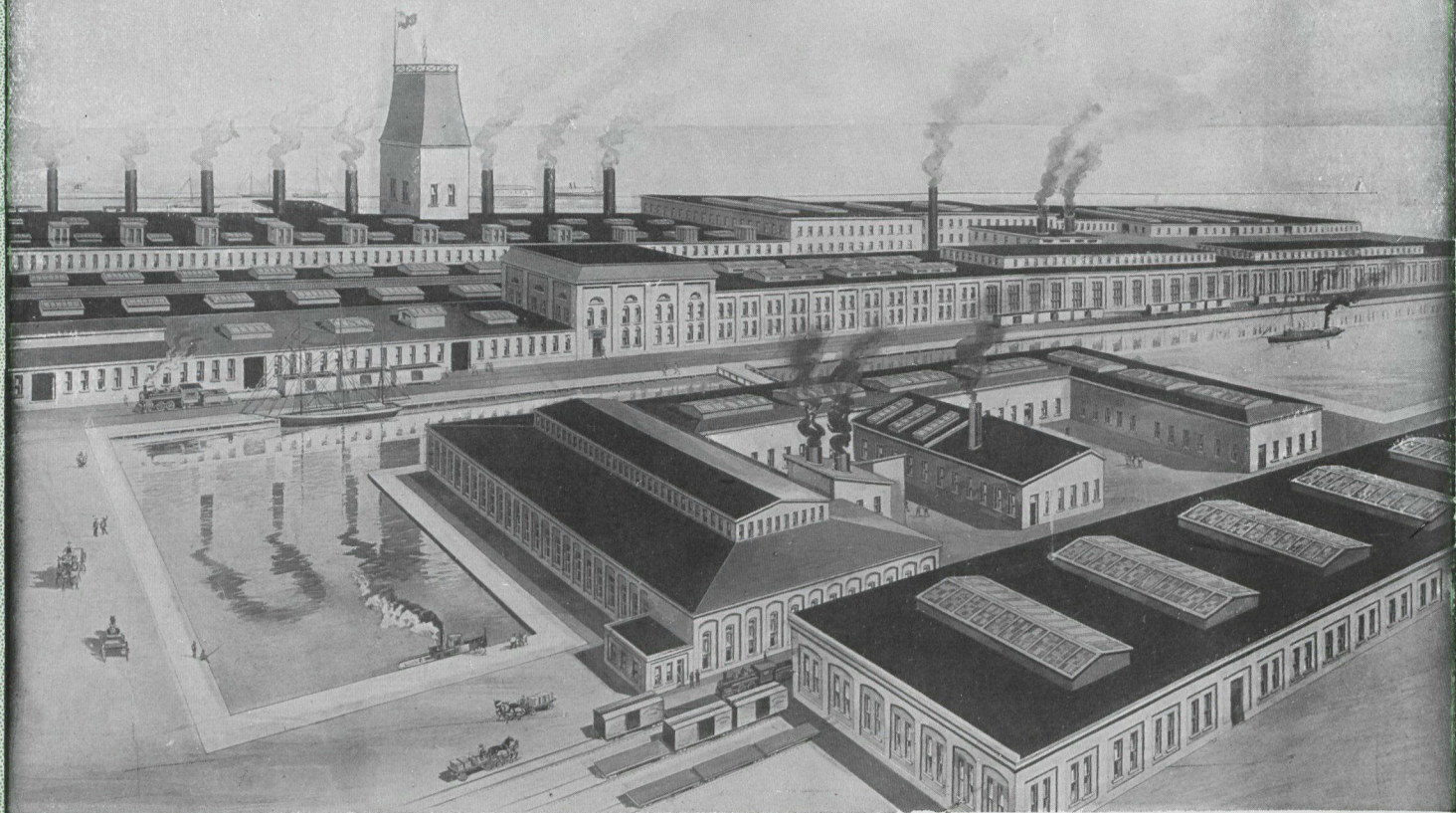
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# CONSTRUCTION

VOL. VI

No. 1

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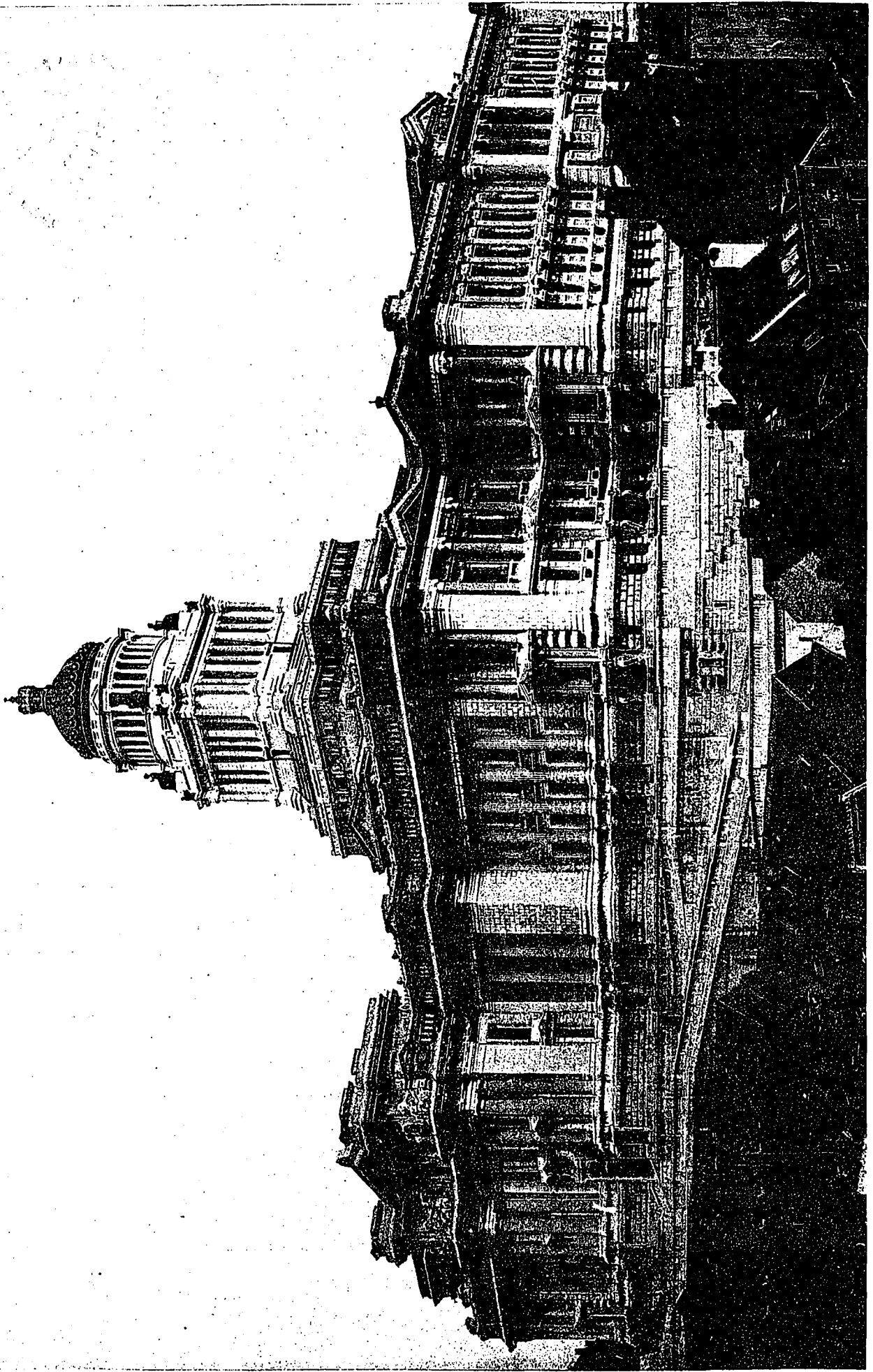
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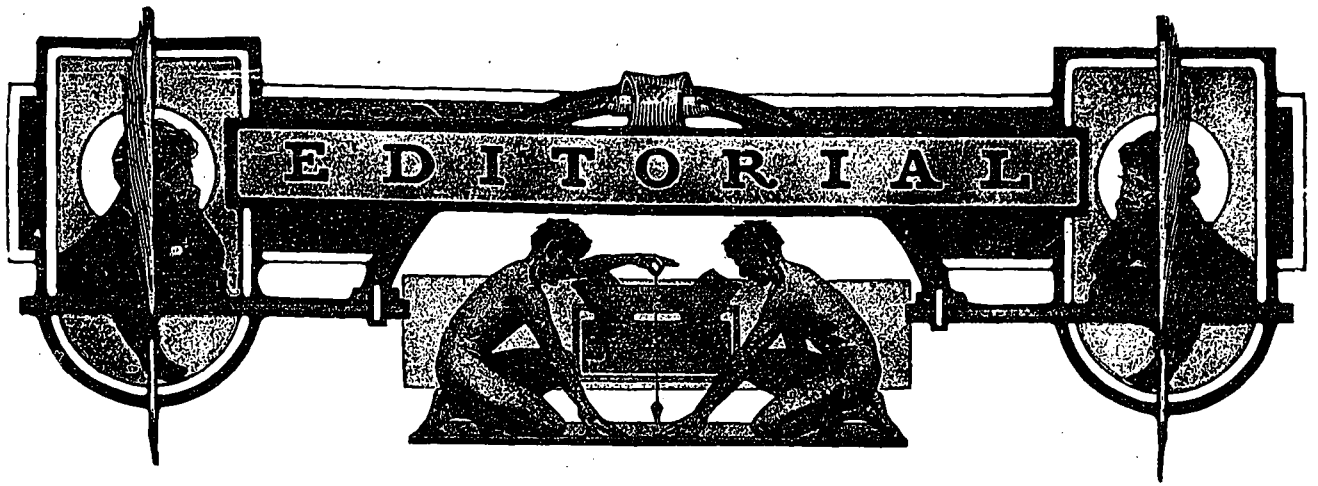
NEW YORK

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LE PALAIS DE JUSTICE, BRUSSELS, BELGIUM.





**Q** *Fees for architects—Is the principle underlying the remuneration of architects wrong, or should he be paid for knowledge and experience?*

FOR SOME TIME the architects have been discussing the present method of charging for their services. It is a condition unsatisfactory to the profession at large and in a few instances has become a personal matter with the individual himself. Quite a number of prominent architects have, through their artistic temperament and practical ability, reached a position enabling them to demand whatever fee they deem advisable. Others equally as capable must content themselves with a certain fixed amount similar to that demanded by the incompetent designer. Consequently the question arises: shall the architect, similar to members of other professions, be paid for his training and true worth or held to a slavish pittance hardly worth his best and conscientious efforts when times are good and insufficient to meet the actual cost of maintaining his office when reverses set in? If it is decided to let experience and ability set the standard the question arises, how can this be accomplished? At present we discountenance the architect who accepts work at a reduced figure. Assemblies and conventions have passed by-laws regulating a minimum fee and condemning the practice for a less profit. Yet in spite of this a large amount of building is being done by men who have compromised themselves and their profession by cutting the standard charge. In a recent address before the Vancouver architects, J. L. Putnam expressed the idea that a safe rule for minimum charge would be to add two or three per cent. above the actual cost, said sum to become the architect's bonus. As to the size of the fees, he believes that it depends upon ethical points underlying the practice of architecture: we should have a proper appreciation of our profession and command the respect of our clients; there should be a strict and unselfish co-operation among the various members; a disciplinary measure should be administered to the member who violates the obligations established. It is to be hoped that the chaotic condition will soon disappear and each architect will feel that his remuneration warrants his very best efforts.

**Q** *Enormous loss by fires in Canada—Comparison with European countries—Causes for such a contrast with remedies to counteract same.*

OFFICIAL REPORTS present interesting and surprising data in regard to fires. The average annual cost per capita is \$3.07 in the Dominion of Canada, and \$3 in the United States; a startling fact when we realize that it is only 33 cents per capita in European countries. This waste may be appreciated all the more if we consider that our loss on this continent is \$500 per minute. Franklin H. Wentworth, secretary of the National Fire Protection Association, speaking on this subject at the Canadian Manufacturers' meeting in Toronto, pictured our people as a race of spenders, wasteful in everything and extremely careless to the destructive effects of fire. Among the various causes for large conflagrations may be cited the inflammable material scattered throughout factories and other buildings; the flimsy construction of walls and open stairways; wooden structures, etc. The members of the N.F.P.A. are to be highly commended for their consistent efforts in eliminating this needless and bitter loss. They endeavor to make the business man see the wisdom of segregating all loose material in special rooms; they encourage the building of fireproof walls and doors; they emphasize the need of enclosing the stair halls and elevator shafts. At present they have one hundred and sixty newspapers using their monthly bulletins. They are entering a strenuous campaign against the dangerous manner of celebrations and encouraging the use of asbestos in Christmas decorations. Thirty of the United States have a Fire Protection Day to teach the grown-up people as well as the children the ordinary caution necessary for their own safety. It is very evident that if we are to prevent the people of Canada from paying for the enormous losses by fire we must all become active. The citizen must feel that his careless use of the match which lights everywhere is responsible for part of the high cost of living. The builder and contractor must finish each structure with every thought of future conflagrations. The architect must impress his client with the absolute need of fireproof buildings, equipped with the sprinkler system and all safety devices known to the profession.

**Q** *The housing problem—Evils attached thereto, together with a means of eradicating same for the betterment of everybody concerned.*

"A FEW MONTHS AGO a gentleman was showing me over the beautiful residential district of an attractively small city. After an hour or two of this I said, 'Now let me see how the other half lives.' 'The other half?' he replied; 'why, there isn't any to speak of. I don't believe we have got a tenement house in this whole town.' I have no doubt he was right, but for all that in ten minutes we were in a quarter of the city which in some respects was as wretched and miserable as the heart of the tenement house district in New York or Boston. We stood in front of a row of five small, low, two-story wooden buildings, neatly painted a bright yellow and altogether not a bad looking collection of dwellings, but going behind them, there was a different scene. These five houses held about forty people. The only water supply for them all was a single hydrant in the yard, the only convenience for the disposal of waste was beside the hydrant and naturally the yard was swimming with slops and dish-water; the only toilets were two or three open privies also in the yard, and in fact the ordinary requirements for decent living were all in the yard, and, as nearly always happens in such cases, the conditions were indescribably filthy."

Such is the condition of small cities cited by Elmer S. Forbes, chairman of the Housing Committee of Massachusetts Civic League. This is a phase of the housing problem pertaining to our Provinces as well as the States, and as such merits careful consideration. Too often is the housing reform movement connected with the tenement districts. It is time for us to realize the need of a strenuous reform in the unhealthy and sordid surroundings of our small homes and emulate the wholesome and artistic treatment encouraged throughout the various sections of England.

The essentials of better living are within the reach of all. There is no need of the miserable housing conditions which exist throughout the Dominion; there is plenty of room, fresh air and incentives to make our dwellings devoid of dirt and disease. The landlord must see to it that the back of his speculative building is sanitary in every respect and capable of being made a haven of attractiveness to the tenants and not a breeder of sickness and crime.

Too often the dirt without is productive of similar conditions within. Is it any wonder that the places are overcrowded and unsanitary conditions exist when we see all about us the picture so forcibly stated by Mr. Forbes? If a large number of degenerates, ignorants or careless people continue to menace the health of our communities it behooves those in authority to take emphatic measures, and by doing so insure protection to others who are endeavoring to make their homes and surroundings beautiful and sanitary.

The existing evils can be easily remedied. Laws must be passed enabling the people in power to investigate and act accordingly. If necessary the amount of space for each person should be allotted; a minimum size of windows given to stated areas; sufficient fater supply to meet existing needs; and proper sewerage disposal. The fault does not rest upon the lack of inspectors and organizations interested in reform as much as it does upon their efficiency. The officials are amply able to handle the work if they are made to understand that the laws must be enforced. And it has been evidenced more than once that the people must act forcibly if they wish to eliminate unwholesome conditions.

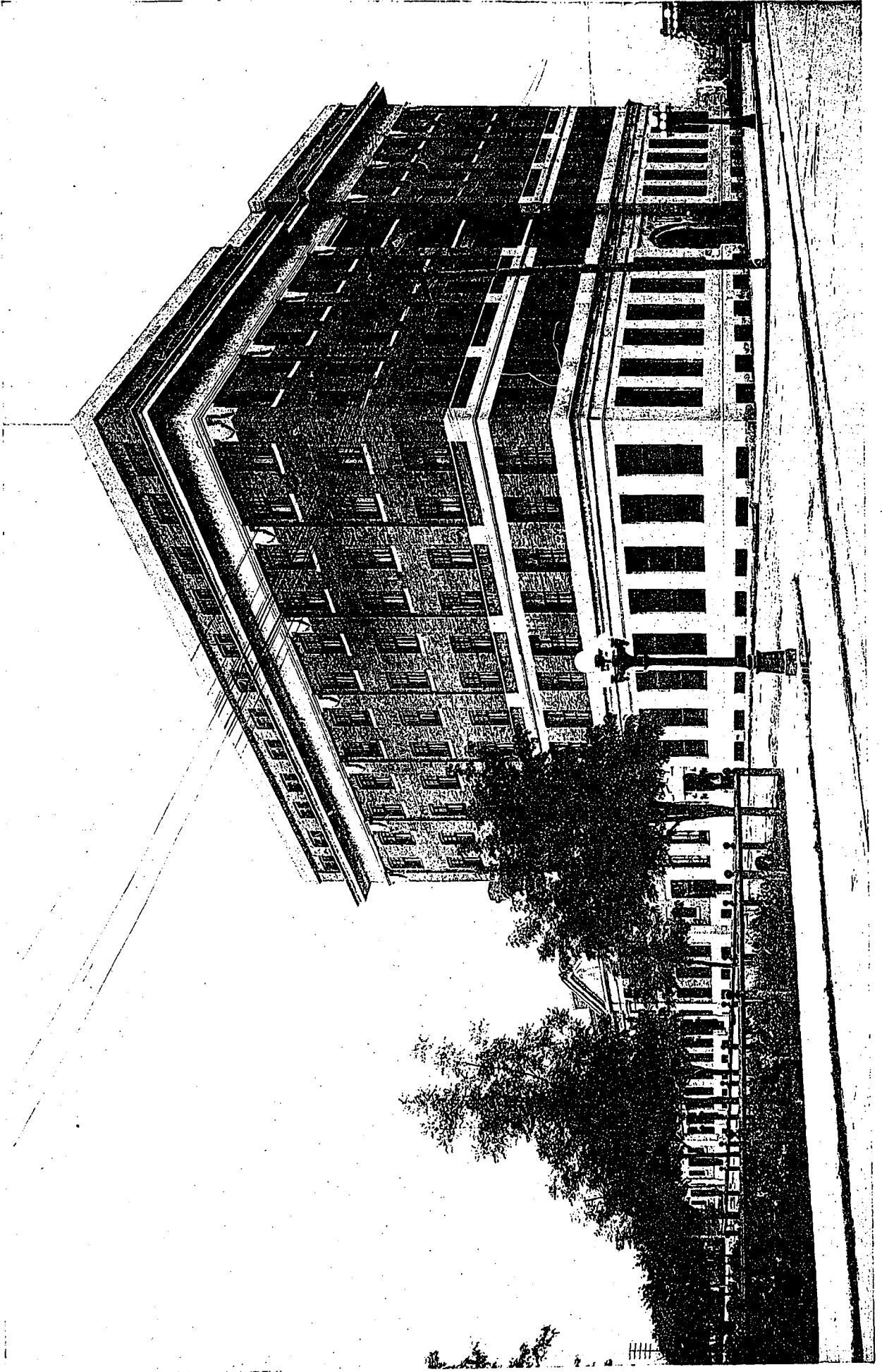
Another danger pointed out is the wooden three or four family flats. This type of building is becoming well established in the States and is fast encroaching upon our own cities. The main objections to this offspring of real estate companies and unprincipled architects and builders, are the flimsy constructional features, the fire hazards and the loss in value of neighboring lots.

The following examples, culled from daily newspapers, are similar to many within the experience of everyone: "A citizen built a beautiful house within an area of 50,000 square feet of land—and presently found himself confronted by a garage." "A gentleman expended \$17,000 on his place, and by and by a fellow citizen built a row of seven one-story shacks on the opposite side of the street. A third citizen whose property cost him \$50,000, awakened one morning to find a Chinese laundry in the basement adjoining his own, and the selling price of his estate was reduced by an unscrupulous neighbor to \$15,000. A comfortable house was built on a generous lot and adorned with trees and shrubs. Shortly after a speculator planted a flimsy fire-trap of a three-decker within a few feet of the former's lot line, cutting off the sunlight and robbing the owner of half the savings of a lifetime."

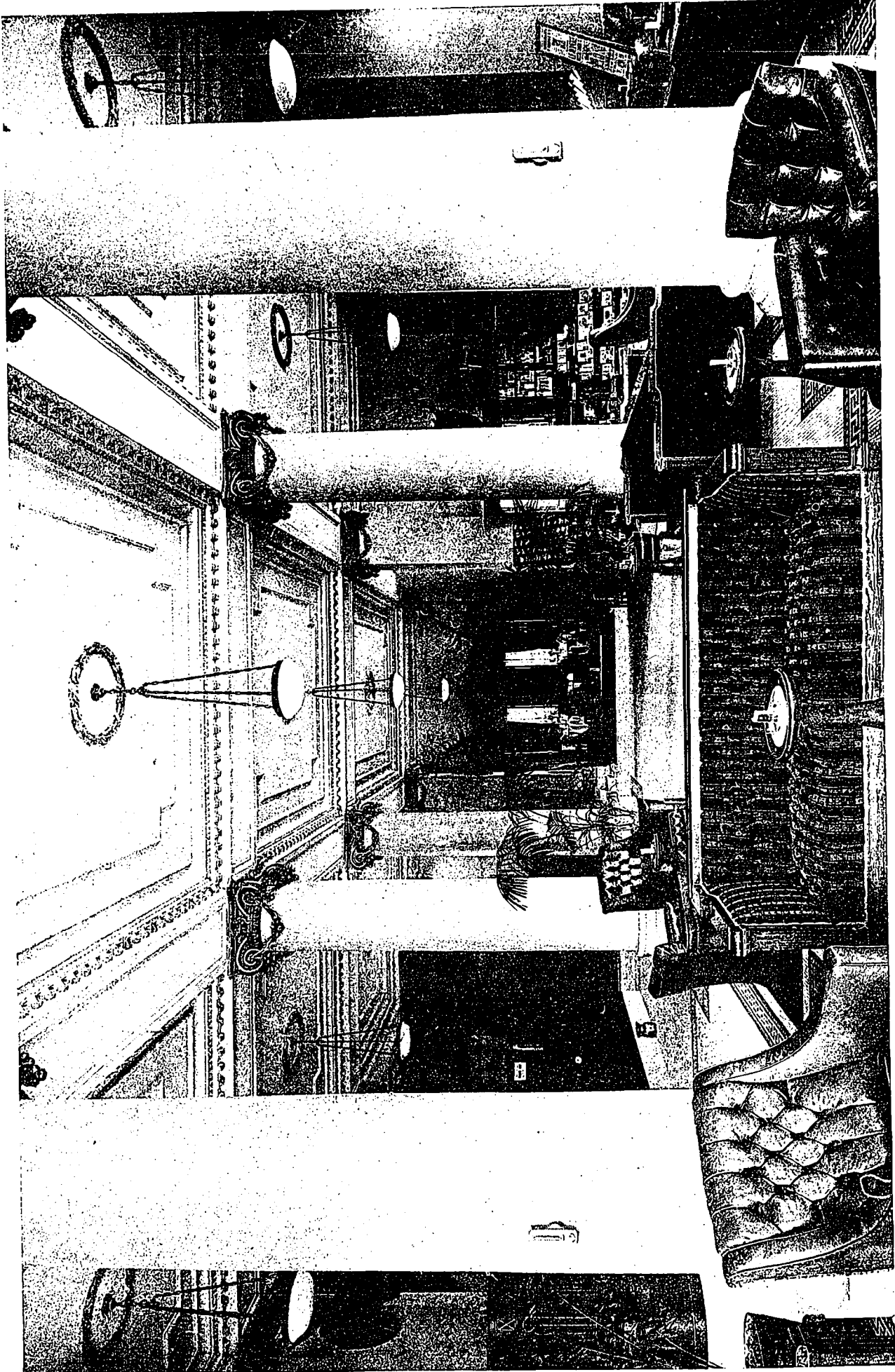
The same unsanitary conditions exist in the city as are found in the small towns. Only the number of them in the cities augment the need of reform. It is necessary to change dark hallways and rooms for fresh air and sunlight; to furnish proper sanitation for wet and squalid yards; to eradicate the dirt and overcrowded quarters with cleanliness and freedom. The speculator must learn to consider the value of his tenants both as to their health and their need of ample protection from fire.

We heartily agree with the statement that the one way to correct this evil is to wipe out the distinction between tenement and private houses, bringing them all under one general housing law. This has been tried and found successful in every instance. It is time for our inspectors to weigh carefully the responsible position in which they are placed and see to it that the people as a whole are free from the carelessness of others. If they show their inability to cope with the situation then the citizens must bring about a condition whereby the laws will be administered to the total extinction of such existing evils.

CONSTRUCTION



PRINCE EDWARD HOTEL, BRANDON, MANITOBA.



ROTUNDA, PRINCE EDWARD HOTEL, BRANDON, MANITOBA.

PRATT & ROSS, ARCHITECTS.

# Prince Edward Hotel, Brandon, Man.

PRATT & ROSS, Architects.

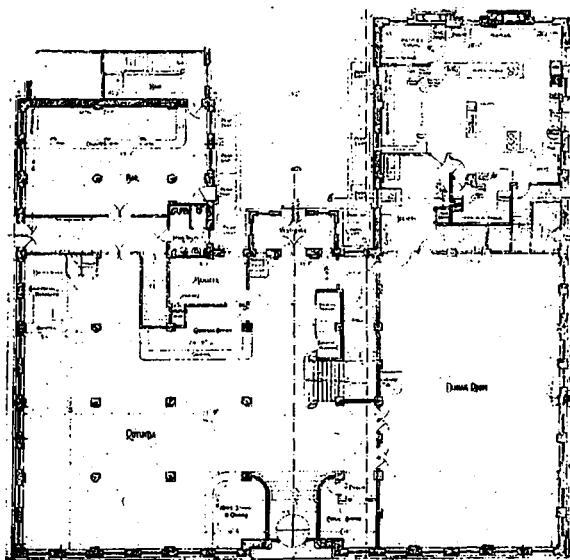
**A** MOST interesting problem had to be worked out in the planning of the Prince Edward Hotel. The general scheme included a terminal railway station approximately two hundred feet long in connection with the main structure. A solution was finally reached whereby the guests can enter the main rotunda through a rear entrance leading direct from the concourse.

This building is typical of the high class work that is being done throughout the Western Provinces. It is built of reinforced concrete construction throughout, with exterior walls of Tyndall stone and Roman brick. There is a frontage of one hundred and twenty feet by one hundred, while the height is eighty-two feet, consisting of six stories and a basement.

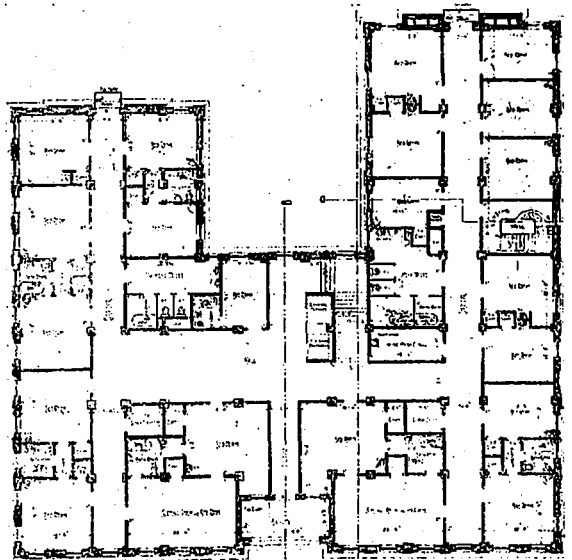
Erected by the Canadian Northern Railway for the accommodation of travellers, especially salesmen, it is equipped with modern improvements and decorated in an especially attractive style. In the basement are located the billiard room, barber shop, public baths, lavatories, storeroom, laundry and machinery room. Provision is also made for a future grill room and cafe. On the ground floor adjoining the station is the barroom, finished in oak, with red tile floors. The rotunda is situated in the north-east corner of the hotel and fronts on the two streets. It is 76 by 62 feet and provides for the main office, manager's office, check room, news stand, telephone

with hand painted wall decorations. This room is free from columns so as to give an unobstructed floor for assemblies. It is one of the best interiors in the West. The chairs are upholstered in a specially designed tapestry fabric; the electric ceiling fixtures are comprised of satin finish brass work and crystal drops; the draperies are made of heavy Sundour fabric with sun-proof lining; while the window is covered with French "filet" lace panels mounted on heavy quality serim. To the rear of the dining room is the kitchen, 35 x 39 feet, pantries, bake shop, etc. The private dining room is probably the most unique room in the house, being decorated and furnished in the Jacobean period. The woodwork is of early English oak and the hand painted panels depicting mounted knights of the Jacobean times. The fireplace, with carved woodwork, lends a cheerful aspect. The main stairway of marble treads is covered with Khorassam rugs to the floor above.

The drawing room on the first floor, 32 by 48 feet, is decorated and furnished in Adam's period. The furniture is of solid mahogany, comprising davenports, fireside chairs, reception chairs, mahogany pedestal lamps, consul tables, fireplace, electric fixtures. The over-curtains and lambrequins are of French pan mohair, lined with non-fading silk; the walls of this room are papered in silk of the same design as the draperies; the under-curtains are of point Venisse lace; while the rugs are of Royal Wil-



GROUND  
AND  
SECOND  
FLOOR  
PLANS



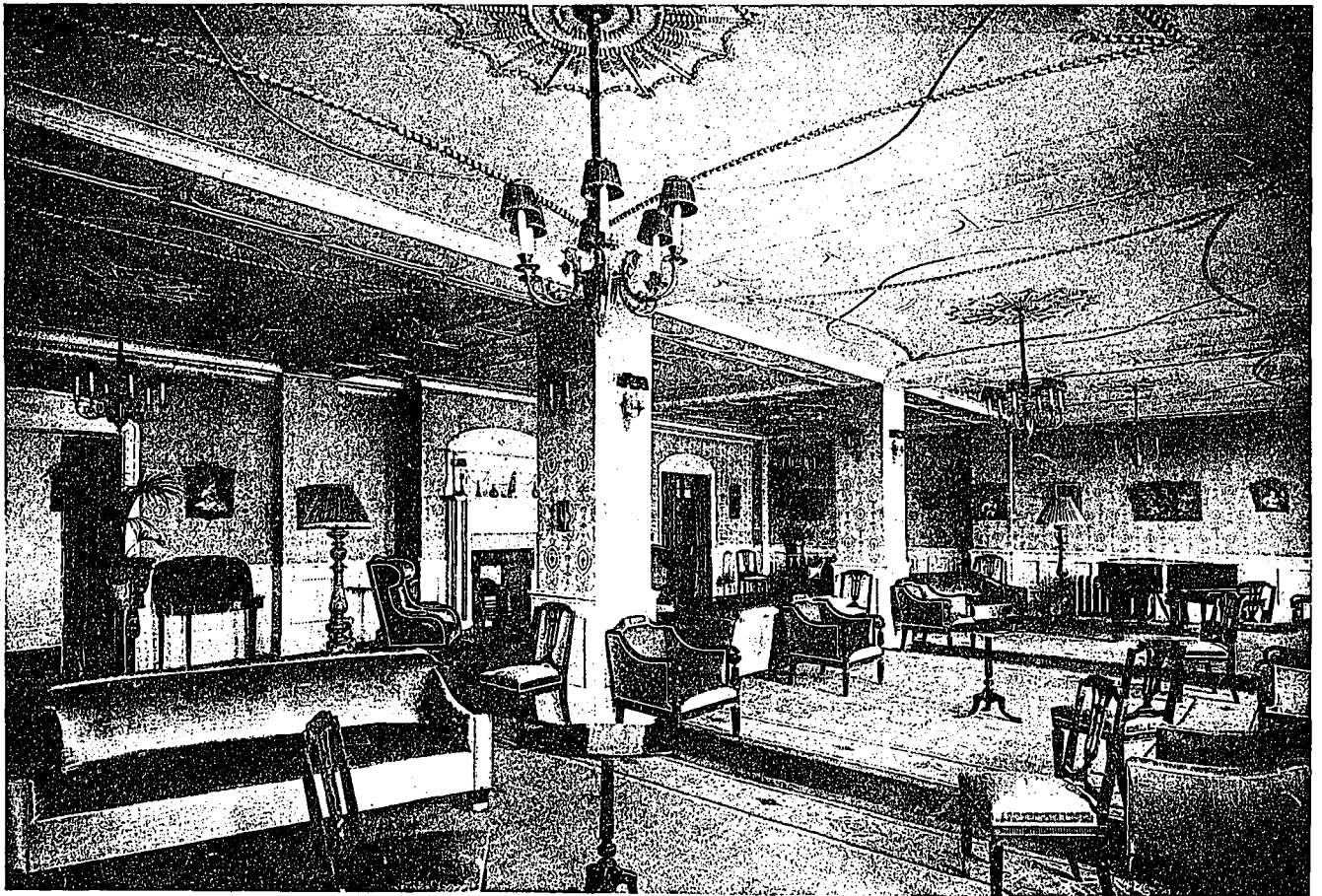
and telegraph offices. The rotunda is furnished with solid quarter-cut oak davenports, easy chairs, smoking chairs and smoker's tables, with a section set apart for writing tables. The draperies and lambrequins are of heavy Sundour fabric with applique trimming following the design of frieze decorations.

To the west of the rotunda is the main dining room, 39 by 63 feet, which is panelled in mahogany

ton. Adjoining the drawing room is the writing room, fitted with tables and desks, warm oriental rugs and window draperies of lace panel "filet." This room opens on to the front balcony.

One-half of the bedrooms, one hundred in number, are arranged en suite, supplied with private baths. The finish is in mahogany and fumed oak with floors of heavy Wilton carpet.

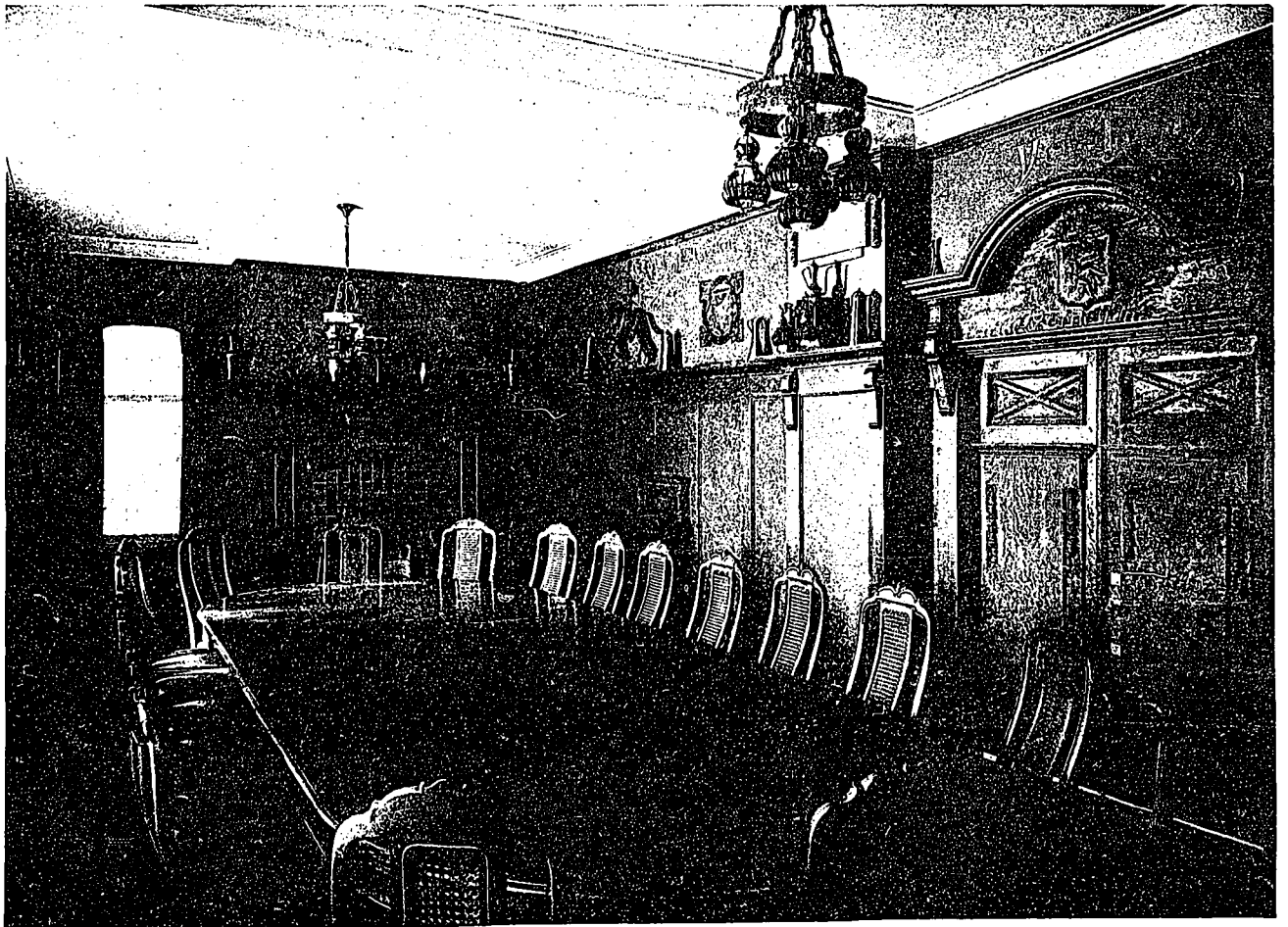
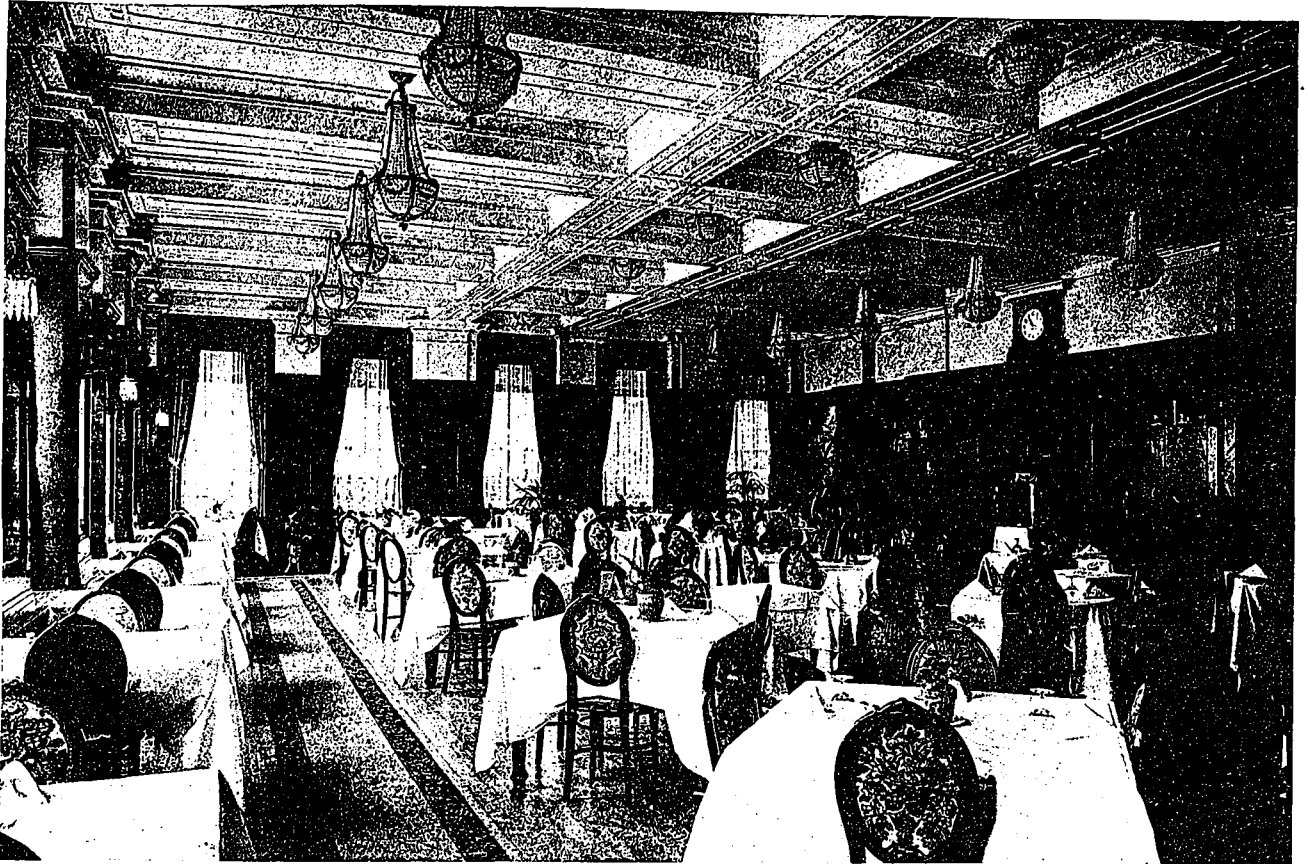




BAR AND DRAWING ROOMS.

PRINCE EDWARD HOTEL, BRANDON, MANITOBA.

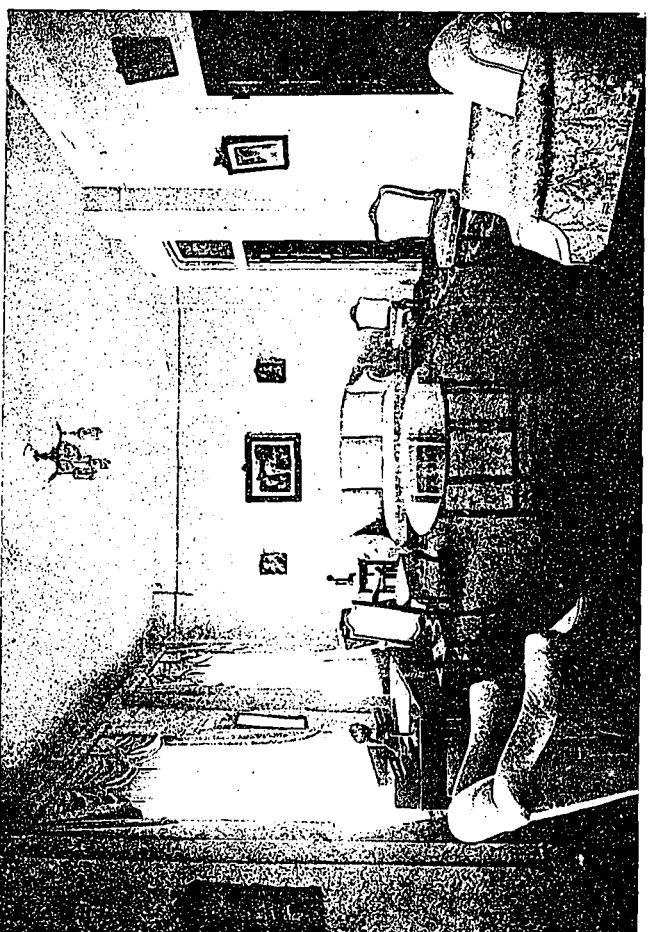
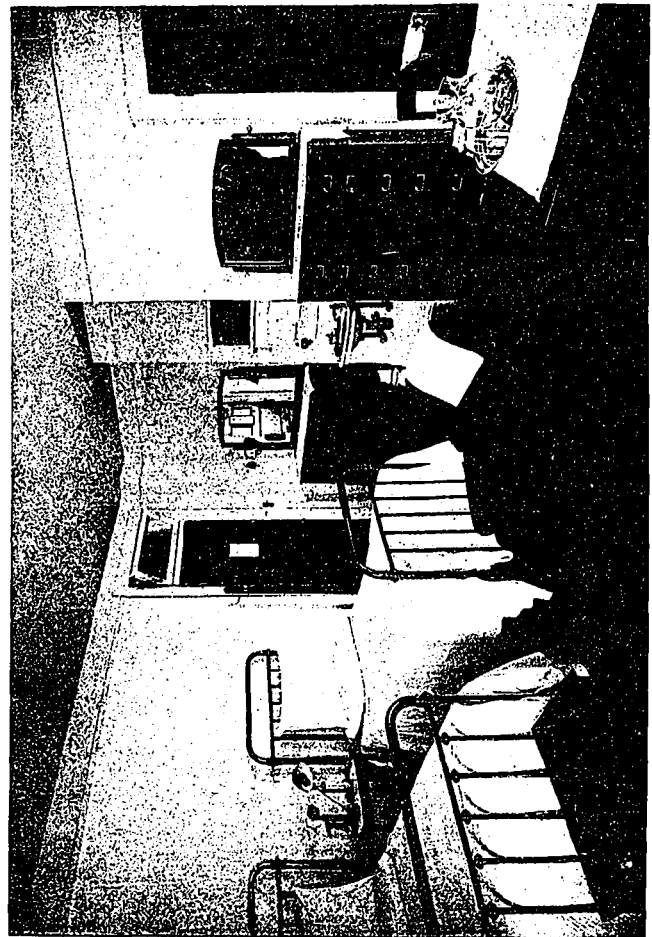
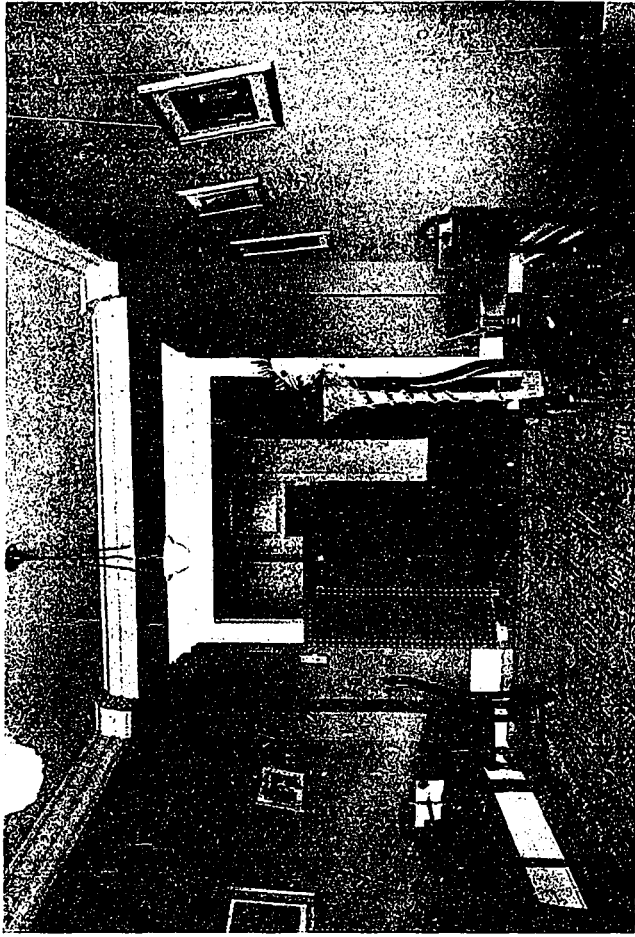
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DINING ROOMS.

PRINCE EDWARD HOTEL, BRANDON, MANITOBA.

PRATT & ROSS, ARCHITECTS.



LADIES' WRITING ROOM.

PRIVATE BED ROOM.

PRINCE EDWARD HOTEL, BRANDON, MANITOBA.

PRAATT & ROSS, ARCHITECTS.

ROYAL SUITE.

ROYAL SUITE.



# Competitive Design for the City Hall, Moose Jaw, Sask.

C. H. BOYLES.

THE successful competitors for the City Hall at Moose Jaw have been announced. First prize, John D. Atchinson & Co., Winnipeg; second prize, Maw & Drewitt, Toronto; third prize, Sharp & Brown, Toronto; fourth prize, Charles S. Cobb, Toronto. The conditions of the programme are well presented and have obtained very satisfactory results. An unusual problem confronted the designer, who had to plan the building over the bed of an old stream which had been drained at some former period.

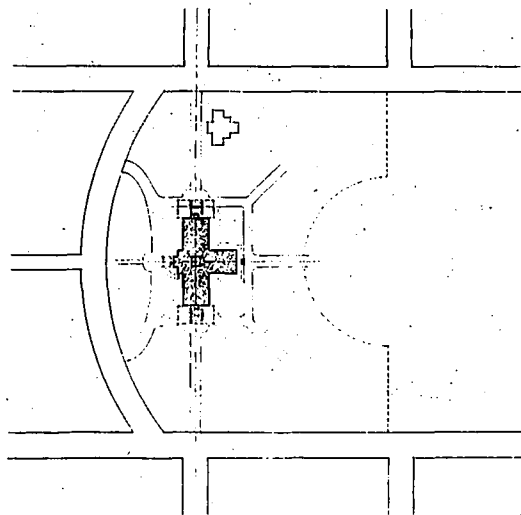
The accompanying illustrations show the manner in which each contestant analyzed the programme. The individual characteristics of each architectural firm has been given considerable freedom, although advised in the terms of the competition to present an exterior of a bold, practical and dignified treatment with a tower or dome to offset the level appearance of the surrounding country. Moose Jaw has a population of approximately 25,000, while the scheme called for

accommodation to house a force necessary for 50,000 people. The competition was rightfully restricted to Canadian architects.

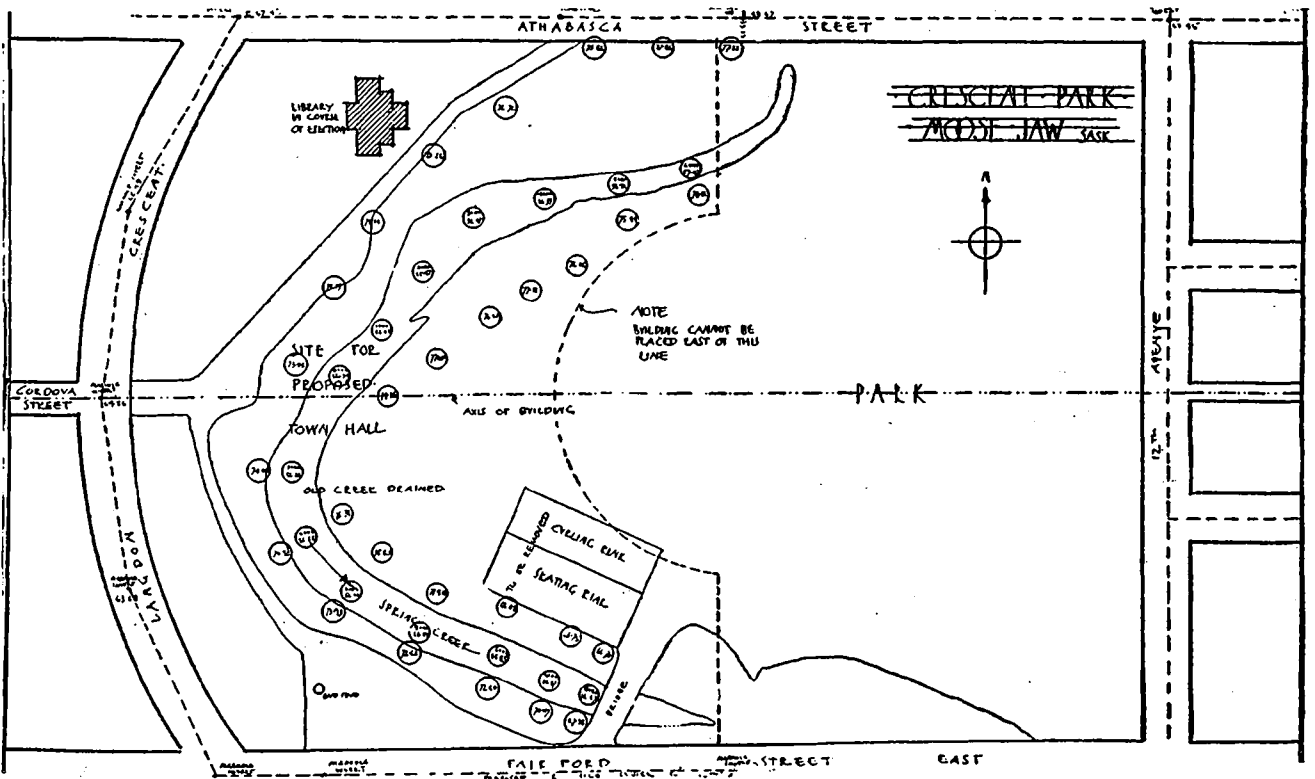
The work of the assessors, who are held responsible for the conditions of the programme, has been highly commendable. The board consisted of Harry H. Bamford, Moose Jaw; F. S. Baker Toronto, and P. E. Nobbs, Montreal.

The following conditions govern the erection of the building: The architect is to make such changes in his competition plan as shall be necessary to meet the views of the Building Committee, appointed by the promoters. The Building Committee may appoint a professional engineer to instal the power, mechanical equipment, heating, ventilating, illuminating, plumbing and other appliances.

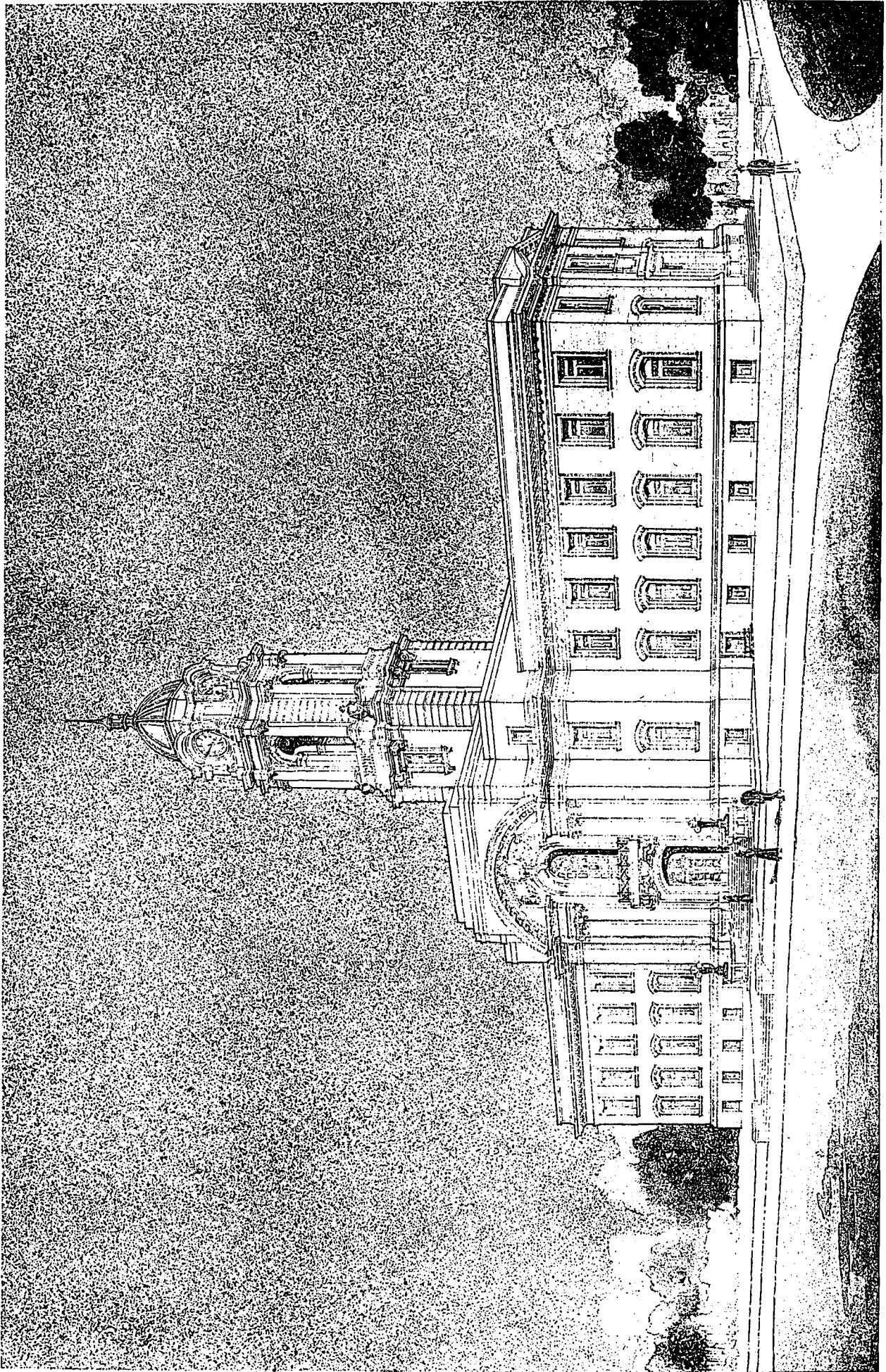
The sum available for the building and the engineering (exclusive of furniture and architect's commissions) is \$225,000. The building, including engineering, should cost about forty cents per cube foot.



BLOCK PLAN



GENERAL PLAN OF SITE FOR CITY HALL, MOOSE JAW, SASK.

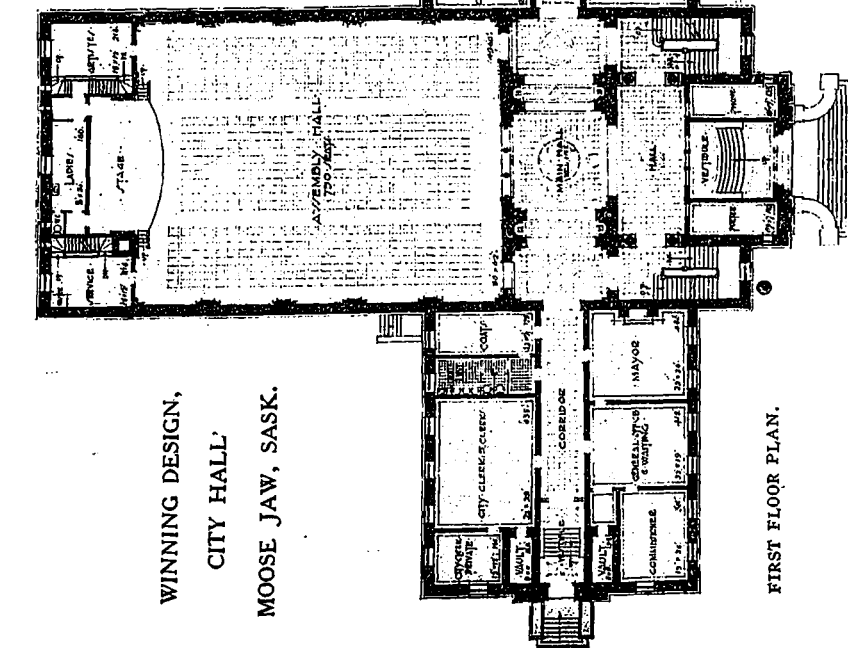


WINNING DESIGN, CITY HALL, MOOSE JAW, SASK.

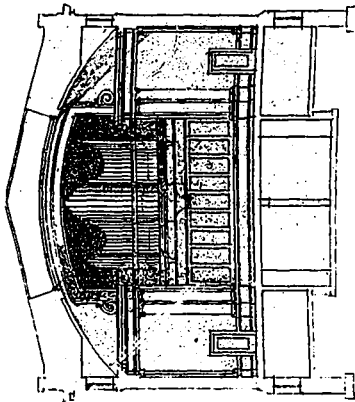
JOHN D. ATCHISON & CO., ARCHITECTS.

WINNING DESIGN,  
CITY HALL  
MOOSE JAW, SASK.

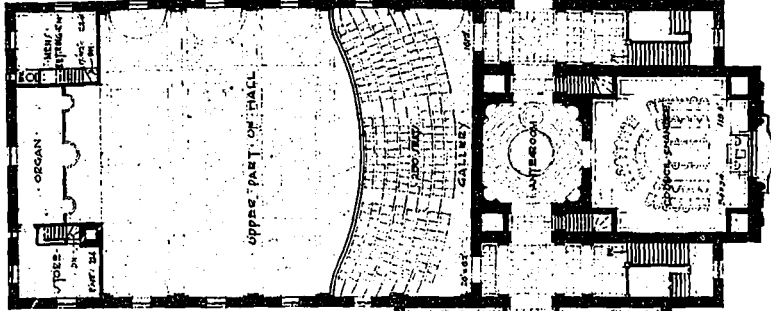
JOHN D.  
ATCHISON & CO.,  
ARCHITECTS.



FIRST FLOOR PLAN.



CROSS SECTION.



SECOND FLOOR PLAN

ACCOMMODATION REQUIRED.

|   |                 |  |
|---|-----------------|--|
| Staff accommodation—                      | Chiefs, Clerks. |  |
| Mayor's office . . . . .                  | 1               |  |
| Commissioners' offices . . . . .          | 2               |  |
| General office and Waiting Room . . . . . | 1               |  |
| City Clerk's office . . . . .             | 1               |  |
| General office . . . . .                  | 4               |  |
| Assessor's offices . . . . .              | 5               |  |
| Treasurer's offices . . . . .             | 2               |  |
| Water and Gas office . . . . .            | 4               |  |
| Engineer's offices . . . . .              | 3               |  |
| Engineer's draughting room.               | 12              |  |
| Electrical Inspectors . . . . .           | 2               |  |
| Building Inspectors . . . . .             | 2               |  |
| Plumbing Inspectors . . . . .             | 2               |  |
| Health Department . . . . .               | 4               |  |
| Park Superintendent . . . . .             | 1               |  |
| License Inspector . . . . .               | 1               |  |

PREPARATION OF COMPETITIVE DRAWINGS.  
*Drawings Required:* The following are the drawings required:

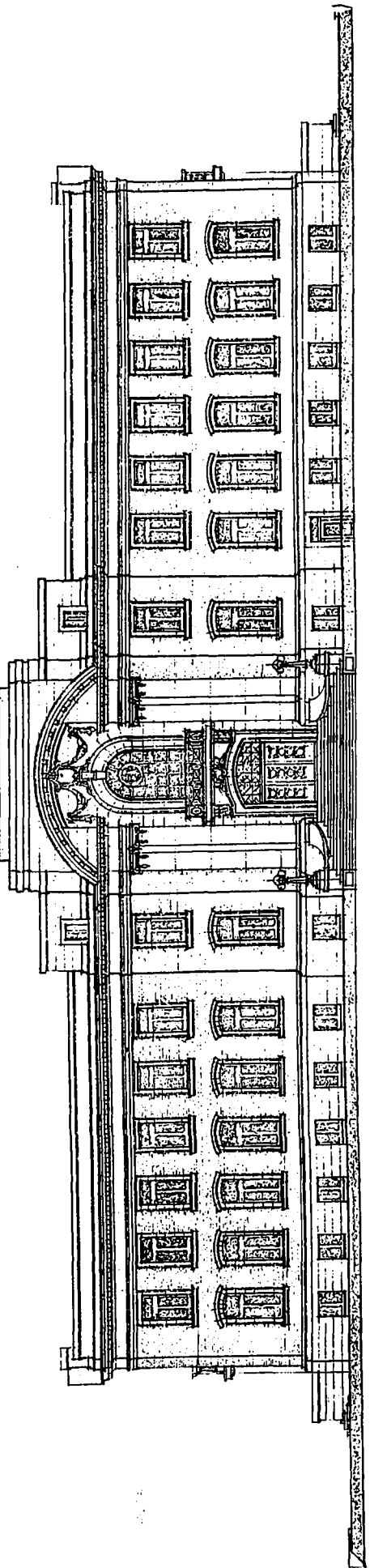
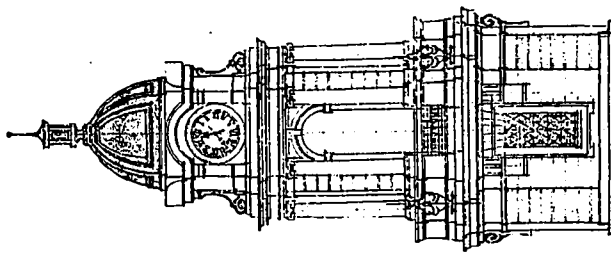
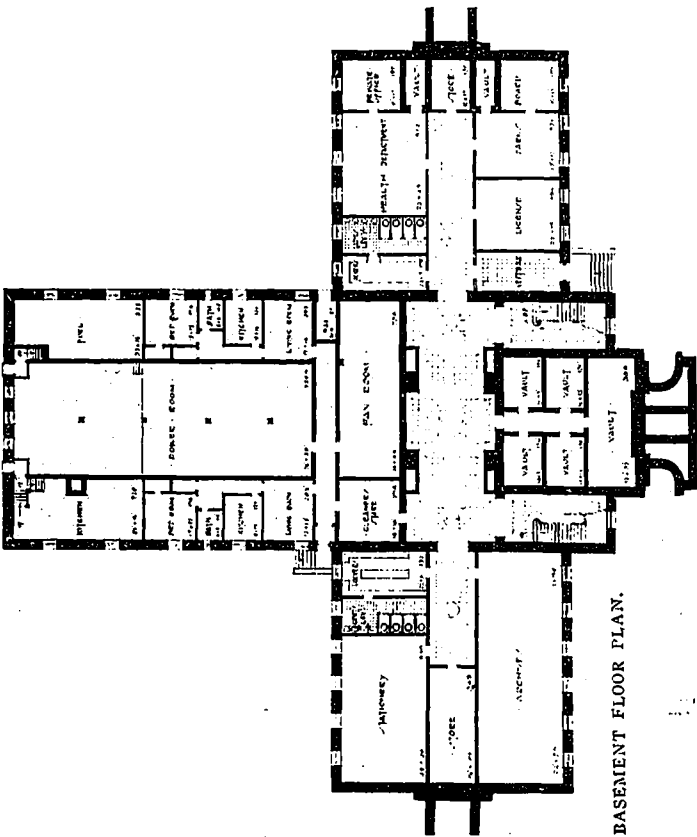
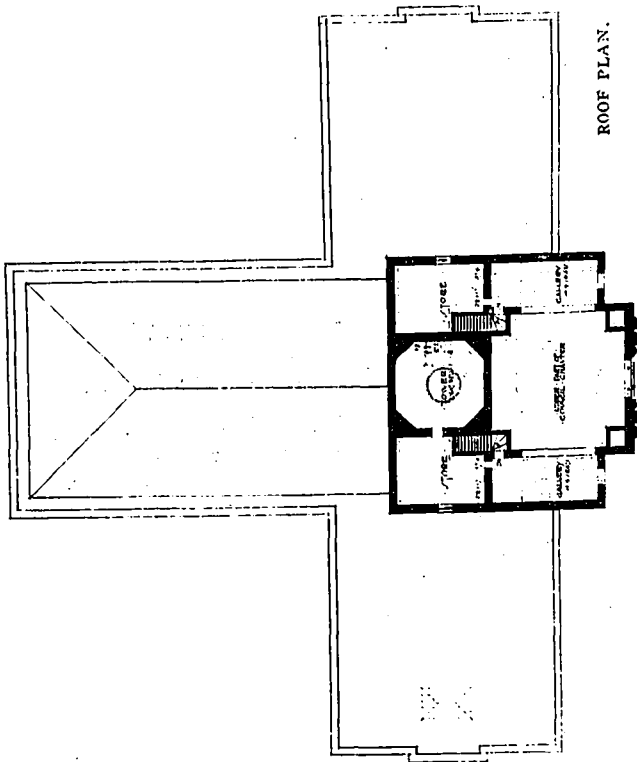
- (a) Block plan 1 in. equal to 1-100 in. scale,
- (b) Floor plans for each storey and a roof plan, 1 in. equal to 1-16 in. scale.
- (c) Sufficient sections to clearly illustrate the scheme proposed, 1 in. equal to 1-16 in. scale.
- (d) Elevations to illustrate the facades; not shown on the perspective drawing, 1 in. equal to 1-16 in. scale.
- (e) A perspective drawing showing a view of the proposed building from the southwest, set out to 1 in. equal to 1-8 in. scale with the horizon line 8 feet above the ground level.

*Council Chamber and Committee Rooms:* Council chamber, 24 councillors, 6 press and 100 public, with ante-room adjoining; committee room, large, for 20 members; two committee rooms for 12 members; three committee rooms for 6 members; police commissioner's room for 5 members.

*Public Hall:* Hall for general purposes with flat floor platform and space for organ, to seat at least 750 on floor and at least 250 in galleries and having servery or occasional kitchen adjoining.

*Incidental Requirements:* Coat rooms, lavatories for officials, staff of both sexes and public of both sexes; vaults and storage for archives; boiler house, fan room, coal store, etc.; quarters for resident engineer; quarters for resident janitor; stationery stores; telephone exchange.

# CONSTRUCTION



WINNING DESIGN.

CITY HALL, MOOSE JAW, SASK.

JOHN D. ATCHISON & CO., ARCHITECTS.

FRONT ELEVATION.

CONDITIONS GOVERNING THE COMPETITION.

*Rendering:* The drawings shall be rendered as follows: All drawings shall be on white paper mounted on linen or calico. Each competitor's set of drawings is to be on sheets of uniform size with moderate margins. Two or more plans, sections or elevations, are preferred on one sheet for the convenience of the assessors. The plans and sections shall be rendered in India ink (black and watered) with walls blacked in solid. The elevations shall likewise be rendered in India ink, and watered ink; pencil and lamp black wash may be used at will to present work on different planes, openings, and the textures of materials in elevation and section drawings. The perspective drawing may be rendered in pen and ink, in pencil or in monochrome wash.

*Statement of Cube:* The competitors shall submit with drawings a brief, typewritten, unsigned statement of the cubic contents of the whole building, with explanations of the method followed in working out the cubic contents.

*Name of Author:* The drawings must have no mark, device, ornamental frame lines, handwriting or other means of identification of authorship. With each set of drawings there is to be enclosed a blank envelope containing the name of the author, together with a statement that the design and all the drawings have been prepared on his own premises under his personal supervision. These envelopes will not be opened till the award has been made.

*The Site:* The site is at the western end of a small public park and practically level, except for the old bed of a stream now drained. The building is to be placed with the main front and main entrance to the west.

*External Character:* As the building will be exposed all round to viewpoints of equal importance, the treatment of the exterior is to be homogeneous in character on all sides. The funds at the disposal of the promoters will not admit of an extravagant type of architecture, and brick is recommended as the chief material on the façades. The building shall not exceed four storeys and a basement in height; and is to be so designed that the administrative offices can be extended in the future, without impairing the appearance of the building.

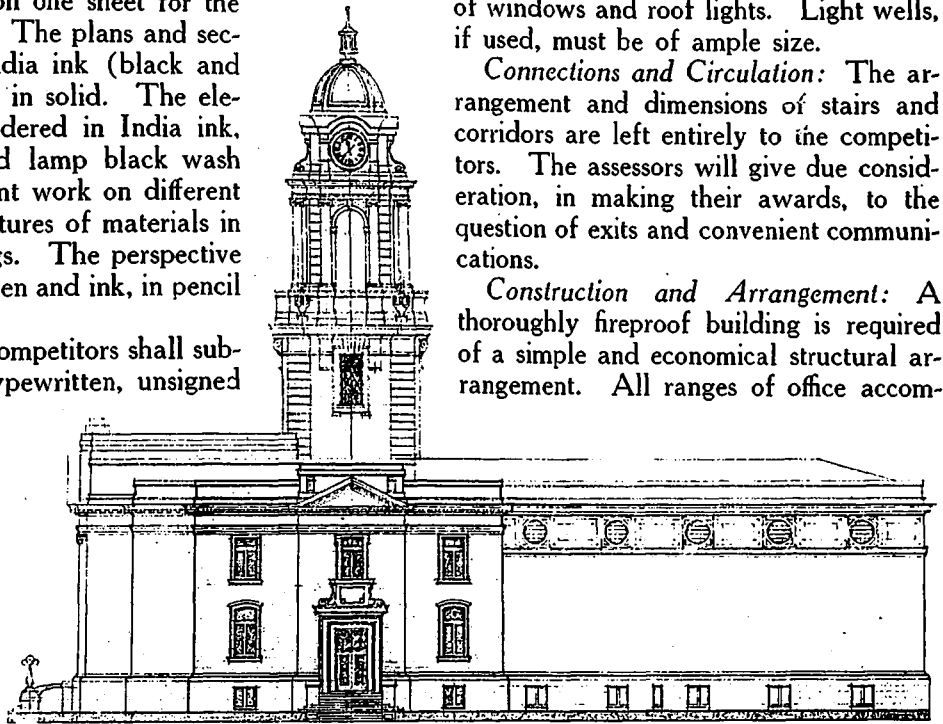
*Disqualification:* Any infringement of these

regulations or disclosure of identity of authorship to the assessors, individually or collectively, shall be held sufficient ground for exclusion from the competition.

*Natural Lighting:* The assessors will give weight to the question of disposition and glass area of windows and roof lights. Light wells, if used, must be of ample size.

*Connections and Circulation:* The arrangement and dimensions of stairs and corridors are left entirely to the competitors. The assessors will give due consideration, in making their awards, to the question of exits and convenient communications.

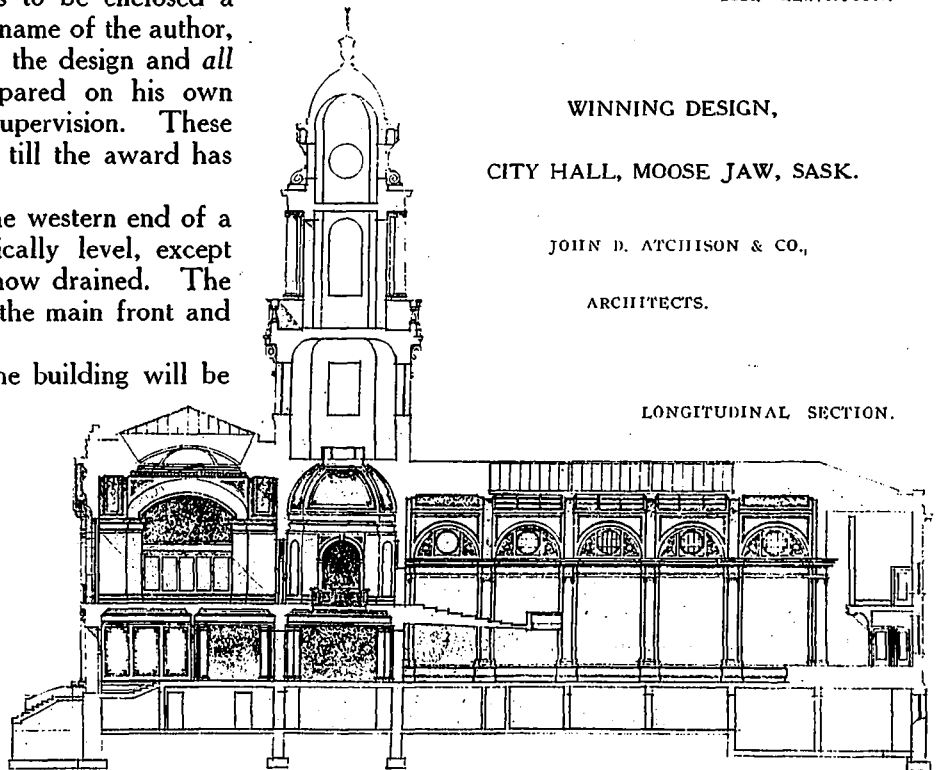
*Construction and Arrangement:* A thoroughly fireproof building is required of a simple and economical structural arrangement. All ranges of office accom-



SIDE ELEVATION.

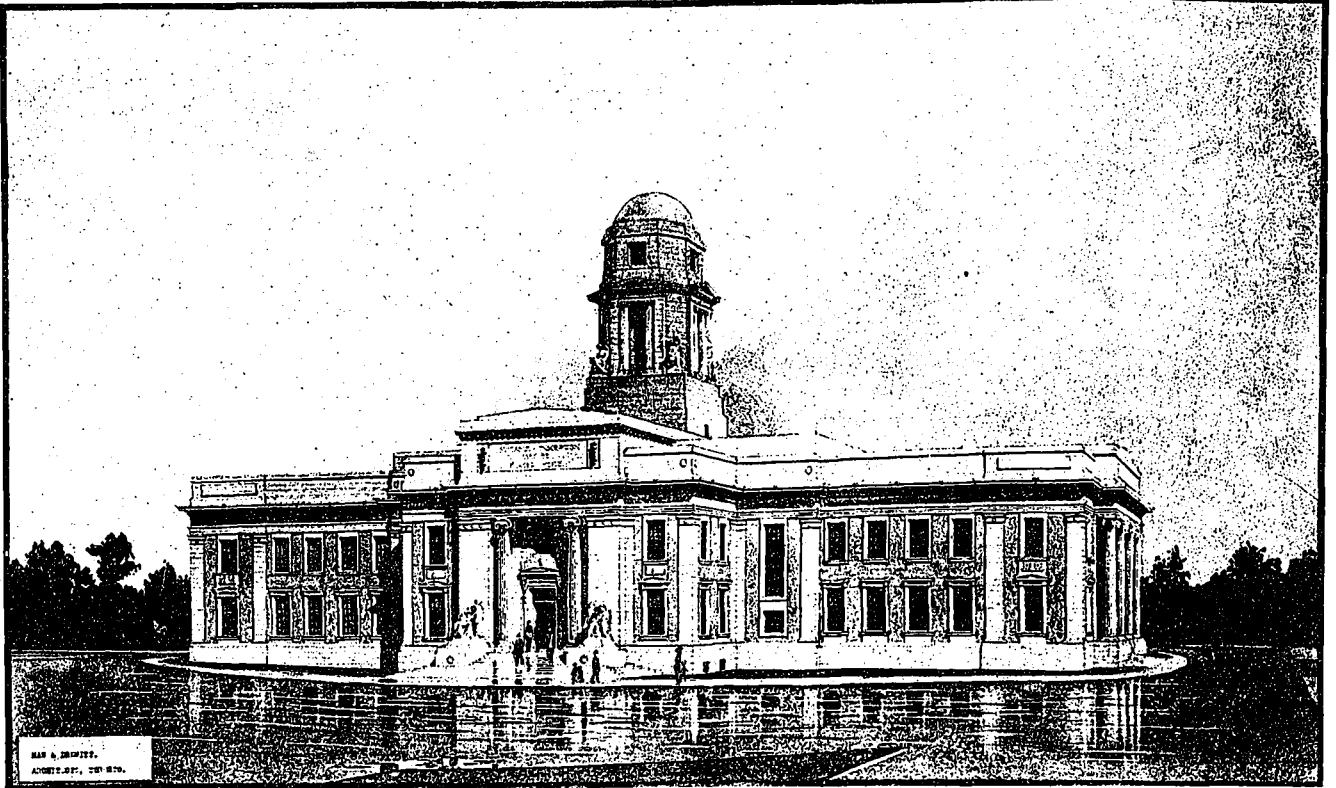
WINNING DESIGN,  
CITY HALL, MOOSE JAW, SASK.

JOHN D. ATCHISON & CO.,  
ARCHITECTS.



LONGITUDINAL SECTION.

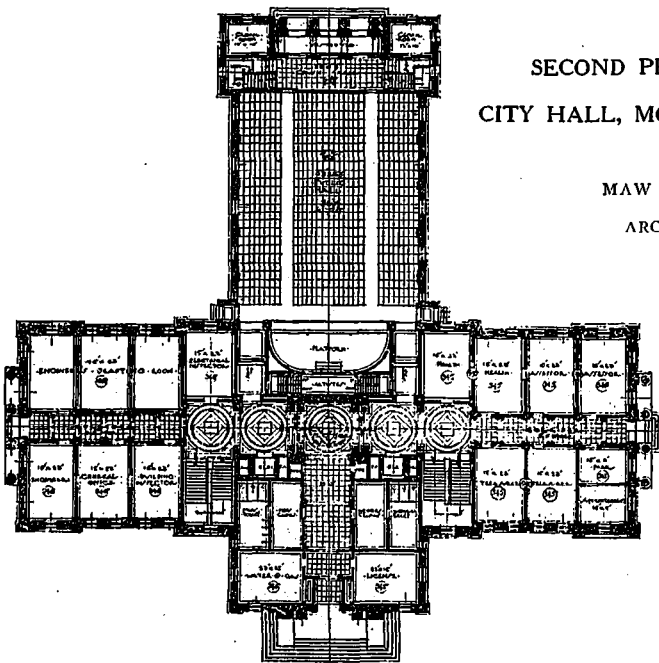
modation should be planned on the "unit system" so that partitions may be removed or altered in accordance with future re-arrangements independently of the main structure. Ventilation ducts should occur as far as possible in inner longitudinal walls.



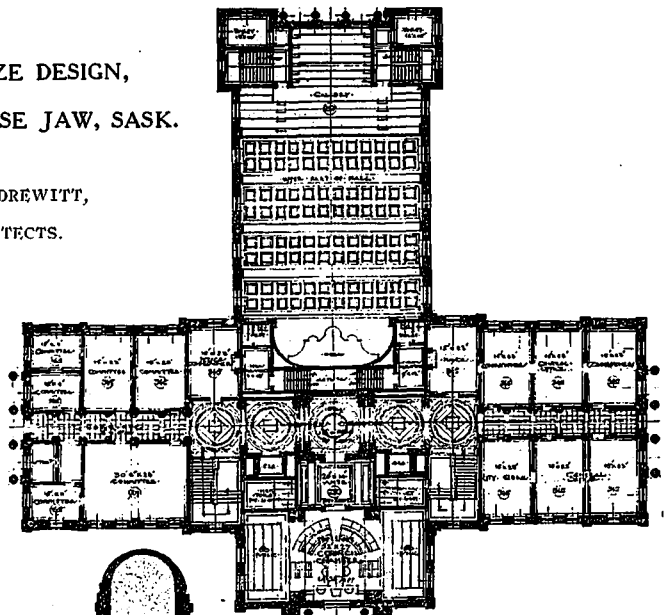
MAW & DREWITT,  
ARCHTTS., 1201 8TH.

SECOND PRIZE DESIGN,  
CITY HALL, MOOSE JAW, SASK.

MAW & DREWITT,  
ARCHITECTS.

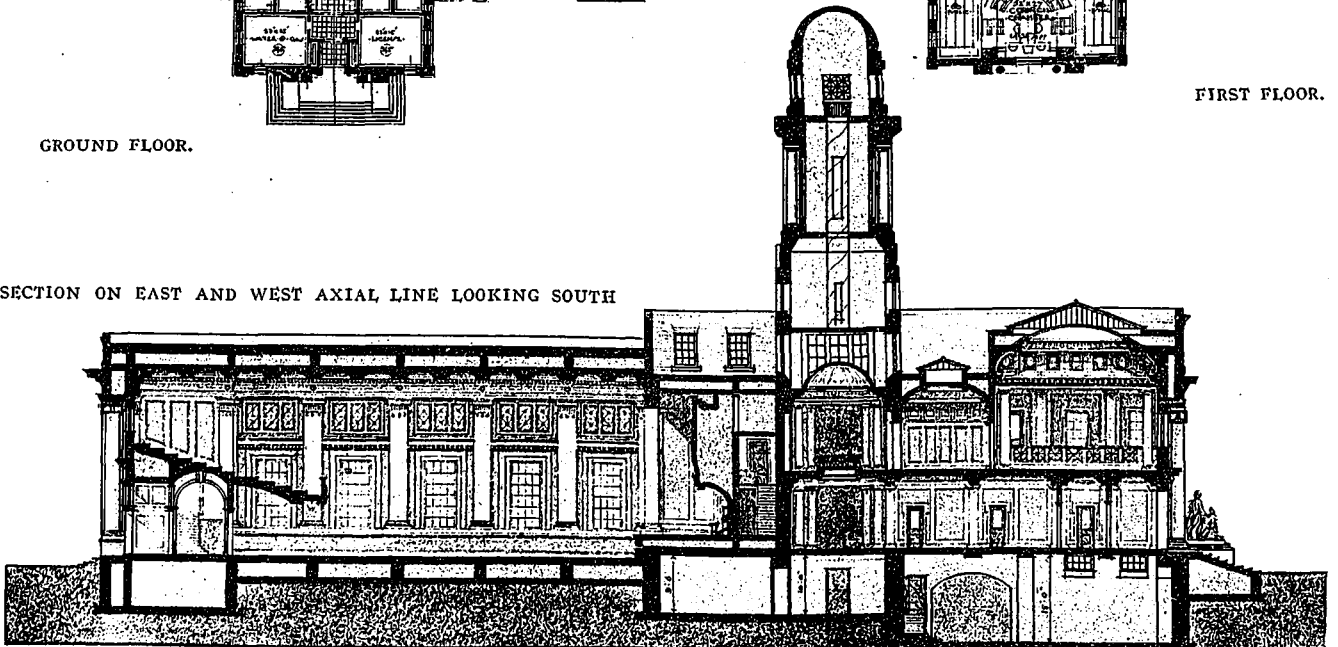


GROUND FLOOR.

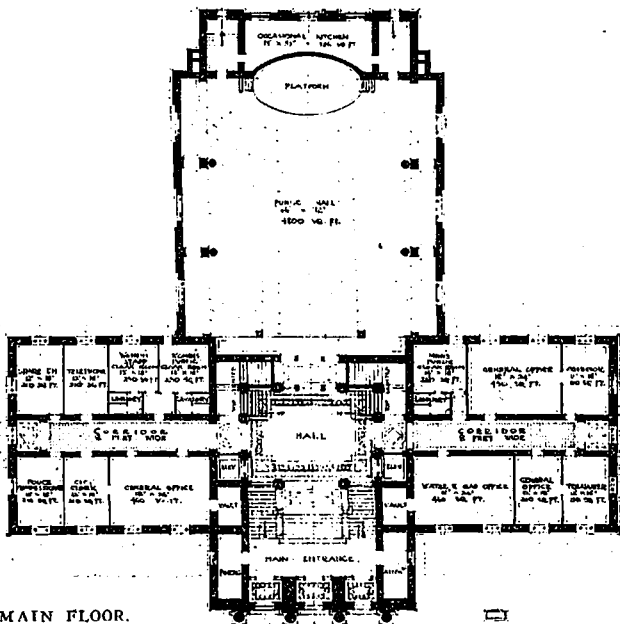
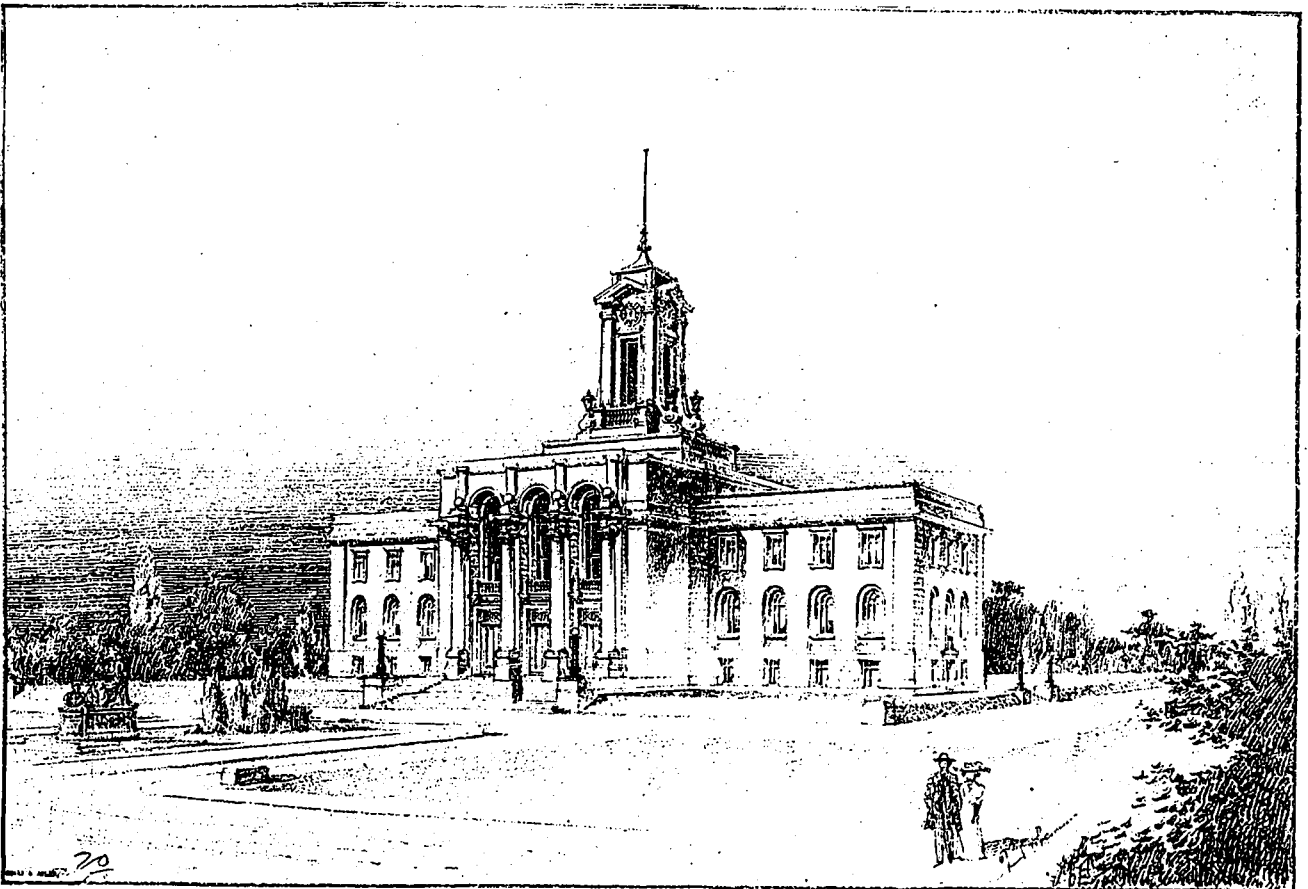


FIRST FLOOR.

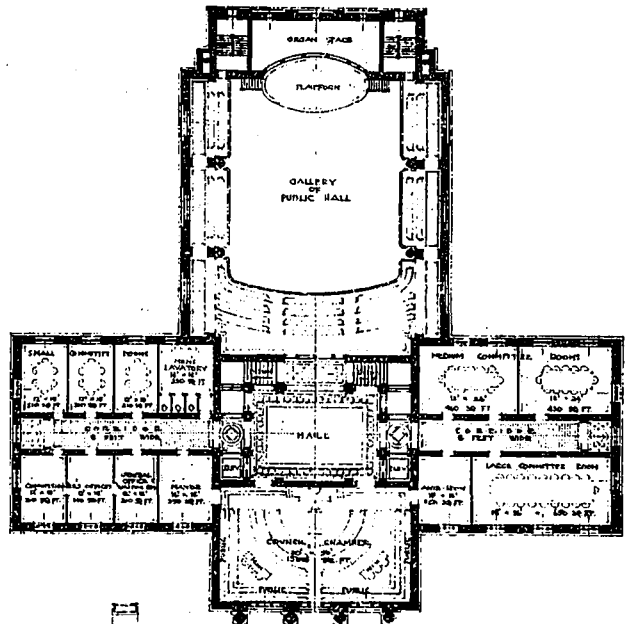
SECTION ON EAST AND WEST AXIAL LINE LOOKING SOUTH





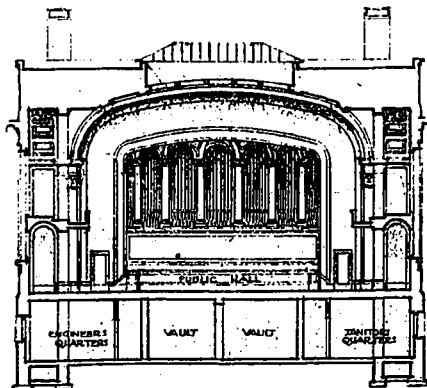


MAIN FLOOR.



FIRST FLOOR.

SHARP & BROWN,  
ARCHITECTS.

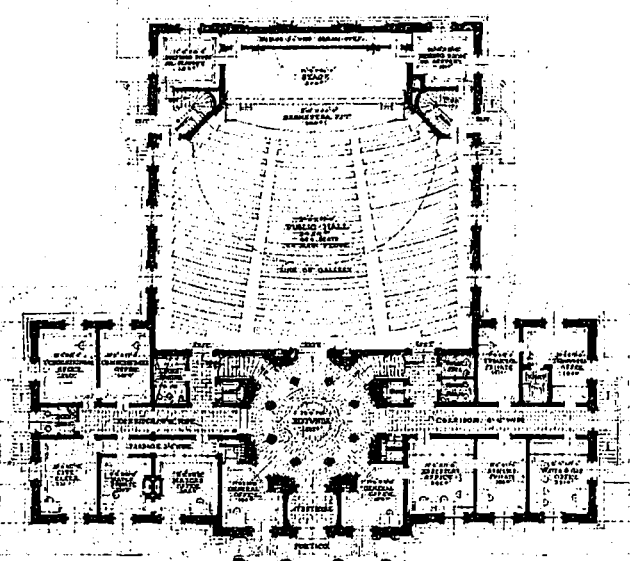
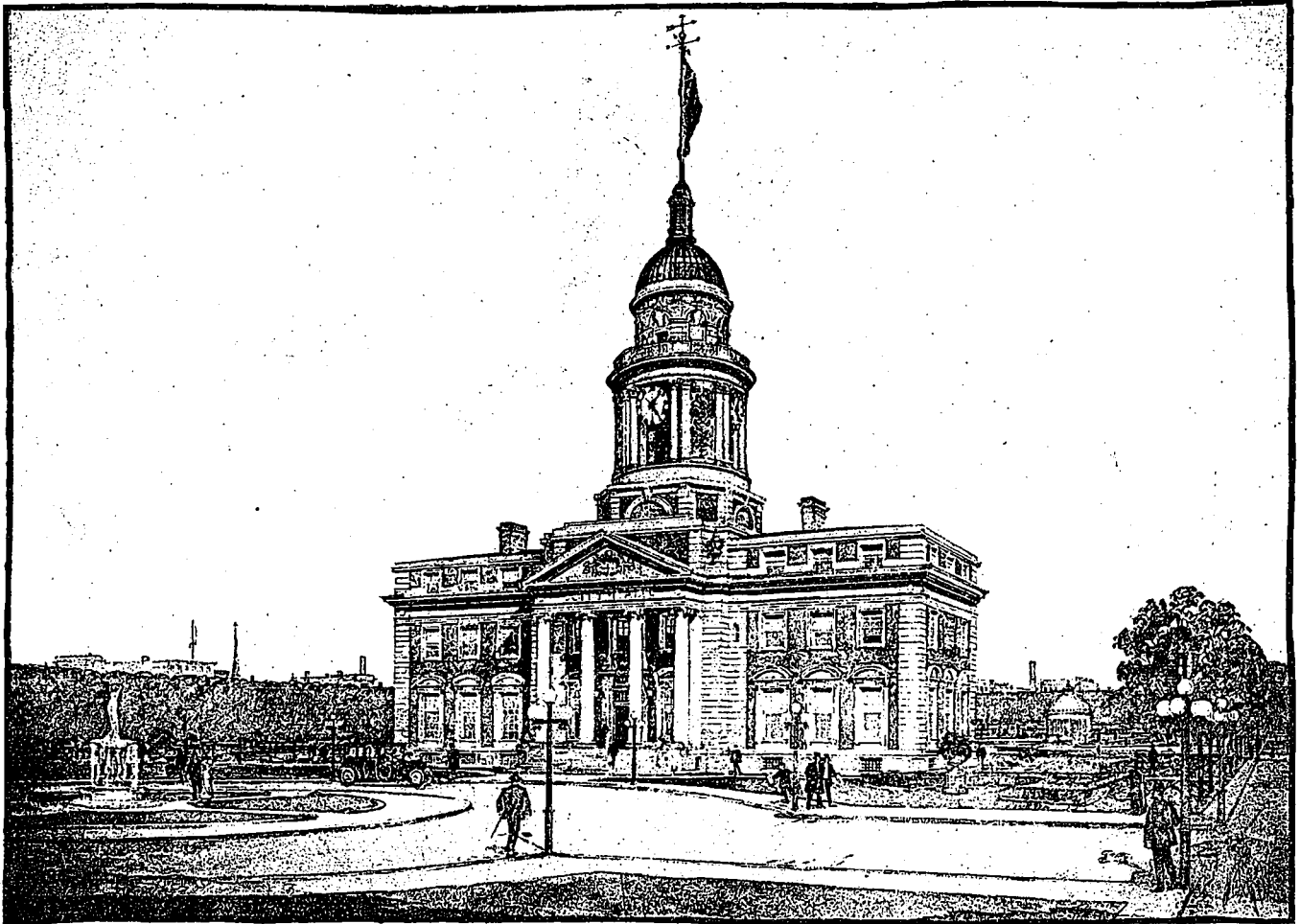


CROSS SECTION OF HALL.

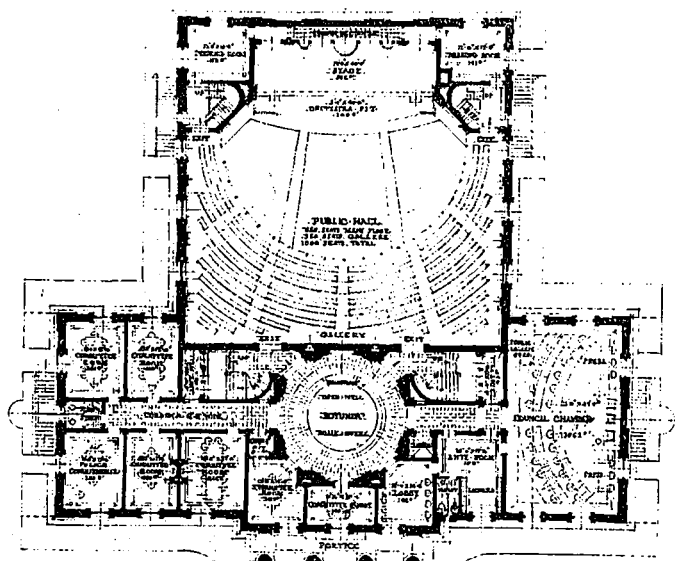
THIRD PRIZE DESIGN,  
CITY HALL, MOOSE JAW, SASK.

*The Architect's Services:* After the plans have been finally accepted by the Building Committee, the architect shall prepare working drawings and specifications and shall supervise the construction of the building. Subject to the approval of the Building Committee, he shall have control of all matters of arrangement, design and execution.

*Drawings and Specifications:* All drawings and specifications as "instruments of service" shall remain the property of the architect, but one record copy on tracing linen of the contract drawings, together with a set of specifications, all amended to correspond with the work as carried out, shall be furnished to the promoters.



GROUND FLOOR PLAN.



FIRST FLOOR PLAN.

FOURTH PRIZE DESIGN, CITY HALL, MOOSE JAW, SASK.

CHARLES S. COBB, ARCHITECT.



# New West End Y. M. C. A. Building Toronto

BURKE, HORWOOD & WHITE, Architects

THE Young Men's Christian Association buildings combine a large number of principles essential to the extended scope of their work. The men and boys must be made to feel they have a home in which are found the every-day advantages. Each year sees a great change in the equipment of these institutions. No building appeals to the young man unless it combines the elements of a social club, an athletic club, a school, a church, and a hotel.

The Y.M.C.A. must be furnished with the idea of attractiveness predominating. In addition special care should be taken to make the interior convenient and comfortable. There is no need for an extravagant and gaudy treatment, but all architectural work should bespeak the lofty ideals for which the association stands. It should satisfy the critical and attract those whose standard of true art is in need of education.

Considerable expense is attached to the working of the various departments. Naturally a certain revenue should be available in order not to hamper the work. This is accomplished by placing dormitories or living rooms in the upper stories. Not only is the matter of expense met, but the men are made to feel the homelike atmosphere so necessary in an institution that should appeal to our better nature.

Another feature entering into the erection of a Y.M.C.A. is the workmanship and quality of materials employed. A building of this kind undergoes exceptionally rough usage. In order to minimize the expense of maintenance the plan should involve the smallest amount of travel in the building, and be arranged so as to require a minimum force to operate successfully.

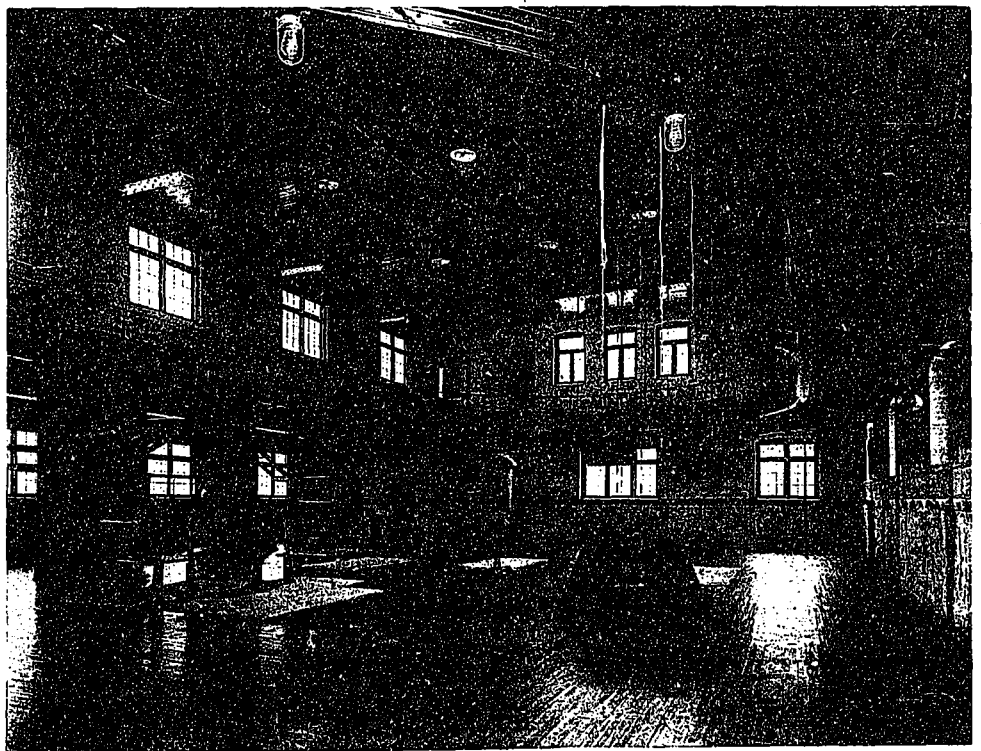
The West End Y.M.C.A. meets the requirements already stated. It has met the needs of the athlete, the student and the lodger. The building rises three stories above the basement and has a modified Colonial exterior. Exterior walls are of red brick laid up in white mortar joints, depending chiefly upon the color and execution

for the general appearance. Indiana limestone is used for the trimmings.

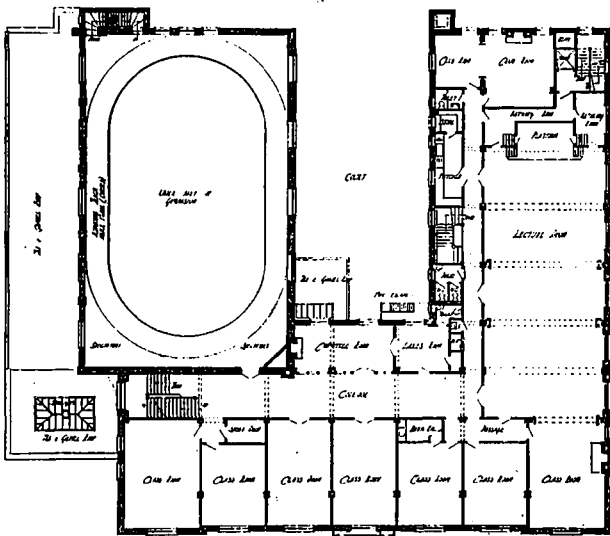
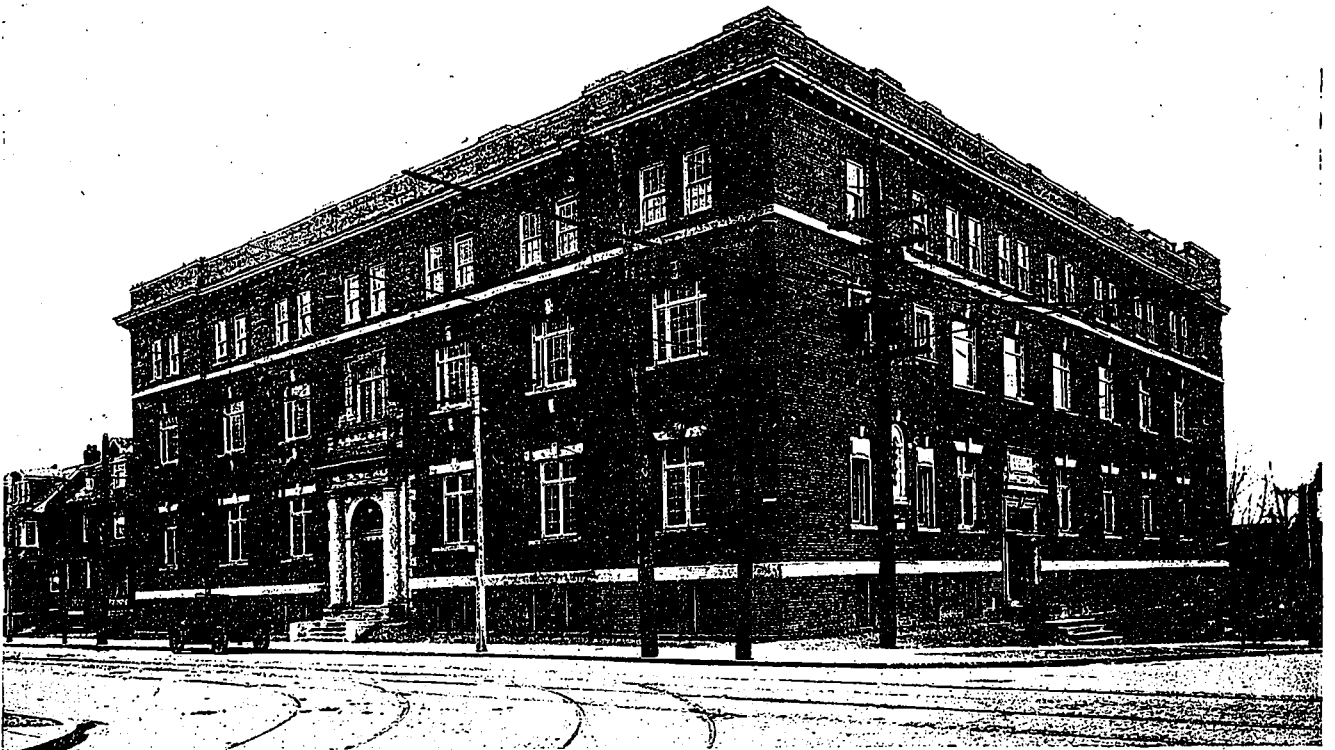
Entering through a vestibule of marble steps and marble lined walls with mosaic borders, one comes into the main lobby. It extends the full length of the building and is quite impressive in its simple Colonial treatment with wooden columns and beamed ceiling. The woodwork is of quarter cut oak finished in fume color. A warm buff tone decorates the walls, while the ceiling is finished in an ivory tint.

In the basement the walls are lined with buff pressed-face brick throughout and floors of maple. Accommodations have also been made for bowling alleys, swimming pool, locker rooms, etc. The pool itself is sixty by twenty feet, concrete construction, with tile floor and sides, lighted by means of a large skylight, and made sanitary by the introduction of a filtration system.

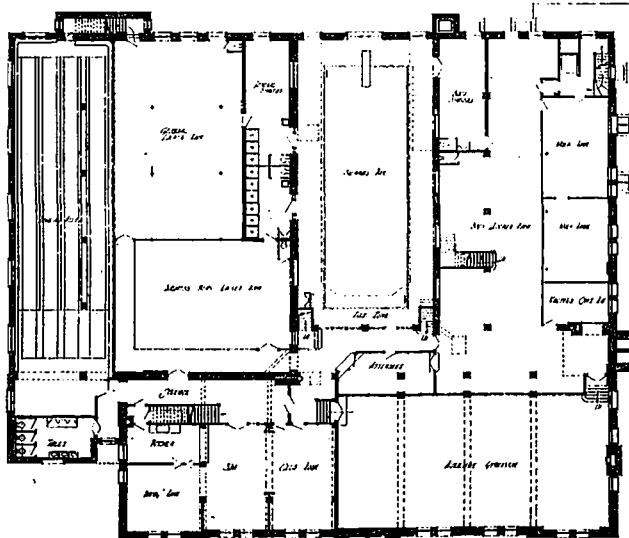
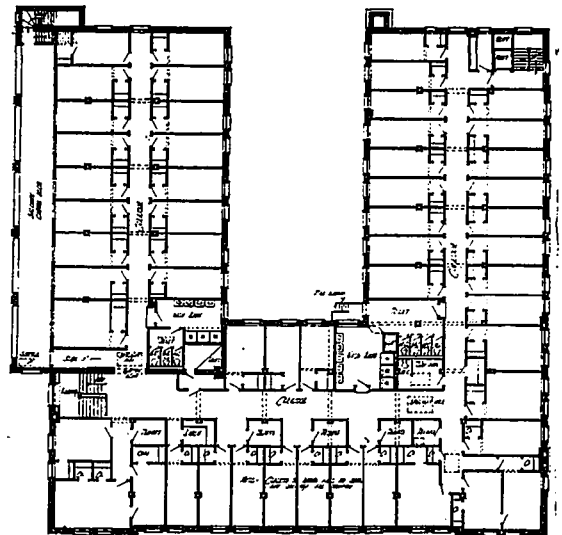
The building is located in close proximity to the college grounds and affords an excellent opportunity for students to obtain exceptionally good rooms and other advantages at a moderate cost. Such work cannot help but prove an incentive to both the architect and contractor, the former to present a building of character and refinement, the latter to build it with the best kind of construction obtainable.



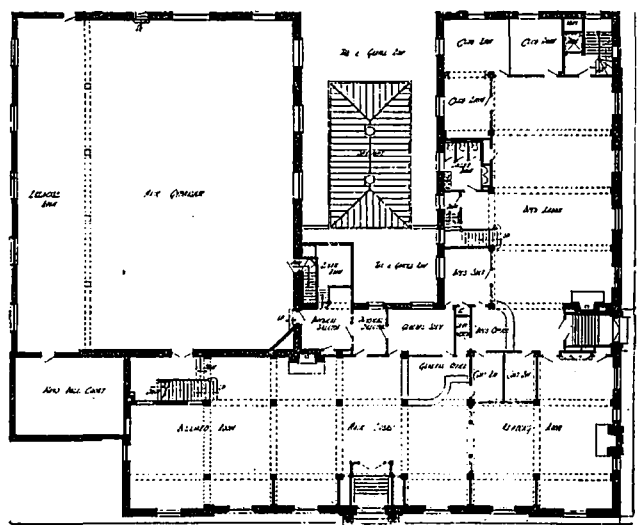
GYMNASIUM.



SECOND AND THIRD FLOOR PLANS.



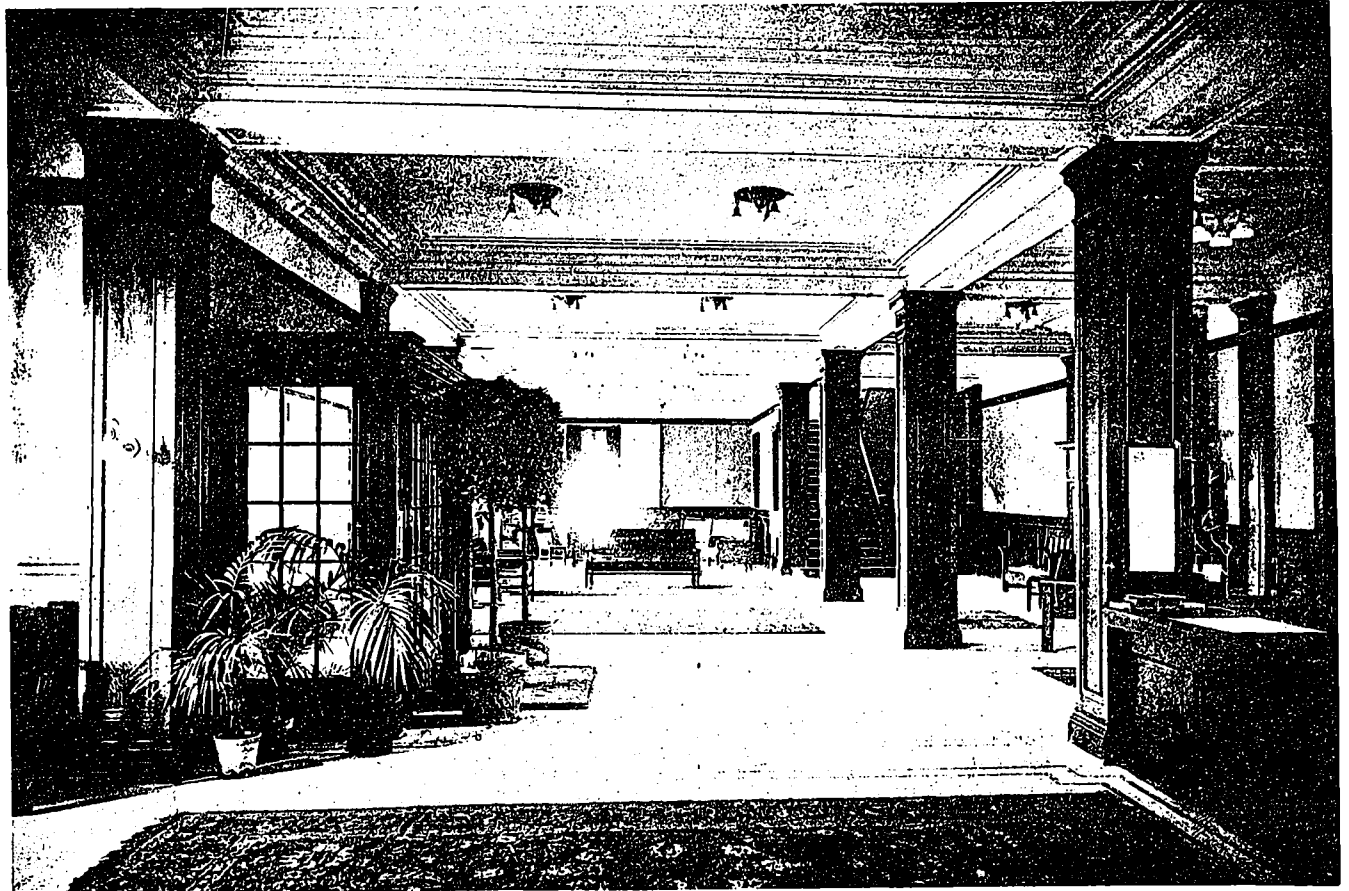
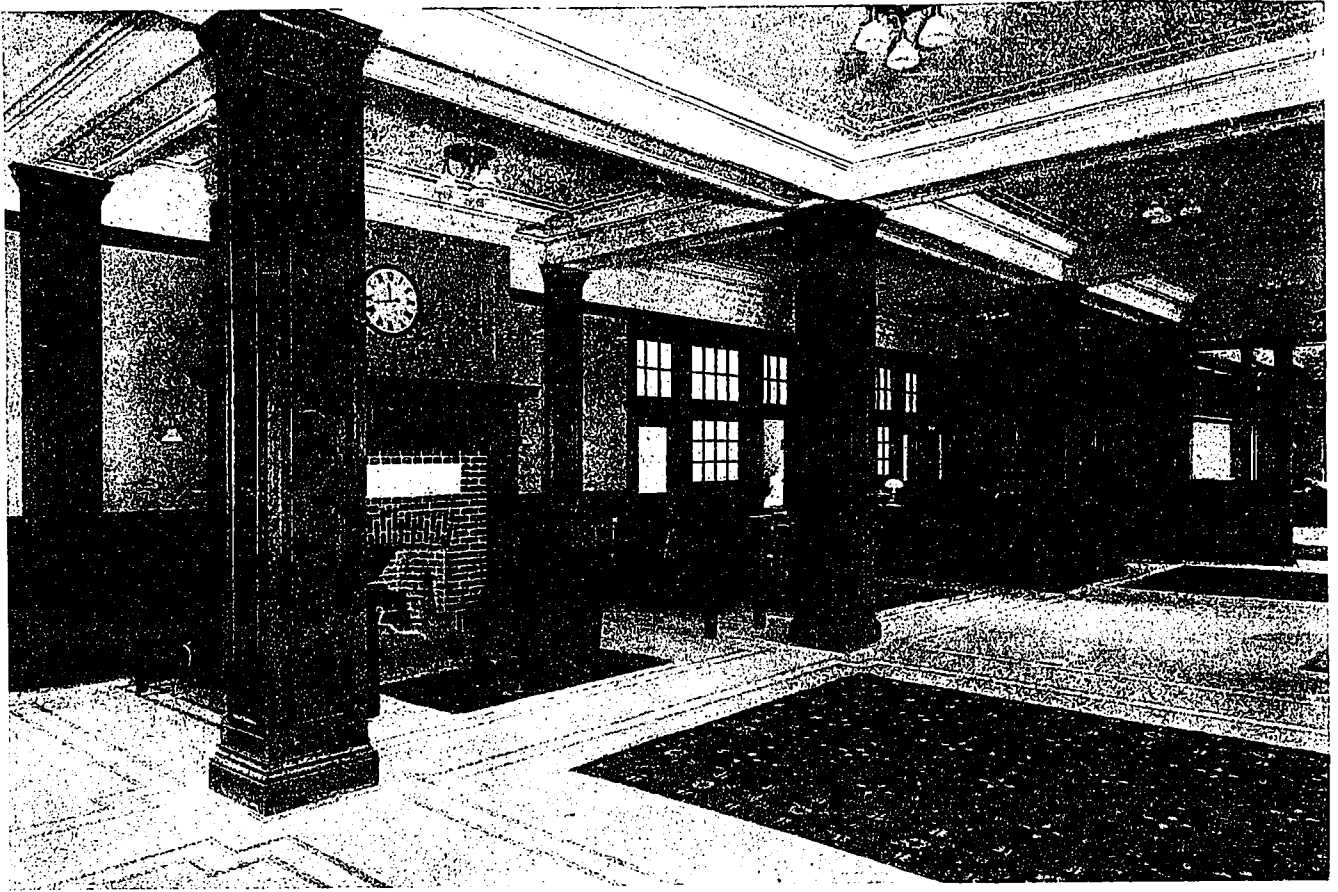
BASEMENT PLAN.



FIRST FLOOR PLAN.

NEW WEST END Y.M.C.A., TORONTO.  
BURKE, HORWOOD & WHITE, ARCHITECTS.

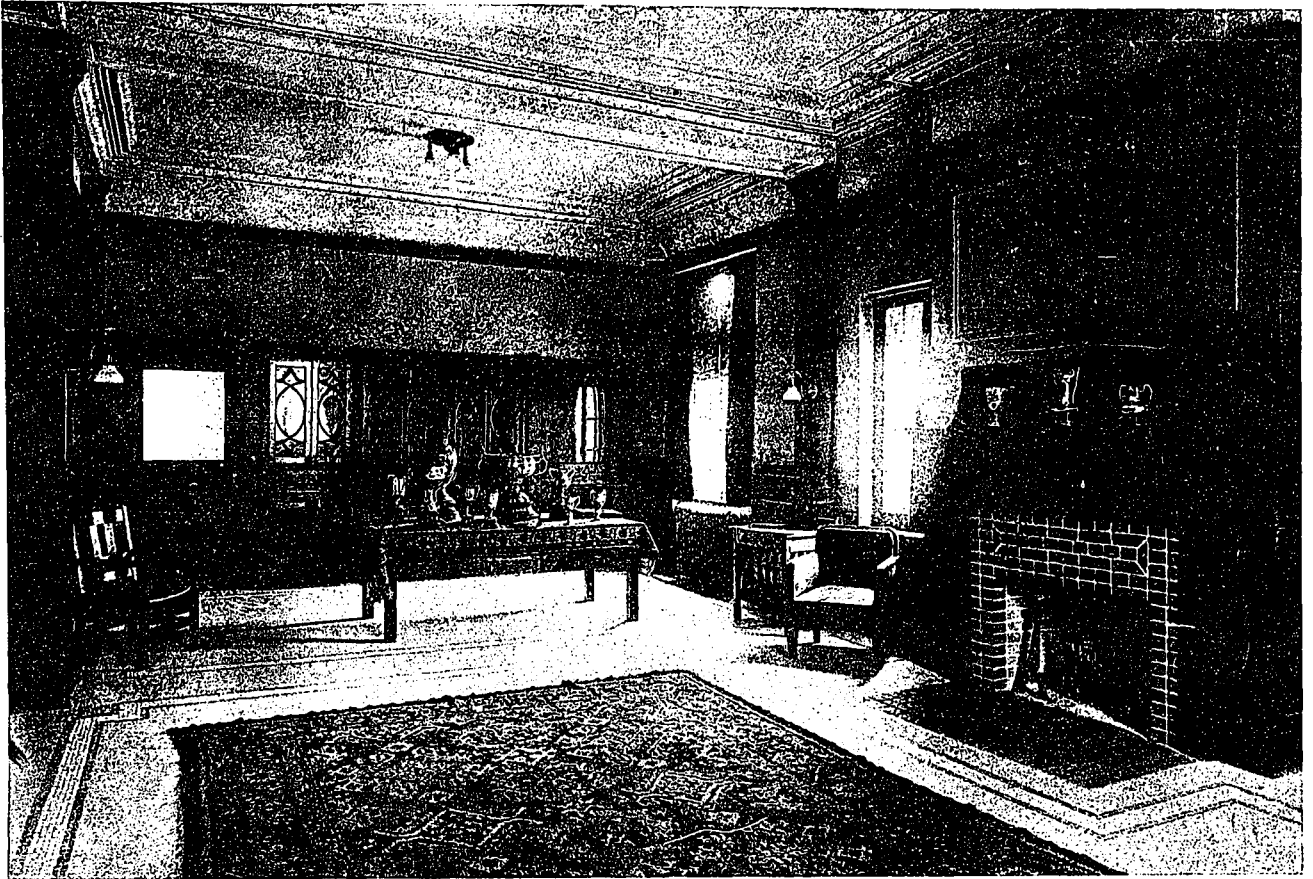




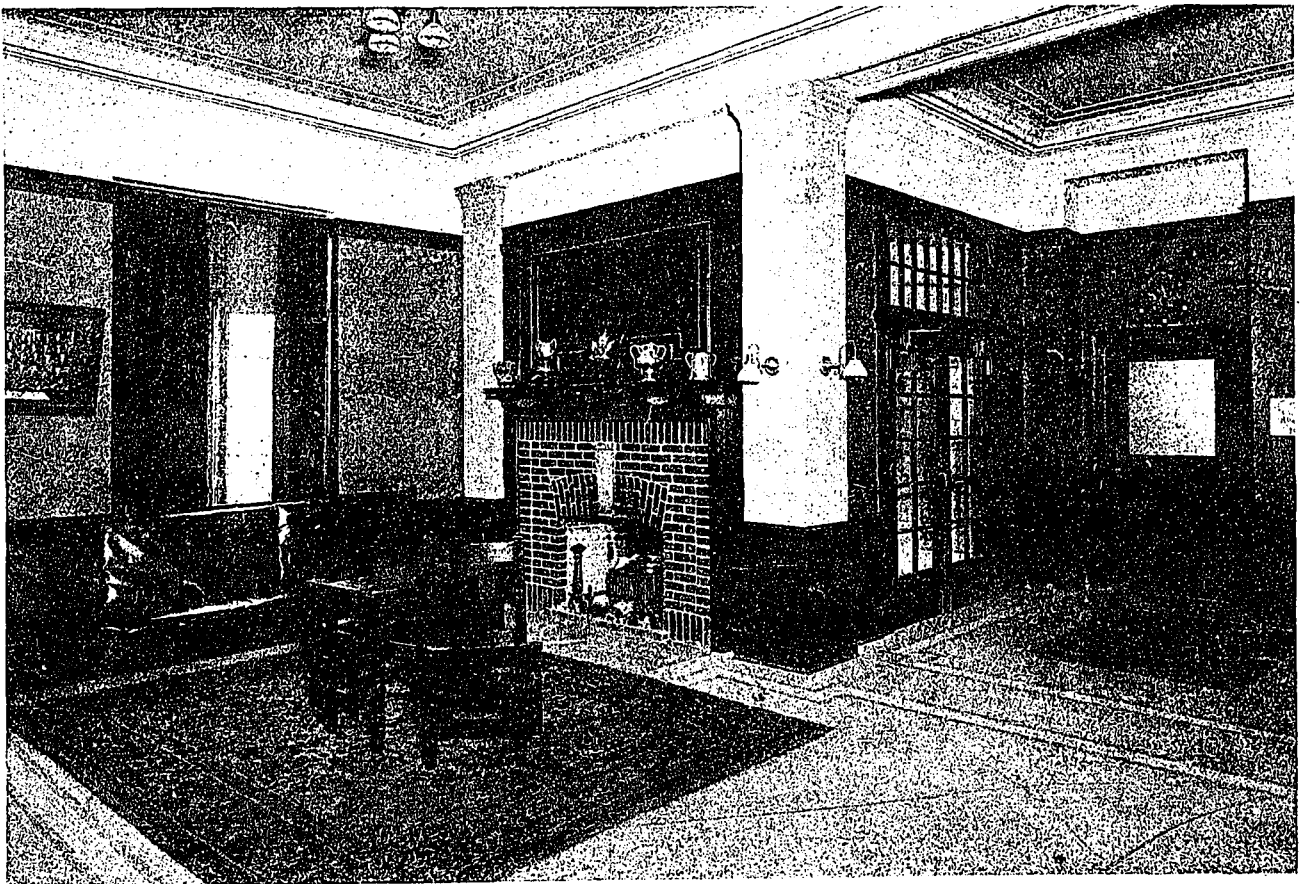
TWO VIEWS OF MAIN LOBBY.

NEW WEST END Y.M.C.A., TORONTO.

BURKE, HORWOOD & WHITE, ARCHITECTS.



TROPHY ROOM.

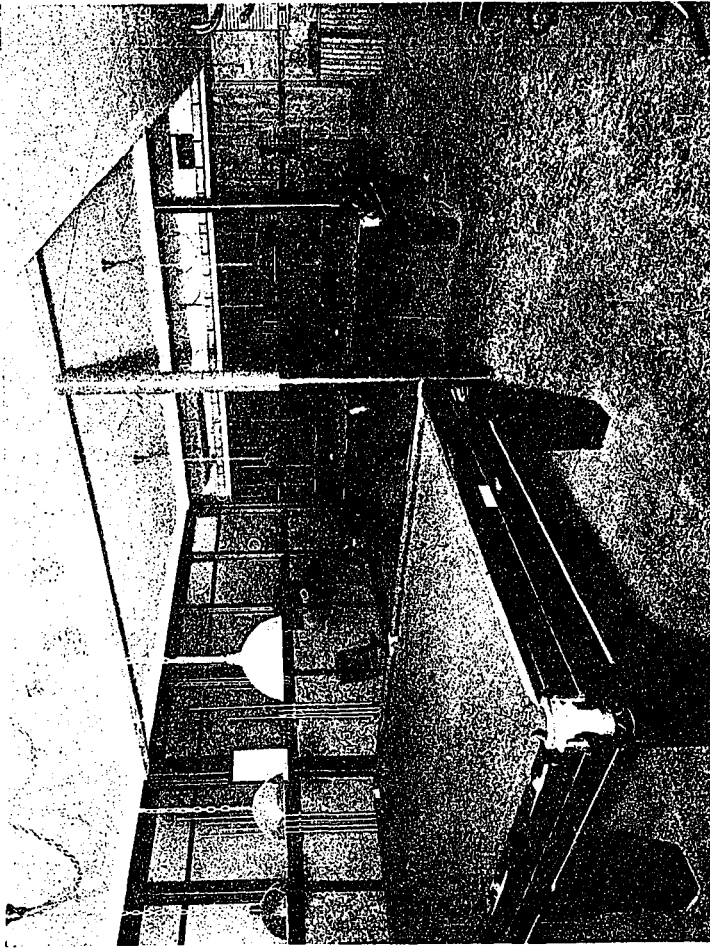


BOYS' LOBBY.

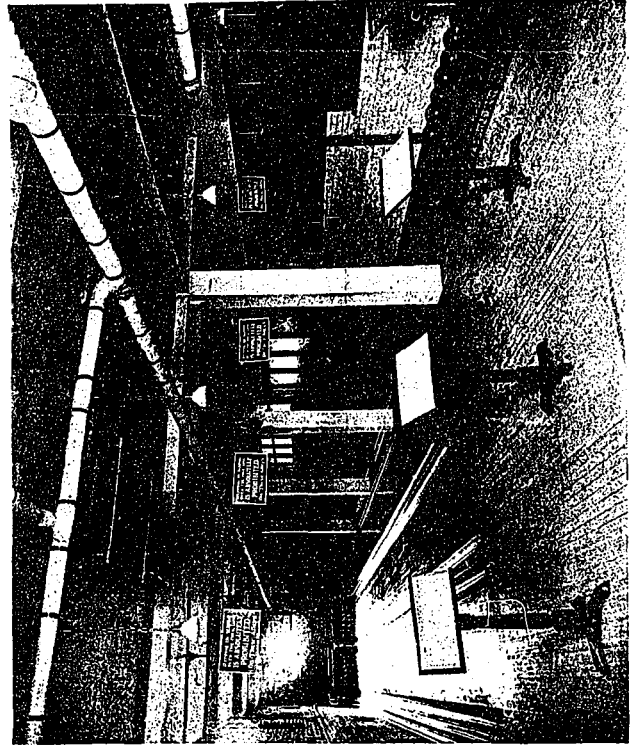
NEW WEST END Y.M.C.A., TORONTO.

BURKE, HORWOOD & WHITE, ARCHITECTS.

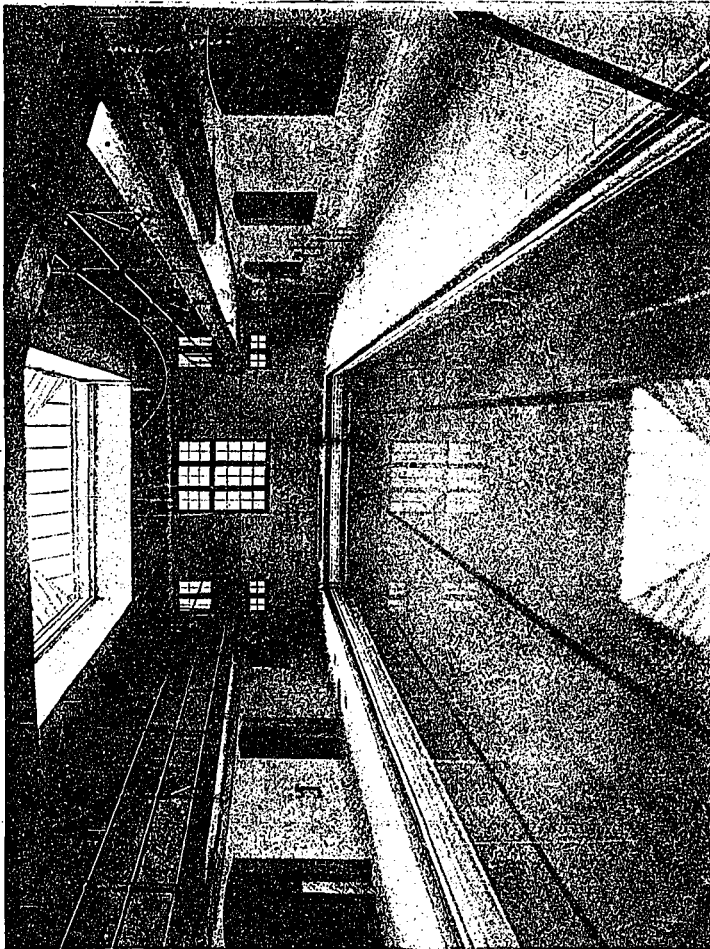




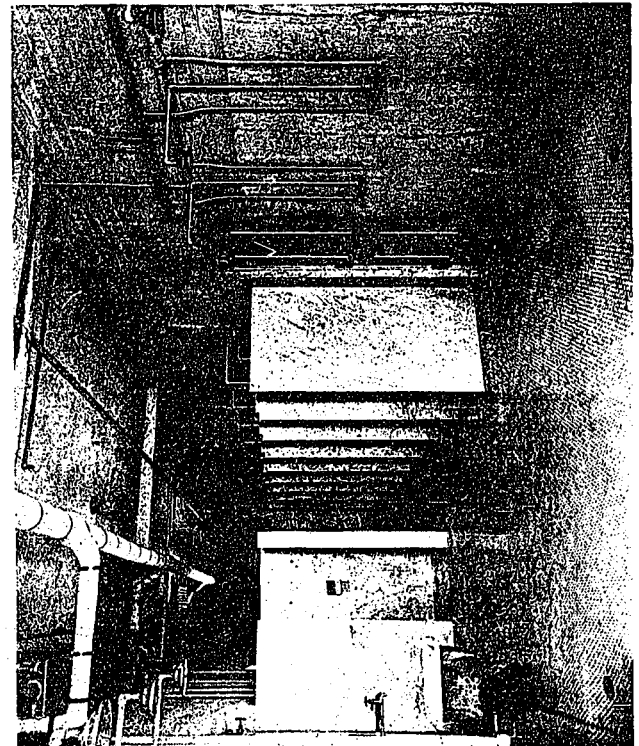
BILLIARD ROOM.



BOWLING ALLEY.



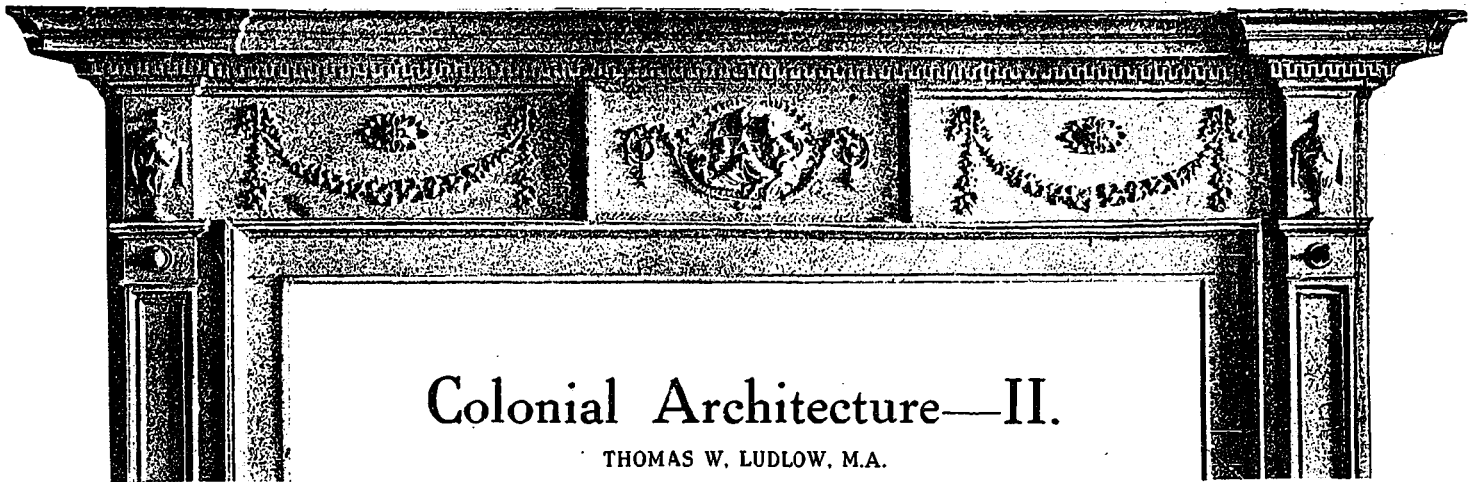
SWIMMING POOL.



SENIOR SHOWERS.

NEW  
WEST END Y.M.C.A.,  
TORONTO.

BURKE, HORWOOD & WHITE,  
ARCHITECTS.



## Colonial Architecture—II.

THOMAS W. LUDLOW, M.A.

**T**HE SETTLERS in the Middle Provinces were the most tolerant of all the colonists, towards religious beliefs, as well as the most eclectic and cosmopolitan in all matters. They welcomed every style of architecture and every kind of building material—wood, stone, brick and stucco were alike equally used.

Prior to 1770, pure Palladian designs were very rare, although the details are all derived from classical sources. The buildings are lower than those in New England, and therefore, as the accommodations are about the same, they cover more ground. The plans, however, are similar and consist of a central stairhall running through the house, from front to back, with the rooms opening from it on either side. Few features are met here that are not to be found in the settlements to the north. The stepped gable, occurring but rarely in New England, is encountered frequently from the Hudson to the Susquehanna. The gambrel roof is a modification of that used by the New Englanders, and often includes two stories. The upper slope was greatly reduced in size and becomes quite insignificant in many cases. The long lower slope was gracefully curved, to soften its otherwise hard and angular outline. This treatment is also found on many gable roofs.

In the large northern cities—Boston, New York, Philadelphia, and Baltimore—there grew up a distinctive English type of urban residence, executed in red brick, laid in Flemish bond. The effect of these structures depends entirely upon their proportions, and the diversified color of the brick, which are very dark, or often blue for the headers, and

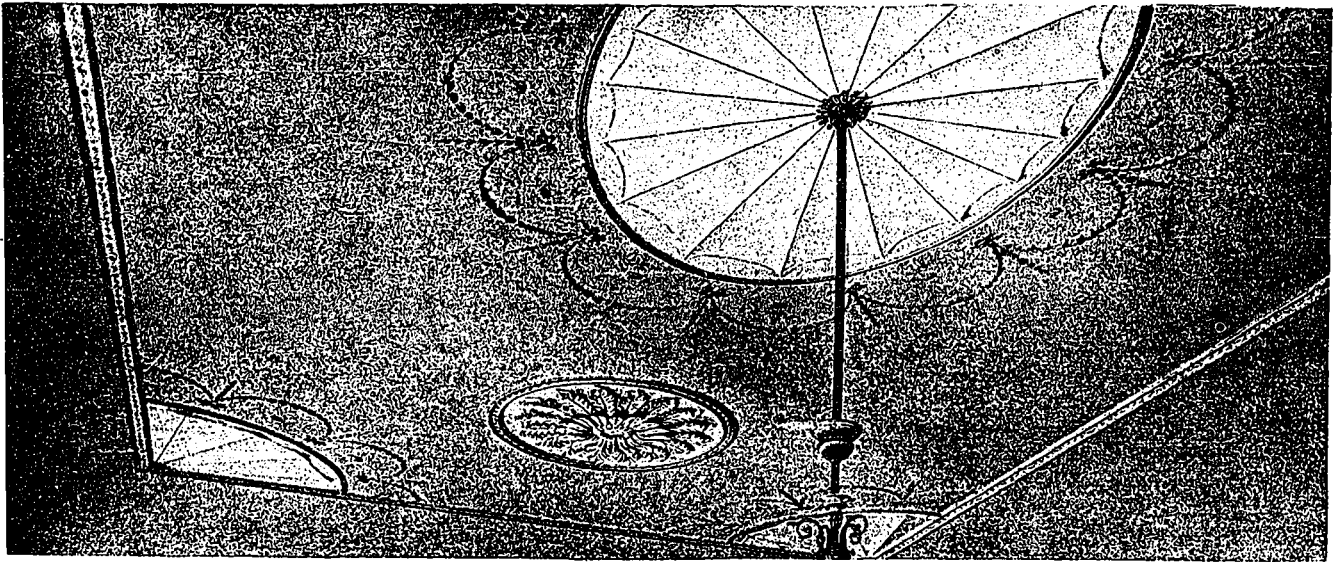
the stretchers vary from a light red to buff. The ornamentation is centered in the doorway and crowning cornice, above which dormers appear against the sky. The storey heights are often marked on the façade by moulded brick string courses. The entrance was treated with delicacy, in a great variety of ways in which one or two orders, without a porch, were used. The door itself was framed by fan and sidelights, consisting of light cast-iron bar tracery, in various combinations of circles, segments and straight lines, with foliage at some of the intersections. This was a direct copy of the English method of lighting halls in city houses. There are still many fine examples in the older parts of these cities.

The southern colonies grew up under entirely different conditions from those in New England and the Middle States. In the south the colonists were not seeking refuge from political or religious oppression. They were cavaliers, sons of wealthy gentlemen, many of them noblemen by birth, who sought this new "paradise" in hope of finding gold, to escape debt, or some similar cause. Their belief was mainly that of the Church of England, and their political ideas were those of the Mother Country.

Brought up on vast estates at home, these gentlemen naturally settled on large tracts of land, and as the distances between these were great, and the only roads which existed were bridle-paths, each planter sought to have his estate on a river front, thus ensuring easy means of communication and commerce. So it is that the Severn in Maryland, Goose Creek in South Carolina, West River, the York, the Potomac, and especially the



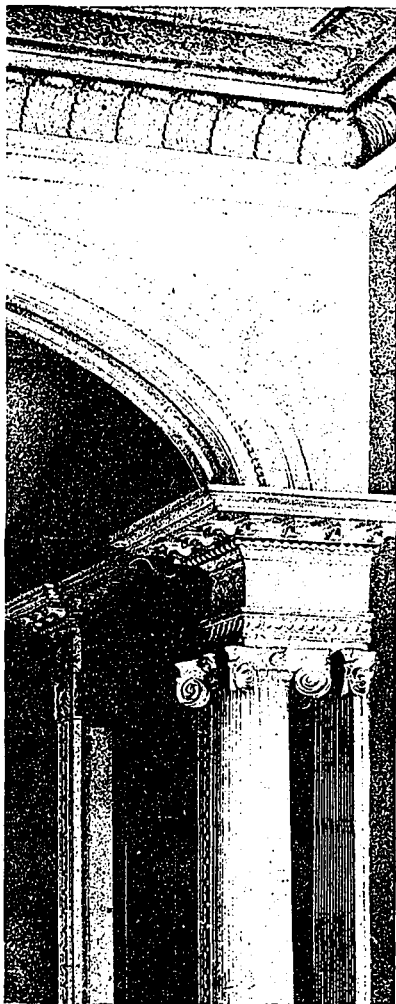
STAIR HALL, BENNETT HOUSE.



DETAIL OF COLONIAL CEILING FOR DINING ROOM.

James, in Virginia, are famous for their almost palatial residences. Accustomed to luxury and refinement, the colonists immediately sought to reproduce like conditions in their new surroundings, and the manors of the James-Shirley, built 1700; Westover, in 1737; Carter's Grove, in 1737, and Brandon, in 1790, show how well they succeeded.

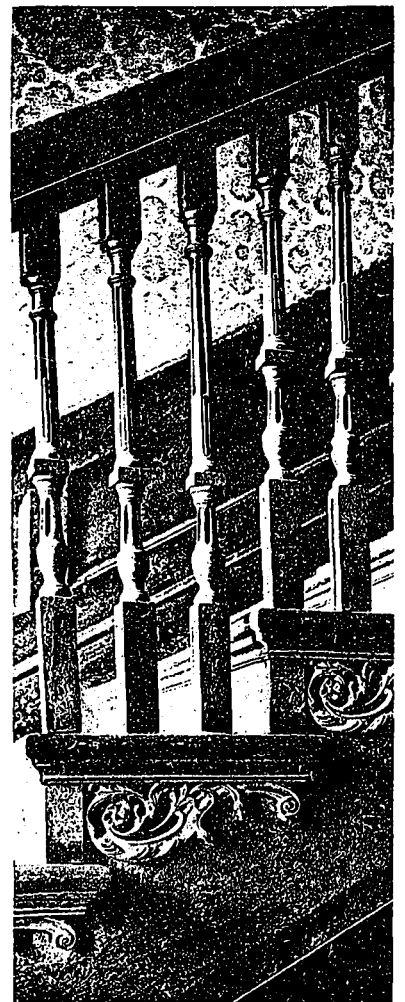
The contemporary English manor house was the inevitable model for these buildings. The house forms the centre of a symmetrical group of detached outhouses or wing pavilions. Whatever plans were drawn were doubtless brought from England. The divisions of space were extremely simple and the exterior was plain, square and massive. The openings are rather high and narrow, and are symmetrically placed. As a



INTERIOR DETAIL.

rule the house is two stories high above the cellar, and the wings or out-buildings one or one and a half. The roofs are bold and the chimney stacks are high. Small, dark red English brick, laid in Flemish bond, from three to four feet thick, were used on both the exterior and interior walls. In many cases the alternate exterior bricks were of deeper color, or sometimes even glazed. Flat arches with voussoirs, one brick and a half high, crown the openings and a moulded brick string course runs along at the second floor level. The cornice and the window and door frames are of wood, carved with a few simple mouldings.

At Carter's Grove the old buildings flanking the mansion are one storey brick houses with high pitched slate roofs, pierced on each side by three dormer windows. From this grew the wing pavilion mansion. The outhouses were first connected with the main building by an open arcade as at Mount Vernon, in Westmoreland County, Va., and then joined to the mansion itself by closing the arches, as at Woodlawn, near Mount Vernon, in the same county. Thus the H or the E shaped plan was established, and it proved to be equally successful in the city as well as on larger country estates, as the Paca,



STAIR DETAIL.



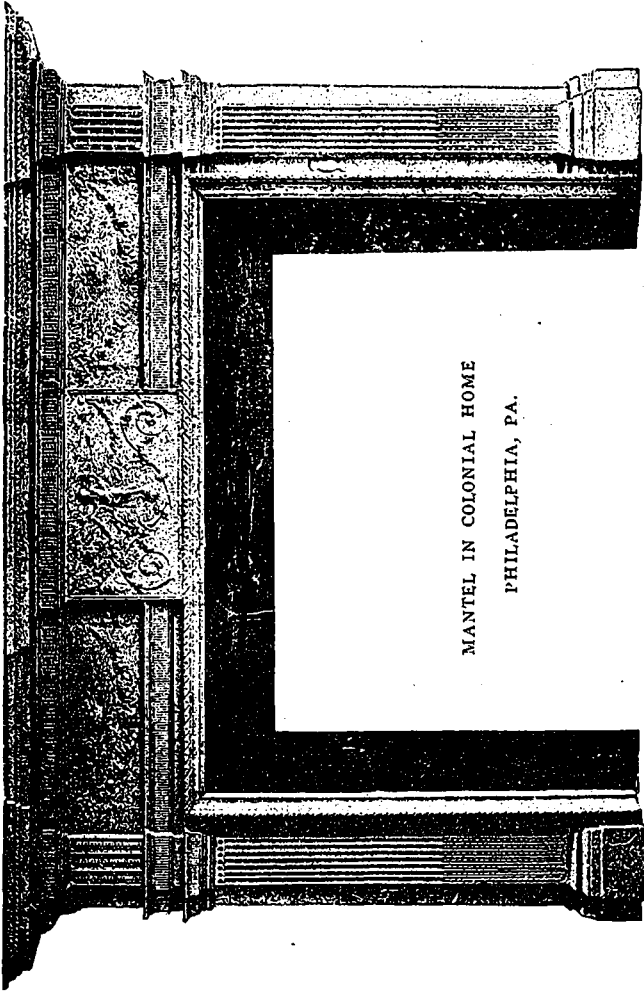


THE BULL HOUSE, CHARLESTON, S.C.

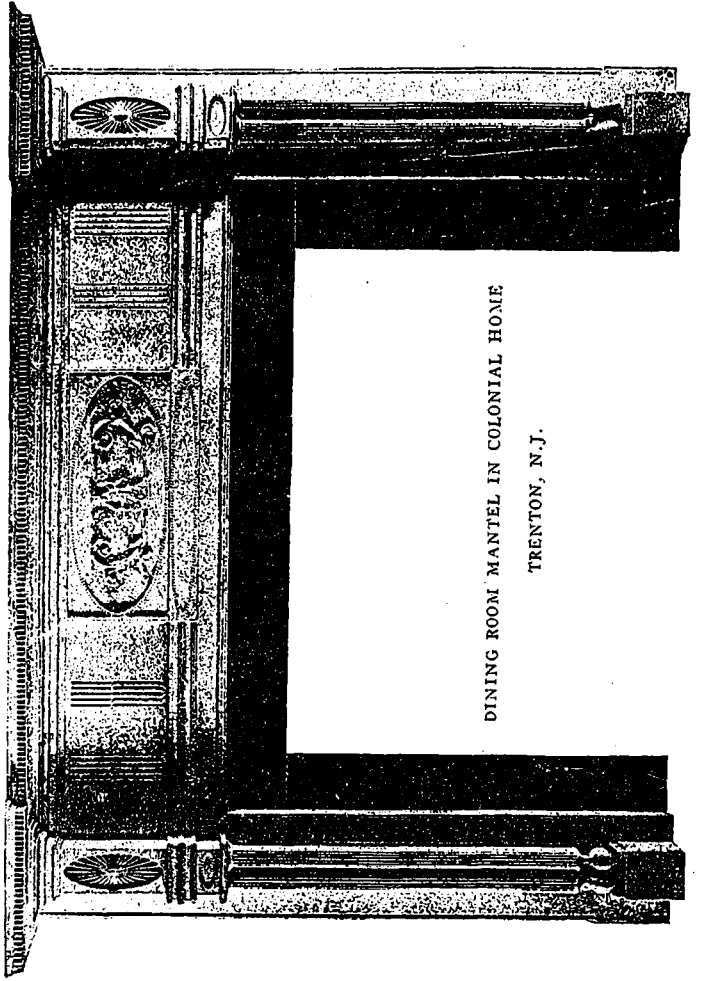


THE PACA HOUSE, ANNAPOLIS, M.D.

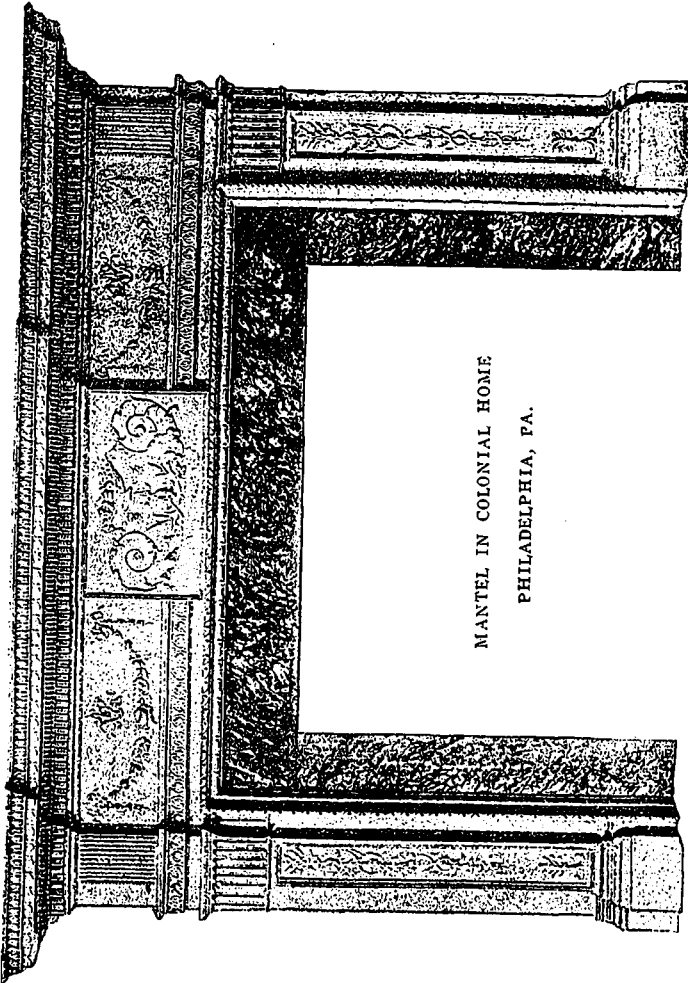
EXAMPLES OF EIGHTEENTH CENTURY COLONIAL ARCHITECTURE.



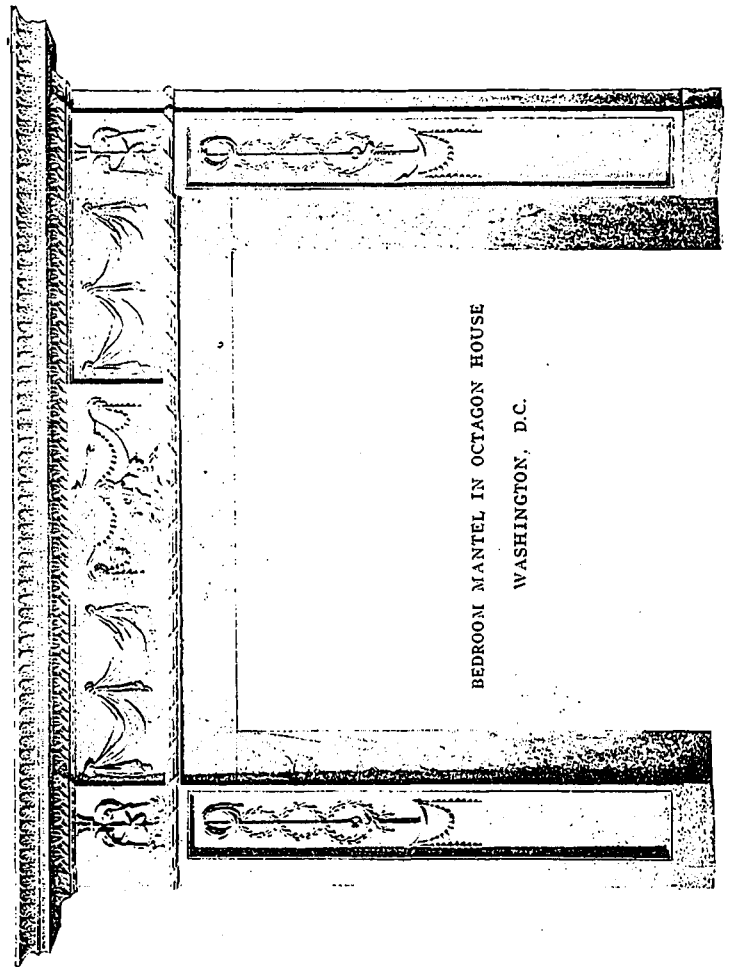
MANTEL IN COLONIAL HOME  
PHILADELPHIA, PA.



DINING ROOM MANTEL IN COLONIAL HOME  
TRENTON, N.J.



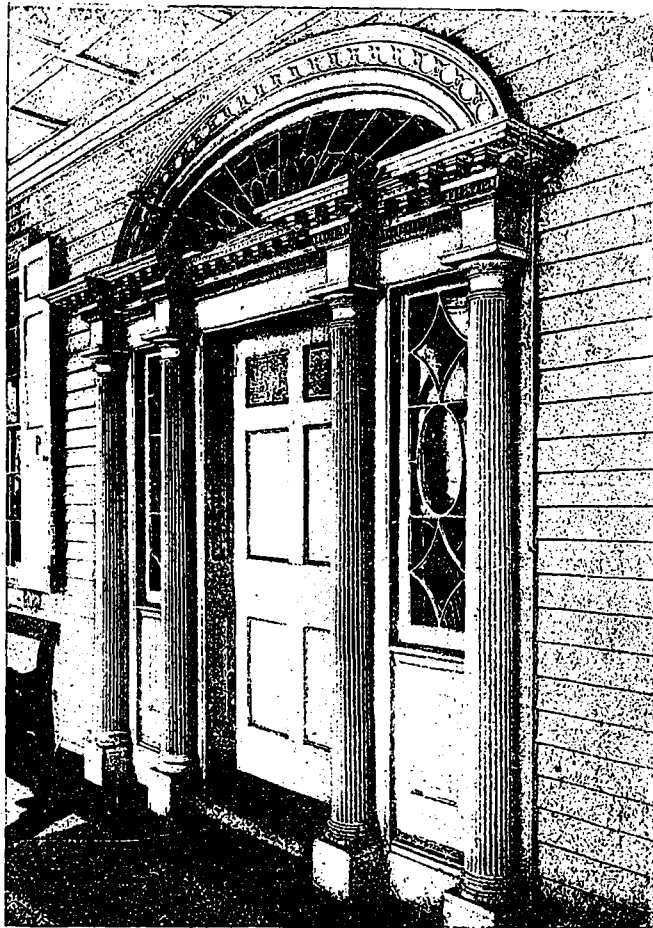
MANTEL IN COLONIAL HOME  
PHILADELPHIA, PA.



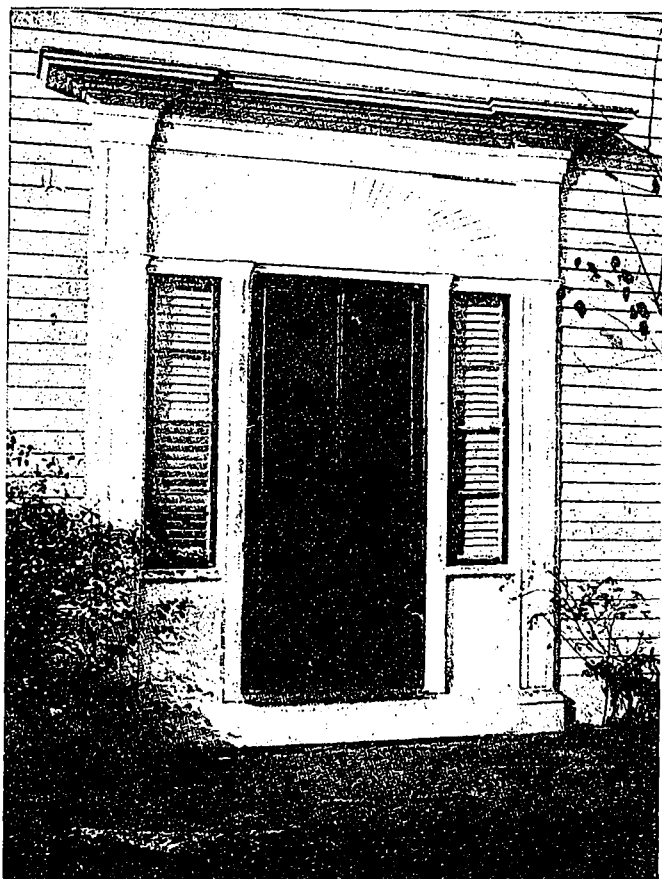
BEDROOM MANTEL IN OCTAGON HOUSE  
WASHINGTON, D.C.



DOORWAY WITH SIDE AND FAN LIGHTS.



DOORWAY WITH TWO FLANKING COLUMNS.

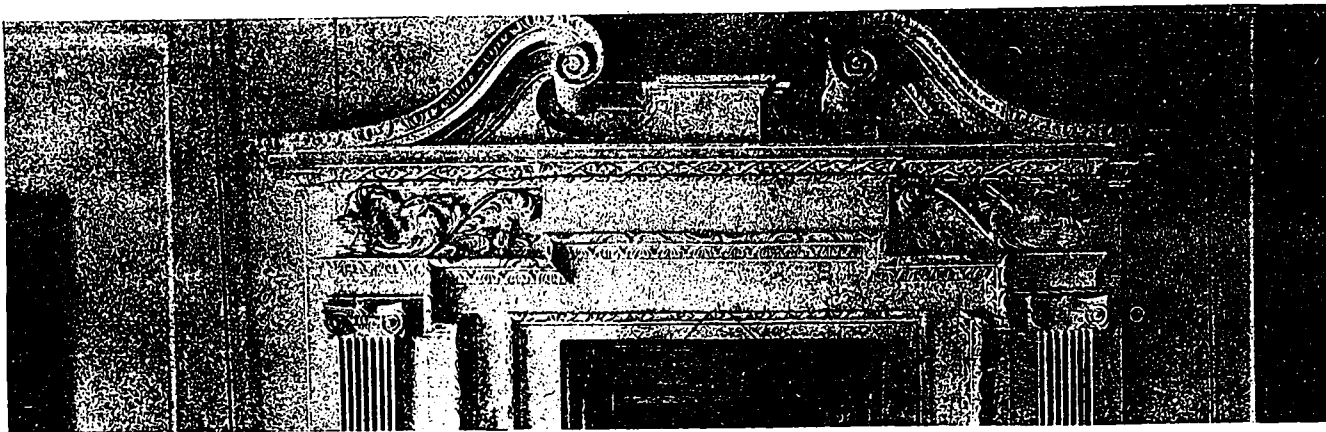


DOORWAY AT MANTON, R.I.



DOORWAY AT PROVIDENCE, R.I.

DETAILS OF COLONIAL ENTRANCES.



DETAIL OF MANTEL IN DINING ROOM.

Brice and Harwood houses in Annapolis show.

As a veranda was unknown in the English manor, it is an exception in those of Maryland and Virginia, so the doorway itself was the chief exterior feature. It was treated in a similar way to those in the North, two flanking pilasters or columns, carrying an entablature and pediment or hood, or, as in Annapolis, a small porch with free standing columns similar to those common in Connecticut. Side lights and fan lights were rarely used in the South, although transoms are very frequently encountered.

The Southern interiors show breadth, simplicity and elegance, the rooms are square and well proportioned as to height, and the halls, which are seldom less than one-third the total floor area, are large and imposing, running from the front to the rear of the house, as in the North. The details and finish show

more solidity and formality than those of the New England and Middle Colonies. The staircases are of mahogany, or even in some cases stone. Many walls are panelled-wood to the ceiling, and the door and window trims are classical, but are at times weakened by French Rococo influences. The ceilings in the best examples are decorated with delicate plaster relief work. Niches, which are a common Northern feature, were rarely used, except as cupboards. Mantle-pieces in marble were quiet, simple and classic in design, while those in wood were slender and graceful, decorated with hand-carved flutes and beads, with some delicately modelled design in putty on the prieze. In all there is a certain repose, and the decoration is focussed, leaving broad, plain surfaces; nothing is exaggerated and odd effects are not sought, thus the whole is restful and refined.



FRONT FACADE OF "WOODLANDS," PHILADELPHIA, PA.

# CONSTRUCTION

A JOURNAL FOR THE ARCHITECTURAL  
ENGINEERING AND CONTRACTING  
INTERESTS OF CANADA



FREDERICK REED, Editor

H. GAGNIER, LIMITED, PUBLISHERS

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**CONTRIBUTIONS**—The Editor will be glad to consider contributions dealing with matters of general interest to the readers of this Journal. When payment is desired, this fact should be stated. We are always glad to receive the loan of photographs and plans of interesting Canadian work. The originals will be carefully preserved and duly returned.

Entered as Second Class Matter in the Post Office at Toronto, Canada.

Vol. 6 Toronto, January, 1913 No. 1

## CURRENT TOPICS

*MANY VILLAS*, pensions, etc., throughout Italy which are out of range of any electric-lighting company are lighted by private acetylene-gas plants. The lighting systems and apparatus used are of Italian manufacture, coming from Milan and Turin. The claim made by a Milan manufacturer is that his apparatus will operate 20-candle-power lights at a cost of one cent per hour.

\* \* \*

*AN EXHIBITION HALL* to cost \$10,000,000, will soon be erected in Paris near the Military School in the Champ de Mars. The Grand Palais in the Champs Elysées is too small and has more demands upon it than it can meet, which facts have induced the Paris municipal council to consider the new Palais des Expositions. Its creation is largely the work of the Agriculture party in Parliament.

*THE SUM OF \$400,000* is being spent on the removal of the Luxembourg Museum from the present building to larger quarters in the old Seminary of St. Sulpice, close by. The change is being looked forward to with great satisfaction in art circles, since it will be possible to arrange the priceless art collections properly. The building which has been selected by the Government for the purpose, will provide three times the space for pictures that exists at present and five times the room now available for sculpture. It will also have several galleries for engravings, which hitherto have been altogether crowded out.

\* \* \*

*JOHN M. CARRERE*, architect, made the statement shortly before his death, that no architect knew the first thing about acoustics. Unlimited money and the best talent have been lavished on public buildings which, when completed, proved to be failures, acoustically speaking, as for example, the Cathedral of St. John the Divine, the New Theatre, and Dr. Parkhurst's church in New York city. Various attempts have been made to deaden the echo, but even these methods of modifying a failure are still in an experimental stage.

\* \* \*

*WINNIPEG* has elected as mayor for 1913, T. R. Deacon, manager of the Manitoba Bridge and Iron Works. Such a movement augers well for a progressive administration in civic affairs. The new mayor, who was elected by a large majority, is generally recognized as a type of business man best fitted to guide the city's affairs at this time—a period of extreme importance owing to impending consideration of public works of great scope and the very rapid growth of the city.

\* \* \*

*UNTIL RECENTLY* it has been impossible to produce a concrete mixture that would not absorb moisture. While carrying on experiments with a view to obtaining a non-absorbent, dustless road material. L. W. Page, engineer, found that when a heavy, mineral residual oil was mixed with Portland cement paste, it entirely disappeared in the mixture and did not separate from the other ingredients after the cement had hardened.

\* \* \*

*HAND-MADE BRICKS* are being used in the restoration of the historical Tattershall Castle at Lincolnshire. These bricks are alike in color and size to those used during the fourteenth century. It is estimated that over one hundred thousand brick will be necessary to compete the work.

\* \* \*

*THE ARCHITECTURAL* firm of Ross & MacFarlane, Montreal, has been dissolved. Mr. Ross will continue the practice of architecture at 1 Belmont street, while Mr. MacFarlane will open new offices in the new Birks Building in Phillips square.



# Town Planning in Great Britain

THOMAS ADAMS \*

## *I.—Building Development prior to 1909.*

FROM 1875 to 1909 the control of building development in British cities, towns and urban and rural districts was chiefly exercised under local by-laws based on the Public Health Act of 1875 and subsequent amended Public Health Acts. These public general Acts have been supplemented in many towns and districts by local Acts to meet special local needs or conditions. Hence, although the control of sanitation and road and building construction has been carried out in the main on identical lines throughout the country, numerous authorities have from time to time secured for themselves special and exceptional powers. As a general rule, however, the development of land has been regulated by the model by-laws of the Local Government Board, based on the Public Health Acts. These have been prepared in two sets, applicable to urban and rural areas respectively.

But the very nature of a code of rules which have to be generally applied tends to stereotype development in accordance with the minimum standards laid down, and while preventing sanitary ill-doing below these standards they do not encourage sanitary well-doing above them. Under by-laws an owner of land who is engaged in developing his estate gets no advantage by improving on the least that is required of him, and local authorities possess no discretionary powers to vary the by-laws to meet special cases, however desirable this variation may be in the public interest.

For instance, under the by-laws the standard width of roads is the minimum prescribed, which is from 36 ft. to 45 ft. A case might arise in which an authority desired to have a 60 ft. street, but was willing to allow a smaller width than the minimum on some other purely residential streets if the owner of the land proposed to be developed gave the extra land and the additional cost required for the wider road, but naturally no such arrangement can be authorized under a code of rules applicable to general conditions.

In spite of these natural disadvantages the British by-laws have secured a very high standard of road construction, a comparatively satisfactory minimum of air space and very efficient control of sanitation. This is proved by the increasing improvement in the general public health, notwithstanding the expansion of cities and the depletion of rural districts, with the consequent increasing concentration of the population on the land.

But of course, the experience gained during the period in which by-laws have operated has taught

certain lessons and has indicated along what lines further progress can be made. From the point of view of convenience of traffic the by-laws have not prevented main arterial roads being made too narrow for public requirements, and it is considered that they have not given local authorities sufficient control over the direction and situation of streets, or over the prevention of cul-de-sacs. From the point of view of health the fact that the by-laws have raised the cost of developing land by insisting on a fairly high standard of road construction and sanitation has tended to encourage rather than to discourage the concentration of dwellings on developed areas, with the resulting narrow frontages and deep back projections that shut out sun and air from parts of the houses. From the point of view of amenity, the absence of bargaining power on the part of the local authorities has prevented them from agreeing to the preservation of trees in streets, or from securing the provision of open spaces in exchange for giving up some lesser advantage. Some public men have urged that by-laws should be framed on more elastic lines to meet such special cases, but there are obvious difficulties in following this advice. From these observations it will be noticed that by-laws have operated in a very limited sense in controlling the planning of areas according to schemes agreed between the local authorities and owners.

## *II.—Garden Cities and Garden Suburbs.*

Side by side with the experience of the limitations of by-law control a series of interesting and useful practical experiments have been in progress of development in England during the past ten years. Garden cities and suburbs are essentially an English creation, and the first important example of this method of development was the garden village of Bournville, established near Birmingham as the result of the enterprise of Mr. George Cadbury and his family. These schemes have been a growing force in Britain and have had a considerable influence in promoting town planning as it is understood in that country. One of the underlying principles of the movement was the predetermined planning of the sites proposed to be developed.

The establishment of garden cities, *i.e.*, towns of a self-contained character built up from the beginning in rural areas, was first advocated by Ebenezer Howard in his book called "To-morrow;" and as the outcome of this advocacy a first experiment is already well on its way to successful consummation at Letchworth, 34 miles from London. Its economic basis rests on taking advantage of the growing tendency of manufacturers to move out from crowded centres to rural and partly rural areas and to obtain the advantage of the resulting conversion of land having an agricultural value into land having a building value. The basis is sound if the conversion can

\*Paper read at the recent international convention held in Berlin, Germany, by Mr. Adams, who is a member of the Government Board of England for the administration of the Town Planning Act.

be made rapid enough to prevent too great a leakage of capital in loss of interest on the first cost of lands and works of development. Letchworth may have "hung fire" too long to be likely to succeed as well as its promoters anticipated, but it has overcome the preliminary difficulties necessarily associated with the beginnings of such an experiment, and has reasonable prospects of being a financial success. It has already succeeded in teaching public men in Europe and America many valuable lessons. More than a score of factories are now established in the new town, where every facility has had to be provided as the need for it arose, and over 7,000 people now inhabit an area which consisted of fields devoted solely to agricultural purposes about eight years ago. The Garden City movement is not a "back to the land" movement in the sense of inducing the people to return from town industries to agriculture. On the contrary it accepts the town, and all that pertains to it, as an inevitable growth, and having done so insists that in the interests of posterity that town conditions should not be, as they need not be, less healthy than country conditions.

One of the reasons advanced by Mr. Howard why new towns should be created in preference to improving old towns was that apart from the great advantage obtained in regard to the cost of sites, the planning of the areas could be arranged in advance to meet all future needs, thus avoiding the almost prohibitive costs which are necessarily incidental to schemes of reconstruction in the older centres. Another was the advantage of designating certain areas for works, other areas for residences, and others for agricultural purposes. A third was the understood rule that every house should have a garden of reasonable dimensions. In these three respects we shall see that the British Town Planning Act is based on principles similar to those which underlie the Garden City movement.

This wider spreading of the population has been rendered more feasible in recent years owing to the great improvement in the means of transit. One of the arguments used against it was that by widening the circumference of development the mileage and cost of travelling to and from the centre is increased; but this objection is not found to be a serious one in practice. The important point in connection with transport is the time spent in travelling between two given points rather than the distance between these points. In England we find that at certain secondary centres, ten, twenty or thirty miles from the principal centre, there is a proportionately quicker service of trains than at the nearer intermediary points, so that those living further away may spend least time in travelling. By creating secondary centres some distance from the town, arrangements can be made to have accelerated services of trains. Moreover, by moving both works and workers into garden cities the necessity for travelling is greatly lessened in some cases and entirely obviated in others, notably in the case of those earning least wages.

Apart from these facts, the proper planning of areas tends to fill up the sites more evenly and less in straggling groups with intervening areas undeveloped, and as the circumference enlarges the population accommodated between two given points in the radii become proportionately greater. Therefore on the whole a more healthy and at the same time a more scientific distribution of the population should not add materially to the cost of travelling in time or in money.

The Garden Suburb movement is distinct from the Garden City movement in that it has for its object the better housing of the people in the suburbs of existing towns. In this respect it is more closely identified with town planning than the Garden City. In the respect that it is purely residential in character the Garden Suburb is, however, less like what an average town planning scheme will be than a "Garden City" scheme. The Hampstead Garden Suburb is the most successful example of the garden suburb created by private enterprise before the Town Planning Act came into force. Now that this Act exists local authorities can obtain all the advantages offered by the private garden suburb under a town planning scheme. Coterminous with the early stages of development of garden cities and suburbs, at a time when the need was felt for more elastic and comprehensive powers than were possible under a code of by-laws, public notice was drawn to the example of Germany and Sweden in matters connected with the planning of cities. "The Example of Germany," a book written by Mr. T. C. Horsfall, took a considerable part in attracting public notice to this aspect of the question, and since its publication there has been a constant stream of visitors to Germany to inspect some of its beautiful cities.

Although Britain has no doubt profited by Germany's example, yet, in view of the difference between German and British conditions, the British Planning Act has of necessity had to be cast in a very different mould to the Prussian Act of 1875. The former goes much further in dealing with undeveloped areas, but is probably much more limited in its scope in dealing with areas already built upon.

#### *The Act of 1909.*

Part II. of the Housing, Town Planning, etc., Act, 1909, was thus placed on the statute book after a period of thirty-four years' experience of the by-laws, after some lessons had been derived from the Garden City movement, and after attention was drawn to the examples set by other countries, including Germany.

Town conditions in Britain are peculiar in that the natural tendency is for the population to spread over wider areas than in Continental cities. The same urban population covers larger areas in England than is the case in Germany, and therefore in proportion to the increase of population a greater acreage is covered every year by houses. In a speech delivered by Mr. John Burns, President of the Local Government Board in England, to whose statesman-

ship the Housing and Town Planning Act is due, he said that in every fifteen years 500,000 acres of land was converted from use as agricultural land and used for new houses, railways, factories and workshops. The town planning part of the Act of 1909 has for its chief aim the controlling of this new development in order to secure the objects of convenience, amenity and proper sanitation in connection with it. It is not concerned with the acceleration of development, but merely with its proper control in the public interest. For this purpose local authorities may either promote schemes themselves, or adopt schemes of owners, dealing with land which must either be "in course of development" or "likely to be used for building purposes." The Act provides that the latter description may include land proposed to be used as open spaces, roads, etc., but only allows the inclusion of land already built upon, or that which is comprised in existing open spaces if these are so situate to the remainder of the area that in the opinion of the Local Government Board they ought to be included. Buildings may not therefore be included for any purposes solely connected with themselves, but only for some purpose connected with a scheme as a whole, or with that part of it which deals with an undeveloped area.

But buildings may be demolished or altered if this is necessary to carry a scheme into effect. In Britain we look to our Housing Acts to control the sanitary condition of existing property, and Part I. of the Act of 1909 added considerably to the powers of local authorities in this respect. The town planning part of the Act does not overlap with these powers and, I have already pointed out, is primarily concerned with proposed and not with existing development.

A local authority has to make out a *prima facie* case to the Local Government Board before it can embark on the preparation or adoption of a scheme. This case rests on the suitability of the land proposed to be planned, its likelihood to be used for building purposes, and whether any object of the Act is to be served by preparing a scheme. It is important to note as justification for this preliminary step that the consent of the Board carries with it the power to control any development within the area of the proposed scheme while it is being prepared. After the application of an authority is sent to the Board, or after such other time as the Board may fix for the purpose, no person is entitled to obtain compensation on account of any building erected on, or contract made or other thing done with respect to land included in a scheme.

An important provision in the Act is that it enables local authorities to include in their schemes land "in the neighborhood" of their areas as well as within their own boundaries, if they satisfy the Local Government Board that such land should be included. Therefore the ordinary artificial boundaries of towns and districts do not necessarily apply to the areas of town planning schemes, and in the absence of co-operation between two authorities one may be

able to make out a case for including part of the area of the other. While this power is given the Act appears to contemplate and provide for a large measure of co-operation between different local bodies and between these bodies and the owners of land. Every person interested has to be notified at each stage of the scheme, and statutory conferences have to be held with a view to encouraging co-operative action.

A town planning scheme may go so far as to include provisions for suspending enactments contained in public general Acts, but whereas in nearly every case the approval of the Local Government Board is sufficient to make a scheme operative, in the case of suspension of enactments a draft has to be laid before Parliament, which has a right to object to the scheme.

Section 58 of the Act, dealing with compensation, is of exceptional interest. Any person whose property is injuriously affected *by the making of a town planning scheme* is entitled to compensation if he makes a claim. The words in italics should be noted, as they lay the basis of any claim which is made. This section includes the limitation as to work done after the application is made to the Local Government Board.

The Act is probably unique in providing for recovery by the authority of half of any increase in the value of property which is due to the "making of the scheme." In both cases the question of depreciation or appreciation of the value of property as a result of the scheme being made has to be settled by a single arbitrator appointed by the Local Government Board, unless the parties agree on some other method.

There are two important respects in which claims for compensation are excluded. One is that no claim Construction Adams Town planning four can be made in respect of provisions included in a scheme when they are such as would have been enforceable if they had been contained in local by-laws. Anything which may therefore be determined as reasonable and proper in a by-law may apparently be included in a scheme without compensation having to be paid, even if injury is caused. The second respect is more important still, as it suggests certain positive directions in which town planning schemes may go further than the by-laws in controlling buildings within the area of a scheme. I shall quote it in full:

"Property shall not be deemed to be injuriously affected by reason of the making of any provisions inserted in a town planning scheme, which, with a view to securing the amenity of the area included in the scheme or any part thereof, prescribe the space about buildings or limit the number of buildings to be erected, or prescribe the height and character of buildings, and which the Local Government Board, having regard to the nature and situation of the land affected by the provisions, consider reasonable for the purpose."

This sub-section speaks for itself and indicates the



wide scope and great possibilities of the Act if wisely applied.

Provision is made in the Act for revoking schemes by approval of the Local Government Board, for compulsory purchase of land and for action of the Board in cases of proved default.

When a scheme is approved by the Local Government Board it has effect as an Act of Parliament. The Board has prepared a set of Procedure Regulations which have to be conformed to in the various stages of preparation, and has also power to prepare, but has not yet prepared, a general set of provisions for carrying out the objects of the scheme.

The above is a brief *résumé* of the most important powers conferred by the Act of 1909 in regard to town planning. They show a great advance on the powers hitherto possessed by public bodies in Britain in connection with the development of land. Added to the increased powers granted by housing legislation, they should do much to help in solving the evils associated at all times with the disorderly and unscientific growth of towns. Local authorities are now able to exercise foresight in determining the position and width of main arterial roads in the suburbs of our towns before development takes place; they are now encouraged to exercise judgment in regard to the lay-out of their suburban areas, because they are asked to initiate schemes and not merely to see that they conform to general regulations, and they are able to take a more active interest in the amenities of their district, because an Act of Parliament enables them to protect them. At every stage in connection with town planning schemes co-operation is suggested, and by these schemes new forces will be set at work to stimulate co-operation between all parties interested in the development of building land. The proper planning of land development and the preservation of amenities are as desirable in the interests of private owners as in the interests of the general community from an economical point of view, and from the point of view of public health, who can defend the enormous waste of vitality and happiness which is caused every day by the disorder, the congestion, the overcrowding, and the shutting out of the beauties of nature from the homes of the people, which have together been the result of the haphazard growth of towns in the past.

#### *Practical Working of the Act.*

I have only space for brief reference to the working of the Act. For practical purposes it has only been in operation for little over a year. During that time it is estimated that about 100 authorities in England have taken preliminary steps with a view to eventually securing the consent of the Local Government Board to the preparation of schemes. The Board has held twenty inquiries into schemes, and has consented to the preparation of seventeen. Two inquiries have also been held in Scotland by the Scottish Local Government Board. Other applications are being received, and the general indications are that the Act will be very widely applied in the

course of a very few years. I am debarred, by reason of my official position, from dealing with this part of the subject as fully as I think it should be dealt with at your congress; but I trust that on the next occasion when you meet and when town planning has made more substantial progress, you will have the working of Part II. of the Act of 1909 more fully dealt with by another.

Town planning is a subject in regard to which Germany and Great Britain may learn from one another, and profit by each other's example. In both countries we want to proceed with some caution, after careful research and tried experience, but none the less boldly after having convinced ourselves what are the right lines along which to build up the cities of the future. The city is more than ever becoming the nursery in which civilized races are reared, and those of us who love our respective countries and desire their future welfare, can put our minds and hands to no better task than that of devising means and carrying out schemes to improve the health conditions in which our children have to live.

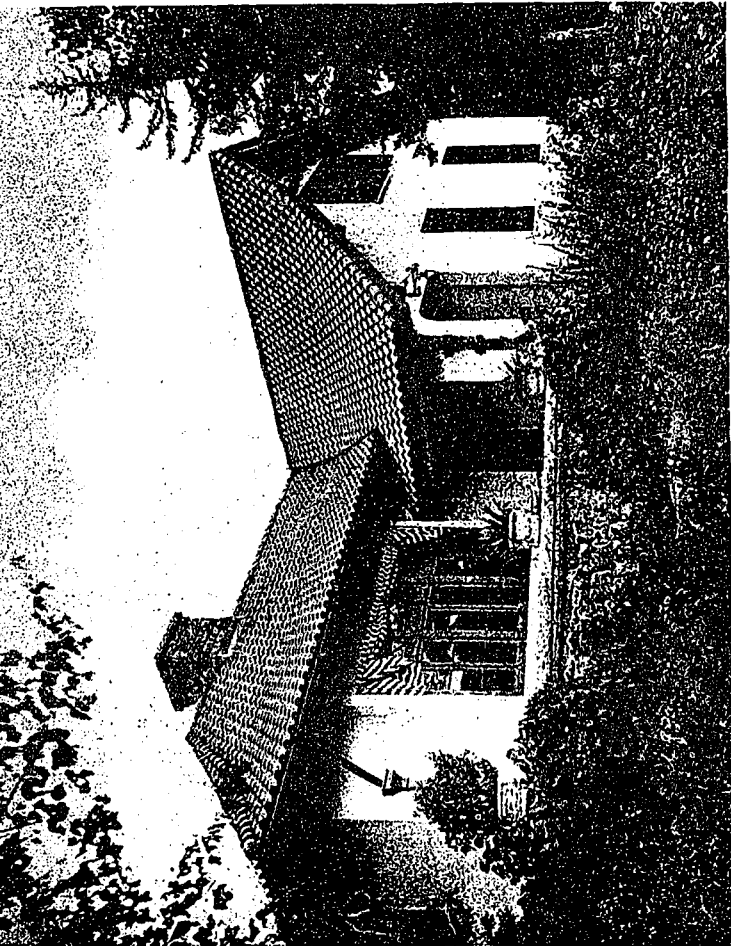
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*THE COMMITTEE* on Town Planning, in reporting to the forty-sixth annual convention of the American Institute of Architects, recently held in Washington, D.C., said:

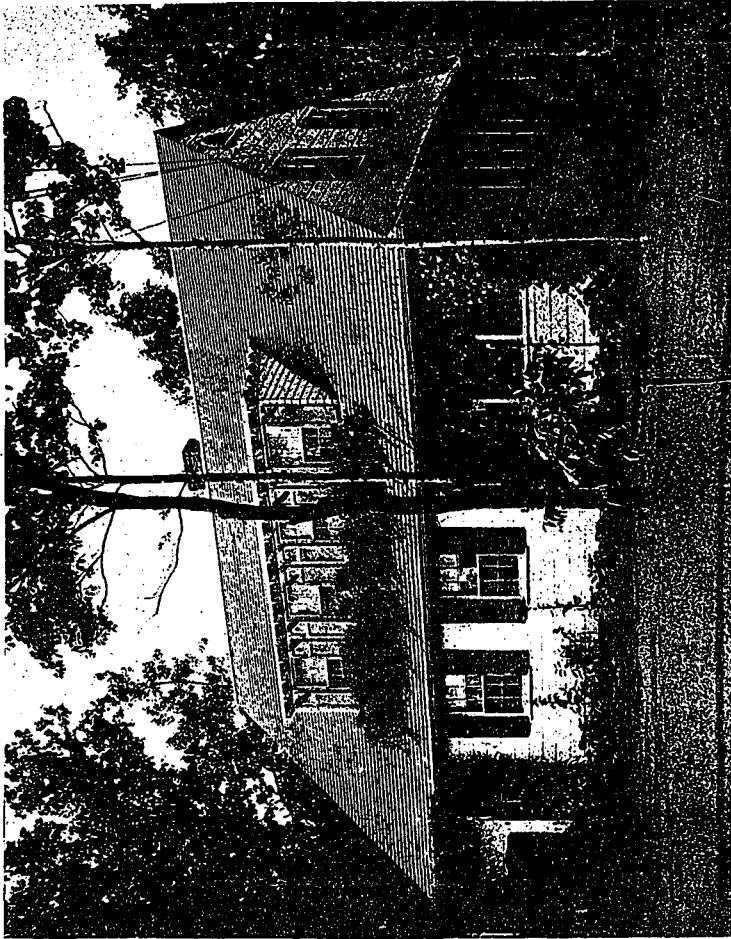
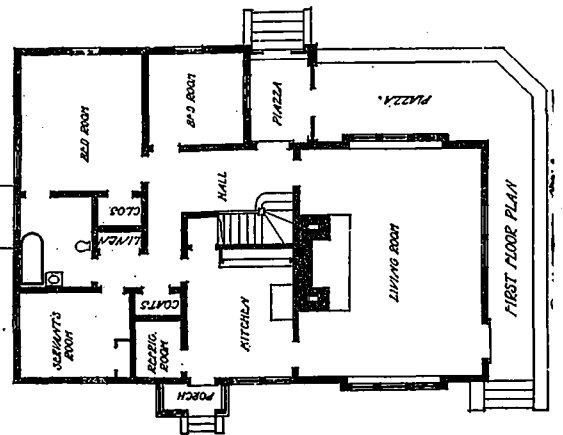
It is gratifying to note the continued interest and the growing appreciation of the value of town planning. During the past year many cities in the United States and Canada have turned their attention to the subject, some are taking active steps to improve their water fronts, solve the railroad problem or to plan civic centres. Others are turning their attention to suburban development and in a few more ambitious instances comprehensive plans are being prepared for the growth and development of the entire city.

The activity in the various societies and civic bodies continues and lectures on city planning and meetings devoted to the subject are on the increase. The result of these activities has been to interest the city authorities themselves and it is encouraging to note that in numerous cases the local city governments have espoused the idea, and recognizing the value of technical advice have appointed expert advisers to guide them in the development of their cities.

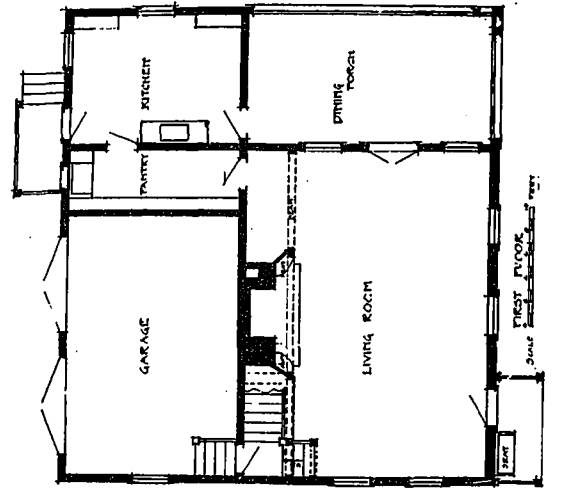
Much interest has been shown in the Town Planning Act now in force in England and it seemed possible that this Act or a modification of it might serve as a basis for a similar law that would be suitable to American cities. After consideration, however, this did not appear feasible. The English town planning law provides for a central body possessing absolute power who can criticize and control the plans for all English cities which must be presented to it for its approval. This does not appear to be possible in our country. The conditions, not only in different states, but in different cities, vary so greatly that we believe it would not be well to attempt to frame a general law.



BUNGALOW AT BAR HARBOR, ME.  
 CHARLES B. PERKINS, ARCHITECT.  
 (From The Brickbuilder.)

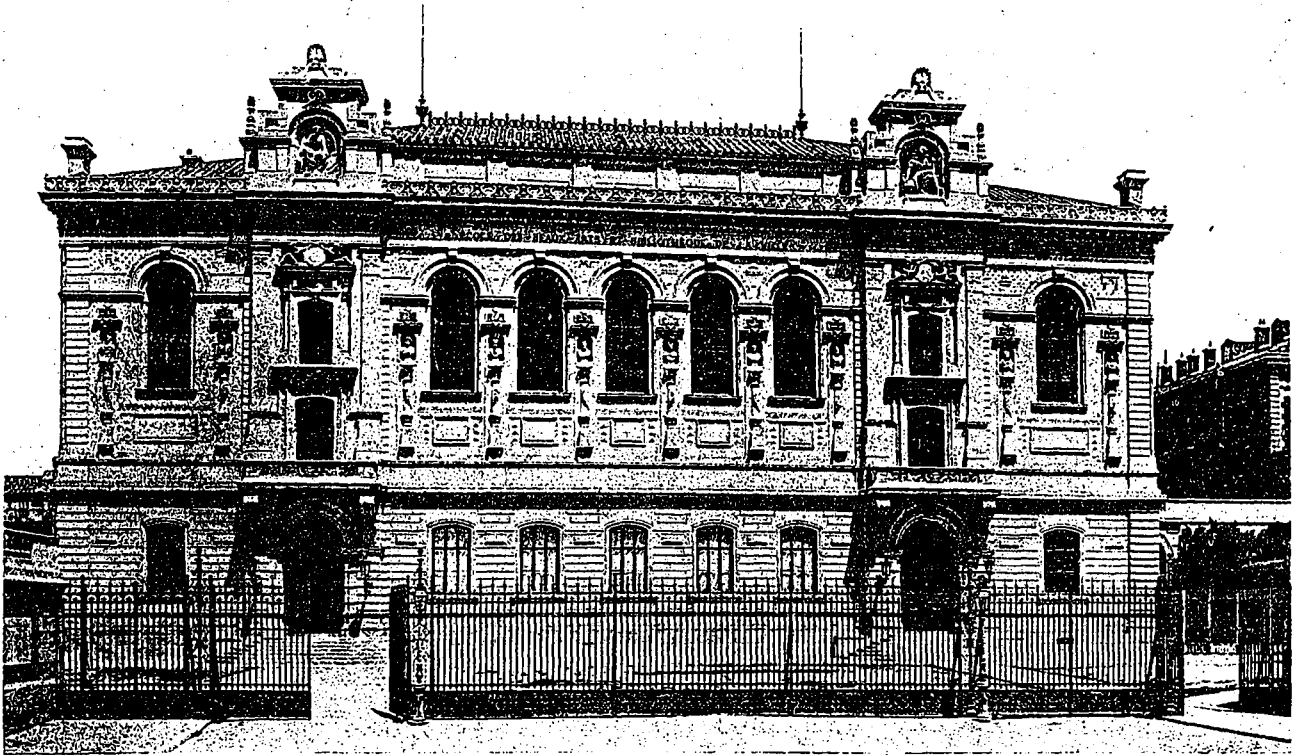


RESIDENCE AT RAVINA, ILL.  
 LAWRENCE BUCK, ARCHITECT.  
 (From The Western Architect.)

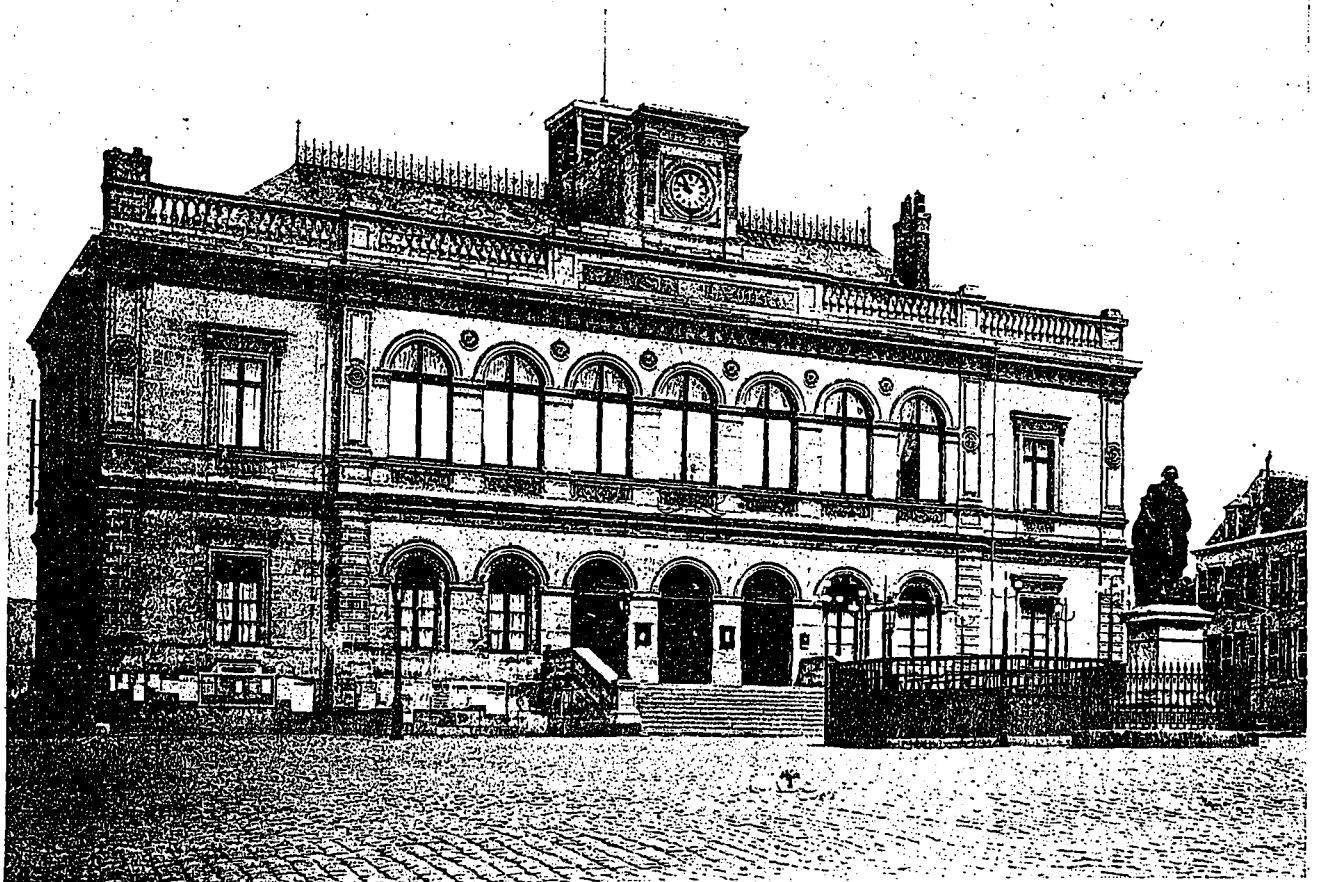


TWO EXAMPLES OF AMERICAN DOMESTIC WORK.

CONSTRUCTION will illustrate each month examples of modern work which is being erected in the architectural field of other countries. The aim is to present the manner in which problems similar to all parts of the world are being worked out. It is done in the spirit of helpfulness and may suggest ideas in design and planning which can be advantageously adopted.

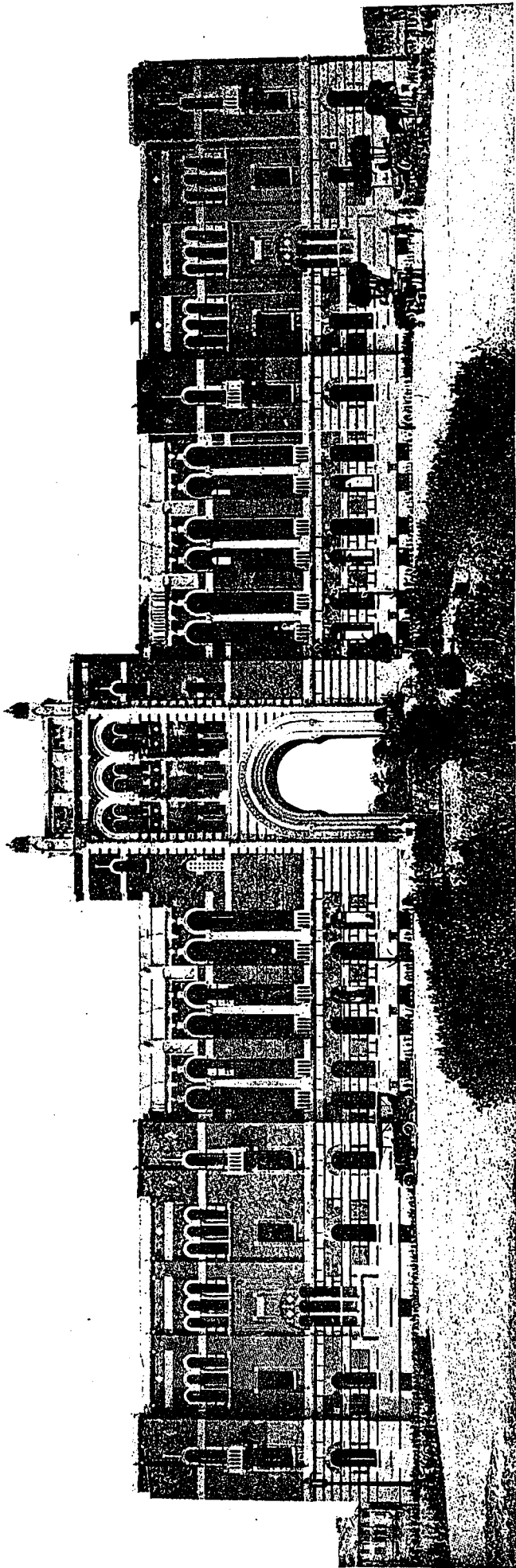


ECOLE DES BEAUX ARTS ET BIBLIOTHEQUE DE LA VILLE, MARSEILLES.

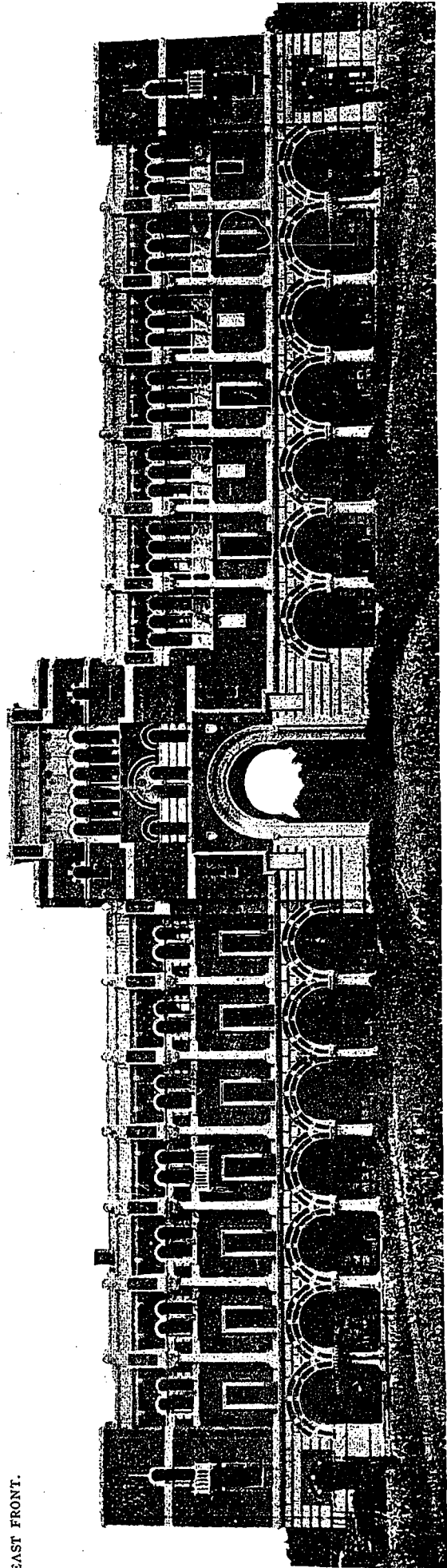


LA PLACE DE L'HOTEL DE VILLE, LAON.

TWO EXAMPLES OF FRENCH WORK.



EAST FRONT.



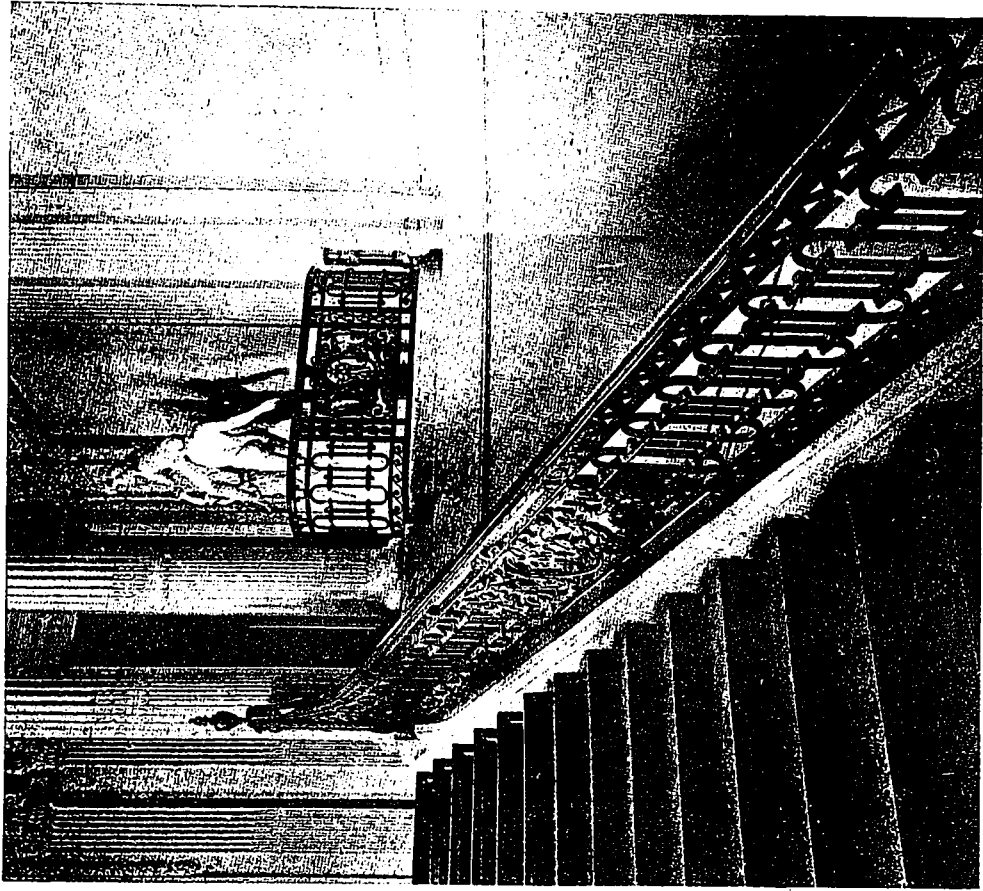
WEST FRONT.

From The American Architect.

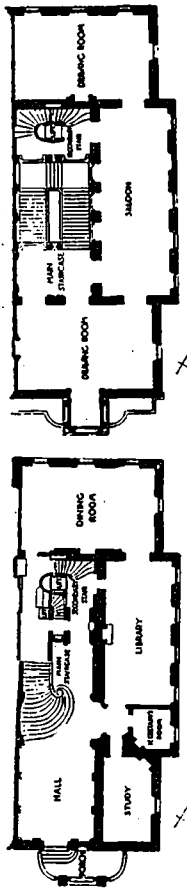
ADMINISTRATION BUILDING,

WILLIAM M. RICE INSTITUTE, HOUSTON, TEXAS.

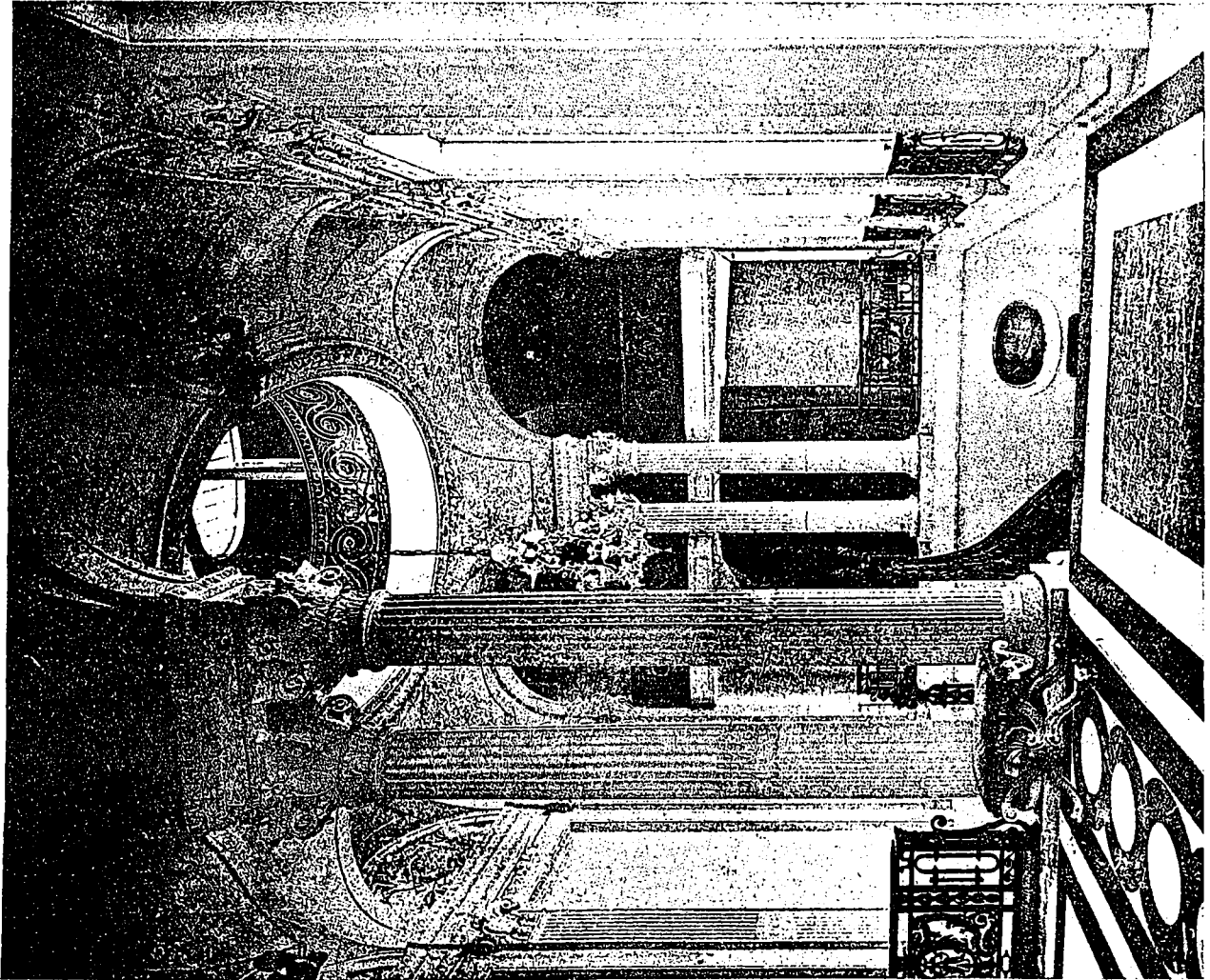
CRAM, GOODHUE & FERGUSON, ARCHITECTS.



UPPER PORTION OF GREAT STAIR.



GROUND FLOOR PLAN.  
FIRST FLOOR PLAN.



HEAD OF GREAT STAIR, CARLTON HOUSE, ENGLAND.

HEAD OF GREAT STAIR.  
From Country Life.



*CALENDARS* for 1913 have been received from the B. Greening Wire Company at Hamilton, and Goldie & McCulloch Company at Galt. These calendars show considerable taste in arrangement and will prove a valuable feature for office use on account of their artistic merit and pleasing appearance.

\* \* \*

*ESTIMATING* for Reinforced Concrete Work is the title of a handbook for measuring and pricing reinforced concrete. It was compiled by T. E. Coleman for the use of engineers, architects and estimators. The items and prices are based on the average cost of materials and labor in the London district. The work contains 154 pp., bound in cloth, price 4s. net, postage 4d. extra. B. T. Batsford, 94 High Holborn, London, publishers.

\* \* \*

*PUMP MANUFACTURERS* have been repeatedly asked to supply a pump with electric motor drive for returning the condensation from radiation placed below the water line of the boiler. Attention has been turned towards the centrifugal or turbine pump for this service, as there is so little expense attached to both the first cost and the upkeep. The problem has been successfully met in the "Economy" Automatic Condensation Pump and Receiver, manufactured by Thomas & Smith, Inc., of Chicago, Illinois.

\* \* \*

*THE ENGLISH SYSTEM* of destroying combustible refuse by high temperature destructors has been adopted in every quarter of the world. One of the very few destructors which have met with marked success in practical use is the Sterling, designed by Messrs. Hughes & Sterling, of London. For this continent, the Griscom-Russell Company enjoys full rights under the Sterling patents. Designs, specifications and estimates for Sterling Destructors of any desired capacity, and calculated to deal with any description of municipal and trade waste, will be furnished upon request.

\* \* \*

*THE* Canadian H. W. Johns-Manville Co., Limited, Toronto, has recently secured contracts for rectifying the acoustical defects in two of Toronto's most imposing edifices. The faulty acoustical properties in the Legislative Chamber of the Government Buildings, Queen's Park, have long been a source of annoyance to our Parliamentarians. The handsome appointments in the auditorium of Knox Church, Spadina Avenue, have also been quite marred by a perceptible reverberation, which has entailed hardship upon both speakers and hearers. The process to be employed absorbs all excess of reverberation and eliminates all curtain wires or parabolic sounding boards.

*ONE OF THE MOST* important developments of the year in the hardware and metal trades was recently announced upon the consolidation of the Metal Shingle and Siding Co. and A. B. Ormsby Co., together with the Canadian interests of the U.S. Metal Products Co. of New York. The Metal Shingle and Siding Co. are familiarly known to the trade in all parts of Canada as being manufacturers of herringbone lath, metal roofings, sidings, ceilings, portable steel garages, steel buildings, and other lines of sheet metal building goods. A. B. Ormsby Co. have specialized in the manufacture of fireproof doors and windows, skylights, ventilators, factory sash, etc. The U.S. Metal Products Co. are large manufacturers in the United States of sheet steel fireproofing materials.

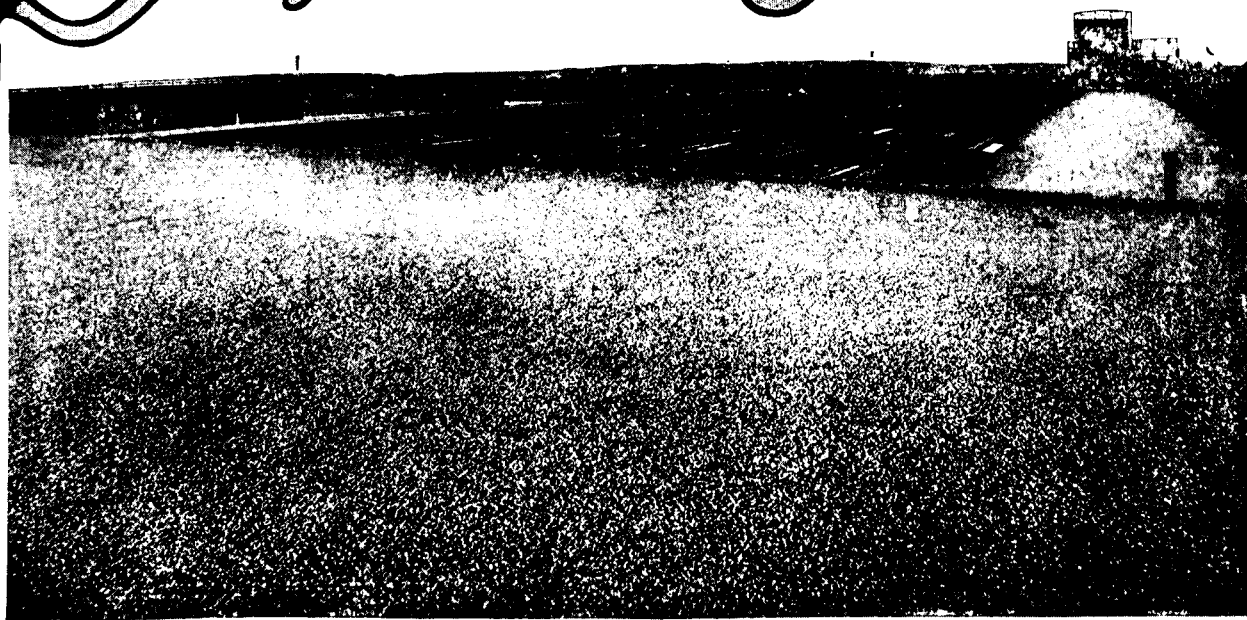
\* \* \*

*A REORGANIZATION* was effected January 1st of the Gutta Percha and Rubber Manufacturing Company of Toronto, Limited. The directors of the main company working in various parts of Canada through the subsidiary branches, the Winnipeg Rubber Company, Limited, and the Vancouver Rubber Company, Limited, decided to operate all the branches under one name. To this end, application was made for a Dominion charter under the name "Gutta Percha and Rubber, Limited," with an authorized capital of \$6,000,000. The new company is controlled by the same interests and under the same management as the old. It has acquired all the trade marks, patents, properties and good will of the old company, and, as heretofore, will be an entirely independent concern without connection or affiliation with any other company in or out of Canada.

\* \* \*

*OF THE MANY* modern improvements that have done much to remove the feeling of dissatisfaction with farm and country life by giving residents in such parts conveniences which they formerly lacked, none is of more importance than the water supply system. By such installation the comforts and sanitary advantages of the city home are made possible, including the hot water tank for kitchen and laundry, a direct pipe line to dairy and barn, and what is still more essential, the modern bath room with its tub, water closet and basin. At the present time a most reliable and efficient system of this kind is being installed in Canada by the Canadian Fairbanks Company. This system consists of an air-compressor which may be driven by a small gasoline engine or electric motor, an air-tight steel tank for air storage, and an auto-pneumatic pump for each source of water supply. One of the advantages of this system lies in the fact that the air storage tank can be located wherever convenient since the compressed air can be piped from any distance.

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It specifies the kind of felt and pitch that should be used, the quantity required, and it further defines the correct method of applying same. It also specifies a simple and practical method of inspection and provides for the identifying of the pitch and felt.

If this specification is carefully followed, the owner of the building is assured of a roof that will usually last twenty years or more without any maintenance expense whatever.

We shall be pleased to mail architects, engineers or owners of buildings, copies of The Barrett Specification with diagrams from which blue prints can be made. Address nearest office.

## Special Note

We advise incorporating in plans the full wording of The Barrett Specification, in order to avoid any misunderstanding.

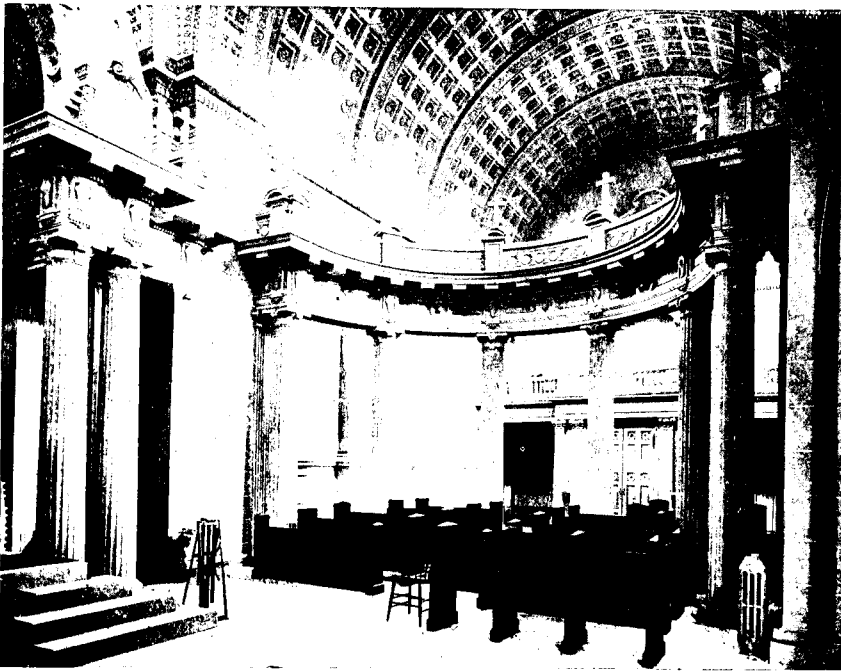
If any abbreviated form is desired, however, the following is suggested:

ROOFING—Shall be a Barrett Specification Roof laid as directed in printed Specification, revised August 15, 1911, using the materials specified, and subject to the inspection requirement.

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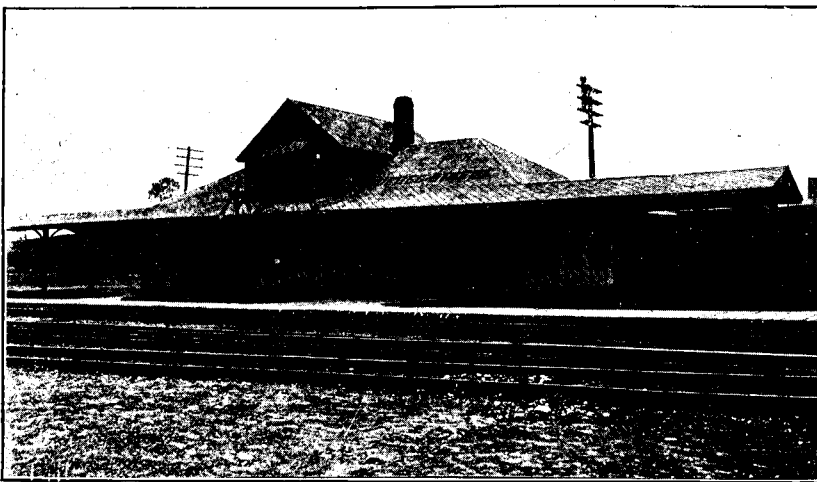
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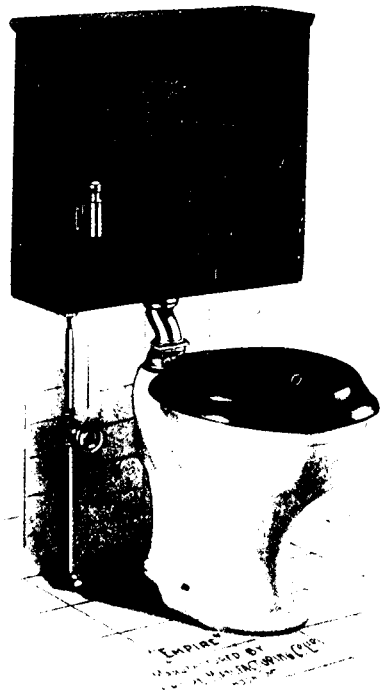
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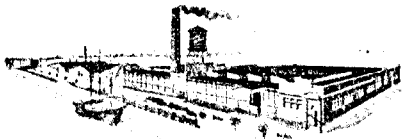
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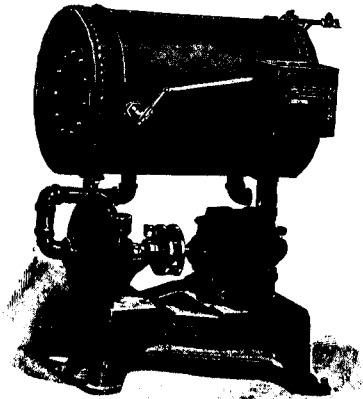
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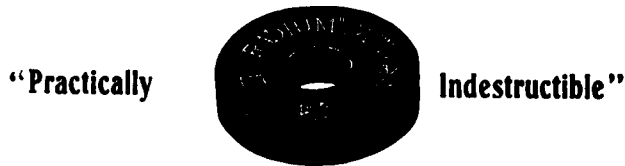
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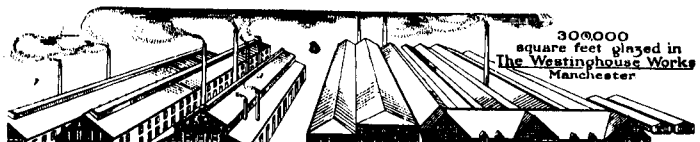
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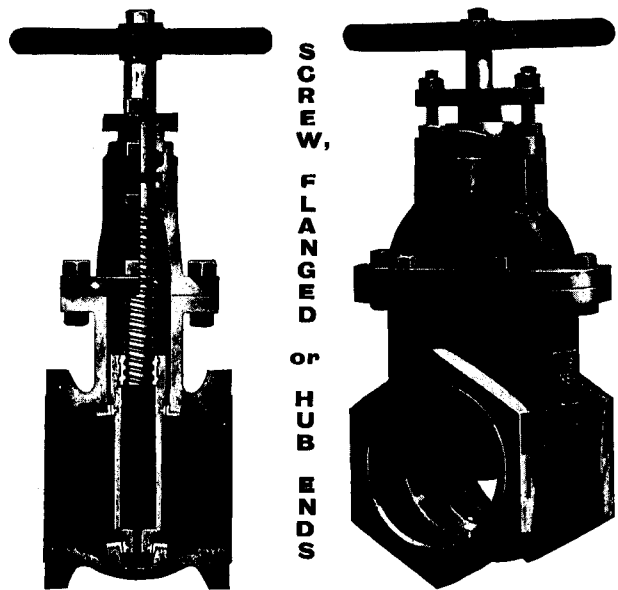


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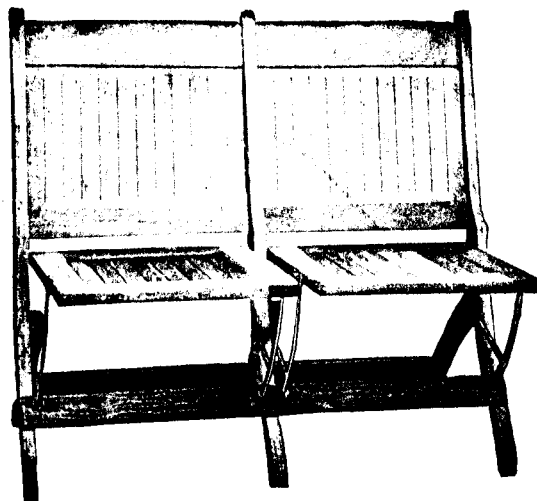
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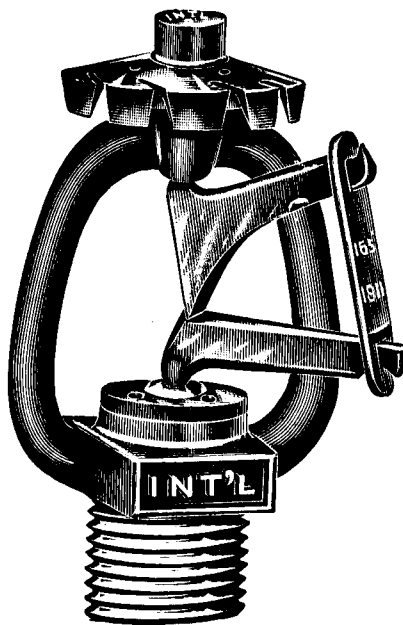
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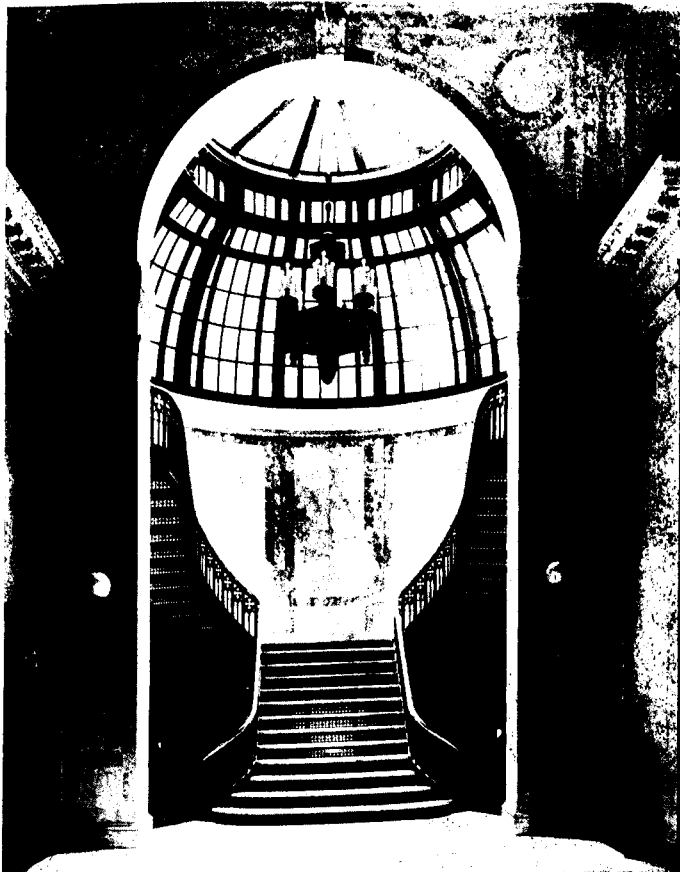
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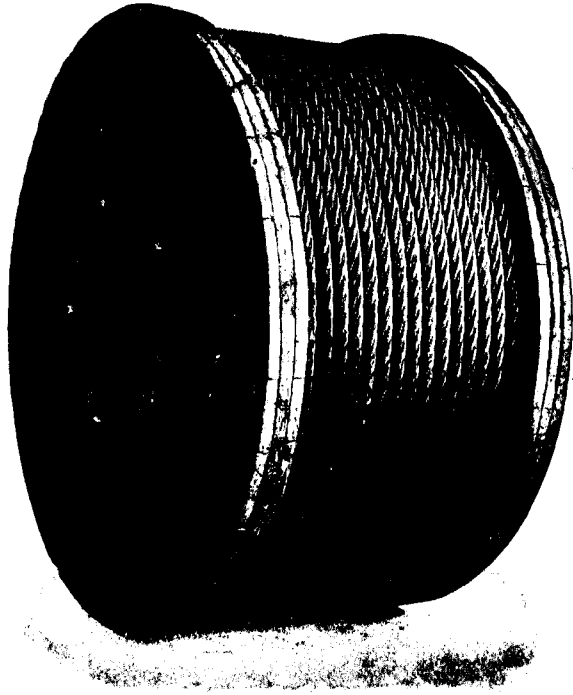
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