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CONSTRUCTION

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



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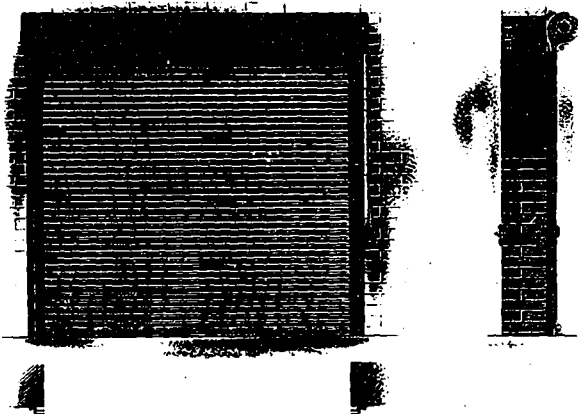
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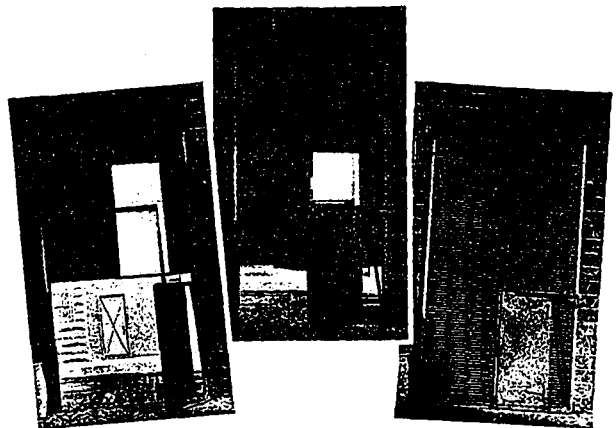
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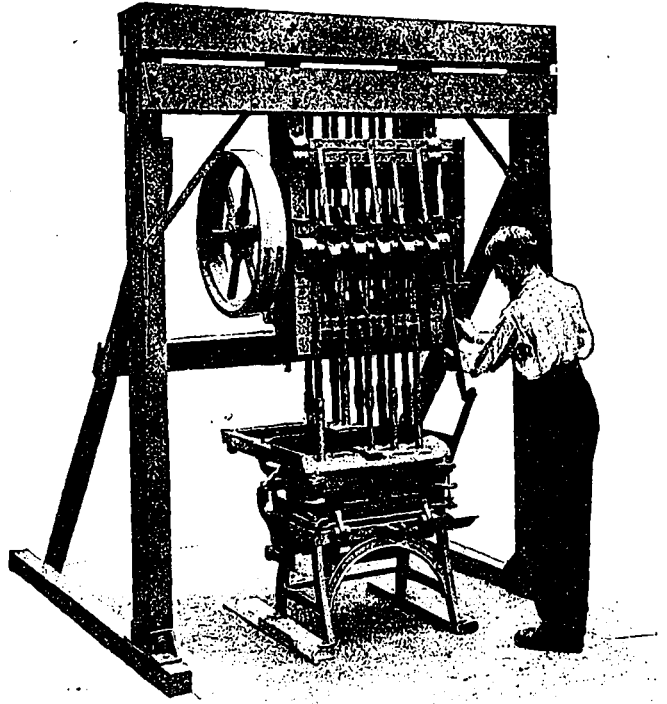
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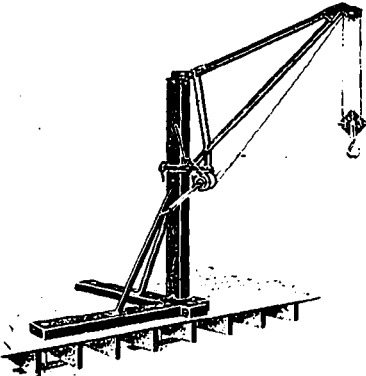
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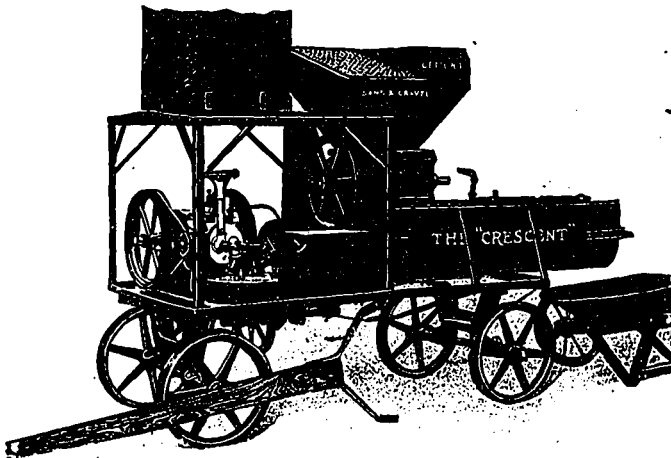
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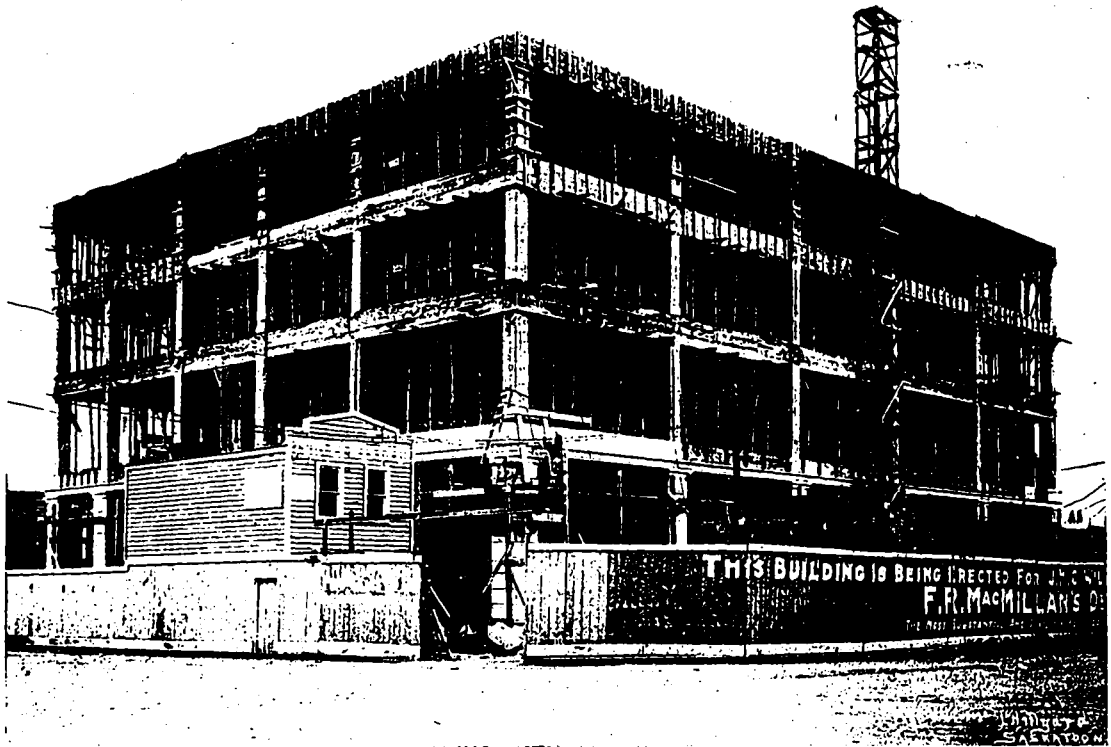
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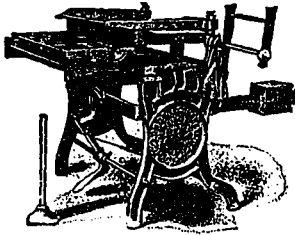
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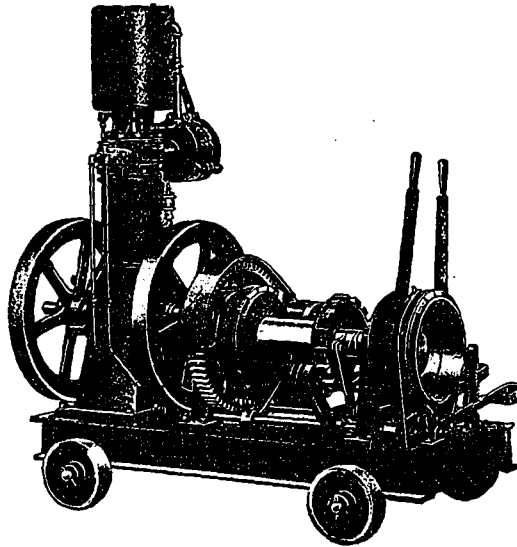
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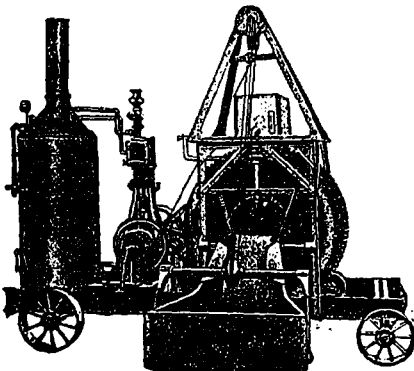
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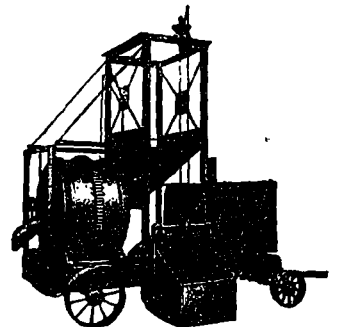
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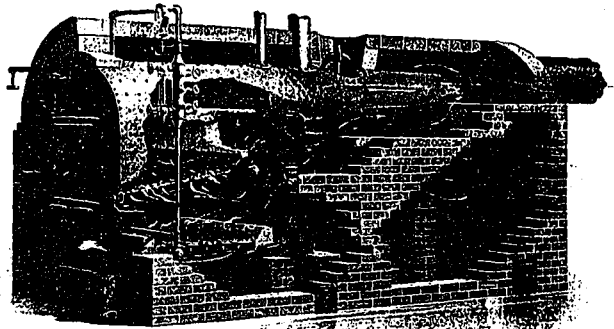
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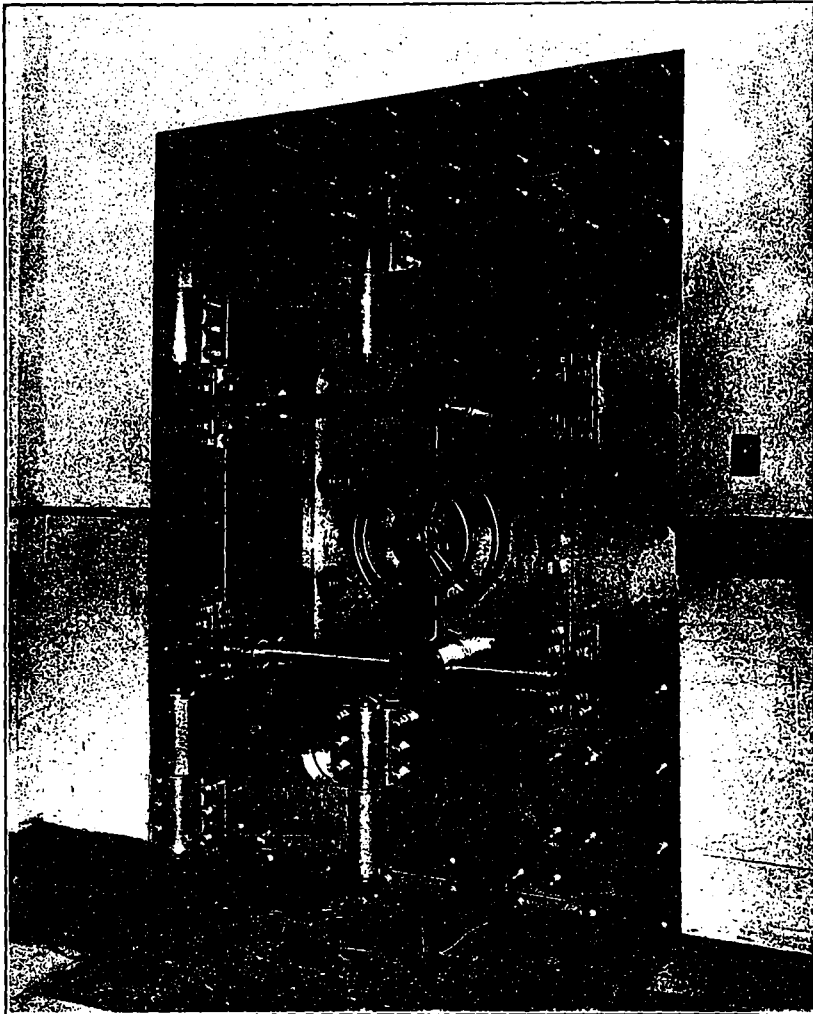
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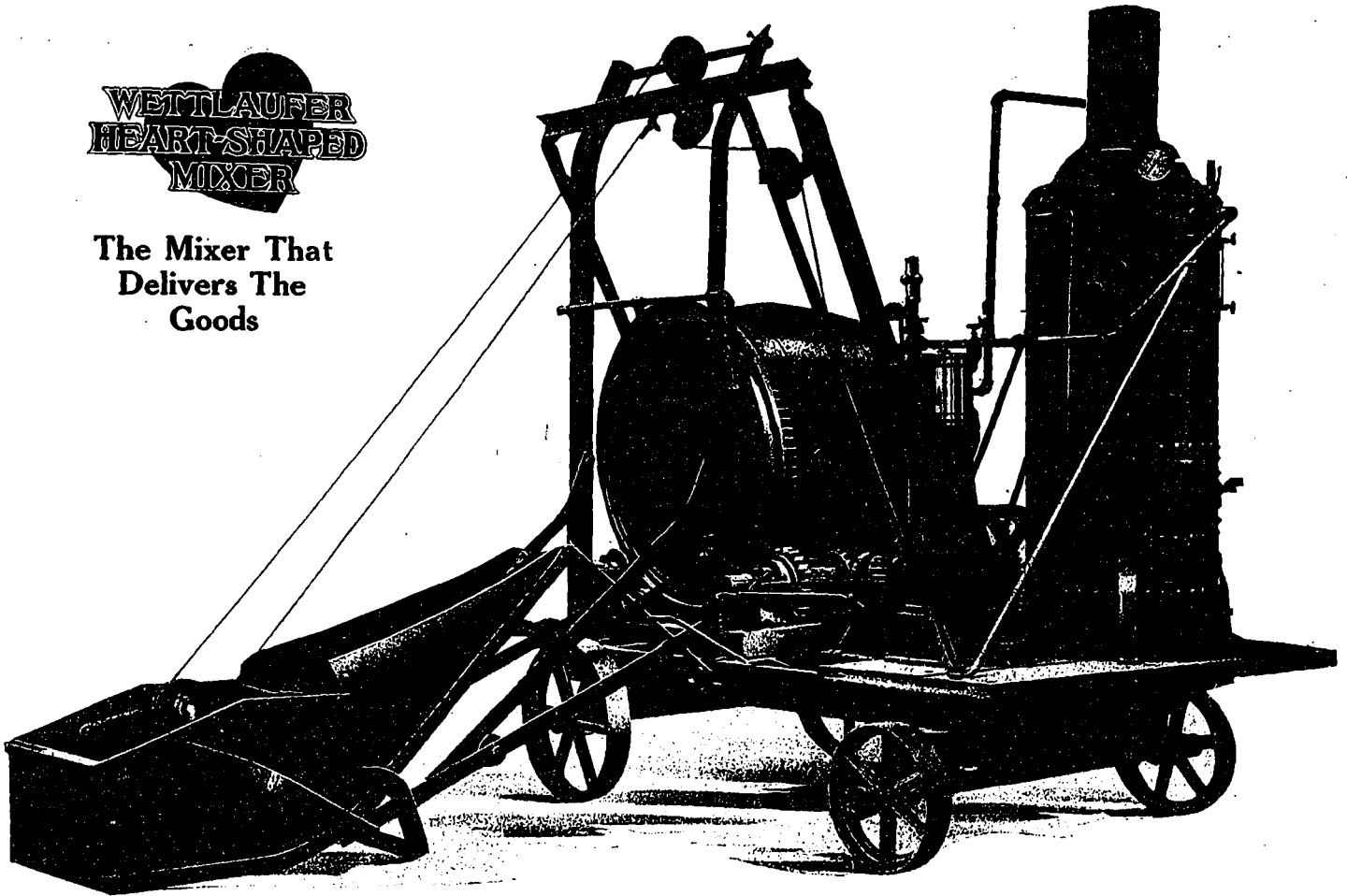
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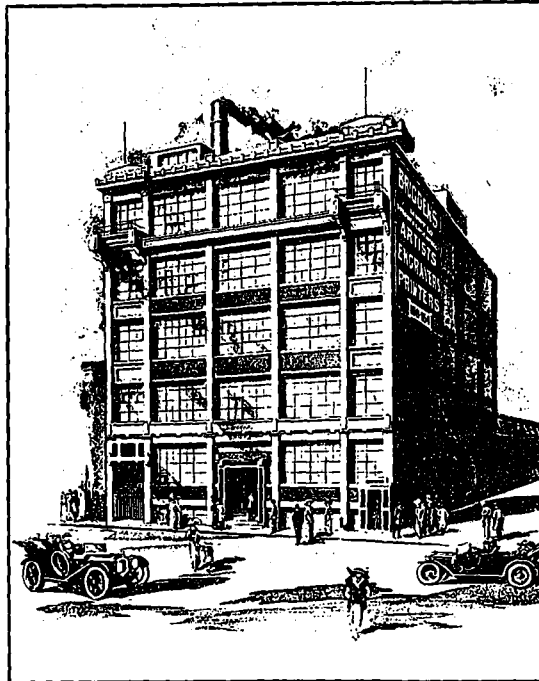
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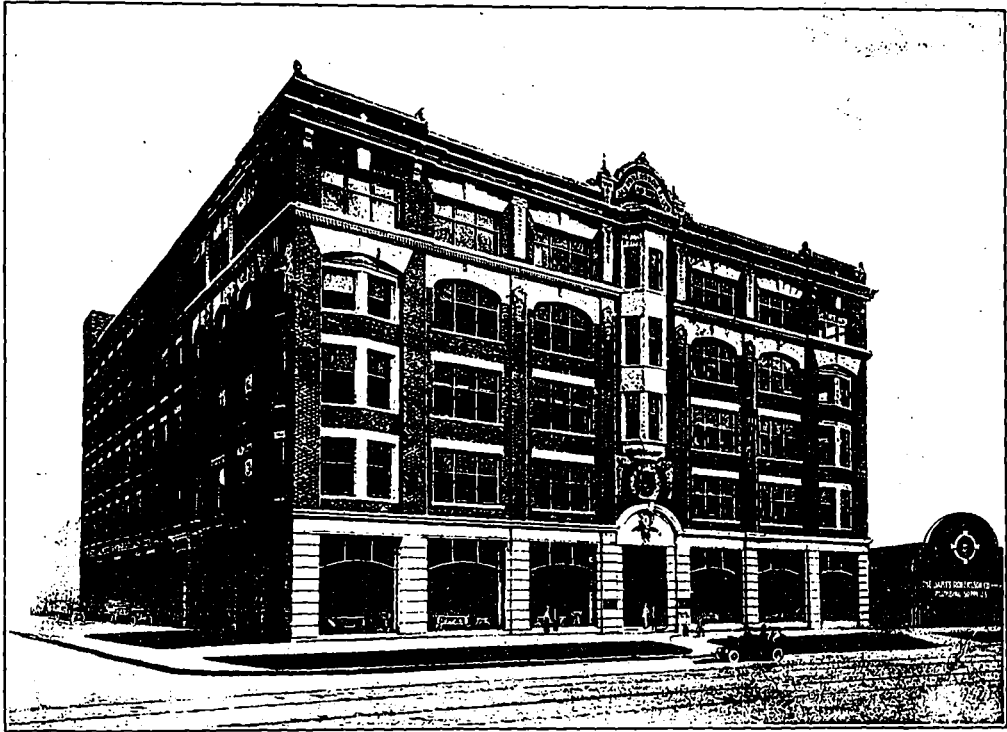
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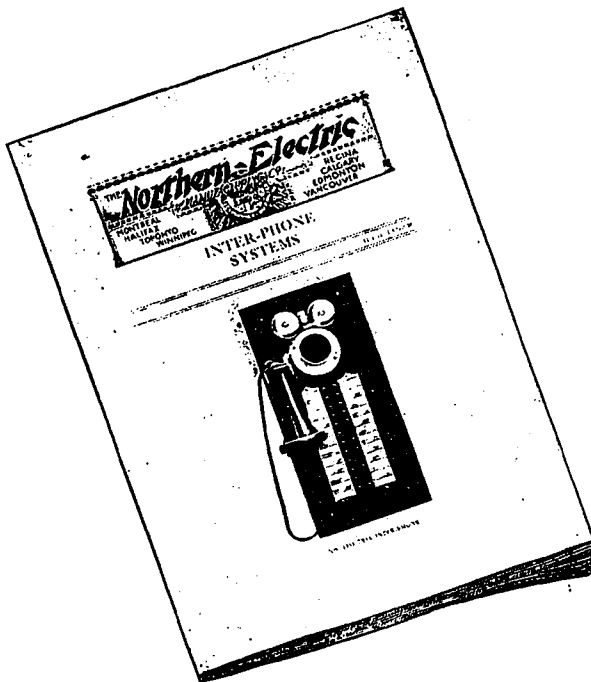
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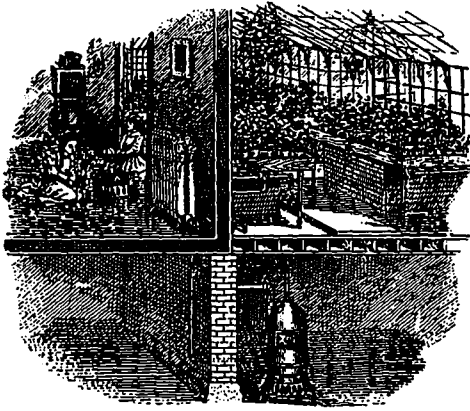
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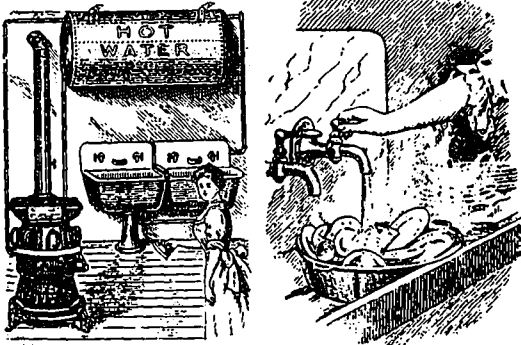
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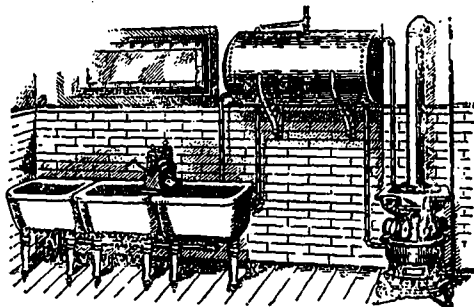
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Little Giant Hot Water Boiler Supplying Radiation for a Conservatory and Living Room



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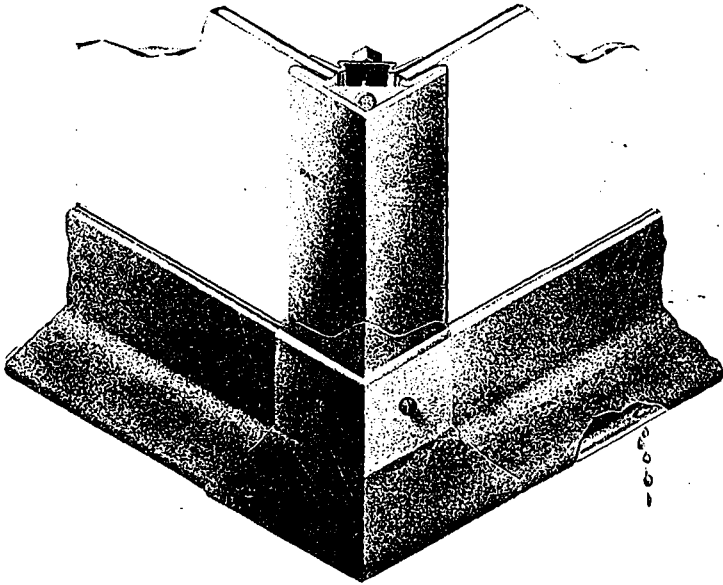
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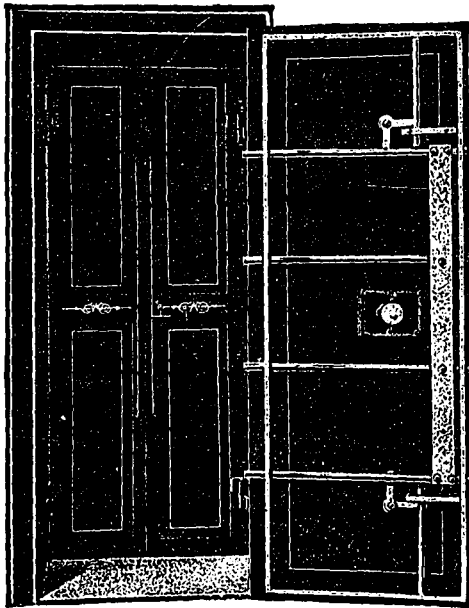
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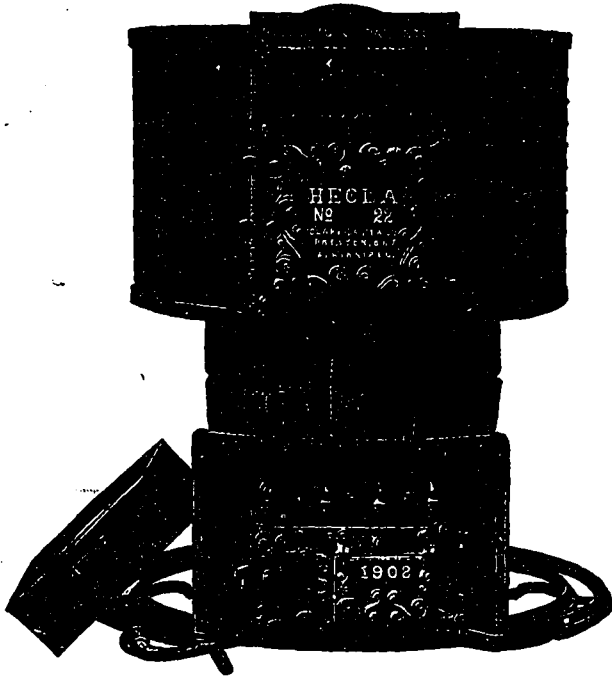
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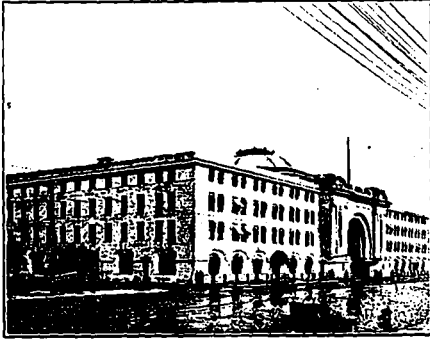
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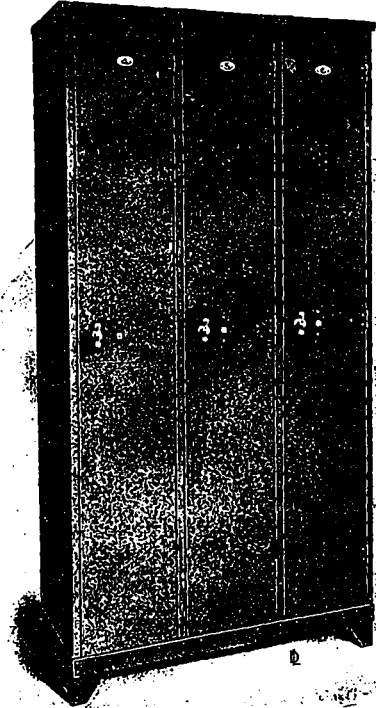
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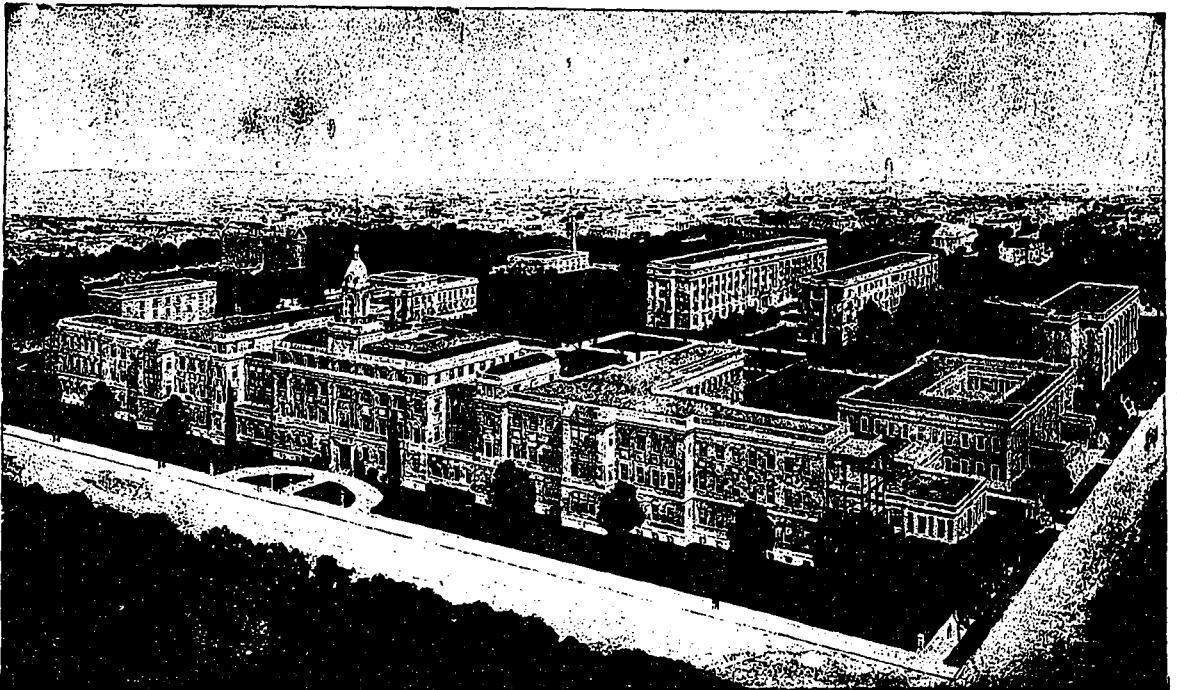
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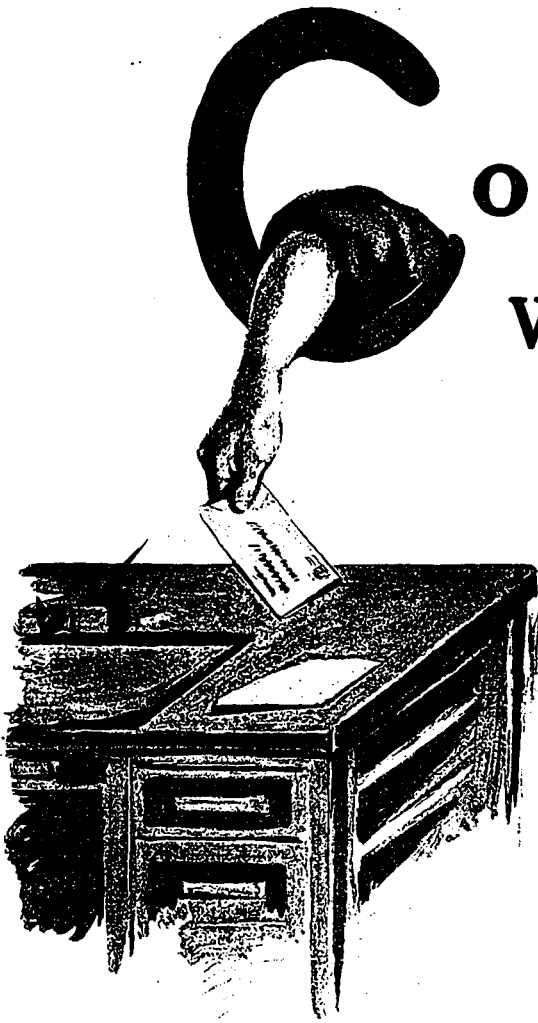
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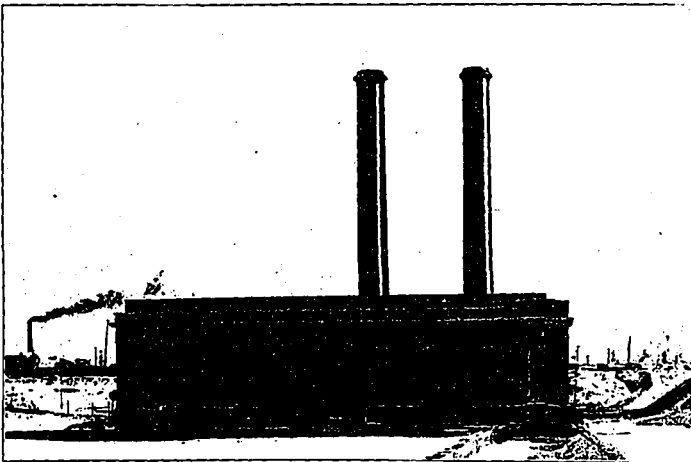


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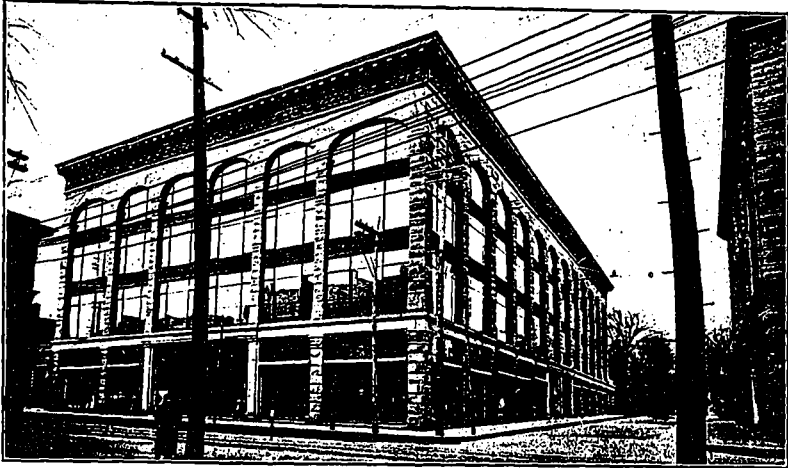
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The Solution is a brilliant black material applied like ordinary paint. Contains no oil, benzine, turpentine, etc., and is guaranteed absolutely free from coal tar. Is impervious to moisture, alkalies, acid fumes, salt and fresh water. Retains its brilliancy and elasticity indefinitely. An ideal covering for Stacks, Boiler Fronts, Steam Traps, retaining its

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Ogilvy Building, Montreal

Medusa Waterproofing Used

David Ogilvy, Architect

It Makes the Whole Mixture Waterproof

PERMANENT waterproofing results are obtained from the use of Medusa Waterproofing, because it is mixed with the dry cement and becomes part of the concrete itself. Being insoluble in water, it cannot wash out under any conditions. The old-time tar and paint coatings, at best, give but a temporary surface waterproofing, and are being rapidly superseded by this dry powder waterproofing.

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Both laboratory and service tests have proven that Medusa Waterproofing is a real waterproofing, one that can be relied upon to give satisfactory results under the most rigorous conditions of use. It has been used by the most eminent engineers for their important and difficult work.



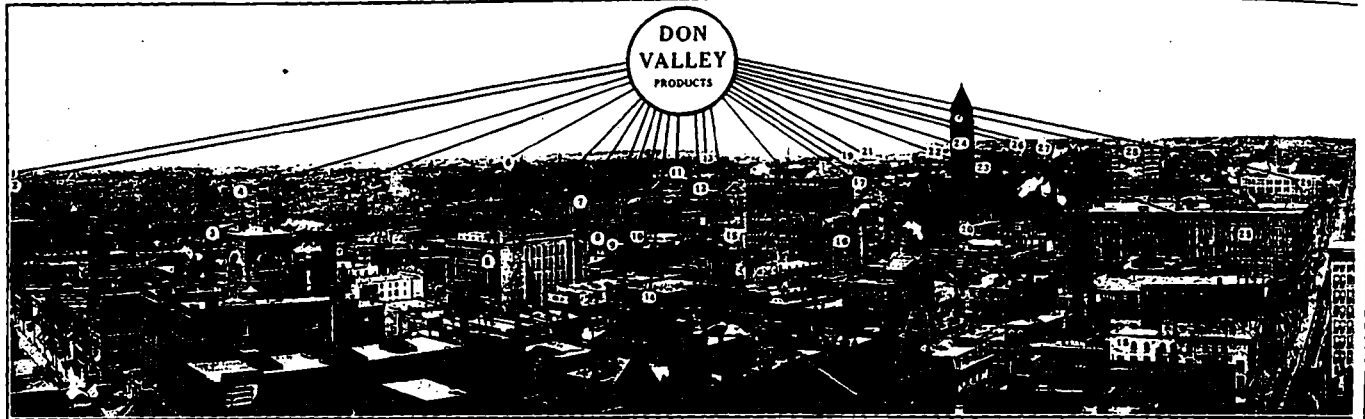
When making building blocks, cement plastering, cellar walls, cistern and reservoir linings, conduits, sewer pipe, etc., a small percentage of Medusa Waterproofing added to the mixture makes it permanently waterproof.

Manufactured by

Stinson-Reeb Builders' Supply Co., Limited

10th Floor Eastern Townships Bank Building, Montreal, P.Q.

Panoramic View of Section of City of T Where DON VALLEY



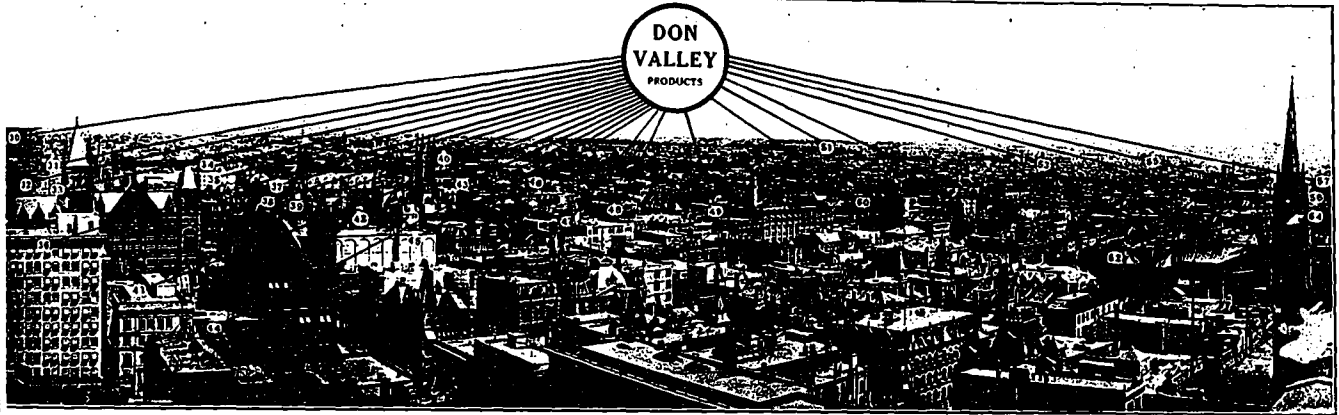
- 1— B —Darling Building.
 - 2— B —W. J. Gage Building.
 - 3— B —Adelaide Street Fire Hall.
 - 4— B —Phoebe Street Public School.
 - 5—AB —Bell Telephone Building.
 - 6— B —Canada Foundry Co.
 - 7—AB —Osgoode Hall (New Addition).
 - 8— B —Ford Motor Co.'s Building.
 - 9— B —Schacht Motor Co.'s Building.
 - 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 fire-proofed 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.

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- 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 —Cendron Mfg. Co.'s Building.
- 57— B —House of Providence.

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

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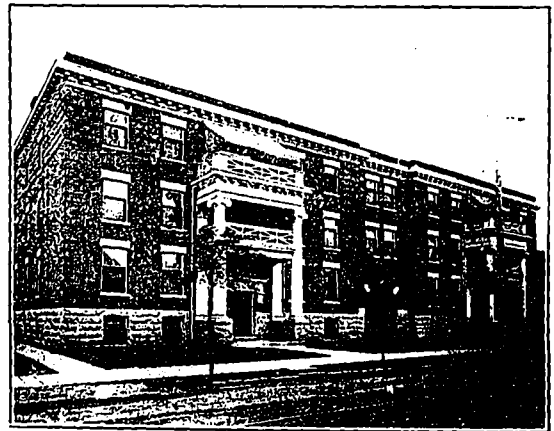
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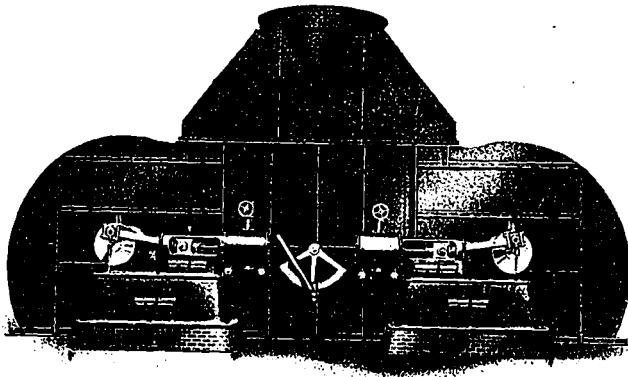
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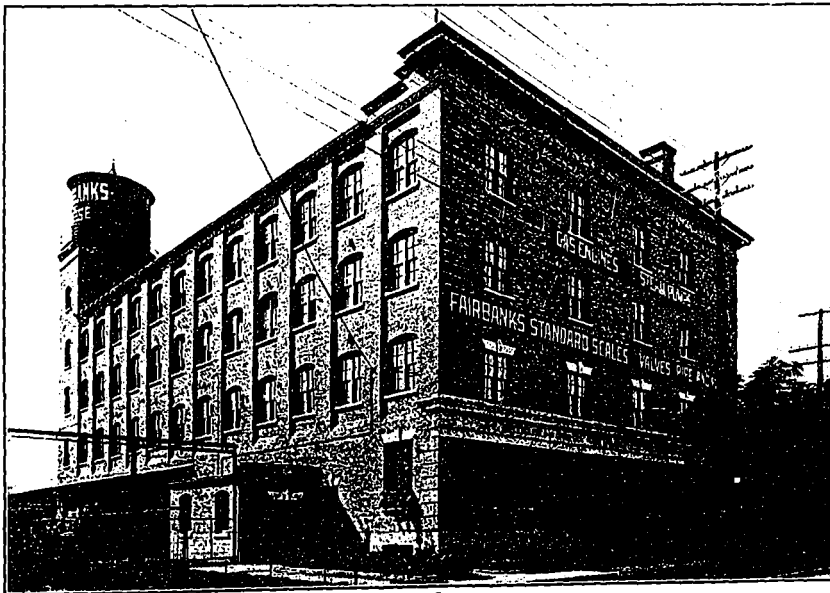
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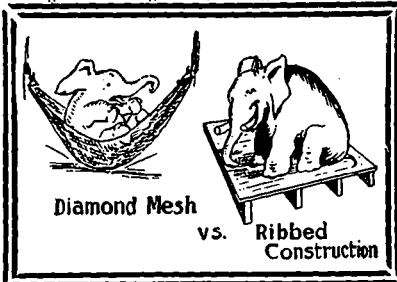
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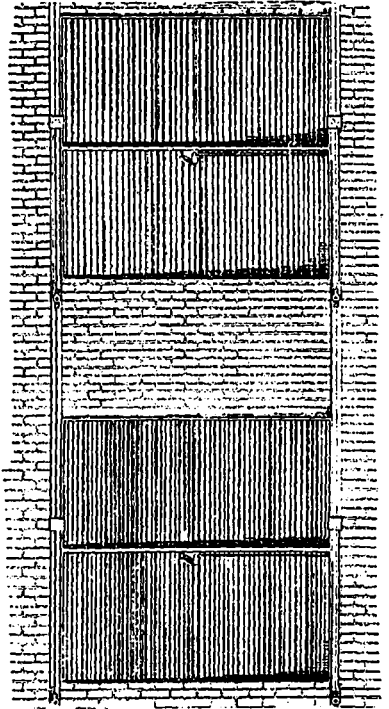
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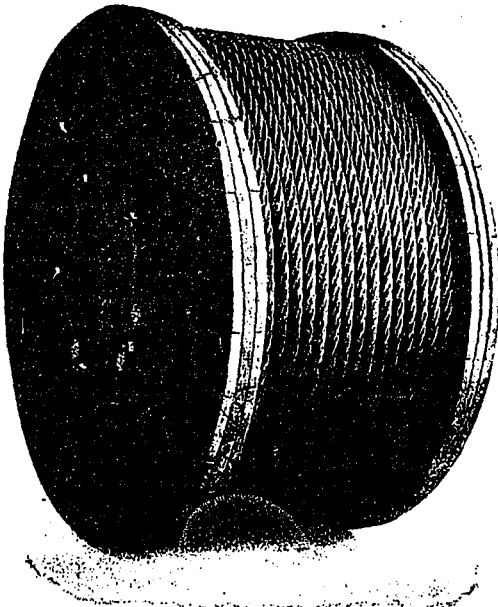
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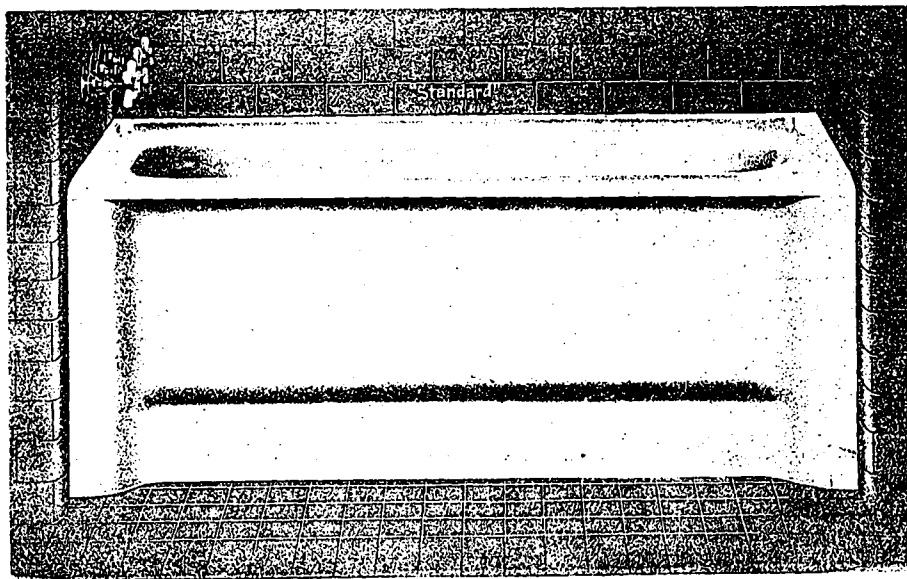
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“Bristol”—Plate P-2355 J

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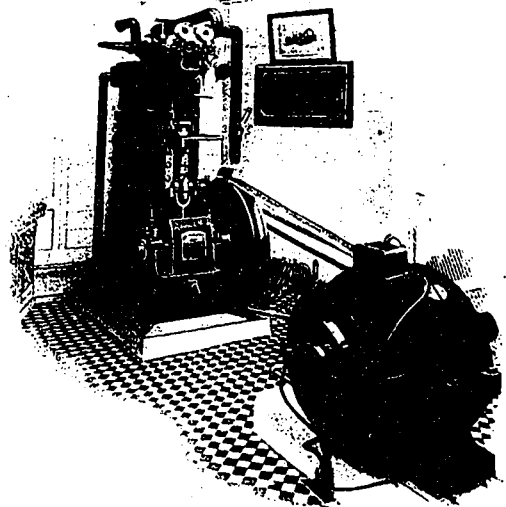
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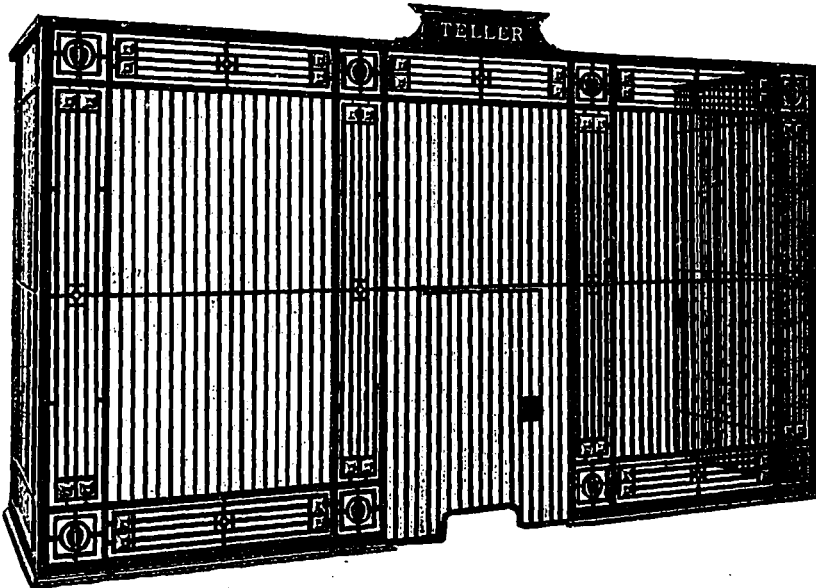
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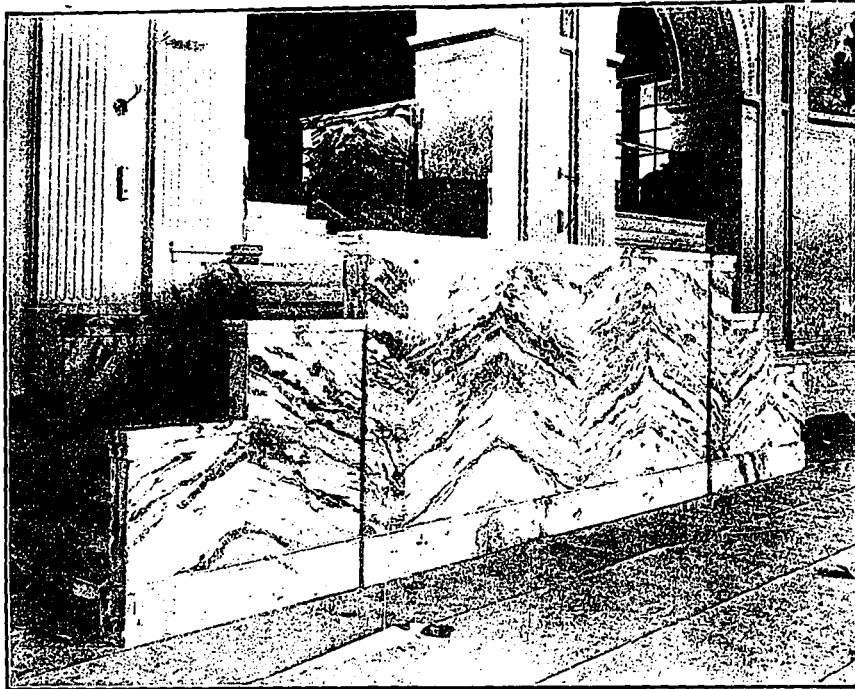
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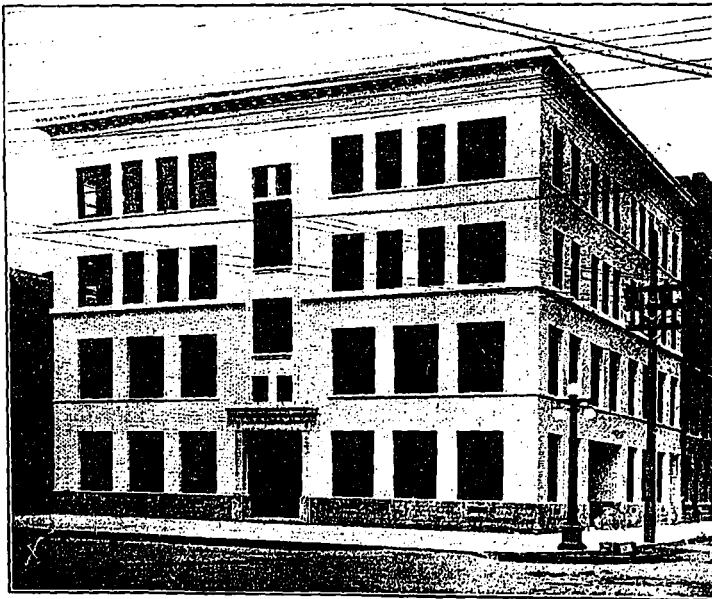
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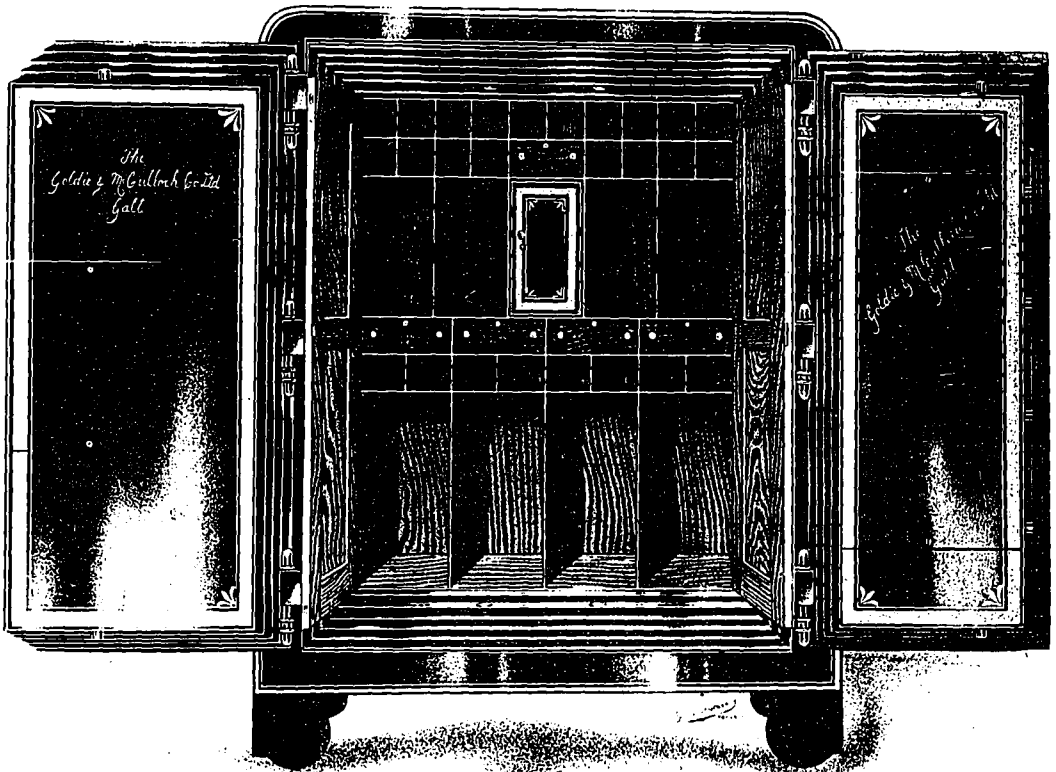
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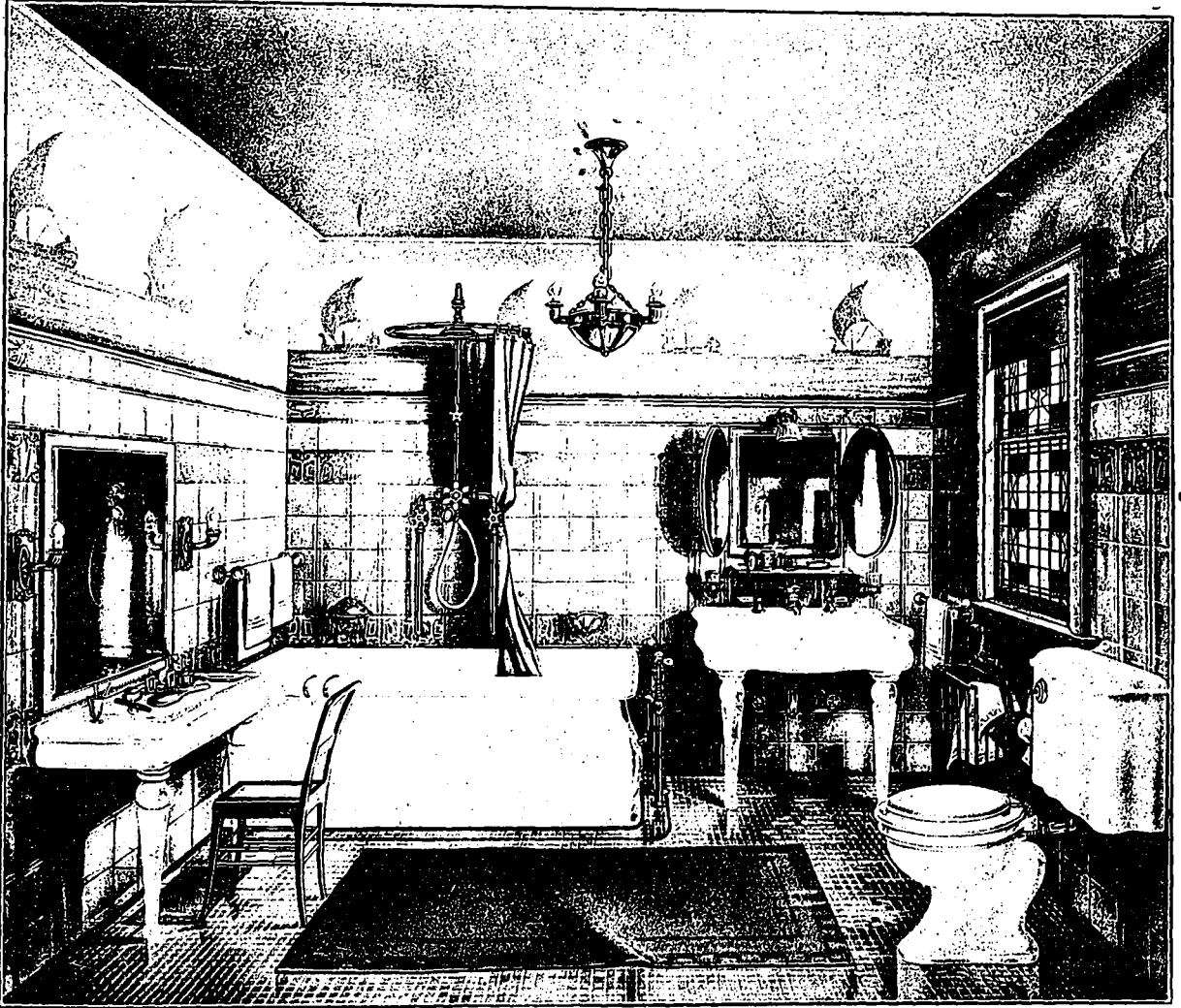
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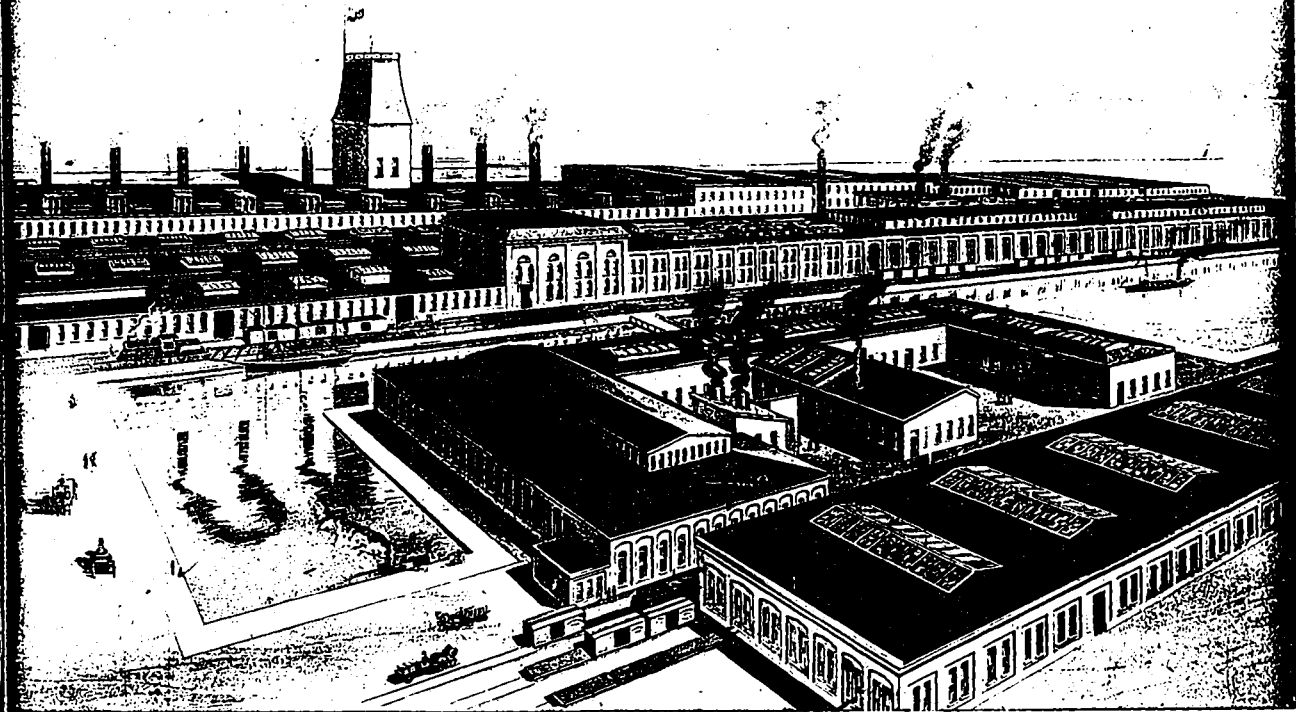


Quinte Hotel, Belleville, Ont. F. H. Herbert, Architect, Toronto. Elliott Bros., Plumbers, Kingston.



THE process by which Standard Ideal Plumbing Fixtures are made gives a pure white porcelain enamel surface, that cannot chip, crack, craze or discolor. From a sanitary standpoint, this smooth, hard surface has no equal. It is so easily kept clean, and so durable that for buildings where more than ordinary hard usage is to be expected it is now generally specified. The architect who gives special attention to this important feature of his buildings, will find it wise to make enquiries about Standard Ideal Ware, and to inspect some of the buildings in which it has been installed. Modern building science demands that sanitary features be given first consideration and the most exacting tests have proved that this ware answers perfectly to all requirements.

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ALEXANDRA
WARE

CONSTRUCTION

VOL. V

No. 13

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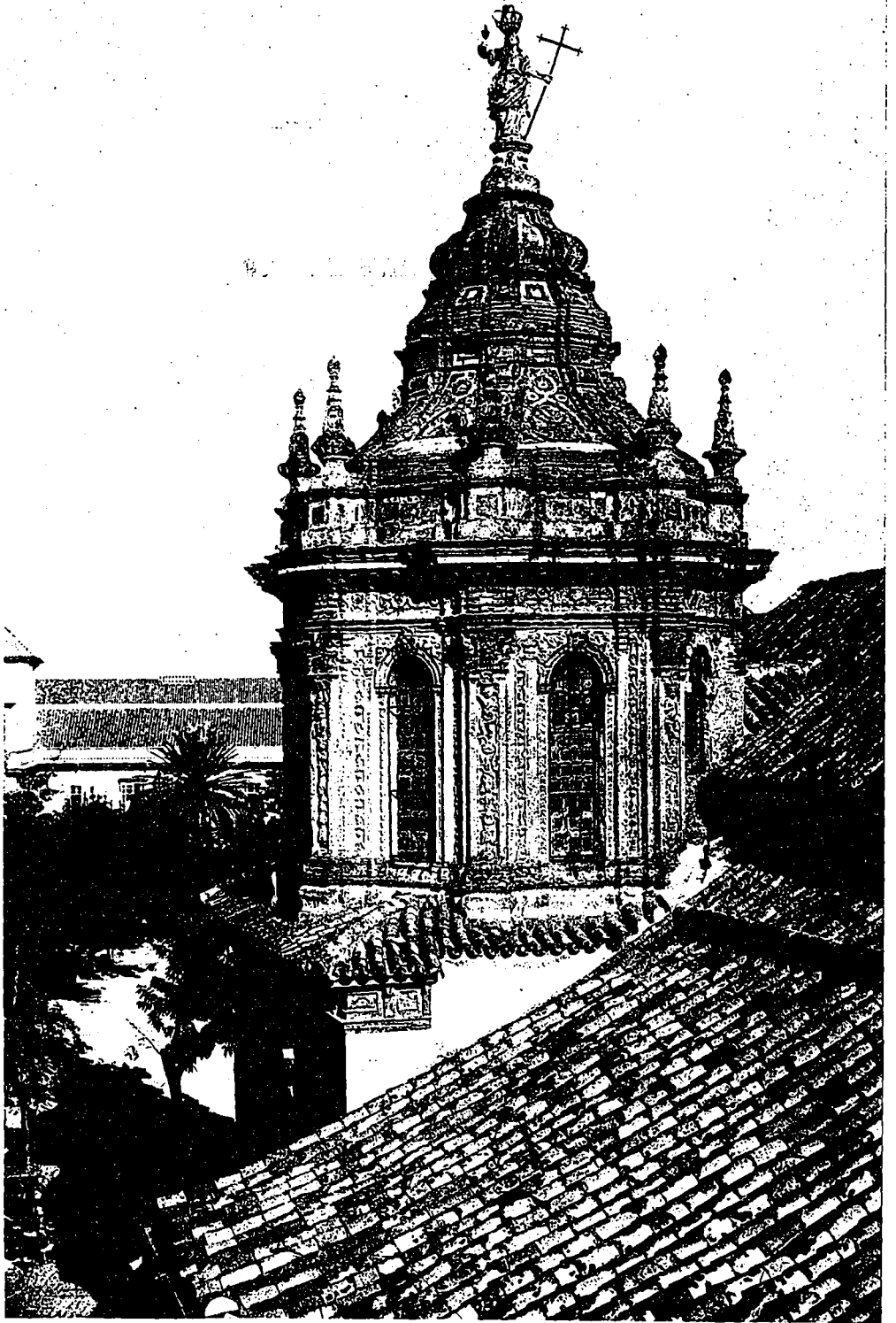
MONTREAL

WINNIPEG

CHICAGO

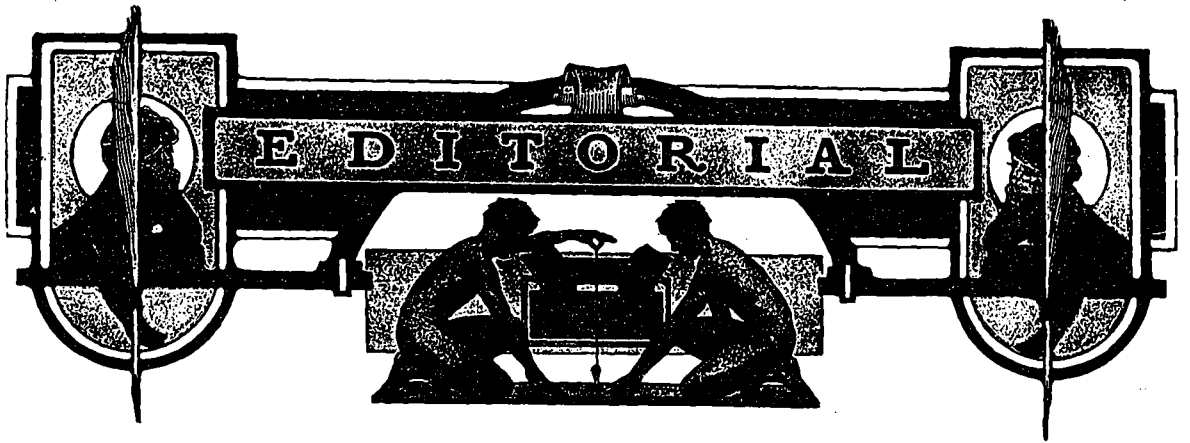
NEW YORK

LONDON, ENG.



DETAIL OF TOWER, CHURCH OF
SANTA CATALINA, SEVILLE,
SPAIN.

Built of brick and terra cotta, with the
rich, subdued colors so noted in
Spanish work.



Q *Benefits derived from travel to the architect—
An education in itself resulting from an intimate knowledge of foreign masterpieces.*

EDUCATION is essential to modern success. It is the foundation of progress in whatever phase of life's great possibilities we take up. It comes from various sources: college, books, observation, travel—it is the development of the mind, no matter how it has been accomplished. By studying the prominent men in the architectural profession of to-day it becomes very evident that travel has enabled most of them to leap quickly to the front. The ancient glory of foreign nations, from where our great inspiration comes, has been their books, and from the enthusiasm and knowledge derived in studying the masterful problems of the world's greatest artists. We are slowly but surely progressing. At best we are imitators, but happily of the kind who accept the established precedents and modify same to meet existing needs. All styles are the developed ideas borrowed from the preceding generations or the absorption of one country's art by another. In the light of this fact it is to be hoped that every draftsman will keep in mind this one thought: I ought to and I will go abroad. The increased facilities for travel, the skill of the amateur photographer, the abundant literature—all help to make such an expedition easy and beneficial. It is essential to one's work, even though our ambition reaches no higher than a subordinate position. The satisfaction of seeing the great masterpieces of art is in itself sufficient. But that is of little value compared with the deep impressions which are our own and which can only be expressed in the finished product of our daily work. **CONSTRUCTION** aims to help the young architect and will during the coming year present a series of articles relative to foreign study and travel. Examples of the best work in Spain, Sicily, Turkey, etc., will be illustrated from photographs taken by architects themselves. In this way many of the unknown and choice bits of detail will be added to the many examples of familiar work. The tower of Santa Catalina, illustrated on the preceding page, is characteristic of the work contemplated.

Q *Can a city control the billboard nuisance?
Calgary says yes, and council passes by-laws regulating this objectionable feature.*

THE QUESTION of regulating and eventually eliminating the billboard has at last become a positive issue. Threats of legal action too often intimidate the city authorities in carrying to completion their efforts in this direction. But the progressive citizens of Calgary, with the co-operation of the building inspector, and city council have revised the building by-laws in such a manner as to leave no doubt of their intentions in this matter. The hardest blow has been struck by a clause which states that no billboard or deckerboard will be allowed in the residential districts without the consent of a majority of the property owners in the block where it is proposed to erect same. This sounds like the death knell of a most objectionable feature which has secured such a strong hold in many of the home centres of our cities. Another important clause, which will preserve the artistic nature of places already made beautiful, provides that no billboards shall be erected or maintained on, or facing any public park, square, or public property or private property abutting the rivers. Other parts of the section rule, that all boarding shall be coated with fireproof material to a height of three feet above ground and faced with a fireproof material; that the posting of advertisements or pictures, obscene or immoral or which portray crime, will be under the censorship of the police department; that before the erection of any billboard it will be necessary to obtain a permit for same from the Department of Buildings. Now that a definite and conclusive action in checking this pernicious practice has been taken, we hope to see other cities respond quickly. The artistic temperament of the people is keenly alive to the billboard nuisance; the city council can pass by-laws prohibiting their erection; if such is the true state of affairs and the councilmen owe their position to the citizens, what can prevent each and every city from banishing all signs which do not make for beautiful parks and attractive thoroughfares?

I *Imperialism and Architecture—Shall we permit of imperial ideals destroying the various styles of a glorious and progressive past?*

THE NOVEMBER issue of CONSTRUCTION contained an article entitled "Imperialism and Architecture." The predominant thought of the writer was to create one style of architecture recognized throughout the world as an expression of British imperial ideals. This "Empire pervading style" would eventually "annihilate distance and conduce to an imperial liberty, equality and fraternity" throughout the various colonies and dependencies of England.

This is a serious problem, and after a thorough, conscientious study of its many phases by competent men, should be definitely settled before too many irreparable blunders have been made. We cannot escape the fact that our lives, our thoughts, and our actions are influenced by the impressions resulting from the natural trend of our every day experience. Is the one great aim of mankind to conquer nature and make it conform to our ideas in manners, dress and art? Do we want to destroy the very fundamental principles of civilization and wipe out, as it were, the very characteristics of races and countries whose advancement at one time far surpassed our own? Can we afford to destroy the stepping stones which have enabled us to mount where we are to-day without the constant fear of losing the others which lead to still loftier planes of culture and art?

Will we, then, by planting in India, in Australia, in Canada and elsewhere, the architectural style suitable to the practical and natural needs of our mother country, England, bring about ideal conditions? It means the loss of a nation's individuality. It will in time remove the great architectural glories of other countries which are acknowledged by many as far superior to the work of modern artists. It will lead the coming generations to think as we think, to live as we live, to build as we build, no matter what their religion, their innate reverence for truth or their climatical needs. The warmth of southern countries will have to give way to the cold, practical experience of a commercial nation. To many this state of affairs would be the crowning achievement of our twentieth century—but to a vastly larger number it would mean a reversal in the progress of art from which it would take centuries to recover.

The new capital for the Government of India at Delhi is one of the projects demanding attention. The committee has suggested that the principal buildings be designed in the Italian Renaissance. The reasons for such a conclusion are: the Renaissance style is more economical; the Mogul style is not suitable to the comforts and conveniences of modern civilization, and will not provide a suitable setting for statuary. The committee appointed was asked to submit its report in three months—none of its members have had any practical Indian experience and only one has had any architectural training. Such a committee is wholly incompetent to decide this question. What other conclusion could a body

of men with nothing but European ideas express? The point of economy raised by the committee is founded on superficial archæological arguments. They claim that buildings in this style erected by Indian craftsmen and built of marble would be cheaper than those erected with local materials. Whatever our views on the main question, is not this point a trifle absurd? The Renaissance building erected by the Government of Calcutta might be cited as an example of what a large additional expense is necessary in the matter of wages. The craftsmen who followed the architect's designs were given eight times the normal pay of first-class Indian carvers. This expense, in addition to the extra cost of importing foreign materials, must be a sad blow to the adherents of economy.

As for the Mogul style being ill-adapted to the comforts and conveniences of modern civilization, this might be misleading were it not for the architecture of our own cities. We have been unable to make the Grecian temples and palaces in their original form meet our needs, but we have adapted their style and motives to many of our prominent structures. The same is true of all styles and this one in question is no exception. It is hardly fair to say that a style which has lived for centuries, producing some of the finest architecture in the world, and which has always conformed itself to the existing circumstances, has all of a sudden lost its adaptability. The true artist can meet the conditions of any modern building in whatever style of architecture he may be called upon to use.

The final point of statuary setting needs little comment. Even were it true that the Mogul style does not lend itself to statuary, would it be advisable to change an art of two thousand years' duration in order to satisfy the vanity of our present generation? But such a statement has its weakness, for statuary can be placed in connection with any building if care is taken as to its architectural treatment. The mihrab is the statuary niche of the Indian mosque.

E. B. Havell, in a paper read before the East India Association, says: "The Government of India is British Government, but Great Britain is responsible to the civilized world that she does not ignorantly or wantonly destroy the great intellectual and artistic inheritance which India now possesses, not only in her splendid ancient monuments but in the skill of her master-craftsmen. The new Delhi is not for Europeans only, neither was the Delhi Durbar. More than two-thirds of the people who will occupy the Government buildings at Delhi will be Indians, not Europeans. The Indian taxpayer, not Great Britain, will pay the cost of them; Indian craftsmen will build them. A Renaissance building built by Indian craftsmen cannot be otherwise than debased." It is to be sincerely hoped that the inherent artistic traits of the Indian people will not be submerged by an enthusiasm of authority. As in the development of all new styles originating through the personal contact of different races, so let the progress of architecture in India be the natural outgrowth of its living building tradition enlightened through the modern experience of English architects.

G *English cottage gardens—How the working people are encouraged to beautify their home surroundings, and the resulting advantages.*

THE CHARACTER of the English people is expressed in a thoroughly wholesome manner by means of the cottage gardener. Especially is this true among the working men. Wherever he can possess a few feet of soil, he endeavors to make it practical through the cultivation of vegetables, or beautiful and picturesque through the artistic arrangement of flowers. The entrance to the home is also quaint in appearance. A little flagged stone path leads from the front gate to the cottage door bordered by bright hued flowers. Not far from the door is the cool deep well, from which the water is still wound up by hand in buckets.

There are many places throughout the west of England where the country houses are cut through deep banks, the cottages are high above the roadway, and the gardens have in consequence a hanging effect, which is most picturesque. A rough stone wall flanks the bank and forms a natural rock garden dotted over with ferns.

The municipal authorities in the rural sections have power to acquire land which may be used for the allotment of gardens. These are let out to the working class and brought within their means. In this way the people can raise vegetables on a larger scale than is possible in the village gardens. In practically every district prizes are offered by private individuals and societies for the best cultivated allotments and also for gardens; sometimes the general neatness of

the interior of the cottage is considered also. Window gardens become a feature of competition. A large number of the well organized societies offer prizes for the best and most practical example, endeavoring in this way to encourage the children to become very fond of plants and learn how to care for them.

One hardly appreciates the thousands of beautifully cultivated gardens within the large cities. London, a commercial centre and prone to neglect the finer qualities of life, is noted for the gaily colored patches hidden, as it were, from the public. The backs of the uniform row of houses present a vastly different appearance from the street view. The little gardens are not very large, but are marvels of beauty and individuality. Generally the surrounding wooden fence is veiled with scarlet runners. Great stress is being placed upon this wholesome phase of private life. The county council of London gives away the bedding plants from the parks each autumn, an opportunity of which the people in the surrounding neighborhoods avail themselves.

Owing to the "Town Planning Bill," the construction of "back to back houses" which rendered gardens in towns impossible, is now illegal, and for the future, in all streets that are built, a specified space must be left behind the houses for a yard or garden. No house without this provision will be passed by the council.

This work is bound to eventually express itself in a bigger manner. Some day the civic scheme for the beautification of a city will be adopted without a dissenting vote. The reason for such a remarkable change will then be traced back to the simple but solid plan of cottage improvements.



English Cottage and Garden.

From The Country Home, London.



View of Staircase from Rotunda.

THE TRANSPORTATION BUILDING, MONTREAL, CANADA.

Carrère & Hastings and Eustace G. Bird, Architects.

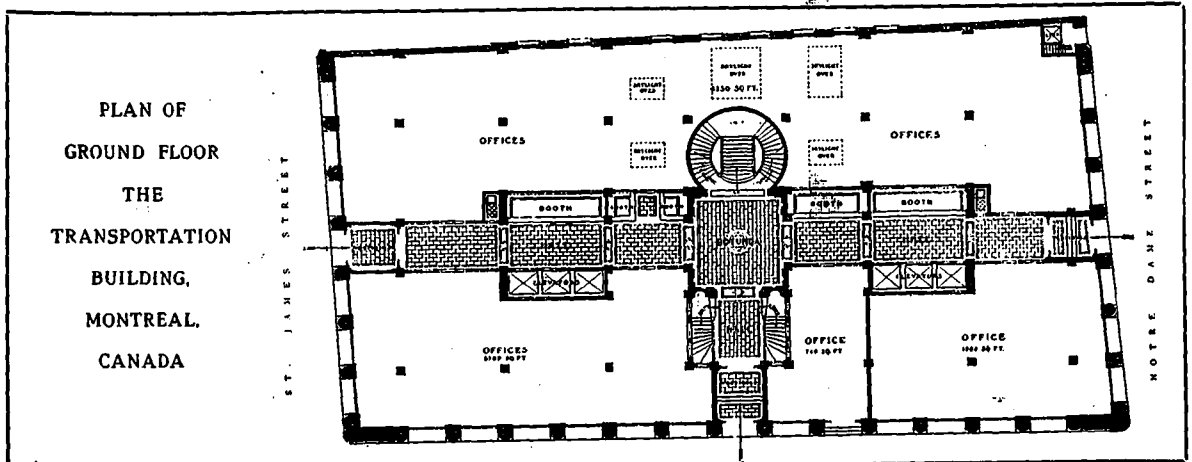
The Transportation Building, Montreal, Canada

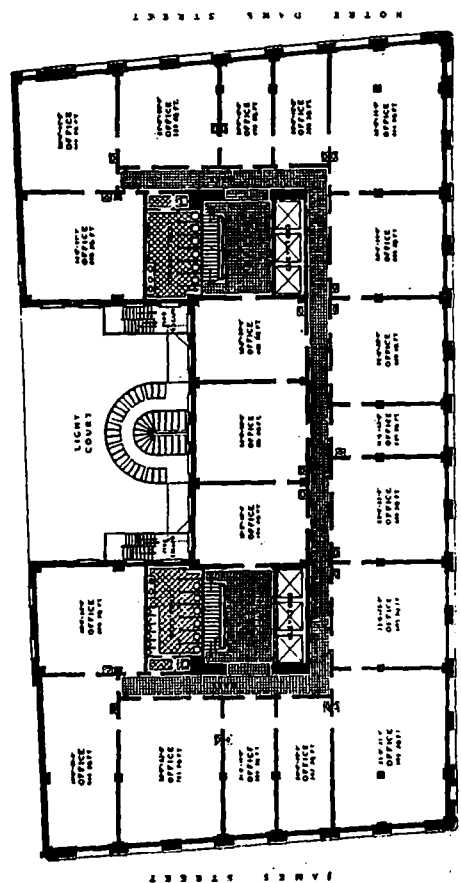
CARRERE & HASTINGS, and EUSTACE G. BIRD, Architects

IN GLANCING over the field of monumental architecture we find that it has not been limited in recent years to ecclesiastical, government or public edifices, but rapid progress has also been made in creating an artistic style for the mercantile institutions of our larger cities. Each succeeding day sees the completion of a structure, pleasing to the eye and acceptable to the critic. Many conditions arise in the erection of a commercial building which necessitates considerable study upon the part of the architect and builder. The exterior must have a design in keeping with the standing of the business corporations which occupy the main portion of the building; the arrangement must conform to the present needs of these big institutions and allow for future growth, while the interior must be the embodiment of everything new, attractive and practical. The erection of such a building must be done quickly and in a thorough manner. The cost of land, high rate of taxes, loss in rent-age together with the

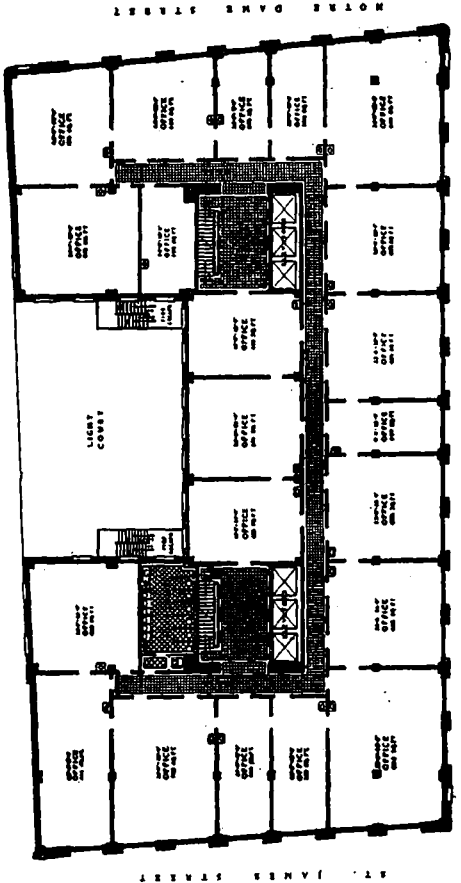
continual rise in the price of building material; all demand that a few months at the most should be given to the work of construction. In watching this rapid growth in our commercial centres it sets one to wondering what will be the future housing condition of our business life. Is it possible for new enterprises to build more artistically and better, keeping at the same time the economical problem within the practical limits. It remains to be seen. In the meantime our enthusiasm need not be stunted when we realize the rapid strides which are being made in the all-around development of this type of building.

The office structure is an expression of individual thought. For many years there has been the distinguishable convention of designing the exterior into base, shaft and capital divisions. This plan is still in vogue, but perfected through a gradual and consistent study of the æsthetic appearance. The ten-story building of to-day is modified so as to express frankly the practical nature

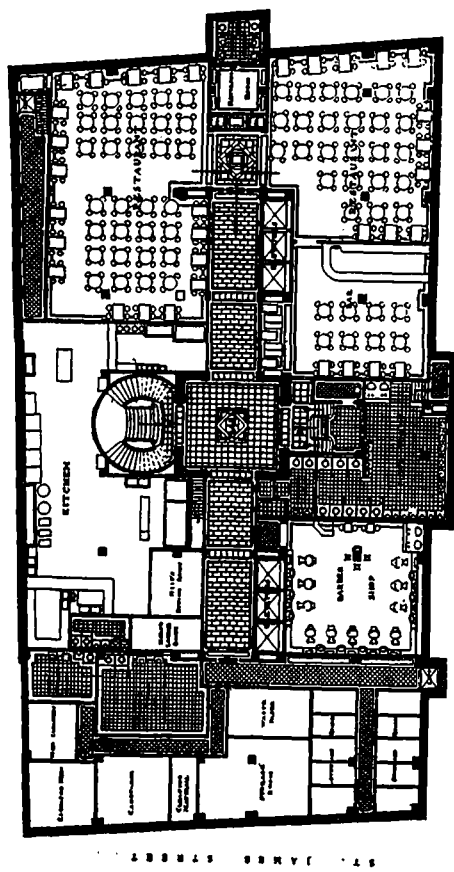




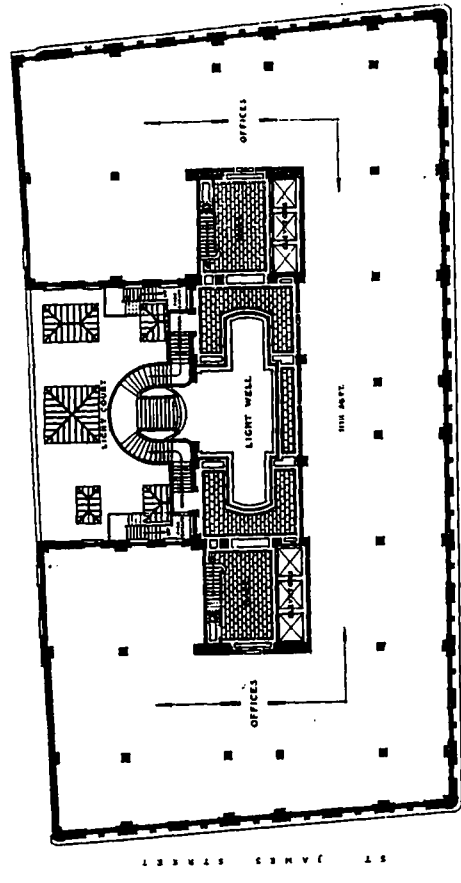
PLAN OF 10, 11, 12 AND 13 FLOORS



PLAN OF 20, 4, 8 AND 9 FLOORS



PLAN OF BASEMENT

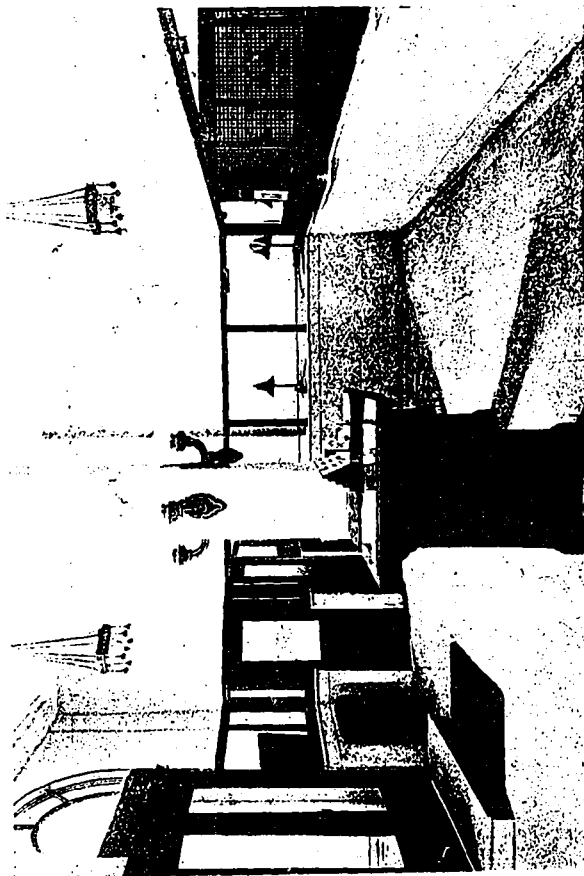


PLAN OF MEZZANINE FLOOR

PLANS OF THE TRANSPORTATION BUILDING, MONTREAL, CANADA.
 Carrère & Hastings and Eustace G. Bird, Architects.



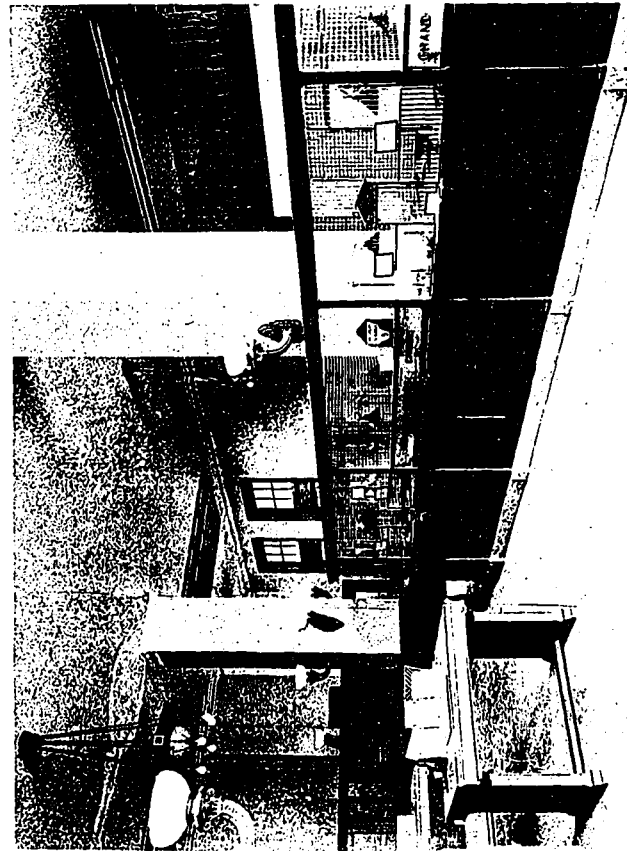
THE TRANSPORTATION BUILDING, MONTREAL, CANADA.
Carrère & Hastings and Eustace G. Bird, Architects.



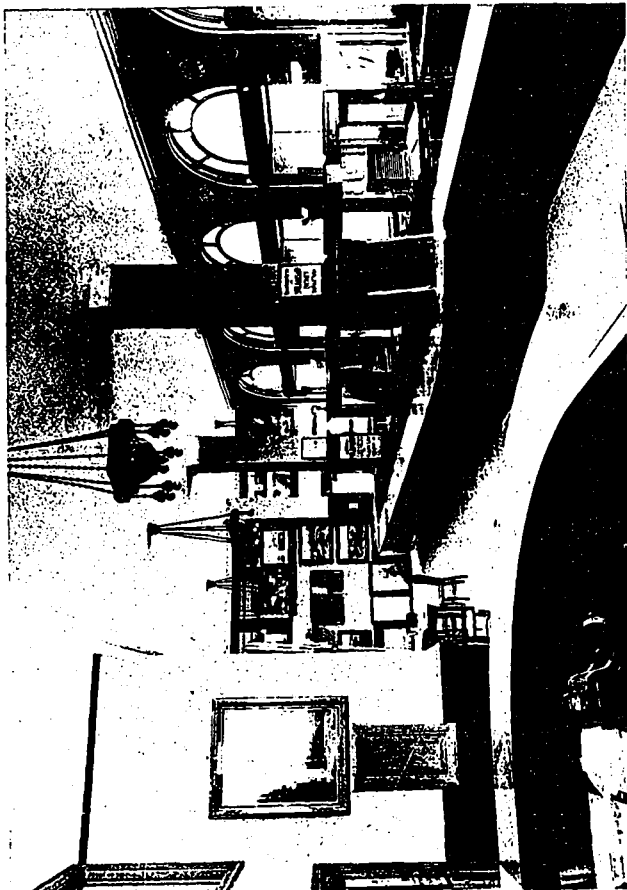
Sterling Bank.



Basement Corridor.



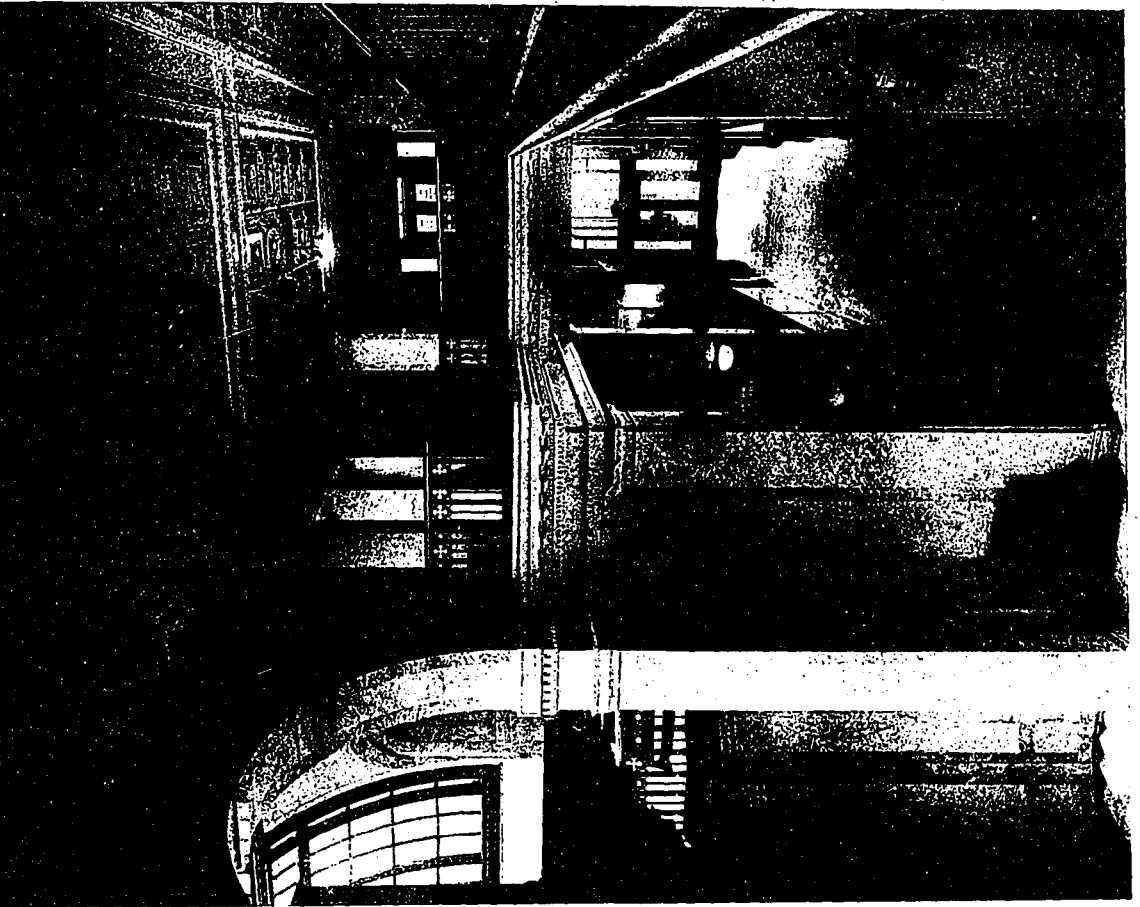
International Bank.



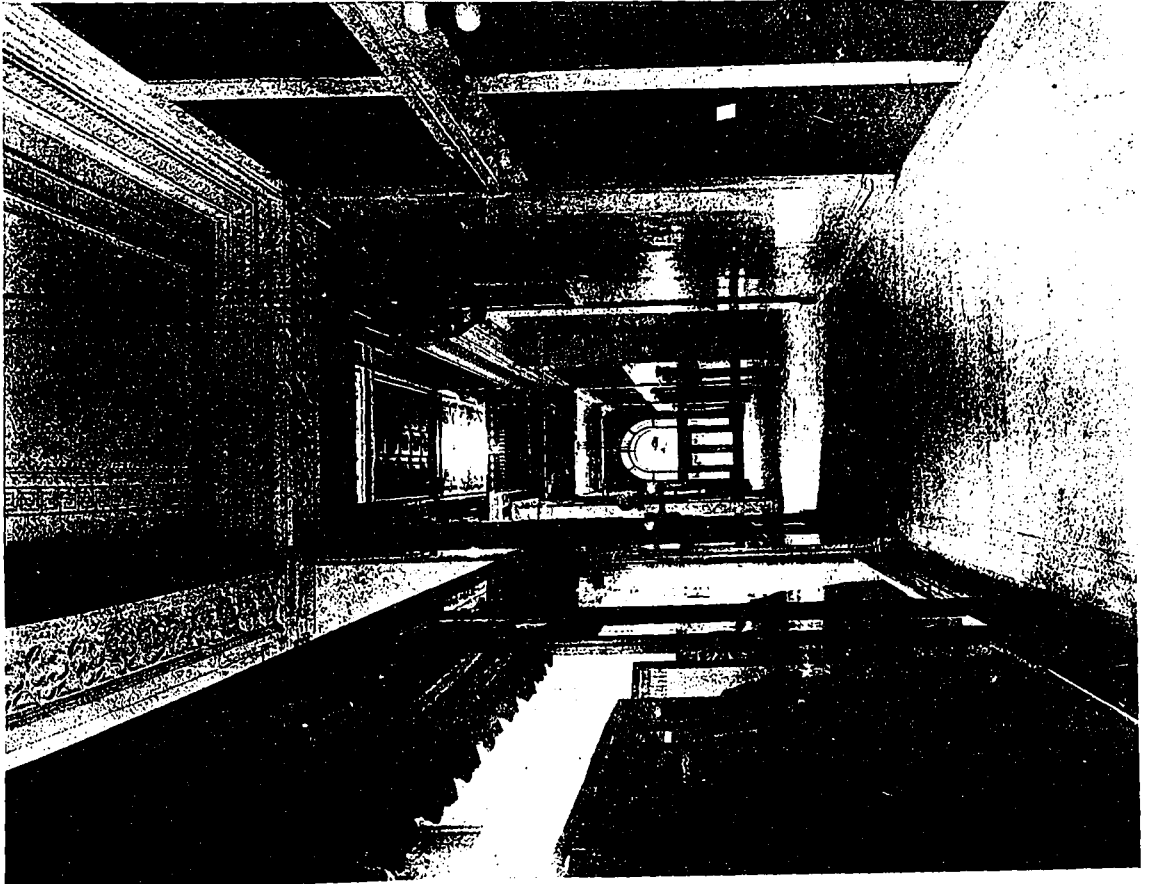
THE TRANSPORTATION BUILDING, MONTREAL, CANADA.

Carrère & Hastings and Eustace G. Bird, Architects.

Grand Trunk Railway.

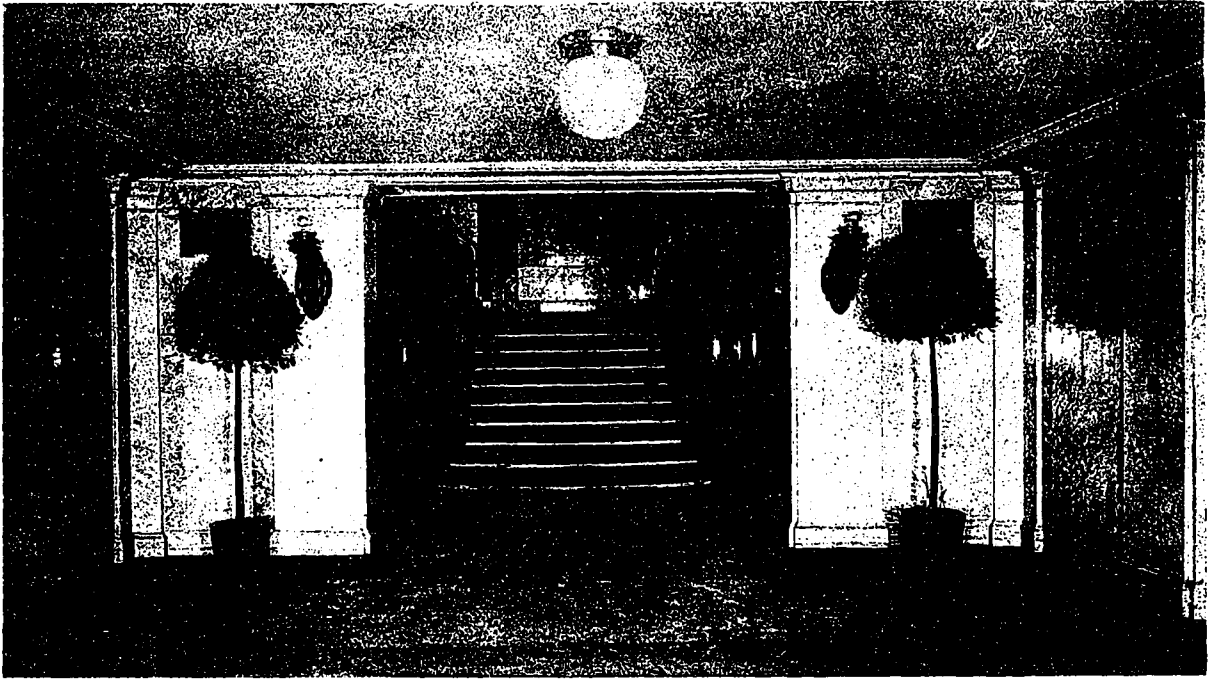


Main Corridor.



Main Corridor.

THE TRANSPORTATION BUILDING, MONTREAL, CANADA.
Carrère & Hastings and Eustace G. Bird, Architects.



View of Hall and Stairway in Basement.

of the structure and at the same time have it possess a certain dignity and artistic feeling. The Transportation Building of Montreal is the largest office building in the British Empire, covering approximately five acres of floor space. It was promoted by a private Montreal syndicate and designed and supervised by Carrère & Hastings and

Eustace G. Bird, architects, Toronto. The building is situated opposite the post office on St. James street, extending along St. Francois Xavier to Notre Dame. Within ten months after possession of the site the structure was completed to such an extent that tenants commenced to occupy the premises, and in twelve months the building was entirely filled. Considerable credit is due the architects and contractors for the expeditious manner in which this immense undertaking has been constructed.

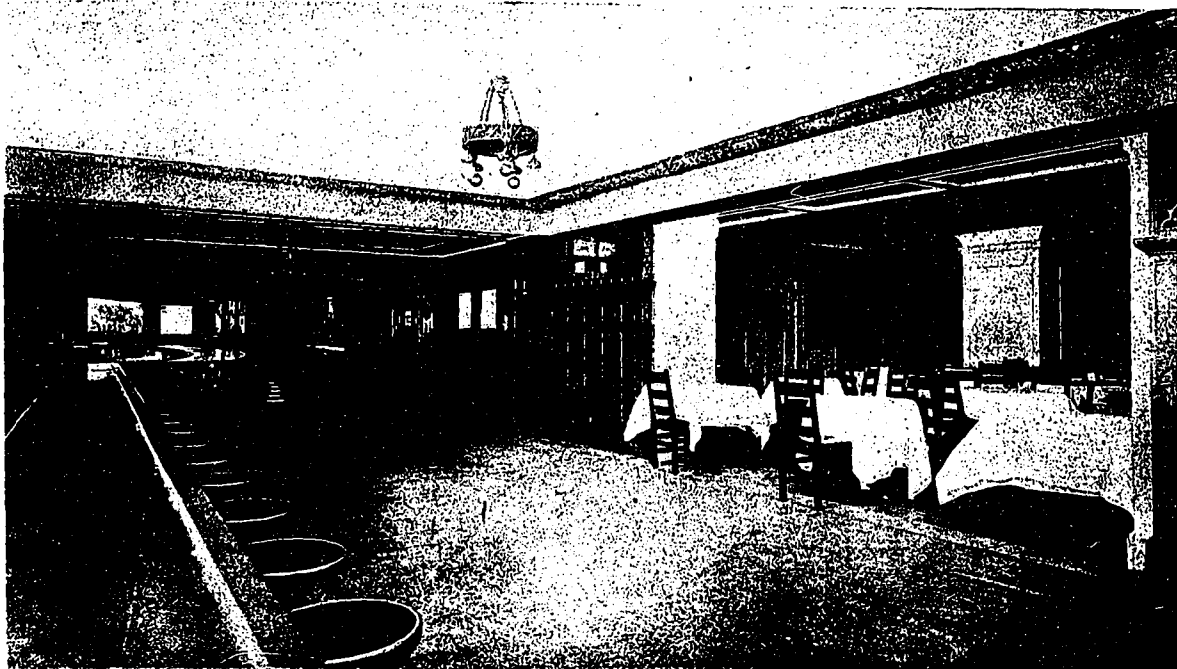
The building is after the style of modern Gothic, with a pronounced vertical feeling. The base consists of a series of arched openings which spring from ornamental columns. Plain piers extend from the third to the tenth floor, carrying the eye upward to the decorative frieze story and cornice. The window treatment throughout maintains the same general width which furnishes the accentuated vertical tendency broken only by the several moulded courses and the balustrade of the openings at the second story.

The exterior is of Indiana limestone, with all window and door frames throughout of metal, those in the bays being bronze and all the others of iron made to resemble antique bronze. Fireproof construction has been employed throughout the building, the floors and inside partition being of terra cotta and the roof covered with gravel and copper.

Access to the building is obtained on St. James, St. Francois Xavier and Notre Dame streets. At the St. James street entrance is a large vestibule, giving access to a hall continuous to Notre Dame street, which passageway intersects the rotunda opposite the hall leading from St. Francois Xavier street. Off this concourse the Grand Trunk Railway



Upper Portion Main Staircase.



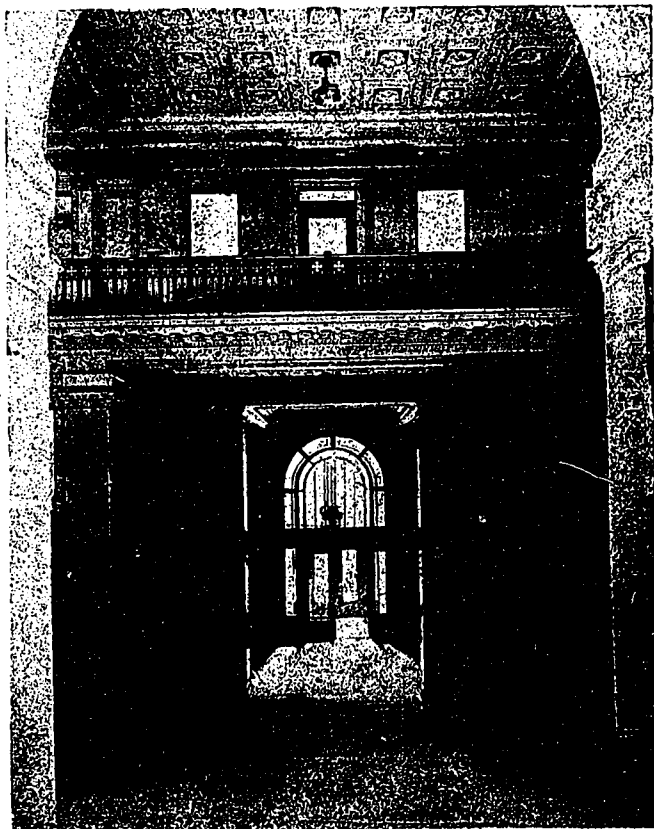
View of Restaurant in Basement.

and Canadian Express Companies' offices are to the right, and the Sterling and International Banks to the left. The rotunda opposite the St. Francois Xavier entrance is a feature of the building, not only architecturally, but also as a general exit from all floors, including the fire escape in the rear court. Missisquoi marble has been used to great effect in the wall treatment of the rotunda and concourse, which material extends from the floor to the ceiling and lends itself to delicately carved mouldings and texture panelling. The floor is of Tennessee marble cut in squares surrounding a central circular design. Lighting fixtures on the walls as well as those hung from the ceiling are of bronze cast design. The stairs leading from the rotunda consist of marble treads with steel construction, while the skylight overhead is of cast iron—finished black—and cathedral glass. A pleasing effect is obtained as one enters the main vestibule and catches a view of the stairway through the hall and rotunda. All corridors, concourse and stair hall are finished with Missisquoi marble.

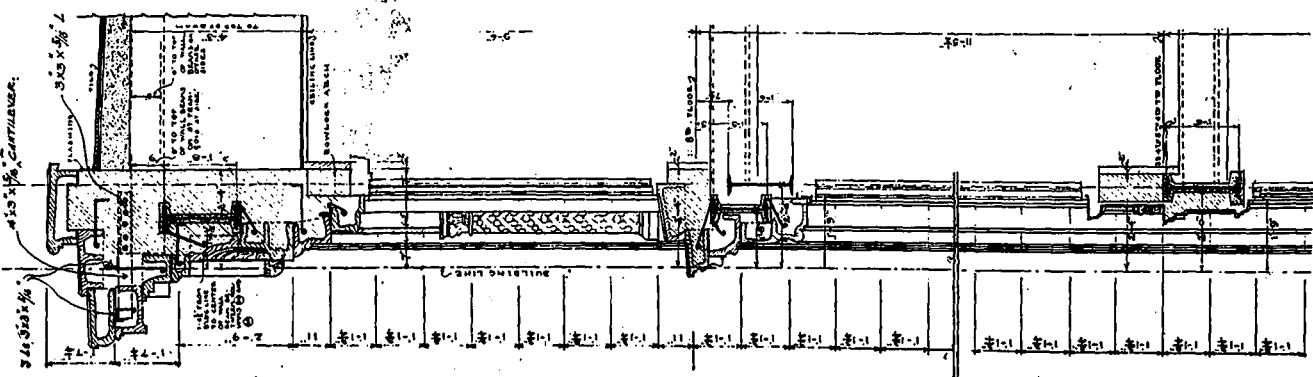
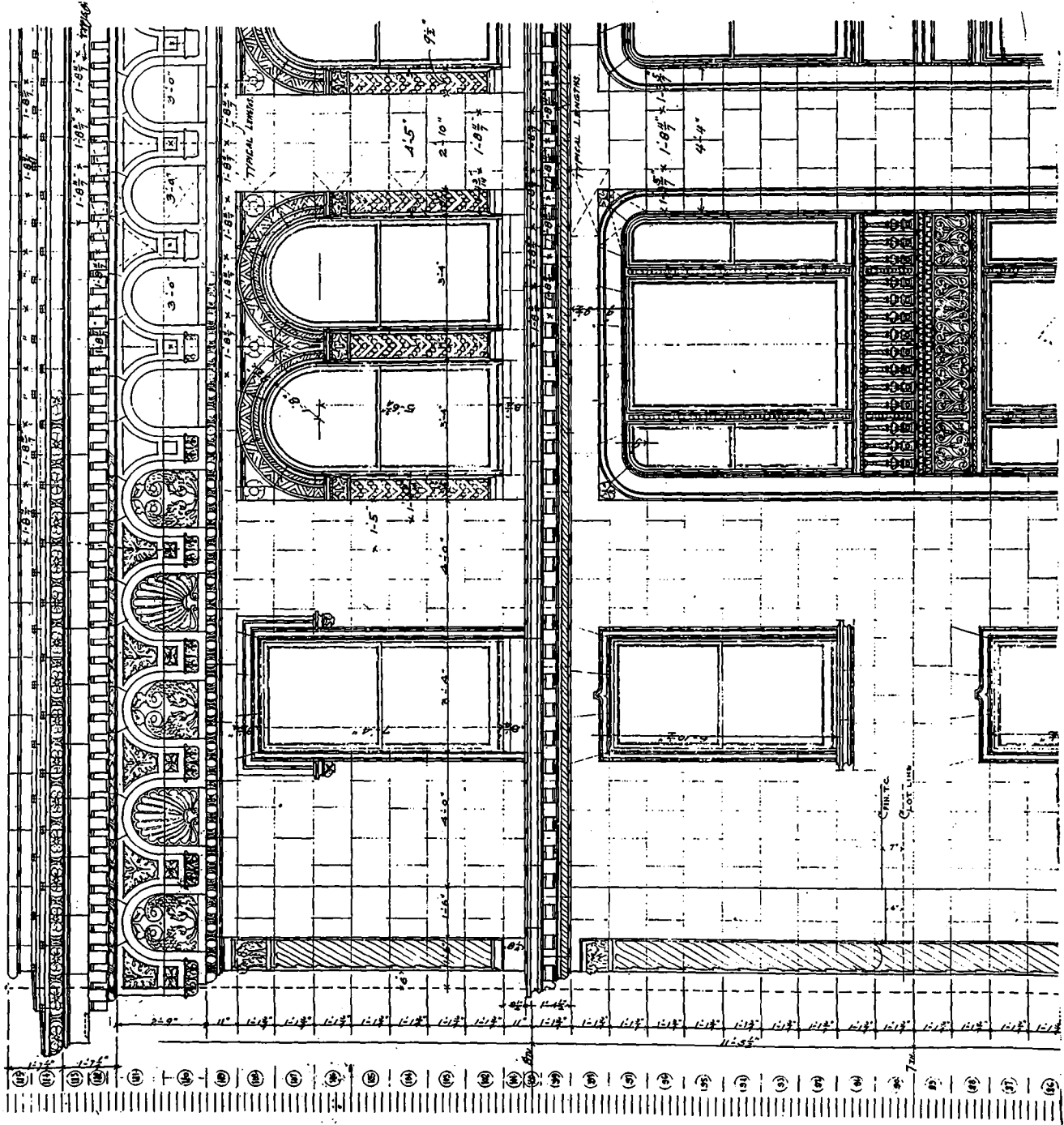
The four large offices already mentioned as surrounding the rotunda occupy the whole of the ground plan. In the Grand Trunk Railway office the floor is laid in Missisquoi marble, the woodwork is of mahogany, and all plaster work tinted a buff tone. The remaining offices have floors of Tennessee marble, wood trimmings of Indiana oak, plaster walls and ceilings, and cast ornamental bronze screens. Botticino marble has been used for the wainscoting and counters of the Sterling Bank.

The entire basement is given up to restaurant purposes, there being a large rathskeller, dining rooms, barber shops, etc. Terrazzo

with marble border composes the floor of the restaurant, whose walls are panelled in Indiana oak, ceiling of ornamented plaster, and furnishings of oak. The barber shop has marble floors and walls with plaster ceiling. The rotunda, walls and floors are treated in a similar manner as those of the ground floor. Access to the restaurants is obtained by means of



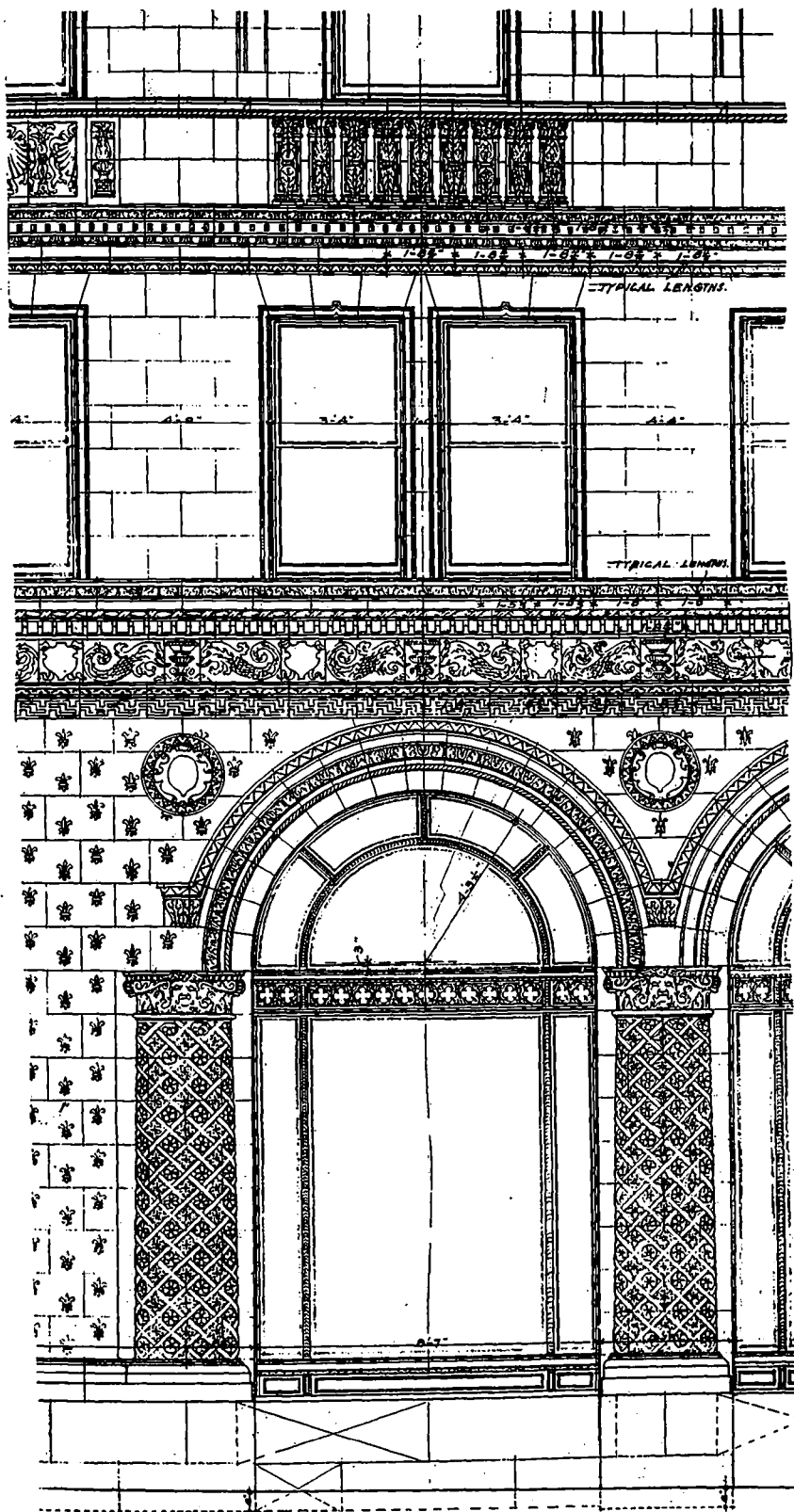
View of Main Entrance from Rotunda.



Detail of Upper Stories and Cornice on St. Francois Xavier Street,

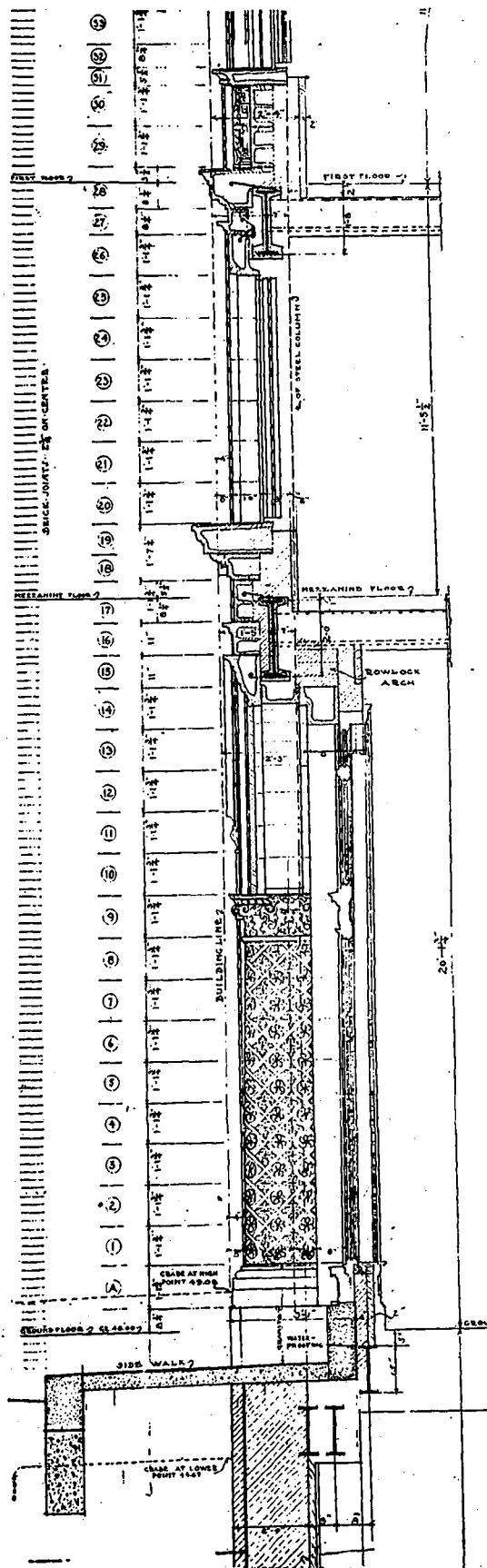
THE TRANSPORTATION BUILDING, MONTREAL, CANADA.

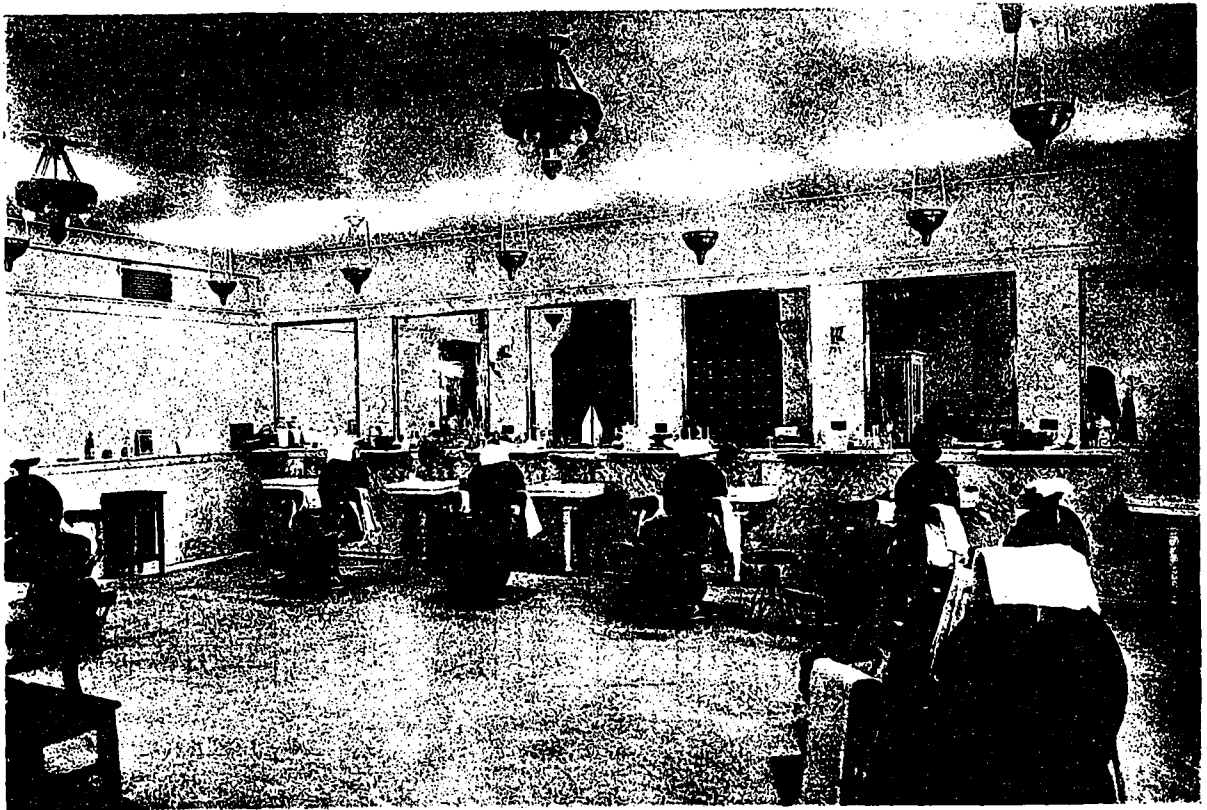
Carrere & Hastings and Eustace G. Bird, Architects.



Detail of Lower Stories.

THE TRANSPORTATION BUILDING, MONTREAL, CANADA.
 Carrère & Hastings and Eustace G. Bird, Architects.





Barber Shop.

four stairs and six elevators, while special lifts and entrances are provided for the service.

The ground floor story is some twenty feet high and the rotunda extends to the top of the second floor with well in front of same, as may be seen in the illustrations exhibiting this part of the building. All offices throughout the building are finished in plaster, with oak trimmings and plate glass.

The building is equipped with a power plant for forced ventilation required in the restaurants, in addition to the six passenger elevators and three service elevators.

One finds in this building an example of architecture which simply answers its purpose. There is nothing in the design irrelevant to the character of a commercial establishment which has as its sole aim the housing of such activities. Decorative motives are used which decorate, while needless stunts which tend to detract from the building as a complete unit have been avoided. Aside from the artistic phase of a business enterprise the real basis is to make it pay. This is a difficult problem when thousands of dollars are spent in needless ornamentation, and when the plan calls for a needless waste of renting space. Here both these conditions have been carefully handled and we have an excellent example of a dignified structure with every foot of the various floors practically handled.

Buildings of this character are a credit to the city wherein they are erected, and will eventually lead to a wholesome growth in our commercial architecture.

The contractors and material firms who executed the work in connection with the Transportation Building are as follows: General contractor, Peter Lyall Construction Co., Montreal (masonry, cut stone, granite, carpentry, painting, plastering, and interior finish); hollow tile, Montreal Terra Cotta Co., Montreal; structural steel, Dominion Bridge Co.; sidewalk lights, John Watson & Sons, Montreal, and Canada Foundry Co., Toronto; prismatic lights, John Watson & Sons, Montreal, and Canada Foundry Co., Toronto; stair cases, John Watson & Sons, Montreal, and Canada Foundry Co., Toronto; ornamental iron work, John Watson & Sons, Montreal, and Canada Foundry Co., Toronto; store fronts, Canada Foundry Co., Toronto; elevators, Otis-Fensom Co.; heating and plumbing, James Ballantyne & Co., Montreal; roofing and cornice work, Campbell-Gilray & Co., Montreal; plumbing fixtures, James Robertson & Co., Montreal and Toronto; electrical work, Philip Lahee & Co., Montreal; electric fixtures, Murray-Kay Co., Toronto; furnishings, Murray-Kay Co., Toronto; vaults, J. & J. Taylor, Toronto, and York Safe and Lock Co.; marble, Missisquoi Marble Co.; granite, Stanstead Quarries, Ltd.; crushed stone, Morrison Quarry Co., Montreal; brick, La Prairie Brick Co., Montreal; metal lath, Pedlar People; plaster, Francis Hyde & Co., Montreal; glazing, Pilkington Bros. and Hobbs Manufacturing Co., London, Ont.; architectural paints and varnishes, Sherwin-Williams Co.; hardware, Durand Hardware Co., Montreal, representing Russell-Irwin.

The Terminal City Club, Vancouver, B. C.

PHILIP M. JULLIEN, Architect

THE CITY CLUB has become an important factor in our social development. Each succeeding year brings new fraternal organizations into existence, or calls for larger accommodations in which to house the old. This means, as a rule, the erection of an artistic building or the remodelling of quarters already existing. In many cases the top story of a tall structure is planned throughout with a studied arrangement best suited to the needs of the club. Such a location permits of privacy, takes the members away from the noise and bustle of our modern thoroughfares, furnishes plenty of fresh air and enables one to enjoy beautiful vistas on all sides.

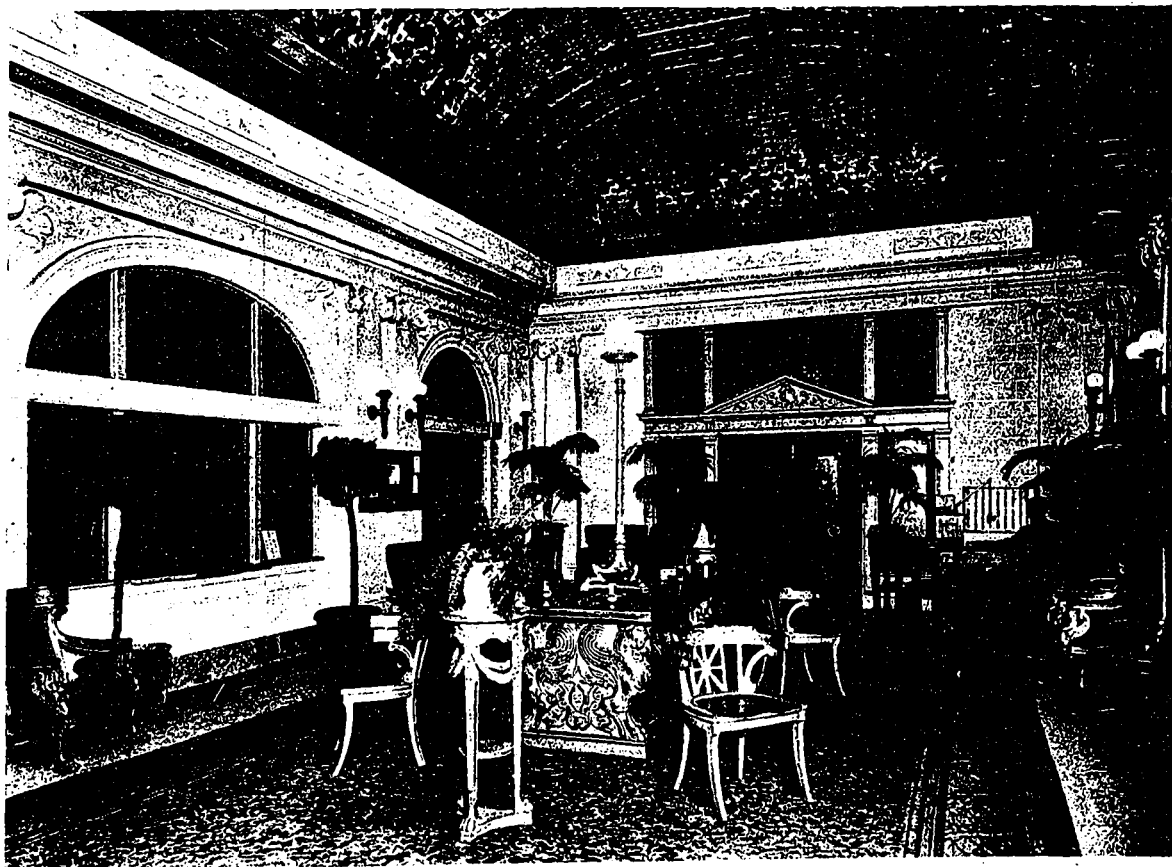
During the past two years the larger clubs of Vancouver and Victoria have increased so rapidly in membership as to demand larger and finer quarters. The Terminal City Club of Vancouver was the first to provide itself with a new home. In order to have permanent and lasting quarters it secured a long lease of a portion of the Metropolitan Building, previous to its erection, and had quarters specially arranged for club house purposes.

In order to secure the very best results a competition was held for the execution of the interiors. Numerous schemes were submitted, each one of which pre-

sented a satisfactory solution to the problem. Philip M. Jullien, architect and decorator, who happened to be in that section of the country at the time, succeeded in winning the competition with more than satisfactory results to the club. The quarters are spacious and designed in an artistic manner both as to the individual rooms as well as the ensemble.

The following description of the illustrations shown will tend to make the real value of the decorations more evident. Considerable care has been taken in keeping the scale consistent and maintaining a tone value to each room which detracts in no way from the others. By this method the entrance hall, foyers, lounge, etc., are considered as units by themselves and still made members of one general plan. The entrance hall, or lobby, is executed in Caen stone with a lattice ceiling. The furniture is copied from pieces taken from Pompeii, and give a remarkable effect with their verte antique finish and brilliant red plush covering.

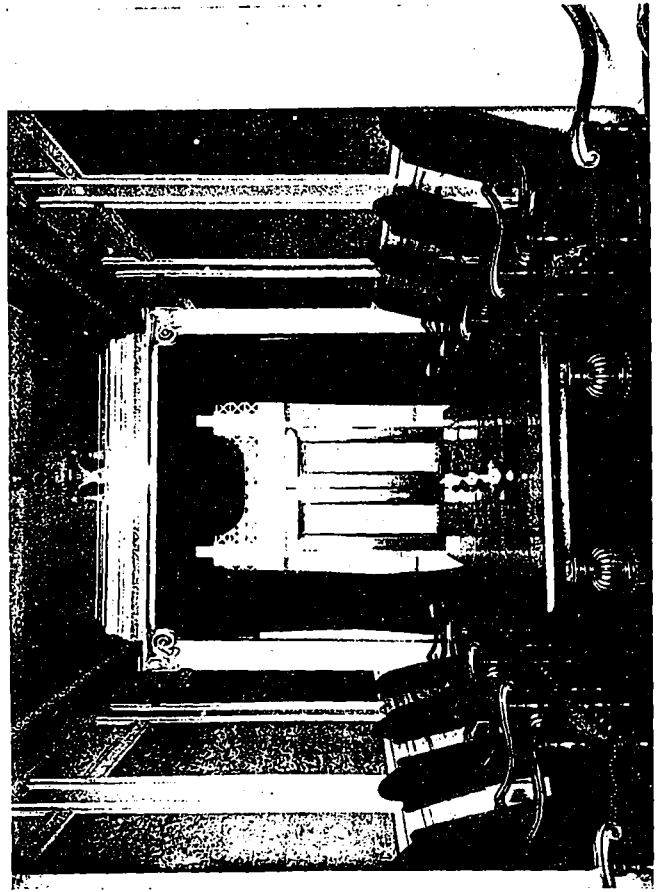
The middle foyer, which communicates with the dining room, reading room and cloak rooms, is arranged as a lounge for afternoon smokers. The walls are hung in tapestry of a light brown tone and the ceiling is done in old ivory with the ornamentation wiped out. The furniture of carved walnut with its



Entrance Lobby.



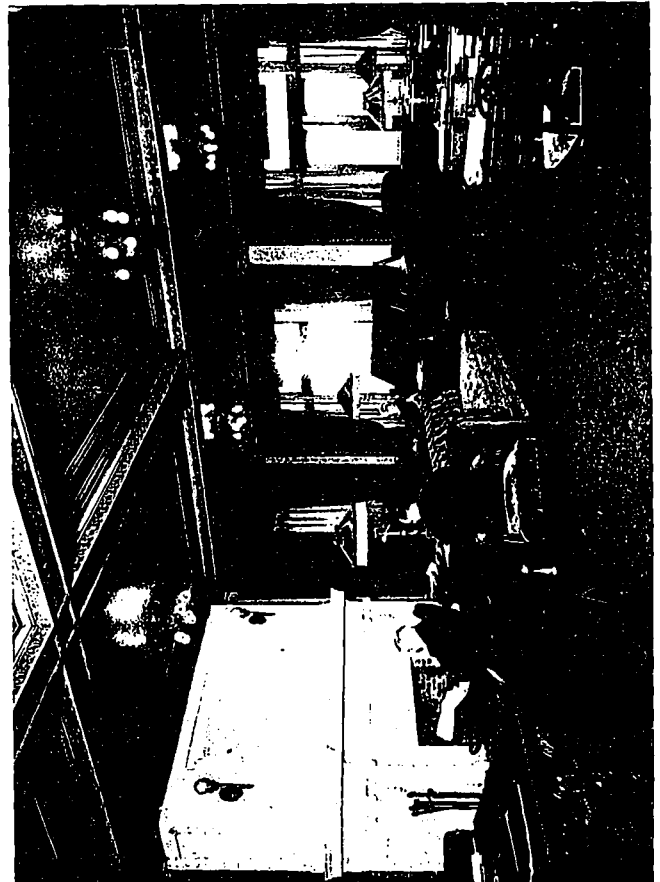
Dining Room.



Board Room.

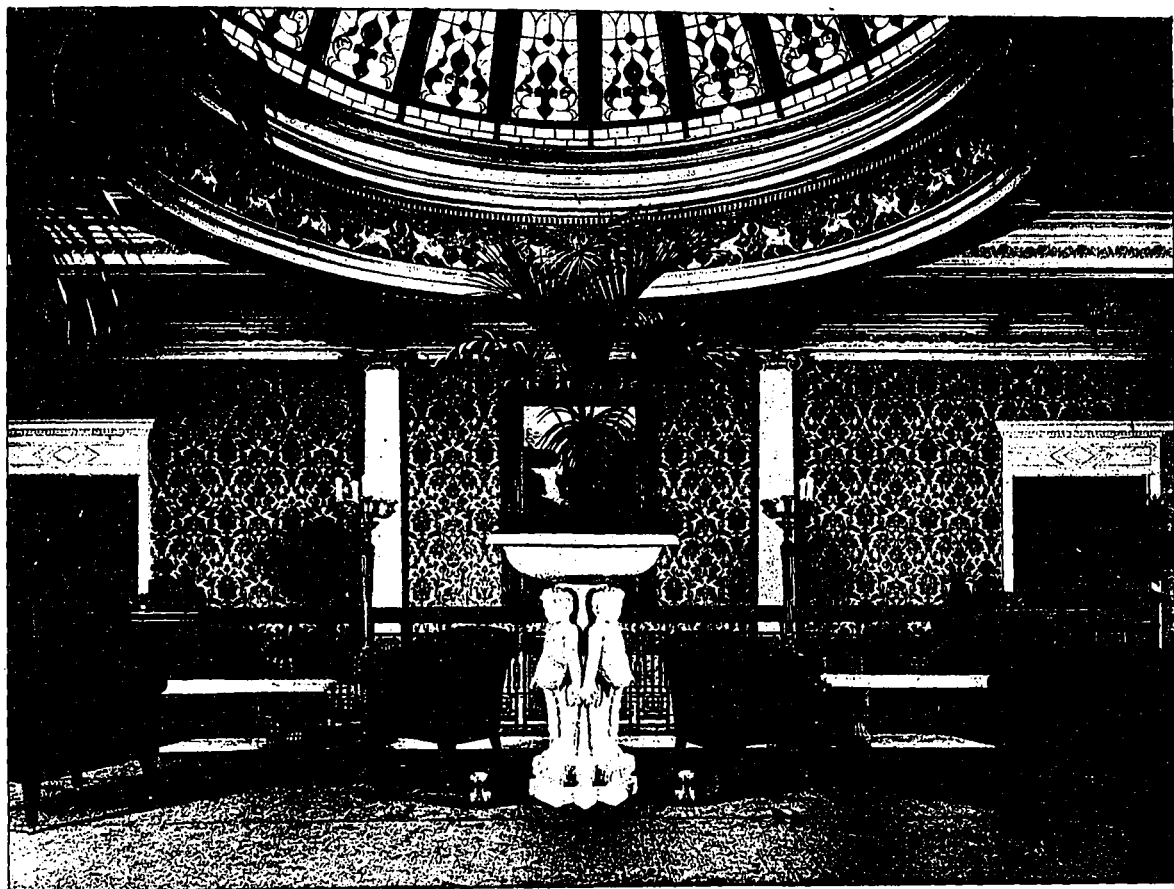


Lounge.



Reading Room.

THE TERMINAL CITY CLUB, VANCOUVER, B.C.
Philip M. Jullien, Architect.



Upper Foyer and Bar
THE TERMINAL CITY CLUB, VANCOUVER, B.C.
Philip M. Jullien, Architect.



Middle Foyer.

THE TERMINAL CITY CLUB, VANCOUVER, B.C.
Phillip M. Jullien, Architect.

damask covering, the statuary in marble, palm stands and gold candelabra give an unusual richness.

The upper foyer, which is entered by a grand staircase from the middle foyer, is lighted by a large stained glass dome and furnished similarly to the middle foyer, although possessing a much more comfortable atmosphere.

The lounge, which has a window space of seventy-five feet overlooking the bay and the mountains in the distance, is furnished entirely for comfort with heavy over-stuffed furniture covered in a soft brown velvet. The general tone of the room is a golden brown. The views of exceptional charm in the daytime and the two large fireplaces at night make of this room a rendezvous unsurpassed in any of the large clubs of America.

The reading and writing room is complete in every detail with the most comfortable of furnishings. Great care has been taken to arrange proper tables for all the periodicals and newspapers in addition to the library. Individual writing desks and ample fireplaces with unusual lighting facilities make this room one of the most desired in the club.

The dining room also has a wonderful view of the bay and distant mountains. It is equipped with specially designed furniture throughout. The emblem of the Club is embroidered on the back

of each chair, also introduced into the window curtains and vallances. The walls are treated with rich Japanese embossed leather which contains strong colors, while the elaborate cornice and the beams are carried out in the same tones.

The panelled walls of the board room are hung in tapestry, while the furniture is of Italian walnut. The room is dignified and quite in keeping with the needs of a board in so important an organization as the Terminal City Club.

It would be a difficult matter to adopt any one plan as typical for club purposes. Each organization has an individuality of its own which naturally needs a proper setting. Such characteristics must be felt by the designer and become a part of his scheme. In doing this the architect not only enriches the club life with a home of artistic merit, but gives to the whole a feeling of charm and ease so essential to the enjoyment of the members.

It is very evident the Terminal City Club has been wise in the selection of a home. Every phase of its life has been considered, so that each room breathes the very atmosphere of the Club itself. The artistic taste has not been stinted, and an unusual freedom has entered into the decorations, giving an intrinsic value to each of the parts which go to make up the fundamental basis for such an organization.



Settler's Cottage, Kingston, R.I.

Colonial Architecture—I.

THOMAS W. LUDLOW, M.A.

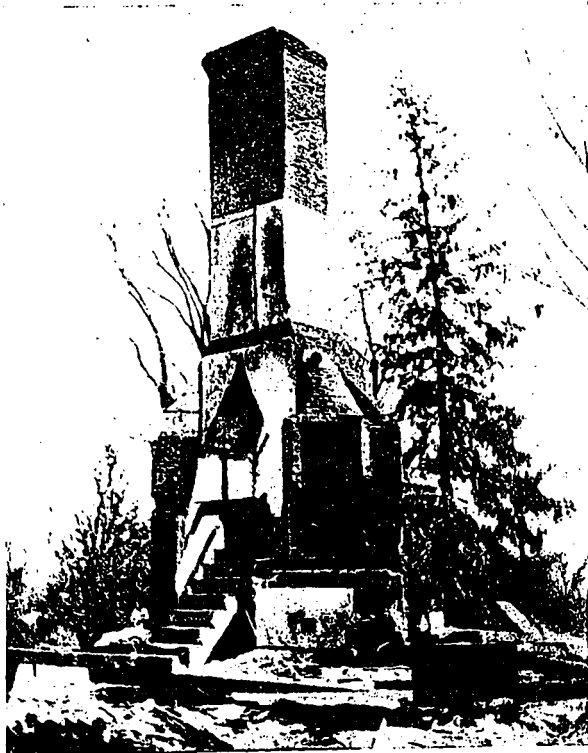
THE HARDY PEOPLE who planted in the new world the civilization of the old during the seventeenth and eighteenth centuries, naturally tried to produce familiar surroundings in the virgin forests. This, to a certain degree, was impossible owing to the new conditions of environment, climate, and even society, which were imposed upon them. Yet with the customs, manners, laws and methods of building of the mother country always before them, the settlers set diligently to work and successfully passed through a period of poverty and strife before they began to realize their ideals.

The vicissitudes through which the colonists had to pass had its effect upon the progress of building. It was not until after the period of comparative peace and prosperity which set in during the first quarter of the eighteenth century that the colonists could devote much time to architecture, and little or no work of importance was done prior to 1730, although the Colonial period in building is usually considered to commence with 1700, and from that time on it con-

tinued to be the vernacular style until finally replaced in popular favor by the Greek revival about 1820. The activities of the colonists were confined to the Atlantic slope of the Appalachian mountains, a strip of land varying from forty to two hundred miles in width, which was limited on the north by the St. Lawrence and on the south by the Spanish possessions, with Portsmouth, N.H., and Charleston, S.C.,

marking the northern and southern centres of importance.

This territory was settled by many peoples, who differed both in nationality and religious beliefs, yet by the time building had become dignified enough to be called architecture, it had also become uniformly English in character. Colonial architecture, therefore, may be briefly defined as "a reproduction, with such means and skill as the builders could command, of the English architecture of the eighteenth century." For convenience, Colonial architecture is divided into three groups, which correspond to the New England, Middle and Southern Provinces respectively, although the differences in these



Fireplaces in central chimney.



Gate Posts (1820) Salem, Mass.



Entrance (1818) Salem, Mass.

groups are rather those of detail than actual disposition of plan. The same broad lines and spirit pervaded all the building of the time and stamped it with a homogeneous character, the like of which has not since been seen in the development of American architecture.

The first type of dwelling to be built after the log cabin period is known as the settlers' cottage. These structures are two and sometimes three stories in height, with a long sweeping roof in the rear, cutting off a corner of each story from the attic to the kitchen, which as a rule was in a rear wing. Houses of this type had practically no hall, the rooms opening, as far as convenience would permit, into each

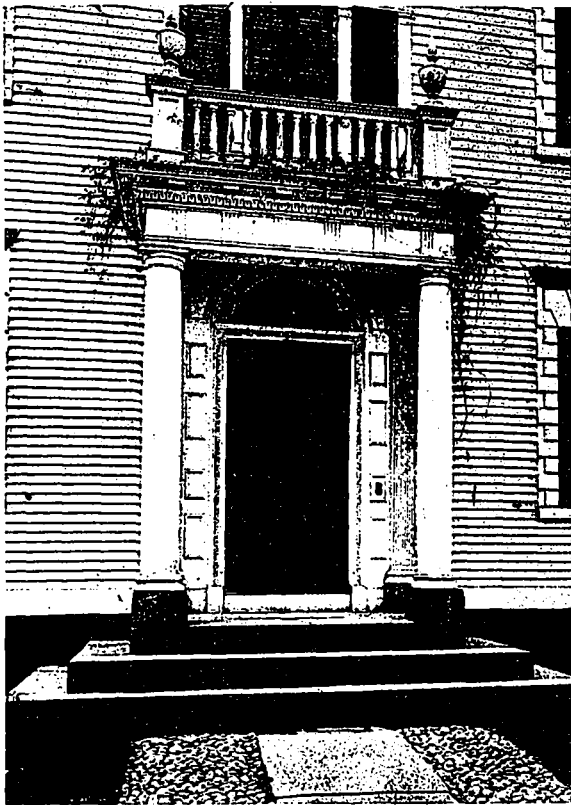
other on both the upper and lower floors. For further economy the fireplaces were all grouped around one central chimney, which in many examples was arched over to allow the narrow stairs to pass under it.

The only feature of these cottages was the entrance doorway. This usually had a classic pilaster treatment with a moulded capital on each side of the opening, supporting a plain cornice with a pediment. This type of structure continued to be built throughout the Colonial period, and many examples are to be seen both in New England and the Middle States.

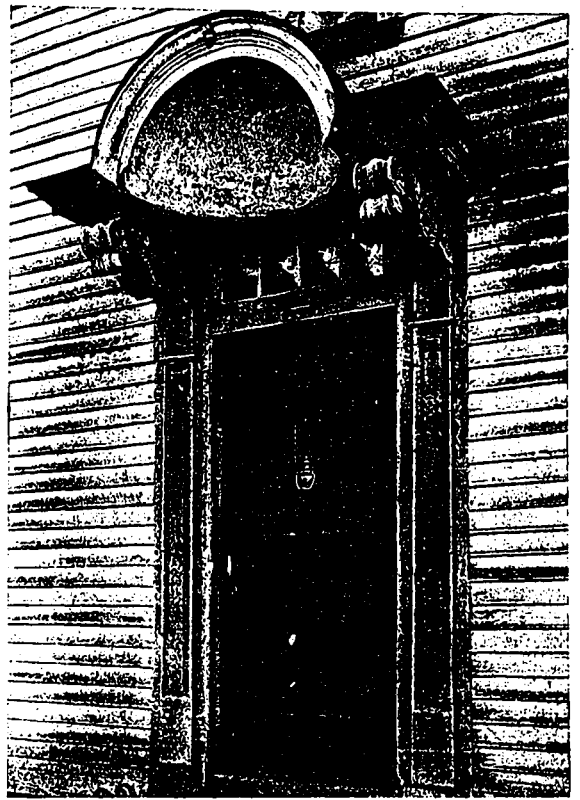
The peaceful period which set in about 1730 greatly stimulated building activity in New England. The many merchants and the few professional men who had saved considerable money during the early days of strife, now began to build on pretentious lines. The material generally used was wood, the houses being constructed of an open framework of timber covered with clap-boards or shingles. Brick was rarely used in the northern colonies. The first residences to be built followed the lines of the old military houses, which were very simple, the chief elements being a rectangular plan, two stories and attic in height, a gambrel gable at each end, a symmetrical disposition of openings and dormers, and an overhang of the second story and attic for defence. In the later examples changes gradu-



Rumford House at Woburn, Mass.



Entrance at Pawtucket, R.I.



Hood Entrance at Newport, R.I.

ally began to appear, at first manifesting themselves in the roof when the mansard form replaced the gambrel, and this hipped-shaped roof was in its turn superseded by the flat deck. No exact date for these transitions can be determined as examples of each overlap, the gambrel roof being especially persistent in an effort to secure additional height for the attic story. Although the oldest, it is the most graceful and pleasing, as it avoids the hard lines and box-like appearance of the other two.

The mansard roof is composed of the same elements as the gambrel, only here the upper slope is flattened to a deck, which necessitates the introduction of a balustrade, thus obtaining a more classical effect in the predominance of horizontal lines on all sides. The Vassall mansion, built in 1759 at Cambridge, Mass., and since 1837 the home of the Longfellows, is a splendid example.

The houses of the third class are less noteworthy, their details are generally stiff and there is a constant tendency to formalism and a certain meagreness of design, the porches being small and bare and the columns few and slender. The original inspiration had suddenly begun to fail and there was a striving after new effects.

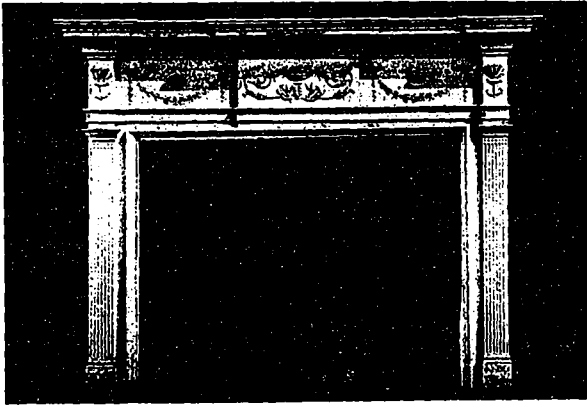
These houses were either rectangular or "L" shaped in plan, with the rooms ranged on either side of an ample central stair hall in contrast

to the disposition of the settler's-cottage. In buildings of the "L" type the kitchen and servants were placed in the wing, which was only one story in height.

The New England houses were as a rule grouped in towns and villages, and are not to be found, as are many of the best examples in the Middle and Southern Provinces, far from the commercial centres on vast farms or vested estates. These northern houses were set on, or close to, the street, which was invariably flanked on either side by magnificent elms. A low wooden fence made worthy by the varied design and careful execution of its gate posts, enclosed the



Tallmadge House (1775), Litchfield, Conn.



Mantel in Seddon House, Philadelphia.

property, and the little gardening which was done was usually in the rear.

There are few names of designers during this period which are still known, but one of them is William Spratz, a Hessian soldier, who designed the Deming house at Litchfield, Conn., in 1790. The house itself is a very good piece of Palladian design, with refined and correct detail. That Spratz was a soldier gives some insight into the architectural profession and shows that there were no educated architects in the provinces. Most of the houses are the joint work of the village carpenter and the owner, the one furnishing the detail, the other the general scheme. The colonial mechanic was more than a mere artisan, for with the help of some of the architectural books then published in England he devised practical methods for executing in wood classical features originally designed in stone. And it is to his ingenuity that the tendency to increase the proportional height of the columns and the lightening of the cornices may be traced. The entrances are fully emphasized with devices borrowed directly from England; for example the shell hood rising from brackets supported by flanking pilasters often occurs, as does a cornice and pediment supported by half columns or pilasters. In the best examples carefully carved Ionic or Corinthian orders are used.

A porch of slight projection with free standing col-



Detail of Interior Doorway (1750), Philadelphia.

umns was also frequent. In many places in Connecticut and to the south are found small porches which show an adaptation of Sangallo's ingenious treatment of the third story windows of the Farnese Palace at Rome, where the frieze of the entablature is cut into by the opening. By this means sufficient height is gained for the doorway inside the porch, without crowding the pediment above the second story window sill.

A remarkable feature of the later interior is the generous allotment of space to the staircase hall. The stairs themselves are broad and the treads easy, with neatly turned and in many cases hand-carved balusters and newels. In the richer examples a carved bracket ornaments each tread.

The ceilings are excellent examples of plaster work carefully executed, the flat surface being in many cases decorated with delicate relief, based on the work of the Adams', with a richly moulded Corinthian cornice.

As in England the mantels are remarkable for their

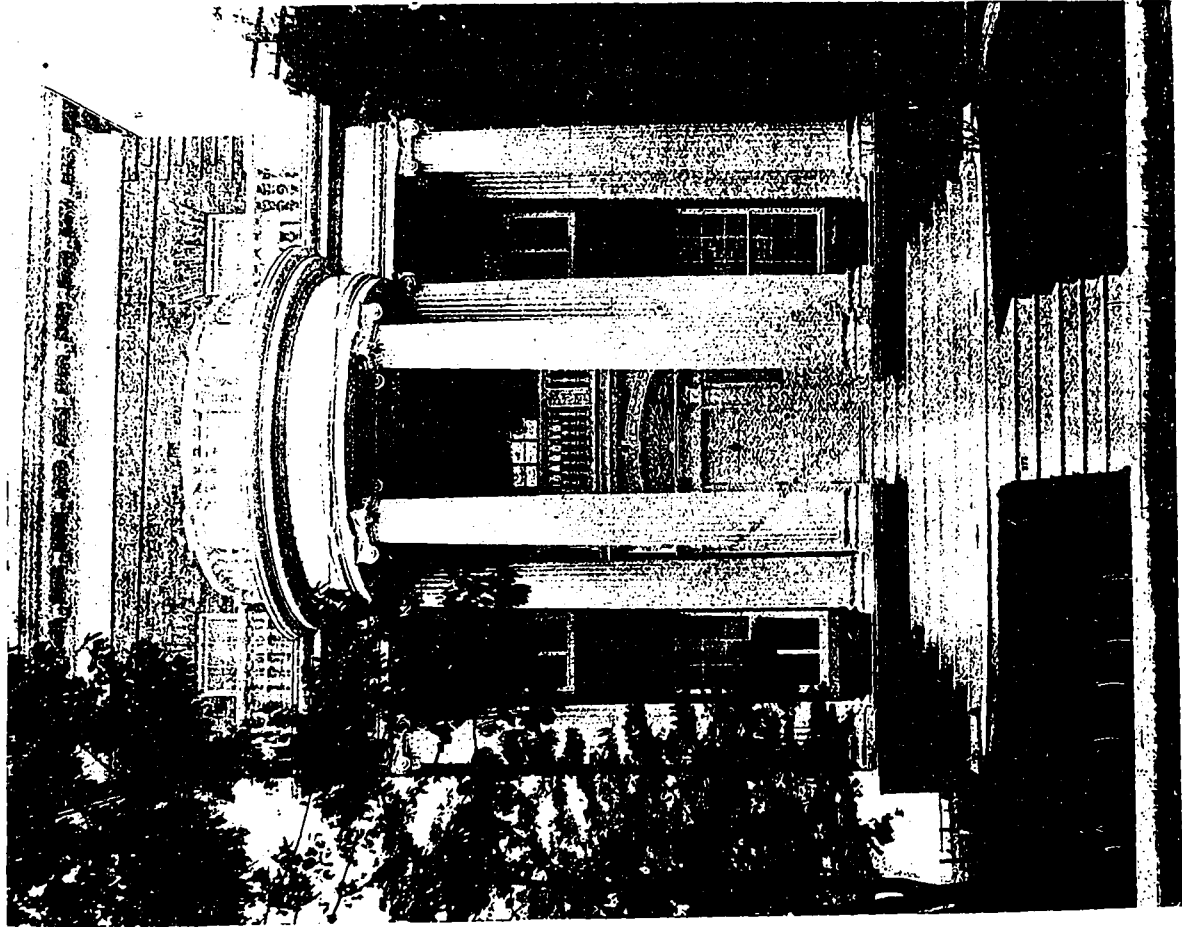


Derby House, Salem, Mass.

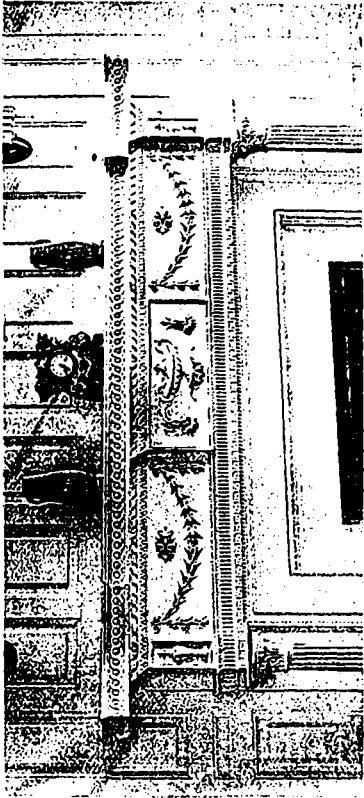
ornament and detail. The orders which form the base of many of the best examples are attenuated to sometimes twice their normal height with the greatest propriety and grace. Hand-carving is freely used in delicate flutings, balls, beads, eggs and darts, figures and geometric patterns, and a very charming low relief ornament similar to that found on the ceilings.

The New England houses are not pretentious, yet all their details can be traced to some prototype in England, France or Italy. In many cases the resemblance is slight. Time, distance and materials have so changed them as to produce a pure, simple and home-like domestic architecture of marked individuality.

The middle and southern colonies with their vastly different problems will be discussed by Mr. Ludlow in following issues of CONSTRUCTION. Churches and public buildings of a colonial nature will also be reviewed.



ENTRANCE.



DETAIL OF MANTEL.

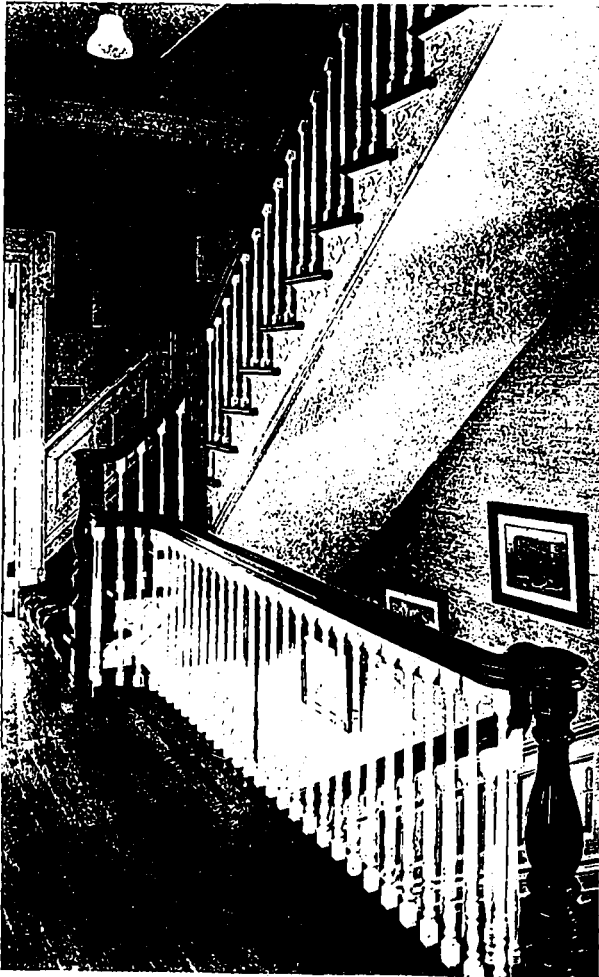


LIBRARY.

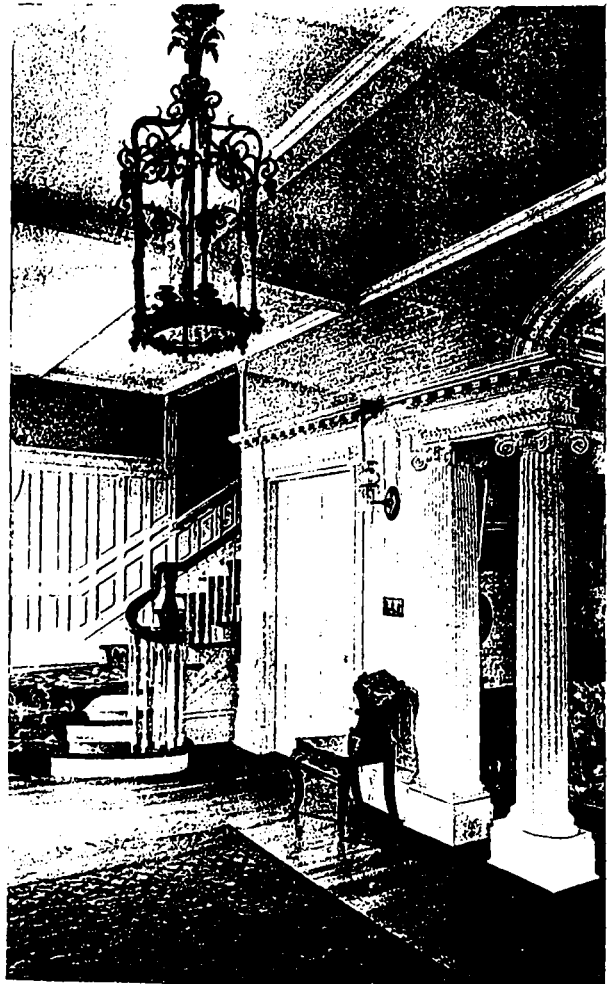
HOUSE ON GRAND ALLEE, QUEBEC.
RENE LEMAY, ARCHITECT.



DINING ROOM.



HALL, SECOND FLOOR.



HALL, FIRST FLOOR.

HOUSE ON GRAND ALLEE, QUEBEC.
RENE LEMAY, ARCHITECT.

CONSTRUCTION

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FREDERICK REED, Editor

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Vol. 5 Toronto, December, 1912 No. 13

CURRENT TOPICS

PETER LYALL, one of Montreal's leading contractors died November 14. Mr. Lyall was head of the firm of Peter Lyall & Sons, and has been actively associated with its large and growing interests from the date of foundation, 1875. At the time of his death Mr. Lyall was engaged in the erection of Winnipeg's new station and the C.P.R. station and hotel at Calgary.

* * *

JULES SIMYAN, in reporting on fine arts for the past year, has created considerable comment among the Parisian artists. In addition to the statement that the National Opera is quite unable to make both ends meet on the present subsidy, he quotes the following market value of the principal monuments: The Arc de Triomphe, \$4,000,000; the Louvre, \$57,000,000; the statue of Henry IV. on the Pont Neuf, \$14,200; the Egyptian obelisk in the Palace de la Concorde, \$27,000; the column in the Place Vendome, which is made of solid bronze, \$800,000, and Palace of Luxembourg exactly \$6,670,619.

THE ARCHITECTS of Saskatoon established a local chapter of the Royal Architectural Institute of Canada at a meeting held November 17th, in the office of W. W. LaChance. The meeting was attended by a large number of the local architects at which time it was arranged to hold a banquet at the King George Hotel on the following Tuesday. The following officers of the chapter were elected: President, W. W. LaChance; vice-president, R. S. Byers; hon. secretary-treasurer, F. L. Turnbull.

* * *

THE CALGARY Architectural Club held its first meeting Monday evening, November 25th, at the rooms of the Calgary Chapter of the Alberta Association of Architects. The following officers were elected: Honorary president, G. M. Lang; president, R. A. Miller; vice-president, E. Thompson; honorary secretary-treasurer, George A. Oman; executive committee, D. S. McIlroy, George Fordyce and two affiliated members. An invitation was extended to persons interested in the study of architecture or any of the allied arts or crafts to become affiliated members.

* * *

THE ALBERTA Town Planning and Housing Association was formed at Edmonton, November 16. The object of the organization is to secure the necessary legislation from the Alberta Government to further town planning schemes for the cities and towns in the province. This is the first provincial organization of its kind in Canada and springs from the suggestion made at the first convention of the National Town Planning and Housing Association at Winnipeg last July, that all provinces organize and become affiliated with the national body. That the town planning idea is growing throughout Canada was evidenced by the delegates from Calgary, presenting copies of the New Brunswick Town Planning Act. This and a similar Act passed by Nova Scotia were eulogized by one of the speakers, who presented a digest of Canadian legislation on town planning. The convention passed a strong resolution embodying the main principles set forth in the Acts of the eastern provinces.

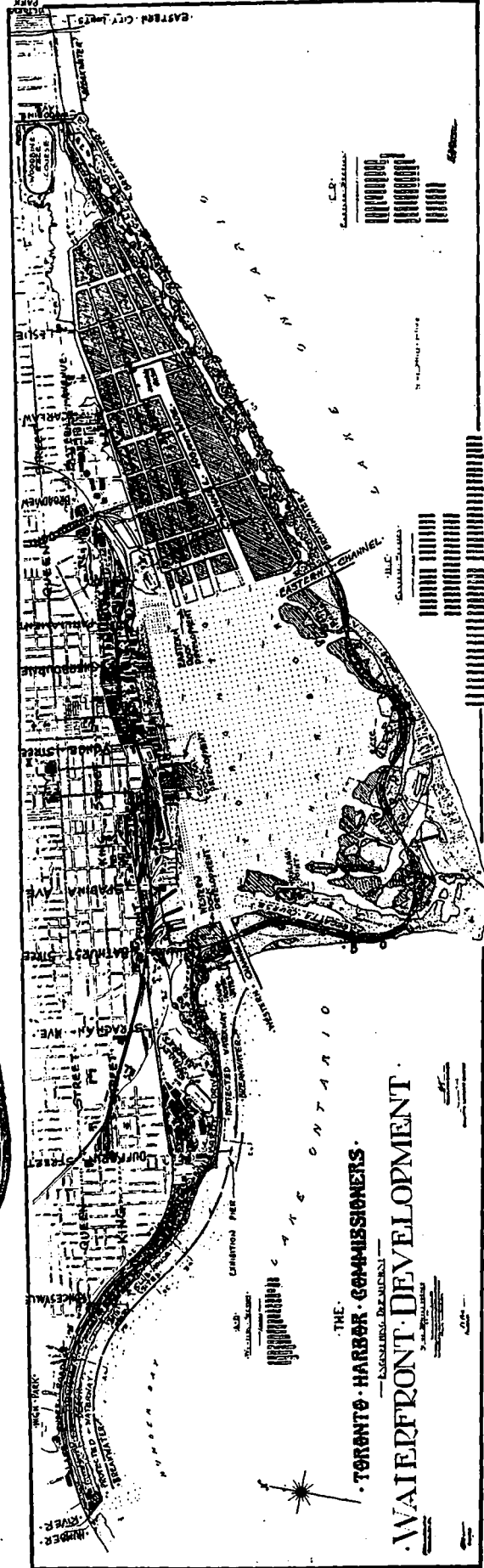
The association was formed under the patronage of Lieutenant-Governor Bulyea, Premier Sifton and Mr. Mitchener. The following officers were elected: Honorary presidents, William Pearce, D.L.S., Calgary, and Dr. H. M. Tory, President of Alberta University, Edmonton; president, Mayor George S. Armstrong, Edmonton; first vice-president, Mayor J. W. Mitchell, Calgary; second vice-president, Paul Von Aueberg, Superintendent of Parks, Edmonton; secretary-treasurer, G. Wray Lemon, Calgary City Planning Commission.

The members are confident of success with such a strong body of public sentiment behind the movement. Some of the problems before the organization are: control of subdivisions outside the city; the prohibition of the 25-foot lot; the enlargement of the powers of taxation for public improvements which directly benefit certain localities; and the revision of the Public Health Act.

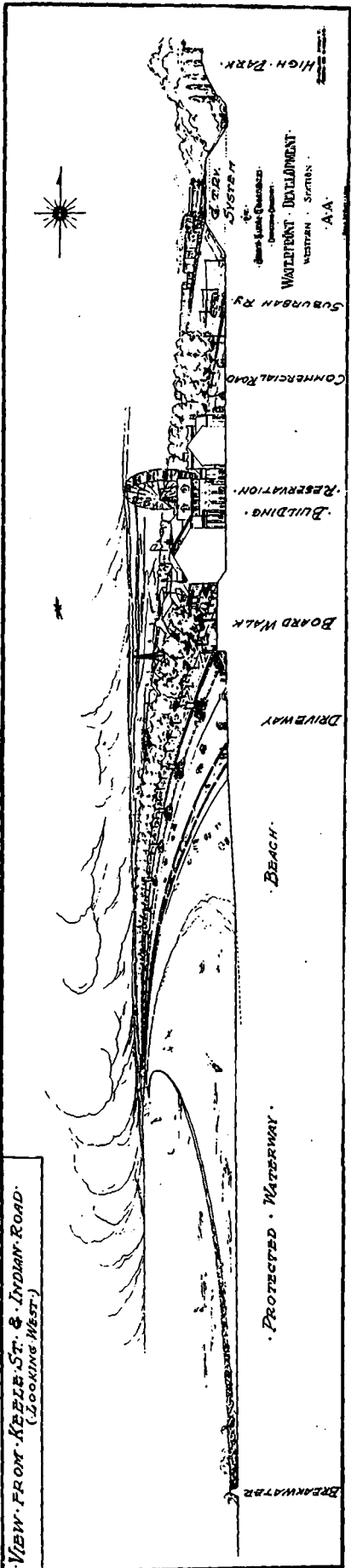


View of Toronto in 1920. Twelve miles of waterfront boulevard, parks and driveways.

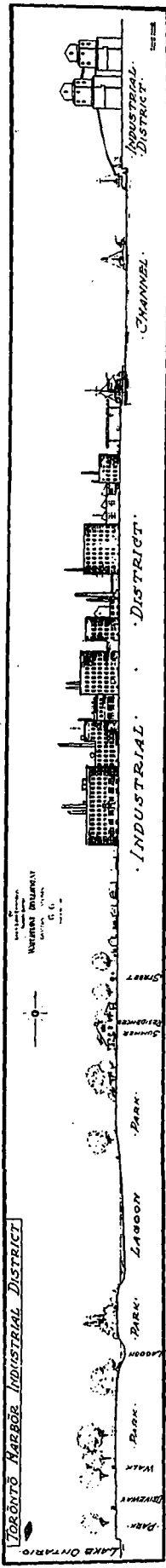
Channel to be 6,800 feet long, 400 feet wide, and 24 feet deep, and will terminate in a basin 1,000 feet square.



Plan for Industrial Development of Ashbridge Bay, with a new 352-acre park in front, a boulevard and driveway. The breakwater gives a protected waterway 500 feet wide.



Perspective view of the section from Sunnyside to the Humber River. A terraced boulevard is to be built with walls 55 feet wide, faced by a parapet, with steps at intervals leading to the boulevard proper.



Cross Section, showing Toronto Harbor Industrial District. This area is to contain 644 acres of land for factories, 23 acres of streets and railroad reservations, and 130 acres of waterways.

The Toronto Harbor Commissioners presented the accompanying plans to the Board of Control for the improvement of Toronto Harbor and waterfront, and the reclamation of the district formerly known as Ashbridge's Bay. The report calls for the expenditure of \$13,142,088.91 by the Harbor Commission, the Dominion Government, and the City of Toronto within the next ten years, distributed as follows: Commissioners' work, raised by debentures on property, \$11,215,920.35; city's work, \$1,779,983.40; Government work, \$6,123,284.66. The Borden Cabinet has approved the Harbor plans, and \$5,000,000 will be placed in next year's estimates to permit work to be commenced in the spring.

The Harbor Commissioners submit the following summary of what Toronto will possess when the present plans have been made a reality on the city's waterfront: A modern harbor, with a uniform depth of water capable of accommodating any vessel with a draught of 24 feet. Modern permanent docks on the central waterfront served by 24 feet of water, and equipped with the best of freight sheds, warehouses, and appliances. A dock and industrial district at the foot of Cherry street, equipped with freight sheds, warehouses, and the first of a series of factory buildings to serve the needs of the east end. A similar area at the foot of Bathurst street, to

take care of west end business. Proper co-ordination of rail and water traffic at all three of the above points, in order to properly develop the port. An industrial area containing 644 acres of available land in the Ashbridge Bay district, which will be known in the future as the Toronto Harbor Industrial district, capable of accommodating factory buildings with a value of \$30,000,000, and producing a ground rent revenue of \$300,000 per year. A ship channel 6,300 feet long, 400 feet wide, and 24 feet deep, with turning basin 1,000 feet square at its east end, serving the industrial district and the eastern portion of the city generally, and equipped with three miles of dockage. A dock area on the west face of the industrial district capable of development, so as to provide an additional dock frontage of 2½ miles. A new lakelike park and waterway, extending from the Eastern Channel to the foot of Woodbine avenue, and containing 352 acres protected by a breakwater three miles long. Inside the breakwater will be ample accommodation for east end aquatic clubs. A protected waterway with an average width of 600 feet, behind a breakwater from Woodbine avenue to the east city limits. Additional park areas on the island totaling 382 acres. New park areas in the district from Bathurst street to the Humber River, containing 190 acres, and fronting on a protected

waterway 500 feet wide, which is separated from the lake by a breakwater. A total area of new park lands of 894 acres. A bathing beach one and one-third miles in length, from Sunnyside to the Humber. A similar beach four and one-quarter miles in length, from the Eastern Channel to Victoria Park. A lakelike boulevard system of driveways, bridge-paths, and walks across the waterfront for eleven miles. A protected waterway twelve miles in length, from east to west along the city front. A terrace promenade 6,880 feet in length and 55 feet wide, from Sunnyside to the Humber. A double-deck combined traffic and recreation pier 300 feet long and 20 feet wide in front of Exhibition Grounds. A location for aquatic clubs 1,000 feet long and 300 feet wide north of the new Western Channel, with an anchorage basin of absolutely protected water covering 42 acres. A similar location at the foot of Roncesvalles avenue 800 feet long and 250 feet wide, fronting on the protected waterway formed by the western breakwater. A public playground covering 3¼ acres east of the foot of Roncesvalles avenue. A public square 500 by 300 feet west of Roncesvalles avenue. A reservation 80 feet wide, from the Humber River to Sunnyside crossing as a right-of-way for radial lines. A new Lake Shore road 66 feet wide, to the south of the radial railroad reservation.

ARCHITECTURAL

MATERIAL	ELEVATION	SECTION
EARTH		
CONCRETE		
ARTIFICIAL STONE		
FACE BRICK		
COMMON BRICK		
TERRAZZO TILE		
WITHEDED TILE - BRICK		
ARCHITECTURAL TERRAZZO		
CUT STONE		
WOOD PARTITION		
WOOD		
PLASTER		
MARBLE		
METAL LATH		
SHEET METAL		
METAL		
GLASS		
CINDERS		
OLD WORK TO REMAIN		
OLD WORK TO BE REMOVED		
DESIGNATIONS MUST BE DISTINCT AND RAPID... FOR MATERIALS COMMONLY ADJACENT IN MASONRY... WALLS DIAGONAL LINES ARE USED WITHOUT MARKINGS... *REPAIRS TO BE MADE WITHOUT MARKINGS AND ACTUAL JOINTINGS THEREIN TAKE PRECEDENCE...		

ELECTRICAL

SYMBOL	DESIGNATION
	CEILING OUTLET: ELECTRIC ONLY. NUMERICAL IN CENTRE INDICATES NUMBER OF 16 C.P. LAMPS
	BACKET OUTLET: ELECTRIC ONLY. NUMERICAL IN CENTRE INDICATES NUMBER OF GAS BURNERS, IF GAS ONLY
	HALL OR BOARDROOM RECEPTACLE OUTLET: NUMERICAL IN CENTRE INDICATES NUMBER OF 16 C.P. LAMPS
	FLOOR OUTLET: NUMERICAL IN CENTRE INDICATES NUMBER OF 16 C.P. LAMPS
	OUTLET FOR OUTDOOR STANDARD OR PEDIESTAL: ELECTRIC ONLY. NUMERICAL INDICATES NUMBER OF 16 C.P. LAMPS
	WIRE CORD OUTLET
	ONE LIGHT OUTLET FOR LAMP RECEPTACLE
	ARC LAMP OUTLET
	SPECIAL OUTLET FOR LIGHTING HEATING AND POWER CURRENT AS DESCRIBED IN SPECIFICATIONS
	CEILING FAN OUTLET
	3-1/2 SWITCH OUTLET
	3-1/4 SWITCH OUTLET
	3-WAY SWITCH OUTLET
	AUTOMATIC DOOR SWITCH OUTLET
	ELECTRIC DOOR BELL SWITCH OUTLET
	METER OUTLET
	DISTRIBUTION PANEL
	JUNCTION OR PULL BOX
	MOTOR OUTLET: NUMERICAL IN CENTRE INDICATES HORSE POWER
	MOTOR CONTROL OUTLET
	TRANSFORMER
	MAIN OR FEEDER RUN CONCEALED UNDER FLOOR ABOVE
	MAIN OR FEEDER RUN EXPOSED
	BRANCH CIRCUIT RUN CONCEALED UNDER FLOOR ABOVE
	BRANCH CIRCUIT RUN EXPOSED
	RACE LINE
	PIPE
	TELEPHONE OUTLET: PRIVATE SERVICE
	TELEPHONE OUTLET: PUBLIC SERVICE
	BELL OUTLET
	PUSH BUTTON OUTLET: NUMERICAL INDICATES NUMBER OF BUTTONS
	ANNUNCIATOR: NUMERICAL INDICATES NUMBER OF POINTS
	WARNING TRACK OUTLET
	WATCHMAN STATION OUTLET
	MATCHING TIME CLOCK OUTLET
	SECONDARY TIME CLOCK OUTLET
	SPECIAL OPENING
	SIGNAL OUTLET FOR SIGNAL SYSTEMS AS DESCRIBED IN SPECIFICATIONS
	BATTERY OUTLET
	CIRCUIT FOR CLOCK TELEPHONE BELL OR OTHER SERVICE RUN UNDER FLOOR CONCEALED
	KIND OF SERVICE NAMED ASCERTAINED BY SYMBOL TO WHICH LINE CONNECTS
	CIRCUIT FOR CLOCK TELEPHONE BELL OR OTHER SERVICE RUN UNDER FLOOR ABOVE CONCEALED: KIND OF SERVICE NAMED ASCERTAINED BY SYMBOL TO WHICH LINE CONNECTS
	HEIGHTS OF CENTRE OF WALL OUTLETS (UNLESS OTHERWISE SPECIFIED)
	LIVING ROOMS 5 FT 6 IN.
	CHAMBERS 5 FT 0 IN.
	OFFICES 6 FT 0 IN.
	CORRIDORS 6 FT 3 IN.
	HEIGHTS OF SWITCHES (UNLESS OTHERWISE SPECIFIED) 4 FT 0 IN.
	THE NUMBER OF WATTS PER OUTLET MAY BE MARKED INSTEAD OF NO. OF LIGHTS

PLUMBING

SYMBOLS	DESIGNATION
	IRON SEWER PIPE
	VITRIFIED TILE PIPING
	COLD WATER PIPING
	HOT WATER PIPING
	HOT WATER CIRCULATING FLOOR DRAIN
	SCOW SINK
	SILL COCK
	COLD WATER
	HOT WATER
	LAVATORY OR OIL BASIN
	CHECK AND WASTE
	CONDUCTOR PIPE
	DRAINING WATER FOUNTAIN
	FIRE HOSE RACK
	LIVE STEAM CONNECTION
	GAS PIPING
	CEILING OUTLET FOR GAS LIGHTING SYSTEM
	FLOOR OUTLET FOR GAS LIGHTING SYSTEM
	VENTING OUTLET - GAS
	COMPRESSED AIR PIPING
	JOINT AND WASTE PIPE
	VENT RISER

HEATING

SYMBOLS	DESIGNATION
	STEAM MAIN
	RETURN MAIN
	TEMPERATURE CONTROL PIPING
	TEMPERATURE CONTROL THERMOSTAT
	FRESH AIR OPENING
	VENT OPENING
	VALVE
	FLANGE UNION
	SCREWED FITTING
	RISERS
	RADIATION ON CEILING
	WALL RADIATION
	RADIATION
	VENT FLUE
	HEAT FLUE
	GLOBE VALVE
	CROSS
	GATE VALVE
	TEE
	COCK
	SQUARE FEET OF RADIATION

ARCHITECTURAL SYMBOLS COMPILED FROM VARIOUS SOURCES BY W. W. LA CHANCE

Mr. La Chance, realizing the great need of simplifying the reading of architectural plans, has classified the above symbols. The chart was submitted for adoption at the convention of the Saskatchewan Association of Architects. The Architectural profession has no uniformity in the presentation of the different materials and should agree upon a specified code for indicating clearly the materials which enter into constructional work.

Architectural Symbols

W. W. LA CHANCE

FROM THE EARLIEST historic period some mode of producing impressions or devices has been known, but it seems not to have advanced beyond the form of seals until the time of the Babylonians and Assyrians. Their buildings were generally built of brick, which were stamped with an inscription according to the character of the edifice, and bore the name of the reigning monarch. The Egyptians also used a stamp to impress the bricks used for their buildings. The stamp appears to have been used to mark the destination of the bricks.

The purpose of this paper is definitely indicated when associated with the "Architectural Symbol Chart" herewith submitted for your approval and adoption. It will be found logically classified, not only in the departments, but in the sub-divisions, which can be so arranged as to give a systematic guide in the use of this chart.*

The benefits of a habitual use of a uniform code of "architectural symbols" is not to be denied. It simplifies the reading of the plans by the allied arts and trades. Arbitrary signs are used in writing and printing and may be classed as follows: Astronomical, botanical, chemical, mathematical, medical, miscellaneous, monetary and commercial, musical and typographical, all of which have been accepted as standard and yet we who pride ourselves as de-

votes to the highest of the industrial arts and the most useful of fine arts, are to blame for the lack of representation in the above mentioned list of symbols.

There is no valid reason why "architectural symbols" should not have a prominent place among the standards and it only remains for the architectural profession to take concerted action and adopt some uniform chart. With this end in view, the chart is offered for your consideration and we hope, for its adoption, so that we may have a basis to work on; yet keeping in mind the possibility of adding to and deducting from, as may be found necessary, from time to time. "Architectural symbols" used by the architectural profession at the present time, have no uniformity and it should be the duty of the profession at large to adopt a set of symbols that will be found not too cumbersome, yet distinctive and so arranged as to give a systematic guide, indicating clearly the various materials that enter so largely into constructional work.

The National Electrical Contractors' Association of the United States have given permission of the use of their standard symbols and would be pleased to have us adopt them.

The Minneapolis Architectural Club have compiled a set of symbols along the lines as indicated in the chart herewith presented.

* Paper read before Saskatchewan Association. Chart on page 70.

STANDARD SYMBOLS FOR ARCHITECTURAL PLANS

ADOPTED BY THE MINNEAPOLIS ARCHITECTURAL CLUB FOR ARCHITECTS, CONTRACTORS & BUILDERS

MATERIAL	ELEVATION	SECTION	MATERIAL	ELEVATION	SECTION
BRICK (COMMON)			WOOD PARTITION		
BRICK (FACE)			WOOD (IN ROUGH)		
TERRA COTTA TILE			WOOD (FINISHED)		
VITRIFIED TILE			METAL		
ARCHITECTURAL TERRA COTTA			C.I. W.I. ST. C.B. B.		
TILE COPING			SHEET METAL		
CUT STONE			COPPER GALVANIZED IRON TIN ZINC		
RUBBLE MASONRY			GLASS		
CONCRETE			D.B.C. P.C. M.C. G.G. C.C.		
CONCRETE-STONE (ARTIFICIAL)			CINDERS		
EARTH			CORK BOARD		
PLASTER			MINERAL WOOL		
METAL LATH			WOOD SHAKINGS		
MARBLE			OLD WORK TO REMAIN		
			OLD WORK TO BE REMOVED		

DESIGNATIONS MUST BE DISTINCT & RAPID--FOR MATERIALS COMMONLY ADJACENT IN MASONRY WALLS DIAGONAL LINES ARE USED--ELEVATIONS MAY OFTEN BEST BE LEFT WITHOUT MARKINGS & INDICATIONS OF ACTUAL JOINTS TAKE PRECEDENCE

PLUMBING SYMBOLS HEATING SYMBOLS

ADOPTED BY THE MINNEAPOLIS ARCHITECTURAL CLUB FOR ARCHITECTS, CONTRACTORS & BUILDERS

SYMBOL	DESIGNATION	SYMBOL	DESIGNATION
	IRON SEWER PIPE		STEAM MAIN
	VITRIFIED TILE PIPING		RETURN MAIN
	COLD WATER PIPING		TEMPERATURE CONTROL PIPING
	HOT WATER PIPING		TEMPERATURE CONTROL THERMOSTAT
	HOT WATER CIRCULATION		FRESH AIR OPENING
	FLOOR DRAIN		VENT OPENING
	SINK		VALVE
	SLOP SINK		FLANGE UNION
	SILL COCK		SCREWED FITTING
	COLD WATER		FLANGED FITTING
	HOT WATER		RETURN RISER
	LAVATORY - B.H. BASIN		STEAM RISER
	CHECK & WASTE		RADIATION ON CEILING
	CONDUCTOR PIPE		WALL RADIATION
	DRINKING WATER FOUNTAIN		RADIATOR OR
	FIRE HOSE REEL		HEAT FLUE
	LIVE STEAM CONNECTION		VENT FLUE
	GAS PIPING		CHECK VALVE
	CEILING OUTLET FOR GAS LIGHTING SYSTEM		GLOBE VALVE
	FLOOR OUTLET FOR GAS		CROSS
	BRACKET OUTLET FOR GAS LIGHTING SYSTEM		GATE VALVE
	HEATING OUTLET - GAS		TEE
	COMPRESSED AIR		COCK
	VACUUM CLEANING PIPING		SQUARE FEET OF RADIATION
	SOIL & WASTE RISER		
	VENT RISER		

PIPES SHOWN WITH DOUBLE LINE MAY BE PENCIL-TINTED TO PRINT BETWEEN LINES

Architectural Symbols compiled by the Minneapolis Architectural Club.

Architecture in City Planning

A. M. JEFFERS

SPEAKING of the relation of architecture to civic planning, at the Alberta town planning convention in Edmonton, November 16, A. M. Jeffers, City Architect of Edmonton, said that the fulfillment of the city plan must necessarily depend finally upon good architecture, adding: It is only natural that architects should take an interest in the art of civic planning. They should do this for the reason that after the civic planning expert has laid out his highway for heavy traffic, residential streets, civic centres or public squares, parks and drives, it then becomes necessary for the architect to complete the work so that a beautiful and harmonious home scheme may be brought to fruition as a result of the efforts put forth by those having charge of these works.

When our people first took up the idea of making the city beautiful, the civic centre seemed to be the only thought. Now we have broadened and come to a realization of the fact that the civic centre is but the beginning from which there outwardly leads a bigger and better idea, to the end that our citizens, through their main arteries of travel, are closely linked together both in their business activities and social relations with each other.

It is the beautification of these highways, culminating as they do in various endings, which of themselves always leave a lasting impression of peace and beauty to the beholder. Now, I realize that to arrive at these happy results, whether it be the embellishment of large public areas, the placing of a monument or possibly it may be a simple cottage in some quiet spot, it can only be accomplished by a campaign of education, and this campaign would have to be carried on relentlessly for a long time in order that the public may be brought to a sense of realization of their duty towards each other as well as towards their own private interests.

This sort of campaign would receive its impetus from the civic planning expert, who must necessarily labor with his people to first get them thinking on lines of beauty for streets and centres, and then that what must necessarily become an individual pleasure would become a community desire and a city's necessity. Thus after a suggestion has found lodgment in the brain of the individual, he in turn wishes to impart it to his neighbor with the result that a spirit of co-operation is born, after which a systematic study of conditions is begun, resulting in the formation of improvement societies and through them the study of particular studies.

It seems to me that architects should identify themselves with these improvement societies and especially the younger men in the profession. There must be much enthusiasm aroused in the young architect who enters into these studies and in the results obtained. The satisfaction of having aided others besides himself to reach a standard of beauty, that tells one he has created a thing which adds to the

enjoyment of the eye or the health and happiness of his neighbors, would be his reward.

The education of the public to their responsibilities along lines of public welfare is generally a slow process of development. Few people will give much of their time to public expression of their own thought on public affairs, while on the other hand they will apparently go out of their way to prevent someone else from putting into effect ideas which are at variance with their own ideas or their lack of ideas. So it behooves the architect who has identified himself with the study of civic planning to keep at his task of enlightening the public to the beauties of his work, and after a few years he will be well repaid for his efforts. It is astonishing what can be done after a few years in obtaining results on these questions of large public interest when consistent efforts have been made.

The thoughts that I have outlined, when carried into effect, would show the future generations what their fathers' ideals were, as they would be a reflection of our times and material examples of how we lived, thought and worked for the betterment of mankind. As a concrete example I wish to bring to your notice two conditions where excellent results have been achieved by this co-operation between architects and the people. Nearly twenty years ago the architects' association in a large eastern city of the United States held a competition for the improvement of one of their city squares, a natural meeting place for several of their highways. Nothing of importance to the public came at that time, but later developments show that this one competition was the means of promoting an annual competition for improving the square, in the architectural department of one of the city's universities, and that to-day a well-known architect has been commissioned by the city's executive to prepare a scheme for its improvement.

Twenty years is a long time to wait for this sort of public benefit, and I hope that we in this western country will not have to wait that long for our civic improvements, although I do believe it advisable to provide the land so as to permit of future developments, even to the extent of considering a longer period of time, or if not based on time, then based on population.

In another city, which recently completed a fine group of public buildings, there is, as a part of the scheme, a fine campanile in which a set of chimes has been placed. The money for these chimes was raised by public subscription, or donations of single bells were given by public-spirited citizens. These results show the work of co-operation between the people and their teachers.

In this latter place the people have been aroused to such an extent for the beautifying of their city that they have bought back their river banks from corporations and private individuals in order that they

may have proper environment for future buildings, and that the city as a whole may present an appearance in its business life that will not be entirely one of commercialism.

An instance of co-operation between what might be called "special interests" and architects is the improvement of Harvard Square in Cambridge, near Boston. This busy part for years, recently awoke to the fact that it was not as active as in former years and that its commercial life was on the wane. The cause was apparent, being due to a change in the method of transporting the people of the district to larger centres. The result was the bringing together of city officials, merchants, property owners and architects with the idea in view of making the square an attractive meeting place, thereby again stimulating trade and promulgating the community spirit.

You can see from this example that it is not always the dreaming architect who wants to see the beautiful predominate in our cities. The man of finance and the landlord have been brought to realize that when their pocketbooks are affected, it behooves them to improve their holdings and to make them and their surroundings attractive to the citizen of the street.

As to the question of civic centres, and I mean by this not only the central spot in our midst, but other little places about the city, some of which are only large enough for a single monument, but nevertheless civic centres. I earnestly recommend to the executives and likewise to the public that you strive to secure the title of adjoining properties, or, in lieu of this, that you secure such legislation from your local government as will give you the right to regulate the type of structure, its uses, its height, and to exercise an architectural censorship over its design in order that a plane of unity may be provided, for where there is unity, peace and happiness abound. With these attributes assured, beauty must prevail. When we consider residential districts that have problems peculiar to themselves and are made up of private interests, it is desirable that each property-holder encourage his neighbor in the desire to prevent architectural monstrosities to the end that a restful appearance of the district may be obtained. In the countries of southern Europe the palaces of the rulers were usually a premeditated scheme, consisting of gardens, ornaments and approaches. Quite often the palace would be the predominating feature of the arrangement; then again it would be one of a series of features.

An excellent example of this special planning idea is that Forest Hill Garden, which, through the munificence of the Russell Sage Foundation Fund, has resulted in the improvement of a district which must be seen to realize its full enjoyment. It is gratifying in these days to read from time to time how general it is that many cities are considering the improvement of their open public spaces, and where they have but few of these spots how determined their citizens are to secure them. One of the best signs of this great movement is the keen interest being taken by public officials to obtain civic buildings that will present an appearance of thought not so much in the way of a

bizarre design, but rather of a simple, dignified type, distinctive enough to indicate their purpose. I do not wish to leave but one architectural thought with you to-day. Another feature of merit you should thoroughly embrace is the erection of memorials for those who by their daily living and works have left lasting thoughts and impressions all about us. The commemoration of great events should be visibly recorded, so that a future generation might by these things be encouraged to strive for still greater victories.

One other appeal I would like to make is to wholesale and industrial firms. By a little thought bestowed upon the external appearance of your structures you can enhance the value of your properties, and cause them to present an appearance which will reflect much credit to yourselves, with the ultimate result of an increasing demand for your products. Too often these types of structures are but four miserable walls of rough masonry, having a disagreeable effect to the outsider and conveying an impression of gloom upon the interior, instead of light and air where good health and peace abounds. I believe it is a right and proper thing for cities to co-operate with railroad corporations, to the end of securing from these corporations passenger stations of an adequate plan and pleasing appearance. They should be made to fit into a harmonious scheme or setting arranged for by the city in order that the traveller's eye may not be offended by incongruities. Such an idea would in some small cities be considered a piece of nonsense and a waste of public monies, by the individual who by nature has been created a non-producer and therefore is a stumbling block to all lines of civic development either present or prospective.

If we wish our cities to grow we must have faith in them, and to this end we must consider the development of a civic plan in all its features, even though some of these features seem to be "dreams"—dreams of men like Baron Haussmann, who made Paris the city it is to-day, the Mecca of tourists from all over the globe, with the attendant enrichment of her merchants' coffers.

It is well to remember, especially in the older cities, that progress on the lines of civic endeavor meets with much opposition due to the habits of its people. In connection with this thought I would ask that you remember this fact: Wise regulations do not hamper civic development, but, on the contrary, stimulate and encourage them. Ambassador Bryce, in a recent art talk, given at Washington, D.C., said: "The chief thing is that the people should learn to love beauty, and one of the simplest and most direct ways of cultivating a taste for beauty is by making the cities beautiful not only by erecting fine buildings, but by giving them a fine setting in natural surroundings."

If you will permit me to digress at this time, I would like to introduce one phase of the question of uniform legislation which should be brought to the attention of our Provincial Legislature at the same time other questions of similar import are being considered. It

is, that common sense may be displayed in the activities of those who have in charge the beautifying of our small centres for their future betterment.

In France there is a bill in force which is of similar import to the one recently brought into force by Great Britain. This is known as the "Beauquier Town Extension Bill." In substance the Act provides that within five years from the date of its passage each urban district containing ten thousand or more inhabitants shall prepare a plan for its improvement and extension. This plan shall determine the position of public squares, gardens, parks and open spaces, shall fix the width of roads, their direction, the manner of constructing the houses, and in general shall establish the proper development of the town on hygienic and artistic lines.

The plan must be approved of by the department bureau of hygiene and by the commission for the preservation of sites and places of natural beauty or historic interest. The plan must also be subject for a year to public criticism and objection before the Council of State shall authorize its adoption. Once adopted it is to remain in operation for thirty years, when it is to be renewed, and during all this period extensions and improvements must be made in accordance with it.

THE ORGANIZATION of the Institute of Western Canada Civic Building Superintendents held its convention at Calgary, Alta., at which time by-laws were adopted and important papers read by J. W. Davidson, H. D. Schutt, G. W. Lemon, and others.

The aims of this institution are expressed in the following article: The objects of this organization shall be to establish harmony of action, insure prosperity and success, secure protection and promote the best interests of the members of the Institute and to further the cause of more efficient and uniform legislation and ordinances for the supervision and control of building construction throughout Western Canada.

H. D. Schutt, C.E., in referring to concrete as a building material, made the following points:

The first reference to the use of reinforced concrete in buildings was in France in 1850; coming across to this side of the Atlantic, a form of reinforced concrete was used in 1872, in a house at Port Chester, N.Y.

The strength of concrete varies with the quality of materials, the quantity of cement per cubic yard of concrete and the density of the mixture. Therefore, the strongest as well as the most economical mixture consists of an aggregate containing a large variety of sizes graded so as to fit into each other and leave the smallest possible amount of voids, with enough cement to slightly more than fill these voids in the aggregate. Thus a graded crushed rock containing the run of the crusher up to a stone that will pass through say a 1-inch ring, and a sharp sand graded from coarse to fine, will give much better results than an aggregate of uniform size.

The steel used should be preferably a mild steel, having an ultimate strength of from 55,000 to

65,000 lbs. per square inch. A high carbon steel is sometimes more economical on account of its higher ultimate strength, which is from 90,000 to 115,000 lbs. per square inch, but on account of its brittleness it must be placed with great care, and should not be used by an inexperienced designer or contractor. As to mixtures, no leaner mixture than a 1:2:4 should be used for reinforced concrete unless great care has been taken in the selection and testing of materials and testing of the cement.

Too much care cannot be taken in the selection of materials for reinforced concrete. Of course the cement must be satisfactorily tested. The fact that the manufacturer "guarantees" his particular brand of cement should not suffice; but independent tests should be made as to fineness, time of initial and final set, density and tensile strength attained in 1 day and 7 days. It is not usually possible to make a 28 day test, valuable as it is on small jobs, but where the work is to extend over a period of time, a 28 day test should always be required. Samples for testing should be taken from at least every tenth barrel. Each car load should be piled separately to permit of taking samples and the samples from each car load should be tested separately. Cement should be stored in a waterproof building, with the floor raised from 6 to 8 inches off the ground to permit a free circulation of air underneath.

The stone for the aggregate should be examined and a soft or porous stone or one showing many cleavage planes or a stone of a shaley formation should be rejected. The crushed rock must be piled on planks or platforms to keep it free from the earth. Otherwise, a wheelbarrow load of the scrapings of stone and earth might be thrown into a batch that was to be placed at just the point in your beam or column that will be subjected to the greatest stress.

The sand should be sharp and gritty and practically free from loam or vegetable matter.

THE CITY COUNCIL of London, Ontario, has decided to submit a by-law providing for an expenditure of a quarter of a million dollars to purchase, in conjunction with the Dominion Government, all the block on which the armory is located for the Federal Square. If the by-law is carried the city will erect a City Hall in that location, and the Department of Militia will extend the armory, utilizing part of the proposed park grounds for parade purposes.

SCHOLARSHIPS approximating one thousand dollars per annum and tenable for three years will be awarded in architecture, painting and sculpture by the British School at Rome. In architecture the award will be made on the result of a preliminary competition conducted in relation to a final competition *en loge*, in London, on lines very similar to those adopted for many years past by the Beaux-Arts in Paris. The date of the first competition will be March 15 to May 15, 1913. Ten candidates will be selected by the faculty for the final competition. The scholarship is open to all British subjects.

The Skyscraper*

F. S. BAKER, F.R.I.B.A.

A CONVERSATION which was overheard at the Engineers' Club, Toronto, recently, may be of interest to your readers, as it bears upon the paper which Dr. Hodgetts recently read at a meeting of the Royal Architectural Institute of Canada. "Did you happen to be present at the recent meeting of Architects in Ottawa, when Dr. Chas. A. Hodgetts read a paper entitled "Condemnation of the Skyscraper"? No, but I read the paper in a recent number of CONSTRUCTION, and I do not know how it appealed to you, but I was rather surprised to find so broad minded a man as Dr. Hodgetts taking so narrow a view of a type of building which on this continent at least has established itself as essentially useful and wholesome. How were you impressed?"

I was personally at the meeting and listened with great interest to the whole paper. There is no doubt everyone must be in sympathy with Dr. Hodgetts' aims and wishes, and we must not forget that his point of view is that of the sanitary engineer with medical training, and that men of his class are always thinking of the under dog, but I think he overstepped the mark, and will find very few sane people who will agree with him when he says that the erection of a skyscraper shows a lack of sanity on the part of those connected with its erection. If an architect or a business man were to state to Dr. Hodgetts that to operate in a case diagnosed as appendicitis were the work of a paranoiac he, with the rest of the medical profession, would be up in arms, and would say, why don't the people talk about things of which they know? And yet it would be just as reasonable as his remarks regarding high buildings.

Yes, he did rather get out of his depth, but the meeting seems to have treated him very well, only one man among the architects present attempting to defend the skyscraper. When you come to think of it, it is not to be supposed for a moment that the erection of a high building with the great expenditure which it involves, is the result of an impulse. If Dr. Hodgetts will investigate this phase of the matter he will find that the modern skyscraper is a delicate piece of machinery of the highest class of construction in every department, and that as conditions are today in large cities, it is just as essential as the electric car or the trunk sewer. From the bottom to the top, any high building which I have seen, and I refer to buildings of ten stories and above, the greatest care has been taken to avoid anything which could produce unsanitary or unhealthy surroundings. No expense is spared in this respect in an effort to get a free circulation of the purest air obtainable throughout the lower parts of the building, and I venture the statement that Dr. Hodgetts cannot put his finger upon a single commercial building of four stories or

less in height, in which the sanitary conditions are anything like as good. This, of course, as any business man knows, is caused by the revenue from the high building, making the necessary expenditure possible, where it would be impossible in the small structure.

But how do you combat Dr. Hodgetts' complaint that the skyscraper must necessarily cast a shadow which will injure the health of those who occupy adjoining buildings, and if a sufficient number of them were to be built in close proximity, the health of those who walk in the street. You see he takes the stand that the only thing to be considered is the health and comfort of the majority, that is to say, the employees who are housed in surrounding buildings, no matter what their occupation, and will not admit that commercial interests should be able to maintain any position against the rights of these people.

Again, I must answer that Dr. Hodgetts cannot have fully considered this, although he says he has taken a survey of the principal cities of this continent and Europe. I am convinced that he has not analyzed the actual conditions in detail, for instance, take a section of London in the city and let him enter the front door of a four-story building, pass through its various floors and out of a door at the back and observe the space upon which the buildings are erected and the relations of one building to another; let him also observe the height of ceilings and the distance from the windows at which the first gas light or electric lamp is in use on each floor. When he gets to the top story the building is, of course, roofed over tight, and is closely adjoined on each side by buildings of the same height, or say there is an 8-foot lane separating this building from the other on one side. Let him then stop a moment and imagine what the effect would be if the building across the lane were removed and replaced by a twenty-story building built of pure white Carrara terra cotta or some similar material. Undoubtedly the condition of the building in which he is would be improved by the reflected light from the white wall surface, and its amount of light would be in no way diminished by the high building. The reduction in the circulation of air would be so small as to be unnoticeable. And then my friend let Dr. Hodgetts, remembering that the adjoining building across the lane has been in exactly the same condition as the one through which he has just passed, walk into the finished skyscraper and examine it from bottom to top, and what does he find? Two stories below ground, a power plant for the purpose of lighting, heating and ventilating the building, for purifying the drinking water, for the cleaning of the building by vacuum process, for the operation of lifts, and for every other purpose which up to this time human skill has been able to devise for the comfort and convenience of the occupants of the

*Submitted to the Editor in reply to Dr. Hodgetts' paper, "Condemnation of the Skyscraper," published in the November issue of "Construction."

building, then as he passes up through this palatial building occupied by the same people who occupied the building which was removed to make way for it, he observes the difference in their surroundings, and passing on up through the mezzanine and the third story he notices the roof line of the building through which he had previously made a tour and recalls what he had seen in the four-story building; he also recalls that before the erection of the skyscraper exactly the same conditions existed in the building which occupied its site. And it is at this point my friend that the real advantage of the skyscraper commences, and for sixteen stories this twenty-story building provides accommodation of the most ideal kind for four times as many people as occupied the previous building.

Will he say that the benefits accruing to the eighty per cent. must not be computed in favor of the skyscraper as against the other building? It is obvious that the building adjoining the skyscraper on the other side, where no lane exists, is not in the least affected by the high building. That the height of buildings should be regulated by the width of the street in which they are built has been accepted by every reasonable architect and engineer since the Chicago post office was built, and you will remember that this building, which fills a whole block, has a high building in the form of a cross with four low buildings filling in the corners, thus providing a proportionate amount of air space to that occupied by the high building.

What do you say as to Dr. Hodgetts' statement that he "fails to find, if ever, a life insurance company has acted from such high motives as the health and life of their staff"? and that part of his paper which say that those who erect skyscrapers have "no other reason than greed and gain"?

Ask any of your architect friends who have large corporations for clients, and they undoubtedly will tell you that one of the first considerations of such bodies in dealing with buildings is the health and comfort of their employees. I have had many commissions from such bodies and I do not recall a case in which I was not instructed to observe the greatest care in this respect. No, sir, he is wrong in that statement. And where does the "greed and gain" come in? Is it represented by the man or the corporation which invests an immense sum of money in building these wholesome palaces, as Dr. Hodgetts says, towering to heaven, and which thereby immensely benefit not only the surrounding property, but the whole city in which it is built, by the distribution of this large sum of money, incidentally providing work for many laborers, who would perhaps otherwise go half starved, and which it is well known do not produce a large return upon the investment? Or is it the man who builds the little four-storey fire-trap, who condenses every portion of the building which is not revenue producing, who limits the sanitary appliances and the general comforts of the building to the minimum requirements by the Health Department, who crowds this building on every inch of his land upon which he is allowed to build, and

who lets this building stand year after year, generation after generation, pocketing the revenue it produces, while the property increases in value by leaps and bounds owing to the open handed investment of these corporations owning adjoining property which Dr. Hodgetts accuses of being actuated by greed and gain? No, my friend, if this paper expresses Dr. Hodgetts' real opinion, why he is still up in the elements. Rich men are not inhuman, neither do they very often become insane, taking a reasonably moderate view of this world, it may safely be said that men of success, no matter of what rank, are the men who possess honest, broad minded qualities, and these are the men who have created, and who to-day own the skyscraper, and here's to their good health.

IN THE NOVEMBER issue of CONSTRUCTION was illustrated the Dominion Express Building, Montreal. An error was made in crediting the steelwork to the Dominion Bridge Company. The Structural Steel Company, Limited, of Montreal, supplied all the structural steel necessary in the erection of this building.

ARCHITECTS are showing interest in the novel idea of room decoration evolved by Montford Coolidge, who has just been admitted as a Sociétaire of the Société Nationale des Beaux Arts. Mr. Coolidge is decorating a panel room in the villa of Count Gabbi, an aviator, at Rimini, Italy, showing landscapes of Southern Europe as seen from an aeroplane. The ceiling of the room will be colored to resemble the sky, while in the middle of the floor will be set a large panel of glass. Some distance below the glass and lighted electrically from the sides will be fixed a painting resembling the Italian Alps as they would appear if seen from an immense height. The illusion of flying in an aeroplane will thus be given to the occupants of the room, which will be used for musical entertainments. Mr. Coolidge explains that the painting being below the level of the eye, it can be enjoyed in comfort while listening to the music, but a decorated ceiling is far too high to be properly appreciated in these circumstances.

CITY OF CALGARY.

Applications for City Planning Expert

Sealed applications for the position of Expert Town Planner, who shall prepare a preliminary plan and report on Calgary's future growth and development, will be received by the City Commissioners, addressed to the undersigned, up to January 4th, 1913. Applicants are requested to state qualifications, previous experience and give at least two references, also to state cost and when able to begin investigation on the ground.

J. M. MILLER,

City Clerk.

CONSTRUCTION

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FRONTISPIECES—FULL PAGE ILLUSTRATIONS.

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Title.	Month.	Title.	Month.
Quebec Technical School, Quebec	*December	California Bungalows	June
Kent Office Building, Toronto	January	Interior of an Old Church at Panama	July
Design for Stock Exchange Building, Toronto..	February	Huntington Residence at Pasadena, Cal.	August
The Perry Memorial	March	Apartment Building, 563 Park Ave., New York.	September
A California Bungalow	April	Chateau Laurier, Ottawa	October
The Dovecote at the Dundurn, Hamilton, Ont..	May	J. H. G. Russell, President R.A.I.C.	November
Tower, Church of Santa Catalina, Seville, Spain.	December		

ILLUSTRATIONS.

Exterior views denoted by Ex., Interiors by In., Plans by Pl.

Title and Location.	Architect.	Page.	Month.
APARTMENTS—			
Devon Court, Winnipeg	Ex., Pl. Atchison, J. D.	47, 48	April
Duplex, Winnipeg	Ex., Pl. Atchison, J. D.	51	April
Osborne River, Winnipeg	Ex., Pl. Bridgeman, C. S.	50	April
Victoria, Edmonton, Alta.	Ex., Pl. Calderon, A. M.	53	April
Cassa Loma, Winnipeg	Ex., Pl. Russell, J. H. G.	49	April
Hecla, Winnipeg	Pl. West, J. Pender	54	April
ARENA—			
Oakville, Ontario	Ex., Pl. Bovell & Molesworth	79	July
BANK—			
Royal, Winnipeg	Ex., Pl. Carrère & Hastings and E. G. Bird	55-59	April
Quebec, Toronto	Ex., In., Pl. Curry & Sparling	52-57	July
Union, Toronto	Ex., In., Pl. Darling & Pearson	62-65	January
Revelstoke, B.C.	Ex. Dunlop, A. J.	89	February
Union, Toronto	Ex., In. Gilbert, H. B.	89	May
Molsons, Toronto	Ex., In., Pl. Langley & Howland	85-88	May
Ottawa, Toronto	Ex., In., Pl. Lyle, John M.	90, 91	May
Hamilton, Ontario	Ex., In. Mills, Charles	64-67	March
CHATEAU—			
Laurier, Ottawa	Ex., In., Pl. Ross & MacFarlane	59-74	October
CHURCH—			
Rosedale, Toronto	Ex., In., Pl. Chapman & McGiffin	53-56	December
St. Alban's, Toronto	Ex., In., Pl. Cram, Goodhue & Ferguson	51-58	January
Our Lady of Lourdes, Toronto	Ex., In. Hynes, J. P.	50-55	September
St. Mary the Virgin, Toronto	Ex., In., Pl. Langton, W. A.	85-87	January
St. Joseph, Babylon, N.Y.	Ex., In. Reiley & Steinback	80-83	October
Parish, Saskatoon	Ex. Thompson, Daniel & Colhurst	82	January
CLUB—			
Owen Sound, Ontario	Ex. Forrester & Clark	88	February
Terminal City, Vancouver	In. Jullien, P. M.	57-60	December
Golf, Toronto	Ex., Pl. Langton, W. A.	66-67	April
Lakeview, Toronto	Ex., In., Pl. Wickson & Gregg	70-71	*December
FACTORY BUILDING—			
Concrete and Coal Co., Detroit	Ex. Kempen, Lewis	87	February
GARAGE—			
Grand Island, Nebraska	Ex.	88	February
GOVERNMENT BUILDING—			
New Legislative, Winnipeg	Ex., Pl. Brown & Vallance	77	November
New Legislative, Winnipeg	Ex., Pl. Clemesha & Portnall	78	November
New Legislative, Winnipeg	Ex., Pl. Maxwell, E. & W. S.	75	November
New Legislative, Winnipeg	Ex., Pl. Sharp & Brown	76	November
New Legislative, Winnipeg	Ex., Pl. Simon, Frank W.	69-74	November
Philippine Islands	Ex. Vance, C. F.	87	February
HOSPITAL—			
Isolation, Winnipeg	Ex., Pl. Ross & MacFarlane	73	January
HOTEL—			
Gerrard, Toronto	Ex., Pl. Havill, James L.	74-75	September
Vanderbilt, New York City	Ex., In., Pl. Warren & Wetmore	68-73	May

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Forest Hill, Toronto	Ex., In.	Band, Charles P.	77-78	July
Brigden, Toronto	Ex., In., Pl.	Bond & Smith	78-81	January
Paisley, Scotland	Ex.	Brown, David	86-87	February
Ansley, Toronto	Ex., In., Pl.	Chadwick & Beckett	76-77	March
Baker, Toronto	Ex., In., Pl.	Chadwick & Beckett	72-76	June
Freyseng, Toronto	Ex., In., Pl.	Chadwick & Beckett	62-65	August
Osler, Toronto	Ex., In., Pl.	Chadwick & Beckett	78-79	March
Ryerson, Toronto	Ex., Pl.	Chapman & McGiffin	62-63	April
Los Angeles, Cal.	Ex.	Corbett, B. C.	96	May
Minneapolis, Minn.	Ex.	Corser, F. G.	67	January
Los Angeles, Cal.	Ex.	Heiniman, A. S.	77	April
Los Angeles, Cal.	Ex., Pl.	Heiniman, A. S.	52-59	June
Potter, Dundas, Ont.	Ex.	Hewitt, H. M.	88	February
Phelan, Toronto	In.	Hynes, J. P.	84-85	February
Carrick, Toronto	Ex., In., Pl.	Langley & Howland	78-82	February
Grand Allee, Quebec	Ex., In.	Lemay, Rene	65	December
Johnson, Toronto	Ex., In.	Lyle, John M.	60-62	*December
Mulock, Toronto	In.	Lyle, John M.	63	*December
Arnold, Vancouver	Ex.	MacKenzie, J. C.	71	August
Blake, Vancouver	Ex., In.	MacKenzie, J. C.	68-70	August
Shallcross, Victoria	Ex., In.	Maclure, S.	85-87	October
Roxborough Street, Toronto	Ex., In., Pl.	Page & Warrington	65-68	November
Maywood, Ill.	Ex.	Seyforth, R. B.	89	February
Howell, Toronto	Ex., In., Pl.	Smith & Sons, Eden	74-79	January
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Gibson, Toronto	Ex., In.	Sproatt & Rolph	65-69	*December
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Daniels, St. Stephen, N.B.	Ex.		88	February
Ft. Collins, Colo.	Ex.		88	February
Owen Sound, Ont.	Ex.		89	February
Ravenna, Ohio	Ex.		88	February
Smith, Ottawa	Ex.		89	February
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Bible Society, Toronto	Ex., In., Pl.	Gordon & Helliwell	57-60	March
Dominion Express, Montreal	Ex., In., Pl.	Maxwell, E. & W. S.	46-54	November
General Trust, Toronto	Ex., In., Pl.	Miller, George W.	71-76	July
MacLean Co., Toronto	Ex.	Sproatt & Rolph	84	March
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Technical, Toronto	Ex., Pl.	Cobb, Charles S.	69	July
Technical, Quebec	Ex., In., Pl.	Lemay, Rene P.	47-52	*December
Madras, India	Ex.	Madras Corporation	87	February
Technical, Toronto	Ex., Pl.	Ross & MacFarlane	66, 67	July
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East River Homes, New York City	Ex., Pl.	Smith, H. A.	76-78	May
THEATRE—				
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Zam Buk, Toronto	Ex.	Wickson & Gregg	85	March
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Y.M.C.A. BUILDING—				
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Y.W.C.A. BUILDING—				
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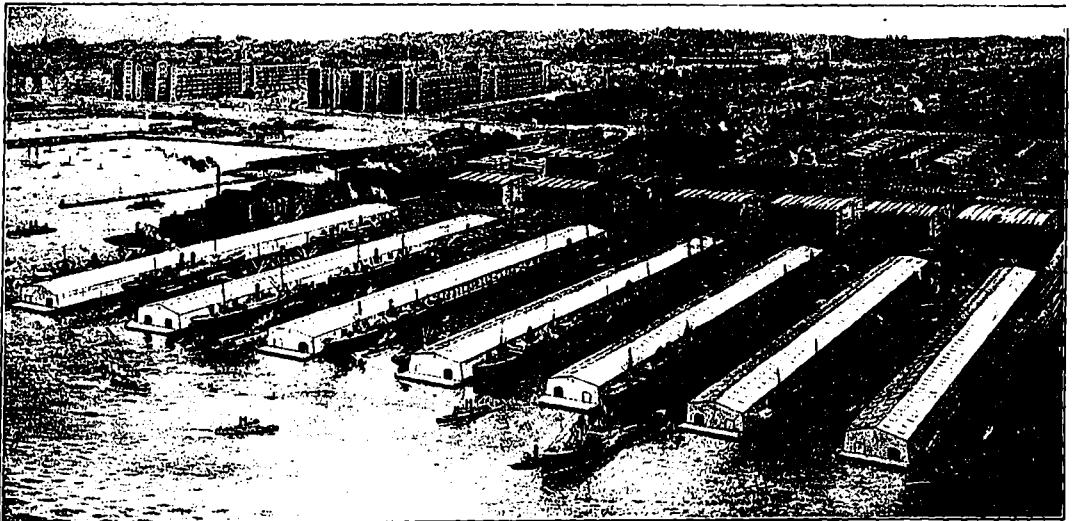
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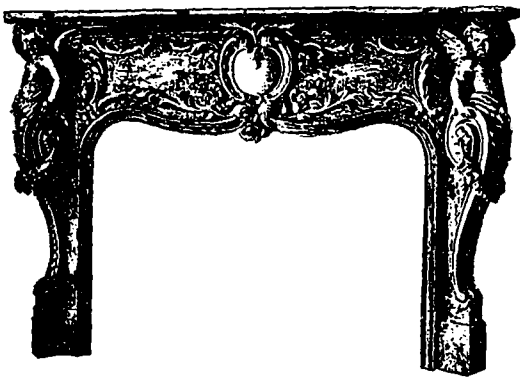
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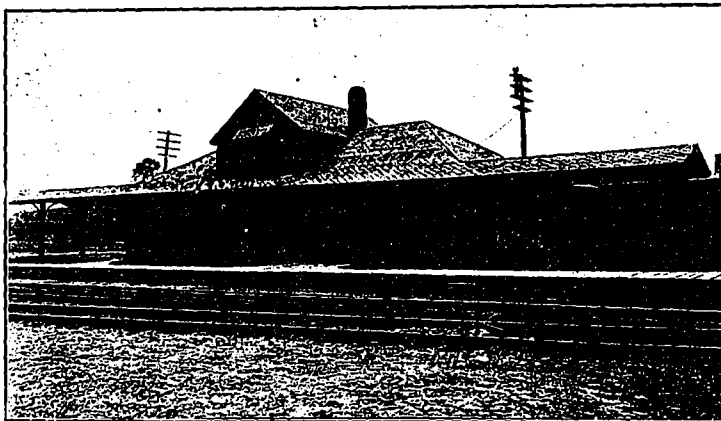
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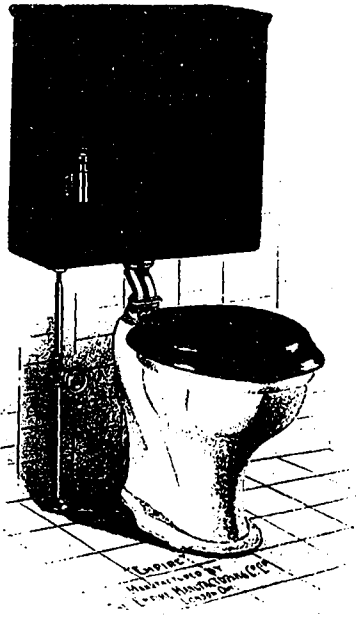
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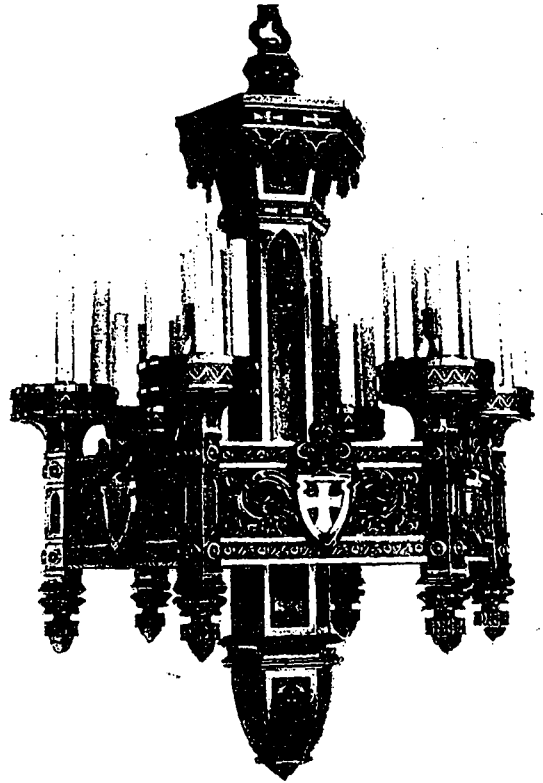
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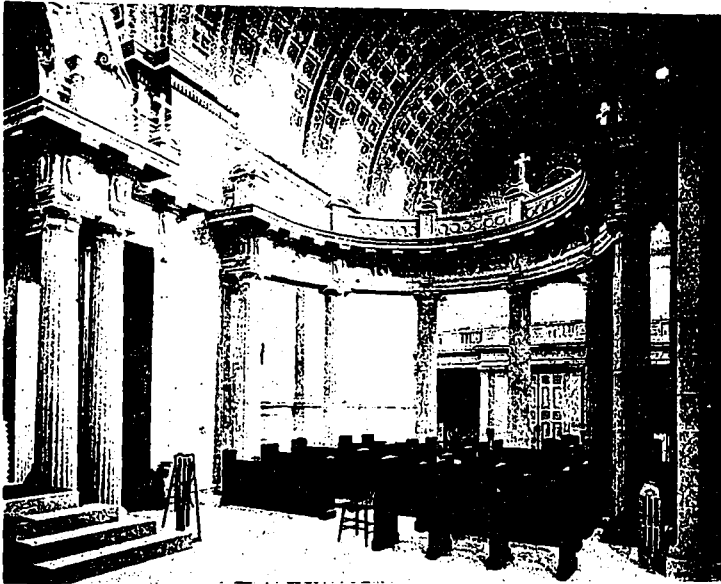
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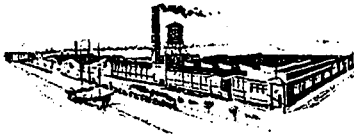
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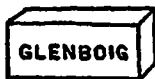
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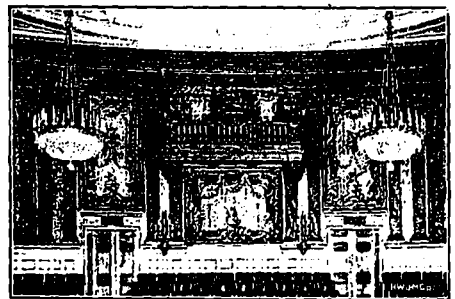
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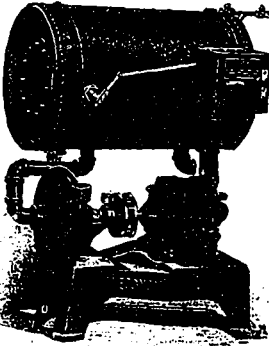
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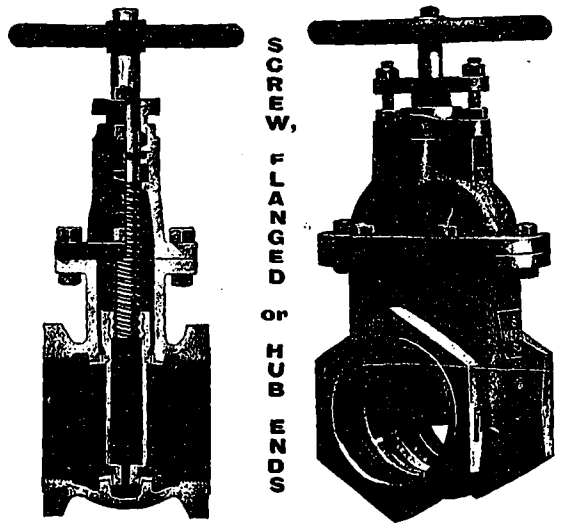


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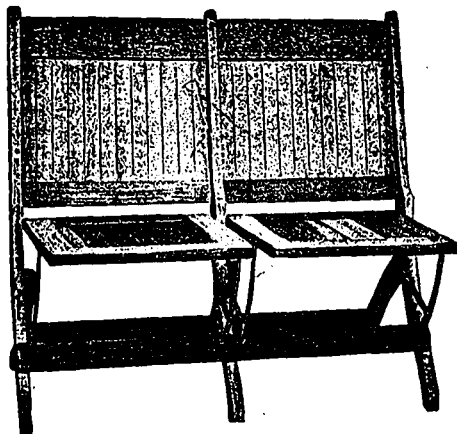
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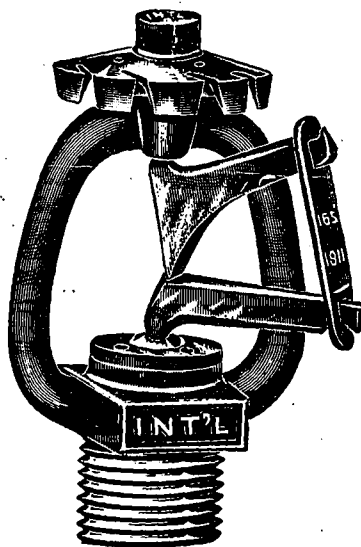
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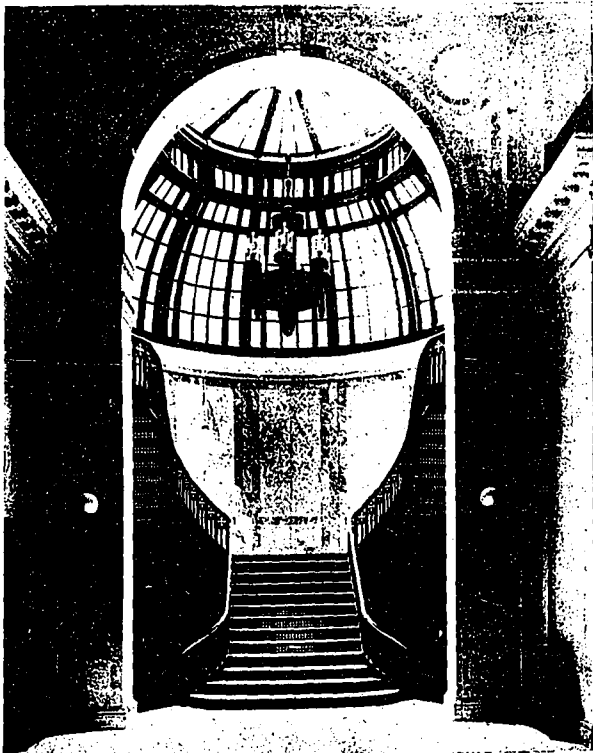
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The Pedlar People.
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- Municipal Supplies. Mussels, Ltd.
- Non-Conducting Coverings. Ault & Wiborg. H. W. Johns-Manville Co.
- Ornamental Iron Work. Turnbull Elevator Co. Steel & Radiation, Ltd. Canada Foundry Co. Dennis Wire & Iron Co., Ltd. Meadows, Geo. B., Ltd.
- Packing (Steam). H. W. Johns-Manville Co.
- Packing. Gutta Percha & Rubber Mfg. Co. Canadian Fairbanks Co., Ltd. Phillip Carey Co.
- Paints—(Steel and Iron). Pinchin, Johnson Co. Brandram & Henderson. Glidden Varnish Co. E. F. Dartnell. International Varnish Co. Imperial Varnish & Color Co. R. I. W. Damp Resisting Paint Co. Solomon & Spielman.
- Paints and Stains. Pinchin, Johnson Co. Brandram & Henderson. E. F. Dartnell. James Robertson Co., Ltd. International Varnish Co. Berry Bros. Ltd.
- Perforated Steel. B. Greening Wire Co.
- Pipe Covering. Canadian Johns-Manville Co. Kent Company, Limited.
- Plasters. W. J. Hynes. Brandram & Henderson. Johns-Manville Co., H. W.
- Plaster Corner Beads. The Pedlar People. Metal Shingle & Siding Co.
- Plate and Window Glass. Consolidated Glass Co. Hobbs Mfg. Co. Toronto Plate Glass Importing Co., Ltd.
- Plumbers' Brass Goods. Steel & Radiation, Ltd. James Robertson Co., Ltd. Standard Ideal Co., Limited. Canadian Fairbanks Co., Ltd.
- Plumbing Fixtures. James Robertson Co., Ltd. Standard Ideal Co., Limited.
- Pneumatic Tools. Mussels, Ltd.
- Porcelain Enamel Baths. James Robertson Co., Ltd. Standard Ideal Co., Limited.
- Radiators. Steel & Radiation, Ltd. Dominion Radiator Co., Ltd. Taylor-Forbes Co., Limited.
- Refrigerating Machinery. Kent Company, Limited. Linde British Refrigeration Co., Limited.
- Refrigerator Insulation. Bird, F. W. & Son, Hamilton. Metal Shingle & Siding Co. Kent Company, Limited. The Can. H. W. Johns-Manville Co., Ltd.
- Radiator Valves. Steel & Radiation, Ltd. Kerr Engine Company.
- Reinforced Concrete. Steel & Radiation, Ltd. Noble, Clarence W. The Pedlar People. The Canadian Siegwart Beam Co., Ltd. Trussed Concrete Steel Co. Metal Shingle & Siding Co.
- Relief Decoration. W. J. Hynes.
- Roofing Paper. The Pedlar People. F. W. Bird & Son. Johns-Manville Co., H. W. Metal Shingle & Siding Co.
- Roofing. Asbestos Mfg. Co. Bird, F. W. & Son, Hamilton. H. W. Johns-Manville Co. Paterson Mfg. Co. Metal Shingle & Siding Co.
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- Roofing (Tile). Walte-Fullerton Co., Ltd., Winnipeg. E. F. Dartnell. The Pedlar People. Metal Shingle & Siding Co.
- Rubber Tiling. Gutta Percha & Rubber Mfg. Co., Limited.
- Safes, Fireproof and Bankers. Goldie & McCulloch, Limited. J. & J. Taylor. Canadian Fairbanks Co., Ltd.
- Sanitary Plumbing Appliances. James Robertson Co., Ltd. Standard Ideal Co., Limited.
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- Screens. Watson-Smith Co., Ltd.
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- Steel Casements. Steel & Radiation, Ltd.
- Steel Concrete Construction. Steel & Radiation, Ltd. Noble, Clarence W. The Pedlar People. Trussed Concrete Steel Co.
- Steel Doors. Dennis Wire & Iron Co., Ltd. Mussels, Ltd. A. B. Ormsby, Limited. The Pedlar People.
- Structural Iron Contractors. Canada Foundry Company. Dennis Wire & Iron Co., Ltd. Dominion Bridge Co. Hamilton Bridge Co. Reid & Brown. Structural Steel Co., Ltd. Toronto Iron Works.
- Telephone Systems. Northern Electric & Mfg. Co.
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- E. F. Dartnell. Missisquoi Marble Company.
- Title (Floor and Wall). Carter & Co. Ltd. E. F. Dartnell.
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