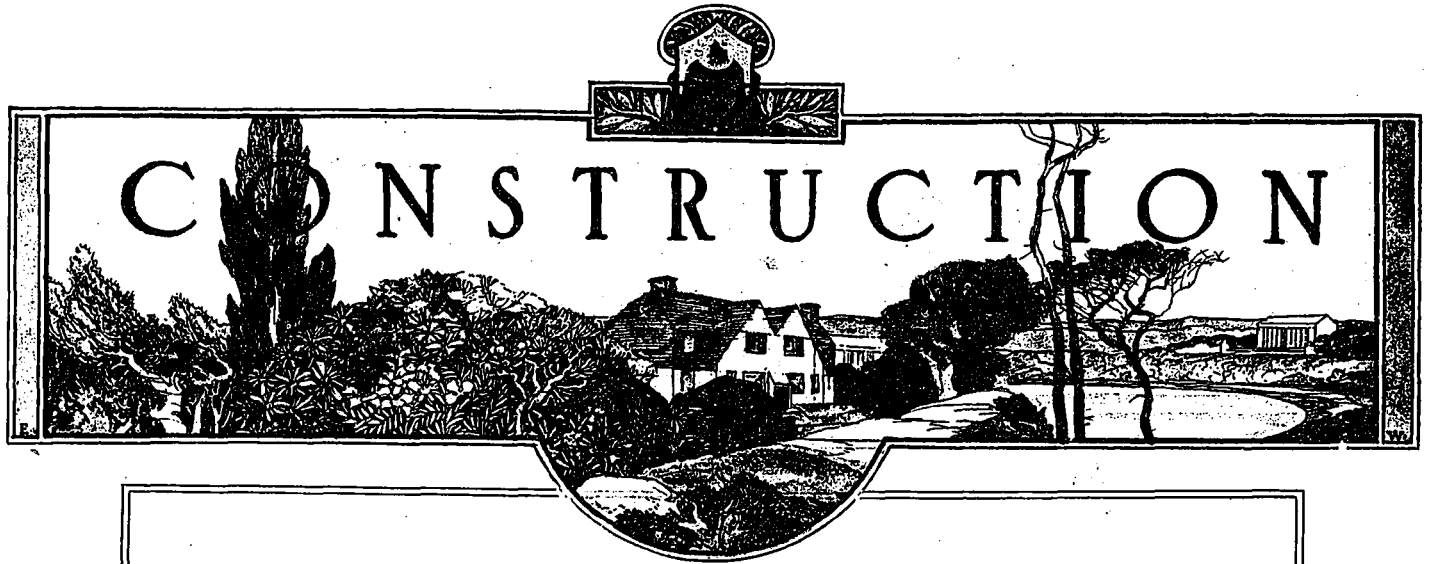


Pages Missing



March, 1916

Vol. 9, No. 3

CONTENTS

| | |
|---|----|
| THE EXCELSIOR LIFE BUILDING | 71 |
| CLEVELAND ART ASSOCIATION COMPETITION | 74 |
| THE FIRE SAFE BUILDING | 77 |
| AMERICA'S FIRST PUBLIC ABATTOIR | 82 |
| THE EDUCATION OF PUBLIC TASTE | 86 |
| NEW BUILDING OF THE ROBERT SIMPSON CO. | 89 |
| THE FARMERS' DAIRY BUILDING | 90 |
| EDITORIAL | 94 |
| Quantities and Contracts—On a Basis of Education. | 1 |
| ARCHITECTURAL DIGEST | 96 |
| CONSTRUCTION NEWS | 97 |

Full Page Illustrations

| | |
|--------------------|----|
| FRONTISPIECE | 70 |
|--------------------|----|

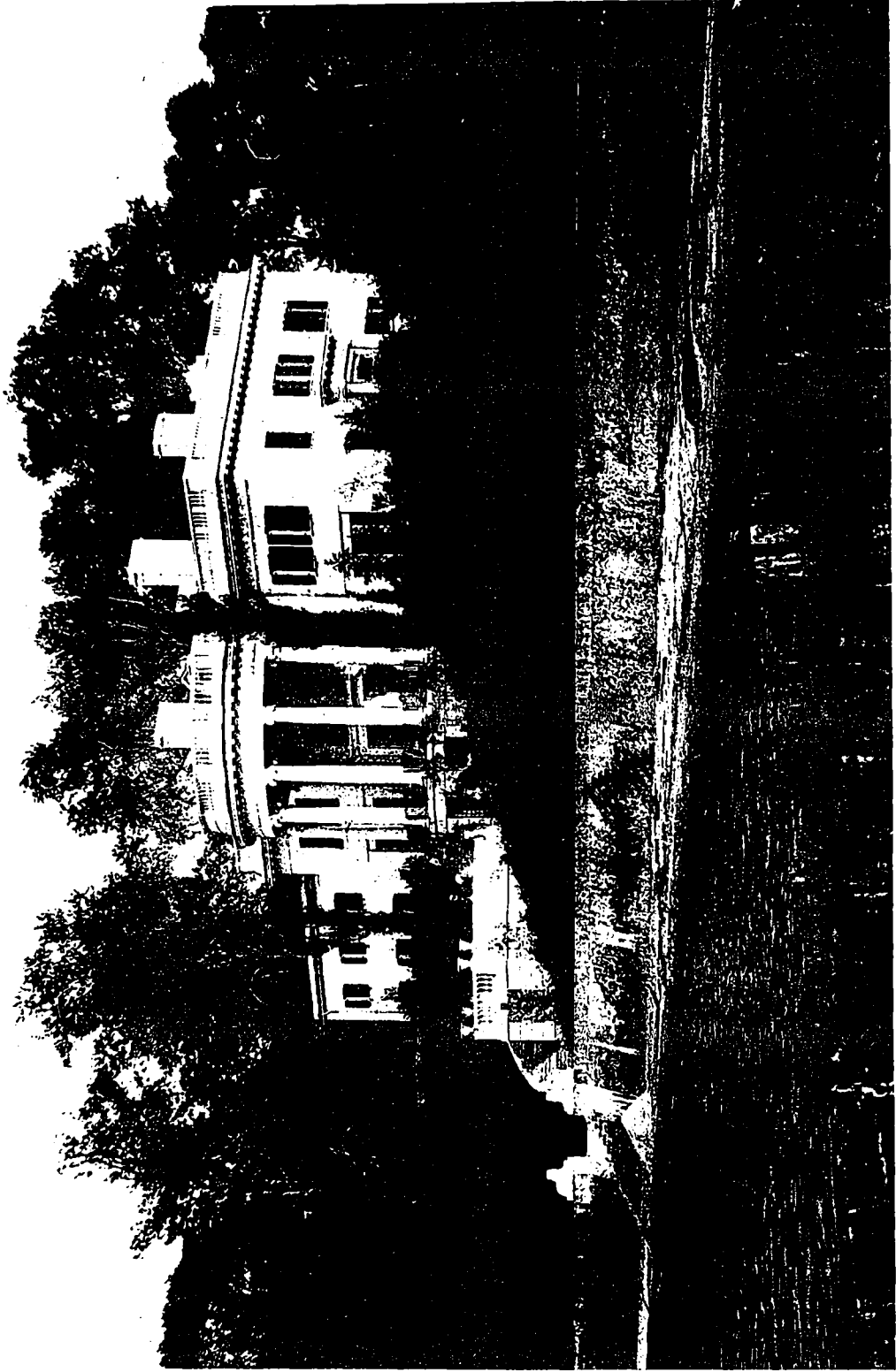
H. GAGNIER, Limited, Publishers

GRAPHIC ARTS BLDG., TORONTO, CANADA

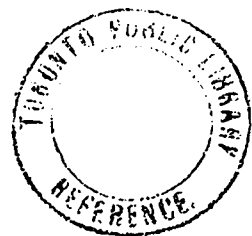
MONTREAL

BRANCH OFFICES

NEW YORK



A MAJESTIC COLONIAL MANSION WHICH OVERLOOKS THE BROAD EXPANSE OF LAKE ERIE. THE FACADE, WITH ITS NOBLY PROPORTIONED PORTICO AND ITS IMPRESSIVE BACKGROUND OF TOWERING FOLIAGE, HAS A MOST COMMANDING APPEARANCE.



The Excelsior Life Building

One of The Finest of Toronto's Many High-Class Office Buildings

THE latest addition to the group of modern office buildings erected in Toronto is the Excelsior Life Insurance Company's new structure, which was designed and erected under the supervision of E. J. Lennox, architect.

In considering the proposition for a new building, the company was desirous of having a building that would be planned in such a manner that it would be adaptable for the accommodation of their large insurance business, and at the same time so planned and arranged that every foot of available space not occupied by the company would be revenue-producing.

The building has a frontage on Toronto street of 134 feet, and a frontage on Adelaide street of about 64 feet. The first two storeys of the facade of the building are built of granite, and the remaining upper storeys of white enamelled terra cotta.

The main facades of the building has been designed in plain modern classic architecture, with a view of good proportion and handsome appearance.

The building has been designed in the form of a pedestal shaft and frieze appearance, the upper storeys being brought out in the form of a colonnade formed with columns and pilasters, which gives a rich appearance to the building.

The general construction, arrangement and equipment of the building are the most modern and best. It is constructed of steel and fireproof material throughout, and as far as modern skill and science can make it, it is absolutely fireproof. All interior partitions are

of sound-proof and fire-proof construction.

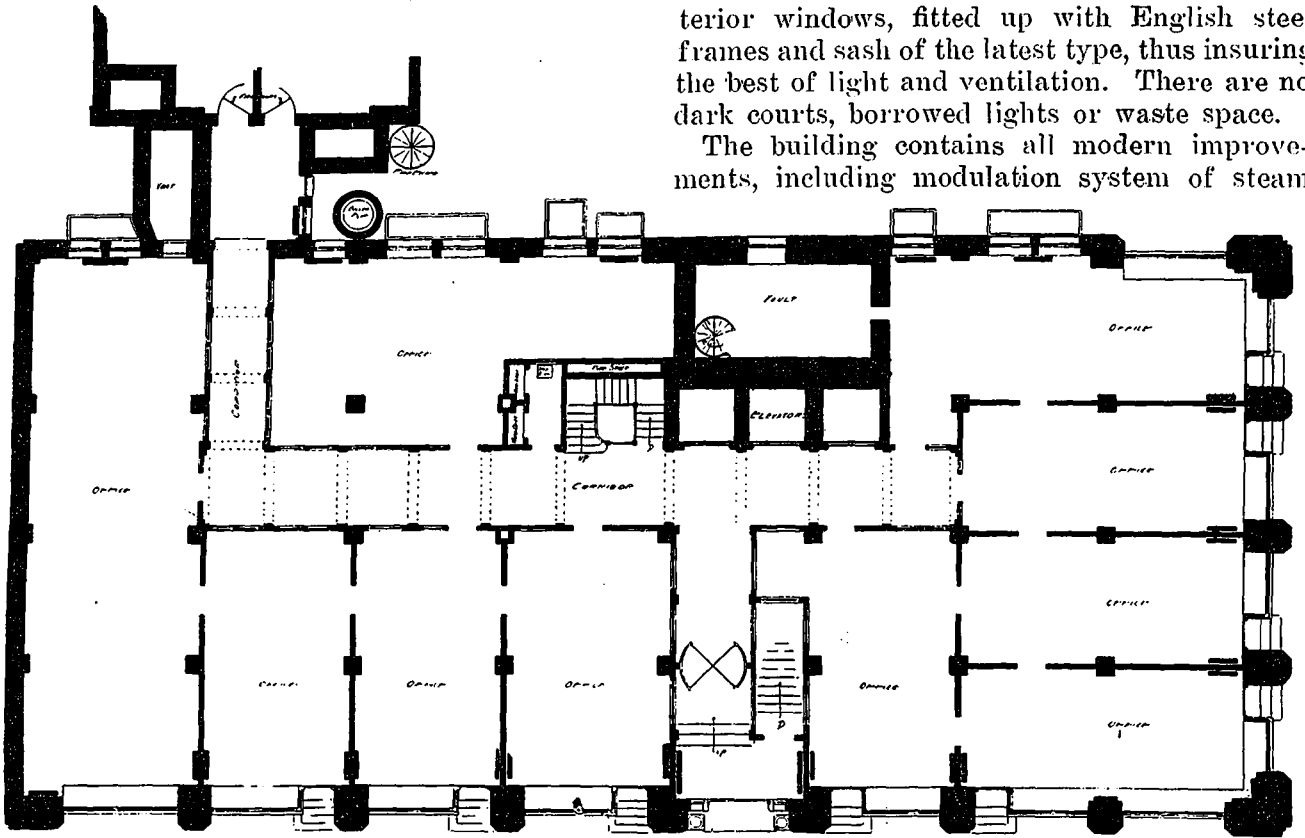
The interior has in every way been well planned throughout; one of the most attractive features is the handsome and spacious entrance on Toronto street, arranged to permit easy ac-



EXCELSIOR LIFE BUILDING. E. J. LENNOX, ARCHITECT.

terior windows, fitted up with English steel frames and sash of the latest type, thus insuring the best of light and ventilation. There are no dark courts, borrowed lights or waste space.

The building contains all modern improvements, including modulation system of steam



FIRST FLOOR PLAN, EXCELSIOR LIFE BUILDING. E. J. LENNOX, ARCHITECT.

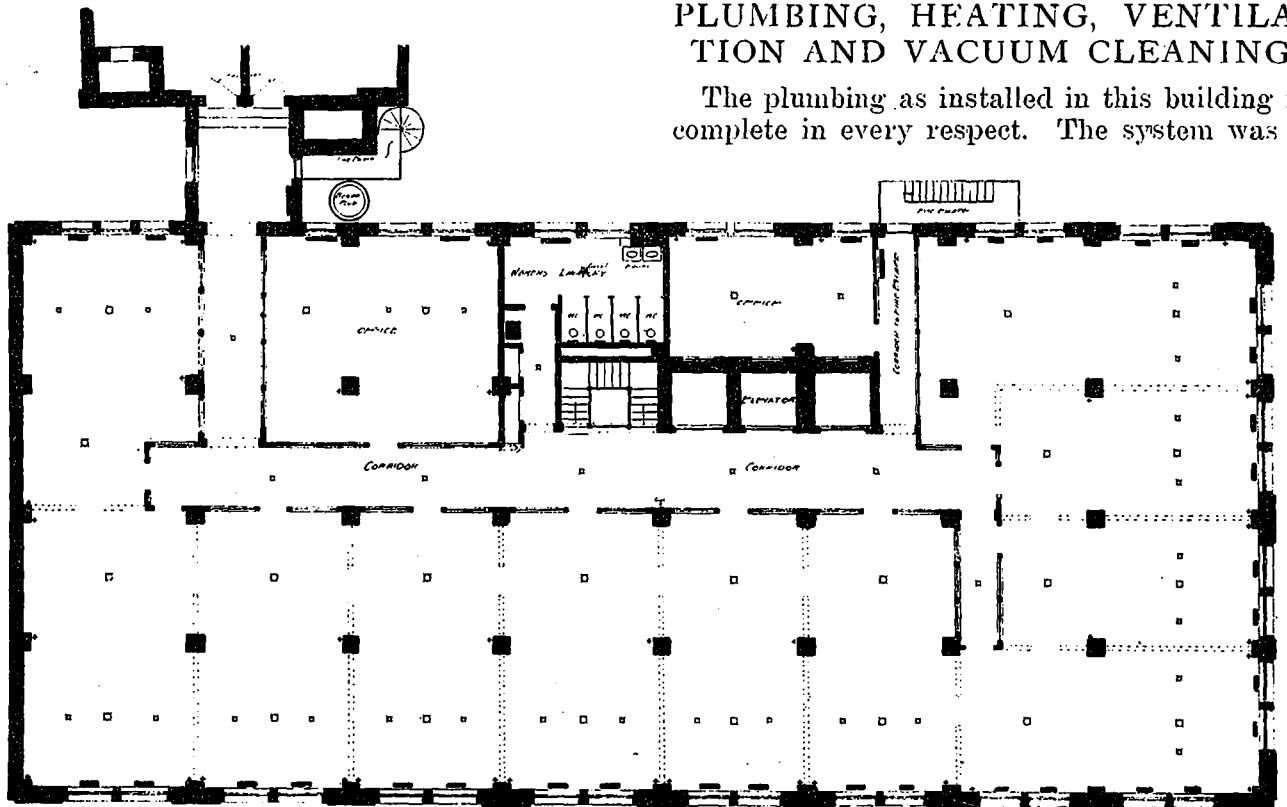
cess to splendid accommodation to all floors, the importance of providing an efficient and quick service being fully realized. Three of the latest and up-to-date elevators are installed, so as to give quick access to all parts of the building.

The building throughout is lighted by ex-

heating (thus obviating all noise in pipes), vacuum cleaners, mail chutes, connections for telephone, telegraph, ticker and messenger call service wires, and the latest and most modern system of plumbing and conduit electric wiring.

PLUMBING, HEATING, VENTILATION AND VACUUM CLEANING

The plumbing as installed in this building is complete in every respect. The system was a



TYPICAL FLOOR PLAN, EXCELSIOR LIFE BUILDING. E. J. LENNOX, ARCHITECT.



MAIN CORRIDOR, EXCELSIOR LIFE BUILDING.

standard type, with porcelain, vitreous china and enameled fixtures.

The lavatories are specially ventilated by means of ventilating shaft, which was run from the basement to the roof space. A multivane fan was installed in the pent house, this fan being full housed, top horizontal, operated at six hundred and ninety r.p.m., direct connected to one-half horse-power motor.

In the boiler room there was installed in connection with the sump which is used to drain the surface water which is carried to same by means of weeping tile, and also the blow-off from the boiler, an electrically driven sump pump, the pump having a capacity of twenty-five gallons per minute against a twenty-five foot head. The pump is automatic, being governed by an automatic float control switch, which is installed in the sump.

All the different lavatories throughout the building have Italian marble divisions and stalls, complete with hinges, locks and bumpers.

The building was completely equipped with a

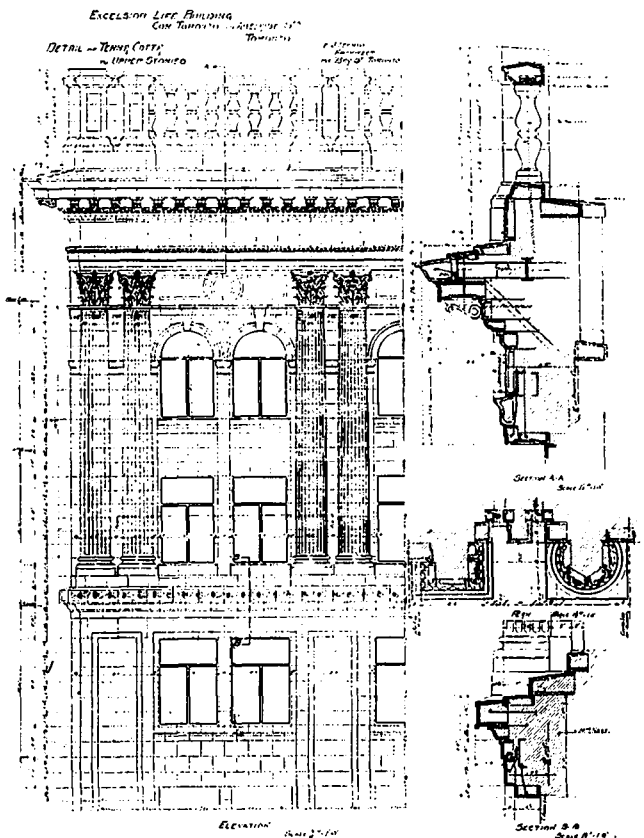


TYPICAL CORRIDOR, EXCELSIOR LIFE BUILDING.

vacuum cleaning system, the system adopted being Spencer large volume low vacuum type machine, being five horse-power two-sweeper machine. The entire building was piped so that any portion of the building might be cleaned with fifty feet of one and one-half inch hose. The machine produces a vacuum of five inches at the machine, and gives a vacuum of from two to three inches at the cleaning tool.

The type of heating installed was an atmospheric modulation system, and is the only building of this height to have a system of this kind installed.

The boilers were three down-draft smokeless standard boilers, set in standard brick setting. There was a total of approximately twelve thousand five hundred square feet of radiation



DETAIL OF TERRA COTTA EXTERIOR, EXCELSIOR LIFE BUILDING, TORONTO.

installed through the building. Each radiator has a modulation valve on the supply and a thermostatic valve on the return. All the radiators installed in the building were one column, being considered more efficient than the two, three or four-column. Both supply and return connection to the radiators are carried in the wall to the position of radiator in a chase, which was left for same, no piping being taken below the floor, which very much improved the appearance of the finished work.

An electrically driven centrifugal pump was installed for returning the condensation from the drips from the mains, this being the only portion of the returns that does not return to the boiler by gravity.

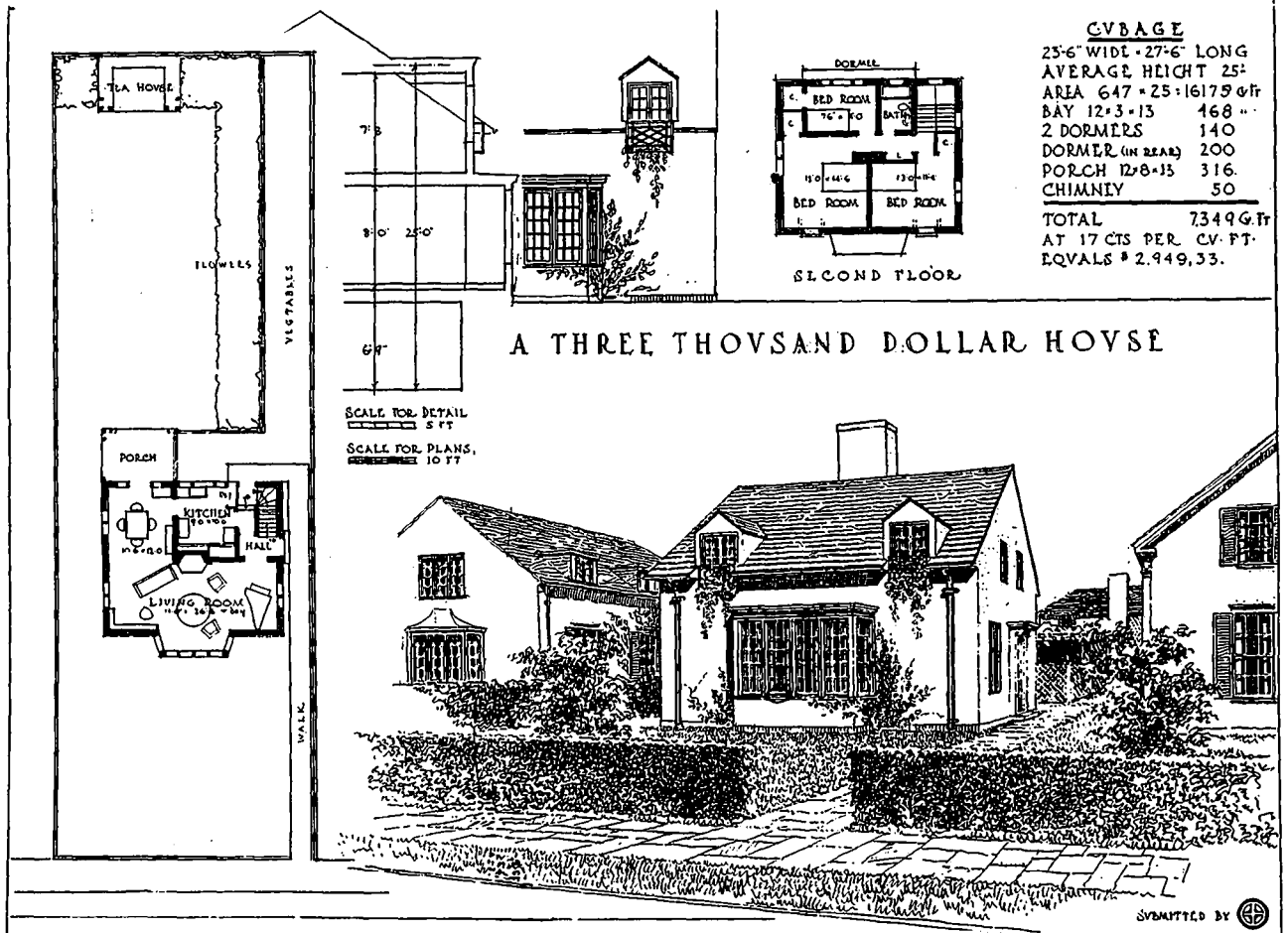
Cleveland Art Association Competition

Winning Designs in Competition Held by the Cleveland Art Association in Connection With The Complete Building Show at Cleveland, Ohio, February 16 to 26, 1916

IN connection with the recent Complete Building Show, held in Cleveland, Ohio, a competition of house designs at \$3,000 was held under the auspices of the Cleveland Art Association, which offered prizes to the extent of five hundred dollars. Over three hundred designs were submitted, all of merit, of which are reproduced seven selected by the judges as being worthy of the prizes offered. First prize was awarded to the design of Olaf William Shelgren, a member of the Buffalo Architectural Club, and connected with the office of Robert North, 1314 Prudential Building. Mr. Shelgren is also president of the Sketch Club, composed of architects of that city, and has many fine buildings in Buffalo to his credit. Chairman C. S. Schneider, of the Selection Committee, stated the choice of this plan for first prize was due to the opinion of the committee that same "best met the requirements of the contest from every point

of view." This design is the essence of compactness, yet every essential requirement of the home is provided for. The dining-room is readily made a part of the living-room, and yet is separated, as reference to the diagram will show. A large living-room is secured by placing the main entrance and hall to the side of the house. Bedrooms of good size are allowed for with necessary closet room. The suggested exterior is in stucco, with roof of green slate, frame work around doors and windows painted green to harmonize with roof and foliage.

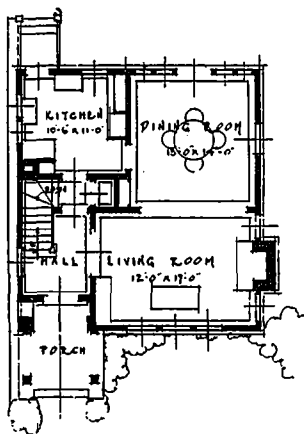
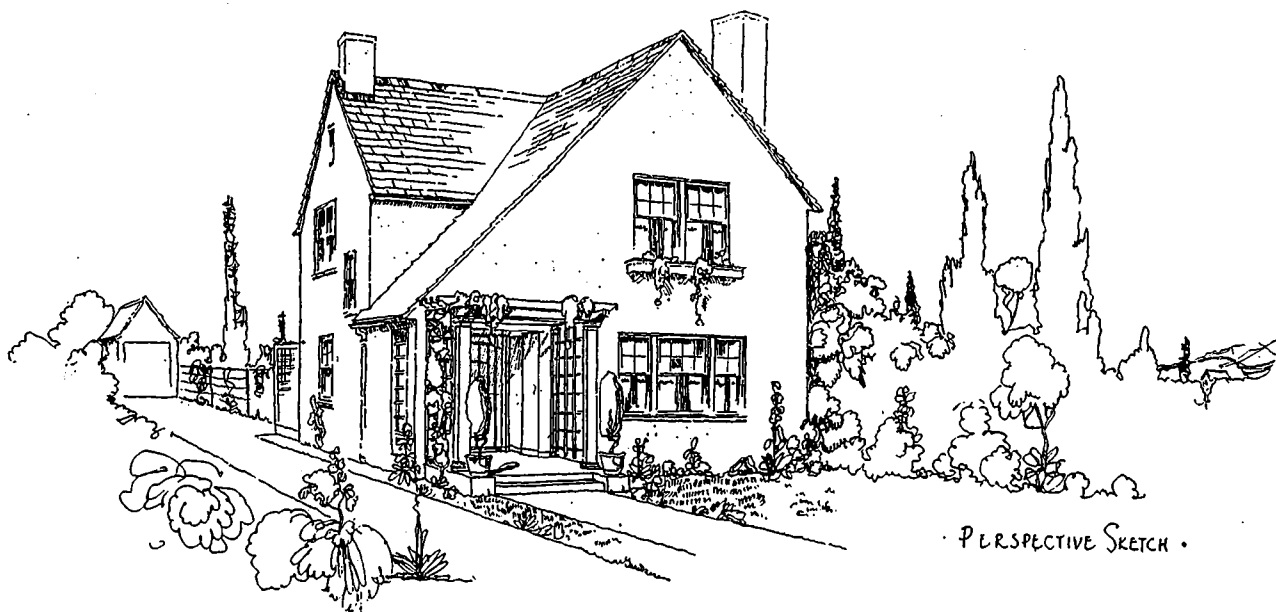
Second prize was awarded to design submitted by Messrs. S. C. Merrell and C. H. Dittmer, of Cleveland, who are on the staff of Chas. S. Schneider. Stucco was used as an exterior surface for the artistic home shown, the recessed porch, stairs, large dining-room and well planned kitchen are features worthy of mention.



| CVBAGE | |
|-----------------------------|-------------|
| 25'-6" WIDE | 27'-6" LONG |
| AVERAGE HEIGHT 25' | |
| AREA 647 + 25 = 16175 sq ft | |
| BAY 12+3-13 | 468 " |
| 2 DORMERS | 140 |
| DORMER (IN REAR) | 200 |
| PORCH 12+8-13 | 316 |
| CHIMNEY | 50 |
| TOTAL | 73496 ft |
| AT 17 CTS PER CV. FT. | |
| EQUALS \$ 2,949.33. | |

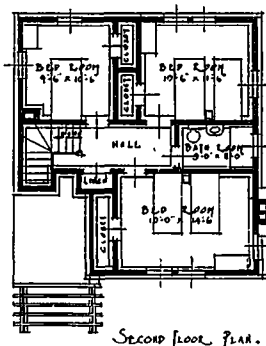
A THREE THOUSAND DOLLAR HOUSE

FIRST PRIZE—BY OLAF WILLIAM SHELGREN, BUFFALO, N.Y.



SECOND PRIZE

BY

S. C. MERRILL AND C. H. DITTMER,
CLEVELAND, OHIO.

SECOND FLOOR PLAN.

Third prize drawings are the work of Messrs. H. W. Peebles and R. W. Hazlewood, 82 N. Elizabeth street, Detroit, Mich., and depicts a quaint exterior with a very modern interior arrangement well proportioned.

Fourth prize was given to F. J. Harburg, 94 West 162nd street, New York City, for a house of Colonial design, in exterior finish of wide lap siding, a material growing in popularity. Large and commodious living-room and kitchen are provided, with a good stairway to upper floor, where large bedrooms well lighted by ample windows provides abundance of ventilation. The grounds surrounding are a good study, and are worthy of notice.

Fifth prize is for home designed by C. C. Tellman, 17 Dill street, Auburn, N.Y., which shows originality. The bay extending from ground to roof is the feature of this exterior, while a large living-room with open fireplace gives a homey suggestion. A roomy cold room off the kitchen is of practical use. Three good size bedrooms are allowed for, together with an ample storage or linen closet.

Sixth prize is for plans by Henry P. Whitworth, 155 Carlyon road, Cleveland, and illustrates a home of the cottage type, with large living and dining-rooms, giving the effect of a

much larger house. All available space has been used to advantage, and the general effect is pleasing.

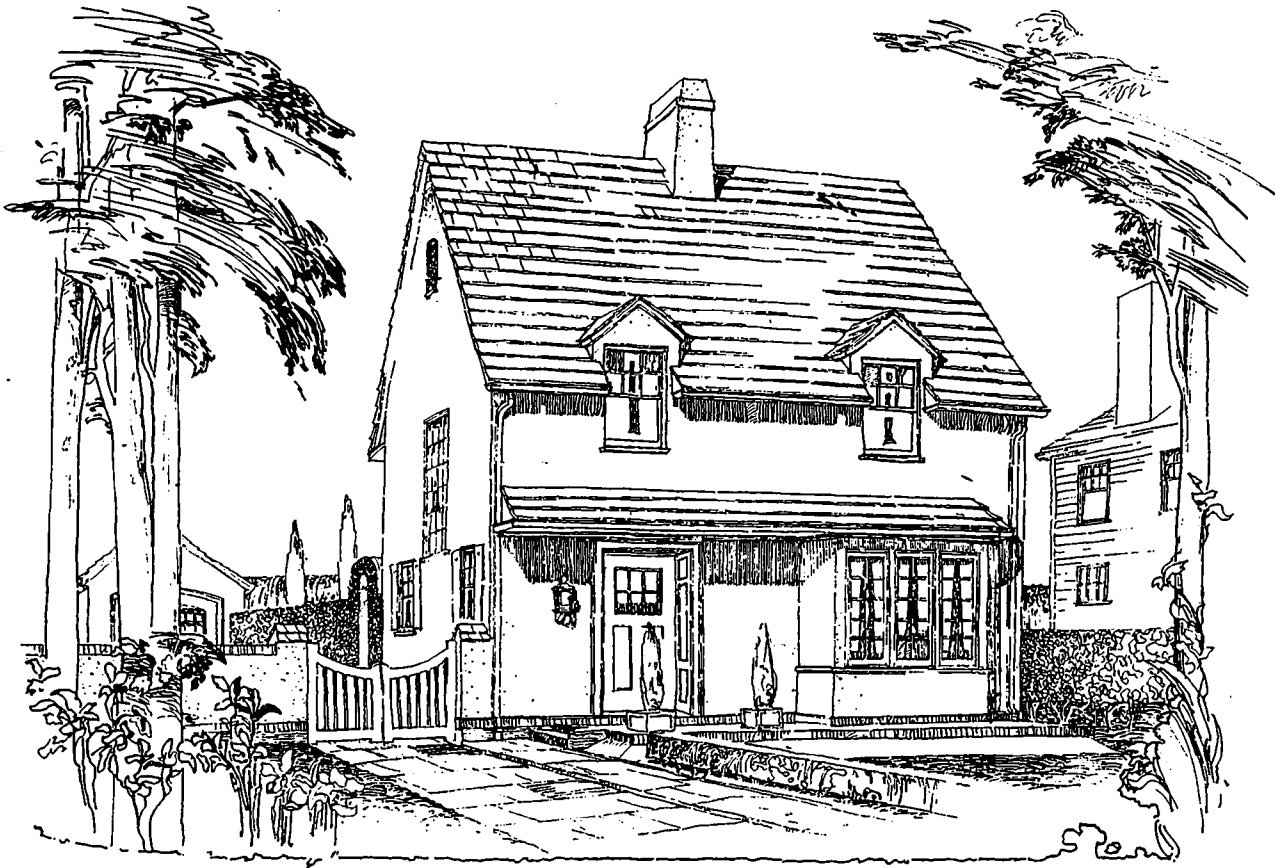
Seventh prize was awarded Maurice Feather, 129 Langdon avenue, Watertown, Mass., who evolved a house of exceptionally interesting exterior. The placing of the porch and entrance upon opposite sides of the front wing, the rather steep roofs and the single large chimney placed in the centre of the building, give it the effect of bigness which is a feature of this interesting design. The interior is well planned, with all rooms of good size.

The judges were favorably impressed with the other drawings shown, which made difficult the work of selection, all of the designs containing features of originality, making them "different" from the average homes.

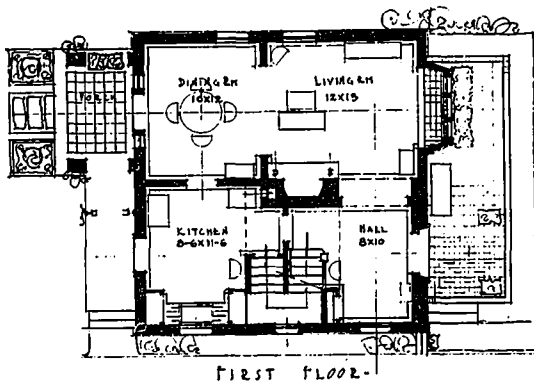
The first prize was \$200.00, second \$125.00, third \$75.00, fourth \$50.00, fifth \$25.00, sixth \$15.00, and seventh \$10.00.

Judges appointed by A. Garfield, president of the Cleveland Chapter A.I.A., were C. S. Schneider, A. S. Skeel, W. R. Watterson, R. G. Hubby and H. Dercum.

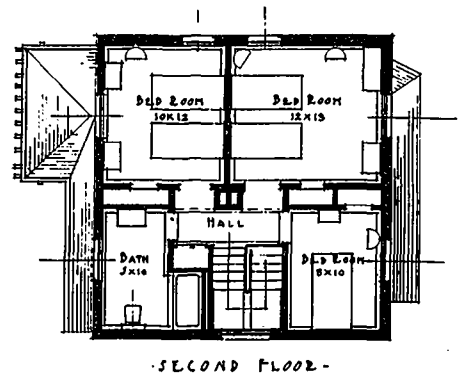
The Cleveland Art Association erected both interior and exterior models of the first prize house on the floor of the Coliseum for exhibition at the show.



THIRD PRIZE HOUSE—By H. W. Peebles and R. W. Hazlewood, Detroit, Mich.



FIRST FLOOR.



SECOND FLOOR.

GREATEST MARBLE BUILDING IN THE WORLD

Construction work on the new \$5,000,000 Field Museum of Natural History, to be built in Chicago, is under way. The structure will be completed, it is expected, in less than three years, and more than 3,000 men will be employed in the work. When finished it will be the largest marble building in the world. It will consist of three storeys and a basement, and will cover an area of 700 feet by 350 feet. The floor area of the museum will be 670,000 square feet, of which 400,000 square feet will be devoted to exhibition purposes. The remainder will be used for scientific laboratories, lecture halls, offices, and a restaurant. The contract for the building is held by the Norcross Bros. Company, of New York and Worcester, Mass., and the material will be Georgia marble.

THE VALUE OF MICROSCOPES IN INVESTIGATING STONE

Comparative microscopic study of building stone that has stood the test of time and that which has not, is very valuable. According to a contemporary, the cause of rapid weathering can be recognized as a natural structural relation. Two granites, for instance, of almost identical mineralogical and chemical composition can behave quite differently. The one remains sound for years; the other disintegrates rapidly because delicate microscopic pressure zones run through it. Two marbles of equal beauty show entirely different powers of resistance as material for a work of art exposed to the weather, according to whether the calcite individuals in this section interlock with sinuous outlines or merely adjoin each other as paving stones.

The Fire Safe Building

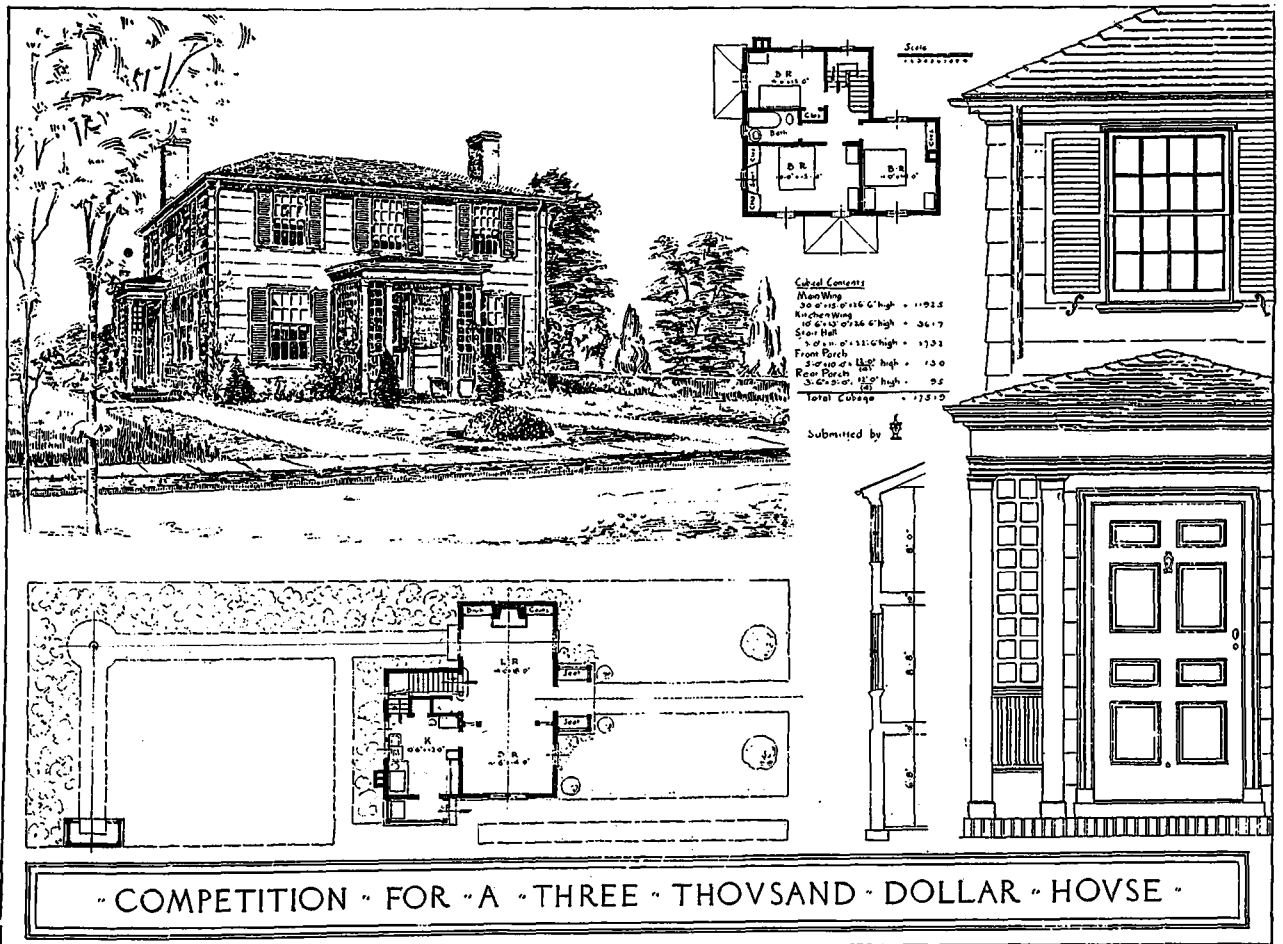
By A. W. ECHBERG

BESIDES a fire loss of about \$25,000,000 per annum this country now carries the excessive cost of insurance, the vast sums spent for fire-fighting equipment and up-keep of fire departments in all our cities, the lost sustained in case of fire, in time, loss of prestige, loss of customers, the cost of renewing the insurance upon resumption of business, and the dead expense while the business is suspended. Besides this, there is very little property insured to its full value, so that even if some insurance is carried, the owner will have to stand a good share of the direct loss. Taking all these items into consideration, the total loss to this country amounts to a really appalling figure.

But what are you going to do about it? It is not within the scope of human possibility to entirely prevent fires, but it is possible to reduce the fire hazard to a minimum. At an expense insignificant as compared to the saving in property and trouble, it is possible to so equip buildings as to render a serious fire practically impossible.

This discussion does not attempt to enter into the merits of different methods of fireproofing the structural parts of a building, or the relative value of different materials used for that purpose. The necessity for providing such fireproofing is well recognized by even the layest of laymen. It is proposed to take up here the question of interior fireproofing, "the kind that safeguards life and contents," as the need for proper equipment of buildings to prevent incipient fires from spreading, and to safeguard the exits to prevent loss of life, is not so well understood or so thoroughly realized.

The first attempt to provide exits in case of fire for the occupants of a building was the outside fire escape, which even up to this time disfigures so many buildings in our cities. While they have no doubt served their purpose in some cases, they have in numerous instances failed, sometimes on account of flimsy construction, and again on account of inadequate upkeep, as the metal work has not been painted, but allowed to rust and become deteriorated, so that when



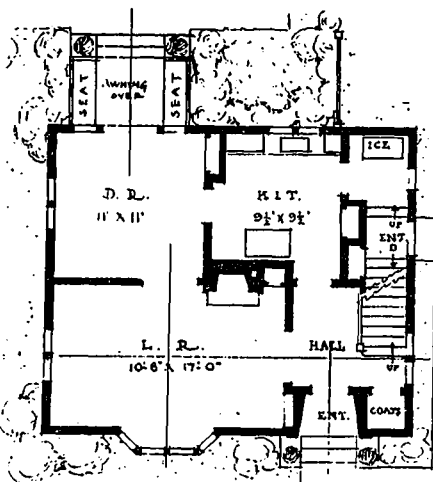
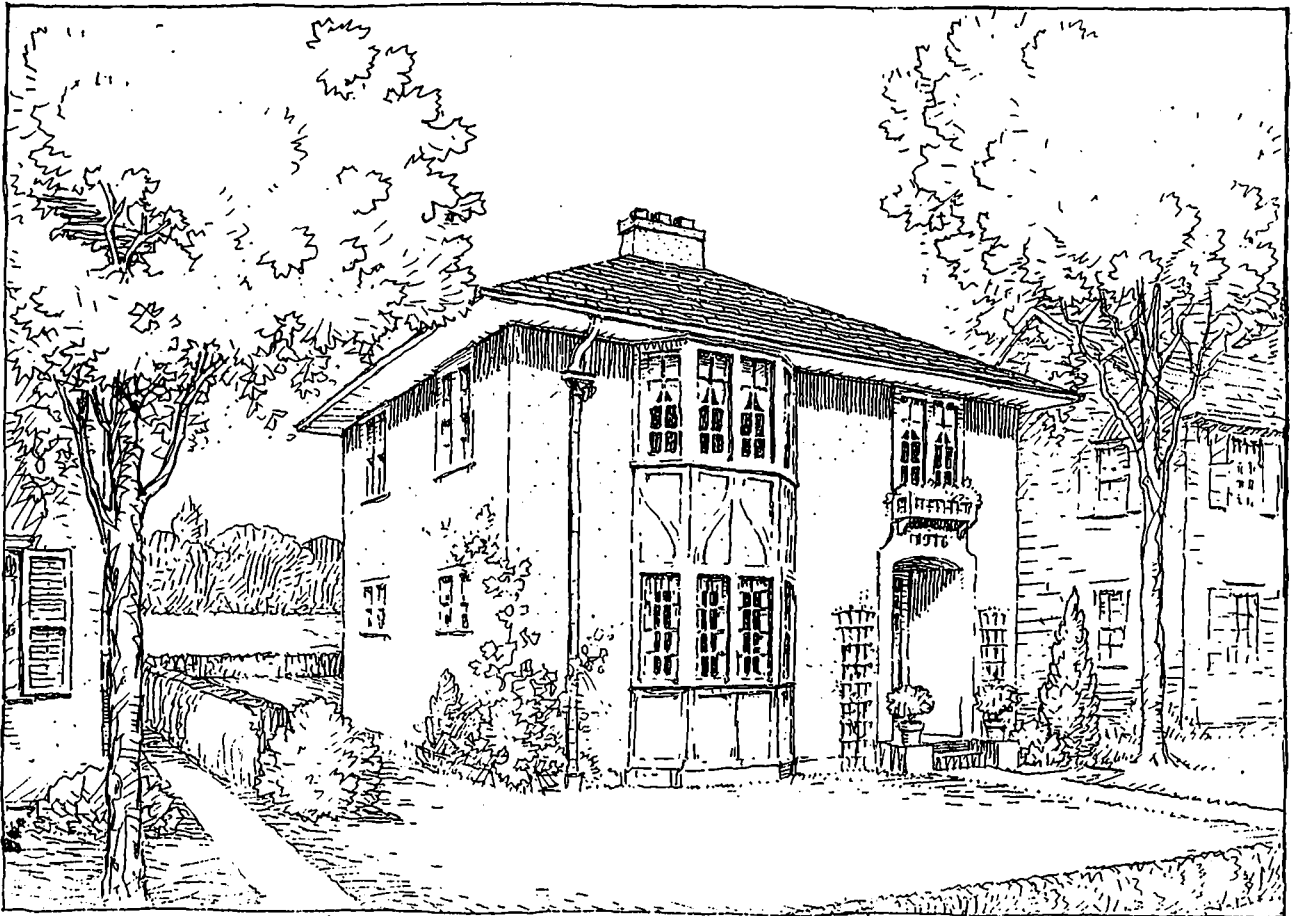
FOURTH PRIZE—BY FREDERICK J. HARBURG, NEW YORK CITY.

put to the test they have failed. Even if the fire-escapes were strong enough, they have very often been rendered useless on account of the flames from a fire breaking out through the windows or doors opening on the fire-escape in the lower storeys, so that the people endeavoring to use it from the upper storeys have been caught in a trap. The idea of using fire-escapes on a modern building is becoming obsolete. It has been found that inside stairways, or fire-towers, if protected by fireproof doors or windows, are much more effective and safe, and designs for new buildings generally incorporate this idea for providing safe exits for the occupants.

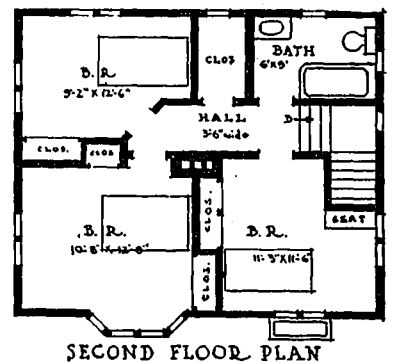
The next step in the evolution of fire protection for buildings and preventing the spreading

of the flames was the realization of the danger from outside exposure. It was found that in a large fire the flames would very often enter an adjoining building through the window or door openings, and to protect these openings, shutters were provided, either of steel plates or made of wood covered with tin. These were eventually found unsatisfactory, however, because they were not always closed by the occupants at the end of a day's work. The metal covering would also very often deteriorate, rendering the shutters useless, and taken as a whole they were quite unsatisfactory.

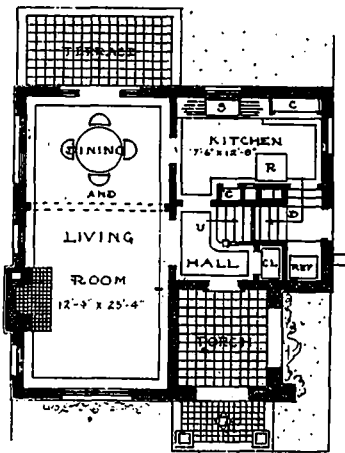
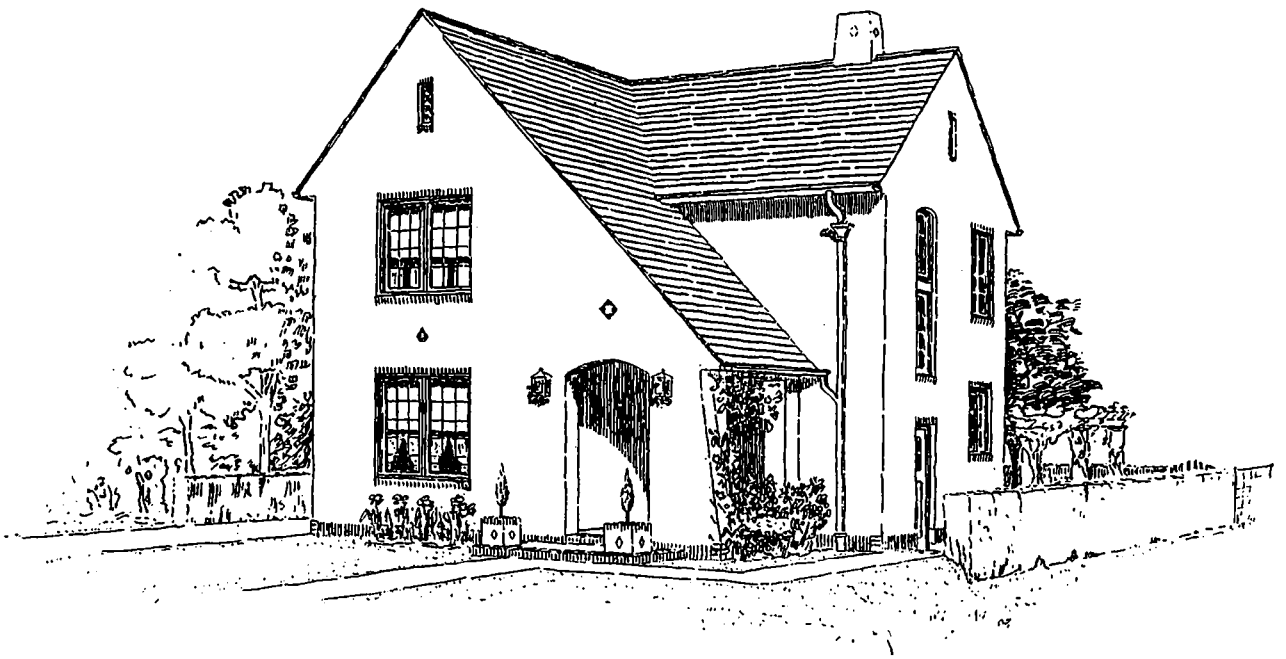
The invention and manufacture of wired glass opened up a new field, and new possibilities for fire protection of such openings. It was now



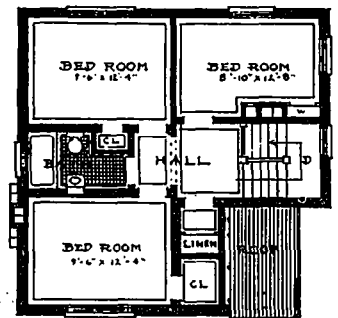
FIFTH PRIZE
 BY
 C. C. TALLMAN, AUBURN, N. Y.



SECOND FLOOR PLAN



SIXTH PRIZE
BY
HENRY P. WHITWORTH, CLEVELAND, OHIO.



found possible to construct a window frame of metal, and by the use of wired glass a permanent protection was obtained that needed no particular attention. These also served to confine the fire within a building, and prevent it from escaping to adjoining buildings, so that they really served a double purpose in this respect. Great care, however, should be exercised to get the very best class of metal windows, as very often they are poorly constructed, and of material that is liable to rust, causing it to deteriorate in a very short time when exposed to the severity of the elements. The very best material that can be found for metal windows, that will withstand the ravages of time as well as fire, is the hollow constructed windows of hard bronze metal. The next best would, no doubt, be a window constructed of heavily coated 18 or 20 gauge galvanized iron, or windows treated within and without by the sherardizing process, which at least for a long time will withstand the action of the elements and prevent the starting of rust.

We now come to the study of interior fire protection, or means for preventing a fire from

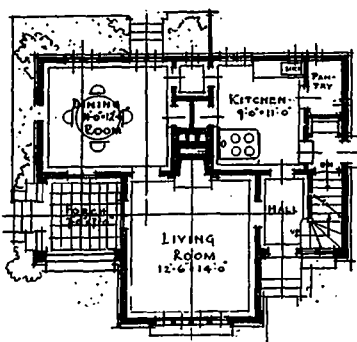
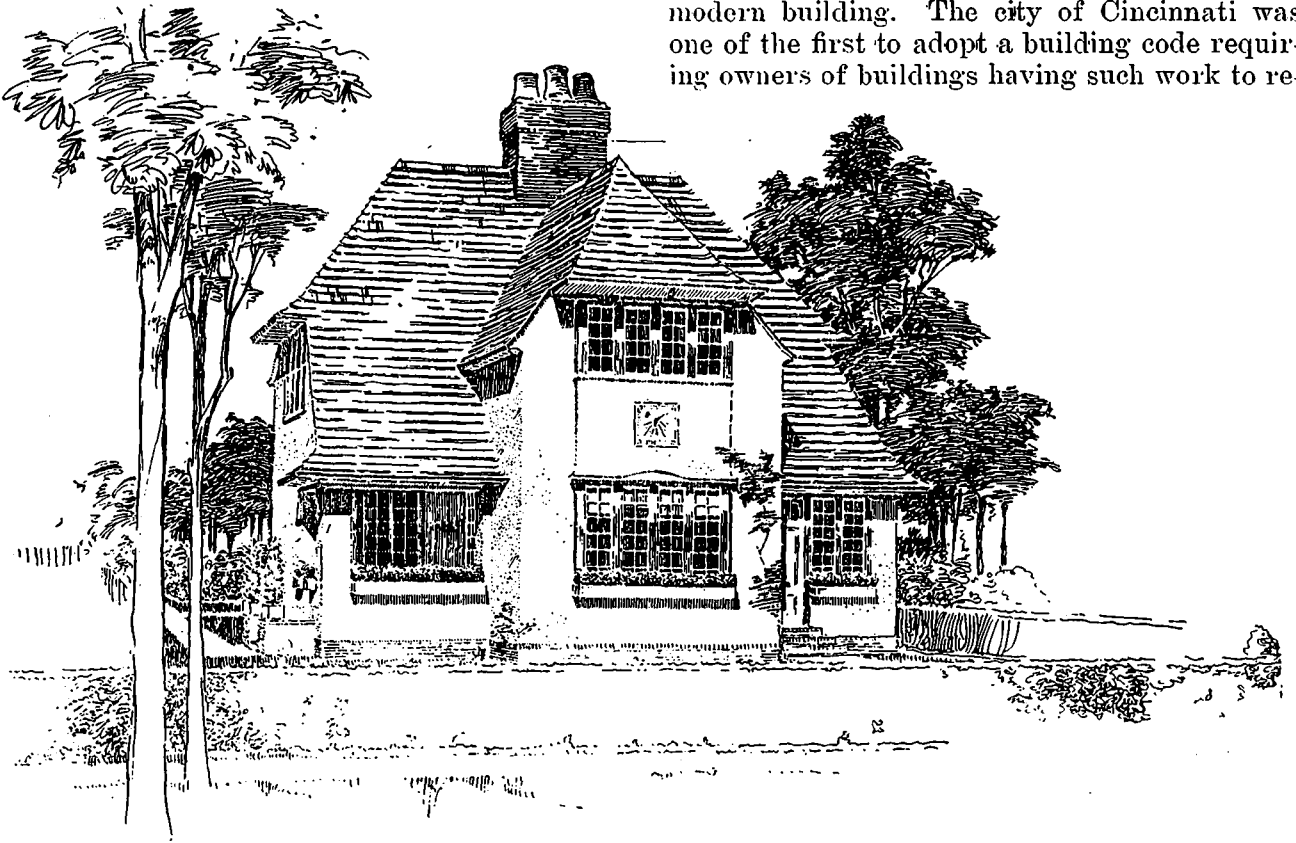
spreading within the building itself. This is an ever-present danger, and the means for localizing and controlling any incipient fire to its place or origin should be given due consideration. One of the most efficient of these devices is the automatic sprinkler, which finds its greatest usefulness and is best suited for such buildings as mills and factories, loft buildings, warehouses, freight terminals, storage buildings, etc. While there are cases on record where sprinklers have failed, they are, on the whole, very satisfactory, and have proven themselves to be one of the most efficient parts of the equipment of such buildings for the purpose. A curious circumstance in connection with the development of the sprinkler system is the fact that the insurance companies at first would not recognize it, or would not allow any reduction in the insurance rate for buildings so equipped. This caused mill owners in one part of the country to organize a mutual insurance company for their own benefit, in order to save the cost of insurance, and it was only after their experiences through a number of years was made public that the old line insurance companies would recognize the merits of the sprinkler system, and give any credit or reduction in the rates where they

were installed. This system is now widely recommended by all insurance companies and experts for buildings of the classes named.

Another idea which has proven itself valuable and is being adopted for buildings of the classes above named is the idea of subdividing buildings having large areas by so-called "fire walls," the openings between the different sections protected by automatic fire doors or curtains. These will provide exit for the occupants of any section in which the fire should happen to occur. It will only be necessary for the employees of a factory or mill to pass through the opening in the fire wall into the next section and close the fireproof doors, when they are safe from the fire peril. This method is to be recommended, providing each section has a separate exit from the building, and will be found useful in hospitals, schools, museums and similar buildings of the better class, in addition to mills and factory buildings.

A study of this important subject has also brought out the fact that vertical shafts

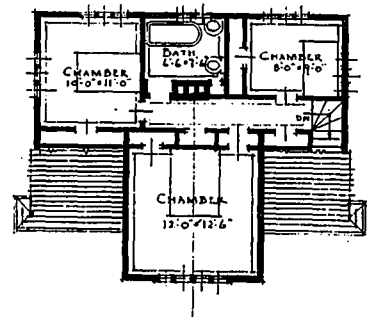
throughout a high building, such as elevator shafts, stair hall, pipe and wire shafts, ventilator shafts, etc., will serve as flues for a fire starting in any of the lower storeys and allow the flames to spread throughout the building. In actual experience in many cases great loss of life has occurred in buildings because escape was shut off by the flames entering the stair halls or elevator shafts. The fact that openings to such flues or shafts have not been provided with fireproof doors have caused some very expensive fires; for instance, the Equitable Building in New York City about three years ago. This has served to call the attention of architects and builders to the necessity for having fireproof doors for such openings and eliminating the open grille work so commonly used for elevator enclosures in the past, and to enclosing elevator shafts with fireproof walls or metal partitions, with wired glass, if light is required. The open grille work used for such a long time has been found inadequate for the purpose, and will not be tolerated in any really fireproof or modern building. The city of Cincinnati was one of the first to adopt a building code requiring owners of buildings having such work to re-



SEVENTH PRIZE

BY

MAURICE FEATHER, WATERTOWN, MASS.



place it with really fireproof enclosures, and other cities are fast following this excellent precedent. According to the best and most advanced ideas, the stair hall shafts are being located in a different part of the building from the elevator shaft, so that in case a fire occurs near one the other would be available for exit by the occupants. This idea is a very important step in the right direction, and will tend to increase the safety of a building, especially those of the better class, or those of the "skyscraper" type.

When the fire prevention campaign started some thirty years ago several attempts were made to protect the wooden door. It was hard to get away from the thralldom of wood, so at first it was painted with preparations of alum and other salts, which was then called fireproof paint, and by this combination wood would not ignite at first, but would not withstand a hot fire for any length of time. Later, experiments were tried to make the wood fire resisting by extracting the resin and other inflammable components of wood, leaving only the fibre. This was tried for some time, but was found wanting, as the wood would presently burn and the fire looked very much like ordinary wood fire.

Later on the method of covering the wooden doors with metal was adopted, and was no doubt the best that could be had for that period. It is, however, impossible to obtain with this kind of work a result that is in any respect satisfactory for high-class buildings. The wooden core will swell and shrink with the atmospheric changes, and the thin metal used will buckle, making the work very unsightly. The finish can only be an ordinary air-drying paint, applied in the dust and dirt of a building under construction, and cannot even remotely be compared with the high-class material and finish required in modern, first-class buildings.

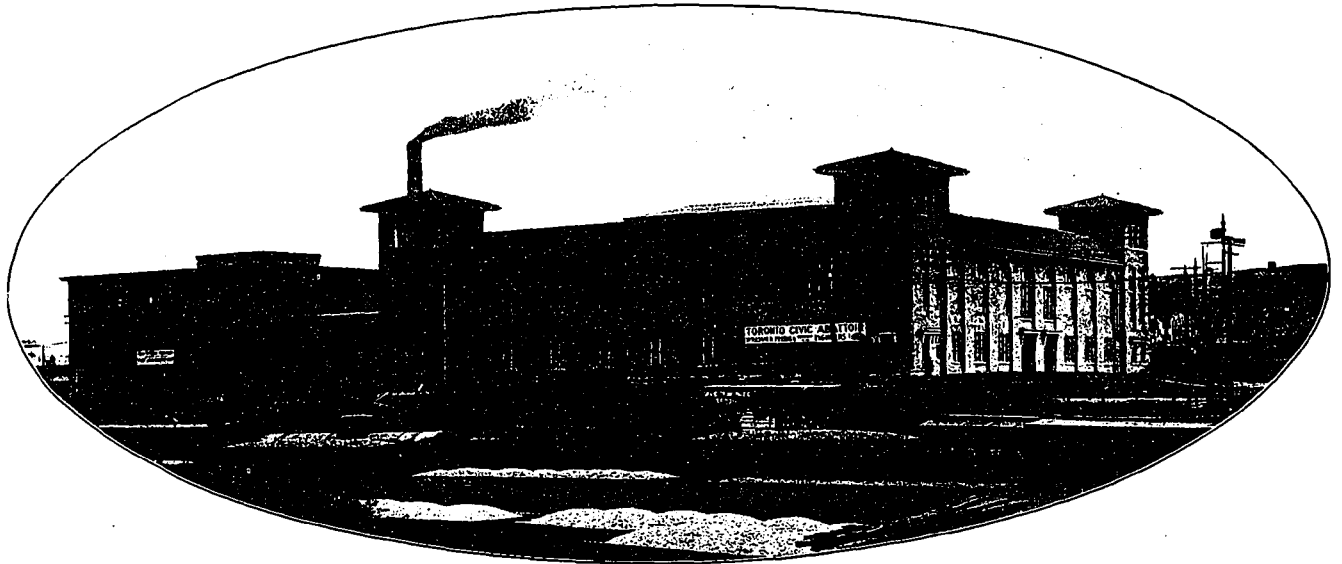
An insurance engineer of national reputation when asked his opinion of tin-clad or metal-covered doors, stated: "I merely quote the best authorities when I say that if the wood core in a metal-covered door does not contain 10 per cent. of moisture, dry rot has already set in; and if it does contain 10 per cent. or more of moisture and is subjected to severe heat, sufficient gas will be generated to explode its metal covering." Hundreds of thousands of dollars have been invested in the manufacture of this class of goods, and an equal amount of kalameined door depreciation is now carried by the people of this country; but in view of the later and more modern developments, the days of the wood core fire protections are counted, and the metal-covered contraptions will soon be a thing of the past.

In their place, and to more adequately meet the requirements of these modern times, the

hollow metal doors and trim were put on the market about ten years ago. In developing the hollow-metal door idea the inventor had to break away from the precedent and start out along original lines, by cutting out the weak spots entirely and replacing it with what has proven to be the last work of door and trim construction—a door of cold-drawn steel provided with air chambers to insulate, instead of wood, which would char and collapse at the most critical moment. This door has proved itself effectively fireproof, handsome, economical and where properly cared for, practically everlasting. Therein is the evolution of the hollow-metal door. The replacing of wood and all other combustible, or semi-combustible, interior trim with cold-drawn steel was a comparatively easy and simple matter. Wherever custom called for the installation of wood for these purposes its absolute elimination was now made possible.

A building equipped throughout with hollow-metal doors and trim, and being, of course, otherwise fireproof, simply means that you have done away with everything which can burn with the exception of the contents of the building. Every room, compartment or floor has been literally converted into an isolated unit. Such an equipment will confine the fire, and combat it by virtually the only possible successful method, namely, starvation. When the contents of the particular unit in which the fire originates are consumed the fire is extinct, because it has nothing more to feed upon. Whatever the structure, be it a skyscraper, loft or office building, theatre, hotel, post office, hospital, residence, school, steam vessel, battleship or railroad car, if it is otherwise fireproof the installation of hollow-metal doors and trim makes it entirely so, or effectively completes the fireproofing by the elimination of these materials which can be consumed by fire.

The necessity for fireproof equipment for buildings is now so well recognized that specifications for a really ideal modern fireproof building generally calls for metal doors and trim throughout; but these should be specified at least for openings in fire walls, stair halls, elevator doors and enclosures, fire towers, fire escapes and all vertical shafts, the openings to which should be protected against the fire spreading throughout the building, rendering the building semi-fireproof. The quality of workmanship, construction and finish obtainable in this line of products makes them particularly suited for these purposes, for such buildings as hotels, schools, office buildings, theatres, hospitals, public buildings, residences, libraries, museums, club buildings, etc., or in other words, buildings in which high-class, satisfactory finish is required.



America's First Public Abattoir

Toronto Leads in Establishment of Civic Abattoir

CANADA has been until recent years somewhat lacking in institutions of public service, and for this reason the new municipal abattoir, recently opened in Toronto, is of more than passing interest.

Added to this, the building illustrated in this issue represents the best in modern construction and equipment adapted for the purpose which it serves.

The necessity of proper inspection of meat, which enters so largely into the daily fare of a city grown to a population of over 500,000, and the desire on the part of the city fathers to have all meats prepared under modern sanitary conditions, a desire furthered by a vote of sanction on the part of the citizens, led to the establishment of America's first civic abattoir.

Here the smaller butcher has all the equipment, if not more than the private owned abattoir, and the facilities at his disposal compel cleanliness.

The city stock yards on Tecumseth street provide a site for the new building, which, while close to the centre of the business section of the city, is on the extreme southern frontier,

separated from the shore of Toronto Bay by the tracks of the different railways which enter the city from the north and west, and provides excellent shipping facilities.

In no way, either within or without, is anything objectionable attached to the building located here, which structurally is an acquisition to the district.

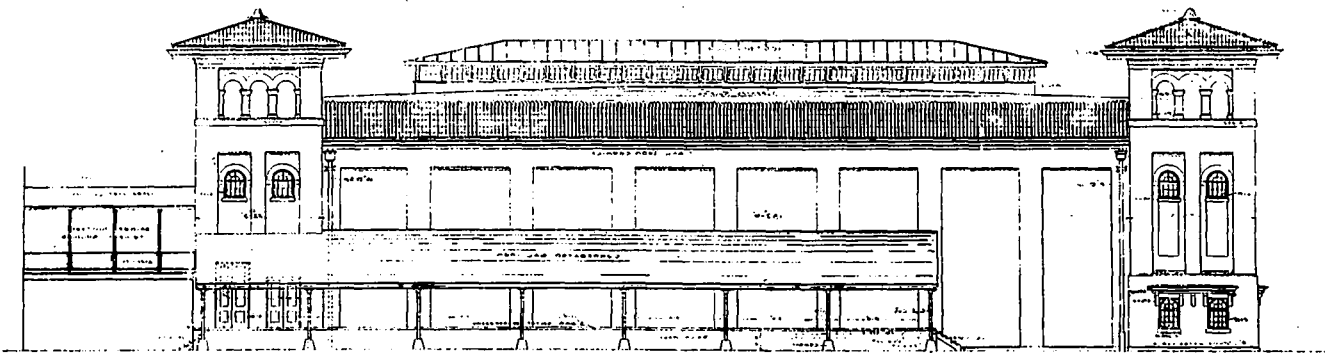
The plant is contained in two buildings, attached by enclosed passageways, the main portion including offices, killing rooms, refrigeration, cold storage rooms, etc., while the rendering and offal disposing plant is located in a separate building.

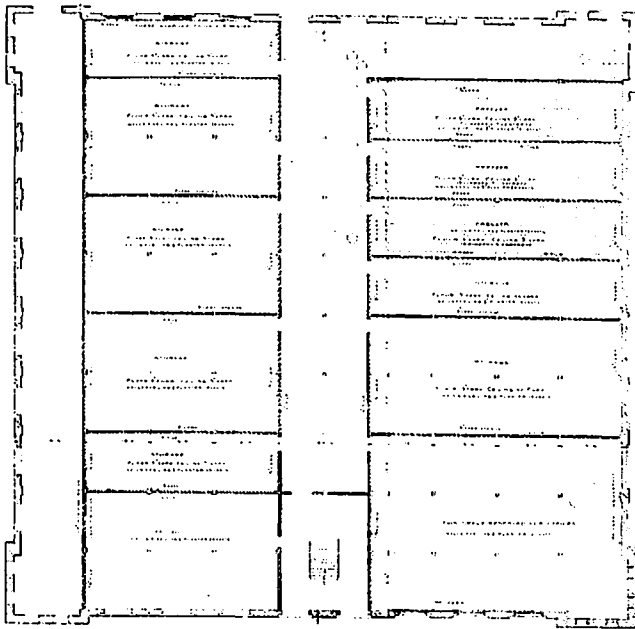
The main building dimensions are one hundred and eighty feet by one hundred and eighty feet, and the rendering building occupies space of one hundred feet square.

The exterior walls are of Canadian buff brick, while the interior walls in part are of white glazed brick.

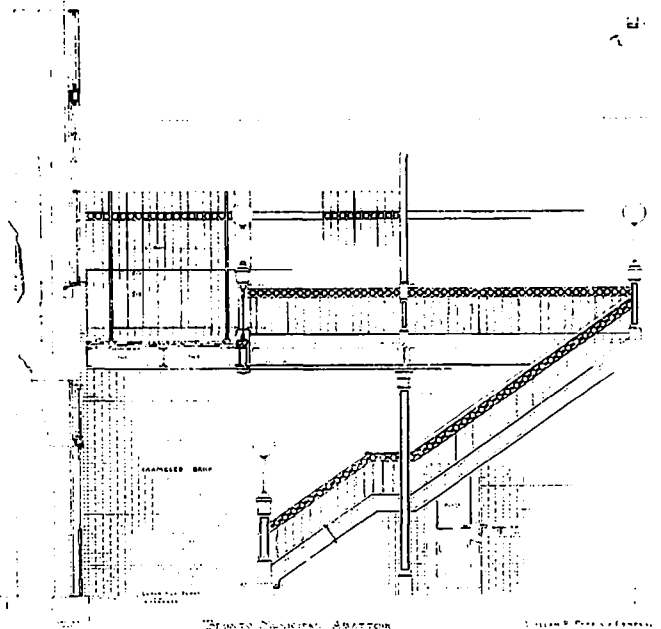
The floors are of hollow tile and brick construction, which is not affected by continued flushing with water.

Steel frame work carries the roof, which is





GROUND FLOOR PLAN, TORONTO MUNICIPAL ABATTOIR.



DETAIL OF STAIRWAY AND HALL TORONTO MUNICIPAL ABATTOIR.

of felt and gravel, with red Spanish tile on the towers and mansard slope.

On the ground floor of the main building is located the general offices, and separate cold storage rooms, the walls of the latter being of cork insulation. Dining and toilet accommodation is provided for the operators.

The first floor of this two-storey building contains the killing and cooling rooms, with separate accommodation for twenty-two butchers to slaughter and prepare the product.

The rendering building is of three storeys and basement, and contains the equipment for preparing the by-products, which is an important part of this trade.

The basement is used in storage of the hides, and the ground floor contains the fertilizer plant.

On the first floor evaporators and casing machinery is installed, while the second, or top floor, includes fat washing equipment.

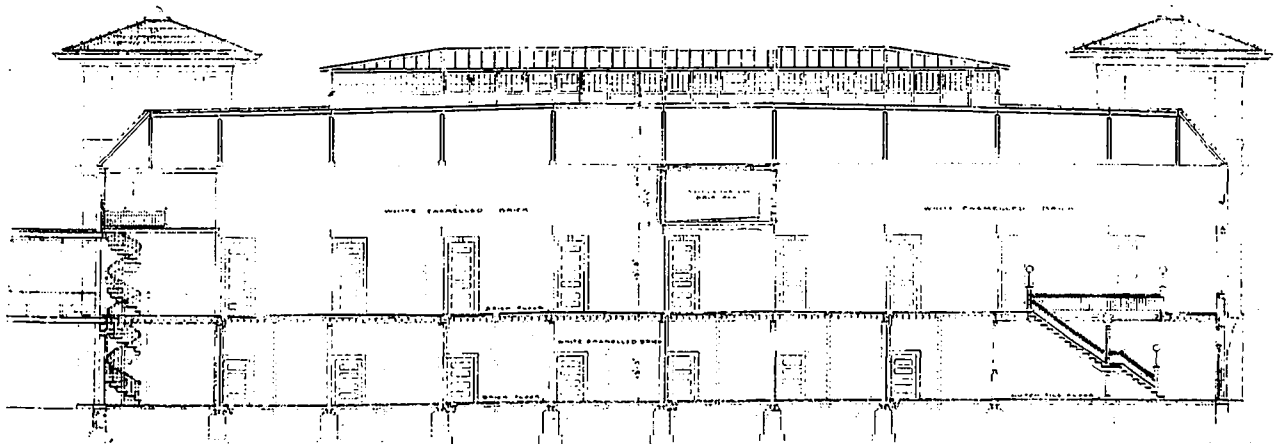
The interior walls throughout this latter building are composed of vitrified brick.

The power plant is housed in a separate building, sixty-four feet square, and while the motive power for the hoists, refrigeration machinery, presses, dryers and rendering house machinery is electricity, steam is largely used and provides for rendering, cooking and heating of the plant. All pens are of steel, raised six inches to permit of washing the entire floor and preventing any accumulation of dirt.

Overhead conveyors and tracks connect all departments and make the use of trucks, etc., unnecessary.

REFRIGERATION EQUIPMENT.

Steam is supplied by two tubular boilers of one hundred and fifty horse-power each, with a working pressure of one hundred and twenty-five pounds. Two ammonia compressors are installed of sufficient capacity each to supply the entire plant, and are also cross connected, so that either or both may be used as occasion requires, one machine being direct connected to a steam engine, while the other is electrically



SECTION EAST AND WEST TORONTO MUNICIPAL ABATTOIR. WM. R. PERRIN & COMPANY, ENGINEERS, TORONTO.

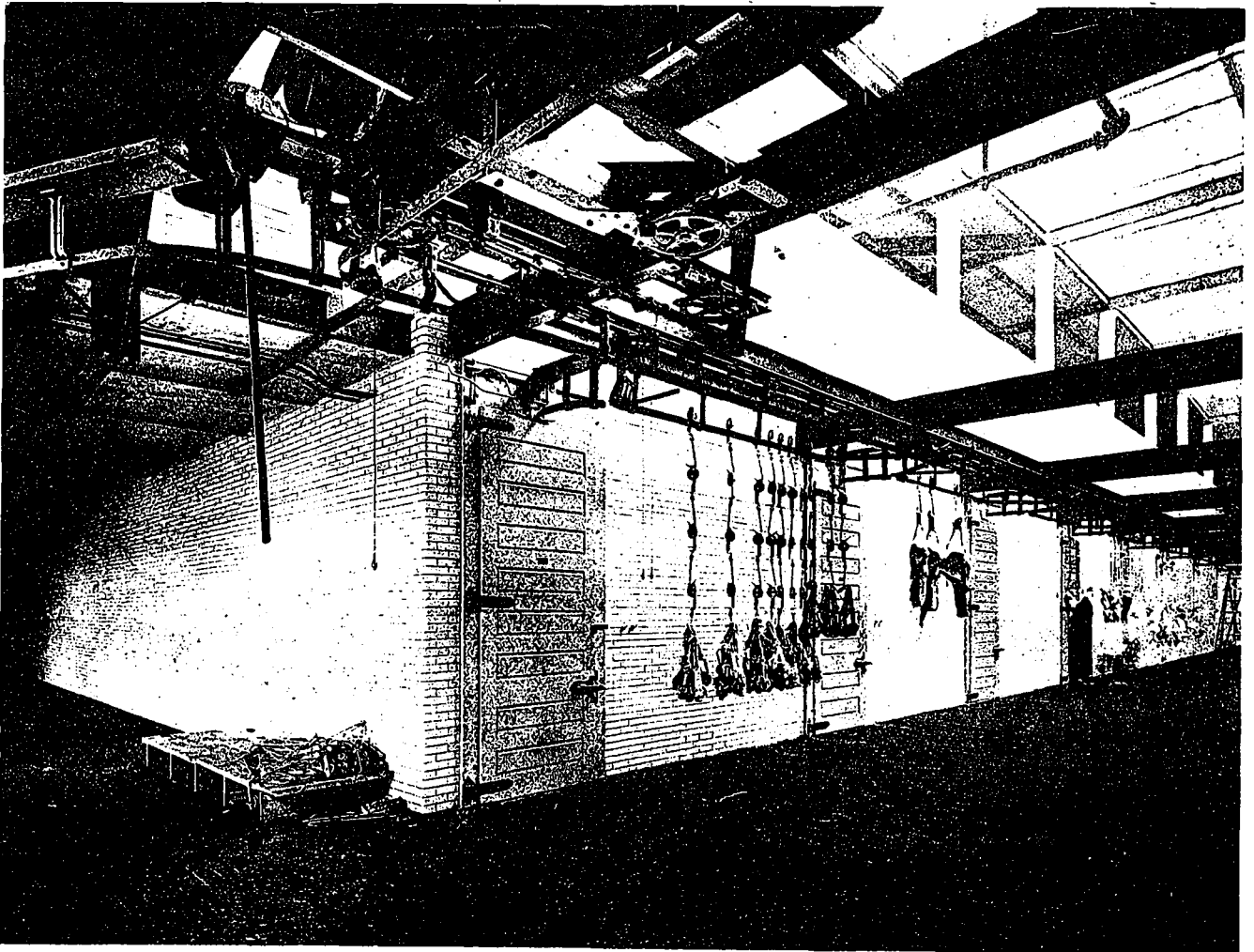
driven. The compression side consists of six stacks of ammonia condensers of the double-pipe counter-current type, each stack being twelve pipes high by nineteen feet long. The condensers are equipped with purge and wash-out headers and valves, in addition to the usual inlet and outlet ammonia and water valves. The other machine has on the compression side a double type ammonia condenser consisting of six stacks, fifteen pipes high and twenty feet long. All pipes from the machines are insulated with cork covering. The cold storage and freezing rooms comprise ten, five being low temperature on the north side and five of high temperature on the south side, ranging in degree from zero to thirty-five F. The walls and ceilings are finished with cement, and the floor with inch and a quarter brick, the rooms being insulated with cork from three to six inches thick. The rooms are cooled with about 22,600 feet of two-inch expansion coils placed in the freezers on the ceiling and on the walls in the higher temperature rooms, connected to two four-inch return suction mains and one inch and a quarter liquid feed main, the two suction mains allow for two different pressures to be carried in the cooler coils, for the freezer and higher temperature rooms respectively.

CANADIAN LUMBER COMES INTO ITS OWN

The decision of the various Dominion Government departments and of the Canadian Pacific railway to use Canadian timber only, to the exclusion of imported timber, is a decided advantage to Canada.

Southern pine, in 1915, was imported to the extent of 95,000,000 feet, having a value of over \$3,000,000. In previous years, very much larger quantities were imported despite an adverse trade balance for Canada and in the face of a supply in Canada of better timber at an equal or lower cost, grown and manufactured entirely within the Dominion.

The Dominion Government will use Douglas fir to replace Southern pine in such works as Quebec and Montreal harbor improvements and Hudson Bay terminals. Douglas fir has been used entirely in the Toronto Harbor works, as a clause was inserted in that contract calling for Canadian material. The action of Baron Shaughnessy in ruling that Canadian timber only shall be used in works of the Canadian Pacific Railway shows that large private users are also finding it consistent with present conditions to use Canadian products.



INTERIOR VIEW OF TORONTO CIVIC ABATTOIR. WM. R. PERRIN & COMPANY, ENGINEERS, TORONTO.

The Education of Public Taste*

B. D. JESSE BENEDICT CARTER, Director of the American Academy at Rome

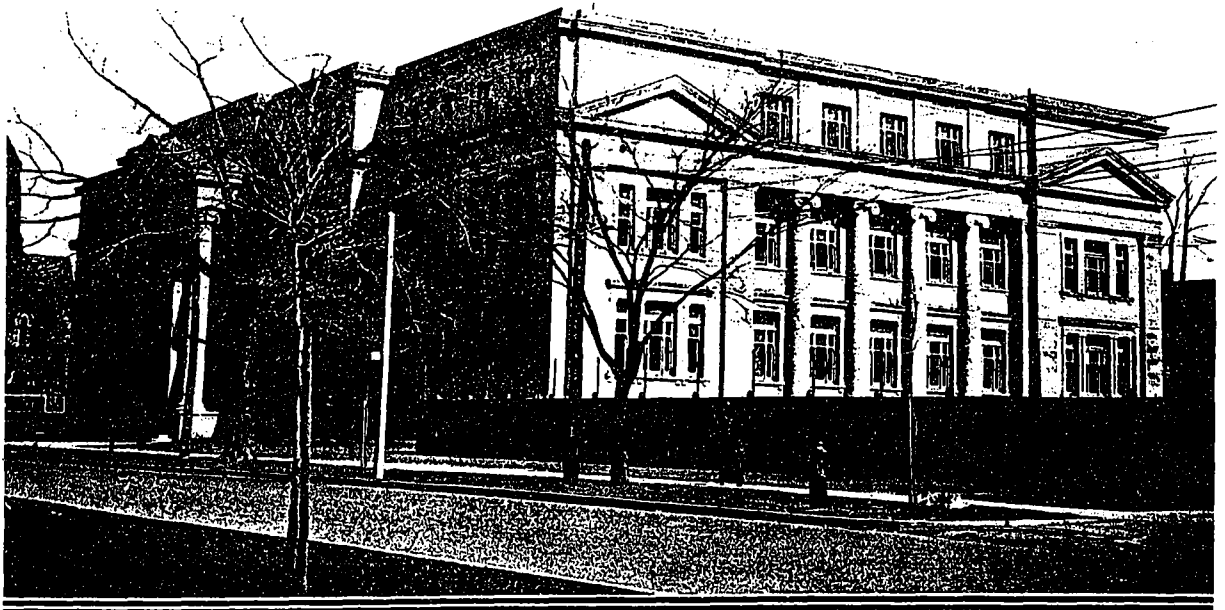
TWO years ago I had the great privilege of addressing this institute, and when I think that at that time I had the childlike and simple audacity to prophesy to you that we were approaching the Middle Ages, I tremble to-night at what I may say, and at the gruesome way in which the fulfilment of that prophecy has been revealed in the last eighteen months. I told you then that we were approaching the Middle Ages. They have not only come, but they are in full darkness. Europe is very dark to-day. She is dark physically, for fear of the terror that flieth by night. She is dark spiritually, for the bubbling up of that perpetual query, "*Cui bono?*"—What is it all about?

And still we stand in an age of prophecy, and prophecy goes, if you will, very cheap. We have old men seeing visions and young men dreaming dreams. We have our peace ships. We have our peace congresses of mothers and wives getting together and throwing themselves, in good old Roman fashion, between the combatants. These are strange days, my brethren.

*An address delivered at the annual dinner of the American Institute of Architects.

The history of them is full of those things that are so simple,—that seem to us so tragic. And, in the midst of this prophecy, I have only one prophecy that I dare to make to-night, and that is that when this war is over the result of it, whichever way victory may lie, will be felt in the United States more than anywhere else in this world. And yet, I understand we dare not talk about preparedness; we must wait until the time has come when we must be prepared.

But that is not my subject to-night. I would not have chosen my subject as it is; it was given me by one of the institute, who asked me to speak on the "Education of Public Taste." Now that, to me, is an unnecessary thing to speak of in the presence of this institute. To you, who are doing all things, it seems impossible that I should tell anything about the possibilities of educating public taste; all the more so when, as I could not hear, I came and saw the growth, the wonderful strides that public taste is making year by year. I stand in rapt admiration of what you are all doing to give us the expression of those things that are latent in all true Americans.



THE DEPARTMENT OF HOUSEHOLD SCIENCE BUILDING, TORONTO.

This was a gift to the University of Toronto from the late Mrs. Massey Treble, who died in Santa Barbara last November. By her will an endowment fund of \$100,000 is left to this institution.

But, seeing I have been asked to do it, I do it in the same spirit in which the request came; for I can think of nothing more touching than the fact that you who are doing these things should so entirely for the moment forget your commissions in the spirit of the realization of your omissions, that you should write pamphlets and circulate documents and publish a journal, in the hope that you may be able to rouse America to a sense of the necessity of the education of public taste. It seems to me such a wonderful thing—so old, so ancient! Like the patriarch that labored all those years and forgot them, for the love he bore to her—the love you bear to your art.

And so, in the spirit of perfectly straightforward honesty, and having been asked to answer this question, I propose to say something to you that may seem very crude. It may have the transcendental uselessness of those counsels that transgress all the rules because they seem to discourage reasonable effort.

As a matter of fact, when we look at the beginnings of public taste, we must look at the history of our country. And there is a thing that could be written in a wonderful way, if someone could only do it—the story of how in the progress of our country, our history, we have gradually forgotten the individual entirely and gone into, not only the psychology of mob-motion, but the personal appreciation only of the mass.

We understand it perfectly. Our ancestors came up with the most wonderfully developed

taste, a small community. Except the ancient Greeks, there was never a community in the world so perfectly individualistic, so absolutely personal, as the Eastern Atlantic States in the seventeenth and eighteenth centuries. And then there came that great, sublime ideal,—no man can have reason that speaks against it,—that ideal that this Continent must be ours; we must possess it; we must cultivate it; we must cover it with a network of railroads; we must extract its mineral wealth; we must populate it—by ourselves, and by hordes of those who would come to us in the great principle—gradually diluting, if you will—in which our ancestors came here first.

But in that process we have long lost the appreciation of the copper cent. From the cent we have passed to the dollar; from the dollar we have passed to the thousands of dollars; from the thousands to the millions. And, in the same sense, the individual went into the mass. It is so much easier to handle the dollar than one hundred copper cents. So much easier to speak of one hundred human beings than one hundred personalities.

So we have gone on massing, massing, massing—working with masses until our alienists, teaching us mob-psychology, in order to make the vicious circle complete, divide us into double, triple, quadruple personalities—until we are in danger of making little mobs inside ourselves. And, when those little mobs come into existence, we may feel, perhaps, more at home, because we are so much more accustomed to dealing with



A COLONIAL HOUSE IN CONNECTICUT, U.S.A.

To the immediate rear of the house, sturdy oaks raise their branches, while sloping lawns retire gracefully to the waters of the Sound. An effective touch is added to the charm of house and grounds by the high white fence of Colonial palings which completely encloses the land. The approach leads through the sunken gardens, a section of which is visible in the accompanying illustration, across the grassy terraces to the severely simple Doric portico which dominates the facade.

masses than with individuals. We may, perhaps, feel a certain old-fashioned sense of shame in the presence of a little internal mob.

I say this in all seriousness, for it seems to me that the only problem we have to deal with in this difficulty in regard to public taste is the problem of private taste and the problem of the elevation of individuality. Taste is the most personal thing in the world. It is quite as personal as religion. A public taste could be, of course, the taste of a committee appointed by some political or organized mass; but it would simply be then the standardizing of the tastes of its members.

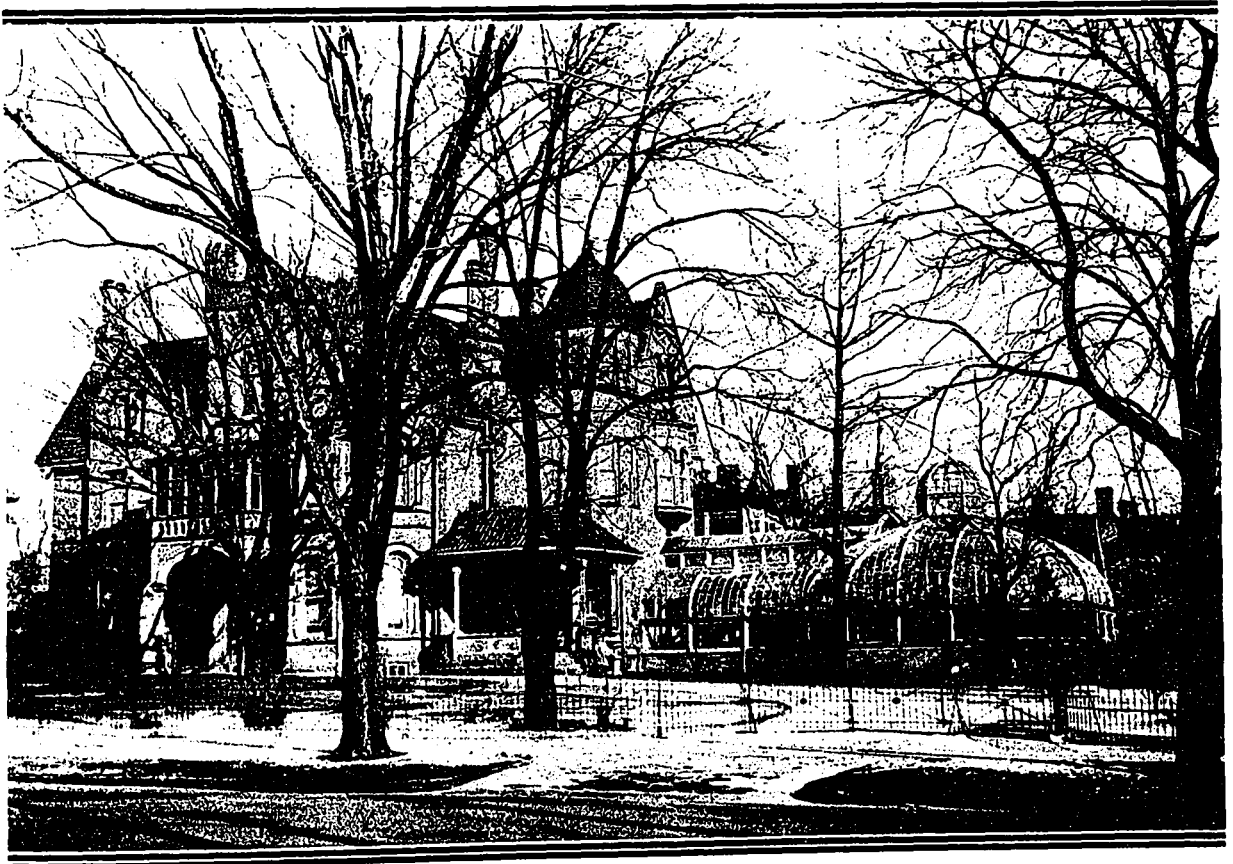
We may go beyond that. We may develop a taste among ourselves that may be harmonious. And that is what we are doing. To inculcate the whole thing, it is an absolute necessity that we should develop private taste—that people should come into harmony with their surroundings. The trouble is simply that we as a nation have forgotten for a moment the necessity of appreciating individuality.

A man goes through the streets of New York, his mind filled with wonderful schemes for helping the masses. He gets on the tram, he gets off the tram, and he doesn't see the man who runs that tram. He would do a great deal more good if he recognized the personality of that tram-conductor.

Really, rowdies are themselves the most courteous men in the world, if you only realize that. I come here and I say to the lift boy, "please," and the man takes his hat off to me a year afterward. I say to the man, "Forty-two, if you please," and he says, "Certainly, sir; thank you."

But this is, after all, only the appreciation of individuality. What other difficulty is there? These persons having been crushed by this massing movement—they are individuals—what are they doing? They are trying to escape individuality, poor things, by being all alike! We establish in this country the great principle that all men are free and equal; and then we spend all the time trying to be equal, and never try to be free.

Speaking for the masses, what is the freedom of our intellectual life? It is the equality of the headline in the newspapers. It does our thinking for us; it does, usually, our reading for us. And what is the freedom of our private dress, of our habitations? We stand there under that anæmic influence of commercial advertising. We find that the wonderful Icthyosaurus Department Store has ten thousand lingerie gowns at ten dollars, and at once ten thousand women must buy those ten thousand lingerie gowns. We find that the men who "saw that hump" put it on the toe of the shoe; and there-



"EUCLID HALL," FOR MANY YEARS THE MASSEY RESIDENCE.

This handsome house on Jarvis street, Toronto, was for years the residence of the late Hart A. Massey, and afterwards of his daughter, Mrs. Massey Treble. By the will of the latter, "Euclid Hall," together with all the land in connection therewith, is devised to such corporation created and organized for educational, hospital or other purposes in connection with the Methodist Church of Canada as the trustees may in their discretion appoint: if for educational purposes to be known as "Phelps-Massey College," and if for hospital purposes as "Methodist Deaconess Hospital" or "Methodist Hospital."

upon all our shoes wore humps, until we rebelled and sent them to Europe, where they are still wearing them.

Now, we may not be able to cure these things. I do not see how we are going to stop them. At the same time, don't forget that they ought to be stopped. Don't give up the great ideal, the possibility of education along these lines.

Don't you see? We are not all of us as we were yesterday. We know, more than we ever knew before, that we are a very mixed nation; there are so many of these "ignorant foreigners" coming in every day.

They're the people who go to the museum on Sundays.

They are men and women who know a good picture when they see it. They know it is a good picture, not because it cost a million dollars, not because the artist died last week, but because the picture speaks to them with the still, small voice of their own admiration.

Those are the people that are ignorant, and the people that are following in our lead.

There was once a man in this world who did more for culture than most men have ever done—Saint Benedict. He founded a monastic rule. In his rule, he puts the doctrine of *stabilitas*—stability. Don't you see, we need that rule. We need a little bit of the recognition of the value of the pools and backwaters. There is where your culture stands. We don't know the people that have had the most of it. Thousands of them we have never met. They are the quiet people, the *stabilitas*-loving people. They sit quietly in their pools and their backwaters, and the great stream rushes on.

And culture lives in the pools and backwaters, lives on things that have been done away with now. All taste is barnacles, if you will; but as soon as we wipe and wash and vacuum-clean all our civilization, where is the residuum, the sedimentary deposit, from which these precious things are to arise? When we find pools and backwaters we organize movements that will drain these things into the great rushing stream, instead of letting them lie there and respecting them.

This all seems criticism. It is not criticism of anything you have done, only criticism of conditions called forth by the spirit of our time. We have not had time to do these things yet, you say. Perhaps we have not, but let us take a quarter of an hour a day and think about them.

On the other hand, what we have done is so wonderful! You men have written these living books that can be read—that he who runs may read. Most people are running here, and so I suppose that is the most popular literature.

Take, for instance, New York. Take a man who is able to put the blessing of God in the shape of a cathedral, or a skyscraper; who is

able to make a Woolworth Building into a sort of amphibious thing, half commercial and half divine. Take your railway stations. I entered the gate of one to-day, a wonderful building, the great Pennsylvania station in New York. I entered it some two years ago, a dark winter morning, at seven o'clock, and there was a light such as I had never seen in such a place, a light such as exists in the Pantheon—that blue, purple dawn, scattering itself in those coffers. I forgot myself. I forgot I was in this prosaic America, and, standing before the man that was going to sell me my ticket, I exclaimed, "Oh! this is wonderful." Then I hesitated, somewhat confused; but I was agreeably surprised. The man said, "My dear man, I am the night ticket man, and that is what I sit up waiting for. Isn't it beautiful?"

You take a city which has on its Fifth Avenue a church like St. Thomas', and when we walk that avenue it divides itself into two parts for almost everybody—until you have seen it, and afterward when you are thinking about it.

The history of taste is a most marvelous series of vicissitudes. In the ancient world it stood again and again at the brink of failure. There came a time when the city of Rome was in the balance, when Totila had captured it and was preparing to raze it to the ground, in order to celebrate his victory. Those things are not so far away now as they once seemed. He was preparing to raze that wonderful city to the ground simply to show his joy in acquiring that valuable piece of real estate, and the Imperial General, Belisarius, wrote him a letter saying: "Great cities are not the work of one generation of men, or of one age, but of countless ages. And surely of all cities in this world the fairest is the city of Rome. And therefore, O Totila, should you destroy this city, and should you fail to win this war, what can you expect of us, of pity or mercy, after you have destroyed it? Whereas, if you win the war, how sorry will you be that you have destroyed the brightest jewel in your crown."

Totila spared Rome, and in sparing Rome he left to it that building which of all buildings is the most wonderful—the Pantheon. He left that building, and Boniface came and rescued it by making it into the Church of St. Mary and the Martyrs. And so it has stood there down into the present.

And when we stand in that Pantheon, and see that moving light and shade which thousands and thousands of our fathers have seen,—our spiritual fathers,—it means a beautiful thing which is not made by man, except in so far as its effects bring out the beauty of God. Those are the things in this world which create taste. They educate our taste. And God be merciful to those who, in any case, destroy a monument such as that!

New Building of The Robert Simpson Co.

A Modern Fireproof Building

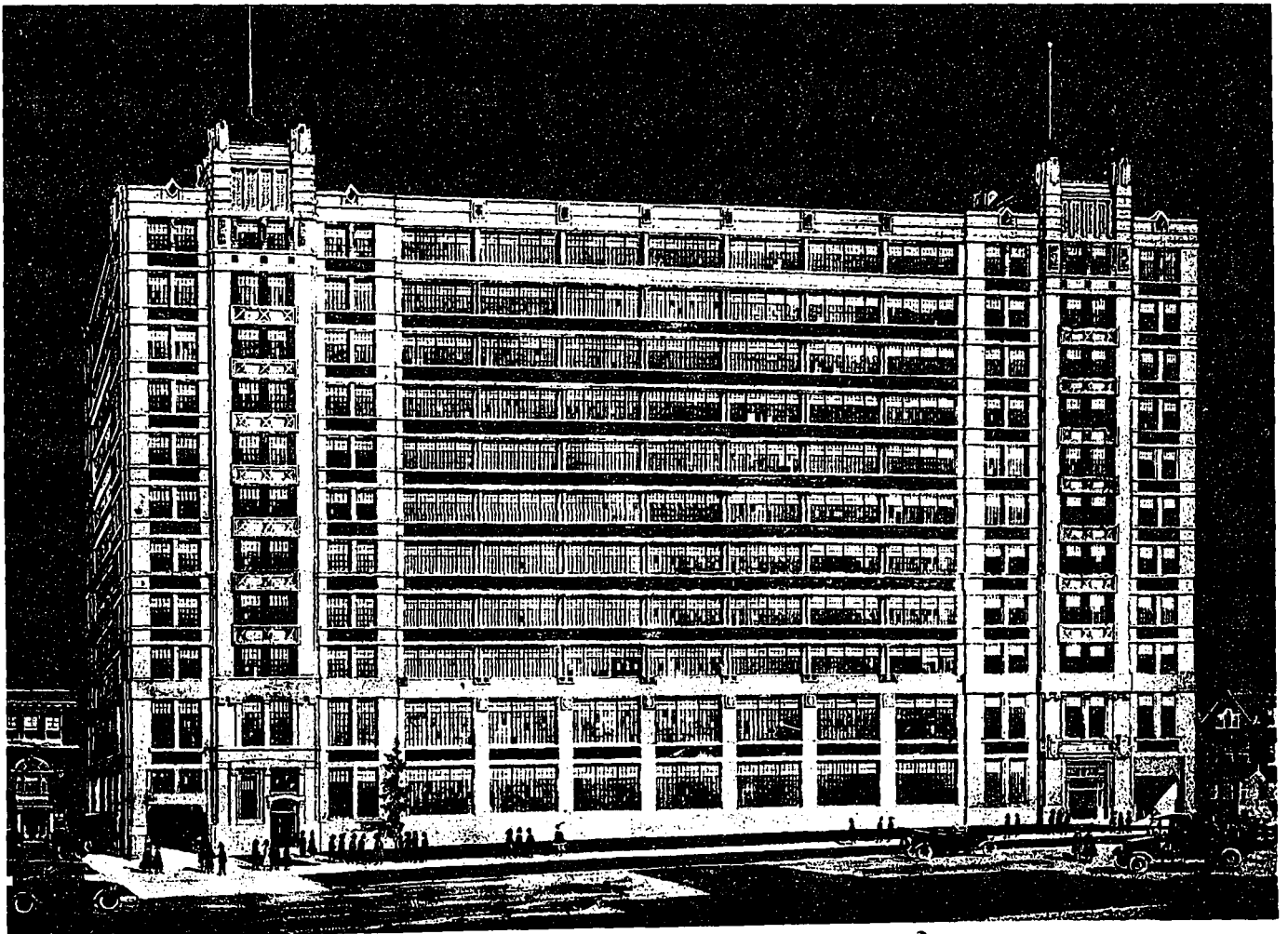
ONE of the large buildings now under way in Toronto is that of the Robert Simpson Co., which is being erected on Mutual street, just north of Wilton avenue, on a site extending through to Dalhousie street on the rear.

The building covers the whole site, and is one hundred and fifteen feet by two hundred and seventy-nine feet, and will be eleven storeys in height, to contain the mail order business of the company, which has grown to an extent that makes necessary the space to be provided by the structure illustrated herewith.

Reinforced concrete of mushroom construction, with brick panels, provide a handsome and durable exterior, and is in line with modern fireproof practice. In the front above the first floor no pillars are shown, leaving an unbroken front of glass extending from the two towers, the piers being set back to provide for this feature. The first floor on both sides extends over

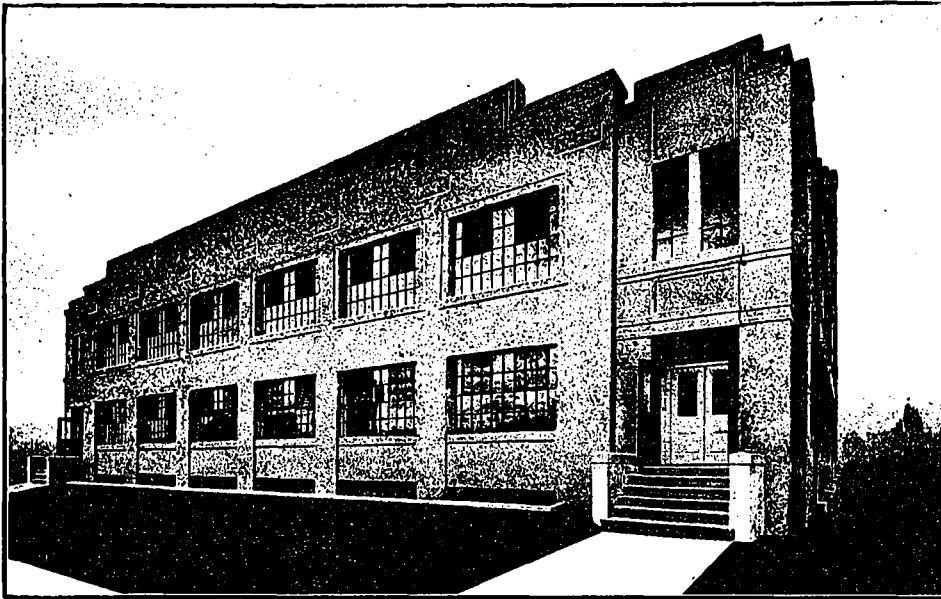
an areaway where all deliveries will be handled, and while the building has a rear street frontage two bays are also placed there, so that all handling of freight will be on the property of the company, and will not interfere with street traffic in any way. A steel chimney will be erected from the boiler room.

“Canada should seriously take up the question of engaging her ship-building facilities,” said a Scotch ship-builder in answer to a question whether the Dominion could compete with the Clyde or Tyne yards. “Material and labor are at hand in Canada. The only question hitherto has been that of cost, and while formerly the cost of building in British yards has been six pounds per ton on the average, it has now risen to fifteen, which is higher than you should be able to build them in the Dominion.”



NEW WAREHOUSE BUILDING OF THE ROBERT SIMPSON CO., NOW BEING ERRECTED ON MUTUAL STREET, TORONTO.
MAX DUNNING, ARCHITECT. BURKE, HORWOOD & WHITE, CONSULTING ARCHITECTS, TORONTO.

The Farmers' Dairy Building, Toronto



SOUTH AND FRONT EXTERIOR OF THE FARMERS' DAIRY BUILDING, TORONTO.

THE Farmers' Dairy building, completed in 1915, offers an example of simplicity and quiet dignity as applied to buildings of the factory type, which of necessity must be placed in districts more or less residential. The site of this structure is on Walmer road, Toronto, immediately below the "Hill," where it is surrounded by homes. In selecting this location the directors had in view the receiving of the milk from the dairy farms which abound in York County, the highways of which converge close by, while a railroad line from more distant points is close at hand. This site also makes for quick distribution of the dairy products to the homes of their many customers. Nothing objectionable can be charged against the locating of the plant here, as smoke and noise are entirely abated, and the character and design of the building is not out of harmony with the surroundings.

This building is constructed of reinforced concrete, the exterior being finished with a coat of cement and painted, the use of exterior facing material being eliminated. The dairy has a frontage of one hundred and five feet by ninety feet deep, and contains two storeys and basement. In the ar-

range of the interior three important processes were to be provided for, viz.: First, the reception of the milk and its conveyance to the pasteurizing room; second, reception of the empty bottles and their conveyance to the cleansing room; third, the conveyance of bottled milk to the cold storage rooms.

A glance at the floor plans will show how well the above were arranged for, and all waste motion obviated.

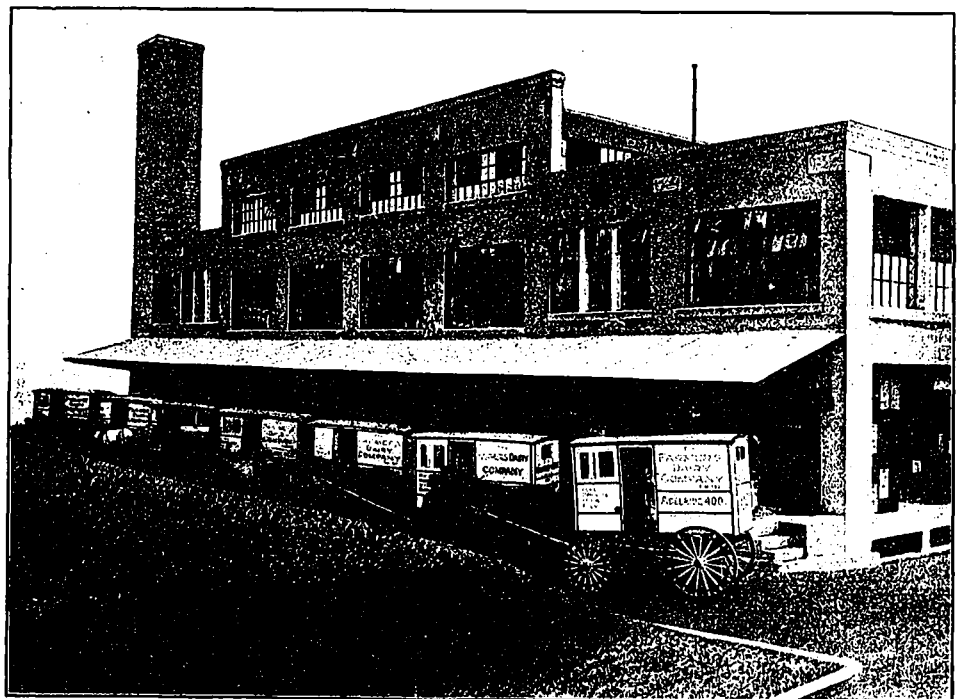
Throughout the dairy proper wood is eliminated; concrete, steel and

glass provide for modern sanitation, as well as making same absolutely fireproof.

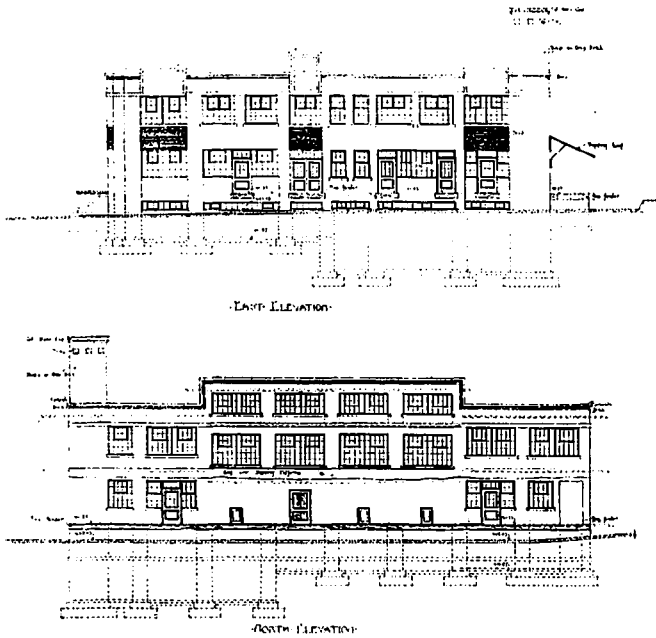
In the modern factory inspection of process by the public is invited, and in this example provision has been made for the closest scrutiny by having visitors' corridors separated from the actual machinery by partitions of glass.

In the basement are placed the workshop, refrigeration equipment, dressing rooms and power plant. Two boilers of the return tubular type are installed, and coal is delivered through a chute in areaway direct to coal room.

In addition to the refrigeration equipment of



NORTH AND REAR EXTERIOR OF THE FARMERS' DAIRY BUILDING. SYMONS & BAE, ARCHITECTS, TORONTO.

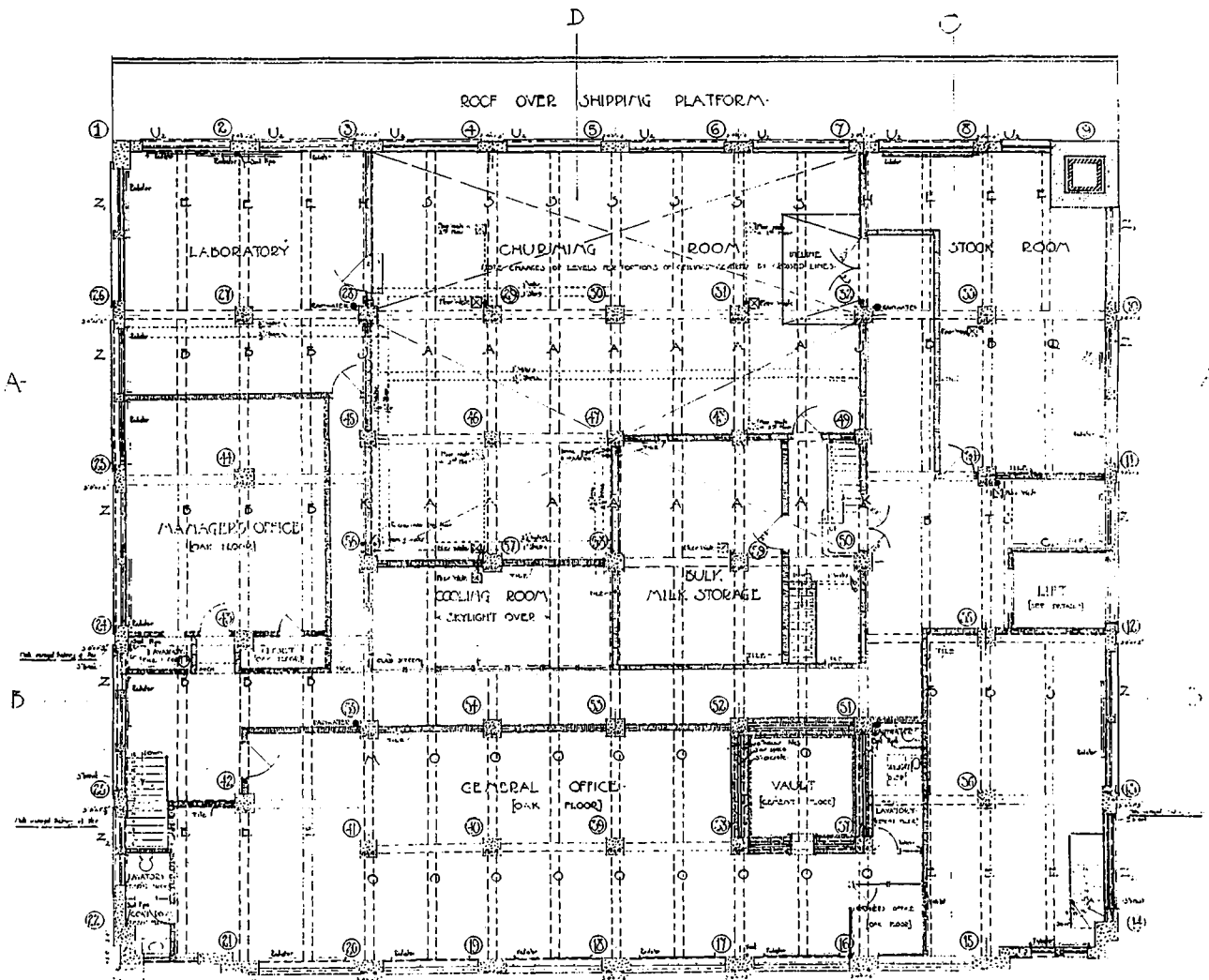


the company which was removed from the old premises on Queen street west, and re-erected in the new building, the following apparatus was installed: One ammonia condenser and receiver, one ammonia oil separator, gauges, brine tank, brine circulating pump, brine cooler, to-

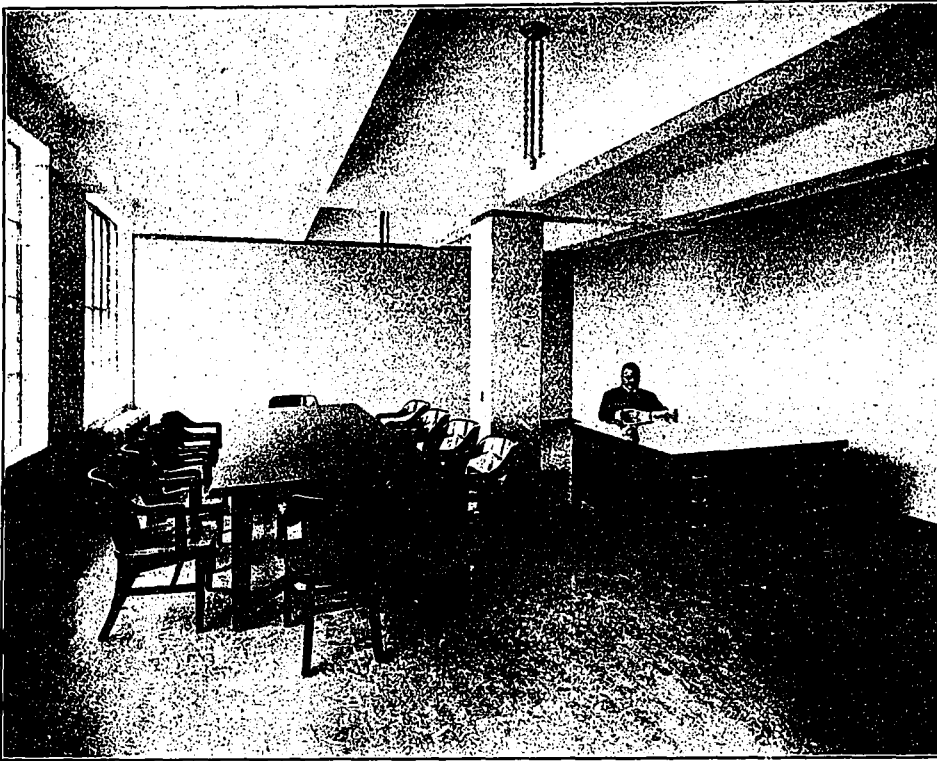
gether with the necessary thermometers, valves and fittings.

The ammonia compression system of refrigeration is used, which, briefly, may be described as follows: Anhydrous ammonia is used as the refrigerating medium, or refrigerant, partly on account of its high latent heat of vaporization or heat absorbing quality, and partly because of the fact that it may be reliquified after expansion and vaporization at comparatively low pressures. In its natural state, at atmospheric pressure and ordinary temperature, anhydrous ammonia is a gas or vapor.

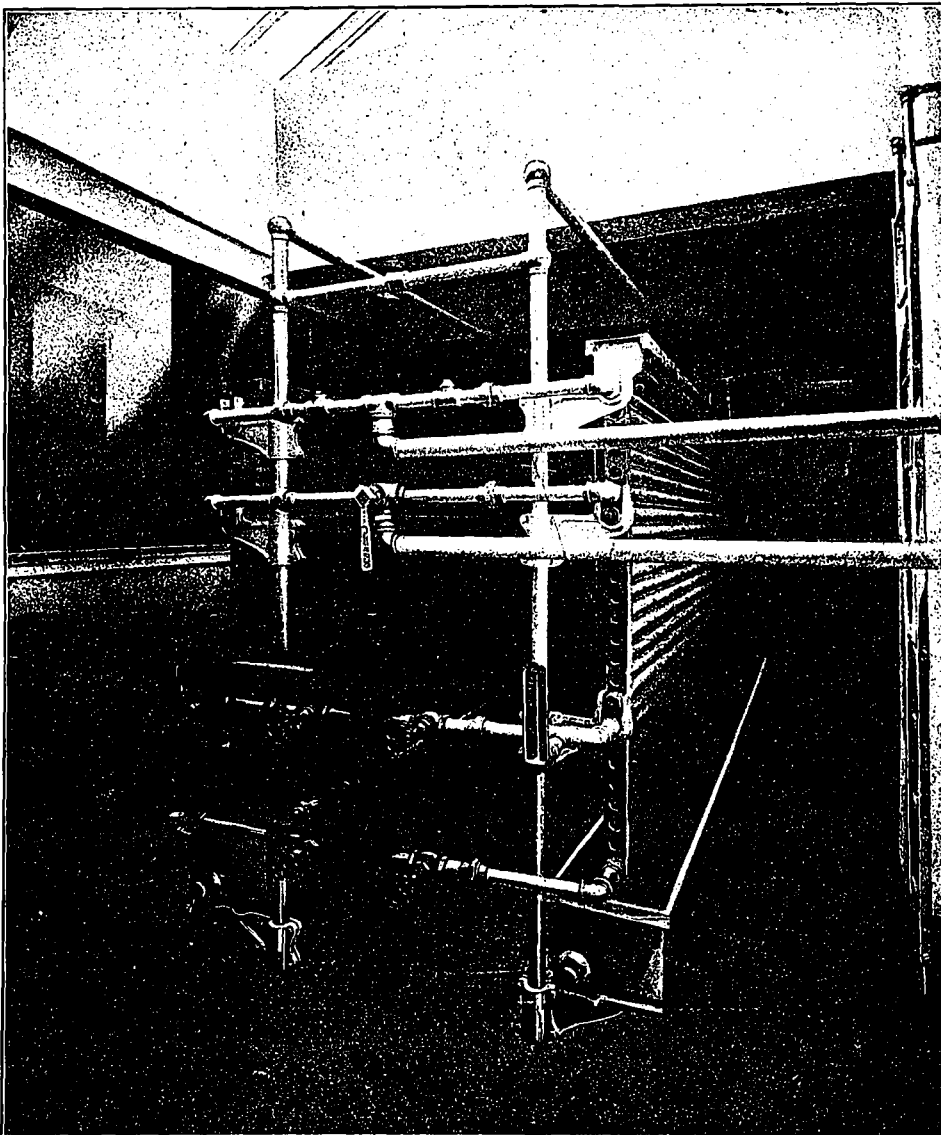
The refrigeration process takes place during the transformation of the ammonia from a liquid to a gas, and is accomplished by allowing the liquid, compressed to 150-170 pounds (roughly), to pass through a special valve, known as the expansion valve, to the expansion piping, in which a much lower pressure is maintained. The ammonia tends to vaporize at the lower pressure, but in order to do so it must be supplied with a certain amount of heat, namely, its latent heat of vaporization. The heat is absorbed from the surrounding substances or bodies by the ammonia in its passage through the piping after leaving the expansion valve.



GROUND FLOOR PLAN, FARMERS' DAIRY BUILDING, TORONTO. SYMONS & RAE, ARCHITECTS, TORONTO.



BOARD ROOM OF THE FARMERS' DAIRY BUILDING, TORONTO.
SYMONS & RAE, ARCHITECTS, TORONTO.



COOLING THE MILK AFTER PASTEURIZING, THE FARMERS' DAIRY BUILDING, TORONTO.

Through the expansion side of the plant the now vaporized ammonia returns to the compressor, is re-compressed and forced through the condenser, where its latent heat is absorbed. From the condenser the ammonia flows into the receiving tank, and from there to the expansion valve, to commence again its cycle. The expansion takes place through piping placed in direct communication with the substance to be cooled.

The pipe covering is of sectional moulded cork, painted with black asphaltum paint.

The walls and partitions of the cold storage rooms are of hollow tile, covered over with two-inch corkboard in a one-half-inch bed of cement, all vertical joints being broken. A second two inch course of corkboard was then added, laid in hot asphalt cement, and additionally secured to the first with galvanized nails, followed with an interior course of hollow tile.

The floors, of concrete, were first covered with four-inch corkboard in two courses, this being flooded with hot asphalt and a three-inch working concrete surface laid over same. Over the boiler room six inches of corkboard was used in two courses, laid as described above, and all exposed hollow tile and corkboard surfaces on walls and ceilings were finished with one-half-inch cement plaster, applied in two coats with a float finish. A temperature of 35 to 40 F. is maintained by the fan blast system on a basis of twelve-hour compression operation. All doors are of special make.

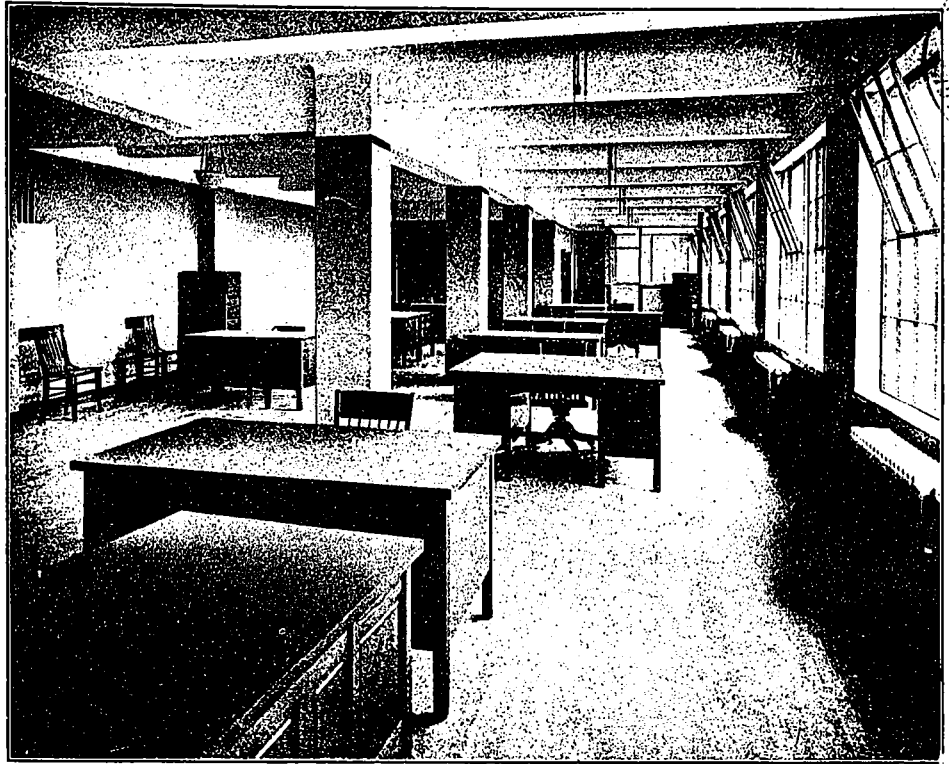
On the ground floor are located the receiving and delivery rooms, can and

bottle washing department, storage rooms, etc., and sales rooms occupy the front portion of this floor. The first floor comprises general offices, board room, laboratory, churning, cooling, storage and stock rooms. In the offices and board room hardwood floors are laid over concrete. Employees' rest rooms and shower baths are also a feature of this plant.

Since the erection of the dairy building work was started on the stables, which is now nearing completion. This building is on the same site, but some distance away, and facing on another street. Built of concrete reinforced construction, this structure will contain storage for vehicles, stabling accommodation on the second floor, blacksmith, carriage and paint shops completely equipped.

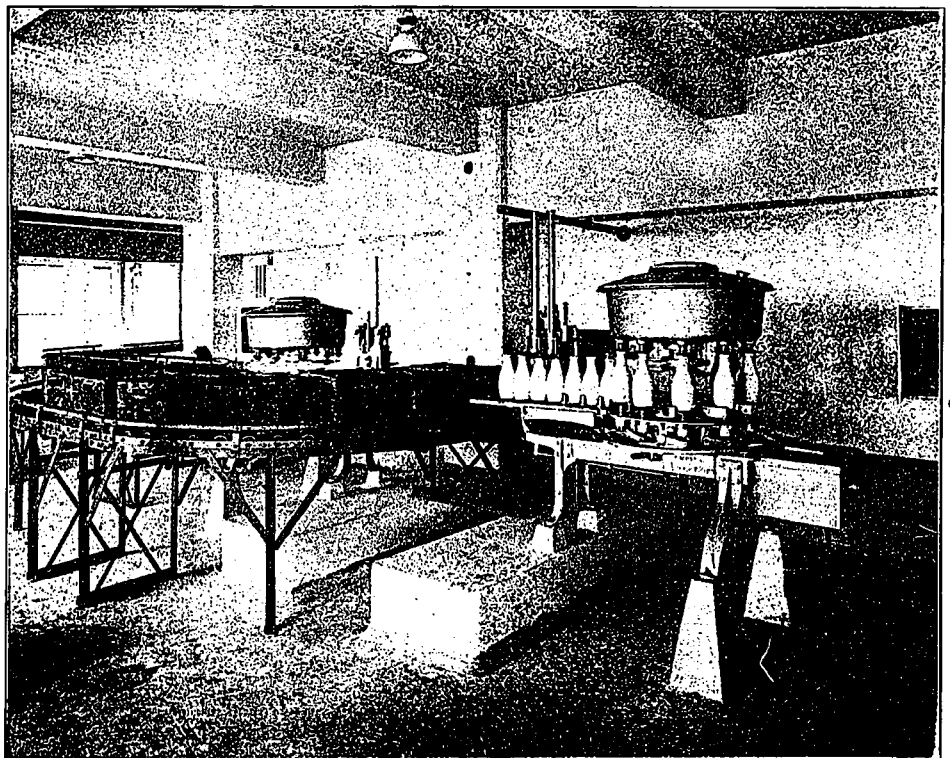
CANADIAN STONE PROTECTION

The decision of the Government to increase the duty on dressed stone, announced by Mr. White during his budget speech, is the result of representations made by stone cutters and quarry owners throughout Canada. The Montreal Builders' Exchange have taken a foremost part in asking the Government to give increased protection to this industry and have been represented on two deputations which have waited on the Government. The stone cutting and quarry trade section of the Montreal Builders' Exchange presented a very strong petition to the Minister of Finance, setting forth the need for higher duties. They then asked for a specific duty of 65 cents a cubic foot on building stone of any kind, sawn, dressed, hewn, polished, or otherwise manufactured. The Government, however, propose that the duty of 20 per cent. on dressed stone



GENERAL OFFICE OF THE FARMERS' DAIRY BUILDING, TORONTO.

sawn on two sides, but if sawn on four sides it will pay 15 cents per 100 lbs.; and if turned, cut or further manufactured, 45 cents per 100 lbs. The Canadian stonecutters and quarry owners contend that there is plenty of suitable stone in the Dominion for all purposes, if the industry were given proper protection, although architects who specify Indiana limestone and Ohio sandstone state they do so for the reason it is most suitable for their purposes.



MILK BOTTLING ROOM OF THE FARMERS' DAIRY BUILDING, TORONTO.

CONSTRUCTION

A JOURNAL FOR THE ARCHITECTURAL
ENGINEERING AND CONTRACTING
INTERESTS OF CANADA



H. GAGNIER, LIMITED, PUBLISHERS

WESTON WRIGLEY, GENERAL MANAGER

Corner Richmond and Sheppard Streets

Toronto - - - Canada

BRANCH OFFICES :

MONTREAL---171 St. James Street

W. J. Cameron, Representative

NEW YORK---10 East 43rd Street

A. R. Lowe, Representative

CORRESPONDENCE.—All correspondence should be addressed to "CONSTRUCTION," Corner Richmond and Sheppard Streets, Toronto, Canada.

SUBSCRIPTIONS.—Canada and Great Britain, \$3.00 per annum. United States, the Continent and all Postal Union countries, \$4.00 per annum, in advance. Single copies, 35c.

ADVERTISEMENTS.—Changes of, or new advertisements must reach the Head Office not later than the twentieth of the month preceding publication, to ensure insertion. Mailing date is on the tenth of each month. Advertising rates on application.

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

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

FRASER S. KEITH EDITOR AND MANAGER

Vol. IX Toronto, March, 1916 No. 3

QUANTITIES AND CONTRACTS

The method in vogue of estimating from plans and specifications, which has been in existence during the past generation, and possibly longer, is about to be superseded by a more efficient method.

No matter how many men or firms are figuring a building each takes off his own quantities and figures accordingly, and the time allowed for determining the value of work is now, generally speaking, too short. Someone has said accuracy is too often sacrificed for speed. Present methods are conducive to error and resulting complications. Estimating as it is now done

entails an immense amount of wasted time and energy, as one individual could take off the quantities ready for pricing, whereas twenty, perhaps, are doing the same work, all going over the same ground. The builder in the various lines wastes a great deal of his own time and the time of men in his employ in taking off quantities for estimating. If this wasted time and energy could be devoted to supervising actual construction work on hand, it would be much better from the standpoint of efficiency, and, incidentally, profit. The builder may not add a particular item for the wasted time and energy in an estimate, but in the overhead cost of the various buildings he does; it becomes a serious item of office expense, and therefore must be, and is, paid for eventually by the owners, although under our present methods he may never realize the fact.

It appears that we are wanting in efficient methods in this particular. Owners may pay in the end many times over for taking off the quantities of a building; this would not be the case if one well-trained person were to take such quantities off and duplicate lists of these quantities furnished to each bidder as a uniform basis upon which to figure. This would help to reduce the cost of construction in the sense that a builder would be able to devote more time to the work he has in actual progress. He would have more time and a clearer mind with which to consider the numerous questions which always arise in carrying out work; greater efficiency and less waste would result.

It would seem, therefore, that the creation of the office of quantity surveyor, licensed by the Government, or appointed by the architectural associations, is desirable; men who have special training in this work and who are responsible and competent. The plans and specifications would pass into his hands from the architect. His duty would be to prepare a bill of quantities of the various materials required for the construction of the building. This bill of quantities, with the plans and specifications to be submitted to the various bidders who are to figure the work. The plans and specifications to indicate the conditions under which construction will take place, height of building, character of work, etc., and the bill of quantities to indicate the quantity of materials of all kinds which the successful bidder is expected to furnish. The bill of quantities should be made the basis of the contract entered into between the builder and the owner. Should more materials be required the builder to be paid for same at his own unit rate, and if less materials are required, the same to be deducted from the contract at the unit rate. This would result in a great saving of energy and time now wasted, and result in a better understanding between all parties.

Some builders seem to be opposed to change

in our system, taking the position if changed anyone from a candlestick-maker could become a contractor; therefore, the business would become overcrowded and would not be a profitable business in which to engage. There is nothing to prevent that now, and, unfortunately, it does occur. It appears that profits are not the result of our system of estimating. Our system is responsible for the losses, because it is impossible for a bidder in the hurry generally necessary in taking off quantities to accurately and intelligently do such work for several reasons, consequently he must use his building instinct and judgment to guess "right" in greater or less degree in making up his estimate, and it is through resulting errors and by omitting quantities altogether that losses occur.

The great variation in figures submitted for buildings is due not to the unit prices used, but is due to the difference in the quantities each bidder takes off. This variation in quantities is due in part to the difference in the judgment of the various men taking off quantities, time being usually too short, and consequently under our present unscientific, inefficient methods of estimating there must be more or less guessing as to the quantity of materials required.

The profit in building—when there is any—is due rather to the ability of the builder to buy materials at the best market price and to his efficient methods in conducting his operations and managing his business.

The quantity system, or some method of payment based on the quantity of work actually executed, would make the business more profitable to the builder, less costly, and therefore a better investment for the owner.

The survey system, as it is called, dissects each and every part of the work, telling the amount of the material required and the length of time, together with the cost necessary, to complete any part of any building. In the case of the owner this system will show what material and labor is required to complete his house. It shows him the kind and grade of material, and by following his cost sheet, as the building progresses he may prove to himself that he is receiving exactly what he is paying for. It is a great saving of time in estimating by the contractor. Instead of many men figuring the same plan in the ordinary way, it is surveyed by the estimator according to plans and specifications.

This system is now being exploited by private companies, and herein lies an opportunity for the various architectural associations and builders' exchanges to work together with a view to facilitating construction and lessening its cost. There are many men in Canada who have had considerable experience in taking off quantities who could be appointed official estimators by the associations of architects and

thus have recognition from the members of the builders' exchanges. In carrying out this procedure it would call for co-operation between the architects and builders, the discussion of which would bring the two bodies of men in closer contact and would have the result of being advantageous to both parties.

ON A BASIS OF EDUCATION

While nearly every professional and technical organization in Canada bases its reason for meeting on the ground of educational advantage by listening to a paper or address by some one of its members on a subject upon which he is probably more familiar than the others, resulting in a discussion by the various members present, the architects of Canada have not yet generally adopted this plan. There is no denying the fact that by meeting on such a ground in this manner the members of any profession are brought in closer sympathy with each other in the very discussion of the problems that confront the individual, and at the same time should be in the way of becoming better posted on the various subjects under discussion.

It is so generally admitted by individual architects themselves that such a system would work out greatly to the advantage that one wonders why it has not been adopted before this.

The Canadian Society of Civil Engineers, whose profession is the most closely allied with that of the architects, and whose work often brings them together on a common ground, have adopted a plan that might well be followed. It happens that the central organization of the Civil Engineers is at Montreal, where the society has a handsome building designed for its own purposes. Here meetings are held weekly, at which a paper is read by a member of the society on some subject relating to civil, mechanical, electrical, mining or chemical engineering, after which a free discussion on the part of the members is indulged in. In every one of the large cities of Canada a local branch of the society exists, where the same procedure is adopted, although the meetings are not held as often as in Montreal, where the largest number of members is to be found. The result of this not only stimulates the interest of the members in the subjects discussed, but it makes them better acquainted, brings them together more often than they would otherwise meet, and creates a bond of union and sympathy that would be impossible under other conditions.

With the experience satisfactory in every way of the Civil Engineers as an incentive the Architectural Institute of Canada, through its Provincial organizations and local chapters, could adopt a similar system which would be of the greatest possible benefit to every member concerned.

Architectural Digest

Articles of More Than Passing Interest From Our Contemporaries

BALANCE IN DESIGN.

Equal disposition of mass about a centre or axis is due to a law having its origin in the demands of equilibrium. In architecture the rule applies rigidly to free-standing parts and components, such as columns. It cannot always, and need never, of necessity, apply to a whole composition. No doubt a peculiar dignity, not obtainable otherwise, attends the exactly-balanced facade in monumental buildings; but site, circumstances, and practical conditions often make it an impossibility for the designer to proceed on centre-and-wings principle. We have, then, to design irregular building masses with grace and beauty. Irregular architectural composition favors variation and novelty; that which at first sight seems an evil need not necessarily prove so. Looking back into architectural history, we see that irregular plans are by no means inconsistent with grandeur of effect. The departure from exact balance in Gothic buildings gave them one of their greatest charms.

In all great styles the rule of exact symmetry in the part is closely followed. This assertion may seem inconsistent with fact, and would be so did we not here include all components that are wanting in exact equal-sidedness by reason of their breaking into other masses. Where a square plan breaks into a circular, the square and the circle are broken; but the spirit and intention in the square and in the circular plan is exact symmetry. When, therefore, we assert that in all great architectural styles the law of equal disposition of mass about a centre or plane is duly honored, we include, for the reason stated, symmetrical components breaking into others. It is possible that those of expansive views, but small practical experience in architectural design, would regard part breaking into part, and leaving an irregular junction, as fatal to all beauty of effect. The architect will contend that such irregular junction, whereby something on asymmetric principles is produced by the union of two symmetrical objects, is not only without offense, but may originate great beauty and interest, and is quite an essential in the "picturesque." If we generally agree upon this, then something is gained of practical usefulness to the asymmetrical planner, and to all those whose minds are greatly exercised with questions of "balance" whenever they are compelled to abandon the principle of centre-and-wings.

The stair-turret and the tower are largely evidenced in our old village churches. We have shown that both the turret and the tower are planned, in spirit, as objects of geometrical regularity and exact symmetry (so called). As carried out, an irregular, unbalanced mass is produced. To destroy symmetrical orderliness by breaking the one into the other seems, at first, a crude idea, likely to cause offense; but we have urged, and taken for granted the concurrence of the reader in our view, that no such offense is produced, but that, on the contrary, a resultant architectural mass of true beauty and interest is obtained.

Under certain conditions, an element or compound will crystallize in true "symmetry" as a cubical figure, a tetrahedron, or the like. Under other conditions the crystals cluster. The free-born, regular, isolated crystal is an object of beauty; but no less beautiful or interesting is the group of associated crystals. Yet here, as with our turret and tower, and as in the case of all irregular junctions of divergent masses in building, broken and diverse—asymmetric—forms are produced; but so much of each crystal as exhibits itself is true to the crystal form, true to angle of crystallization, and possessed of symmetry. On the face of things, one might conclude that the irregular massing of crystals would destroy their beauty. All who carefully ponder this matter will admit, we think, that the resultant forms, lines, outlines, and masses are beautiful, often very beautiful indeed, and highly suggestive for the picturesque grouping of masses of building on the asymmetric system—that is, opposed to the centre-and-wings arrangement. We should consider this natural phenomenon, and endeavor to establish some general proposition respecting the breaking-in of part to part in architectural composition. On elevation, such masses may appear at times "lopsided"; but this effect of out-of-balance disappears in perspective.

Once we have, either by choice or necessity, abandoned the centre-and-wing plan, we must, we assume, proceed on a different fundamental design principle. Asymmetrical or irregular composition must be adopted without compromise. There must be no weak leaning towards the rules of symmetry, and we should ascertain what will be the true effect of masses in execution before we amend apparent defect on elevation. Equal-side, centre-and-wing composition of a whole facade is one way; the other is totally different. It was, sometime back, observed to us on passing a block of office buildings, that it seemed that the tower "should have been bigger." The observation was not made by an architect; but, all the same, it was much to the point. A strictly "symmetrical" facade, with equal mass right and left, up to about roof-line, had on one side a weak, half-hearted turret, an excrescence just budding, one might say. The effect and impression was that the designer had hesitated to destroy the exact equal-sidedness. Had a bold tower been provided, the composition, from a mere tribute to pseudo, or distorted, symmetry, would have passed clear into true asymmetry.

In a very difficult subject, we have endeavored to suggest two rules for guidance in irregular architectural composition, such as we find must necessarily pertain in the great majority of buildings: firstly, to maintain the great principle of mathematical equal-sidedness in the part, either actually, as in a column, or in spirit and intention, as in the circular turret breaking into the square tower; and, secondly, that when once the symmetrical whole facade is not possible, or not desired, the asymmetric principle should be consistently observed. If we believe in the former suggested rule, we shall not put pilasters with one left-hand volute on the right side of a facade, with a right-hand, single-voluted, cap on the left wing. In irregular architectural composition we must needs be too urgently concerned in rendering each part beautiful to have time to waste in perpetrating these or other monstrosities. The offense is against the rule of studied "symmetry" in the part. The strongest argument for irregular architecture, and

for dispersed ornamental device, is that each part of the composition may be so fashioned as to be interesting and graceful, irrespective of other parts. In unbalanced (in a sense) composition we need not distort the unit for the sake of some whole effect; and a beautiful building, surely, should be such unit, as we pass along, every part, contributory to the whole, should appear an object of interest and beauty. Then architecture bears comparison with music. Our subconsciousness, or memory, holds the general air and progress of rhythm and melody, while our immediate consciousness is enthralled with the instant harmony. We cannot have it both ways; either there must be symmetry, so-called, or asymmetry—either a St. Owen interior or a west front of Rouen Cathedral.

The idea that we must "balance" in irregular architectural composition is often a delusion, an impression, a legacy of lingering sympathy with exact equal-sidedness, itself largely the outcome of habitual elevational display of architectural device. The lion is sufficiently like the unicorn to balance in heraldic composition; sufficiently unlike to give individual interest to dexter and sinister hands. If we duplicate either the real or the mythical quadruped, we certainly attain exact equal-sidedness; but sameness is substituted for variety. This, by the way, demonstrates the fundamental difference between asymmetry and symmetry, so-called. We cannot however, deal with architectural mass as the herald employs lion and unicorn. Divergent "twin" towers to cathedral west-ends may have a certain quaintness; but we generally feel dissatisfied, or unconvinced. The failure may, perhaps, be accounted for as the result of an attempt to graft asymmetry on symmetry, which we have endeavored to show is not possible. We must either produce the monumental, equal-sided building, or start away on a new plan, based on quite a different principle. Small variations in detail are added charms in many symmetrical compositions; but a great belfry is not a detail.—Chas. H. Sturgis in "Architecture."

APPLY MODERN METHODS TO SUPERVISION OF BUILDING WORK.

The surprisingly low ratios of efficiency obtaining in some of the departments of state and city government having jurisdiction over the construction, equipment and operation of factory buildings, in New York City, revealed by the investigations held as a result of the Diamond candy factory fire seem to add tremendous weight to the contentions of those who advocate a consolidation of all departments governing building construction. That the present plan, involving as it does a division of responsibility among various departments, leads to a waste of public funds, and gross inadequacy of service appears now to be pretty thoroughly established.

Under the laws nominally in force here at present—and it is probable that conditions differ but little in other cities of the first class—factory buildings are inspected by seven, tenement houses, theatres and motion pictures by six, and office and hotel buildings by five separate and distinct departments. The advantages to be derived by establishing one bureau and conferring upon it complete jurisdiction over building construction and alterations are many, and would seem to be so apparent that all classes coming in active contact with building work must recognize them. It would, for example, inevitably lead to the establishment of high standards of inspection in place of the present multiplicity of ineffective and superficial inspections with divided responsibility. It would at the same time greatly reduce the cost of this work to the city, and add immeasurably to the convenience of architects, builders and owners.

The Advisory Council of real estate interests, in recommending a unification of all departments controlling the construction, equipment and repair of buildings, goes on record as follows:

"If this consolidation of building inspection departments should be accomplished, friction between minor city officials and property owners would largely disappear, while simultaneously some saving should be effected to the annual budget by the elimination of those positions consisting of similar duties. Economy and efficiency is not a slogan merely for taxpayers, but realization is gradually dawning upon the rentpayer that the high cost of living here is largely due to high taxes, and that high taxes can be partially accredited to extravagance in the administration of many of the city departments. It has been difficult to make progress in this respect, because of the mandatory legislation imposed on the city by the State Legislature. If a large part of this legislation could be repealed during the coming legislative session, and the various conflicting duties of the various city departments co-ordinated and unified under a single department, the mayor and the comptroller would have corrected one of the chief evils in our local government."

An advantage not noted by the various bodies which have given endorsement to this movement for consolidation of departments controlling building work, is the amount of time which it might be expected to save in the securing of permits for new buildings or alterations to existing ones. Under present laws the filing of plans at various departments and the necessity of securing the approval of some departments before the consideration of others can be obtained—traveling from one part of the city to another, and in general attempting to comply with the complex and often conflicting requirements of different departments—has resulted in not only a burden of expense and inconvenience to the architect, but a real loss to the owner, in the construction of whose building cannot be undertaken until the approvals of all the various city departments have been secured. In the interest, therefore, of economy, convenience, thoroughness and general efficiency—in fact from every point of view except possibly that of the politician or holder of some of the easy berths existing by reason of the present lax and indefensible methods—it would seem desirable, if not actually mandatory, to consolidate and bring under one responsible head all the various branches of city and State government now charged with the control of building work.

As suggested by the Advisory Council of the real estate interests, it is devoutly to be hoped that conflicting legislation will be repealed and new laws necessary to the establishment of the new order of things passed as the first important act of the coming session.—"American Architect."

Construction News

The following information is obtained from our correspondents, from architects, engineers and local newspapers. These items are published in our Daily Report Service, and are herein compiled for the use of subscribers to the monthly issue of "Construction." Should any of our readers desire this information daily we will be pleased to submit prices upon request

CIVIL ENGINEERING.

BRANTFORD, ONT.—City of Brantford propose installing natural gas plant.

BRANTFORD—Township of Brantford, A. M. Jackson, Temple Building, has called for tenders for bridges, concrete or steel construction.

CALGARY, ALTA.—City of Calgary will erect bridge, steel construction; cost \$24,000. Tenders now open.

COLLINGWOOD, ONT.—Tenders open for water works apparatus, steel lower and foundation, pumps, pump well, etc. Chairman, H. A. Currie; engineers, Chipman & Powers, Toronto.

CORNWALL, ONT.—Town Council have awarded contract to John Inglis, Toronto, for boiler and pump equipment.

DRUMMONDVILLE, P.Q.—Town of Drummondville, P.Q., will erect pumping station and filters. Tenders close March 15, 1916.

GLADSTONE, P.E.I.—Department of Public Works, Charlottetown, P.E.I., has called for tenders on a new bridge over Fox River. Engineer, L. B. McMillan.

HAMILTON—Hamilton and Toronto Highway Commission have plans for new bridge.

HULL, P.Q.—New bridge over Gatineau River proposed. Chairman, Archambault.

LACHUTE, P.Q.—Town of Lachute has awarded contract for water-mains to Contractor R. Arthur. Contract for new bridge has been awarded to Messrs. Lafleur & Bernier by the Province of Quebec.

LEAMINGTON, ONT.—Town Council has called for tenders for reinforced concrete work.

LONDON, ONT.—City Council are calling for tenders on new sewers.

ONTARIO—Plans are being prepared covering good roads by the Counties of Kent, Brant, Lambton, Victoria, Elgin, Prescott, Dundas, Stormont and Glengarry.

OTTAWA, ONT.—City of Ottawa, engineer, J. B. McRae, 310 Booth Building, has called for tenders on pumping station and equipment on Lemieux Island.

PEMBROKE, ONT.—County of Renfrew, clerk, R. Roney, has called for tenders on new bridge.

PORT STANLEY, ONT.—The Dominion Government propose erecting a new bridge here, of steel construction.

PORT STANLEY, ONT.—Dominion Government will improve docks at a cost of \$115,000. P. Pocock and M. D. Fraser, Port Stanley, interested.

TORONTO—City of Toronto has called for tenders for special tracks. Plans at room No. 10, City Hall.

TORONTO—City of Toronto, contract awarded for new bridge at Bathurst street, to Canadian Bridge Co.

VICTORIA, B.C.—Canadian Northern Pacific Railway has awarded contract for new bridge over Selkirk River to S. Doe for \$20,000.

WINDSOR, ONT.—City of Windsor has called for tenders on sewers for Elsmere and Marquette avenues. Engineer, M. E. Brian.

WINNIPEG, MAN.—City of Winnipeg has opened tenders for water mains on Doncaster street.

WINNIPEG, MAN.—City of Winnipeg propose laying new asphalt pavement on MacGregor street at an estimated cost of \$40,000.

YORK COUNTY—Engineer E. A. James, Toronto, has completed plans for roads to cost \$300,000.

CLUBS, THEATRES, HOTELS AND HOSPITALS.

ALBERTA PROVINCE—Province of Alberta, architect, M. Blakley, Edmonton, will erect asylum.

BRANDON, MAN.—Addition proposed to General Hospital.

GUELPH, ONT.—Griffin Amusement Co. will erect a new theatre on St. George street. Architect, W. Mahoney, Guelph.

GUELPH, ONT.—Guelph Theatre Co. have plans completed covering alterations and additions to present building, covering brick work, flooring and seating accommodation.

HAMILTON, ONT.—City of Hamilton; secretary, S. H. Kent; architects, Stewart & Whitten; alterations to hospital. Tenders have been called for steam fitting.

KINGSTON, ONT.—New nurses' home proposed for Hotel Dieu. Chairman of committee, Dr. A. B. Williamson.

LONDON, ONT.—Tenders called for addition to Victoria Hospital. Architect, A. E. Nutter.

MEDICINE HAT, ALTA.—Sisters of St. Louis propose erecting new hospital on Crescent Heights to cost \$15,000.

MONTREAL, QUE.—Metropolitan Columbus Association propose erecting new building.

OTTAWA, ONT.—City of Ottawa have plans ready for sun room addition to Isolation Hospital to cost \$6,000. Architects, Millson & Burgess.

REGINA, SASK.—Department of Education; secretary, W. Scott, are preparing plans for institute for the blind to cost \$30,000.

ST. THOMAS, ONT.—Alterations will be made to Amasa Wood Hospital. Architect J. T. Findlay has called for tenders.

SYDNEY, N.S.—Architect R. A. Frechette, 30 Bonnacord street, Moncton, has called for tenders on Knights of Columbus club house to cost \$6,000.

WINDSOR, ONT.—Oscar Fleming and G. McGregor propose erecting new hotel, Oullette and London streets.

WINNIPEG, MAN.—Department of Education, Minister G. L. Caldwell, propose building deaf and dumb institute.

VANCOUVER, B.C.—Plans completed of new theatre for Broadway Moving Picture Theatre Co., to cost \$50,000.

VICTORIA, B.C.—Department of Public Works, architect, H. E. Young, will prepare plans for new asylum.

ELECTRICAL CONSTRUCTION.

BEADLE, SASK.—Beadle Rural Telephone Co., secretary, J. Buckingham, have taken tenders on new telephone construction and equipment.

CALGARY, ALTA.—City of Calgary has awarded the following contracts: Electric light arrestors, \$5.13 each, to Canadian Westinghouse Co.; reactors, \$1,825, to Northwest Engineering Company.

COBDEN, ONT.—Town of Cobden will purchase electrical equipment.

HAMILTON, ONT.—City of Hamilton, clerk, S. H. Kent, has received tenders for renewal and re-erection of motor pumps and electrical equipment.

NIAGARA FALLS, ONT.—Niagara Power Co. preparing plans for developing 250,000 additional horse-power.

ORANGEVILLE, ONT.—Dufferin County Court House to be rewired. Clerk, J. C. Reid.

SASKATCHEWAN—Marienthal Telephone Co., secretary, A. G. Vinge, Torquay, Sask., has called for tenders on new telephone system.

ST. THOMAS, ONT.—City of St. Thomas have awarded contract for new transformers to Canadian General Electric Co.

TORONTO, ONT.—Board of Education has called for tenders on electric conduit work, etc.; architect, C. H. Bishop, City Hall.

FACTORIES AND WAREHOUSES.

BERLIN, ONT.—John Forsythe Co. will erect addition to factory, brick construction.

CAMPBELLFORD, ONT.—The Northumberland Paper and Electric Co. will rebuild mill recently destroyed by fire.

CALGARY, ALTA.—Ford Motor Co. site secured for new plant; cost \$200,000.

EDMONTON, ALTA.—Emery Mfg. Co. preparing plans to rebuild building destroyed by fire.

FENWICK, ONT.—W. L. Horton and Irvin Lambert will erect saw mill; new machinery required.

FORT WILLIAM, ONT.—J. I. Case will erect warehouse.

GUELPH, ONT.—Alex. Callander will erect a new foundry to cost \$8,000.

HAMILTON, ONT.—Hydro Commission have awarded contract for new warehouse to Dickinson Building Co.

HESPELER, ONT.—A. B. Jardine Co. will rebuild plant recently burnt. Contracts let: for masonry, Grill Bros.; carpentry, Freesteen & Bartles.

KINGSTON, ONT.—Richardson Co. will make additions to elevator early in the spring.

LONDON, ONT.—Parnell Baking Co. will make additions to plant to cost \$35,000.

MONTMORENCY FALLS, QUE.—Dominion Textile Co. will make addition to plant.

MONTREAL, QUE.—J. H. Rainville, M.P., interested in new cutlery factory to be erected on south shore; cost \$250,000.

NIAGARA FALLS, ONT.—The Union Carbide Co. will make additions to factory to cost \$25,000.

NIAGARA FALLS—Pollard Manufacturing Co. will erect new plant; have purchased equipment of the Dominion Safe and Vault Co., of Farnham, Que.

NEW TORONTO, ONT.—Brown, Cooper Brass Co. have awarded contract for new factory to Toms Contracting Co.

OAKVILLE, ONT.—Wallace, Chapman & Marshall require machinery for box factory.

OTTAWA, ONT.—New storage and office building to be erected by city of Ottawa. Engineer, F. C. Askwith.

PELEE ISLAND, ONT.—J. C. Pennington, Windsor, Ont., is preparing plans for warehouse for N. McCormick.

PETROLIA, ONT.—Alviston Flax Co. have secured site for new flax mill.

PRINCE RUPERT, B.C.—T. M. Michaels and F. J. Burling are preparing plans for woodworking plant and sawmill.

PRINCETON, B.C.—British Columbia Copper Co. will erect smelter.

SAULT STE. MARIE.—Algoma Steel Corporation will make additions to their plant.

ST. CATHARINES, ONT.—Metal Drawing Co. will make additions to plant.

ST. THOMAS, ONT.—Factory plans completed by St. Thomas Milk Co. for new plant on Railway and Wellington streets. Tenders called.

STRATFORD, ONT.—Avon Hosiery Co., Erie street, will erect factory; architect, T. J. Hepburn; cost \$15,000. G. Laughlin Furniture Co. preparing plans for four-storey factory addition, 60x160 feet. R. M. Ballantyne contemplates addition to plant.

TORONTO, ONT.—Ideal Bread Co. have plans completed for addition to their plant on Argyle street.

TORONTO, ONT.—Dunlop Tire Co., Booth avenue, will make additions to plant; plans completed.

TORONTO, ONT.—Factory, three-storey brick, to be erected by Fardrew Peet Mfg. Co., Boston, Mass., in Earls court district.

TORONTO, ONT.—R. J. Mitchell, 661 Queen street west, will erect new factory. Scythes & Co., 22 Church street, P. Atkinson, architect, have plans for addition to factory, Brown and Paton road.

TORONTO, ONT.—Architects Messrs. Craig & Madill, Manning Chambers, Toronto, have awarded contract for new factory of the Hamilton Carhart Co., 535 Queen street east, to F. W. Weale, 35 Lindsay avenue.

TORONTO, ONT.—Kellogg Cereal Co. will make alterations to old Central Prison buildings for use as a mill. Mr. Thompson, the company's representative, care of Queen's Hotel, Toronto, has called for tenders.

TORONTO, ONT.—Gutta Percha Rubber Co. will erect new storage sheds. Contracts let to Holby Bros. for masonry, McGregor & McIntyre for steel work. Architects Sprout & Rolph prepared plans. Harris Abattoir have awarded contract for additions to Messrs. Wells & Gray of this city.

TORONTO, ONT.—Robert Simpson Co. are erecting a warehouse building on Mutual street; architect, Max Dunning, 35 Dearborn street, Chicago; associate architects, Burke, Horwood & White, Toronto; general contractor, Wells Bros., Toronto office, 96 Gould street, will submit contracts; contract for steel sash awarded to Henry Hope & Sons.

TORONTO, ONT.—Warehouse to be built on Church street by Architect F. S. Baker (in trust); plans now ready. Factory addition contract has been awarded by Sheet Metal Products, 199 River street, to Brown & Cooper, 297 Carlton street. Standard Sanitary Mfg. Co. have awarded contract for new addition to Dominion Bridge Co. to cost \$2,000.

VANCOUVER, B.C.—Cresote plant to be built by Vancouver Cresote Co. Contract for piling awarded to Palmer Bros.; filling, Pacific Dredging Co.

WINDSOR, ONT.—Maxwell Motor Car Co., president, W. E. Flanders, Detroit, are considering tenders for new factory to cost \$65,000.

WINDSOR, ONT.—Store house to be erected by city of Windsor; architects, G. Jacques & Co., 5 Sandwich street west; on Tecumseh road.

WINNIPEG, MAN.—J. I. Case Co. will erect a warehouse.

WINNIPEG, MAN.—T. Eaton Co. have plans completed for new warehouse. Engineer, G. W. Thompson.

FIRE LOSSES.

ASHCROFT, B.C.—Hotel destroyed, Cariboo Trading Co. owners; loss \$18,000.

BATHURST, N.B.—W. J. Kent's store destroyed; loss \$200,000.

BEAUPORT, QUE.—Church destroyed; loss \$475,000.

BOWDEN, ALTA.—Barclay hardware store destroyed; loss \$30,000.

BROCKVILLE, ONT.—Dr. W. Harding, business block; loss \$15,000.

CALGARY, ALTA.—Central Methodist Church destroyed; loss \$50,000.

CALGARY, ALTA.—White Lunch Co., 8th avenue, buildings destroyed; loss \$8,000.

CAMBELLFORD, ONT.—Northumberland Paper and Electric Company plant destroyed.

CARBERRY, MAN.—Carberry grist mill destroyed; loss \$25,000.

CLARKSON, ONT.—Barn of G. W. Gooderham, Toronto, destroyed; loss \$40,000.

CORBEN, ONT.—J. M. McDermott's butcher shop and E. Little's grocery store destroyed by fire.

DAVIDSON, SASK.—Bank of British North America, frame structure; loss \$4,000.

DELORA, ONT.—Mrs. Devine's store destroyed; loss \$8,000.

EDMONTON, ALTA.—Emery Skirt Mfg. Co., factory; loss \$100,000.

FENELON FALLS, ONT.—Post office gutted.

FORT WILLIAM—St. Luke's Presbyterian Church damaged; loss \$5,000.

HALIFAX, N.S.—Store of L. Cody, Poplar street, destroyed; loss \$3,000.

HALIFAX, N.S.—Clarendon Hotel and Schwartz & Co. buildings destroyed; loss \$8,000.

HARRISON, ONT.—Residence, Eaton street; loss \$2,200.

HAVRE BOUCHER, N.S.—St. Paul's R.C. Church destroyed; Rev. Father M. M. Doyle, priest; loss \$20,000.

HEPWORTH, ONT.—Bell Telephone building destroyed by fire; V. S. Campbell, manager; loss \$4,000.

INGERSOLL, ONT.—Gas Co. building wrecked and purifiers destroyed; loss \$4,000.

KEDGWICK, N.B.—Richards Mfg. Co., lumber mill.

MAILDEN, ONT.—J. E. Snead, residence destroyed; loss \$14,000.

MERLIN, ONT.—Stores destroyed of Dr. Reid, W. Barr and J. Halliday; loss \$150,000.

MONCTON, N.B.—Record Foundry and Machinery Co. building damaged; loss \$100,000.

MONTREAL, QUE.—Gold Medal Furniture Co., store; loss \$30,000.

MONTREAL, QUE.—Windsor Bowling Club damaged; loss \$30,000.

MONTREAL, QUE.—G.T.R. Bonaventure Station destroyed; loss \$300,000.

MONTREAL, QUE.—Canada Car and Foundry Co. factory destroyed; loss \$50,000.

MONTREAL, QUE.—Pharmacie Secord, Amherst street, gutted by fire; loss \$5,000.

MONTREAL, QUE.—Lighting Fixtures Co., 613 St. Catherine street, store and flat damaged.

MONTREAL, QUE.—Residences destroyed: J. B. Ledoux, Chabot street; Arthur Brisette, S. Carron.

MONTREAL, QUE.—Dufresne & Gallipeau's shoe factory, 66 St. Paul street, gutted; loss \$10,000. Prince Hotel, R. M. Michael, proprietor, 126 St. Antoine street, gutted; loss \$8,000.

NORTH BATTLEFORD—Separate school destroyed; loss \$30,000.

NORTH SYDNEY, N.S.—J. W. Peppett's store damaged.

ORILLIA, ONT.—G.T.R. station destroyed.

ORILLIA, ONT.—J. A. Orton, planing mill destroyed; loss \$7,500.

PORT HOPE, ONT.—Five houses owned by W. R. Chislett damaged by fire.

PORT STANLEY, ONT.—John Frick's residence destroyed.

QUARRYVILLE, ONT.—Residence of B. Jackson burnt; loss \$10,000.

QUEBEC, QUE.—Quebec Central R.R. building destroyed.

QUEBEC, P.Q.—La Biscuiterie factory destroyed; G. A. Vandy, proprietor; loss \$40,000.

RIDGEWAY, ONT.—Residence of W. H. Hogg, Phipp street, destroyed.

SACKVILLE, N.B.—T. Horsler, Main street, store; loss \$4,000.

SACKVILLE, N.B.—Residence of Rev. A. V. Landry destroyed; loss \$5,000.

SHERBROOKE, P.Q.—Queen's Hotel damaged; loss \$4,000.

SMITH'S FALLS—Elgin Ward School destroyed and will be rebuilt at once; loss \$16,000.

ST. CATHARINES, ONT.—Marshall's Ltd. and Columbus Candy Kitchen destroyed; loss \$18,000.

TORONTO, ONT.—American Club gutted by fire; loss \$30,000.

TORONTO, ONT.—W. Rennie & Co.'s seed warehouse damaged; loss \$5,000.

TORONTO, ONT.—Ideal Bedding Co., Jefferson avenue, damaged; loss \$3,000.

WELLAND, ONT.—Planing mill of S. C. Lambert destroyed; loss \$25,000.

WINDSOR MILLS, P.Q.—Grist and sash mill destroyed of Henry Tremblay.

PUBLIC BUILDINGS AND STATIONS.

BEAMSVILLE, ONT.—Bank of Hamilton will make alterations to their premises; L. Huntsman, contractor.

CHATHAM—Bank of Toronto will erect a new building.

CHATHAM, ONT.—City of Chatham, clerk, W. A. Merritt, are preparing plans for temporary market building.

HALIFAX, N.S.—City of Halifax propose erecting a civic abattoir.

HAMILTON, ONT.—Erection of municipal auditorium proposed by city of Hamilton.

KINGSTON, ONT.—Architects Sheppard & Calvin, Excelsior Life Building, Toronto, are preparing plans for new library building for Queen's University.

LEAMINGTON, ONT.—Leamington Agricultural Society will erect new building; secretary, L. Smith.

MIMICO, ONT.—Grand Trunk Railway will erect a new station.

MONTREAL, QUE.—City of Montreal will rebuild St. Anne market building and also erect new building in North End; Architect Decarie.

MOOSE JAW, SASK.—C.P.R. will erect new stations on Saskatchewan division. Engineer, T. C. McNab.

OTTAWA, ONT.—The Dominion Government have appointed Darling & Pearson, Toronto, and C. Marchand, Montreal, to inspect foundations and walls of recently destroyed Parliament Building, and make report on rebuilding.

QUEBEC, P.Q.—Architect Pierre Levesque, 115 St. John street, has awarded general contract on La Banque Nationale to C. E. Marissette.

RICHMOND HILL, ONT.—Town Council have purchased a site for municipal building; clerk, J. Hume.

SMITH'S FALLS, ONT.—Bell Telephone Co. have purchased a site on William street and will erect new building.

TORONTO—American Club will rebuild recently damaged building.

TORONTO—Godson Contracting Co., Manning Chambers, will erect office and stable.

VANCOUVER, B.C.—C.N.R. and G.N.R. will erect a union station. Architect, R. P. Pratt, C.N.R. Building, Toronto.

VICTORIA, B.C.—C.N.R. have secured a site on the corner of Bert and Government streets, and will erect an office building; agents, Green & Buidick.

RESIDENCES, STORES AND APARTMENTS.

FENELON FALLS, ONT.—James Fraser will rebuild stores damaged by fire.

KNOWLTON, P.Q.—F. S. Mallory, architect, 65 Adelaide street west, Toronto, is preparing plans for a new residence to cost \$12,000.

LOCO, B.C.—Plans being prepared for office buildings for Imperial Oil Co.

LINDSAY, ONT.—Woolworth Co., contractor, M. McGeough, altering store.

LONDON—W. Hill, Home Bank Building, will erect new residence; cost \$5,000.

MELFORD, ONT.—A. Watson & W. McCutcheon will erect two new residences.

MEDICINE HAT, ALTA.—Robt. Mitchell, Second street, is having plans prepared by Architect W. H. Bourne for office building. Hefferman Bros. are having plans prepared by Architect W. H. Bourne for new store.

MELFORT, SASK.—H. Carlson has awarded contract for new house to Rush & Price.

MONTREAL—E. Pepin, 129 Marlowe avenue, will erect a new dwelling to cost \$4,000.

MONTREAL, QUE.—P. Duchavine, 4409 Lagunesse boulevard, has plans completed for new store and residence, to cost \$5,000.

MONTREAL, QUE.—J. Legault, 3141 Drolet street, will erect residence. G. Hoolohan, 361 Belanger street, will erect residence.

MONTREAL, QUE.—Hyde & Sons, 33 Bleury street, will erect a three-storey brick veneer residence to cost \$1,000. N. Forget, 526 Gufford street, will build a new residence to cost \$1,200. Jas. De Caunfel, 1143 Delormier street, will erect a new dwelling to cost \$2,500.

MONTREAL, QUE.—Gersler Bros., 676 Drolet street, will erect a residence; cost \$3,500. Gault Estate, 263 St. James street, will erect store and apartments; cost \$6,000. J. Rodier, 3349 St. Gerard, will erect two residences; cost \$2,000. O. Provst, 1219 Cote de Neiges, has plans for new store and dwelling.

OTTAWA, ONT.—W. A. Cole, 163 Sparks street, will erect an apartment house. Plans completed by Richards & Akra, architects, Booth Building.

PEACE RIVER CROSSING, ALTA.—Town Council will erect a new fire hall. Secretary, L. W. Divine.

PRESTON, ONT.—F. Wurster will erect a business block.

QUEBEC, P.Q.—P. J. St. Michel, Durocher street, will make addition to building. Adj. Drown, 142 King street, will make alterations to building.

RANKIN, ONT.—Rev. J. Albert will erect a new residence.

REGINA, SASK.—Grain Growers' Association will erect an office building. Head office now in Moose Jaw.

REGINA, SASK.—Architects Storey & Van Egmond (in trust) have called for tenders on new residence.

ST. JOHN, N.B.—Gaudy & Anderson will erect three houses on Crescent Heights.

ST. JOHN, N.B.—Architect F. N. Brodie, 42 Princess street, has awarded contract covering store for W. H. Thorne & Co. to R. N. Corbett.

ST. JOHN, N.B.—W. H. Thorne Co. have called for tenders for store addition on Prince William street. Architect, F. N. Brodie, 42 Princess street.

STRATFORD, ONT.—J. M. Lillow will erect eight residences. A. J. McPherson has awarded contract for ten houses to J. M. Lillow.

SUTHERLAND, SASK.—Department of Public Works, Ottawa, will accept tenders to March 23, 1916, on boarding house to be erected here.

TILBURY, ONT.—Bedford Bros. have purchased site and will erect stores.

TORONTO, ONT.—S. Swartz, 18 St. Patrick street, will make addition to residence.

TORONTO.—Darling & Pearson have called for tenders on alterations to building for O'Briens, Ltd., King street west.

TORONTO, ONT.—Architect J. Hunt, Confederation Life Building, is preparing plans for residence in Lawrence Park; owner, G. Boomer.

TORONTO.—Architect C. J. Gibson, 53 Yonge street, has called for tenders on a block of stores for Col. Nichols, to be erected on the corner of Bloor and North streets.

TORONTO—Dr. Gibson, 1228 St. Clair avenue west, will erect stores and flats; architects, Ellis & Ellis, H. E. Warrington, 98 Wheeler avenue, will erect new residence on Waverley road. P. L. Slayer, 498 Bloor street west, will make addition to store. S. R. Marchon, 168 Oakmount road, will erect a new residence.

TORONTO—J. Richardson, Manning Arcade, will erect a new residence to cost \$6,500. E. Wilkinson, 151 Balsam avenue, will erect a new residence to cost \$4,500. L. B. Brennan, 73 Victoria street, architect, has prepared plans for a new residence for G. C. Patton, 4 Bartlett avenue. J. C. Crocker, 2 Alton avenue, will build a new residence on Orchard Park boulevard to cost \$4,000.

TORONTO—Wilkes Estate, per Moss & Thompson, Traders Bank Building, will alter store front, Yonge and Wellington. R. Reid, 180 Jones avenue, will erect residence. H. Dunn, 25 Penderith street, addition to residence. D. McLeod, 47 Ben-Lamond avenue, has plans for a new residence. R. L. Spiers, 95 Glenholme avenue, architect, J. C. Ure, 122 Westmount avenue, will erect a residence. C. H. Pickering, 169 Robert street, has plans prepared for a new residence on Rushton road. R. Reed, 180 Jones avenue, will erect residence, cost \$1,500. C. L. Denison, 640 Dufferin street, will erect storage building, 18x40. T. B. Coombs, 157 Keewatin avenue, contemplates the erection of store and office building, corner Yonge and Erskine. E. & A. Gunther, Spadina avenue, are preparing plans for new residence on Benhamond avenue. D. A. Mitchell, 502 Palmerston avenue, has completed plans for two-family residence on Gormley avenue to cost \$8,000.

VANCOUVER, B.C.—Hudson's Bay Co. making alterations to store.

VANCOUVER, B.C.—Mrs. Turnel will erect residence. Contract awarded to J. McDonald.

VANCOUVER, B.C.—R. J. Snelgrove, 8th avenue west, will erect a pair of houses on Hemlock and Eighth avenue.

VANCOUVER, B.C.—Farley & Cronie, architects, have prepared plans for new residence for Mr. Allan, Sixth avenue; also for Mr. Earle.

VANCOUVER, B.C.—C. Bowman, Southampton, Ont., architect, U. F. Gardner, 347 Pinder street west, is preparing plans for stores and theatre, brick and steel construction, hot water heating.

WOODSTOCK, ONT.—J. F. Moore will alter store. Plans completed.

SCHOOLS AND CHURCHES.

BIENVILLE, QUE.—Architect Pierre Lavesque, 115 St. John street, Quebec, is preparing plans for new Roman Catholic church, to cost \$30,000.

BISHOP'S CROSSING, P.Q.—Tenders have been called for a new school. Plans by Architect H. R. Bishop.

BLACKFALLS, ALTA.—Aspelund S. O., No. 758, Blackfalls, have called for tenders on new school. Secretary, E. A. Wigmore; architect, L. A. Hill.

BURLINGTON, ONT.—School Board will make alterations to school, including lavatory equipment and painting.

DRUMMOND TOWNSHIP—S.S. No. 9, Drummond, Secretary R. Dowdall, R.R. No. 6, Perth, Ont., have opened tenders for labor on new school, material to be purchased by owners.

DUNDAS, ONT.—The School Board have secured site for new school, corner Lawrason, Alma and Cayley streets. Architect B. E. T. Ellis has been appointed to prepare plans.

HILLSIDE, SASK.—School trustees, Ward D, 3583, have called for tenders on new school; secretary, S. Wheeler, Hillsboro P.O.

HULL, P.Q.—Contract has been awarded for the building of the new St. Redemptor Parish Church to Noel & Monette, Ottawa.

HULL, P.Q.—Province of Quebec propose the erection of a new technical school. Mayor Archambault, Hull, P.Q., is interested.

HULL, P.Q.—St. Redempteur Parish, Rev. Father S. Carriere; architect, Charles Brodeur; new church tenders have been received.

JUNIOR, SASK.—New school; secretary, H. Gadsby; tenders have been called for.

LONDON, ONT.—Plans to be prepared for new technical school.

LONDON, ONT.—School Board are preparing plans for temporary four-room school. Secretary, J. F. Bryant.

MONTREAL, QUE.—Protestant School Board have purchased a site on St. Helen street for new school.

MOUNT DENNIS, ONT.—Architects S. B. Coon & Son, Toronto, are preparing plans for new school on Dennis avenue; chairman of committee, D. Robertson.

NIAGARA FALLS, ONT.—Union S.S. No. 2 has called for tenders on a new school. Architect, J. U. Collins, Niagara Falls.

NORTH RIDGE, ONT.—Architect J. C. Pennington, of Windsor, is preparing plans for new school to be erected in North Ridge.

NORTH VANCOUVER, B.C.—Department of Education propose building a two-room addition to North Star school; chairman of School Board, Trustee Purdy.

OXFORD TOWNSHIP, ONT.—J. D. Anguiss, Muirhead, Ont., secretary of the School Board, has received tenders on a new township school to cost \$5,000.

PARRY SOUND, ONT.—The School Board have called for competitive plans for new school; secretary, J. D. Broughton.

PEACE RIVER, ALTA.—Presbyterian Church have purchased a site for new church. Pastor, Rev. W. Granan.

REPENTIGNY, P.Q.—R. Gariepy, architect, 25 St. James street, Montreal, is preparing plans for new R. C. church.

RICHELIEU, P.Q.—School Board propose erecting new school. Secretary, J. C. Boshaw.

SAANICH, B.C.—Saanich School Board contemplate erection of new school. Estimates have been passed for \$6,000.

SARNIA, ONT.—Board of Education will make alterations to schools. Will require ventilating system, lavatory equipment, windows, etc.

SIMCOE, ONT.—Board of Education will have plans prepared for two schools.

STRATHROY, ONT.—The Methodist Church have plans for alterations to present building, including steam heating, painting and seating. Pastor, Rev. A. E. Jones.

TORONTO—Plans will be prepared for addition to Winchester School.

TORONTO, ONT.—R. C. School Board are preparing revised plans for St. Clare's School. Architect, C. J. Read.

TORONTO, ONT.—Plans are completed for new Ear'scourt Methodist Church, corner of Ear'scourt and Boon avenue. Chairman of Building Committee and architect, A. C. Smither, 121 Greenlaw avenue.

TORONTO, ONT.—Board of Education have called for tenders on alterations to schools, including electric work, drains, ash hoists, fire doors, etc. Architect, C. N. Bishop. Board of Education propose building new High School, Bloor street, to cost \$250,000; also additions to the following schools: Orde Street, \$50,000; Dewson Street, \$60,000; Wilkinson, \$65,000; Perth Avenue, \$45,000; Keele Street, \$60,000.

TRAIL, B.C.—Addition to public school is proposed by the School Board to cost \$12,000. Secretary, Walter Cody.

WALKERVILLE, ONT.—A new Presbyterian church is proposed to cost \$6,000. Pastor, Rev. P. Taylor.

WESTMORELAND COUNTY, N.B.—Tenders have been called for new school. Secretary, G. Morton, S.S. 21, McQuale P.O., Moncton.

WEST SALISBURY, ALTA.—The School Board contemplate erecting a new school of brick construction.

MISCELLANEOUS.

DARTMOUTH, N.S.—Department of Railways and Canals, Ottawa, has called for tenders on railway buildings.

DAVIDSON, SASK.—E. R. Mann & Son have plans completed for a new garage.

EVERETT, B.C.—N. C. Jamison will double the capacity of his shingle mill.

ANNUAL MEETING OF PROVINCIAL BUILDERS' EXCHANGE.

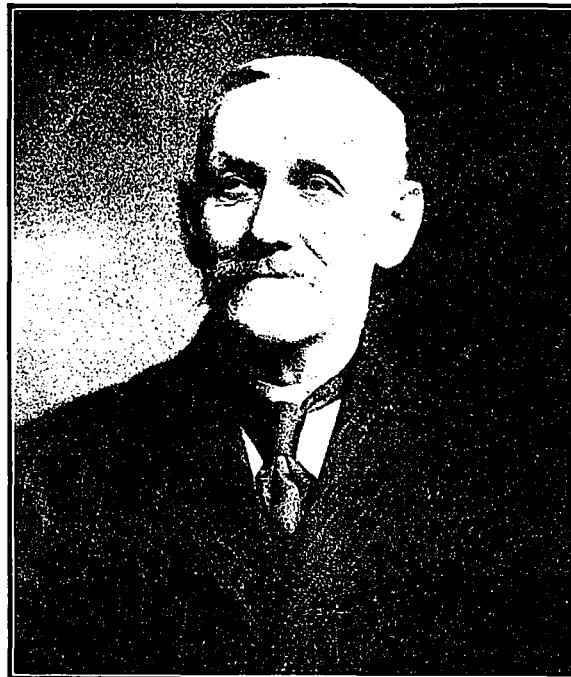
The annual meeting of the Provincial Builders' Exchange was held in Hamilton on February 22nd and 23rd, in the quarters of the Hamilton Exchange, corner of Main and John streets.

The meeting opened with an address of welcome to the visiting members by the Hamilton president, C. T. Pearse, local manager of the Pease Foundry Co. Mr. Pearse, in his remarks, which were well chosen, referred to Hamilton as the Pittsburgh of Canada.

The appointing of the different committees followed the reading of the minutes, after which the retiring president, George Gander, gave an interesting resume of the past year's work, making mention of general business conditions, which were fair, and pointing out the brighter future now opening up.

Secretary Flower read his annual report, outlining the efforts made and work accomplished towards the betterment of conditions for the members, after which the treasurer's report was presented, showing a satisfactory balance on hand. The meeting adjourned for lunch, and opened after with reading of reports from the different branches, showing trade fair, with prospects for the future much brighter.

Considerable time was devoted to the discussion of the Workmen's Compensation Act, and many suggested amendments made thereto, including an amendment to regulation number 53, exempting the smaller contractor.



T. R. WRIGHT, LONDON, ONTARIO.

The newly-elected President of the Ontario Builders' Exchange.

An interesting address was given by Mr. J. Mackenzie, Past President of the International Association of Master Painters, on Technical School Systems for Boys and Girls, which showed considerable thought given to his subject.

In the evening the visiting members were the guests of the Hamilton Association at a banquet held in Hotel Wentworth Arms. Ald. Plunkett, on behalf of the City, welcomed the guests, followed by an address by W. Ellis, of the Hydro Commission. Mayor Walters replied to the toast of "Canada." Addresses were also made by Principal Whittam, of the Hamilton Technical School, and President Gardner, of the Hamilton Board of Trade.

Wednesday morning a tour of inspection was made to the new Connaught Hotel, now nearing completion.

The meeting resumed by a discussion on a clause in the President's report on American competition in building, and it was suggested that the Builders' Exchange unite with the Ontario Association of Architects in representations to be made towards strictures on the unfair conditions existing.

Several resolutions were passed, including one approving of fair wage clauses in contracts.

A form prepared by the Association for use in sub-contracting was approved.

Platernal greetings were sent and received with the National Association of Builders' Exchange, in session at Baltimore, Md. A grant of \$25.00 was made to the Hamilton Branch of the Red Cross Association.

A vote of thanks was tendered to the Hamilton Chapter for their hospitality, as well as to the retiring officers and to the Secretary and Treasurer, who were unanimously re-elected.

The election of officers resulted as follows: President, T. R. Wright, London, Ont.; 1st Vice-President, C. T. Pearse, Hamilton; 2nd Vice-President, A. Tomlinson, Chatham; Treasurer, Geo. Arkley, Jr., Toronto; Secretary, A. E. Flower, Toronto. Executive Committee to be composed of one member to be appointed from each branch of the Association.

Architects, engineers and contractors are invited to contribute information on construction work, whether it be proposed or in progress, and such information will be published in these columns.

HAMILTON, ONT.—Hospital Board has called for tenders on fire hose and fireproof doors for Barton Street Hospital. Secretary, S. H. Kent.

KINGSTON, ONT.—City Engineer R. J. McClelland has called for tenders on cement, hardware, rubble stone, sewer pipe, manhole covers, gratas, etc.

KINKORA, P.E.I.—Kinkora Cheese Factory has called for tenders on concrete work.

LONDON, ONT.—The City of London has called for tenders on supplies, covering cement, tile, coal and wood, lumber, stone and gravel, iron castings, rubber supplies, hardware, comfort station supplies, plumbing fixtures and road oil.

MEDICINE HAT, ALTA.—J. T. Bergman, box 164, Winnipeg, Man., has called for tenders on tar roof for building in Medicine Hat.

MELFORT, SASK.—Beaver Lumber Co. will erect new coal sheds and scales.

MONCTON, N.B.—School Board, secretary, F. A. McCully, require 108 school desks.

MONTREAL.—The city of Montreal has called for tenders on brick. Specifications may be obtained from purchasing department.

NAPANEE, ONT.—C. A. Wiseman has purchased site for new garage on Bridge street.

NELSON, B.C.—New smelting plant and mill will be erected. E. Dedolph, Kaslo, B.C., interested.

OTTAWA, ONT.—City of Ottawa has called for tenders on new porch roof for City Hall. Engineer, F. C. Askwith.

PETERBORO', ONT.—City of Peterboro' has called for tenders on cement and tile pipe. Engineer, R. H. Parsons.

PORCUPINE, ONT.—Miracle Mining Co. will install 150-ton mill.

ROCKY MOUNTAINS—Great Northern Railway, manager, M. J. Costello, Seattle, is preparing plans for snow sheds of concrete construction.

SAULT STE. MARIE, ONT.—Steel Co. of Canada have awarded contract for barracks to McPhail & Wright.

STRATFORD, ONT.—Tenders have been called for wrecking of Central School by Secretary of School Board D. W. Foster.

THURLOW, ONT.—A. H. Eastern, Thurlow, Ont., will erect galvanized iron barn. Plans being prepared.

TORONTO, ONT.—Toronto Furniture Co. will erect garage and dry kiln.

TORONTO, ONT.—Board of Education has called for tenders on cabinet work.

TORONTO, ONT.—The city of Toronto is preparing plans for shelter, St. Clair and Avenue road, to cost \$500.

TORONTO, ONT.—W. J. McGuire, 15 Maple avenue, has awarded contract for new garage to A. H. Niblett, 34 Oxford street, to be erected on Pearl street.

TORONTO, ONT.—Manning Estate, 24 King street west, have awarded contract for new store front at 68 Queen street west to S. B. Bayshaw, 477 Marion street.

TRIPLE ISLAND, ONT.—Dominion Government will erect lighthouse. Secretary, R. C. Desrochers.

VANCOUVER, B.C.—Department of Public Works, Ottawa, architect, W. Ewart, has completed plans for freight sheds for Government wharf.

VANSKOY, SASK.—Trustees S. B. No. 3652, Vanscoy, Sask., has called for tenders on hardware and lumber for new school. Secretary, J. Cornelus.

WINDSOR, ONT.—City of Windsor has awarded contracts on new building at race track as follows: Carpentering, W. Dupuis; metal work, Pennington & Brian; painting and glazing, Lossing & Harris. Architect, J. C. Pennington.

PERSONAL.

Geo. M. Miller has returned from an extended Southern trip. Mr. Alphonse Venne, architect, of St. Lambert, Quebec, has been re-elected mayor of that city.

Lieut. F. P. Page and Lieut. S. Warrington, brothers in arms as well as partners in the architectural profession, have been raised to the rank of captain in the 36th Regiment.

The death occurred in Sydney, N.S., on the 9th of February, of Mr. F. W. Spencer, architect and designer of many of the large buildings in that city. Mr. Spencer was 47 years of age, and had practised his profession in Sydney for a number of years.

Chadwick & Beckett, architects, 132 Church street, are temporarily closing their office, owing to both members of the firm being in command of overseas regiments, while their staff are either on military service or engaged on munition work. Any communications for the firm may be sent to 107 Howland avenue.

REVIEW.

A catalogue has been received, just issued by the Gaten Hillock Revolving Door Co. of Canada, 154 George St., Toronto, which fully illustrates and describes the standard collapsible and the automatic collapsible panic-proof revolving door as manufactured by this firm. Illustrations and detail drawings clearly shown make this folder of value to those interested.

TORONTO ARCHITECTS MEET.

The Toronto Chapter, O.A.A., met at the St. Charles Hotel on Tuesday, February 15th, 1916, at 1 p.m. After luncheon routine business was disposed of, and an informal discussion on matters of interest to the profession was held. It is understood that an important announcement will be made shortly with reference to legislation to be introduced to further the architectural interests and improve existing conditions. The following members were in attendance: President R. K. Sheppard, Secretary I. Feldman, A. F. Wickson, A. A. Gregg, H. B. Moore, W. Webb, W. A. Langton, E. Menges, E. T. Arnold, C. E. Langley, J. P. Hynes, A. E. Watson, J. E. Wagman, J. C. B. Horwood, M. A. White, V. D. Horsburgh, V. L. Gladman.