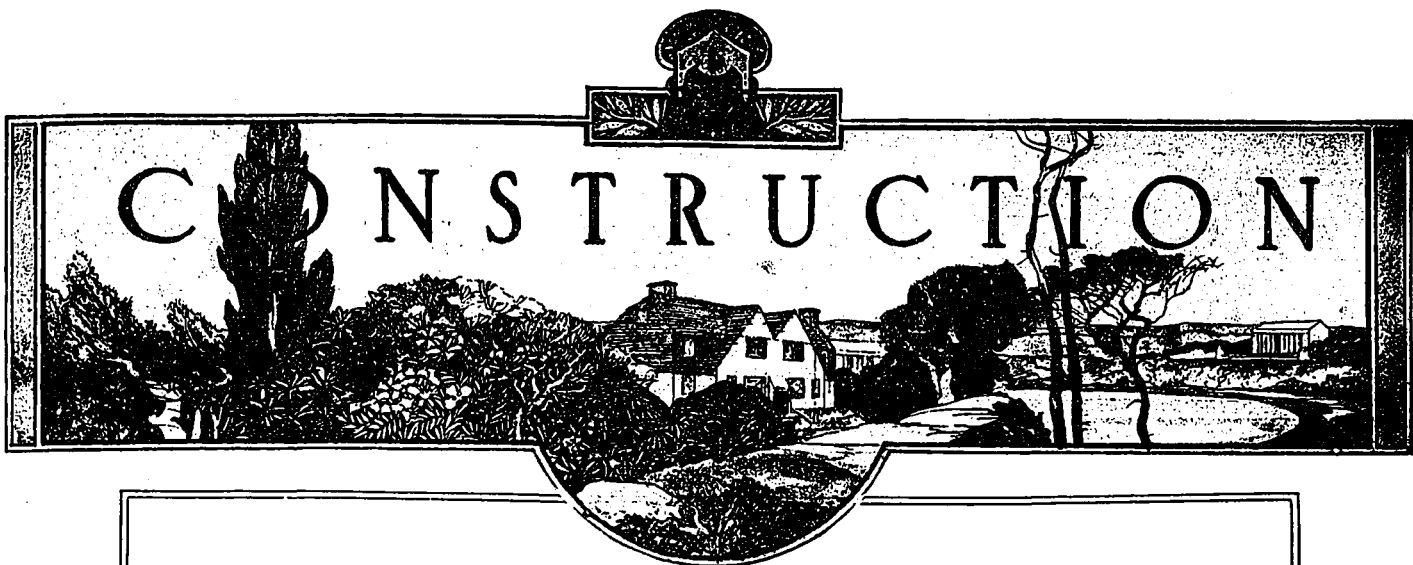


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May, 1919

Volume XII, No. 5

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GRAPHIC ARTS BLDG., TORONTO, CANADA

BRANCH OFFICES

MONTREAL

NEW YORK



# Queen Alexandra Sanatorium, Byron, Ont.

THE Queen Alexandra Sanatorium, at Byron, Ont., was founded by the London Health Association about eight years ago through the efforts of Sir Adam Beck, then Mayor of the city of London, and is the most modern and best equipped institution of its kind in Canada, and equal to any elsewhere on this continent. At the beginning of the war it comprised a group of buildings including an Administration Building, infirmaries for both sexes, patients' cottages, physicians' residence, and the required farm buildings, laundry and help quarters; administering in all to the needs of about 100 patients for Western Ontario.

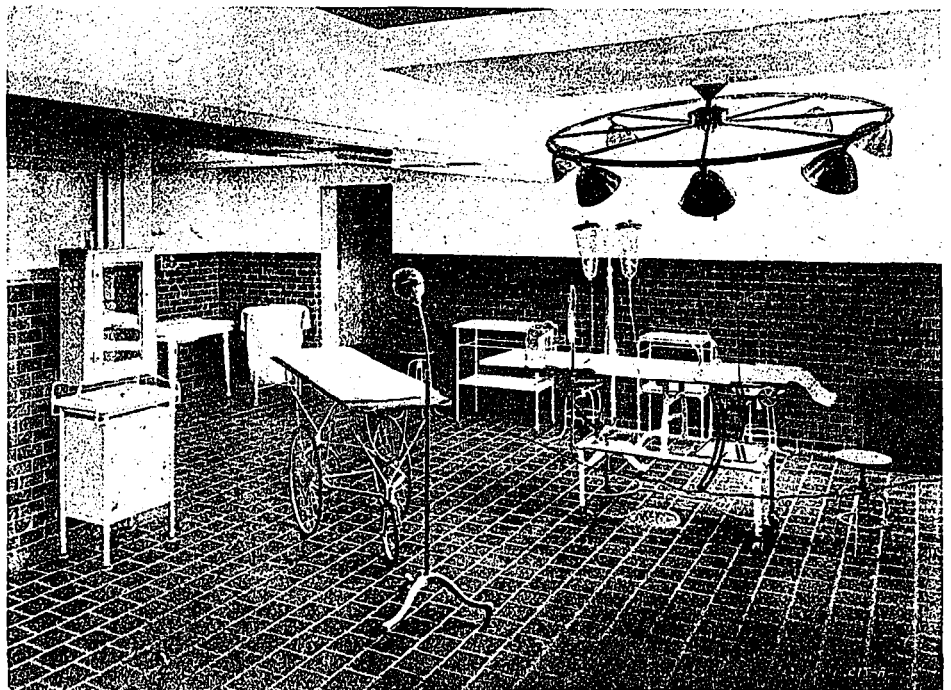
While originally established as a civil institution for the treatment of tubercular cases, it has, owing to the return of a large number of soldiers suffering from the effects of being gassed and lung trouble brought on through hardships otherwise encountered, now assumed the character of both a civil and military hospital.

In order to provide the extra accommodations thus required, the Military Hospitals Commission, shortly after the commencement of hostilities, built three pavilions for the immediate care of cases coming under its jurisdiction, and in the meantime funds were raised through a patriotic campaign for the erection of the Soldiers' Infirmary, which in itself accommodates 100 patients. To these have since been added, by the co-operation of the London Health Association, a 48-bed pavilion, built by the Department of Civil Re-Establishment; four open pavilions, a nurses' home, and a Vocational and Recreation building.

The Soldiers' Infirmary, or Reception Hospital, which is the most important building in the group, constitutes a com-

plete unit in itself for the treatment of those suffering with the disease in the more advanced stage. In this building are complete accommodations and equipment for the scientific treatment of the patient, such as a complete X-ray equipment, pathological laboratory, operating rooms, dental room, throat room, etc., as well as offices for the administration of military patients.

The units are divided into four-bed, two-bed and single wards, each with a bed balcony where the patient may get the benefit of air and sunshine. The window openings throughout, in fact, are all arranged to admit the maximum amount of sunlight and air, and provided with

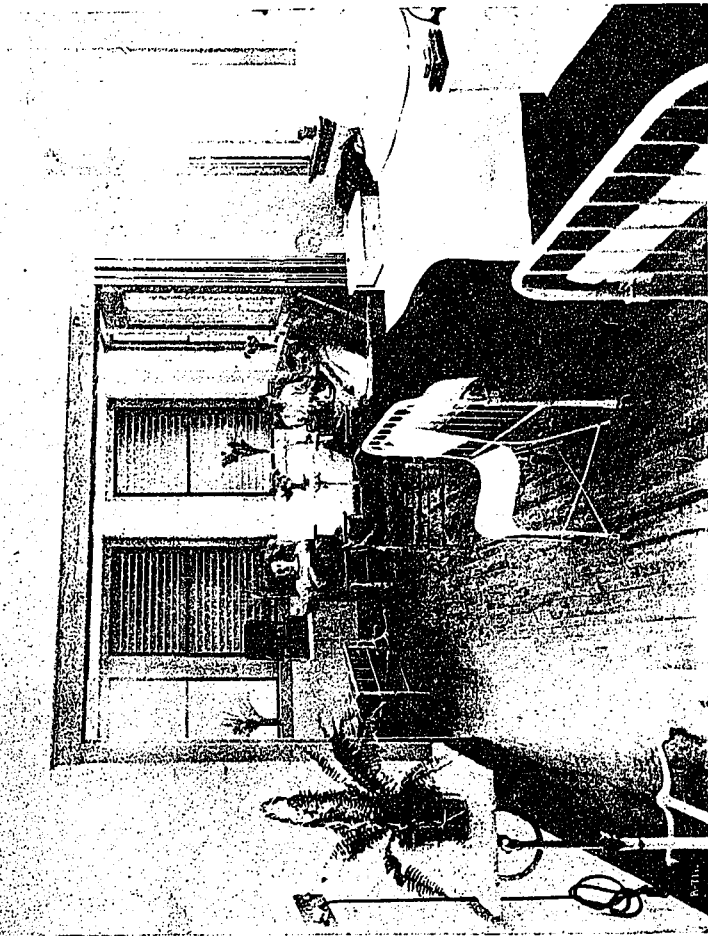


UPPER VIEW: OPERATING ROOM. LOWER VIEW: PATHOLOGICAL LABORATORY. SOLDIERS' INFIRMARY, BYRON, ONT.





FOUR BED  
WARD.



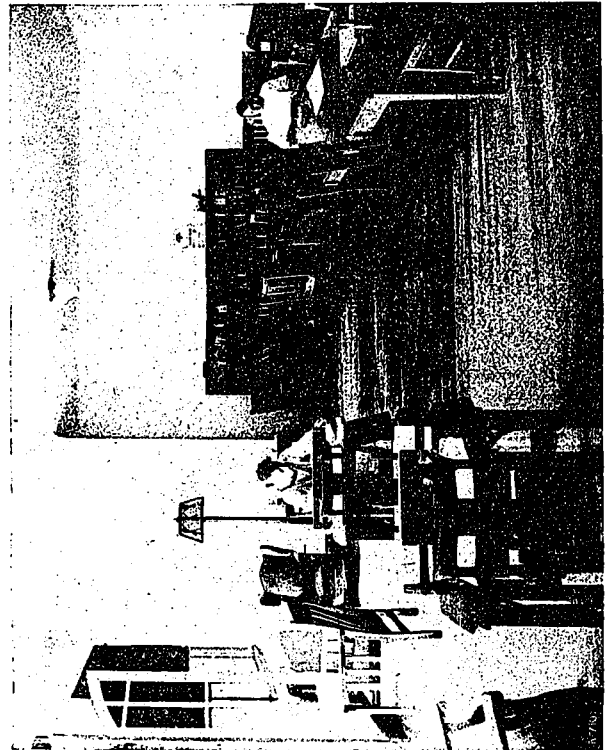
WARD,  
DOUBLE



SINGLE  
WARD.

SOLDIERS' INFIRMARY,  
QUEEN ALEXANDRA  
SANATORIUM,  
BYRON, ONT.

Watt & Blackwell, Architects.



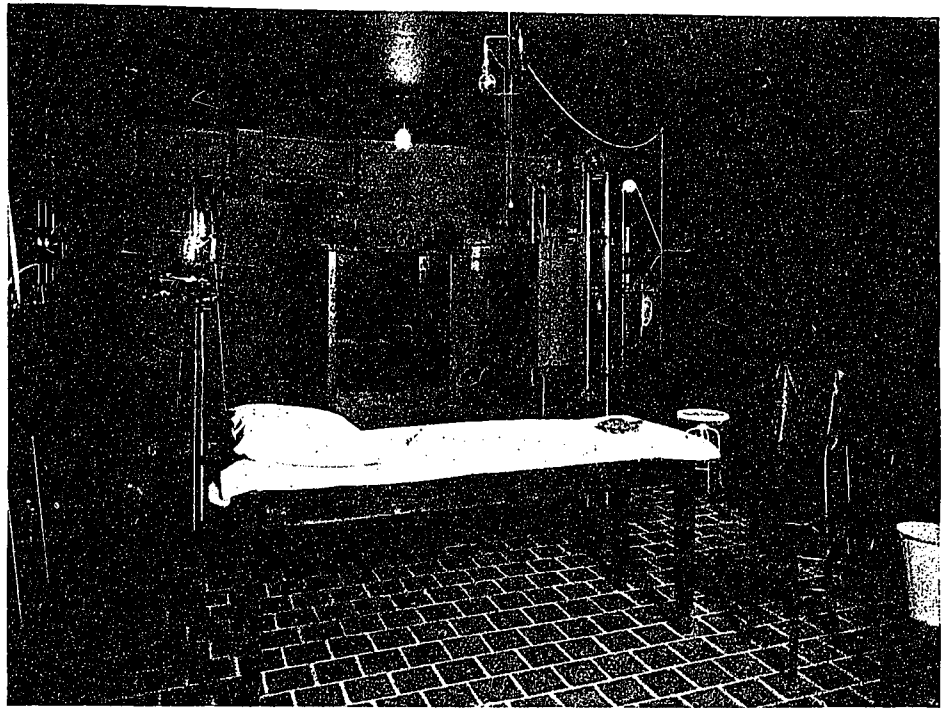
READING  
ROOM.

a louvre sash whereby the patient may still have plenty of fresh air on rainy days.

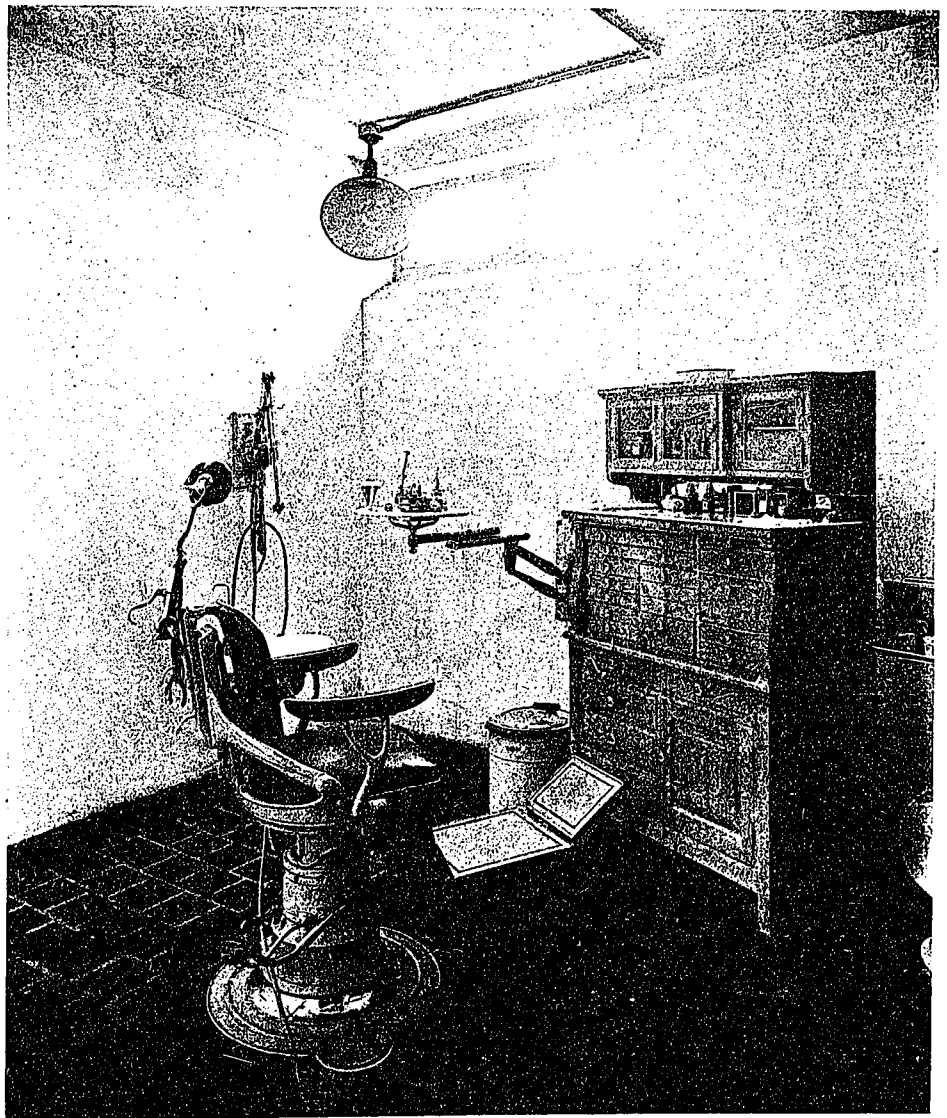
In addition to the various wards, there are four completely equipped nurses' stations, with private toilets, sterilizers, etc.; also four completely equipped patients' toilets, a feature of which being the rose spray attachments to all lavatories, whereby the patients wash in running water at all times. On the second floor of the building is a reading room, a bright and airy interior, together with a modern diet kitchen.

One feature of the plan is the separating of the kitchen from the main building, thus keeping all kitchen odors away from the patients. The kitchen is a model of cleanliness, all cooking being done by electricity. In fact, cleanliness is the keynote throughout. The corridor floors and the stair heads are of 6 x 6 inch quarry tile, and all mouldings have been eliminated where possible, so as to make everything of a sanitary character.

The 48-bed pavilion, which has been built by the Department of Civil Re-Establishment, is for ex-members of His Majesty's Military and Naval Forces suffering from tuberculosis in the incipient stage. The erection of buildings of this size by the Department is a departure from the usual procedure, insofar as it has been the general custom in the past, both in the United States and Canada, that buildings for the treatment of incipient cases accommodate only sixteen or thirty-two patients, depending upon

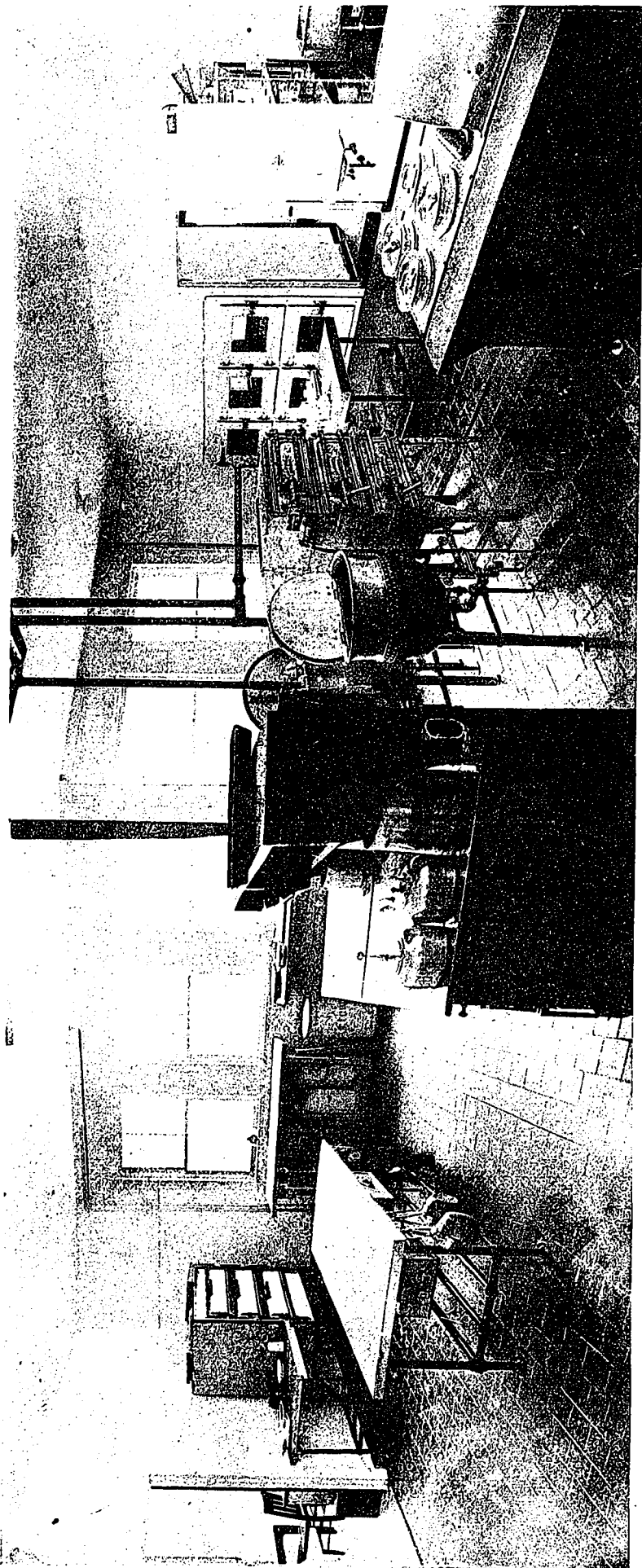


X-RAY ROOM, SOLDIERS' INFIRMARY, BYRON, ONT.



DENTAL ROOM, SOLDIERS' INFIRMARY, BYRON, ONT.



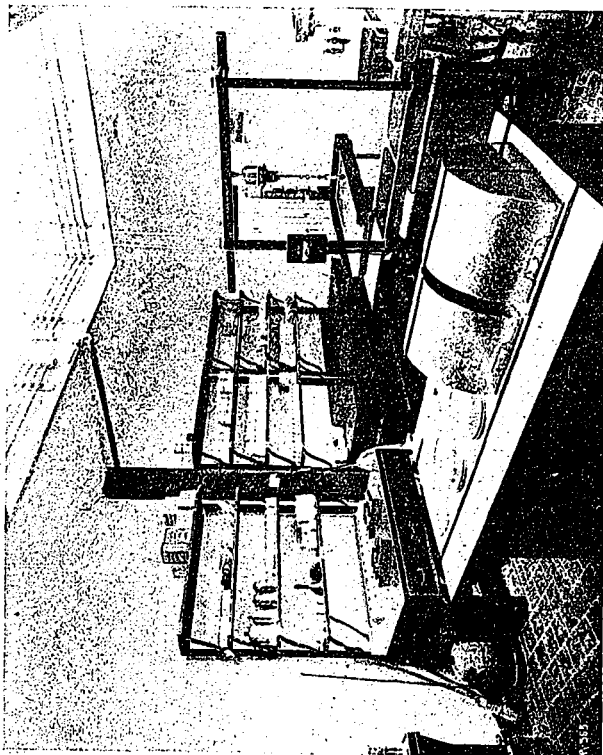


GENERAL VIEW OF KITCHEN.

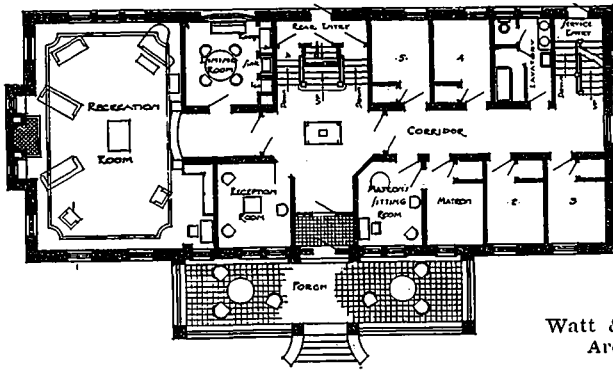
SOLDIERS' INFIRMARY.  
 QUEEN ALEXANDRA  
 SANATORIUM  
 BYRON, ONT.

Watt & Blackwell, Architects.

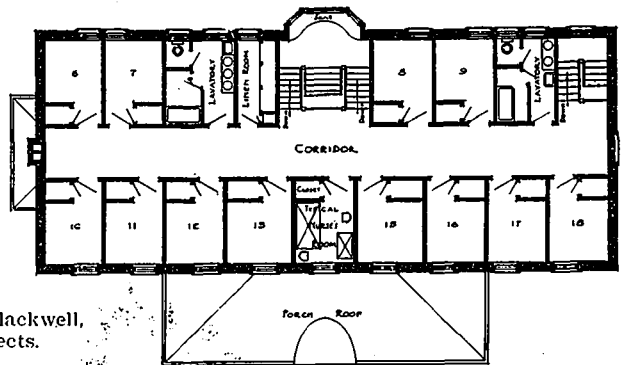
SERVING PANTRY.



DINING ROOM.



FIRST FLOOR PLAN.



SECOND FLOOR PLAN.

Watt & Blackwell,  
Architects.

MARION BECK NURSES' HOME, BYRON, ONT.

whether the structures were of one or two stories. The Department, however, after careful consideration bearing upon the matter of Ward supervision, and the cost of erection, have firmly established that under certain conditions 48-Bed Pavilions are extremely satisfactory as regards supervision, and may be erected more economically in proportion to the accommodation obtained.

The layout of this type lends itself only to locations where extremes of climate are not encountered. Consequently, its use in Canada is limited to parts of British Columbia, Western Ontario and certain parts of the Maritime Provinces. In other locations where extremes are prevalent, this type is not recommended.

In observing the plan and elevation of the building, it will be noted that there are four distinct wards, of twelve beds each. Each

is a self-contained unit, having in connection with it recreational accommodation, toilet and ablution facilities, linen stores, emergency ward, and private dressing room space for each patient. By such a layout it is possible to have four distinct communities in the same building, all under one supervision, but at the same time all enjoying separate facilities as regards service.

The toilet and ablution facilities are removed as far as possible from the living quarters of the patients. This is most desirable from a sanitary standpoint. The wards are of sufficient width to permit the use of reclining chairs for each patient. An abundance of light and ventilation is obtained by the use of triple hung sliding sash. The use of this type of window has been standardized for some time past, but certain objections have arisen in connection

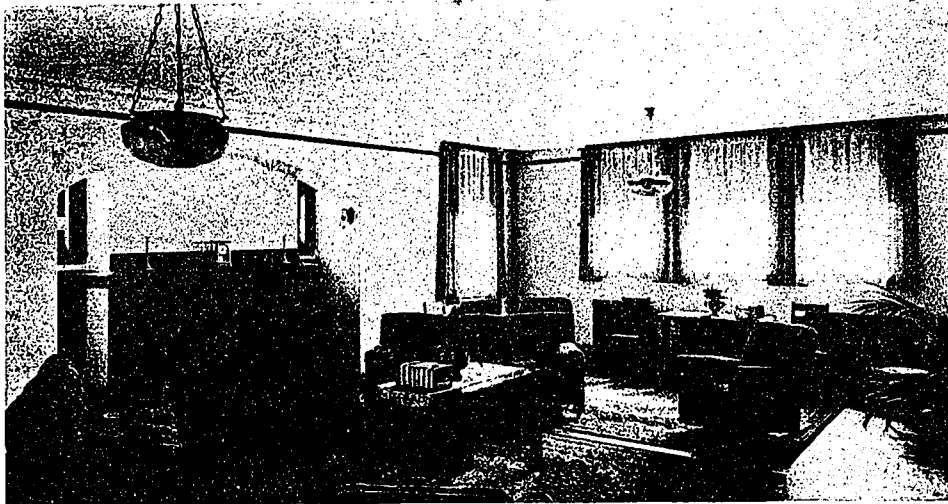


with its use, as it was found that during severe storms and inclement weather they could not remain open without serious discomfort to the patients. This drawback has been overcome by the provision of hinged transoms placed over the triple hung sash.

The introduction of an Emergency Room to each ward of twelve patients is an innovation which has been most successful. A patient having a sudden relapse can be removed from

The toilet and ablution facilities are complete in every regard. The fixtures consist of 2 w.c.'s, 1 dental bowl, 2 lavatories, 1 shower bath, and 1 stationary bath. The floor of this room is in red quarry tile, and the walls in white enamel on Keen's cement plaster.

All portions of the building are hot water heated with the exception of the wards. The lighting fixtures have been selected with special regard to the eye comfort of the patients. The



LIVING ROOM, MARION-BECK NURSES' HOME, BYRON, ONT.

the ward without causing inconvenience or distraction to the other patients.

Private dressing room space is provided for each patient, in the form of cubicles in direct connection with the communicating corridor. These cubicles are of sufficient size to accommodate each patient's personal effects, together with a chair and dresser. The partitions of the cubicles are only seven feet high, thus allowing perfect air circulation.

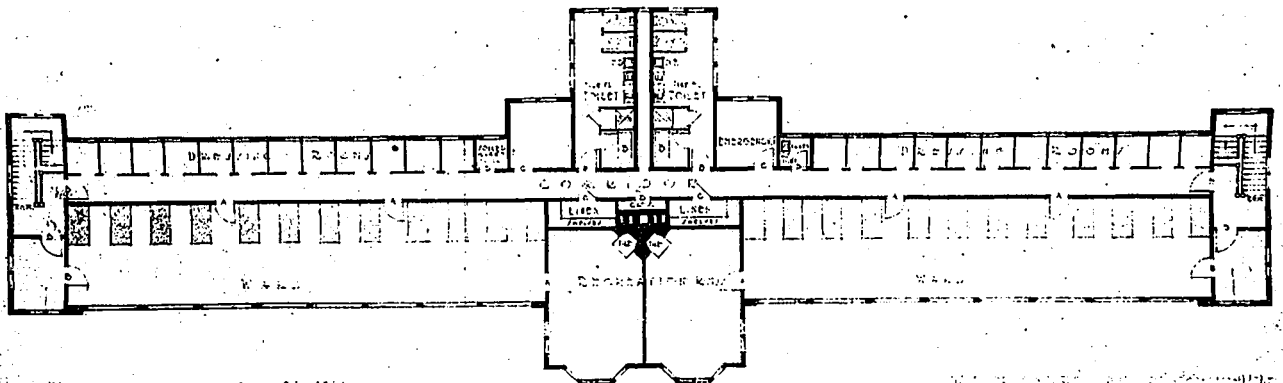
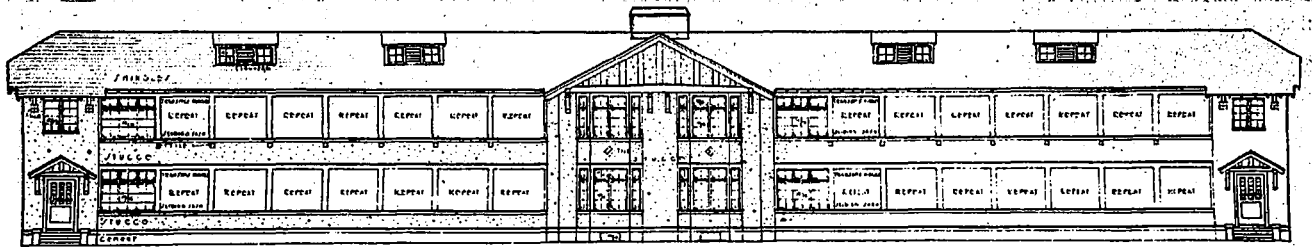
exterior treatment of the building is a combination of stucco and brick, which combination lends itself admirably to the general design of the building. The severe lines of the roof are amply relieved by the introduction of four dormer windows, the centre light of which is louvred for the purpose of ventilating the dead air space.

Two other necessary and important buildings in the group are the Marion Beck Home, as the

nurses' quarters are known, and the new Vocational and Recreation Building, both of which have been completed within the past two years. The former, which is planned to provide for future extensions, was built and furnished

hospitals Commission, thus giving the patients a building where they can be fitted for future careers as well as a place where they can enjoy concerts and moving picture entertainments.

The buildings are all beautifully situated,

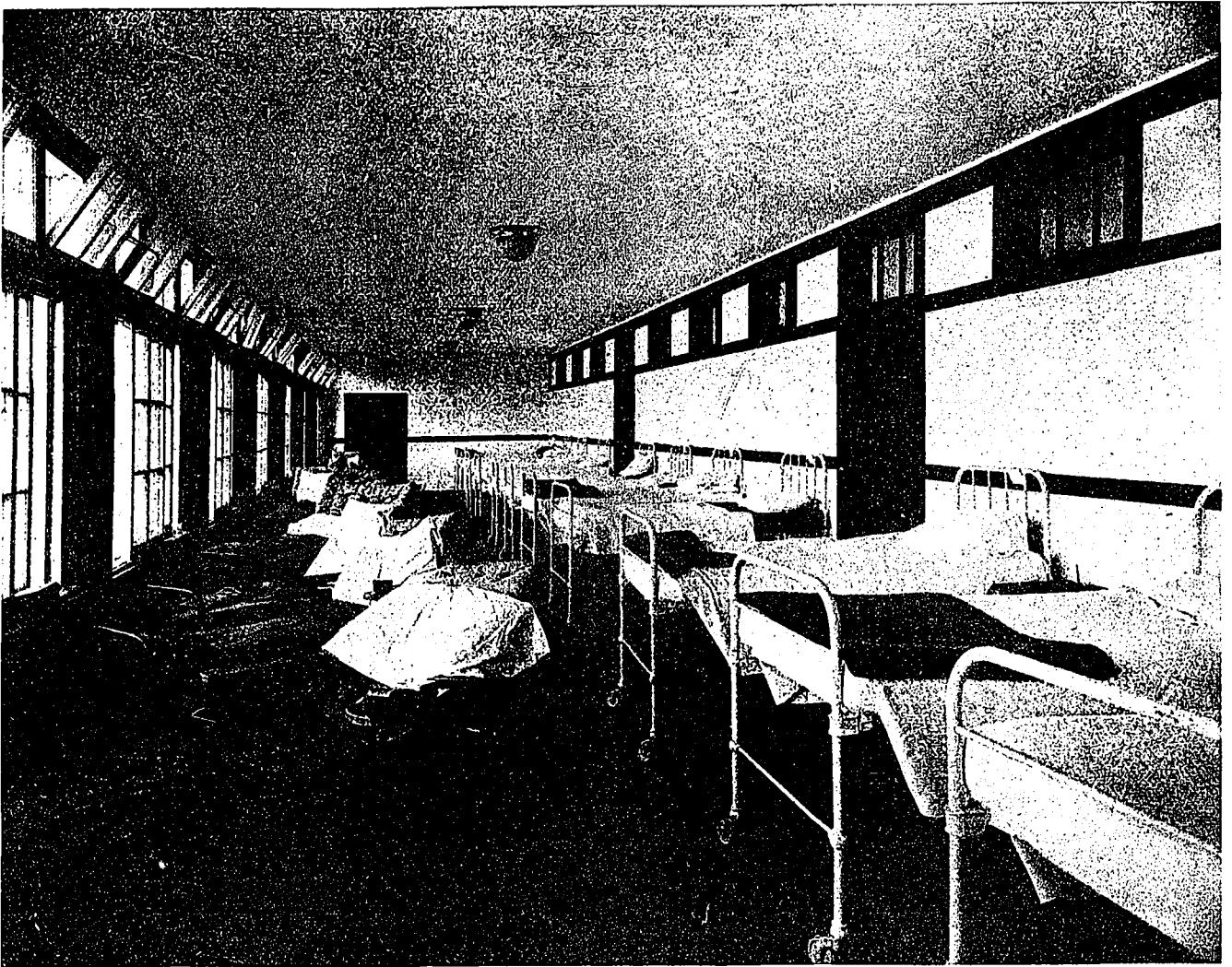


ACCOMMODATION 48 BEDS  
 24 ROOMS  
 24 BATHS  
 24 TOILETS  
 24 CLOSET  
 24 LOCKER  
 24 CHAIR  
 24 TABLE  
 24 SEAT  
 24 STOVE  
 24 SINK  
 24 TUB  
 24 SHOWER  
 24 W.C.  
 24 V.C.  
 24 H.C.  
 24 L.C.  
 24 P.C.  
 24 S.C.  
 24 T.C.  
 24 U.C.  
 24 V.C.  
 24 W.C.  
 24 X.C.  
 24 Y.C.  
 24 Z.C.

48 BED PAVILLION, BYRON, ONT. ERECTED FROM STANDARD PLAN OF THE DEPARTMENT OF CIVIL RE-ESTABLISHMENT, OTTAWA. Watt & Blackwell, Supervising Architects.

through the generosity of Sir Adam and Lady Beck, and is considered an ideal building of its kind, having a large living room for the use of the nurses when off duty, and modern appointments throughout. The Vocational and Re-creating Building was erected jointly by the Provincial Government and the Military Hos-

being on the brow of the river bank some two hundred feet above the water, yet accessible to the roadway and overlooking Springbank Park on the opposite shore, one of the finest natural parks in Canada. The high elevation of the site, absolute purity of the water, the fact that the Sanatorium is readily accessible to the



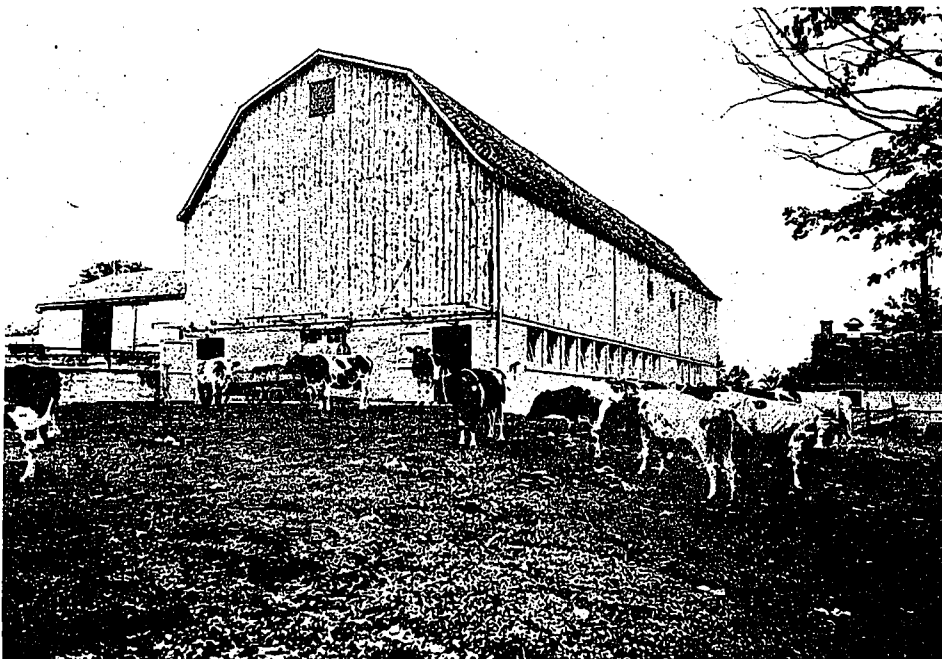
INTERIOR OF 48 BED PAVILLION, ERECTED BY DEPARTMENT OF CIVIL RE-ESTABLISHMENT.

patients' friends, together with the competent staff, makes it an ideal institution of its kind and one which is rendering a splendid service

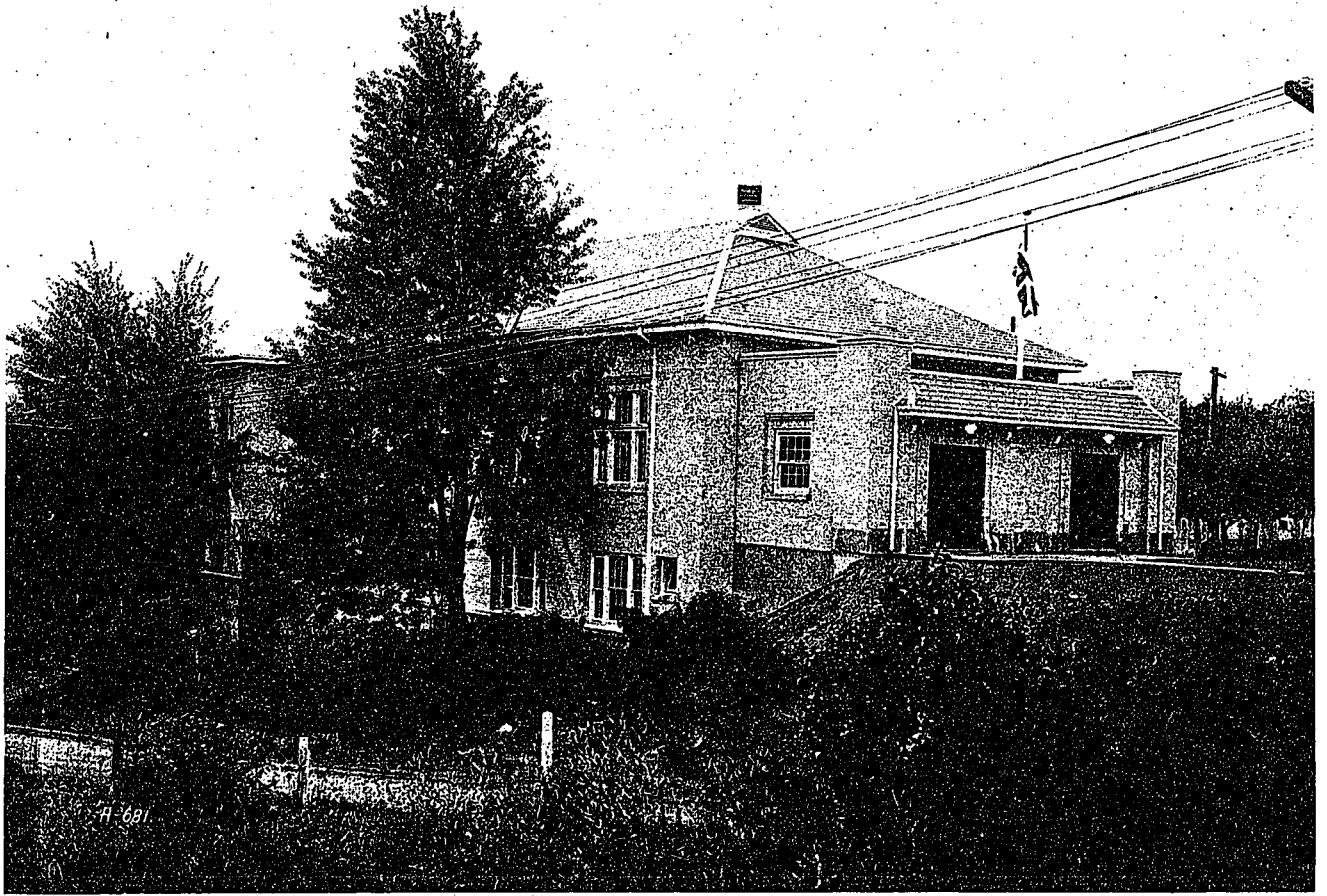
to both the city of London and vicinity and the whole of Western Ontario.

Many visitors, in fact, including Dr. A. B. Macullum, Sir James Lougheed and other prominent persons in public and private life who have made a close study of institutions of this kind, have expressed the highest admiration for the arrangement of the place and the ultimate utility it will have owing to the permanent character of its buildings.

The total number of both military and civilian patients being cared for is now about 400. Every standard device of recognized merit is included in the hospital equipment and no expense has been spared to provide adequate means with which



COW BARN, QUEEN ALEXANDRA SANATORIUM, BYRON, ONT.



RECREATION AND VOCATIONAL BUILDING, BYRON, ONT.

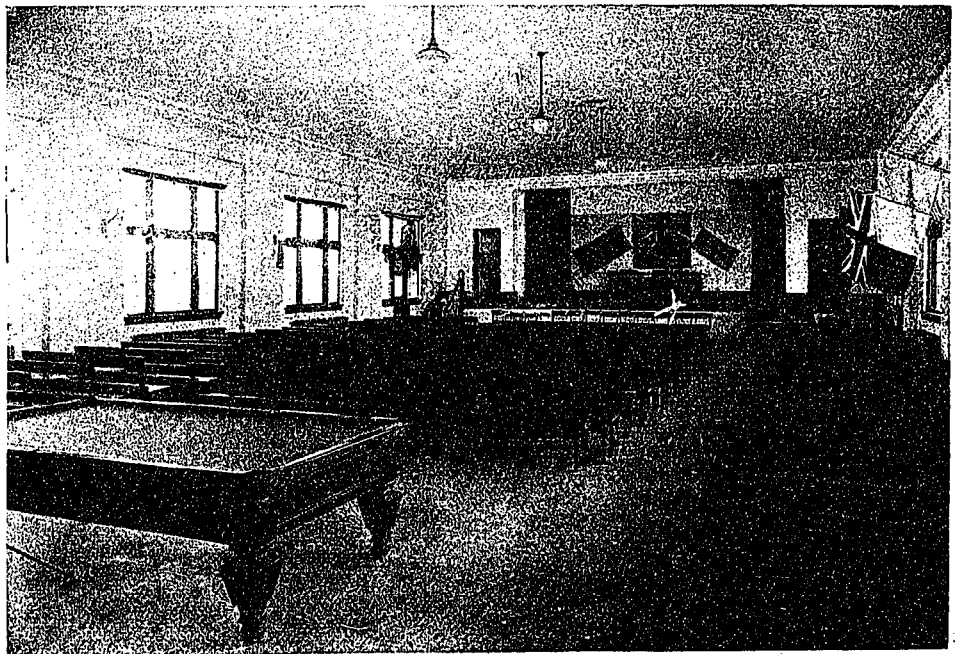
to enable the staff to successfully treat the patients, the percentage of arrested cases being the best evidence of the efficient manner in which the work is carried on.

In the erection of these buildings, which altogether cost some \$600,000, it was also found necessary to enlarge the dairy barns, piggery, poultry houses, laundry, etc., and the latter are all of an up-to-date character.

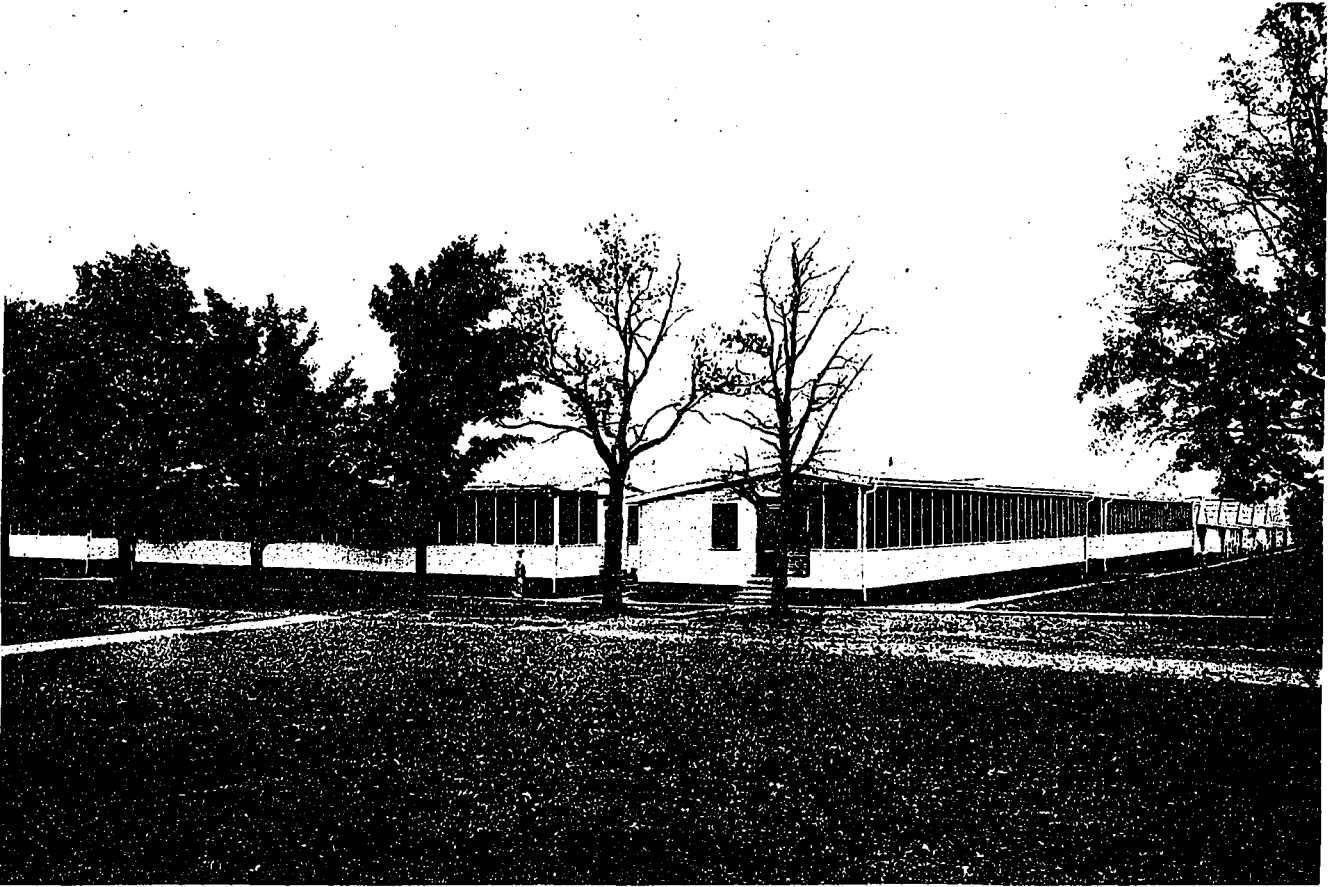
### Zinc in Building Construction

Zinc is coming largely into use for building construction. The New Jersey Zinc Company has recently erected in New York, for their own use, a building in which they have shown what can be done with zinc. Flashing,

gutters and all other outside work, are of rolled zinc. The entrance and vestibule doors are constructed of sheet zinc rolled on wood. Knobs and locks are made of zinc plate. A



INTERIOR VIEW OF ABOVE BUILDING.

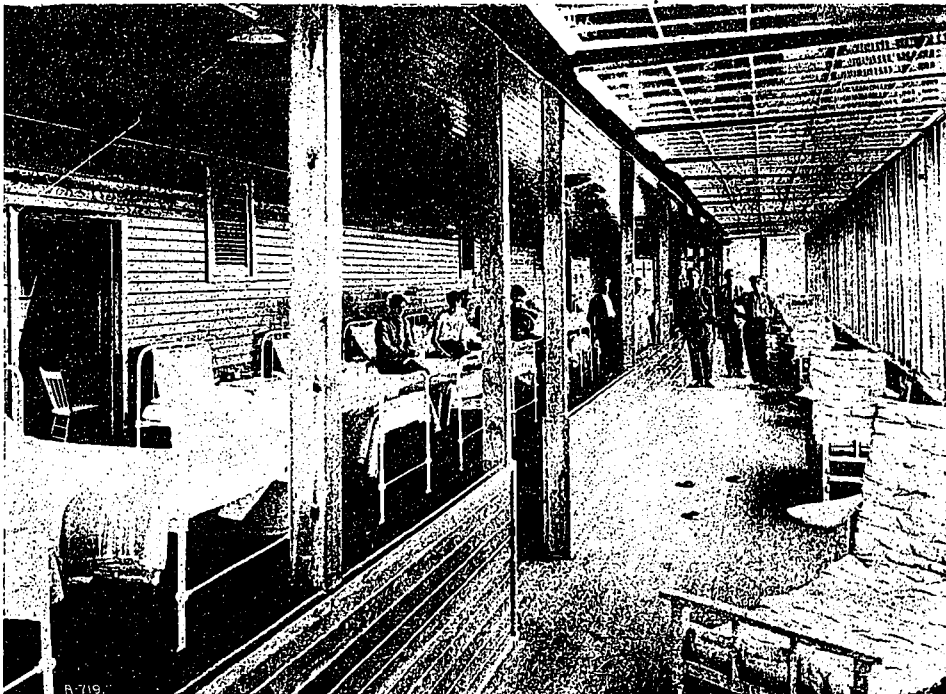


PAVILLIONS 1, 2, 3, AND 4, QUEEN ALEXANDRA SANATORIUM, BYRON, ONT.

zinc alloy is used for the hinges. The surfaces of the side walls of the lifts are of zinc. Further, the lift-gates and bell-plates are zinc coated, giving a rich satin finish. All the window hardware is manufactured from zinc plate. This includes sash, locks and handles. For the inside fixtures zinc is consistently employed. The lighting fixtures are of zinc plate, and

frames for the lamps are spun and rolled zinc sheets. All ornamental work has been cast from the same metal. The utilizing of zinc in building is an economic feature capable, it is believed, of greater development.—*Engineering and Mining Journal*.

A 525-foot chimney has recently been built in connection with the smelter at Anaconda, Montana, to save the gold, silver, copper and arsenic which has up to the present time been lost in the fumes. As a result of its erection, thirty-two tons of arsenic will be saved daily. The base contains 5,000 cubic yards of concrete and weighs 10,100 tons. The octagon is 96 feet from angle to angle. The stacks consist of special bricks equal to 7,000,000 common bricks and, with the base, weighs 33,700 tons. The stack reaches 6,400 feet above sea level, and is capable of handling 3,000,000 cubic feet of gas and 1,000,000 cubic feet of cooling air per minute at 24 feet per second.



INTERIOR PAVILION NO. 1. (15 BEDS).

# Why Building Materials Should Be Tested

*By Emmanuel Mavant.*

ONE often wonders why it is that so many engineers and architects seem adverse to having their building and structural materials inspected and tested before accepting them for use in their work. Too often this is omitted during the construction of high-priced dams, bridges, breakwaters, office buildings, theatres, etcetera, where the professional reputation of the engineer or architect, the capital of the investor, and, quite frequently, the lives of many people are at stake.

Is it through ignorance? Is it through jealousy and selfishness, not wanting any other engineer or chemist to share the credit for the appearance or assured safety of the structure? Or is it through a mistakenly economical point of view? We will review these points one by one.

Is it through ignorance? I may answer that in quite a few cases it is. Engineers of high standing have deliberately claimed to me that it was not necessary to test anything, using as an argument that cement was standard, that any experienced man could tell good sand at sight, and that, as far as stone was concerned, limestone was limestone, and that was all there was to it.

These men start the work without knowing the quality of the materials they are using; and, too frequently, their structures fail. If it is concrete, the mass crumbles, disintegrates, cracks, or otherwise goes to pieces, and the average person who sees it concludes that, after all, concrete is a poor investment.

Let us review the arguments of these engineers. They claim that cement is standard. I say it is not; though I know the cement manufacturers, especially the larger ones, do all in their power to have the cement not only up to specifications, but as near perfect as practically possible. But the chemist and superintendent cannot be all over the works at once; and, for that reason, there is always a possibility, though it may be remote, of the cement coming out too fresh, too high in sulphuric anhydride or in magnesia, or too low in specific gravity.

These defects, which cannot be found without having the cement tested, will cause many different troubles in concrete work. For instance, one defect will cause the cement to set too quickly; that is, it will take its initial and sometimes its full set before being placed on the job, or, in other words, while the men are mixing it. In this case, there will be no cementitious qualities between the different lumps of concrete as it breaks up when being deposited, and so many

stones covered with mud might just as well be thrown into the forms; the result would be as good.

On the other hand, another defect might cause the concrete to set too slowly. This naturally retards the work, because the forms cannot be taken off as quickly as planned. If the risk is taken and the forms removed, there is a great possibility of the structure failing. If slow-setting cement is used in the winter time, and freezes before it sets, the concrete will soon disintegrate. Even if it should not totally collapse, it will be a constant cause of expense for repairs and an ever-present eyesore.

I had occasion, some time ago, to condemn eighteen cars of cement, containing over sixteen thousand bags, and amounting to over eleven thousand dollars in value. These eighteen cars, which had been purchased by two of our largest Canadian manufacturing firms, were condemned for the reason that the setting took place in from eight to twenty minutes. It should take at least one hour, as determined by the Gilmore needle. Had not that cement been tested, it would naturally have been used, and, without a doubt the work would have failed because of the concrete setting before being placed.

Outside of this particular case, I have had occasion to condemn cement quite a few times in different parts of the country. In the majority of cases the cement manufacturer was not to blame for these failures in cement, but either the railway company or the contractor was responsible. Cement is often stored in unsuitable sheds, where dampness and rain injure it. How many of us have not seen bags that were set as hard as rock taken out of temporary storage sheds? In such an instance, while only certain bags may be unusable, many others—and frequently a large quantity—have been affected to such an extent that they should not be used.

Another instance came to my personal attention last summer. An electric power development company situated in the Province of Quebec were about to raise their dam. The cement was purchased and stored beside the falls, in an enclosure with no front. After this was filled with cement, a few boards were put up to protect the cement from the spray of the falls; but cracks ranging from one to ten inches were in evidence. The result was that the spray reached many of these bags of cement, making some of them so hard they had to be broken up with shovels before using. I drew the attention of the superintendent to this fact,



but his answer was that the cement was first-class.

It stands to reason that had this cement been tested before using it would certainly have been condemned, as chemical action had already taken place, rendering it of little value. This is but one of the many cases where the cement company was not to blame, and similar instances occur almost daily; but, whether the manufacturer or the contractor is responsible, if the cement is not tested, and the work supervised by an experienced concrete inspector, the investor is likely to suffer.

Now, let us go into the sand question. It is claimed that any engineer or experienced man can tell good sand at a glance. That is impossible. He may be able to tell that it is too fine, if it is very much too fine, or too dirty, if it is very much too dirty; but beyond that there are no engineers or experienced men who can tell at sight whether this sand or that is good and reliable for strong and dense concrete work.

All sand contains more or less silt or dirt. The reason for this is that it is composed of small particles of broken rock, of different sizes and compositions, coming from different parts. These particles have been washed away or transported from their different sites at different times and settled in layers of different thicknesses in what is now a workable sandbank or deposit. Therefore, there is no guarantee, or even a likelihood, of uniformity, and one carload of sand may be first-class and the next of very poor grade for concrete work.

Also, the dirt and silt, which is very often injurious to sand for concrete purposes, are bound to be present in some parts of the sandbank, because the small particles of rock that are washed towards the bank will naturally carry with them more or less of this fine material.

The above shows conclusively that, in order to be sure of good results, the sand should be tested, not only once, but continually, while the work is in progress.

Besides the avoidance of injurious silt, there is the size or grading of the sand to be considered. It should be well graded, having a certain proportion retained on each sieve from, say, the eighty mesh to the one-quarter inch sieve. If all of the sand grains are of nearly the same size, the voids will be too great, and unless an additional amount of cement is used the voids will not be filled. If too fine, the concrete will not be of the required strength. The reason for having sand well graded is so that the fine particles will fill the voids of the coarser particles, thus reducing them to a minimum.

In order to properly proportion a concrete mixture, it is necessary to determine the voids;

for, without this information the engineers are working blindly, and probably wastefully. Where they are figuring on having a good dense concrete for a reservoir, oil tank or foundation, the result is apt to be different; and, if the water goes through the wall, concrete once more gets a black eye.

Another very bad fault in some sands, which cannot be determined without testing, is that they contain injurious chemicals. Sometimes the drainage from some industrial plant, such as a chemical works, soap factory or tannery, though located several miles away, will contaminate a sand supply, rendering it unfit for use in making concrete. As a rule, such contamination is discovered by making three-to-one briquettes with the sand under consideration and also with standard sand. A comparison of the results will soon tell whether or not there are injurious chemicals present.

Some years ago, I had occasion to deal with a very interesting case of the above type. A company decided to build a concrete laundry building in Eastern Ontario on the site where an old stable had been standing for years. They tore down the old building, and in excavating for the cellar ran across such nice-looking sand that they decided to use it in the concrete mixture for the new structure. They had no end of trouble. The concrete would not set, and the walls fell in.

In carrying out an investigation, it was found that briquettes made of this sand would crumble in the hand after seven days' setting. These briquettes were so disintegrated that they could not even be put in the machine to test. An analysis was made, and we found that the sand was saturated with ammonia, which had percolated through from the horse manure.

As a result of this investigation, the sand had to be taken away from the site of the work, the old concrete thrown out, forms rebuilt, new sand purchased, and the work reconstructed. All this delayed the work, cost money for material and labor to replace that wasted, and inconvenienced the owners. A sensible programme of testing would have prevented any of this trouble.

I would venture to say that three-quarters of the failures in concrete are due to poor sand; and then some engineers will not hesitate to state that it is unnecessary to have sand tested.

As far as stone is concerned, the same argument holds as in the case of sand. In order to regulate the mixing of concrete, the voids must be determined; and in order to get good results the stone must be clean, strong, well-shaped and well-graded.

It might well be stated that the best argument for the general inspection and testing of all building and structural materials is that every

large corporation, such as the Canadian Pacific, the Grand Trunk, the Canadian National Railways, the Montreal Tramways, the Montreal Light, Heat & Power Company, the Harbour Commissioners of Montreal, Toronto, Hamilton, London and Peterborough, the departments of the governments, provinces, states, the counties and municipalities that are at all progressive, and large private concerns too numerous to mention, all have their materials thoroughly tested before using. The sooner other engineers and architects make up their minds to have testing and construction supervised by experienced men, the sooner eyesores, failures and constant repairs to concrete work will stop.

Is it through selfishness? I happened to interview the city engineer of one of the larger cities of Canada on the subject of supervising concrete construction and the testing of materials for same. After a long conversation, he agreed that the construction materials should be tested, but turned around and said: "Where do we come in? You will be the party doing the work, and getting the credit. The municipal council will say, 'These engineers of ours are no use if they must get their materials tested and work supervised.' If we were to do that, we might find ourselves out of a job."

Whether it is the effect of the above policy or not it is hard to say; but this particular city has had constant trouble and very heavy expenditures for replacing defective work; which expenditure has, of course, fallen upon the taxpayer. They erected a Fat Stock Show building, and the whole thing collapsed. Their water main cracked, and as it was a suction system, sewage, polluted water, and so forth, was sucked into the mains and contaminated the drinking water. This caused a typhoid fever epidemic that carried off in the neighbourhood of a thousand people and forced the city to open emergency hospitals, that it had to furnish and provide with doctors, nurses and orderlies. The boiler in one of their municipal buildings exploded, killing one man, injuring another, and wrecking the building. A pavement about twenty-five city blocks in length took the form of a corrugated road and had to be relaid a few years after it was first put down.

It goes without saying that all this trouble cost the city many thousands of dollars, which expense might, and very likely would, have been avoided had all the materials used in these constructions been tested and the work supervised by someone particularly familiar with each type of construction. Any possible loss of prestige to an engineer or architect through the employment of outside specialized inspection and testing service could not conceivably injure him as much as one such failure as we have mentioned. In fact, after the failure,

someone will ask why he did not have knowledge enough to understand that he needed such specialized service. The family physician does not try to operate on his patient's heart; the city engineer should not think it necessary to pretend that he knows it all, either, and the same applies to the outside engineer or architect. Specialists usually pretend to know but one thing, but to know that one thing uncommonly well.

Is it through an economical point of view? With some engineers and architects it is. A good many of them will say that this or that work is not of sufficient importance, or will not be seen, so spending money on tests for it is wasting it. This is very unwise economy; in fact, not economy at all. It is a case of saving the pennies to throw away the dollars; for when the construction materials are tested and accepted by specialists, and the work supervised by them, the engineer or architect is practically relieved of all responsibility except that of having selected competent specialists to do the work. He cannot do all this himself. He must hire someone; so why not those particularly competent to take care of the particular matter for him.

Besides, if his plans and specifications are correct, he is sure there will be no unwarranted expense for repairs, and the structure will be there to stay as a monument to his name and a foundation for his future reputation in the engineering profession.

The engineers and architects who are foremost in their professions would not consider for a moment the proposition to have their plans and specifications executed without full inspection and testing as the work progressed; therefore, why should men who have not reached the pinnacle of professional success risk failures that might forever preclude their arrival?

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### 450,000 Buildings Destroyed

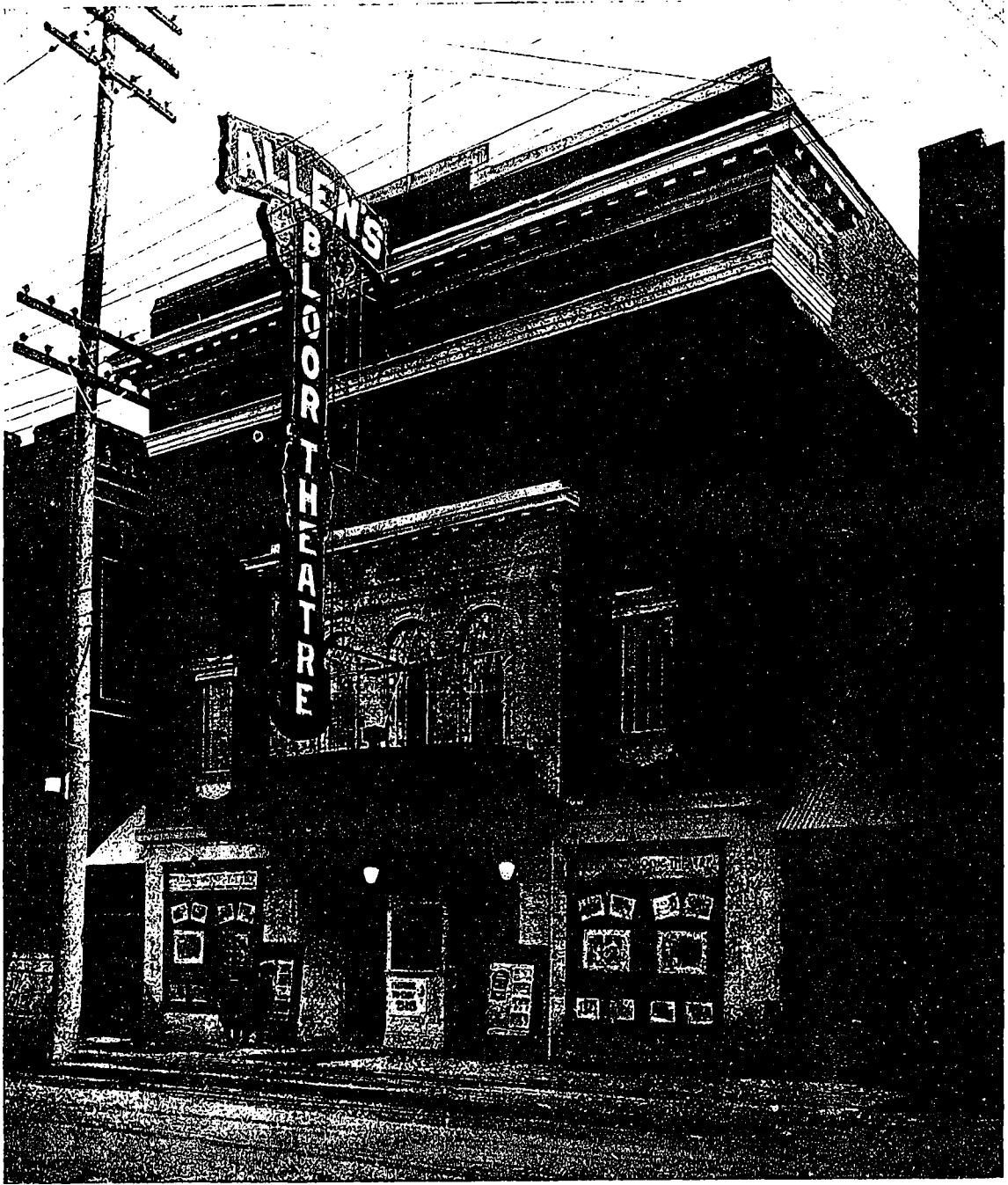
Bad sanitation and housing, especially in devastated regions, have made France's problems still more acute than they would ordinarily have been.

A report bearing on this phase of the problem has been announced by Andre Tardieu, who says French official investigators have learned that a total of 450,000 buildings, exclusive of all public structures, were destroyed in France during the war.

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### Moves to New Offices

The firm of Hynes, Feldman & Watson, Architects, Toronto, have moved their offices from 105 Bond Street to the McKinnon Building, corner of Jordan and Melinda Streets.



NEW ALLEN THEATRE, BLOOR AND BATHURST STREETS, TORONTO.

HYNES, FELDMAN AND WATSON, ARCHITECTS.

### Water Power of the Empire

The author of articles on the Water Power of the Empire in the "Times Engineering Supplement" suggests that the interests of the Empire as a whole and of the individual countries in which water power exists, can best be served by calling into consultation the financial community, the manufacturers of machinery, prospective power users and the owners of water power rights both privately held or those retained by the Crown. The idea would be to form a central committee representing these interests and its primary duty would be to co-

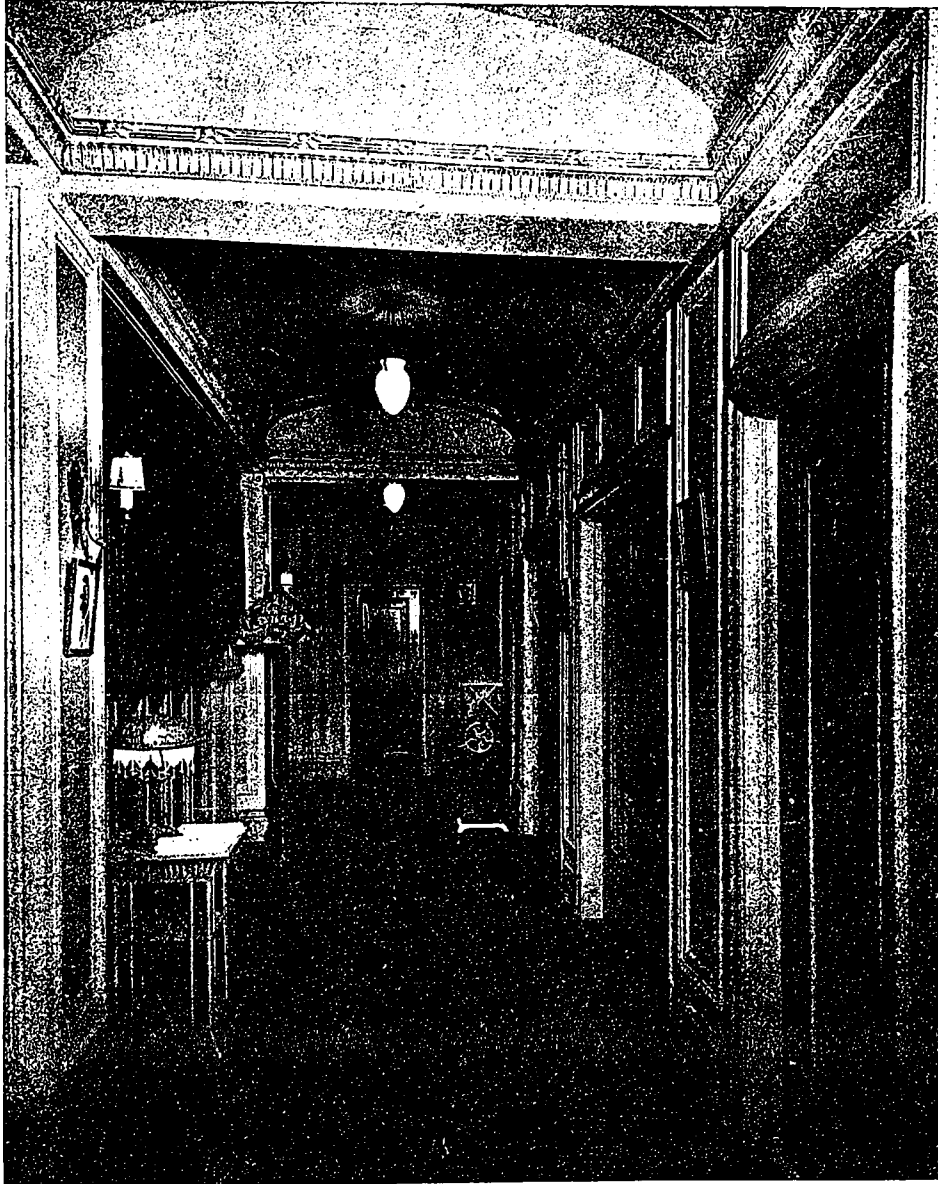
operate hydro-electric enterprises in the British Empire and to bring those interested into close touch with each other. It is claimed that such a body would be in a position to give the soundest advice and should have the confidence of all concerned, and that if suitably composed and with loyal co-operation between its constituents it could do much to further the development of water power and of dependent industries.

— — —  
Mr. Charles H. Bishop, Superintendent of Buildings for the Toronto Board of Education, has resigned, after holding that position continually for thirty years.

## Allen's Bloor Street Theatre, Toronto

TO Messrs. Jules and Jay Allen, of the Allen Theatres, must be given the credit for one of the most notable moving picture enterprises in Canada. It is less than two years that their modern theatre at the corner of Richmond

Bathurst streets, which was completed the early part of this year. In this theatre the aim has been to provide attractive surroundings, together with every factor which might contribute to safety, comfort and convenience.

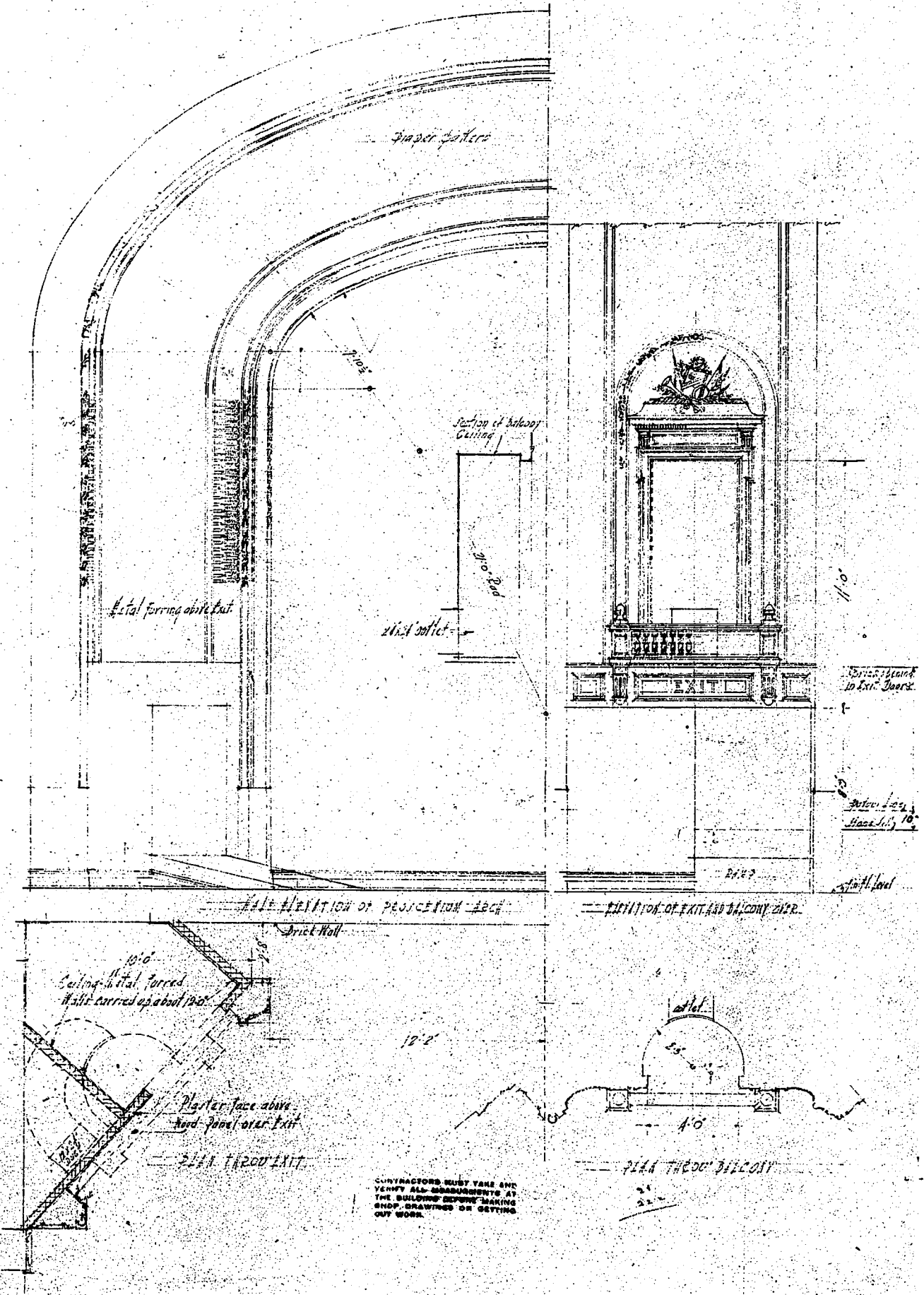


FOYER.

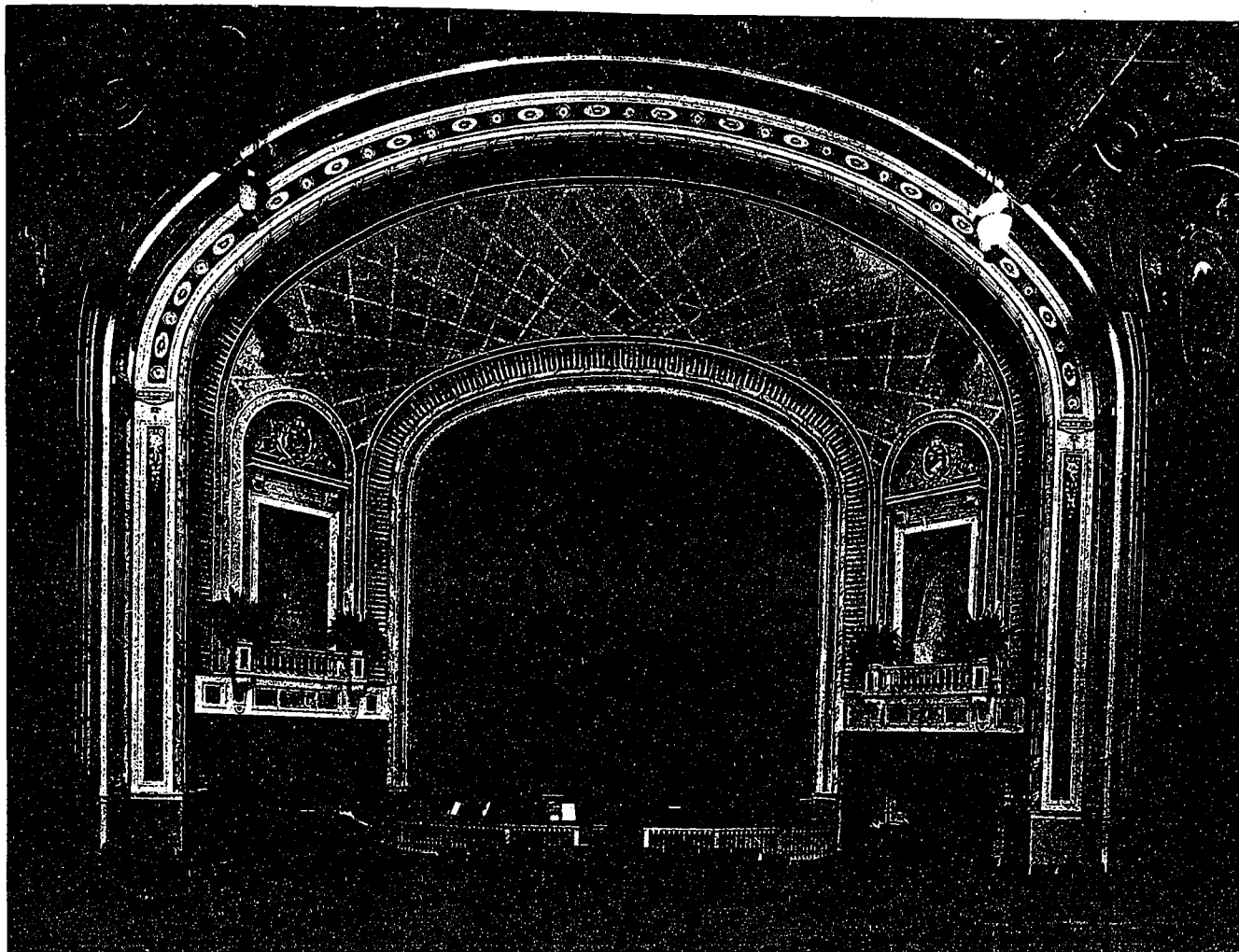
and Victoria streets was opened to the public. Since then this firm has increased its holdings in Toronto alone by two additional picture houses, besides having two others in course of construction, and still two more to be built shortly. It further stands to their credit that the class of buildings they are erecting are designed architecturally to appeal to the better class of "movie" patrons. A typical example of their efforts in this direction is seen in the new Allen Theatre in the vicinity of Bloor and

The materials used in the construction of the building are mostly brick, tile and reinforced concrete, making it fireproof in character. A feature of the concrete design are the elliptical trusses which span the auditorium and the cantilever beams which extend from the front wall and form the support of the balcony, which seats some four hundred persons.

Altogether the general scheme is quite satisfying and pleasing. The exterior, which is carried out in tapestry brick and cut stone, is



DETAIL OF PROSCENIUM ARCH.  
 NEW ALLEN THEATRE, BLOOR AND BATHURST STREETS. TORONTO.  
 HYNES, FELDMAN AND WATSON, ARCHITECTS.



PROSCENIUM ARCH, NEW ALLEN THEATRE, BLOOR AND BATHURST STREETS, TORONTO.

quiet in architectural detail and somewhat Italian. Dignified lines, effective in their simplicity, characterize the foyer and mezzanine and terminate in festoons of enriched detail interlacing the ellipse of the ceiling. In the auditorium, which represents a modern development in the Louis XVI. style, the plaster ornamentation is richly detailed and very effectively done. The dominating colors are ivory and old rose, with wall panels of this period. Perhaps the only criticism of the scheme lies in the lack of adornment of the proscenium arch, which could have been improved with further enrichment.

The theatre is equipped with an efficient heating and ventilating system, which regulates the temperature of the auditorium and provides for a constant circulation of fresh air. The seating capacity of the house altogether is about one thousand, and exits are provided at both the sides and rear, in addition to the main entrance.

The Allen interests have also established theatres in a number of other Canadian cities, and, with others being planned and built, will eventually own and control a chain of modern

moving picture houses extending from coast to coast.

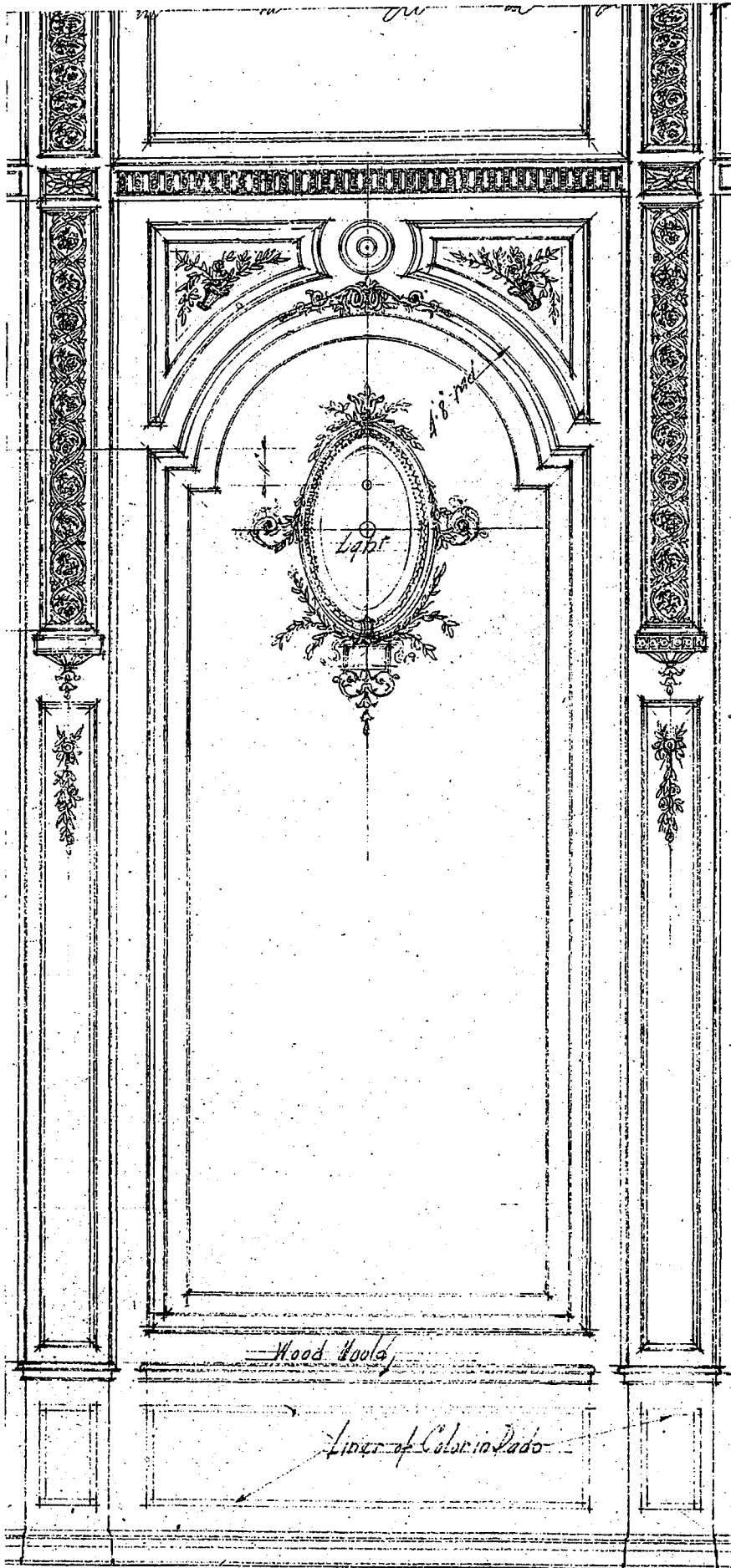
### Change in Partnership

Mr. A. S. Mather, B.A.Sc., has withdrawn from the architectural firm of Banigan, Mather & Thompson, 7 King street east, Toronto, and hereafter the business will be carried on under the name of Banigan & Thompson.

### Cheaper Electric Wiring

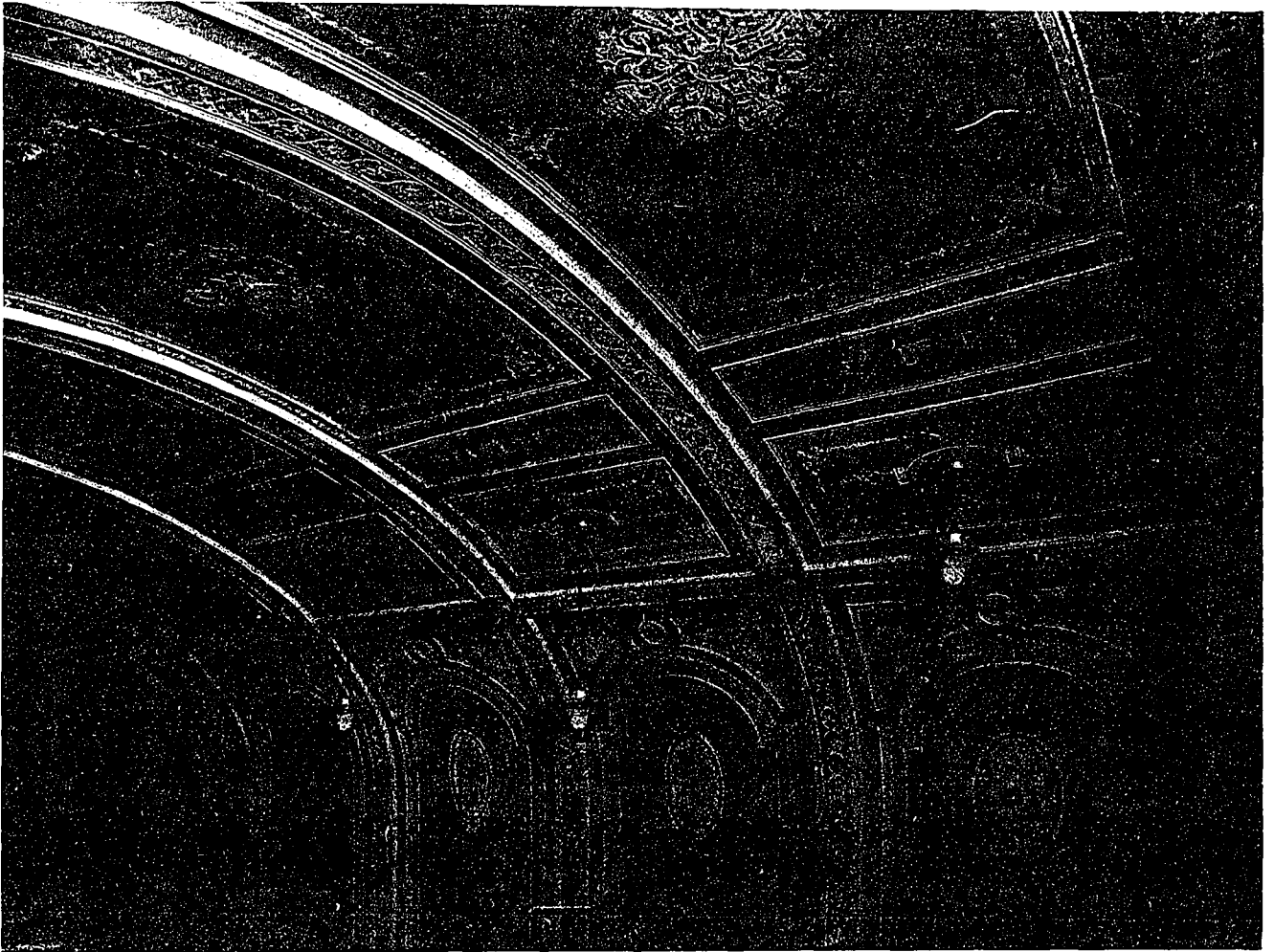
A Special Committee of the Institution of Electrical Engineers (Great Britain) has been formed to consider the revision of the existing rules for electric wiring in buildings. This committee is the outcome of a growing conviction that the high quality of British cables and accessories justifies a relaxation of the standards hitherto imposed. During the war an enormous number of army buildings have been wired on the surface and in other ways not consistent with standard British practice, and the experience thus gained will be turned to account in cheapening the cost of installation.





DETAIL  
OF WALL  
PANEL

HYNES,  
FELDMAN  
& WATSON,  
ARCHITECTS.



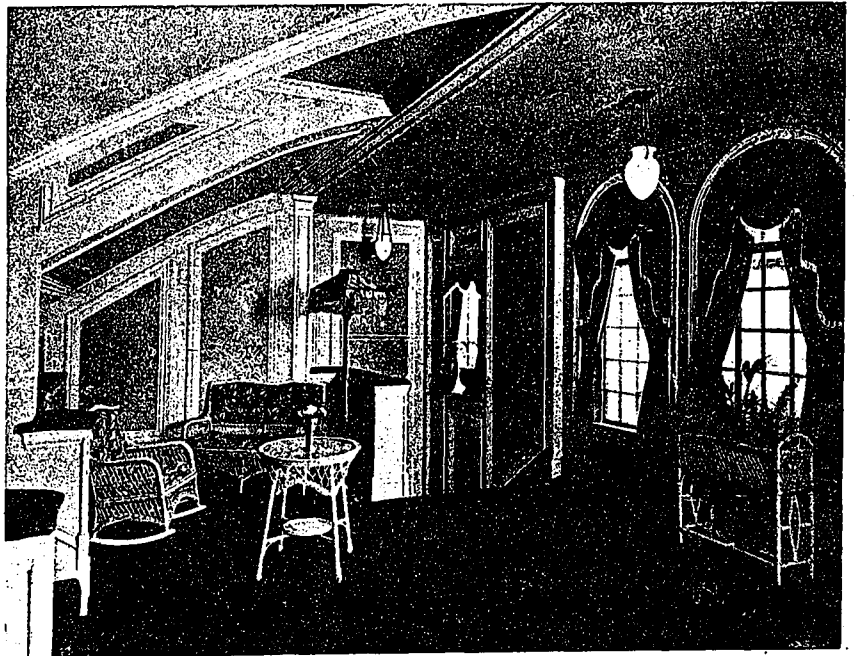
DETAIL OF CEILING, NEW ALLEN THEATRE, ELOOR AND BATHURST STREETS, TORONTO.

and materials. British manufacturers of wires, switches, insulators and other accessories will thus be led to expand the production of types which will be peculiarly adapted to meet the needs of overseas markets. Satisfactory quality will be ensured by the National Electric Proving House, which is about to be established in Great Britain. The proving house will put the hallmark of good design, material and workmanship on every class of electrical apparatus, thus giving British productions the full benefit of the high reputation they have always held.

### Bigger Than Ever

A larger hotel than the new Pennsylvania recently completed in New York, which now hold the record as to size, is shortly to be built at Atlantic City. It will contain twenty-four hundred sleeping rooms

and twenty-four hundred baths, and will occupy three blocks of beach frontage at Albany Avenue, Chelsea. A swimming pool as well as other novelties will be incorporated in the design.



MEZZANINE.

# Woodwork from Temple of Vadi Parsvanatha

The woodwork of a room (mandapa) from a Jaina temple now in the galleries of Indian art of the Metropolitan Museum of Art, New York City, is described in a bulletin recently issued by the Museum authorities. The information is taken mainly from the Architectural Survey of Western India, Volume IX, 1903, which is the work of two distinguished archaeologists, James Burgess and Henry Cousens. This volume deals with the architectural antiquities of Northern Gujarat, more especially of the districts included in the State of Baroda, and contains a number of drawings and photographs prepared under the supervision of Mr. Cousens in 1886-'87 and 1889-'90. On pages 49-51 of the Survey is found an account of the woodwork referred to, and a translation of a long inscription in the temple which affords definite information as to the date of the temple, the name of the founder,

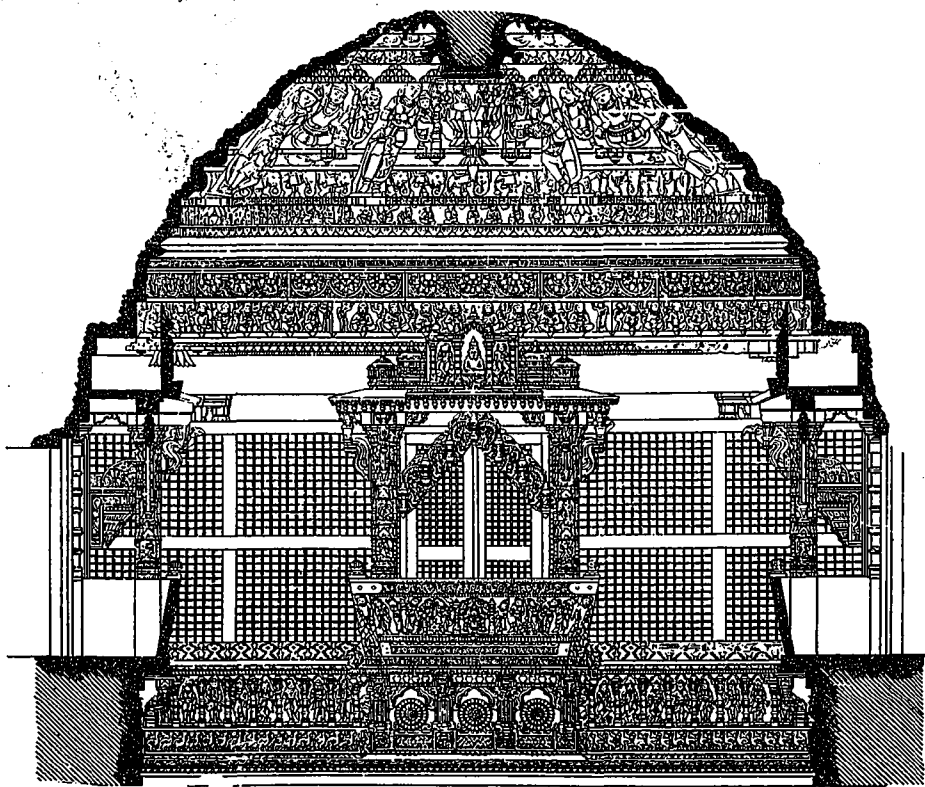
tuted in the upper part of the walls for an iron grating or cage shown in the photograph. The purpose of this grating was to enclose the dome against bats and swallows. The modern grille work forming the lower part of the walls, as the woodwork is now set up in the Museum, serves a decorative purpose, but does not follow the original construction of the mandapa. Unfortunately, neither the drawings nor the photograph show the structure below the frieze nor give the ground plan of the temple; but presumably the superstructure was borne upon columns, thus permitting access to the shrine and other halls.

The town of Patan, whence comes the woodwork, lies on the left bank or south side of the Sarasvata River in the flat, sandy plain of Northern Gujarat, about sixty-six miles northwest of Ahmadabad, in the State of Baroda.

Patan, also known as Anahilavada, Anahillapura, etc., is one of the oldest and most renowned cities of Gujarat, and a centre of Jain culture. The temple of Vadi Parsvanatha, located on Jhaveri Street, was built between 1594 and 1596. A marble slab built into the wall of the principal mandapa of the temple bears a long inscription from which we learn that the temple was dedicated to the Jina Parsva of Vadipura; that its construction was begun on November 11, 1594, and the image dedicated on May 13, 1596; that the temple was founded by Ratnakumyaraaji of the OsvaI clan, with his sister (?) and daughter as co-founders, on the advice of the Jaina pontiff Jimchandra-suri VI, entitled by

the Emperor Akbar "the most virtuous, glorious pontiff of the age."

The Jina Parsvanatha, to whom the temple is dedicated, is the twenty-third in order of succession if the twenty-four Tirthakaras or perfected saints worshipped by the Jains. Jainism, a religion still influential in India, is of contemporary origin with Buddhism (VI century B.C.), and was founded, according to tradition, by Mahavira, the twenty-fourth Tirthakara or



SECTION OF THE MAUDAPA IN THE TEMPLE OF VADI PARSVANATHA.

a list of Jaina pontiffs, etc. Plates XX and XXI reproduced herewith are carefully detailed drawings; one showing a section of the mandapa and the other a plan of the ceiling.

The woodwork in the Museum is identical with that published by Burgess and Cousens, and the correctness of the present installation is established by these drawings made before the woodwork had been removed from the temple. It should be mentioned, however, that in the reconstruction, grille work has been substi-

Finder of the Ford through the Ocean of Re-birth.

In the carving of the ceiling may be noted eight seated male figures, each with two attendants. These are the eight regents of the points of the compass, each with his vahana or conveyance represented beneath his throne. Originally, eight large bracket figures, now missing, of musicians and dancers, separated the regents. A lotus-shaped pendant and concentric circles with figures and bands of ornament complete the sculpture of the dome. The decorative carvings of the spandrels are particularly fine. Gaja Lakshmi and other deities, dancing figures, musicians, etc., are represented on the elaborately carved balconies. In the frieze below are musicians and dancers and various ornamental carvings.

Dr. Burgess remarks that "all the carving, designs and figures are precisely the same as are found in stone. But with the Hindu workman, whatever was practicable in stone seems to have been regarded as equally so in wood, and vice versa." Certainly these carvings give ample evidence of great technical skill and feeling for design. So bountiful is the enrichment of surfaces, so numerous the decorative motives, that the visitor's first impression is apt to be one of bewilderment, but more prolonged observation is surely rewarded by the discovery of beauties of line and form which are to-day, as centuries ago, a source of unflinching delight to those who possess the "seeing eye."

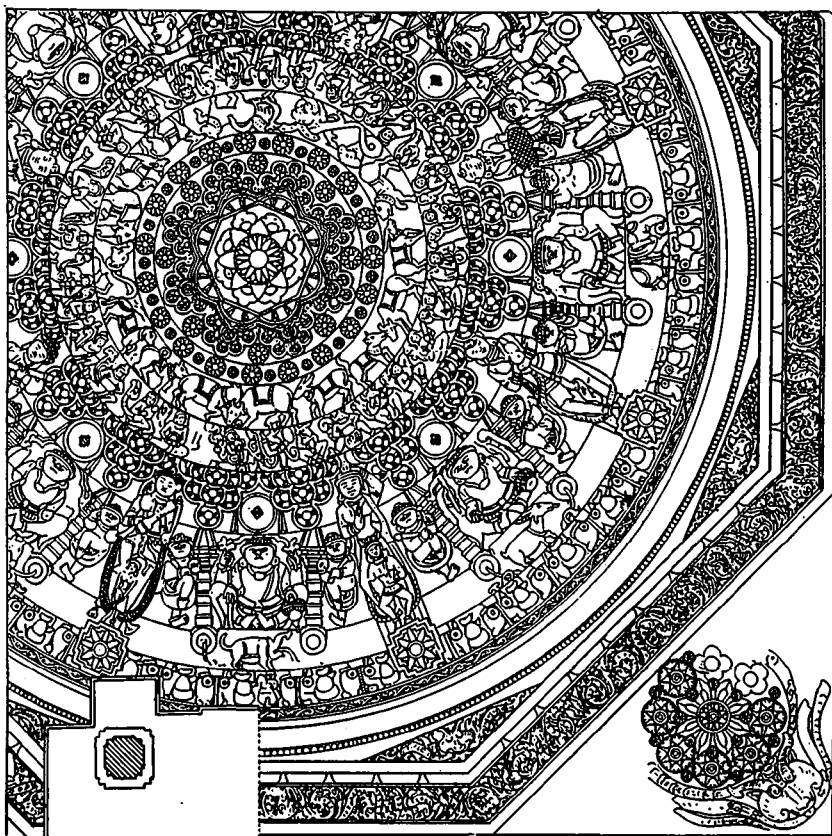
### French Ask Art Works For Those Ruined

As reparation for the works of art destroyed in France by the Germans, it is suggested by the French Academy of Fine Arts, according to the "Journal des Debats," that works of French genius now in the collections of the former royal families in the public museums of Germany and Austria be put at the disposal of the French state, which will select some of these works as a legitimate indemnity. The petition sent by the academy to the Government reads:

"The public monuments of twenty cities, cathedrals, museums, libraries and a large number of small churches known as the most precious among the churches of France have been mutilated and destroyed with the works of art they contained. In order to make up in a small

measure for the loss of the home of the French works which composed our national art treasure destined to serve for the education of future generations, we do not demand that the museums of Germany and Austria be plundered, but only that the works due to French genius which are now in the collection of the former royal families and in the public museums in Germany and Austria be put at the disposal of the French state to let it select some works of art as a legitimate indemnity. The same can be said regarding the ravishing of the art patrimony of Belgium. Could pecuniary indemnities be considered sufficient to make up for the destruction of Louvain and Ypres? Belgium should be allowed to select a certain amount of Flemish works of art from the collections of the states which destroyed them on the same conditions as we demand for France.

"The destruction carried out in Italy which affected some precious works of Venetian art must also be compensated for, as justice demands, by the handing over of some Italian



DETAIL OF CEILING, TEMPLE OF THE VADI PARSVANATHA.

works of art now in possession of the enemy.

"In short, the signers of the petition demand that the following principle be written in the peace terms:

"That the diminution brought to the art treasures of the attacked nations be compensated for by the handing over of the works of art of the countries which have carried out the destructions."

# Competition for War Memorial at Regina

In view of the unsatisfactory conditions which have characterized so many architectural competitions, we heartily commend to the attention of our readers the model programme published herewith for the proposed War Memorial Museum to be erected at Regina for the Saskatchewan Government. The terms are, indeed, such as to assure the promoters the best possible result and to preclude any cause for complaint on the part of the contestants. There is no seeking of gratuitous service and nothing indefinite to leave one in doubt as to the final outcome. In the first place, the conditions are in full conformity with governing principles approved by the architectural fraternity in that qualified architectural assessors have been appointed to draft the terms and judge the designs. In the second place, the contest is restricted by invitation to eight competitors, each of whom will be recompensed at least in part for the expense he must meet in presenting his design, which is only fair and as it should be, and something which can only be done when the participants are limited in number. In the third place, it pro-

vides that no competitor shall submit more than one design and that alternative schemes are not to be considered. Besides this, it is expressly stated that the winning architect's design must not involve a building to cost more than the estimate submitted, independent of such changes as may be suggested by the assessors. Under circumstances such as these architects will not only show a disposition to compete, but will find an incentive to awaken their very best efforts. There is no opportunity for a "double chance" such as an alternative scheme gives; no possibility for a competitor to win who does not comply with the conditions or come within the appropriation. The terms are eminently satisfactory and in every way safeguard the interests of all parties. The Saskatchewan Government will not only benefit as a result of entrusting this work to competent architectural direction, but it establishes a principle of fairness on which future competitions in Canada can be profitably based if promoters are desirous of obtaining successfully planned and artistic buildings.—*Ed.*

Conditions of Competition for the Selection of an Architect for the Proposed War Memorial Museum at Regina, Saskatchewan.

## A—TERMS OF THE COMPETITION.

1. The Government of the Province of Saskatchewan promotes this competition and is hereafter referred to as "The Promoters."

2. The Competition is restricted to those invited by the Promoters to take part.

3. The prize in this Competition shall be the commission of the design and the supervision of the erection of the proposed building, at such time as it shall be proceeded with, on the usual terms and as herein set forth. One thousand dollars (\$1,000) shall be paid to the winner within fifteen (15) days of the announcement of the award, this sum being merged in the amount of the Commission when the work goes on.

4. The unsuccessful competitors shall receive an honorarium of one thousand dollars (\$1,000) each towards their expenses in the presentation of their designs within fifteen (15) days of the announcement of the award.

5. The Assessors shall be: Septimus Warwick, F.R.I.B.A., Architect, Montreal; Ramsay Traquair, A.R.I.B.A., Professor of Architecture, McGill University, Montreal.

The award of the Assessors shall be accepted by the Promoters provided that they are not required to accept a design which fails to meet the spirit of the conditions as set forth herein.

6. The Promoters reserve the right to appoint a third professional assessor.

In the event of failure by the Assessors herein named to agree upon an award the Promoters shall nominate a third Assessor.

7. The Assessors are responsible for the preparation of the conditions as herein set forth, and in reporting their award, shall make such recommendations to the Promoters

as to changes in the winning scheme as their study of the problem may suggest.

The Assessors shall not be employed professionally by the Promoters in connection with this undertaking subsequent to the award.

8. The named Assessors shall come to a decision within twenty-one (21) days of the date for sending in drawings; and all drawings shall be exhibited marked with the names of the authors at Regina for two (2) weeks as soon as possible after the award.

9. All drawings and notes shall be returned by the Promoters to the competitors immediately on the close of the exhibition.

10. The invited competitors are: Messrs. Brown and Vallance, Montreal; Mr. Emil Delay, Regina; Messrs. E. and W. S. Maxwell, Montreal; Messrs. Nobbs and Hyde, Montreal; Mr. J. H. G. Russell, Winnipeg; Messrs. Storey and Von Egmond, Regina; Mr. R. G. Bunyard, Moose Jaw; Mr. David Webster, Saskatoon.

11. No competitor shall submit more than one scheme. No alternative arrangements are to be shown.

12. The submission of drawings under these conditions shall signify the acceptance of all the conditions herein set forth.

## B—THE ARCHITECT FOR THE WORK.

1. The Architect, who shall be awarded the work, shall, if requested, revise his design and make such changes as may be necessary to meet the views of the Promoters, and shall advise the Promoters as to any additional cost involved by such changes.

If, upon tenders being received, it is found that, independently of such changes, the cost of the proposed building will exceed the Architect's estimate, furnished at the

time of the competition, to such an extent that the alterations necessary to bring it within the limits of this estimate render it no longer acceptable to the Promoters, the plans may be rejected, in which case the author shall receive no other remuneration than the honorarium stated in A3 of these conditions, and the Assessors shall be called upon to name a successor.

2. After the plans have finally been accepted by the Promoters, the Architect shall prepare working drawings and specifications and shall supervise the work during the construction of the building. Subject to the approval of the Minister of Public Works he shall have control of all matters of arrangement, design and execution.

3. All drawings and specifications, as instruments of service, are to remain the property of the Architect, except the signed contract drawings and signed specifications and one (1) record copy on tracing linen of the plans, elevations and sections, to a scale of eight feet to the inch, to be furnished to the Promoters when the works are completed, together with a set of specifications amended to correspond with the works as carried out. The Promoters hereby bind themselves not to utilize the said drawings otherwise than as records of executed works.

4. The Architect shall, if required, provide a resident responsible representative whose appointment shall be approved by the Minister of Public Works and whose duty it shall be to superintend the conduct of the works and who shall have full powers to deal with the Promoters and the contractors on the Architect's behalf.

5. The successful competitor shall be required to visit the site and to meet the Promoters immediately on the announcement of the award.

6. For all these and for all other services as are usual or incident and necessary thereto, the Architect shall receive the customary commission of 5 per cent. on the estimated cost of the works as accepted in the tenders, (exclusive of the cost of the engineering works hereafter described), plus 5 per cent. on the cost of any extras subsequently suggested by the Promoters, but exclusive of extras due to omissions or errors on the part of the Architect.

7. The Promoters shall provide and pay a clerk of works and bear the cost of his office expenses. The appointment of such clerk of works shall be made with the approval of the Architect, who shall regulate his duties and shall have power to order his discharge for cause.

8. The Minister of Public Works shall at all times have access to the works and to all records and documents appertaining thereto.

9. The Promoters shall have the option:

- (a) of obtaining tenders in the usual way through the Architect;
- (b) of obtaining tenders themselves on the Architect's drawings and specifications;
- (c) of letting the work on a "time and material plus fixed sum" basis;
- (d) of carrying out the work directly under the Department of Public Works.

In cases C or D the Architect shall not be held responsible for the cost of the work under clauses B1, B6 and B7, and shall be furnished with full particulars of the expenditure.

10. The furnishings and fittings for the building will not necessarily be placed in the hands of the Architect.

11. The Architect will appoint a heating and ventilating engineer, with the approval of the Promoters, to install the power, heating, ventilating, illuminating and other appliances and he shall be paid directly by the Promoters. The Architect shall consult with such engineer on the general lay-out of the equipment, on the construction of

ducts, foundations and all other matters which require to be incorporated in the Architect's drawings and specifications and shall receive 2½ per cent. commission on the cost of all the contracts for the aforementioned engineering works. The engineer will call for tenders and will be solely responsible for the heating system and for the mechanical apparatus installed by him.

#### C—PREPARATION AND DELIVERY OF DRAWINGS AND DOCUMENTS.

1. The drawings required are, to the scales mentioned:

- (a) a block plan of the site to a small scale;
- (b) plans of all floors including basement and roof, to 16 feet to the inch;
- (c) elevations to illustrate the facades of the building to 16 feet to the inch;
- (d) sufficient sections to illustrate clearly the scheme proposed to 16 feet to the inch;
- (e) one detail of a small part of the exterior to two feet to the inch.

No perspective drawing is required and no drawings, other than those required, are to be submitted.

2. Drawings shall be on white paper mounted on calico, delivered flat in a plain portfolio. Each competitor's set of drawings is to be on sheets of uniform size, with moderate margin without borders of any kind. Two or more elevations, plans or sections may be placed on each sheet, if desired.

Drawings shall be rendered in India ink or lead pencil, the sectional parts blacked in solid, the openings and shadows washed in with lampblack. Light washes of India ink may be used if desired to indicate planes or wall textures but no color shall be used. No ornamental features such as cornices or floor patterns are to be shown on the floor plans but the position of permanent fixtures may be shown.

All printing shall be in plain, legible block type.

All rooms shall be figured both for floor area and dimensions.

3. Competitors shall submit, along with their drawings, a brief typewritten, unsigned description of the main arrangements and characteristics of their schemes, together with a guaranteed statement of the total cubic contents, notes of the relative value per cubic foot of the different portions of the scheme, and an estimate of cost of the proposed works.

In estimating the cubical contents the measurements shall be taken from the outside of the walls and additions shall be made for all projections. The height shall be measured from the bottom of the foundations to the top of flats and to the mean height of pitched roofs, additions being made for the extra height of any portion.

The Promoters consider that at the present time a suitable building can be erected at a cost of 80 cents per cubic foot, including engineering.

4. The drawings must have no device or mark of any kind nor any handwriting or other means of identification. With each set of drawings is to be enclosed a blank sealed envelope, addressed in typewriting, containing the name of the architect in question, together with a statement that the design and drawings have been prepared entirely in his office under his own supervision.

5. Any infringement of these regulations or disclosure of identity shall be held sufficient ground for the exclusion of drawings from the competition, at the discretion of the Assessors.

6. All questions asked by competitors must be addressed to Ramsay Traquair, Department of Architecture, McGill University, Montreal, by the 5th day of May, 1919, and such answers as the Assessors may give will be sent,



together with the questions asked, to all competitors alike within four days thereafter.

7. All drawings accompanying documents and envelopes shall be delivered to the Deputy Minister of Public Works by *post or express*, labelled with the tag herewith attached, on or before the 7th day of July, 1919, and the packages and envelopes shall be numbered by him, the envelopes to be retained in his possession and opened subsequent to the award and the drawings and notes to be forwarded at once to the Assessors.

D—SITE, CHARACTER OF BUILDING AND COST.

1. The Block plan hereto attached shows the proposed site, which is situated to the south-west of the existing Parliament Buildings. The site is practically level and the surrounding country flat. The existing road to the power house need not be regarded as fixed. The Building will face on to Albert Street, but will be seen principally from the north side as approached from the city.

2. The style of the building is left to the discretion of the competitors. It should be such as to harmonize with the Parliament Building, a photograph of which, from the north, is hereto attached.

3. The primary purpose of the building is that of a Memorial to the Men of Saskatchewan who fell in the great war and of the part taken by the Province in that struggle.

The secondary purpose is to contain the

- (a) collection of war trophies and records of the Province;
- (b) natural history and scientific collections of the Province.

The Promoters desire to obtain a building which will express these ideas and will fulfil the purpose of a Museum.

Competitors are reminded that elaborate architectural detail is unsuited to the interior of the museum, whose object is to display the exhibits to the best advantage.

4. Construction.

- (a) The foundations will probably be at a depth of about 12 feet in stiff heavy soil;
- (b) the construction shall be fireproof throughout and woodwork in the finishings shall be reduced to a minimum;
- (c) competitors will prepare designs for a building in Tyndal Limestone, similar to that used in the Parliament Building. This is a creamy white stone with large markings of a slightly darker color;
- (d) in the roof, parapets with pitches behind them should be avoided. Pitched roofs may be of slate or tile, flashings will be of copper, flats may be in galvanized iron or gravel.

Canadian materials shall be used where possible.

5. Cost. The sum available for the building and the engineering (not including furniture and the Architect's commissions) is \$400,000.

(e) Schedule of Accommodation.

Note—The floor areas for the various rooms or galleries is stated in round numbers. The exact area and division is left to the discretion of the competing architects.

Vestibule with cloak room and room for the exhibition and sale of photographs, etc.	} Floor space 2,500
Hall of Honor with bronze tablets for the names of men who fell in the great war.	

War Relics Museum.

Large hall .....	3,500
Small room for records, etc. ....	700

Provincial Museum.

Natural History:	
Zoology .....	1,000
Ornithology .....	1,000
Botany .....	500
Mineralogy .....	500
Entomology .....	500
Ethnology and History .....	1,500
Spare Collections and Stores.	3,000 to 4,000
Repair rooms, work rooms, etc. ....	1,000
Curator's office:	
Private room .....	} 1,000
General office .....	
Lavatory .....	

Public lavatories for both sexes.

Stairs as required.

A large elevator capable of taking large cases or exhibits.

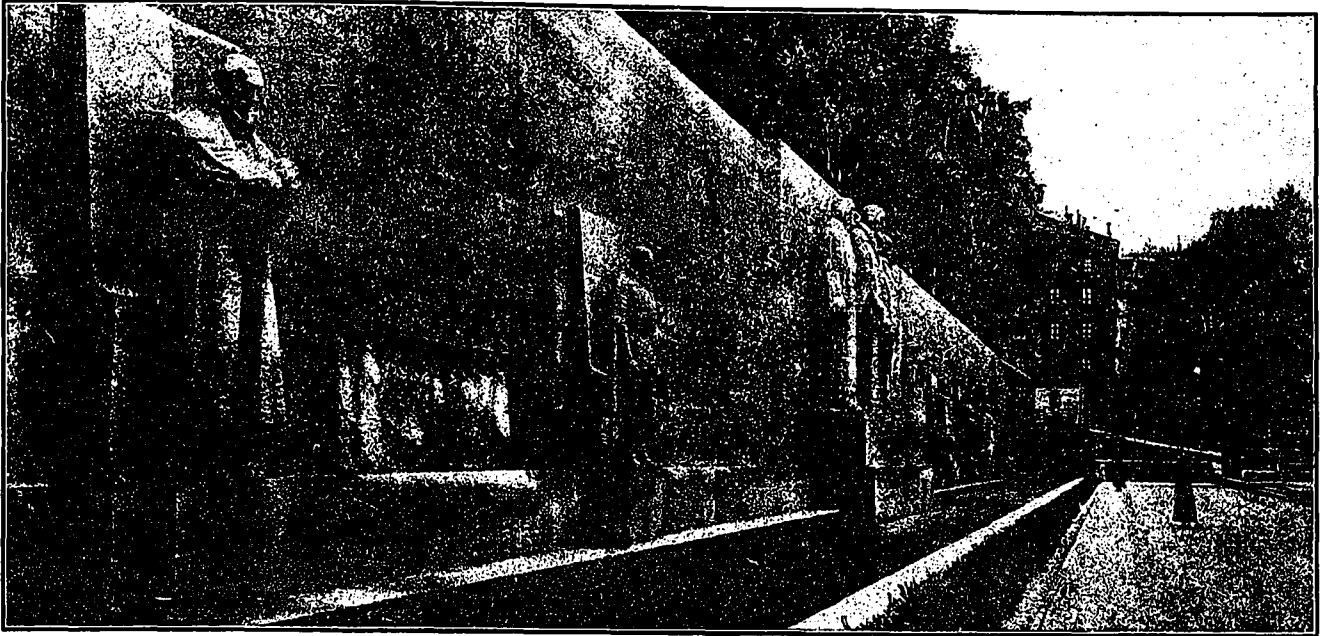
Note—Caretaker's or Janitor's quarters are not required. Provision is to be made for a statuary group in front of the building. The cost of this is not to be included.

The importance and interest of the building must centre in the Hall of Honor and the War Relics Museum. The Promoters desire that these shall be a worthy memorial and that other uses of the building shall be subordinated to its purpose as a Commemoration of the Men of Saskatchewan who fell in the Great War.

Issued Regina, April 7, 1919.

Reforestation Essential

Discussing the subject of reforestation, F. E. Olmstead says it is sometimes argued that we do not need to concern ourselves about the forests of the future, because the forests we now have will last us for 50 or 100 years, or even longer; that it is futile to worry about the matter, so long as we have wood. Of course, it is possible to estimate the length of time our present supply of timber will hold out, assuming certain fixed domestic and foreign demands (demands, incidentally, which are by no means fixed). This question has no direct bearing on the problem of keeping forest lands productive. Let us suppose, for example, that under certain estimated demands our present forests will last us for a hundred years. That is no reason at all why we should allow cut-over lands to become wastes or near-wastes. In the first place, it takes a hundred years, let us say, for a seedling to grow into a respectable tree, fit for the saw. The trees we are now cutting are, on the average, much older. The time to start our new forests, therefore, is now—not a hundred years from now—for otherwise we should have a long period during which we should be without adequate supplies of timber. In the second place, those who argue that no present action is necessary overlook one of the most vital facts in the whole forest problem, namely, that the destruction of forests in any one locality, district, or region has a distinctly adverse influence on the prosperity of the country as a whole. The forest problem is essentially a local problem.



MEMORIAL SCULPTURES AT GENEVA, SWITZERLAND, SHOWING THE CHIEF FIGURES AND EVENTS OF THE SPIRITUAL AND POLITICAL RENAISSANCE.

## History of the Reformation Written in Stone

At the foot of the old ramparts of 1543, in the city of Geneva, Switzerland, and within sight of Mont Blanc, there has just been completed what William Elliott Griffis, in the *New York Times*, describes as the noblest of all the memorials of the Reformation yet upreared. In the form of a series of mural sculptures, it stretches along the Promenade de les Bastions, fronting one of Geneva's famous parks.

In itself it is a book of history in stone. It portrays, in figures of heroic size, the leading personages and the chief events of that mighty movement of the human mind out of which grew the public school system, modern democracy, and the age of science. The new memorial is therefore not merely of local interest or import. It is of international significance, because it shows the influence and outworking, in many countries, of the recovery, in the sixteenth century, of ancient truths. Following the spirit of conciliation characteristic of the Genevans, all subjects of a polemic or controversial nature have been avoided, all disputes, conflicts, battles and persecutions. The emphasis is laid on actual history and upon memorable facts, upon the growth of religious peace and of social progress and of freedom of conscience.

In the central group stand Farel, Calvin, Beze, and Knox. The first was a popular orator and man of action. He taught ethics, but cared little for dogma; the second gave logical precision to the Reformation doctrines and laid the foundations of modern democracy, in teaching that all men are equal before God and that human salvation rests on a divine purpose of

love older than Kings, thrones, or earthly institutions; Beze, the scholar and translator, carried on Calvin's work; John Knox, father of the public schools, transformed feudal Scotland into a church republic.

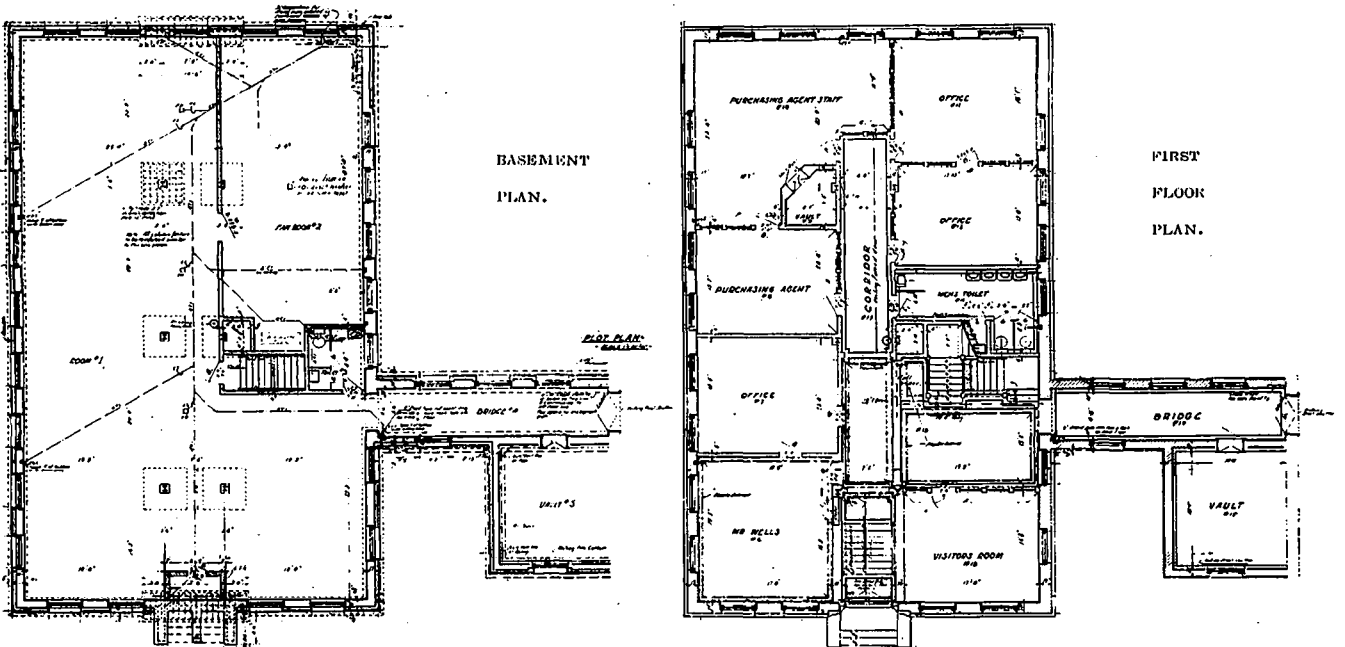
Flanking these gowned and capped men of the pen, who were builders of the Church, are the makers of governments—Coligny, William the Silent, Oliver Cromwell, Boeskey of Transylvania, the Elector, Frederick William of Brandenburg, and Roger Williams. The historical bas-reliefs, which are spirited and artistic, represent the scenes associated with modern liberty, in which the men commemorated in statues were actors, and in the elucidation of which they were exemplars.

With each of these is a notable text or representation in bas-relief. These are, on the right, the Edict of Nantes, in France; the Declaration of Independence by the United States; of the Netherlands forming the Dutch Republic, in 1851; the Great Elector, in 1685, offering refuge to the Huguënot refugees; and the unpictured stone, in commemoration of the Reformation in Geneva, in 1536. On the left are the Mayflower Compact, in 1620; the Declaration of Rights in England, in 1689; the Hungarian Diet of 1606, receiving notice of the Peace of Vienna, which granted religious liberty in the realm. A smaller inscribed stone tells of the deliverance of Geneva in 1606.

The work, artistically, is the result of the zealous co-operation of Swiss and French artists, sculptors and architects, and the total cost approaches \$200,000, of which the city of Geneva contributed one-half.



EXTERIOR VIEW.



NEW OFFICE BUILDING, STEEL COMPANY OF CANADA, HAMILTON, ONT.  
Bernard H. Prack, Architect.

## Steel Company of Canada's Offices

**I**NCREASING staff requirements have made it necessary for the Steel Company of Canada to provide additional accommodations for its executive and clerical staff. As a result a new office building has just been completed adjoining the company's large industrial plant at Hamilton, which is practically planned for this purpose and which gives the office force very desirable quarters in which to carry on its work.

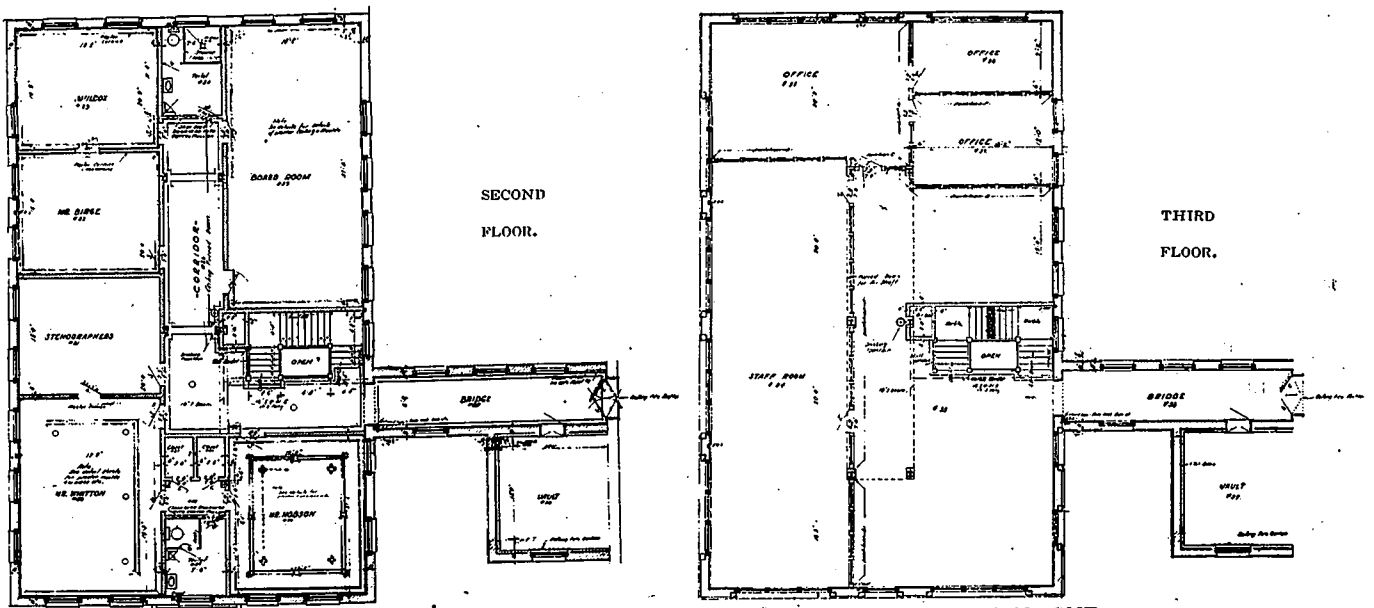
This new building is three stories and basement, 47 x 77 ft., and of brick, steel and hollow tile construction. The exterior walls are surfaced with rug brick laid to pattern and backed with common brick furred and plastered on the interior. The corridors and toilet rooms have terrazzo floors with marble cove and base. In the general offices the floors are covered with battleship linoleum over a cement finish, and in the executive offices the sub floors are of pine with oak floors laid on top. All the plastering throughout is of three coat work, the executive offices and Board room being finished with cornices, mouldings and ornament of neat design. In these offices the walls are panelled in oak to the chair rails, and in the President's office is carried full height to the ceiling.



CORRIDORS AND STAIRS. STEEL COMPANY OF CANADA'S OFFICE BUILDING, HAMILTON, ONT.

While a complete structure in itself, the new building is connected to the old offices by enclosed corridors. This connection extends through on all floors, making it unnecessary to go to the outside in passing from one part of the premises to the other.

Especial care has been given to the matter of heating and mechanical equipment. One-third direct radiation is derived from a tempered air ventilation system consisting of multiblade fan, air washer, tempering and re-heating stacks. In the summer time this equipment will be used to change the air in all offices every twenty minutes, giving a fresh supply of washed air at such intervals.



STEEL COMPANY OF CANADA'S OFFICE BUILDING, HAMILTON, ONT.

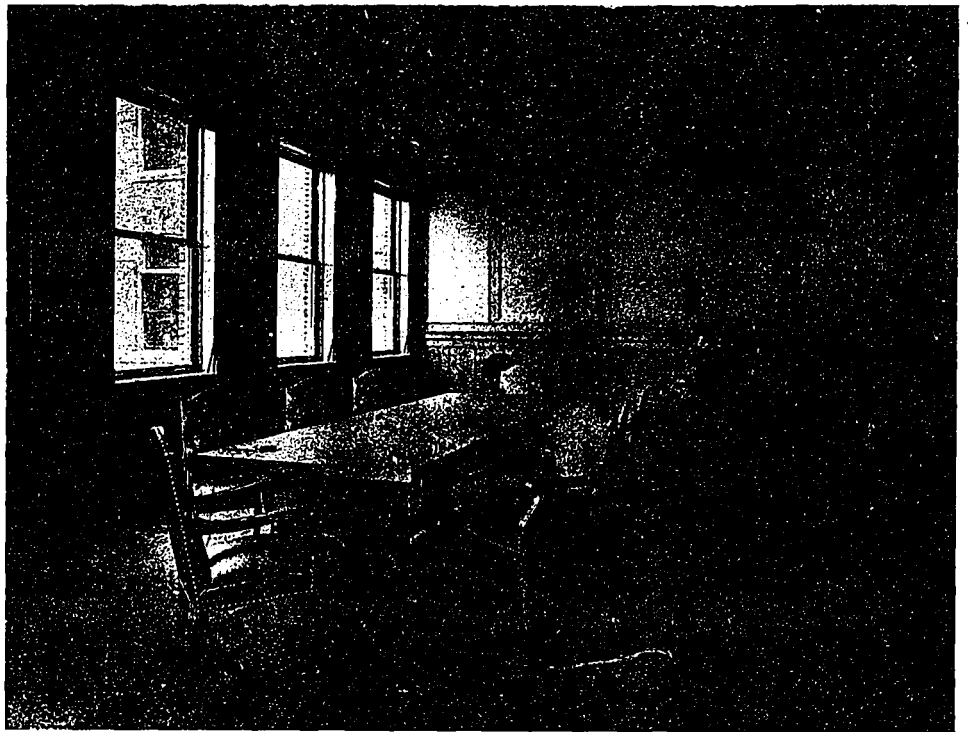
In addition, the building contains a modern and up-to-date lighting equipment. It is also wired for adding machines, fan outlets and a complete bell system, besides having dictaphone outlets in all offices as well as a complete inter-communicating system.

### Clay Interests to Meet

The programme for this year's convention of the Canadian National Clay Products Association, to be held in Montreal May 26-27, provides for a number of technical and trade subjects which promise an interesting and profitable three days' session.

Mr. W. W. Pearse, City Architect, Toronto, will discuss "Brick Tests and Investigations," and Mr. Millard F. Gibson, General Manager of the National Fireproof Company, the "Transportation of Clay Products." Other papers to be presented are: "Why Freight Rates Are as They Are and How Made," by James E. Walsh, General Manager of the Canadian Manufacturers' Association; "Use of Firebrick in the Steel and Clay Products Business"; "Sewer Pipe Investigations," by A. G. Dalzell; "Firing of Clay Products in the Dressler Continuous Muffle Kiln," by Conrod Dressler, of the American Dressler Tunnel Kilns Co., New York; "Steam Shovel Comparisons," by Wm. Burgess, Superintendent of the Don Valley Brick Works, Todmorden; "Motor Trucks in the Clay Products Business," by Charles Harrison and Horace Harpham; "The Burning of Carbonaceous Clays," by Joseph Keele, Chief Engineer of the Ceramic Department, Mines Branch, Ottawa; "Machinery and Dryers for Large Size Tile," by L. Haigh, American Clay Machinery Co.

In addition to the foregoing, the reports of the Tile Committee and the



BOARD ROOM, STEEL COMPANY OF CANADA'S OFFICE BUILDING, HAMILTON, ONT.

Committee on Technical Education will be presented to the convention.

Florence, Italy, has just taken the sandbags away from the bronze statue Perseus, with the head of Medusa, executed by Benvenuto Cellini in 1445. It had been covered to protect it from German air raiders, along with other priceless statuary. Benvenuto's Perseus is a marvel of detail, but even more famous is his story, told in his biography of how it was cast. It made that very intimate recital a classic.



ENTRANCE TO PLANT, STEEL COMPANY OF CANADA.

# CONSTRUCTION

A JOURNAL FOR THE ARCHITECTURAL  
ENGINEERING AND CONTRACTING  
INTERESTS OF CANADA



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

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WESTON WRIGLEY, Business Manager

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## The Question of Advertising

The fact that one or two prominent New York architectural firms have recently made use of large newspaper space, along with the additional fact that a full page architectural advertisement has more recently still appeared in the Toronto papers, indicate that certain members of the profession have decided to give "publicity" a trial. Just how far this tendency will spread is difficult to say, although it might be observed that in the United States where the ban on advertising has been removed by the American Institute, advertising among architects does not as yet exist to any great extent. Two opinions, in fact, recently published by the "American Architect" on this subject are of interest in showing opposite views. One is expressed by Thomas Crane Young, a prominent member of the profession, who states that there has been much complaint from a certain class

of architects that the public has not been properly informed as to the character and value of architectural service, asserting that this is no doubt true in part. In his opinion, however, however, the means is at hand by which this ignorance can be dispelled, and holds that if the architectural profession contains within itself the amount of good taste and artistic merit which are a part of its claim for recognition, there need be no fear of a loss of professional dignity through the proper form of advertising. The one requirement that could and should be rigidly enforced, he contends, is that truth and nothing but the truth be contained in any advertising statement. In other words, Mr. Crane does not take a radical stand, but simply approves of architects advertising within certain restrictions.

On the other hand Mr. F. E. Davidson, who discusses the subject in the same issue, of our contemporary with Mr. Crane after careful study of the matter, states that as a financial proposition alone he doubts very much as to whether display advertising by a professional man would yield a sufficient return on the money to justify it. Mr. Davidson amplifies this opinion by the following remarks, which we quote direct.

"At the present moment it is my thought that the only advertising that any architect should do, in addition, possibly, to signing his building during construction, would be to have his professional card appear in the publications that his particular class of clients read, particularly if he specializes in a certain line of work. I very much doubt the wisdom of an architect attempting anything in the way of display advertising, for I not only believe that such advertising would be in bad taste, but that it should be condemned from every viewpoint as well. . . . If the acquisition of money alone is the only thing to be desired, then the architect should cease to call himself an architect and become a contractor in which line of work, no doubt, it will be necessary to do some display advertising, for the reason that contractors as a class are advertisers and the public expects it of them. For myself I am not practicing architecture expecting to get rich. I am in the game because I love it and know of no other profession that is bigger or embraces so many subjects of interest, or that provides so many opportunities for patriotic and unselfish labors for the general good. . . . I am satisfied with enough financial return to live decently and enjoy some of the luxuries of modern civilization. I believe that such a return is all that any professional man, or for that matter, any man, is entitled to. But I must add that the professional fees commonly paid architects are not in all cases suf-



ficient to secure even this minimum of net financial return."

Undoubtedly the sentiment of the majority of architects in this country are in accord with the later viewpoint. The unfortunate part of it is the fact that the work of the architect is too little known. In other words while the public may admire certain buildings, the beholder too often has little or no knowledge of their authorship. In view of this it might be perfectly legitimate for architects within certain limitations to "let their light shine forth," but we doubt as to whether anything is to be gained by competing with the departmental stores in the use of newspaper space, or of permitting the copy used to contain any questionable or extravagant statement.

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### **The New Price Revolution**

Dealing with what is termed the new price revolution, Prof. Irving Fisher, of the Chair of Political Economy, Yale University, in a recent address delivered at Washington, D.C., gave some interesting facts as to the present cost of materials in the various fields of production. To quote from this authority, the main reason why business is not going ahead better is that most people expect prices to drop. The merchant is selling, but not buying. The manufacturer holds up the purchase of his raw materials. People quote the disparity between present prices and those prevailing "before the war," and decide they will not buy much until present prices get down to "normal." This general conviction that prices are sure to drop is putting a brake upon the entire machinery of production and distribution. Readjustment waits because we keep on waiting for it. We have waited in vain for over three months. It is interesting to observe that many manufacturers think that prices must come down, including the price of labor; but they are ready to demonstrate to you that their own prices cannot come down, nor can they pay lower wages. Almost everything they buy somehow costs twice as much as before the war, and their labor is twice as dear. They cannot pay their labor less if labor is to meet the increased cost of living. Now, as a matter of fact, when we investigate almost any individual one of the so-called high prices for industrial products, we are likely to find that individually it is not high; that is, it is not high relatively to the rest. Our quarrel is with the general level of prices.

Variations in the general price level may be compared to the tides of the sea, while individual prices may be compared to waves. Individual prices may vary from this general level of prices for specific reasons peculiar to individual industries, just as the height and depth

of waves vary from the general level established by the tide. The causes controlling the general price level are as distinct from those controlling individual prices as the causes controlling the tides are distinct from those controlling individual waves.

All prices have risen, but some have risen more, some less, than the average for particular reasons affecting each industry. In some cases an improved organization of both employers and employees has enabled them to combine against the public and take full advantage of the price advance. The war brought about an abnormal demand for certain products like copper and steel, and they advanced faster than the average. The abnormal demand having disappeared, these prices are being adjusted downward. Wheat is a case where demand increased and at the same time certain of the usual sources of supply—Russia, Australia and Argentina—disappeared, with a resultant abnormal price increase. The closed sources of supply have opened again, and wheat prices in the world market have dropped. In some cases, as in many of the industries making building materials, the war meant a great slackening in demand, an enforced curtailment in use by Government order. In such instances we are likely to see an upward swing in prices as the suppressed demand again makes itself felt. To-day we are witnessing throughout the country such price readjustments, up and down, but the general price level has shown little sign of falling, as is evidenced by price index numbers. It is apparent to every thoughtful observer that some great force has affected all prices, creating a new standard to which they are all conforming.

The fundamental practical question confronting business men is whether the general level of prices is going to fall. In my opinion, it is not going to fall much, if at all. We are on a *permanently* higher price level, and the sooner the business men of the country take this view and adjust themselves to it the sooner will they save themselves and the nation from the misfortune which will come if we persist in our present false hope.

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### **Toronto Architect Weds in England**

A notice has been received from England announcing the marriage at Wesleyan Church, Eccles, Manchester, of Lieutenant John Jackson Beck, R.G.A., to Miss Gertrude E. Chapple, youngest daughter of Mr. and Mrs. Alfred Chapple, of Toronto. The groom, who is a native of Doncaster, England, is well-known to the architectural profession of Toronto, where he was engaged in practice prior to going overseas, after being connected for several

MADE IN CANADA



## Free of Repairs for Twenty Years

WHEN the engineering staff of the Montreal Tramways Co. wrote the specifications for this handsome little power-house, they merely said, as to the roof:

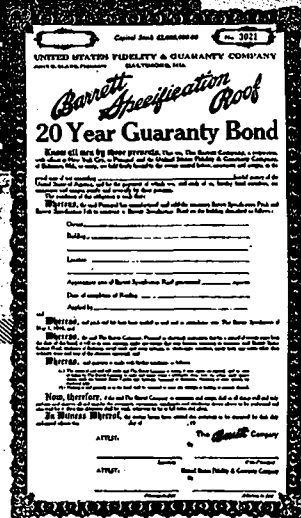
“The roof shall be laid according to The Barrett Specification dated May 1, 1916, and the roofing contractor shall secure for us the 20-Year Guaranty Bond therein mentioned.”

On this fair and precise basis, roofers could bid intelligently.

The Metal Shingle & Siding Co., Limited, of Montreal, was the successful bidder.

When ready to commence work, they notified our Montreal office and we sent our inspector to verify

compliance with the specification. He reported “O.K.” and we forthwith issued to the owners, without charge, a Barrett 20-Year Guaranty Bond, indorsed by a well-known surety company, guaranteeing the roof free of repairs for twenty years.



This is the Bond that guarantees your roof for 20 years.

The 20-Year Bond is now given on all roofs of fifty squares and over in all towns with a population of 25,000 and over, and in smaller places where our Inspection Service is available. Our only requirements are that The Barrett Specification dated May 1, 1916, shall be strictly followed and that the roofing contractor shall be approved by us.

Copies of The Barrett 20-Year Specification, with roofing diagrams, mailed free on request.

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SYDNEY, N. S.

years with Mr. F. S. Baker, F.R.I.B.A., Bank of Hamilton Building. Lieutenant and Mrs. Beek expect to return to Canada shortly.

### Builders Extend Organization

The Ottawa Branch of the Association of Canadian Building and Construction Industries came into existence at a meeting of the Capital's contractors and supply dealers in the Chateau Laurier on April 16th. Close to one hundred attended the meeting and great enthusiasm was shown by those present, who were in favor of organizing only as a branch of the Canadian Association. In the past years several associations have been formed by the Ottawa contractors, but interest in the local organizations gradually died out. However, their new formation promises to put the branch on the list of "live wires," and it was the unanimous decision of the contractors at the meeting to get their branch on the active list by starting off with generous subscriptions to carry on the work.

The following were appointed on the Executive Committee: Hugh J. Graham, Secretary; Sid Smith, V. Hall, W. G. Adamson, Carpenters; A. Garvoek, T. C. James, Alex. Robertson, Bricklayers; J. B. Duford, Painters; J. R. Murphy, Plasterers; J. T. Blyth, Plumbers and Steamfitters; J. O'Toole, J. Foley, T. C. Bate, General Contractors; W. A. Mattice, Structural Steel; E. M. Barrett, Lumbermen; Ruggles Wright, Quarrymen; Richard Hooper, Stonecutters; J. R. Douglas, Galvanized Iron and Roofing; J. A. Ellacott, P. Ackroyd, Electricians; A. K. Mills, Marble and Tile; Thomas McLaughlin, Roads and Sewers, and W. Cuzner, Hardware.

### CONTRACTORS and SUB-CONTRACTORS

As Supplied by the Architects of Buildings  
Featured in This Issue.

ALLEN THEATRE, BLOOR STREET, TORONTO.

Brick, Milton Pressed Brick Company.  
Concrete Design, Mouchel & Partners.  
Furniture, Gendron Manufacturing Company.  
General Contractors, Witchall & Sons.  
Plaster Ornament, W. J. Hynes, Limited.

Lighting Fixtures, Canadian General Electric Company.  
Seating, American Seating Company.  
Tile, Italian Mosaic and Tile Company.  
Ventilating System, Sheldons, Limited.  
Woodwork, Geo. L. Robinson.

#### QUEEN ALEXANDRA SANATORIUM, BYRON, ONT.

Reception Hospital.  
General Contractors, Hyatt Bros.  
Sub-contractors, Otis-Pensom Elevator Co.  
Tile Work, Italian Mosaic and Marble Co.  
Heating and Plumbing, Eggett & Co.  
Mill Work, Gerry & Sons.  
Metal Work, J. A. Brownlee.  
Roofing, Jno. Whittaker.  
Reinforcing Steel, Trussed Concrete Steel Co.  
Ornamental Iron Work, Dennis Wire & Iron Works Co.  
Lockers, Dennis Wire & Iron Works Co.  
Hospital Equipment, Scanlan-Morris Co.  
Plumbing Fixtures, Imperial Products, Ltd.  
Boilers, Spencer Heater Co.  
Refrigeration, Canadian Ice Machine Co.  
Kitchen Ranges, Canadian General Electric Co.  
Other Kitchen Equipment, Geo. Sparrow & Co., Canadian Aluminum Co.  
Electrical Work, Public Utilities Commission.  
Metal Lath, Trussed Concrete Steel Co.  
Hardware, Hobbs Hardware Co.  
Conduits, Conduits, Limited.  
Vitrolite, Vitrolite Company.  
Dining Room Tables, I. G. Pickering.  
Nurses' Home.

General Contractors, R. G. Wilson & Son.  
Mill Work, Geo. H. Belton & Co.  
Metal Lath, Trussed Concrete Steel Co.  
Plastering, R. C. Dancy, Toronto.  
Plumbing Fixtures, Imperial Products, Ltd.  
Electric Wiring, Western Ontario Electric Co.  
Heating and Plumbing, Eggett & Co.  
Boilers, Spencer Heater Co.  
Radiators, Clare Bros., Ltd.  
Hardware, Hobbs Hardware Co.  
Tile Work, Italian Mosaic and Marble Co.  
Conduits, Conduits, Ltd.

#### Forty-eight Bed Pavilion.

General Contractors, R. G. Wilson & Son.  
Heating and Plumbing, Eggett & Co.  
Mill Work, Gerry & Son.  
Hardware, Hobbs Hardware Co.  
Conduits, Orpen Conduit Co.  
Dairy Barn.

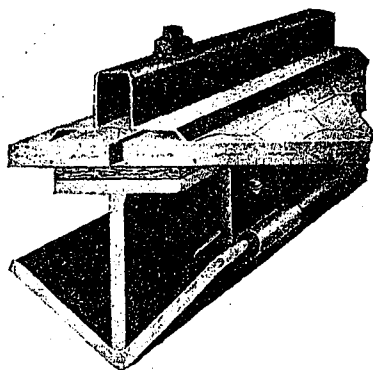
Carpenter Work, R. G. Wilson & Son.  
Mason Work, Jno. Hayman & Sons Co., Ltd.  
Stable Fittings, Beatty Brothers, Limited.  
Wiring, Public Utilities Commission.  
Floors, Armstrong Cork and Insulation Co.  
Interior Dairy Enamel, Trussed Concrete Steel Co.

#### Vocational Building.

General Contractors, John Hayman & Sons.  
Mill Work, Dymont Baker Co.  
Heating and Plumbing, Eggett & Co.  
Metal Lath, Trussed Concrete Steel Co.  
Hardware, Hobbs Hardware Co.  
Plumbing Fixtures, J. L. Mott Company.

#### Military Pavilions.

General Contractors, S. Willis.  
Painting and Glazing, Paul Quick.  
Hardware, Hobbs Hardware Co.  
STEEL COMPANY OF CANADA'S NEW OFFICE BUILDING.  
Hollow Tile, National Fireproofing Co.  
Stone Work, Ritchie Cut Stone Company.  
Structural Steel, Hamilton Bridge Works Company.  
Air Washing System, Canadian Sirocco Company.  
Miscellaneous Steel, McGregor & McIntyre, Ltd.  
Heating, Adam Clarke.  
Electrical Work, Culley & Breay.  
Plumbing, Adam Clarke.  
Marble, Tile, Terrazzo, Kent-Garvin & Company.  
Roofing and Sheet Metal, Thos. Irwin & Son.  
Electrical Fixtures, Tallman Brass and Metal Co.  
Trim, Partitions and Doors, T. H. Hancock.  
Standing Trim, Patterson & Crosswathie.  
Hardware, Kent-Garvin & Company.  
Glass (Interior and Exterior), Hobbs Mfg. Company.  
Electrical Fixtures, McDonald & Willson Co.  
Vacuum Cleaning System, United Electric Co.  
Brick, Milton Pressed Brick Co.



Section of Bar

## Anchor Bar Skylights

are designed for large areas where the bar length exceeds eight feet. The structural parts being of rolled steel and the trim of sheet metal (generally copper) forms a combination which cannot be surpassed, to wit: steel for strength, copper for weather protection.

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