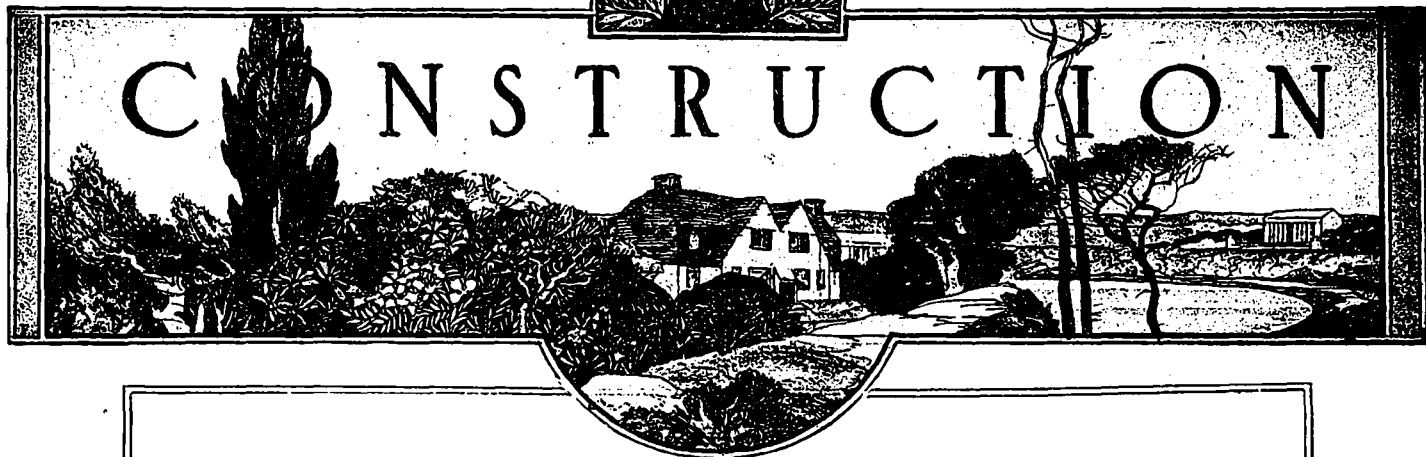


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CONSTRUCTION



October, 1920

Volume XIII., No. 10

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BRANCH OFFICES

MONTREAL

NEW YORK



"CROSS WAY," LOOKING EAST, 1915

MINISTRY OF MUNITIONS
 HOUSING SCHEME.
 WELL HALL,
 WOOLWICH, ENGLAND.



CRESCENT, NEAR STATION.



"ARSENAL ROAD,"
 LOOKING WEST, 1915.



"OLD OAK," LONDON COUNTY COUNCIL DEVELOPMENT.

Inter-Allied Housing and Town Planning Congress of 1920

By W. D. Cromarty.

Address delivered before the recent London Convention of the Ontario Association of Architects.

THE business of the Inter-Allied Housing and Town Planning Conference was divided into two parts, the formal proceedings and discussions and the series of visits made to various housing projects.

The formal proceedings were held in the Central Hall at Westminster almost under the shadow of Westminster Abbey on Thursday and Friday, June 3rd and 4th. In the week following the delegates made journeys in the neighborhood of London and as far afield as Bristol and Birmingham, visiting both pre-war and post-war housing schemes.

At the opening session some 700 delegates were in attendance, twenty nations being represented. France had 35 delegates, Norway 45, Holland 50, Finland 53, Belgium 25, Spain 20, Denmark 20, the United States 6. In addition, among others, the following countries had representatives—Canada, Australia, New Zealand, Cape Colony, Egypt, Italy, Switzerland, Roumania, Japan and Siam. Dr. Addison, the Minister of Health, presided, and after welcoming the delegates and outlining the business of the Conference, he stated that he thought it fortun-

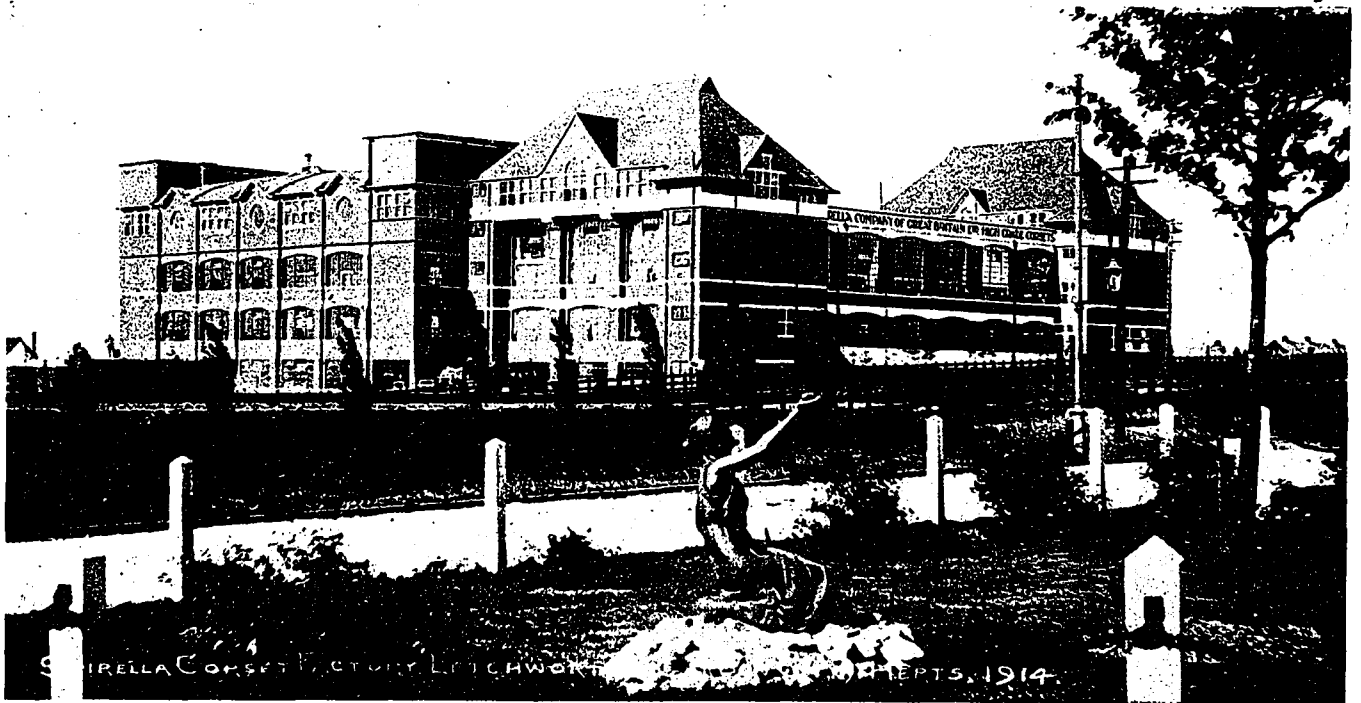
ate and indeed significant that one of the first international meetings after the conclusion of peace should be assembled to discuss housing.

Short addresses were also delivered by the delegates other than those of Great Britain, including the Spanish Ambassador, M. Merry del Val, a brother of Cardinal Merry del Val; M. Sellier, a French delegate; Mr. Thomas Adams, representing Canada; Mr. Veiller of the National Housing Association of the United States, and Dr. Royal Copland of New York.

The presiding officers of the subsequent sessions were in turn: the Minister of Health for France; Mr. Robert Munro, Secretary for Scotland; and Lord Astor, Under-Secretary of the Ministry of Health.

The conference, at the first session, passed a resolution to this effect:

That, in the opinion of this Congress, legislative action in the preparation of a National Housing Policy should be taken by each Government (with wherever necessary special financial provisions relative thereto), such programme to be carried into effect on lines of co-operation between the Government on one hand and local authorities and other agencies—including private enterprise—on the other.



SIRELLA COMPANY FACTORY, LETCHWORTH, HERTS. SEPT. 1914

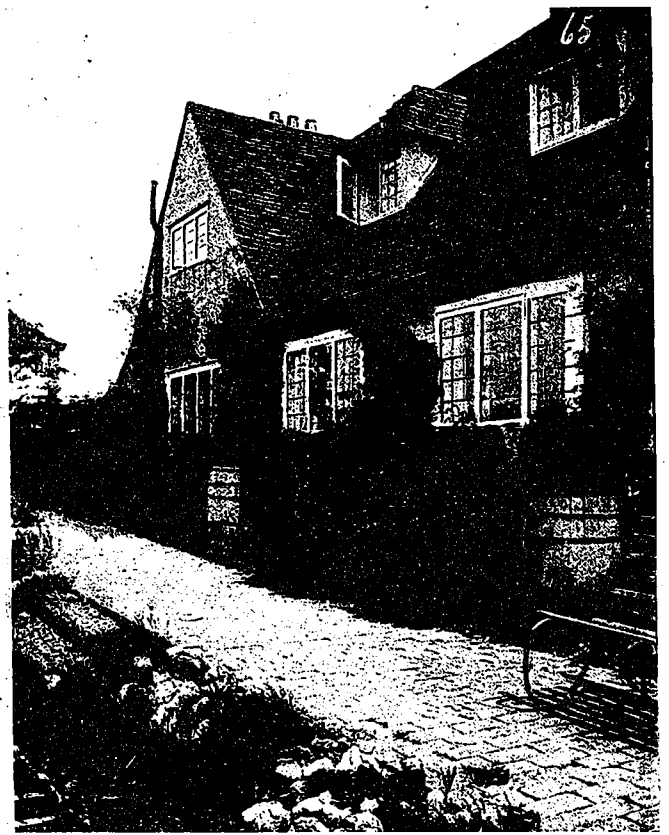
TYPE OF FACTORY: PLENTY OF LIGHT, PLENTY OF ROOM, GARDEN SURROUNDINGS. WORKERS LIVE FEW MINUTES WALK AWAY.



A BACK YARD THREE YEARS OLD: PAIR OF HOUSES, SOLLERSHOT, WEST



MEADOW WAY.
VIEWS OF LETCHWORTH.



LEITCHWORTH: BACK GARDENS OF WORKMEN'S HOMES.

Further, this Congress is of opinion that such a housing policy should be sufficient in its scope and character to secure that within the limit of twenty years every family shall be housed under proper conditions with adequate provision for amenity in regard to surroundings.

At the afternoon session on Friday, the following resolution relating chiefly to town planning was passed:

(1) That in order to secure adequate provision of air and light in and around the homes of the people there should be definite limitation of the number of dwellings per hectare and for space adjacent to dwellings, such limitation being a matter of Governmental determination in each country.

(2) That the policy of decentralization of industries and the building of new garden cities should be encouraged by legislative provisions and by all other means, both public and private.

(3) That each Government, acting in partnership with local authorities, should prepare in advance and carry into effect a regional survey, followed by planning schemes, with a view to putting an end to wasteful and chaotic developments and securing that the lines of future growth shall be well ordered and scientific.

(4) That in view of the acknowledged necessity of such action the Government should, acting in co-operation with local authorities, control the direction and assist in the upkeep of main and arterial roads.

One of the great benefits of such a congress is the opportunities it affords of talking over problems and conditions with men from other lands. Such opportunities were many, occurring now and then in the corridors of the Central Hall at a time when some eloquent gentlemen pleaded in the meeting for his particular and generally

impossible fad. Chiefly, however, the opportunities occurred during our visits around the country. I found men from France, Norway, Sweden and even as far afield as Egypt, who had visited Canada and who, retaining pleasant impressions, were anxious to know of what we were doing here. I told them modestly, I trust, of the things we had done and of what we hoped to accomplish.

On behalf of the British Government, Sir Alfred Mond, H.M. Commissioner of Works, invited the delegates to a garden party at Hampton Court on the afternoon of June 7th. The delegates were received by Dr. Addison, the Minister of Health. It was a wonderful June day of soft sunshine. The lawns and flowers and splashing fountains dominated by the grey old buildings with the vivid memories of kings and princes and cardinals made an impression I shall not soon forget.

On Thursday, June 10th, H.M. King George V. received a deputation from the Congress at Buckingham Palace. The deputation consisted of two delegates from each country represented. Mr. Thomas Adams and myself as Canadian representatives were included in the deputation and were presented to the King. I derived a certain amount of quiet amusement when on hailing a taxi, the driver asked me "where to." I murmured Buckingham Palace, managing, I think, to convey the impression that I lived there.

In connection with the Congress I paid visits

siderable number of housing schemes. I shall have to confine myself briefly to three of them, with some reference to the newer materials and types of construction being used at others. The three are Well Hall, Letchworth and Hampstead. At Well Hall, Sir Frank Baines, the chief architect of the office

of works received the delegates. The Well Hall scheme was a direct outcome of the war, the town being built for the Ministry of Munitions in 1915. The whole of the work of building up an area of 96 acres with permanent houses, occupied less than a year from start to finish. There is, however, no suggestion of hurry or scamped labor anywhere, and the houses wear an air of comfortable prosperity, and the whole scheme is pleasant to look upon, although the design in general errs on the picturesque side. The open spaces are of considerable area with a reasonable allowance of garden space to each house, the average garden being about 1,100 square feet. All the roads are gravelled, the secondary sidewalks also are gravelled, the more frequent ones having concrete slabs down the centre. The roads are 40 feet and 30 feet wide according to the amount of traffic passing over them. The names of the roads recall personages who have



LETCHWORTH: GARDEN CITY AGRICULTURAL BELT.

been connected with the Arsenal and the town of Woolwich. The total number of houses and apartments provided is 1,298, thus making provision for a population of about 6,500.

In certain of the houses the rooms were too small. I spoke to several of the tenants, two living in houses

without parlors expressed a preference for an ordinary fireplace in the living room with the range in the scullery. This would constitute an arrangement similar to the small Canadian house with a living room and a modest kitchen. The bath-tub in some of the houses is in the scullery. This would seem to be fatal to cleanliness, as the cover over the bath-tub becomes a shelf, necessitating the removal of a large variety of articles prior to bathing. In most of the newer developments in England, the bath-tub is in a definite bathroom and is generally on the upper floor.

The absence of street trees is very noticeable, and mars the effect of the otherwise attractive streets.

The reason for this is, of course, that the work was undertaken at a time of great national stress when the lesser things had to be set aside. Trees will, I have no doubt, be planted later and the added charm resultant from their presence obtained.

Letchworth. — This, the first Garden City, is situated about 30 miles from London, and owes its being to the Garden City Association which was formed to bring before the public the principles advocated by Mr. Ebenezer Howard. The garden city movement seeks to make us ashamed of our ugly, unhealthy cities, and to advance principles by which their worst evils may be abolished or at least reduced to a minimum in the planning of new cities. The English countryside is very



"HAMPSTEAD WAY," HAMPSTEAD GARDEN SUBURB.

beautiful, but many of the larger cities are depressingly unlovely. Thoughtful town planning in years past would have obviated this. Letchworth is now a town of some 13,000 people with sixty factories and workshops, carrying on under conditions favorable to the health of the workpeople.

The general effect of Letchworth is one of much charm. In detail one is disappointed at the lack of interest displayed in the gardens of the smaller houses. This is no doubt accounted for by the fact that the occupants of these houses were previously dwellers in large cities where gardens for the worker were unknown. It is the next generation that will benefit most completely by their new environment.

I went carefully over the houses now being built at Letchworth. In spite of the vastly increased cost (pre-war £200, post-war approximately £1,000), they do not possess the charm of the earlier houses. A Spartanlike simplicity is now aimed at, and while one appreciates this as a general motive, there is no denying that the occasional introduction of gables and long roof lines, for example, does add to the appealing quality of a scheme.

The main principles of the garden city movement may be thus classified:

1. Constructive—by the erection of new houses in undeveloped areas.
2. Provision for both industries and residences.
3. To procure the unearned increment for the community.

As the official handbook of the First Garden City Company puts it: "The essence of the idea lies in the principle of beginning at the beginning. Instead of allowing houses to be run up here and there, one block or one street quite irrespective of the position of another, drainage and water system being introduced piecemeal, as best they can—the whole city which is to be should be planned out from the outset with an eye to the convenience of the community as a whole."

For good or ill the people of Great Britain are a manufacturing people, and the Garden City recognizes this economic fact as it also recognizes the prevailing tendency of manufacturing industries to migrate from large centres of population to rural districts—a tendency, by the way, that is prevalent in Canada at present.

Letchworth has been an undoubted success, 3,800 acres were bought at \$200 an acre. The promoters planned the site of the city. They put in an electrical installation, gas works and a pure water supply. They prescribed that there should not be more than seven or eight houses to the acre. All the industries were put in one part of the estate where the prevailing winds would take the smoke away from the town. The

worker in Letchworth lives within a few minutes' walk of his place of employment. No costly transportation system takes him to a point ten miles or so out in a suburb to a plant in the centre of the city requiring him to spend two or three hours a day in going to and fro from his work.

It was decided to maintain control of the land in perpetuity for the benefit of the people. The so-called unearned increment is conserved for the benefit of those who create it. The land, as I have said, was bought for \$200 an acre, the value of it now has increased to \$1,000 to \$2,000 an acre, and the whole of that increase in value goes to the reduction of taxes or to the development of the estate and the provision of new public services. There can be no private property in Letchworth. Land can be acquired for 99 years with the right to renew at the end of that period subject to a revaluation. It has been found that this system gives the practical feeling of ownership, while the important power is



COTTAGE OF PISE DE TERRE, NEWLAND CORNER, SURREY.
CLOUGH WILLIAM-ELLIS, ARCHITECT.

reserved by the trustees of the community to prevent misuse of the land by incongruous and undesirable development. An interesting feature of the Garden City scheme is the agricultural belt around the city. The city area comprises about 1,200 acres laid out for a population of 30,000 people; 2,600 acres of the original area, with an additional 700 acres since acquired, are reserved as a permanent agricultural belt around the city. Here farming is carried on, and here, too, are areas reserved for golf, tennis and other outdoor games. Thus the inhabitants have a large open area all around the city that can never be built upon, and the produce of this agricultural area is brought close to the door of the consumer.

The industry of farming is thus linked up with the manufacturing interests in one community avoiding the usual separation of town and country and the unsightly and ragged development on the fringe of the city which we have all so often deplored.

Hampstead is a garden suburb, not a garden city, the latter being complete in itself, while

the former is residential only. It owes its origin to the work of Mrs. Barnett, who is at present in Canada, and will lecture in Toronto. Mrs. Barnett is the wife of the late Canon Barnett and his co-worker for many years in the East-End of London. After a lifetime spent in the closest touch with the physical and spiritual needs of the people in the East-End of London, she saw in Mr. Ebenezer Howard's scheme an opportunity for the improvement of the deadly monotony of the average London suburb.

She conceived the idea of a garden village at Hampstead, near the famous heath, now as a result of her efforts an open space for ever. The estate was laid out by Mr. Raymond Unwin, and to-day it is a place of great beauty. Both rich and poor live there, barristers, architects, musicians, actors and poets. These, of course, are the poor. It is only a short ride on the underground from the centre of London, but here are pleasant gardens and open spaces with great trees, every house well designed, and congenial men and women living there. There are few places on this wide globe where a person of modest means could be so content as in Hampstead.

Of post-war housing in England much has been said and written, and perhaps more has been accomplished than many critics are willing to concede. In proportion to the vast number of houses required, 800,000, according to a statement issued by the Ministry of Health, the number of houses actually built is astonishingly small. Plans, however, have been approved of some 250,000 houses, and contracts for the erection of about 75,000 houses have been entered into. The scarcity of suitable labor and materials is the root cause of the lack of greater accomplishment, but this will be remedied by a nation which generally triumphs in the end.

The state permits a local authority to borrow money and institute taxation for housing purposes, expenditure in excess of a certain amount is met by the state. In addition the state meets a proportion of the interest on the capital borrowed. The local authority is bound to build houses, if it does not the state steps in and builds them and charges the cost to the local authority.

I mentioned previously the fact that the state will present to the builder or private person erecting a house or houses the sum of \$1,300 per house. This is a gift, not a loan, and is intended to assist in meeting the extremely high cost of building.

The shortage of bricks in England has caused attention to other materials, notably concrete, steel, wood and pise de terre or earth for house building, and I visited schemes where each of these materials was being used.

There are many advantages claimed for concrete in this connection; for example, cheapness

where suitable aggregate is locally obtainable, speed in erection and ease of manufacture. In-so-far as cost is concerned, it is unlikely that under normal conditions concrete would prove much cheaper than brick. The clay for brick-making and the aggregates for concrete are both raw materials generally obtainable at a low cost. The excessive demand for bricks, however, and their comparative scarcity probably makes concrete a cheaper material to use.

There are, roughly speaking, two systems of concrete construction in use, the pre-cast and the site moulded. Of the pre-cast system concrete blocks and slabs have found most favor, their use makes a continuous cavity possible. This, it is claimed, eliminates the possibility of dampness on the inside walls and assures coolness in summer and warmth in winter.

The entirely site moulded construction has not proved very popular; it is stated that houses built in this way are cold, that the walls "sweat" on the inside and are liable to crack. Possibly if such walls were strapped on the inside prior to plastering, some of these objections might be overcome, but this is obviously an added expense. In addition, for this type of wall, forms are necessary; these are not needed for concrete blocks.

One objection to the use of concrete is the hard appearance of the exterior walls. They do not "weather" as brick and stone walls do. The charm of the old cottages built of the two latter materials lies to a considerable extent in the mellowing caused by sun and rain and wind. Concrete does not appear to mellow in the same way; the application of stucco, however, assures an attractive appearance.

Among the many large schemes carried out in concrete blocks is the village of Chepstow, erected for the employees of the National shipyard. The external walls of these houses are built of two thicknesses of four-inch solid plain concrete blocks with a three-inch cavity, tied together with iron ties. In the first cottages built the blocks were each 32 inches long, 9 inches high, and four inches on bed. It was found that these blocks were too heavy for handling, and in the later houses the blocks were made 16 inches long. The concrete blocks were made on the site of local stone chippings and sand, and these blocks could be used a few days after making.

Houses have also been built of reinforced concrete. These houses, it is stated by the builders, cost considerably less than brick houses of the same size; they are rapidly constructed, an experimental pair being completed four weeks after the start of operations.

The steel frame system of house construction was introduced by Messrs. Dorman, Long & Co. at their industrial village, Dormanstown, Redcar, Yorkshire. Dorman, Long & Co. is one of

the largest firms of steel manufacturers in England, their main works being at Middlesbrough. During the war new works were opened at Redcar, and in order to house their employees a new village was planned near the works. The first 300 houses of this village were built during the war and were of brick.

When the company desired to extend the village, they decided to adopt a method of construction unique in house building, a framework of steel for the outside walls, upper floors and roofs, with hyrib as the concrete reinforcement.

The site of each house is first laid with a thick bed of concrete on which steel sills are laid and secured by Lewis bolts. The builders then proceed to erect the steel frame which consists of light rolled sections all made to precise standards and clearly marked before being sent to the site. The connections are made by bolts and nuts, no riveting being required. The erection of the frame in consequence takes but little time.

To this steel framework is attached the expanded metallic material, which is then concreted to a thickness of two inches; this forms the outer shell. The exterior may be finished in stucco or simply whitewashed. An inner wall or shell is formed of cinder concrete slabs three inches thick with an air space of about four inches between the inner and outer coverings. The interior partition walls are also built of cinder concrete slabs.

For the floors the reinforcing sheets are fixed to the steel joists by means of plate clips. The concrete is then applied to a thickness of two and a half inches with a smooth composition finish and with a half-inch coat on the underside to form the ceiling.

The roofs are of tile or slate laid on a similar reinforcing material. It is claimed that these houses are absolutely water-tight, the outer skin of reinforced concrete offering great resistance to the severest weather. It is further claimed that they are by virtue of the continuous air space cool in summer and warm in winter. The builders state that the cost is less than one of equal accommodation in brick, and that these houses can be much more rapidly built.

This type of house, if it could be built for a reasonable amount, would probably be quite suitable for Canada. Concrete floors with a composition finish might not prove popular here. Hardwood floors or stout linoleum could be laid on the concrete, but this of course would add to the cost.

The frame house is a traditional English method of building. It is probably true that the general use of wood for building is superseded by the use of more permanent materials as our resources increase. The tendency in the larger towns in Canada and the United States has been of late towards brick, stone and concrete, and it is unlikely that under normal conditions the

building of frame houses would have been seriously considered in England. The war, however, and the consequent shortage of houses, has introduced an entirely new condition there—a pioneer condition—when a house that may be speedily erected is the need of the hour, and it is here the frame house may help.

Sir Charles Ruthen, an English architect, has built as an experiment three frame cottages at Newton, near Swansea, and in a paper read before the Society of Architects in London on October 16th last, he gave an account of their construction. Sir Charles said that these houses complied with all the essentials necessary for the provision of homes for the people and were cheaper than brick or stone houses and had the added advantage of rapidity of construction.

The first house of frame and stucco was erected and completed in thirty days; the second is a brick veneer type, and the third brick veneer and half timber work.

The type of construction adopted is the same as that in general use in Canada, the roofs, however, are of slate or tile instead of shingles.

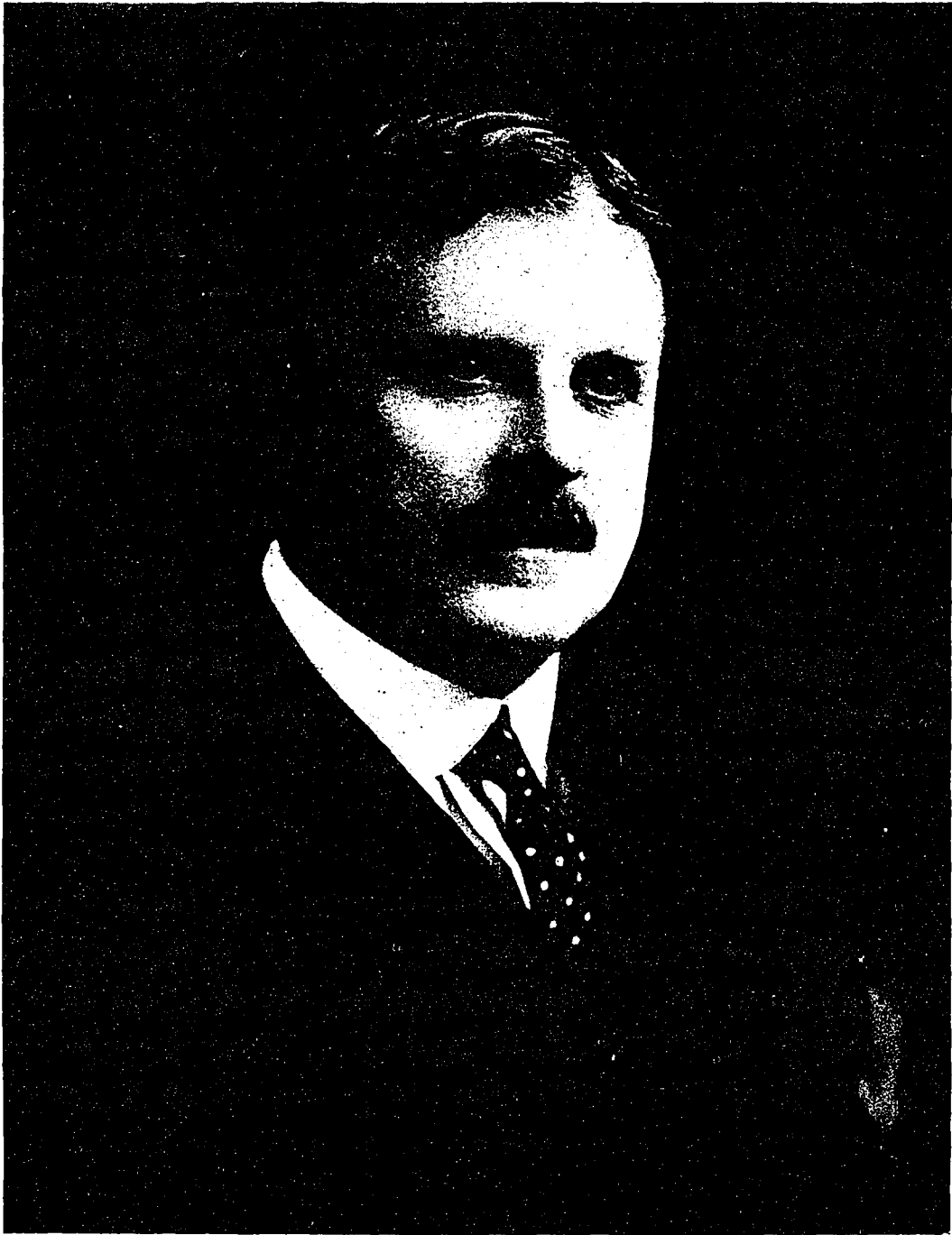
The site at Newton was selected for the houses because of its exposed character. It is some two or three hundred feet above the Bristol Channel and fully exposed to the prevailing westerly gales. On visiting the houses one feels regretful that they are not more readily accessible; had they been built, for example, in the near neighborhood of London, so many more people would have had an opportunity to see them, and these houses would surely have conquered an island prejudice against the lately unknown and untried thing.

Sir Charles stated that the actual cost of the stucco finished house was £125 less than it would have cost in brick.

Mr. Clough Williams-Ellis, an English architect, has recently built on the estate of Mr. Strachey, the editor of the "Spectator," in the south of England, a small house of pise de terre or rammed earth which has attracted a good deal of attention. Buildings of this material are not new. They have been erected in France and Spain, and more recently in India and Rhodesia. The material, however, is new for all practical purposes so far as England is concerned.

Pise is merely earth to which nothing whatever is added. The earth is dug and thrown between wooden forms and rammed till it is perfectly hard and compact—until, in fact, what is practically an artificial sandstone has been created. The earth is thrown into these forms in layers of five inches or six inches, and then rammed until it is thoroughly solid, before another layer is added. When the mould is full of rammed earth, and the rammer no longer makes

(Concluded on page 328)



David R. Brown

*Newly elected President of
the Royal Architectural Insti-
tute of Canada.*

R. A. I. C. Assembly, Ottawa

THE thirteenth general annual assembly of the Royal Architectural Institute of Canada was held at the Chateau Laurier, Ottawa, on October 1 and 2, with President A. Frank Wickson in the chair.

The meeting was opened with an address by Mayor Fisher of Ottawa, who extended a warm welcome to the visiting architects. In the course of his remarks, his Worship stated that perhaps the present period was not altogether one of unmitigated evil, that from it would likely emerge a return to first principles which would, among other things, exert a stimulating influence toward the development of a national architecture.

In responding to the address, President Wickson declared that as the knowledge of architecture increased the public would become more impressed with the fact that well designed buildings were not only a practical necessity, but an important factor in their everyday lives. Canada's building expenditure at the present time amounted to approximately \$85,000,000 annually. As this represented developments which were carried out to endure a long time, it was an important matter that these structures should be so designed and constructed as to be a credit to the country.

Following the adoption of the minutes of the previous annual assembly, the report of the Hon. Secretary was presented. This report dealt largely with matters which came before the meeting of the Council at Montreal on July 10th, of which a complete digest appeared in the August issue of CONSTRUCTION.

The secretary reported that at the suggestion of the Royal Institute of British Architects, the Council is giving close attention to the action which is being brought by Messrs. Saxe and Archibald and other competitors against the Government in reference to the Ottawa Government Building Competitions. The R.I.B.A. is retaining the services of counsel to follow the case, and an appeal has been made to the provincial associations for financial assistance to help establish the rights of the competitors.

The attention of the meeting was also drawn to the conditions governing the competition for the St. John, N.B., courthouse, in which connection the Engineering Institute was criticized for usurping the functions of the architectural profession. It was stated that the Engineering Institute dealt with the entire project without any reference to the architects and that the conditions were not eminently satisfactory. The meeting decided to have the incoming Council give its prompt attention to the matter.

Reference was also made to the decision of

the Council to have special or urgent matters dealt with by a special committee to be appointed by the general annual assembly. Heretofore, in cases demanding immediate action, it was found that nothing could be done owing to the fact that no meeting of the Council could be held until after thirty days' notice. The intention is to have the committee take prompt action between Council meetings on all such matters as the president may deem to be of an urgent nature.

The president stated that upon the request of Queen's University, a lecture was delivered at that school by a representative of the Institute. It was felt that much more could be done in this direction, and that practically every seat of learning would be glad to have some one talk to them on the subject of architecture.

The president further suggested that effective educational work could be done providing funds were available, and that arrangements might possibly be made with the film companies to show examples of good architecture, particularly worthy instances of good design of buildings erected in Canada.

An important subject up for discussion was the necessity of additional revenue to carry on the work which the Institute was doing. This was based on a recommendation of the Hon. Treasurer in presenting the financial statement for the year, and resulted in the adoption of a resolution to increase the membership fee to a sum not to exceed \$5.00 annually. It was the general opinion that the present fee was altogether too inadequate for the important work and objects which the Institute was endeavoring to further.

Attention was also drawn in this connection to a resolution passed at the recent convention of the Ontario Association at London, asking the executive of that body to co-operate with the other provincial associations with regard to reinforcing the activities of the Institute and also with a view to co-relating the activities of the different associations, so that the work of the Institute might really be of a national character.

The hon. treasurer reported that as a result of representation made to the Board of Customs Duty, the tariff on imported plans has been increased from 1 to 2 per cent., and that an effort was being made to have a duty levied against specifications as well.

On motion of the hon. secretary, the Council was instructed to deal with certain proposed revisions to the by-laws in reference to special committee work, collection of fees, nomination of delegates, travelling expenses of Council

members, and the fixing of the pro rata rate.

It was further decided to have the Council communicate with the provincial associations with a view to publishing a year book to comprise their several charters, by-laws and other regulations, and a list of the profession in the different provinces.

Prominent speakers addressed both the luncheons and the business meetings. Mr. Eric Brown, of Ottawa, gave a fine talk on "Canadian Art and the Canadian National Art Gallery."

Professor Percy E. Nobbs gave an outline of what has been accomplished by the Government as regards "Battlefield Memorials," and the probable conditions which will govern the proposed competition to select designs for the monuments to be erected.

Other interesting addresses were delivered by Mr. Charles H. Whittaker of the American Institute of Architects and President Anglin of the Association of Canadian Building and Construction Industries, who spoke on the labor situation and present conditions affecting the building industry. The subject matter of these addresses dealt exhaustively with problems of vital interest to the profession, and resulted after considerable discussion in the adoption of a resolution requesting the Council to arrange if possible with the provincial associations for monthly meetings in each city where local chapters are established, to which architects, engineers, contractors and representatives of the

Trades Council would be invited to discuss questions affecting their mutual interests.

At the closing luncheon, Dr. C. A. Hodgetts of the Department of Public Health, and formerly Red Cross Commissioner at London, gave an interesting and instructive address in which he paid tribute to the services rendered by the architects to the Army Medical Service during the war. Dr. Hodgetts spoke of the power combined in the medical and architectural professions to make or mar human happiness. The subject was altogether an important one, and will be dealt with more fully in the next issue of CONSTRUCTION.

It was decided to hold the next general assembly at Winnipeg at a date to be fixed by the Council.

ELECTION OF OFFICERS.

The election of officers for the ensuing year resulted as follows: President, David R. Brown, Montreal; vice-presidents, W. D. Cromarty, Ottawa, and L. H. Jordon, Winnipeg; honorary secretary, Alcide Chausse, Montreal; honorary treasurer, C. S. Cobb, Toronto. Council: John S. Archibald, Montreal; J. P. Ouellet, Quebec; Joseph Perrault, Montreal; C. H. Acton Bond, Toronto; A. Frank Wickson, Toronto; Herbert E. Moore, Toronto; John M. Watt, London; A. G. Wilson, Edmonton; S. M. Eveleigh, Vancouver; A. S. Mercer, Vancouver; David Webster, Regina; W. C. Van Egmond, Regina; M. W. Sharron, Edmonton; A. Melville, Winnipeg; R. B. Pratt, Winnipeg.

Labor in the Building Industry*

By J. P. Anglin.

President of the Association of Canadian Building and Construction Industries.

THERE can be no industry of such vital interest to mankind in general as building construction. It matters not where man dwells or where he works, he must come in direct contact with actual building "labor" at some stage of his activities.

Of the three great necessities of life, food, shelter and clothing, the first and third come to us for the most part through salesmen. We seldom even see the "labor" which produces these. Building, however, goes on in full view, not only of its owner, but of the public as well. Then, too, who is ever free, even for a twelve-month, from the presence of a representative of the building construction industry within the very four walls of his private dwelling? A broken pane, a split pipe, a cantankerous door, damaged woodwork, or some other of the hundred and one things necessary to keep our immovable property habitable demands the actual presence of the building mechanic.

If, then, the individual householder is vitally interested, how much more should the architect, the engineer, the contractor and the worker unite to study the labor problems of their common industry, and combine to raise its standards. . . . Both our organizations are the representative bodies in their line of endeavor, and should be definitely linked up to raise standards all through this great industry. The Architectural Institute needs every architect's support, and ours the co-operation of every contractor, as well as every supplier and producer of building materials. . . . Broadly speaking, all our problems have a direct or indirect bearing on the labor situation in our industry.

Let us briefly run over a little history, because a proper study of the past should be of material aid in developing out of the present difficult conditions something even better than

* Address delivered at the Thirteenth General Annual Assembly of the Royal Architectural Institute of Canada, recently held at Ottawa.

has been. We cannot hope to do this in a day. It will take a generation or two, but we must begin, or building will degenerate into a purely mechanical or machine-made conglomeration of steel and stone.

We cannot dwell at length on ancient labor in the building construction industry, but we should recall those times of which we have all read, when the mechanic, architect, and builder were one and the same individual in most cases and where he was surrounded by a few whose ideals were of the highest, and who in turn were aided by a mass of common labor. Such was probably the case in the best Egyptian and Grecian work. Coming to Roman work there began to appear a more distinct division of duties, the builder more separated from the architect, and soon the desire for an estimate and fixed price cursed the community and the contractor was evolved.

As the present is an age of organization—perhaps too much so—we must consider the organization of guilds, which played such an important part on the continent in the middle ages. These guilds frequently had their origin in a desire to combat the power of the nobles. They became so powerful about the thirteenth and fourteenth centuries that in some cases they formed the basis of municipal government, and in order to participate in local affairs, a citizen had to become a member. (Surely this was the closed shop in the extreme). They even acquired the right to bear arms for their defence, and later the guilds were even victorious over the nobility and their power continued for several centuries. Only in the eighteenth century several edicts were issued in Germany, permitting all to practice any trade without having guild membership, and the same was done in Austria in 1860.

In England, these mechanics' societies began with the development of cities. They had no legal right to prevent any man from practicing his trade; the only restriction was Elizabethan, and required seven years' apprenticeship. It is noteworthy that the only English guilds of importance still in existence are those whose chief object is to give relief to poor and needy members.

In France, guild privileges were sold by the State, until the Revolution at the close of the eighteenth century, when every restriction to practice any trade was removed. It was during the first half of the nineteenth century that similar action was taken in the other European countries.

Unionism, or the modern trades and labor union, as we have it to-day, has developed to its present high state of organization during the past fifty years, and is the direct outcome of the modern system of industrialism, whereby factories, mines and general business is formed

into large corporations, and in place of the old struggle between guilds and nobles, we now have labor unions versus capitalization.

The building trades, even before the formation of large contracting companies, were unionized. The fact that the work is so open and accessible makes it vulnerable, and the added fact that the workman is so frequently changing from one employer to another makes it difficult to develop or maintain any degree of mutual interest between the individual tradesman or mechanic and his employer. The formation of large companies also makes this individual contact more difficult, and, therefore, new means must be found for raising and maintaining the standards of workmanship in the various building trades.

In Canada we have been in the habit of depending on immigration to maintain our supply of building trade mechanics, while little attempt has been made to train the boys, and they are allowed to drift into other lines. We must begin at once a broad and comprehensive plan of apprenticeship and technical training, if we hope ever to improve the situation.

Apprentices were fairly common in most trades twenty years ago or more, but the rapid development of this new country held too great inducements in other lines than building. This situation was further aggravated by the war conditions, when even a boy could earn a man's wages in munition factories.

Another war condition was the rapid assimilation into munition work of the major portion of building labor. Steamfitters, carpenters, stone-cutters and masons, being trained men, soon learned the new game, and as building was slack and munition pay high, they did well. This affected the building labor by reducing the quality and efficiency of thousands of our mechanics in the building trades.

Still a further war condition was the scarcity of good tradesmen left for even the much reduced volume of work. This condition, and the wage competition of various localities and of other industries led to the actual bidding for "building labor." Even without the influence of trade unions, wages would have been greatly increased, but the union, taking advantage of this condition, forced greater increases in some trades than others.

At the close of the war we expected much unemployment for a lengthy period, and plans were made to boost construction to avoid excessive unemployment and to catch up with the building shortage. Our governments planned considerable work as well, but this was scarcely needed. While very little Government work was started, there has never been lack of employment, and even now, two years after the armistice, building labor is scarce in all trades.

As to *production* and *quality*, it is said that

costs are high and work inferior. As to inferiority, can we not see that it is due chiefly to scarcity of good materials and the necessity to permit lower grades, and so poorer work results? No doubt a great deal of the inferior building is also caused by the fact that high prices tend to influence the owner to buy lower quality materials in order to economize.

Regarding *output*, I can say from experience, and after comparing pre-war with post-war unit labor costs, that the output or unit of production in most trades shows little change. Speaking generally, wages have increased seventy-five per cent. and costs about one hundred per cent. Curiously enough, such trades as brick-laying, painting, and even common labor, where wages increased about one hundred per cent., do not show as high an increase in unit labor costs as carpenter work and plastering and steamfitting, where the wage increase was less.

Production, however, is now greater than it was during 1919. It is still, nevertheless, far below what is possible. The old saying "an honest day's work for an honest day's pay" still holds good, I believe. But who is to determine the "honest day's work"—the workman? And who is to settle the "honest day's pay"—the employer? So long as we stand apart and wrangle at long range, just so long will dissatisfaction continue and low output and inefficient work continue.

The only way we can improve matters is to get together and study one another's difficulties and problems, and arrive at an understanding.

It is said by some that the proper way is to wait for hard times and poor conditions to come, and then, perhaps, we'll have the upper hand and demand lower wages, longer hours and big output. The man who uses this argument is going along as our forefathers did a generation ago. He is reckoning without his host—organized labor.

This is the age of centralized control, and the great unions have been learning the game until they have developed the largest and most powerful machine-controlled organization in the world. The outstanding proof of this is the manner in which they forced their way into the Peace Negotiations, and even had labor clauses written into the Treaty itself.

In my humble opinion, this was labor's crowning victory, and unless great caution and care are exercised by its leaders, it will steadily decline as a world factor. If labor unions as a class attempt to dominate all other classes, by forcing "unfair demands" and "unfair conditions" by means of the undemocratic "closed shop" principle, instead of following the lines of real service to its members and the community, they will go the way of the old guilds.

The "closed shop" principle is not only un-

democratic, but it is as inimical to the true and permanent success of labor as it was in the middle ages the cause of the ultimate failure of the guilds. The first plank enunciated in the trade union platform, viz., "the abolition of all forms of involuntary servitude," is contrary to the principle of forcing a worker to join a union before he can earn a livelihood.

Please do not misunderstand me. I am not opposing organized labor. I believe in organization, but not in over-organization, or in the abuse of organized power. The moment an organization departs from the high ideal of service both to its members and to the community, its usefulness is impaired. You perhaps recall the cartoon which portrayed "Giant Capital" standing ready to battle with "Giant Labor," but before the struggle they both looked up and beheld across the narrow river a third who was called the "Great Unorganized Majority." This third giant was many times larger, and stood gazing on them with interest. There could be no serious fight in his presence if he stood up for his rights.

Turning to the consideration of the question of building labor, what are its present problems and future needs? There is no doubt in the minds of most sane men that this is an age of organization, rather than a period of individualism, and further there is no doubt but that the only way to meet organization is with organization. We must first, last and always aim to render the service that will demand the respect, support and aid of all engaged in our branch of the industry, whether it be labor, business, or professional. The man who will not get under his special organization should be looked down upon as one who derives a benefit without paying his way. Individuals who "ride free" should not be tolerated. . . .

At the great National Industrial Conference in Ottawa, about a year ago, there were nearly a hundred delegates representing labor, whose whole time is paid for by labor organizations. Millions upon millions of dollars are contributed by our employees to carry on their unionizing work. Is it not high time that we gave without stint to our societies and associations, so that they can employ the staff, and be prepared to co-operate in the great service-rendering campaign? If we fail in this we shall fail utterly to solve present problems or meet future needs.

Having strong organizations we can then function adequately, and at least try to solve our problems, and anticipate our future needs. As an illustration, let me cite the case of our "National Joint Conference Board" in the building and construction industries. At present it is composed of five representatives from our Canadian Association and five from labor in our industry. There is an independent chairman. Why should not the Royal Architectural

Institute of Canada and the Engineering Institute also be represented?

The aims and objects of this Joint Conference Board are set forth as follows:

(a) The functions of the National Joint Conference Board shall be of an educational and advisory nature, furnishing a common meeting ground for the discussion of questions affecting employers and workmen in the building and construction industry of Canada.

The National Joint Conference Board shall remain in this advisory and educational form for an indefinite period, but it may exercise such powers as may be granted to it from time to time by the affiliated memberships.

(b) The National Joint Conference Board shall undertake to present to the Government such measures as may be requested by both groups, parties to the Board.

(c) The National Joint Conference Board shall advise with the organizations affiliated with it on measures which are considered to be of value in improving the building and construction industry, such as technical education, apprenticeship system, movement of labor, etc.

(d) The National Joint Conference Board shall encourage the organization of the employers and workmen in the groups represented by this Board into Local Joint Industrial Boards, for the settlement of disputes in the building and construction industry of Canada.

(e) The National Joint Conference Board may deal with disputes referred to it for settlement by affiliated organizations or established Local Joint Industrial Boards, provided they have been submitted in writing to the Chairman-Secretary and in his judgment are of sufficient importance to be brought to the attention of the Board.

Let me also enumerate some of the subjects we have already had under discussion, and plans for future action now in course of preparation: (1) Consideration of Causes of the Cement and Coal Shortage; (2) Proposal to Institute a Standard of Practice for Local Joint Industrial Boards, based on the experience of those now in operation; (3) Improved conditions which may result from the more scientific movement of Labor, to avoid seasonal unemployment; (4) Standard Apprenticeship Agreements, and the Training of Apprentices; (5) Wage Agreements, and their Effects; and (6) the Housing Shortage in Canada and its possible remedy.

Is it not evident that by adopting definite prescribed lines of action jointly with labor in our industry, we have taken a long step forward? Suppose we are able to agree upon a Canadian apprenticeship contract, establish attractive wages for boys, and add a system of technical training for them in the various building trades, do you not believe we will have more apprentices and better mechanics a few years hence?

We also believe we can formulate plans for the stabilizing of wages and the transportation of men from points of unemployment to points of employment. If necessary, we can together encourage the immigration of good mechanics in some trades where we are continuously short, such as bricklaying.

The architects can suggest some work for

this National Joint Conference Board in the Building Construction Industry, and if it functions properly, much good for the industry and the community can be accomplished.

Some improvement which might be worked out through all Canadian-wide organizations co-operating with labor within our industry are:

(1) The unification and standardizing of building by-laws for various types of cities and towns.

(2) The standardization of building units for various types of cities and towns.

(3) The standardization of all building units and equipment.

(4) The equalizing of architects' and builders' responsibility in the provincial codes.

(5) The publication of standard practices in modern building construction.

(6) Town planning and zoning needs attention everywhere. Should we not lead in this necessary work?

(7) Housing could also be solved by such a Joint Board, if it is possible for anybody to solve the problem.

In so far as the immediate future is concerned, I believe the architect and the contractor can do considerably more to serve their clients and themselves by studying ways and means of reducing labor costs than is generally appreciated. A joint board should be created for this purpose.

At random, I would submit that labor costs could be lowered if the architect would more carefully apply the following suggestions:

(1) Eliminate multi-material building designs, as far as possible.

(2) Design buildings with minimum quantity as well as minimum variety of material.

(3) Localize to the limit, in the selection of materials.

(4) Anticipate by several months, information and details for the progress of your work.

(5) Consult master builders, even when design is in embryo.

(6) Specify briefly, but clearly and completely.

(7) Give decisions without delay.

(8) Allow rational time for building at normal speed.

These points will all tend to greatly reduce labor costs. So many architects and engineers fail to appreciate the extreme difficulties of present-day building, owing to shortage of materials, slowness of delivery, and the carelessness of the average individual.

Again, I would suggest that the contractor can do just as much on his side. I would like to see him make a serious effort along the following lines:

(1) Careful planning and routing of materials and sequence of work by looking well ahead.

(2) To study the work in hand so as to eliminate surplus labor.

(3) By taking a greater personal interest, either directly or indirectly in his workers, and to show them his costs and output.

(4) Having an up-to-date plant, and keeping it up.

(5) Careful handling of materials, and the avoidance of waste.

(6) The more careful selection of men, and the training of apprentices.

(7) Seeing that when a piece of work is done, it is done right, so that no come-back is possible.

Now about the client—can he help reduce his own cost? Both architect and contractor and even building workmen could help him with suggestions:

(1) By being fairly sure of what he wants, and of his requirements, and thereby avoiding as much as possible subsequent changes.

(2) By giving ample time for drawing and specifying and also for quantities and pricing.

(3) By beginning far enough ahead to avoid over-rushing and overtime.

(4) By prompt payment of both contractor and architect, thus ensuring efficient attention.

(5) By being rational in his time requirements. As a rule an under-manned building will cost less than one that is over-manned. (This one thing—the demand by the owner that operations must proceed in spite of conditions, is responsible for more raising of wages and costs than any other one factor).

(6) By getting back to the fixed contract system of building.

Coming to the consideration of labor, what is the course open for our building mechanic and workman? We can all make suggestions, but how can we get back the respect and goodwill of our men? The men, who when all is said and done perform all of the manual labor, and to whose technical skill we owe the actual execution of the architect's design and the contractors' orders.

You may say, "Let him get busy and give us the day's work we used to get in years gone by." We know, and our clients know, and the worker knows that the average output per hour has been going lower year by year until we touched the fifty per cent. efficiency mark. This was reached in 1919, when some false prophet started to proclaim the gospel of "cut your output and so help to provide employment for all." This was when unemployment on a large scale seemed to stare us in the face.

No one thing has done so much to injure our industrial life during the period of unrest as this kind of false economic teaching. Its effect was immediately to increase costs, reduce buying power and, therefore, demand dropped, and there is really less work for all as a result. It is a simple truth that increased individual output reduces costs, increases buying power, and so creates employment.

What is needed chiefly is enlightenment on these questions. The workman, especially in our industry, is a highly intelligent being, but we are not appealing as we should to his sense of reason and perception, in a way to gain his respect.

There are already signs of improvement. The unrest is abating, and efficiency is gradually coming up. But, it is a voluntary improvement, as it should be, of course, and will only become permanent if we meet our workmen half way.

They must feel the personal interest of the architect, the contractor and the owner. We can do this best on the works, but also indirectly. We should be ready at all times to confer on questions of mutual interest, and before long we would restore the confidence which we seem to have lost.

On their side, the building mechanics should help the employer by co-operating to the extent of encouraging their sons and others to become apprenticed, and further by aiding the beginner in every way possible to become a proficient mechanic. Is it not far better to teach our own boys rather than to go on depending on immigration? It is surely better to try to grow Canadians than to try to assimilate foreigners.

By being more frank all around in our dealings with labor, so that our men see the true situation, I feel satisfied that output will increase, and building costs recede, even without a reduction of wages.

Therefore, I would urge upon all engaged in the great building construction industry, whether architect, engineer, contractor, manufacturer, or workman, that we strive to get together and break the sod on common ground. Let us, for the sake of rendering that service for which the community is longing, begin without further delay to lay a foundation worthy of our noblest ideals, in the hope that we, or perhaps others who follow after, may erect a solid superstructure in the near future which shall represent the most efficient type of joint workmanship.

Let us remember that we are producing one of the world's fundamental necessities, shelter. We have assumed that trust, and from present indications we are making a failure of it. We are certainly falling far short of what it ought to be possible to attain. The terrible post-war world diseases of sloth, carelessness, materialism, and self-interest, still have us in their grip. We must shake them off, and by careful application and co-operative service lead in the upward struggle.

Steel Tubes for Reinforced Concrete

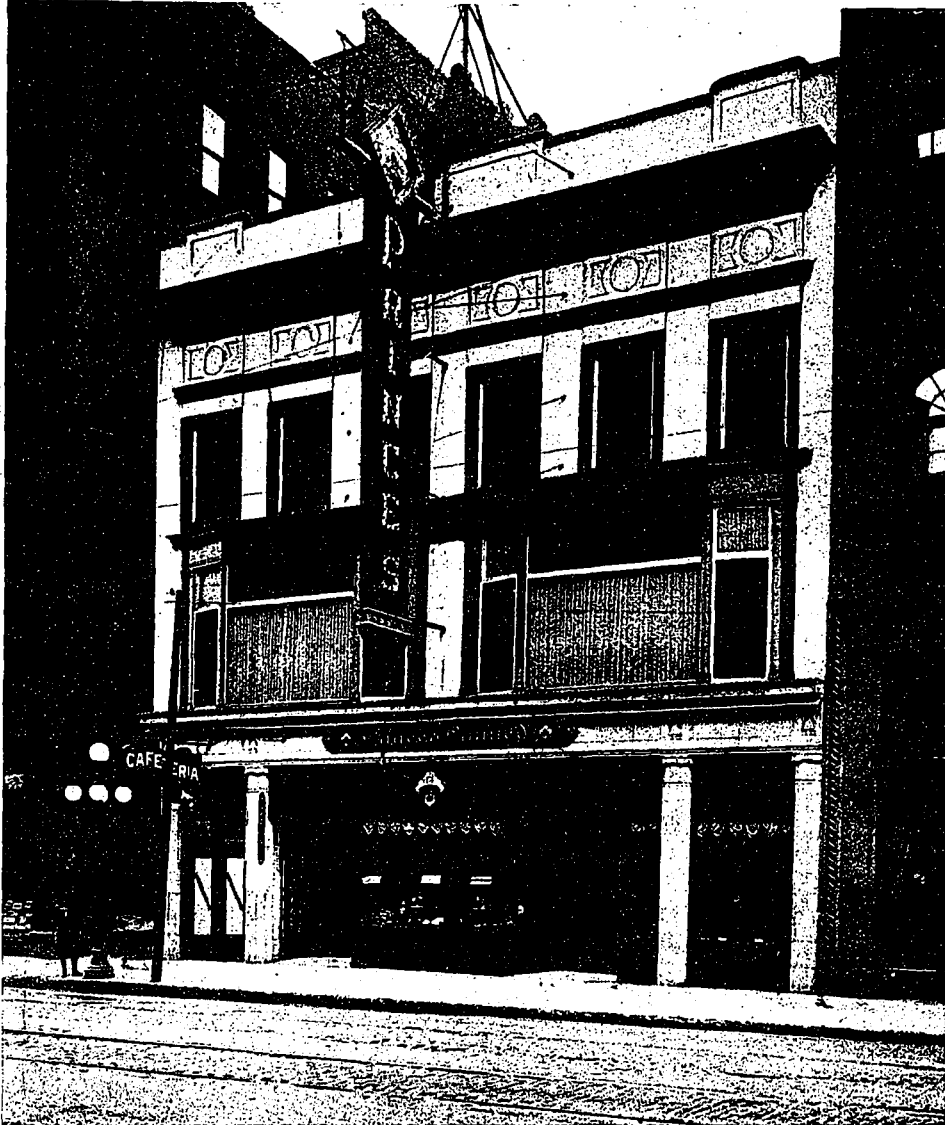
The increasing use of reinforced concrete for buildings of every description makes the question of the behavior of such structures in case of fire exceedingly important. Owing to the tendency of the steel supports to become overheated, there is a risk of the structure collapsing when exposed to fire. In order to obviate this danger a British engineer suggests that steel tubes might be used in place of steel rods and arrangements made to circulate water automatically through the tubes in case of fire. He considers that the cost of such an arrangement would not be excessive, and that it would serve to save the structure from collapse.

Premises of Princes Limited, Toronto

IN the premises of Prince's, Limited, the problem of the architects was that of remodelling the old Fairweather building at 84 Yonge street into an up-to-date catering establishment. It is therefore not a new structure, but one which has been so extensively altered as to be entirely new in character. In adapting the building to its present requirements, a complete rearrange-

tion and encased with cut stone forming octagonal columns with carved caps. Above the ground floor the facade has been remodelled and finished with a cement plaster, giving a pleasing effect.

The feature of the scheme lies chiefly in the treatment of the interior, which is rich in coloring and decorative effects. On the main floor,

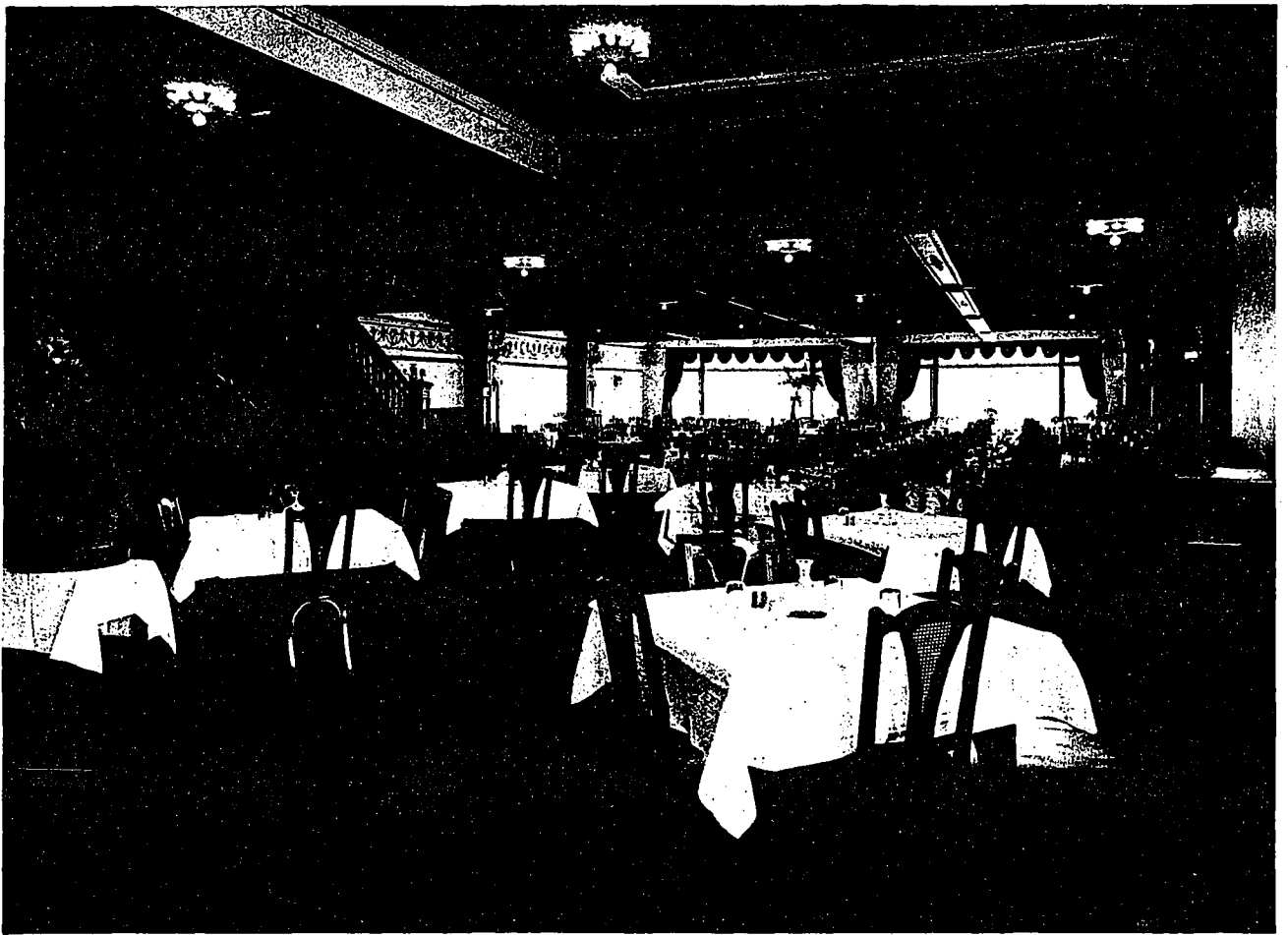


PREMISES OF PRINCES LIMITED, TORONTO.

ment of the interior was necessary. The original structure had a series of large columns down the centre of the front portion. This objectional feature was removed by spanning the entire width with large steel beams supported by steel columns in the walls.

Moreover, the old store front was removed, as were also the steel columns supporting the front wall. New steel beams were set in posi-

as one enters, are the confectionery and French and Danish pastry sections, including an elaborate soda fountain, and immediately back of this are tables and chairs with accommodation for 500, where light luncheons and refreshments are served. The character of the ornament is Pompeian, and the color scheme in gold, black and bright red. In harmony with this is a terrano floor with gold colored ground, inset with



UPPER VIEW: MAIN DINING ROOM.

LOWER VIEW: GROUND FLOOR SECTION.

PREMISES OF PRINCES LIMITED, TORONTO.
DENISON & STEPHENSON, ARCHITECTS.

black squares at regular intervals. The walls are treated entirely as a background, only the pilasters standing out in relief. The ornament is rich and dignified in character, but is by no means overdone.

The building is 150 x 43 feet, three storeys and basement with an additional storey to the rear portion, and is used entirely for the business of the owners. Besides the ground floor accommodations, the plan divides itself into a basement cafeteria, main dining room and ballroom. The latter two are reached by a wide and well-proportioned staircase, under which the manager's office is located. The main dining room is approximately 110 x 41 feet, with separate lavatory accommodations, and direct kitchen service at the rear. The scheme is Adam in character and exceedingly rich in design. The ornament has been handled with great skill to conform with the architectural lines and is beautifully modelled and pleasing in detail. The ceiling and walls are in ivory and the element of color chiefly supplied by the draperies and carpets, the whole resulting in a most charming and inviting effect.

The ballroom is located at the front portion of the third floor, and is shown by plan only.

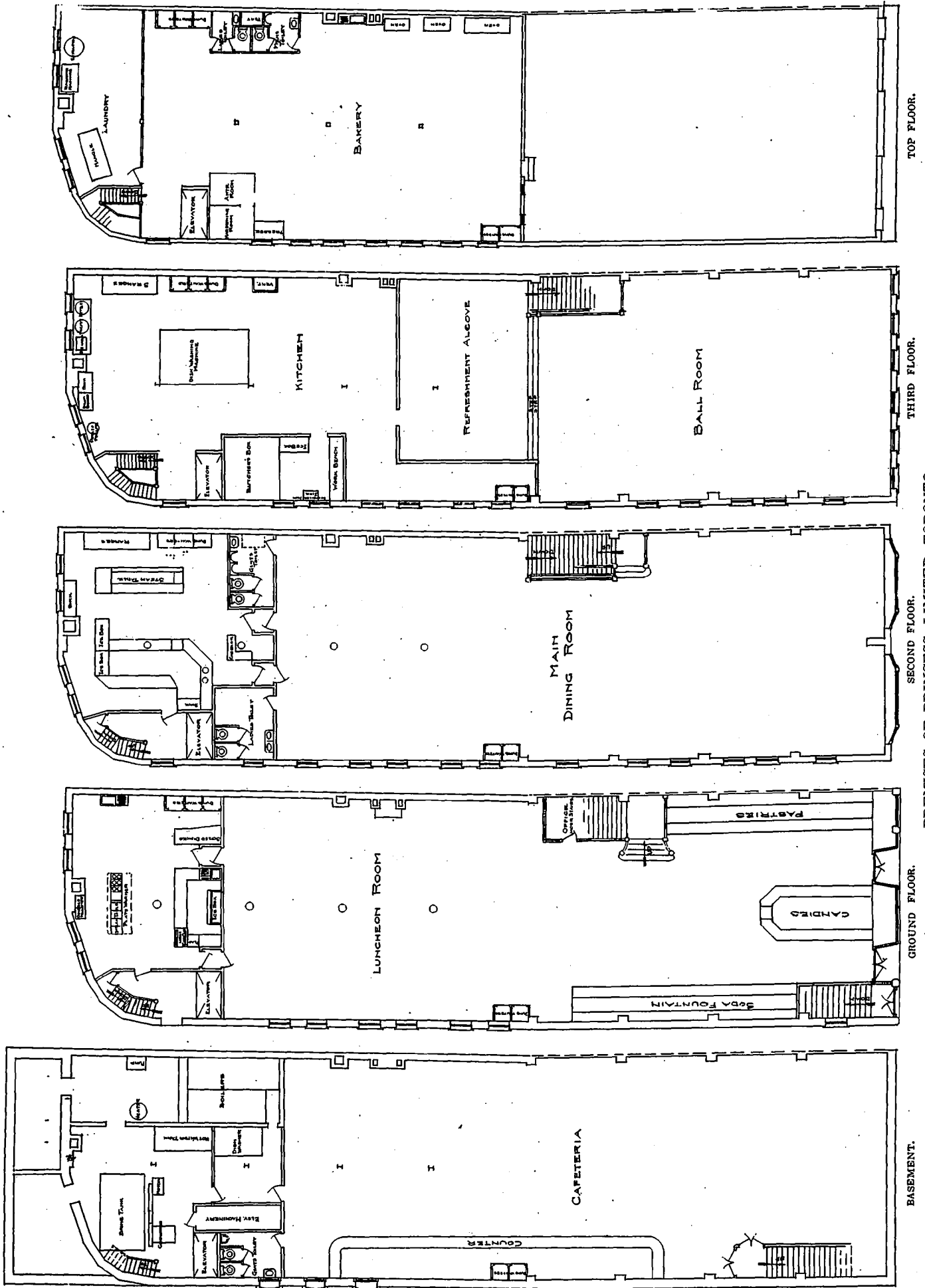
The treatment here is quite simple, the wall being carried out as a background, and depending on the dresses of the patrons for color. The ceiling is in gold and black, and the lighting fixtures the main feature. A dancing space, 42 x 64 feet, is provided with an adjoining alcove where refreshments may be served. Italian draperies in black and gold with nicely balanced lambrequins of pleasing design are used on the windows and stand out in pleasing relief against the walls.

The basement has a separate street entrance, and is devoted entirely to the cafeteria. In order to gain more height, the basement was excavated three feet below its original level. The walls are finished in cement to imitate stone; the floor is of concrete in tile pattern and colored red, and the ceiling finished with ornamental plaster beams.

The fourth floor extending over the rear portion is used entirely for manufacturing purposes, and is equipped with modern facilities for carrying on a high-class baking and confectionery business, thus making the place a most complete and self-contained establishment, the pastries and candies being conveyed to the ground floor counters by electric dumb waiters.



BASEMENT CAFETERIA, PRINCESS LIMITED, TORONTO.



TOP FLOOR.

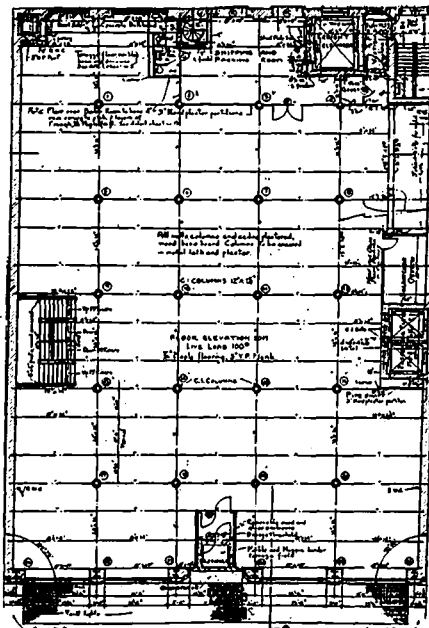
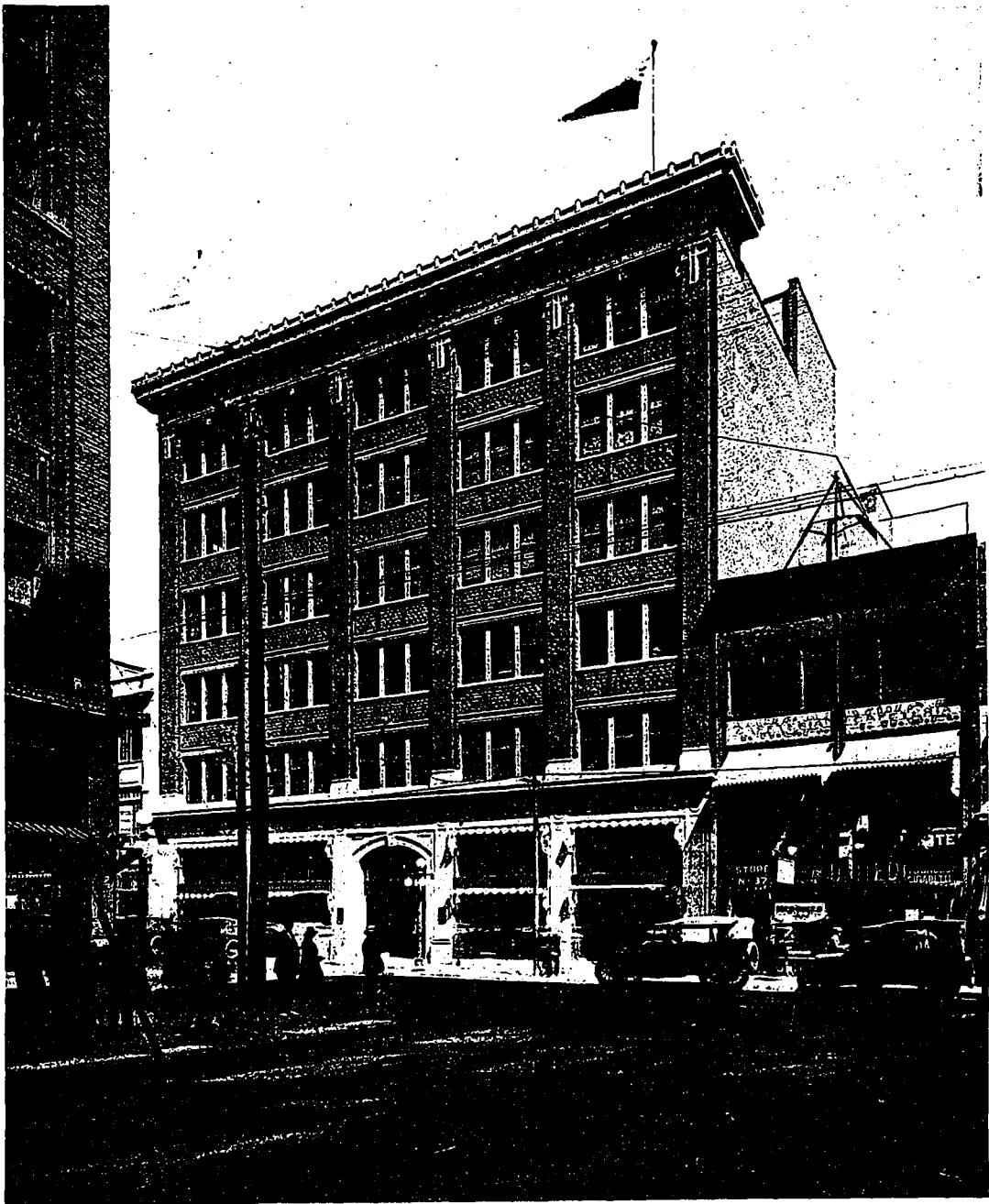
THIRD FLOOR.

SECOND FLOOR.

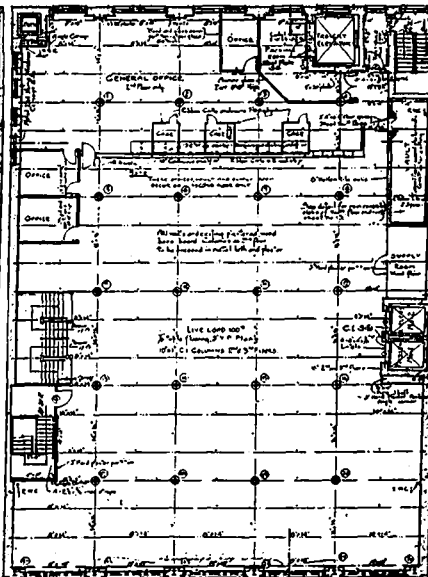
GROUND FLOOR.

BASEMENT.

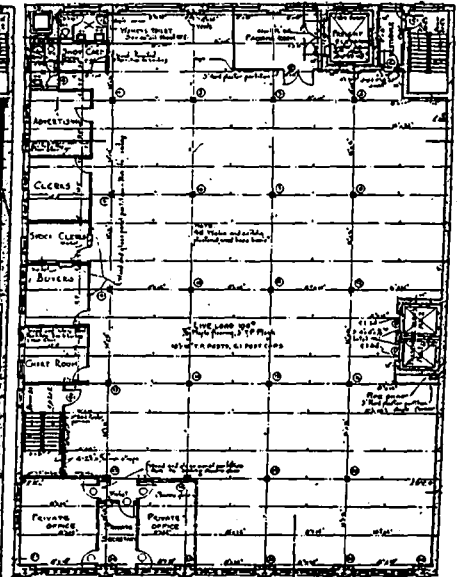
PREMISES OF PRINCESS, LIMITED, TORONTO.
 DENISON & STEPHENSON, ARCHITECTS.



GROUND FLOOR PLAN.



SECOND FLOOR PLAN.



TYPICAL FLOOR PLAN.

ADAMS FURNITURE COMPANY'S BUILDING, TORONTO.
 WM. STEELE & SONS CO., ARCHITECTS.



GROUND FLOOR: ADAMS FURNITURE COMPANY'S BUILDING, TORONTO.

Adam's Building, Toronto

The new building of the Adams' Furniture Company, Toronto, is one of several developments which have been recently carried out due to changes in leases in the downtown business section. It not only provides premises well suited to the needs of the owner, but at the same time represents a noteworthy improvement in the vicinity of Yonge and Albert Streets, by replacing two commonplace brick structures which previously occupied the site.

The building is of mill construction, 88 x 122 ft., with cast iron supporting columns enclosed in plaster. The lower storey is of cut stone with a large frontage of glass for display purposes. Above this the facade is faced with brick

having a rough texture and flecked with soft red, brown and neutral tones. This wall which faces the west, together with the north and south walls, have cantilever footings.

The plan in itself involves no special problem, but consists mainly of open floor areas with aisles dividing the space into sections for the arrangement and display of furniture. The main floor, which is 20 ft. high, has a mezzanine extending around it four sides. The typical floors have a height of 12 ft. 8 inches, and the basement a height of 12 ft. The general offices are on the second floor, and offices for the buyers, stock clerks and shipping department on the fourth and upper floors.

The building is equipped with an approved sprinkler system with all piping concealed, together with centrally located passenger eleva-

tors, and a freight hoist connecting with the receiving and shipping space at the rear.

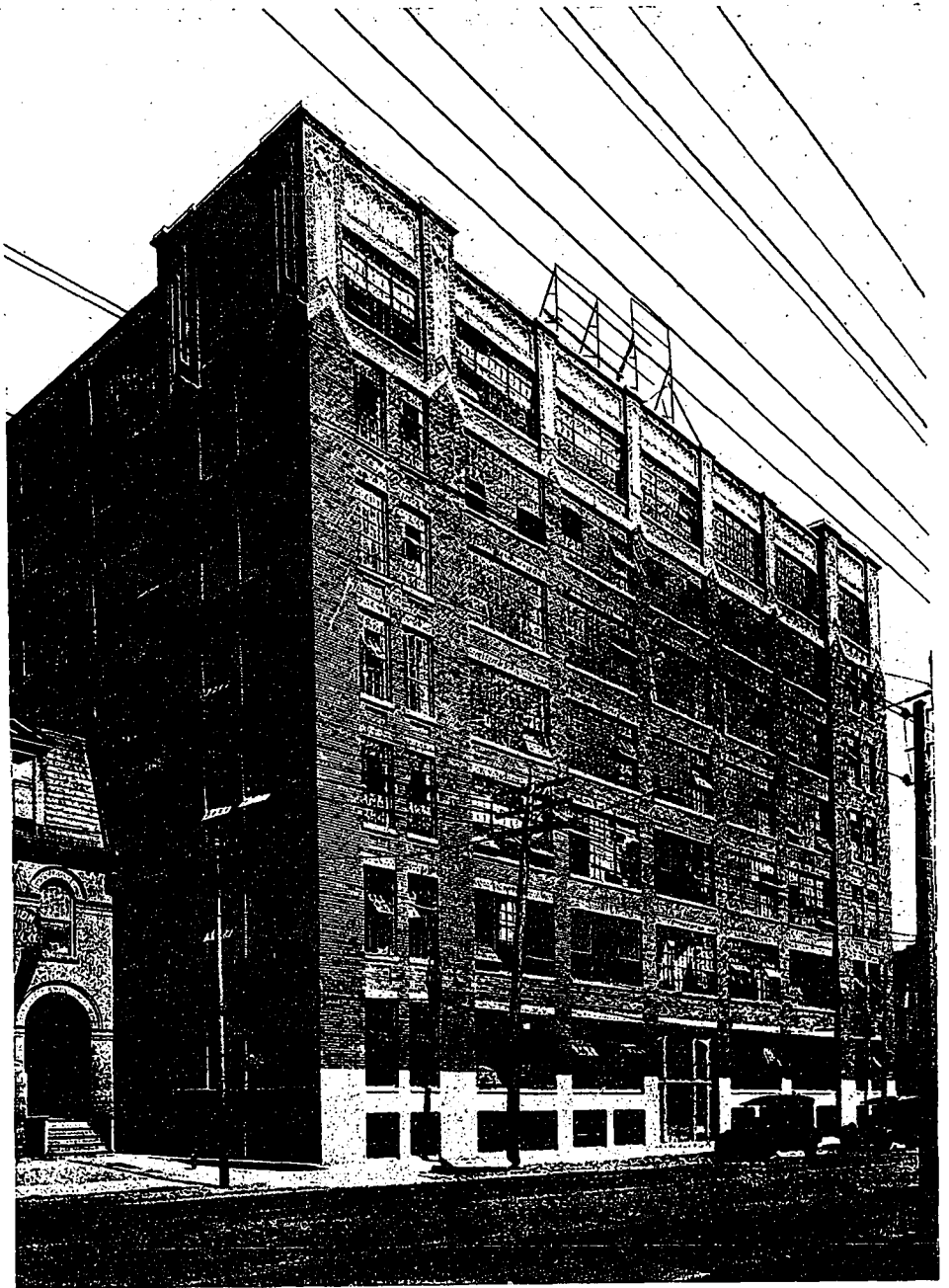
Hobberlin Building Toronto

This building was chiefly erected for the garment and needle trade of Toronto. The floors are 120 x 145 ft., giving an area of 17,400 sq.ft. to each floor. The height of the building is seven stories and basement, making a total of 140,000 sq.ft. for the entire building. The feature of the design is that it ensures a maximum of interior light, notwithstanding the width of the building. This has been accomplished by adopting steel mill construction which allowed of the use of about 90 per cent. of glass, the sash units being approximately 15 x 23 feet.

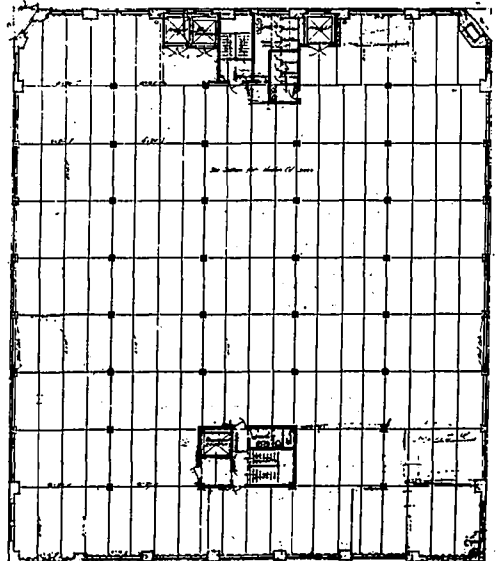
The floors are designed to carry a live load of 150 lbs. per sq.ft., the flooring itself being three inches thick. The resting and intervening beams are placed on six-inch centres, and all heavy timbers were put in place in two or three sections to avoid checking. The columns of the basement floor are 20 x 20 inches, consisting of four 10 x 10 inch timbers. The principle beams are 16 x 20 inches, consisting of two 8 x 20 inch timbers. The super floors are of mastic $1\frac{1}{4}$ inches in thickness.

The building is equipped with four high speed elevators, sprinkler and water curtain, and was completely erected in 78 days. Over 1,000,000 ft. of B. C. fir were used in its construction.

The Legislation Committee of the Toronto City Council is considering a proposal to exempt all houses erected at the present time from taxation for a period of three years.



NEW HOBBERLIN BUILDING, TORONTO.



TYPICAL FLOOR PLAN.

Post War Architectural and Building Problems

An address by Charles H. Whittaker, American Institute of Architects, before the recent Ottawa R.A.I.C. Assembly.

ANY of the several phases of my subject would be quite a large order for me to talk about, and yet all of them are so intimately related that it comes down to describing or narrating, as best I can, where the profession in America is finding itself at the present day in relation to its problems of practice as individuals, and how much greater it is finding its problems and adjusting itself to changes in the building trades brought on by the war, and also the tremendous problems being raised by the expansion of our communities and our big cities.

We are passing very rapidly from the stage of individual problems into the stage of great community problems; and they are very pressing problems, and we have a crisis on the way.

All of these things came about so far as the profession in America was concerned, I suppose, as a result of the war very largely. Of course when the war burst upon us there was a serious complaint that architects were not appreciated by the Government, and that the profession was being overlooked. Towards the close of the war, in fact, before we had any idea that the war was to end when it did, I believe the Institute (A.I.A.) appointed a committee to undertake a little more extensive survey of the practice of architecture in the United States, and very generously gave that committee \$10,000 with which to do its work. It was quite the largest thing the Institute has ever tried to do, and the committee was organized both within and without the Institute, because the American Institute of Architects is only partly representative of the profession in the United States.

We tried to make the committee very general, and to draw into it all the architects, whether they were affiliated with the Institute or not.

That work went on for something like two years, I think. It did not develop anything that we did not know before, but it had one very great effect—it did concentrate the attention of architects for a certain period on problems with which they were quite unaccustomed to deal.

We were able to raise questions for discussion both in the Institute Conventions and in the Chapters (of which there are forty in the United States), and for the first time in the history of architecture in the United States we really got architects down to a national discussion of the problems with which we were faced.

The end of it was that I think the great majority of us became convinced that if we wanted to solve the problems that we called architec-

tural and as related to the practice of architecture we should have to dig pretty deep into the business of building. A few of us had thought that for a long time, but I think it is pretty well understood in the United States now that architecture, the art, and building, the business, are two quite separate things, and that they do not go along side by side the way we think they ought to go.

Out of the report of the Post War Committee it was recommended that a study be made of the building trades in England and what they had been doing, and the last convention of the Institute authorized the directors to undertake such a study if they could. All of this crystallized in a meeting held in Chicago last Monday (Sept. —) at which for the first time in America we got together representatives of practically all the major elements of the building industry—architects, engineers, manufacturers, contractors, and labor leaders. That conference was called as a result of the preliminary discussion we had at Atlantic City in August, and its object was to make a survey of the building industry in the United States, and in some manner to find ways and means of raising the money necessary to make such a study.

Of course it came about, as I said, very largely on account of the serious study of the building industry in Great Britain that was made by the Committee on Scientific Management and Reduction of Costs of the British Trades Parliament. I have no doubt most of you are familiar with the report of that committee. It was a very startling document, which, as a principle, recommended that the building industry of Great Britain be transformed into a public service. I think this is the most remarkable document that has come out of the war as bearing on the question of industrial relations, because it was made by a committee composed of an equal number of employers and employees.

I do not think there is any doubt among the great majority of the profession in the United States to-day but that we are faced with problems in architecture which have their roots in our economic system, and one of the tasks which this Congress at Chicago will have to carry out if things go as promised, is to make a study of the building industry as a machine, to see how it functions, and see why it is not functioning at the present time, because the building industry in the United States is really paralyzed; it is at a standstill, except in certain directions where buildings are so badly needed that the cost does not matter, or in the case of moving picture theatres, and things of that sort.

Then, again, so far as the supply of houses is concerned the building industry is absolutely unable to function. There are very few houses being built in the United States, and there does not seem to be any prospect of houses being built.

Now, the point is to get at what is the reason for this condition.

I think up to the beginning of the war the preponderance of opinion in the American Institute of Architects so far as the development of architecture in the United States was concerned would be about like this—our function is to educate the public. We must get them to appreciate architecture. We must teach them what architecture is, what it means; and what we as architects have to offer. Our job is a job of education. I think that opinion still holds among the minority in the United States, but I think the great majority are beginning to feel that it is no use to give education unless you can also give power to utilize that education. In other words, to put it briefly, there is no use teaching the people what good architecture is unless good architecture is economically within their power.

The history of building in the United States does not show that at all. It shows that so far as the supply of homes is concerned it is quite impossible to give good architecture economically, that evidently there is something very wrong as between architecture, the Art, and building, the business. There is a great hiatus between the two, and they do not fit together at all.

I should like, if I may, to run over the three major things on which we concentrated our attention so far as this committee is concerned. They seemed pretty remote from architecture, the Art, and I am reminded here, as I am always at our own conventions, of the fact that architecture, the Art, seems to get very little discussion. On the last day of our conventions of the American Institute of Architects, two or three men rise very mournfully and bewail the fact that three days sessions have been devoted to registration, and competitions, and schedule charges, and by-laws, and this, and that, and that no one has talked about architecture. That really indicates what I think is quite a significant fact; that the business side of architecture and building is gradually encroaching upon everything else, and there is hardly any time left for architecture.

Building to-day is a business, for the most part. It is a competitive business. It is a profit making business. And when I say these things, and when I say a good many things I shall say, please do not think I am dogmatizing or that I have any hard and fast and fixed opinions. I have some opinions, but I will try to conceal them.

Just imagine we are all of us, if you will, simply going into a sort of a laboratory to try to dissect this building industry, this building business, pull it to pieces and see what it is composed of, and how it works, and why it does not work. That is the only way to get at the truth about it.

After we have made our start, the first thing that ought to come to our attention is the fact that you cannot build buildings without putting them on land. Then land has something to do with the building business. You must have land to put a building on, and I must confess it seems a rather remarkable thing to me that so many architects have not seen the connection between land and the building business.

I imagine that here, as in the United States, almost every architect has been up against the problem of the rising cost of land. Certainly we have it in the United States, and certainly the answer that we have sought in the United States has been a larger volume of building on the same piece of land in order to make the investment pay, or a cheaper kind of building on the same piece of land, or packing more people into an apartment house on the same piece of land, because it is only by one of those three that you can make the building profitable, and, of course, the building has to be made profitable.

Therefore, at the very outset you must recognize that somewhere or another the cost of land plays a tremendous part in architecture, in building, and in building progress, and unhappily the more large cities expand the higher grows the cost of land generally, and all that extra burden has to be somehow swallowed up in the building and made to pay. If you compare it with the architectural period of Greece, or the medieval period of Europe, you find the same problem did not exist.

The housing crisis which has overtaken all our cities is, as the Reconstruction Committee of the State of New York said, primarily a land problem. Your Ontario Commission said the same thing. It is being said pretty generally all over the world. It is a land problem. We cannot solve the housing problem until we can solve the land problem. Solving the land problem alone will not solve the housing problem, but it is the first thing that has to be done. You cannot escape it, and you must deal with it if you are really going to study the building industry, if you are really going to study what is the matter with building, if you are really going to study what produces the disordered congestion of our American cities. Some of our cities have brought themselves to such a pass that it seems almost humanly impossible for them to extricate themselves. I do not know what will become of cities like New York and Philadelphia, for instance. On the face of it it

seems utterly ridiculous to think of packing more people into the City of New York where they cannot possibly be handled from the point of view of transportation; where they cannot possibly have schools, and where the docks and terminals are so congested at the present time that it is almost impossible to supply them with food. There seems to be absolutely no understanding of the fact that with houses have to go a great many other things, and the result is that a good many of our American cities are face to face with problems which seem to be almost unsolvable. They cannot find the means of extricating themselves out of the difficulty.

Of course a very considerable part of the difficulty lies in the fact that they have allowed their lands to be frightfully capitalized by private owners, and of course all that burden has to be paid in an annual charge. It seems to me it is very much like continuously watering capital stock, and adding water continually to something that produces nothing.

It is one of the great problems in the building business, and several solutions are offered. So far as the United States is concerned it is a problem which we are just beginning to face really seriously.

Of course we are slowly admitting the principle that the community must in some manner find out how to control the use of land. That is why we got our zoning laws, and it was really quite astonishing that New York City should accept the principle of a zoning law, because the zoning law is a restriction upon the use of private property.

Little by little, by police restriction, and zoning restriction, and town planning restrictions, there is developing a common sense view about land, but so far as I can see not much progress is going to be made in the development of our cities or in the supply of housing or the progress of architecture until we as a nation come to accept the principle of some kind of land control.

What this shall be, what is the best kind of control, I am not sure. I do not know that anybody is sure, but when all our minds get working on the problem we shall undoubtedly find some way of solving it. This will mean an absolutely new field for architecture.

The second factor of the building industry with which the Post War Committee labored for a long time is the factor of credit. Almost all of our building operations in the United States depend upon the extension of credit of some kind from some source. Credit, I find, is a very difficult and a very elusive subject to touch, and a very delicate subject to discuss, because there is not any generally accepted definition of credit any more than there is any generally accepted definition of wealth, or any

generally accepted definition of money, and the three things are somehow bound up together.

After all credit is some kind of a provision you have to make for paying people while they are doing a certain amount of work. Who supplies that is one question; where it comes from is another question. So far as our conclusions go in the United States the building industry to-day is really dominated by what we have to call the credit monopoly. It is the bankers, the investors, who are really determining mostly the kind of buildings that can be built. It is not the architect, and it is not the contractor, nor is it the workman. It is the man who is supplying the money who tells us the kind of building we can build.

At the present time the people who supply money will not lend any money in the United States. You cannot get a building loan—it is almost impossible. What would happen if credit refused to function in the building industry? It has refused to function for a long time, and the result is we are woefully without buildings, we are very short of houses. What is going to happen if private credit refuses to function? Well, the State of New York has just done a very remarkable thing; it has called a special session of the Legislature to deal with the housing situation in the State of New York. We have the position of a Government body convening for the first time on this side of the water to deal with the housing situation. It has not done anything beyond extending certain help to the renters of buildings. It has not proposed any measures which are going to provide more houses. But, the fact remains that the situation became so serious that the State of New York actually called a special session of the Legislature to deal with the housing problem. It did not call upon the architects, the contractors, the builders and the renters to tell why there are no houses, and I ask you to imagine the State of New York trying to find ways and means for building more houses in the City of New York when 33,000 farms were abandoned in that State last year.

It is a very strange commentary on modern civilization, but there is no disguising the fact that a great city is a great cancer in many ways, and that is the stage to which we are coming in the United States. Our individual problems are gradually being swallowed up in those tremendously big problems with which our communities are faced, and the consciousness of those problems is only just now beginning to dawn. We have had projects for the city beautiful, and the city square, and the city plan, and so on, and all these were grandiose, but now we are face to face with the tragical problems of transportation, and of schools, and of houses, and the thing is rapidly passing beyond the individual stage, and, as I say, the consciousness

of this is only beginning to dawn on us, and we do not know how to meet it.

This again indicates to me that architecture, the Art, is quite helpless. It cannot come to the rescue. It ought to be able to. There is sufficient skill, there is sufficient knowledge, and there are a sufficient number of technicians qualified to solve any of those problems. There is not an architect practicing in Canada or the United States who could not find a solution for it so far as the physical problem is concerned, but, economically, it cannot be done.

Therefore it seems to me that if you are going to look forward to great architectural development, you must examine the economical system, and you must find out why it is that the business of building has been taken away from the architect, taken away from the contractor, and taken away from the workman. The master builder is gone. The whole system is gone. The business of building has passed into the competitive profit-making system, and it is being rapidly taken over so far as the United States is concerned by what we have to call the financial business. We see the great constructing firms everywhere in the United States taking over the entire functions of architect, contractor and builder. A vast amount of building operations is being carried on in that way. You would be astonished if I were to tell you the names of some of the architectural firms who are selling plans to construction companies, their functions ceasing as soon as they have made the plans. Yet, the extraordinary thing is that the architects do not seem to grasp this situation.

Here it is—they are familiar with the land problem; they know how they have to struggle to get loans for buildings; they see those construction companies coming up. Is it not time to look into the system, and try to understand it?

The third factor which enters into the building industry from the point of view from which I am speaking is the question of profits. The building industry to-day is based upon the law of profits—no profits, no building. Of course, no profits, no credit—the two go hand in hand. Is it possible to conceive a building industry carried on without profits, or is it possible that we must forever depend upon the profit-making motive? It seems to me a very curious paradox that when we glorify the men who died in the war as typifying the noblest kind of heroism, giving their lives for something in which they believed without any thought of profit, we should still cling pretty tenaciously to the fact that the profit-making motive is the only impulse upon which we can depend in order to stimulate mankind to do things. I am willing to express my own opinion upon this point, and say I do not believe it. I believe the profit-

making motive is a snare and a delusion. I do not know how we are going to get rid of it, and I do not know whether we ever will get rid of it, but I do not believe it is the real motive that inspires any man to do good work—I do not care whether he is workman or king.

I do not believe the profit-making motive is going to survive forever, because it was very curious at the Building Conference in Chicago that a body of forty or fifty men all eminent in the building industry sat in a room and discussed those problems of harmony, and co-operation, and mutual service, and so on, never once mentioning the word "profits."

It is true the building industry, like all other industries, is based upon the law of profits, and I have nothing to say about the man who believes in profits any more than I have to say about the man who does not believe in profits. It does, however, seem very ridiculous to try to discuss the building industry without discussing profits. What is going to become of the profits? Who is going to get them? How are they going to be divided? That is the real problem. And, as for profiteering, what is it? Who can define it? What is a fair measure of profit for any kind of work? Is there any fair measure of profit? I defy anybody to define it.

There are those three things running through the building industry—the business of building—there is the land problem; there is the credit problem; there is the profit problem. It is my hope that this group of men who are working on the matter will be able to make a really serious study of the whole thing, and that they will be able to lay the facts before the industry, and that they will at least begin to make the building industry understand the nature of the machine, how it functions, why it does not function, and what all these things mean. They should not discuss such questions as co-operation, and so on, because those questions are all beside the mark until you have decided what you are going to do about the profits, how much the profits are going to be, and who is going to get them.

That is why I am very much interested in the Building Guilds in England. They have not got very far, it is true. There are about fifty of them in existence at the present time, and two or three of them are working on building projects, one to quite a considerable extent. But, the Building Guilds in England in all their negotiations with the Government and in all their negotiations with municipalities, have clung tenaciously to the principle that they should carry on their work without any profits. They have offered to supply the labor for carrying out those building operations—of course almost entirely housing. At first they worked on the basis of 10 per cent. to cover the cost of plant, superintendence, and things of that kind. It was not to be distributed as a

profit. In the final agreement approved by the Ministry of Health it was reduced to four per cent. They have clung absolutely to the theory that there are to be no profits in what they will do. The workman says: "Give me an acceptable wage, and guarantee me continuous work, and the community shall pay no profits for having its building carried on." Of course, this is a new motive in industry. I do not know how far it will go, and I do not know what fruit it will bear, but all of those things are educational and they all indicate that there is dawning a consciousness of the fact that the building industry does not function primarily in the service of society, but functions primarily in the service of profit-making business.

That really covers the history of what has been happening to the American Institute of Architects since the war, and indicates the line in which I think the majority is travelling. As I said I hope this conference in Chicago will make a really practical, scientific and economic analysis of the business of building, so that architects, contractors and workmen may be made understand what is wrong.

I need hardly dwell on the Trades Union situation. It is the dreadful condition with us in the United States. I should think the most backward trades unions we have are in the building industry. The Post War Committee discovered, and I think we all know, that the quality of workmanship is steadily declining among the trades in the United States, not only since the war, but even before the war, and none of the building trades are drawing to themselves the kind of men they have had in the past. Skilled labor is a very difficult thing to find.

Competent labor is almost impossible to find. This again is another condition with which the building industry in the United States is going to be faced in the future. I do not think anyone knows where the workmen to carry on such operations are to come from. They cannot be found. We have not got them. We have not been training them. We have not been educating them. I suppose the reason is that we have not been offering the incentive.

I have given you roughly this history of what really started with the work of the Post War Committee of the American Institute Committee of Architects, and I have brought you as far as we ourselves have been able to go. I have not the faintest idea of what is likely to develop in the future.

My hope is that more and more architects especially will be willing to look at those things broadly, and impartially, and fearlessly, and try to understand them; because we have quite a different condition at the present time from the conditions which existed when architecture was a great art. We have a great industrial system, a great business system, and a great com-

petitive profit-making system. They are facts. We are living under those conditions, and they must be faced. The matter has to be studied, and I think we must rebuild carefully, slowly, and patiently, because if we do not rebuild in that way the whole structure is likely to collapse which is a thing none of us wants to see.

So, if I have any message at all to the architects of Canada, it is that they concern themselves with trying to get at the real facts and the real truth about the building industry and the going machine.

Inter-Allied Housing and Town Planning Congress of 1920

(Continued from page 309.)

an impression, the forms are taken apart and re-erected on the top of the wall just completed.

The success of the work depends on the use of rigid forms, on the freeing of the soil used from larger stones and upon its thorough ramming. The work, it is stated, is extremely easy and can be carried out by unskilled labor.

The cost of the walls for the house built by Mr. Ellis was under £20. The estimate for the same amount of walling in brickwork was over £200.

A brick footing was used in a concrete foundation, but in later buildings the pise wall is built directly on to the concrete.

The exterior walls are whitewashed; the interior being plastered.

I shall always cherish memories of the English countryside in June; it is then altogether beautiful. The manor house with its shaven lawns and mighty oaks; the thatched diamond-paned cottage with its gay profusion of flowers; the grey old church; the village inn—I'm speaking without inside knowledge of the inns—all these make a picture that brings joy to the heart of the architect.

With the great cities, however, it is different. They are frequently grim and ugly, of Liverpool and Manchester in particular I formed this impression. I remembered a story of Judge Parry, then of the Manchester County Court, who had brought up before him a man charged with drunkenness. The Judge asked the unhappy wayfarer why he was drunk, and the man explained that he had been saving up to go away from Manchester, and had then had practically all his money stolen from him, and so in a fit of despondency he had used what remained to get drunk with. "Ah well," said Judge Parry, "perhaps that is the quickest way out of Manchester."

Canadian cities appear brighter and cleaner; they are as yet, at all events, better places to live in than the average English city, but they can only continue to remain so by our taking thought for the morrow in the combined matters of housing and town planning.

O. A. A. Notes

The first business meeting of the new Council of the Ontario Association of Architects was held in Toronto on Tuesday evening, Sept. 21st, with President Moore in the chair. Others present were: Messrs. Allaster, Hynes, McGiffin, Page, Shepard, West and Wickson.

Standing committees were appointed as follows:

Board of Admission—Andrew Sharp, convener; John M. Lyle, Henry Sproatt.

Editing and Publishing Committee—R. K. Shepard, convener; F. H. Marani, H. F. Secord, B. Frank Kelly, J. L. Kingston.

Publicity Committee—Joseph Banigan, convener; Chas. S. Cobb, R. B. McGiffin, Gordon M. West, F. A. Belfry, George T. Evans, John M. Watt.

Architectural Competition Committee—Vaux Chadwick, convener; Stanley Fryer, Allan George, Gilbert Jacques, A. J. C. Paine, J. M. Watt, Murray A. White.

The following representatives were also appointed:

Canadian National Exhibition—A. Frank Wickson.

Art Gallery of Toronto—William Rae.

College of Art—Stamford Warrington.

Advisory Conference Committee—J. P. Hynes, Forsey P. Page.

Board of Trustees of the G.W.V.A. Club House Fund—A. H. Gregg.

Special Botanical Garden Committee—W. Ford Howland.

Ontario Fire Prevention League—Victor D. Horsburgh.

Joint Industrial Council of the Building Trades of Toronto—J. P. Hynes.

The President called attention to the employment of an U. S. architect to make additions to the Western University at London. In this connection Mr. Hynes' suggestion to interview the Minister of Education was adopted.

The President reported that he had written to the Hon. Sydney Fisher with regard to the competition for the Laurier Monument at Ottawa. This matter was referred to the Competition Committee.

The President laid on the table the correspondence with Mr. Stanley Fryer with regard to the War Memorial at Hamilton.

The President also submitted correspondence with Mr. Willis Chipman with regard to the form of legislation recommended at the convention.

Mr. Shepard submitted Certificate of Membership as drawn by Mr. McDonald, which was approved, subject to slight changes in the wording. The members will be charged \$1 each.

A letter was received from Mr. F. V. Johns, Assistant Provincial Secretary, with regard to competition to be held in connection with the British School at Rome. The scholarship will be of the value of £250 per annum for three years. Particulars can be obtained from the Secretary.

A letter from the Royal Architectural Institute of Canada was read stating that Mr. Andrew T. Taylor, late of Montreal, has been appointed on the Special Committee selected by the Royal Institute of British Architects to consider the question of "Unification and Registration," and asking for information. This matter was referred to the Editing and Publishing Committee.

Several cases having been reported to the Council of firms wrongfully advertising as "Registered Architects," it was decided that in every instance where this title is improperly used, attention be drawn to the contravention of the Act by the association's solicitor.

The President was authorized to deal with routine business between meetings of the Council and report at the next meeting.

In the matter of clerical assistance the President, Treasurer and Secretary were authorized to make such arrangements as may be deemed necessary.

Hamilton Meeting

Pursuant to the active campaign of association work decided on at the London convention a meeting of the Council of the Ontario Association of Architects was held at the "Wentworth Arms," Hamilton, on October 9th, with President Moore in the chair and the following members present: Messrs. Hynes, Kelly, McGiffin, Page, Shepard, Watt and West.

An article in the London "Free Press" was read in reference to the contemplated extension at the Western University. The President explained what had been done towards interesting the Provincial Government in the Association's protest against the architectural work for this proposed new building being done outside of Canada. A telegram was read from President D. R. Brown, of the R.A.I.C., endorsing the attitude of the Council in this connection. It was decided to send a letter to the Board of Governors of the Western University, to be prepared by the President and the Publicity Committee.

The Secretary was directed to write to Mr. F. R. Ewart, Secretary of the Advisory Conference Committee, advising that the Council desires further information from various

sources before coming to a decision with regards to legislation, and was not in a position to make a definite statement at the present time.

The President reported regarding the Laurier Monument Competition that enquiry had been made as to the names of the assessors, but that no reply had been received.

The Board of Admission report from Mr. Sharp was read, and the following were admitted to full membership: W. C. Chamlers, Ottawa; Jas. S. Russell, Stratford; W. M. Moorhouse, Toronto; J. M. Cowan, Toronto; L. G. Bridgeman, London; W. G. Murray, London.

The Secretary was directed to write the Solicitor, Mr. Grier, to ask as to what action has been taken with regards to non-members of the O.A.A. who are using the title of "Registered Architect."

The matter of more clerical help for the Secretary and a possible small office with telephone was discussed, and left with Mr. Moore and Mr. Wolsey to take up with the Engineers' Club.

The Editing and Publishing Committee reported through Mr. Shepard that CONSTRUCTION had offered to publish a page of association notes every month. This offer was accepted as it was felt by doing so information relating to the affairs of the Association would reach more of the profession than in any other way. The Secretary was accordingly instructed to stop sending out copies of the minutes as has been done recently, as same will appear hereafter regularly in CONSTRUCTION.

The Publicity Committee reported through Mr. West the result of their last meeting. The committee favored the idea of an educational campaign both within and without the association.

Mr. Moore stated at the recent annual assembly of the R.A.I.C. the annual per capita assessment of the provincial associations had been increased from \$2.00 to \$5.00.

OPEN MEETING.

Following the Council session an opening meeting was held in the evening when in addition to the Council, seventeen Hamilton architects were in attendance.

Mr. Moore told of the objects of the Association and its aims, and explained that the purpose of the meeting was to have the Hamilton Chapter again become active and to have all the Hamilton architects take an interest in the Chapter activities. Various phases of the Association's work with regards to the Industrial Council, publicity campaign and proposed architectural clinic were explained by members of the Council.

The Hamilton architects present were all keenly interested in having the Chapter resume its work, and decided to call a meeting for re-organization on October 12th.

Letter re Western University

On October 9th, an interview quoting Lt.-Col. Walter J. Brown appeared in the London "Free Press" in reference to the protest of the Ontario Association of Architects in regards to plans for the Western University extension. The interview is given herewith in part:

"The protest of the Ontario Architects' Association regarding the employment of American architects in preparing plans for Western University buildings is extremely unfortunate.

"The plans prepared for the new university buildings are a gift of a friend of the University, and are designed to enable those interested in the University's development to get a good idea of collegiate-gothic type of architecture, and at the same time to look forward far enough to avoid the architectural blunders which have occurred in the building of other Canadian institutions of higher education.

"The plans are still tentative as they have not been finally accepted by the board of governors. The interior details for library and reading-room space, class rooms and laboratories must, of necessity, be worked out by the teaching staff. The clothing of these designs with form and beauty is the work of the architect. Arrangements are already well advanced whereby competent local architects will be employed to work out the details along similar lines to those followed in the case of the new medical school building.

In reference to the foregoing the following letter was sent by the Council to the publishers of the "Free Press."

October 11, 1920.

To the Editor:

With reference to the statement of Lt.-Col. Walter J. Brown which was published in your issue of Saturday, October 9th, concerning the protest of the Ontario Association of Architects, respecting the reported preparation of designs by foreign architects for the Western University Extension, we wish to point out that having failed by direct effort to obtain information from the University authorities on this matter, we consider it desirable to clearly state our position through the Press.

As Col. Brown, in the article referred to, has taken occasion to characterize our protest as unfortunate, explaining "that the Plans are the gift of a friend of the University, that they are designed to get a good idea of Collegiate Gothic type of architecture, and at the same time to look far enough ahead to avoid architectural blunders which have occurred in the building of other Canadian Institutions of higher education" we consider it advisable in the public interest, and as a duty to the profession in this country, to issue the following statement.

The Ontario Association of Architects believes:

1. That the Western University, being a Canadian public educational institution, receiving support from the Government of this Province to the extent of some Sixty-five to Seventy-five Thousand Dollars per year, should, in as far as it is possible to do so, pursue the policy in its development that will conserve the resources of the country for development, by the brain power which it produces.

2. That any action which the University has taken, or may take, in entrusting the architectural design of such a Canadian public building to foreign architects, is a direct violation of the economic principles above set forth, and which it, as a University, should be the foremost to uphold.

3. That if we are to have in this country, a national spirit, or a national character, it will never be created or maintained by entrusting its public institutions to those who are not desirous of its inheritance, and to the exclusion of those who, by virtue of citizenship, sympathy, environment and ability, are entitled to participate in its welfare and development.

Referring to some of Mr. Brown's remarks, it is not the purpose or intention of this Association to enter into any newspaper controversy on the relative merits of American and Canadian architects, further than to say we believe the work of Canadian architects as reflected in the design and execution of buildings in connection with Toronto University, Victoria University, Knox College, McGill University of Montreal, and several of the recent Western universities, does not suffer by comparison with anything that has been produced on this continent.

The inference which one may draw from Mr. Brown's

statement that Collegiate Gothic designs as suggested by photographs published in the Press, and planning of a character to suit the purpose and requirements of the University, can only be successfully carried out by architects from another soil, in conjunction with the University authorities, leaving the execution of the work to local architects, is almost incomprehensible, and leaves us to be "the hewers of wood, and drawers of water."

With all due respect to the opinion represented by Mr. Brown, and to American practitioners (with whom we have no issue), we fail to perceive any just reason why the Board of the Western University should go beyond our borders for the design of the University buildings, furthermore, we cannot be expected to sit passively by and accept such a procedure without strong protest.

We believe that in bringing this matter to the attention of the public, we are acting in the best interests of the University, of the citizens of London, and the country at large.

Signed on behalf of the Council of the Ontario Association of Architects.

R. B. WOLSEY,
Secretary.

Toronto Chapter Luncheons

Luncheon meetings were held at the Hotel Mossop on Sept 20th and 30th by the Toronto Chapter of the Ontario Association of Architects. Nineteen members attended the first luncheon and thirteen the second, with Mr. Horsburgh presiding on the two occasions.

At the first meeting Mr. Hynes introduced the subject of the steel workers strike and explained the working of the Joint Industrial Council of the Toronto Building Trades. A committee was appointed to endeavor to influence the contractors involved to settle their difference through the Joint Industrial Council.

At the second meeting Mr. Shepard spoke on the starting of a free architectural clinic to reach those who were building their own homes and who would not likely come to an architect. A committee of Messrs. Shepard, Dolphin and Lee was appointed to get in touch with the G.W.V.A. to explain the purpose of the clinic and the service which the Association aims to render.

A letter was read from Mr. Somerville as follows:

September 29th, 1920.

As I am unable to be at the luncheon to-morrow, I am doing the next best thing; writing to tell you what my idea was regarding the question of establishing an Atelier. Briefly it can be stated as follows:

PURPOSE: (a) For the training of the younger men who have entered offices directly from the technical high schools and who are unable to take the university course. This training to be under the direction of experienced practitioners, in order to develop these men into skilled, proficient draughtsmen in the shortest possible time. (b) To give those men, who have enough ambition and energy to want to improve themselves an opportunity to do so, without leaving the country and depriving the Architects of the services of the best type of draughtsmen.

BENEFIT TO ARCHITECTS: By developing the usefulness of juniors making them more available. Most boys coming from high school are under the impression that they can make drawings. In most cases they have an elementary idea of what is required and with a little training in the purely manual preparation of drawings would be doubly valuable. This with the knowledge of design gained by the atelier training is as valuable to the architect as it is to the draughtsman.

Will keep the better types of draughtsman in Canada and they will be trained according to the

ideas of Canadian architects. At the present time the large majority of our architects receive their training in the offices of American architects, American colleges, and the ateliers of France or the United States. Will the Government or the general public ever do anything to remedy this if the architects themselves do nothing but howl about it and ask some one else to do something?

We have got to have a decent University course; we cannot provide that ourselves; but we can help the men in our own offices and largely to benefit ourselves, establish an Atelier for the improvement of our junior draughtsmen.

Mr. Hynes opposed the idea at the last meeting on the plea that it would interfere with his pet idea of legislating the entire Association into Utopia where no American architects, engineers or other undesirables can obtain admission. All support to his efforts, his good work should be properly appreciated by us all, but in the meantime let us do something for those men whom his educational programme does not cover. There is surely no danger of having too many highly trained draughtsmen.

I was glad to learn that this question had been brought up before by Mr. Cobb. I understand he is willing to devote a portion of his time to it and has already taken the matter up with some of the draughtsmen. If an Atelier is established we will all be benefited by it and it seems only just that the Association should stand back of it.

I might add that I am one of a number of men grateful to John M. Lyle for his tireless efforts in starting an atelier in Toronto a number of years ago.

Yours very truly,

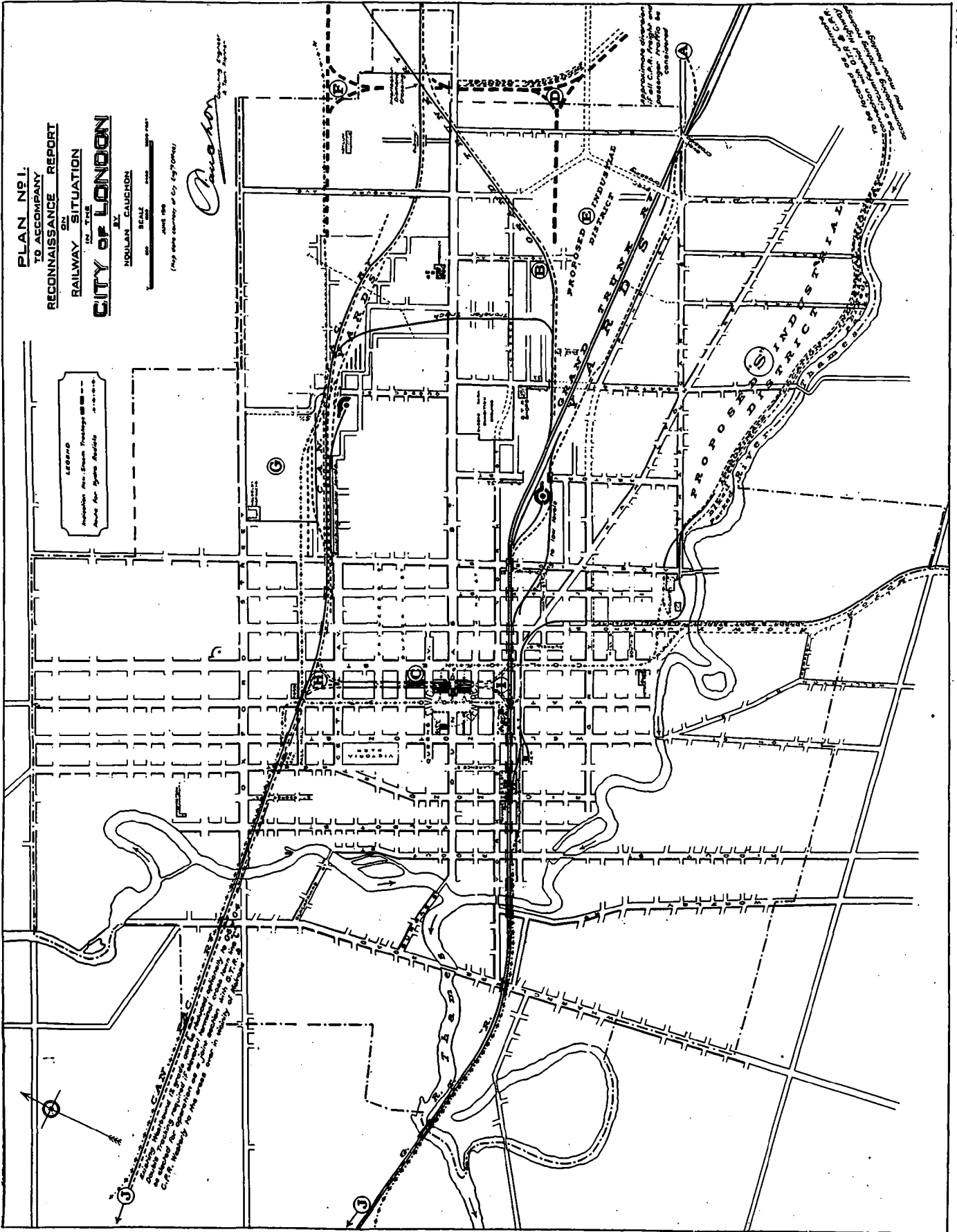
(Signed) W. L. SOMERVILLE.

The feeling of the meeting was that such an atelier should be started now, but definite action was deferred until the next meeting.

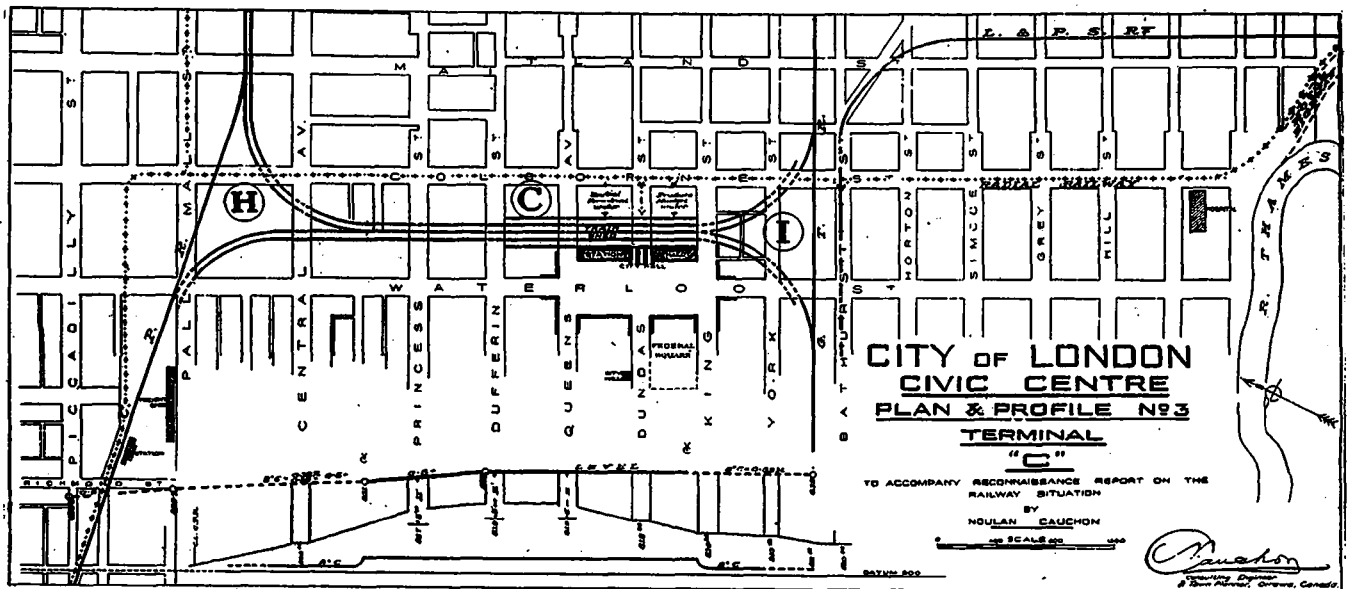
The Latest at Greenwich Observatory

Once every year a rather quaint ceremony is observed at Greenwich Observatory. An inspection of the Observatory is made by a "Board of Visitors" to whom the Astronomer-Royal presents a report on the work of the preceding twelve months. The latest reports shows that although the Observatory was founded centuries ago, at the very dawn of scientific navigation, it keeps in line with the latest developments. A new aerial has been erected to extend the range over which wireless time signals can be received. These signals are now received regularly from the Eiffel Tower, Nauen, and Annapolis. The Observatory also controls the operation of time-balls in different parts of the country. These time-balls are hoisted on a prominent mast and released at specific hours by an electric signal from the observatory. The accuracy of the operation is checked by a return signal from the distant time-ball. Greenwich also controls "Big Ben," the famous clock of the House of Parliament, London.

Jade, though little used by Europeans, is still prized by the Chinese and other Asiatics, and is especially notable for its extensive use in every continent in prehistoric times. Ornaments and utensils of this stone are found among the lake dwellers of Switzerland, the ancient peoples of France, Mexico, Central America, Greece, Egypt and Asia Minor.



PLAN ACCOMPANYING RECONNAISSANCE REPORT ON THE RAILWAY SITUATION AT LONDON, ONTARIO.



PROPOSED CIVIC CENTRE AND UNION TERMINAL FOR LONDON, ONT., RECOMMENDED IN THE CAUCHON REPORT.

Synopsis of Cauchon Report on Railway Situation in the City of London, Ont.

THE following is a synopsis of Mr. Noulon Cauchon's report on the railway situation in the City of London, Ont., and formed the basis of an illustrated address delivered by Mr. Cauchon personally at the luncheon tendered jointly by the City Council and the Chamber of Commerce to the visiting architects at the recent convention of the Ontario Association of Architects held in that city.

The essential features of the scheme and the nature of the improvements contemplated are indicated in the two accompanying plans.

The idea of having one railway entrance and the elimination of others, one union terminal company for all freight and passengers, is implied—but, in view of Parliament having withheld full power from the Railway Commission to deal with existing terminals; of the railways being free in the matter of negotiations and of their constitutional disinclination to merging identity, etc.; of the limited size and financial strength of London to bear its probable proportion of such a scheme as would involve the total abandonment of the C.P.R. for over ten miles; or of diverting only the passenger service and the disability to the C.P.R. of having, notwithstanding, to elevate its main line on account of freight traffic, an alternative has been submitted known as Union Terminal "C."

The full elevation of the main lines of the G.T.R. and the C.P.R. is recommended, from Adelaide Street westerly to and beyond the river; Adelaide Street and easterly to be partially elevated and the streets to be proportionately subways. This means the complete elimination of all level crossings in London on

all running tracks; the industrial tracks to remain on surface level with switching regulated and protected.

From 1900 to 1918, inclusive, there were twenty-eight people killed and seventy injured on the level crossings.

Two extensive industrial areas to be municipally owned, capable of expansion, have been selected and trackage proposed to give access to them from both railways and freedom from all inter-switching charges. These industrial areas are adjacent to main sewers and public utilities.

If London is to enjoy a Union Terminal for passengers, the Engineer and Town Planner thinks that the solution lies in a line elevated for three-quarters of a mile across the city connecting the G.T.R. and the C.P.R. elevated main lines. This terminal is to be municipally owned but leased to a terminal company in which the two railways would be equally represented, and be operated with the G.T.R. and C.P.R. main lines westerly as far as "Melrose Junction," as a "joint section" for passenger business only.

A Civic Centre is proposed at the intersection of Dundas and Waterloo Streets with the latter enlarged to form a spacious square, upon which the new terminal station would face, right in the heart of the city and at the almost exact centre of its population. The Civic Centre Square is to be created by taking one row of lots for two blocks on each side of Waterloo Street. This traffic square would be about 1,100 feet on its long axis north and south, and about 370 feet wide on the axis of Dundas Street, containing over nine acres, of which about 60 per cent.

would be composed of already existing street areas. About four acres only are required to be purchased. There would be eight streets, each 132 feet wide, leading out of this square.

It is also proposed that the new City Hall be built directly on the axis of Dundas Street, facing upon the Square; the traffic to pass under the Civic and Station buildings by wide arches.

Recommendations are made for the removal of the Asylum and also the Barracks from where they block street extension and development, to sites outside on the city-owned London and Port Stanley electric railway, this also aiding in the building up of this latter holding.

Provision has also been made in the plan for all future steam or hydro-radials to use the common entrances of the scheme free from level crossings, and thus avoid any further cutting up of the city by new rights of way.

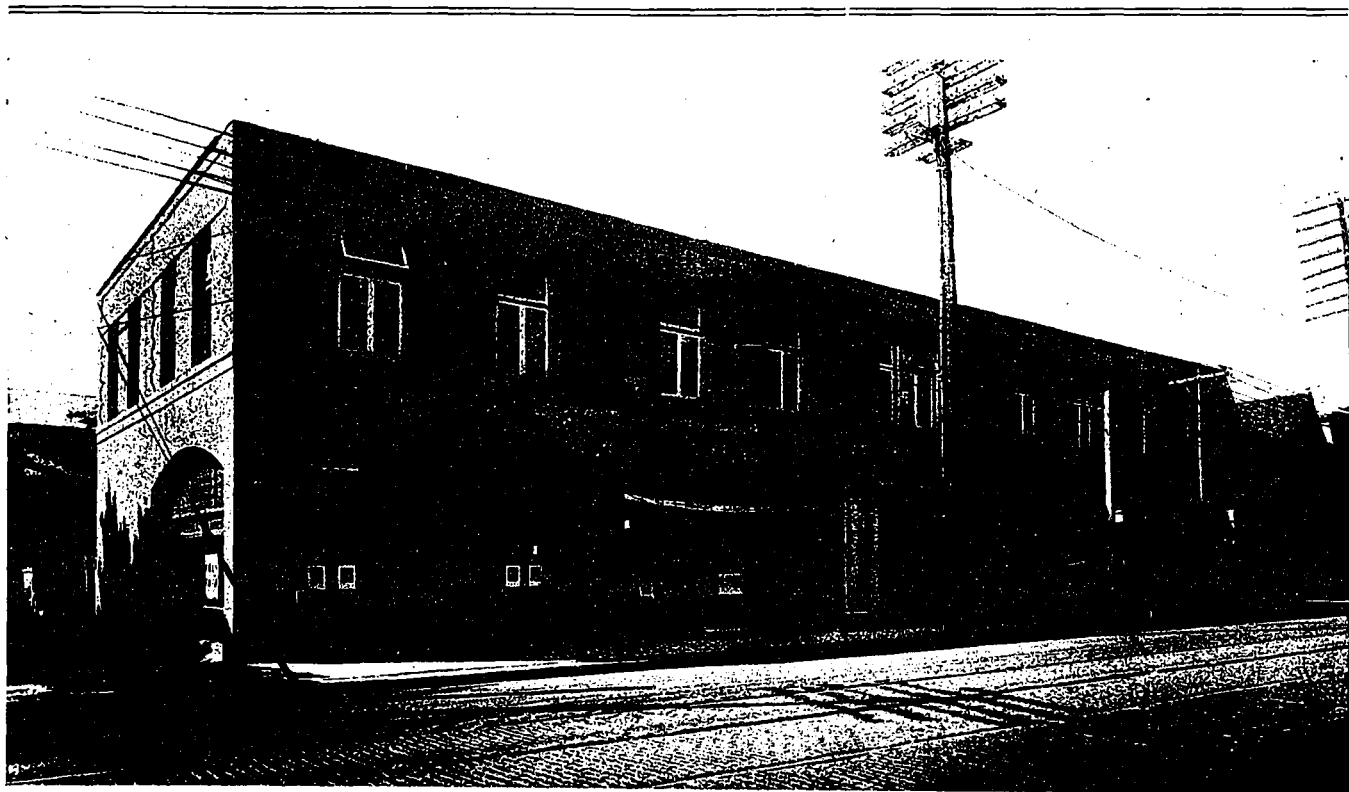
Many other co-related features of the city's enhancement are analyzed and provided for, which will prove most interesting to the citizens of London and to those of other cities and towns which are facing railway and development problems.

This reconnaissance report on London was made by Mr. Cauchon for the London Chamber of Commerce as an indispensable preliminary to the further advance of the general town planning which they favor. Speaking at the luncheon, Mr. Cauchon recommended that the report be published in full in pamphlet form for the citizens' information and judgment.

The proposal was subsequently endorsed by the architects attending the convention, and resulted in the passing of a resolution recommending its adoption to the city, the feeling being that it would assure a systematic and beautiful development of the city.

Electric Cooking for the British Worker

Electric cooking apparatus in Great Britain is finding its way into the working class dwellings constructed under the numerous "housing schemes" undertaken by local authorities or by private enterprise. In one large colony every house is being equipped with an electric cooking range, two electric fires and an electric copper for washing purposes. There is only one chimney in the house, an open-fire being used for burning refuse and also for warming (by means of a boiler at the back of the fire) the water for baths and other uses. The construction of the houses, it is said, is so much simplified by the use of electric cookers and heaters that the total cost, including all the electrical appliances, is less than that of a similar house built in the ordinary way. Electric light is, of course, installed. The electric ranges are large enough to cook ordinary workmen's meals for seven or eight persons.



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C. J. GIBSON, ARCHITECT.

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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The Toronto Architects Clinic

The gratuitous offer of the Toronto Chapter of the Ontario Association of Architects to conduct an architectural clinic for the benefit of the small house builder, is indeed to be commended. There is in the heart of every community workmen and other individuals who desire to own and live in their own homes, but whose means will not permit them engaging the services of an architect. They invariably get out rough plans themselves and build the best they can, and it represents a class of work which never comes to an architect's office. It is for the purpose of assisting such individuals that the proposed clinic is being inaugurated. The intention as we understand it is to hold these clinics under proper neighborhood auspices, at which free architectural advice will be given to small investors submitting their own plans.

In doing this the architects will not only be rendering a real service to the owners of small homes, but to the community at large, in that it will result not only in better consideration being

given to the designing and planning of such dwellings, but will to a large extent prevent the erection of that class of structures which has too often proved detrimental to neighborhood development.

The proposal has reached the stage where it has been submitted to the Toronto branch of the Great War Veterans Association and has met with full acceptance from that body. The principle in a more direct way follows a similar movement in the United States where under the direction of the Minnesota Chapter of the American Institute of Architects a periodical is being published, containing advice to small house investors, together with sketches and plans of which blue prints can be obtained for a small sum. A similar publication might eventually be started here in Canada, but much will depend on the spread of the clinic idea to other cities, as well as the time and co-operation architects elsewhere might be willing to give in furthering a more general movement along these lines.

THE ROYAL ARCHITECTURAL INSTITUTE OF CANADA.

Montreal, Que., October 7, 1920.

Editor, "Construction":

Dear Sir,—I beg to inform you that at the last session of the Thirteenth General Annual Assembly of the Royal Architectural Institute of Canada, held at Ottawa, on the 1st and 2nd October instant, a special vote of thanks was unanimously adopted to be sent to you for your generous co-operation in making such a success of the Assembly.

Yours very truly,

(Signed) ALCIDE CHAUSSE,

Hon. Secretary.

Toronto Builders' Exchange Reorganized

Members of the Toronto Builders' Exchange held a recent meeting in the Board of Trade rooms in the Royal Bank Building to deal with the proposed reorganization of the Exchange, which had already been submitted to them in the shape of a new constitution drawn up by the board of directors and business manager Reynolds. With some changes in the constitution and by-laws the reorganization as proposed was endorsed by the meeting.

The name of the exchange was altered to "The Builders Exchange and Construction Industries of Toronto." This change was made to make it more inclusive in character so as to take in all supply firms and branches of the contracting business.

As a result of reorganizing it is felt that the Exchange will be able to adopt a more progressive policy. The object is to make it a more useful and influential organization, and to bring it up to the highest point of service to both its

members and the public. Among other things an endeavor will be made to establish trade schools for artisans in the industry, and to promote concerted action in reference to the question of labor and related problems. There is also a possibility that some effort will be made to induce the Board of Control and the Board of Education in reference to schools and civic buildings to have plans and specifications submitted to the Exchange for constructive criticism. It is felt that if this is done certain economies in construction could be effected with a corresponding financial saving to the city.

New Associate Professor at U. of T.

During the past month the staff of the University of Toronto has been increased by the arrival of Professor Adrian Berrington, who is assuming the duties of Associate Professor of Architecture in connection with the School of Practical Science. Prof. Berrington, who has had a wide experience in both France and England, comes direct from Paris, and has a distinguished war record to his credit, having served five years (less two months) and being wounded twice. His addition to the university staff is in accordance with the policy announced some time ago by Dean Mitchell, which aims to substantially improve the present course offered to architectural students.

Crouse-Hinds Company to Build

In order to more adequately meet the demand for their well known products, the Crouse-Hinds Company have purchased a five acre site with track facilities for the erection of a large new modern plant at the corner of Hanson St. and Coxwell Ave., Toronto. The main building of the new plant will be 500 x 80 ft., and either three or four storeys high. In addition to this a foundry, 300 x 60 ft., will be erected, together with a fireproof pattern warehouse approximately 100 x 100 ft., and two stories high. The buildings will be of the modern daylight type, of brick and mill construction and will be equipped with sprinklers throughout.

Plans and specifications are now in course of preparation and ground will be broken about May 1st, so that the plant will be ready for occupation in November, 1921. The plant will cost \$500,000 for buildings alone and when completed will be occupied jointly by the Harvey Hubbell Company, the Hubbell-Mack Machine Screw Company and the above concern. This will make three plants that the company will have under operation in Toronto, the other two being factory No. 1 on Labatt Ave., and factory No. 2 on Carlaw Ave., all of which will be under the supervision of Mr. E. G. Mack, managing director of the three companies.

The Cylindrical House

The house can be no wider than its lot, but it may be wider than its foundation, and roomier by several feet than the dimensions of its side would betoken. In proof of this a Kansas City man has built a 22-foot house on a 25-foot lot, and has seven feet of yard left—three and a half feet on each side. He accomplished this remarkable feat by making his house cylindrical. Far from sacrificing any element of beauty to the unusual design, the appearance of this novel dwelling is entirely pleasing, outside and in, says the "Western Contractor." The foundation measures 18 feet wide by 36 feet long, with its walls vertical up to the swell of the cylinder. The basement windows are round port holes giving a nautical effect, and perched in the centre of the room, like a turret, is a little sleeping porch. The roof itself is a segment of a cylinder, extending over the front porch. Inside are four good-sized rooms and a large hall, which serves as a spare room by virtue of a built-in bed, occupying the curve of the wall.

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