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CONSTRUCTION

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



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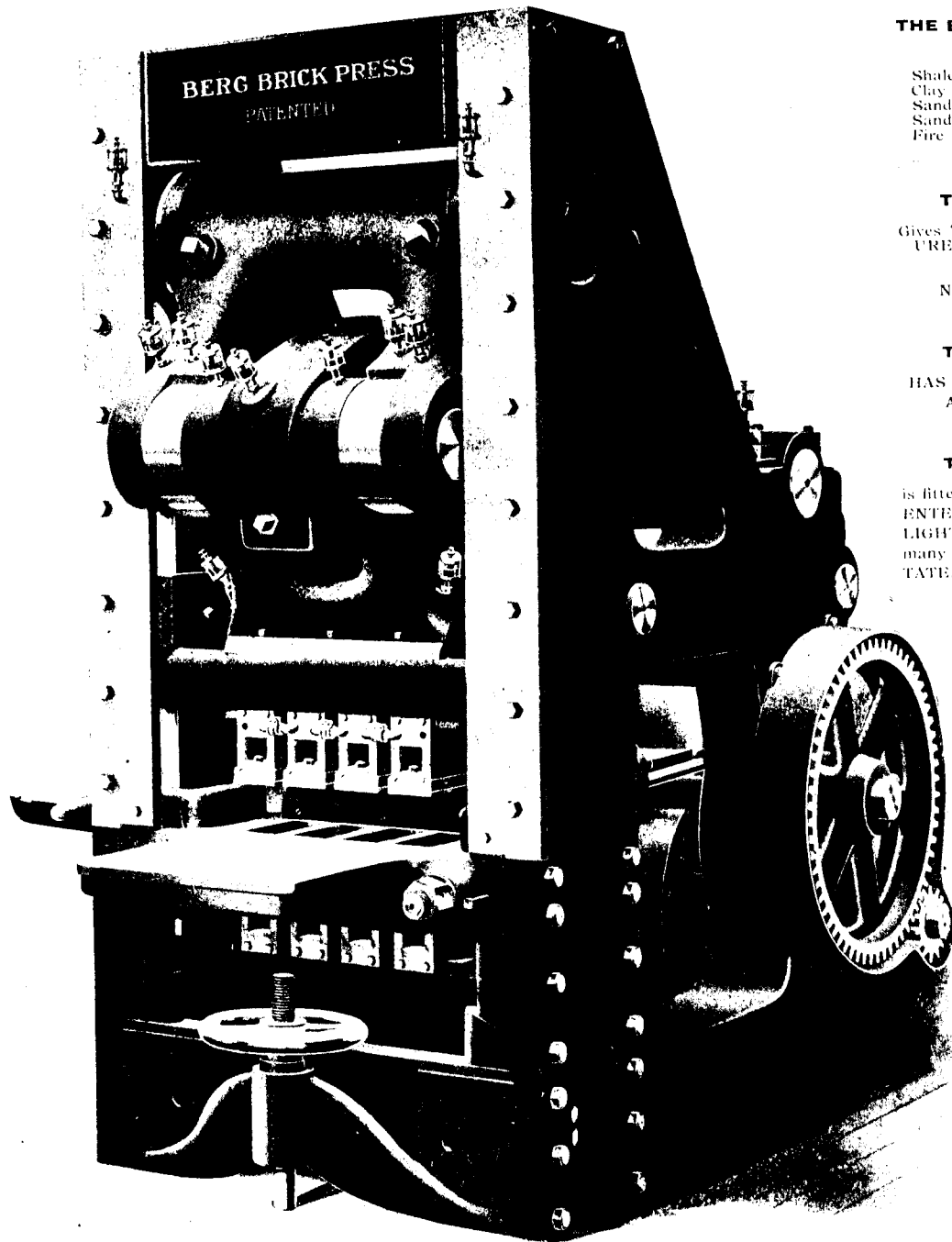
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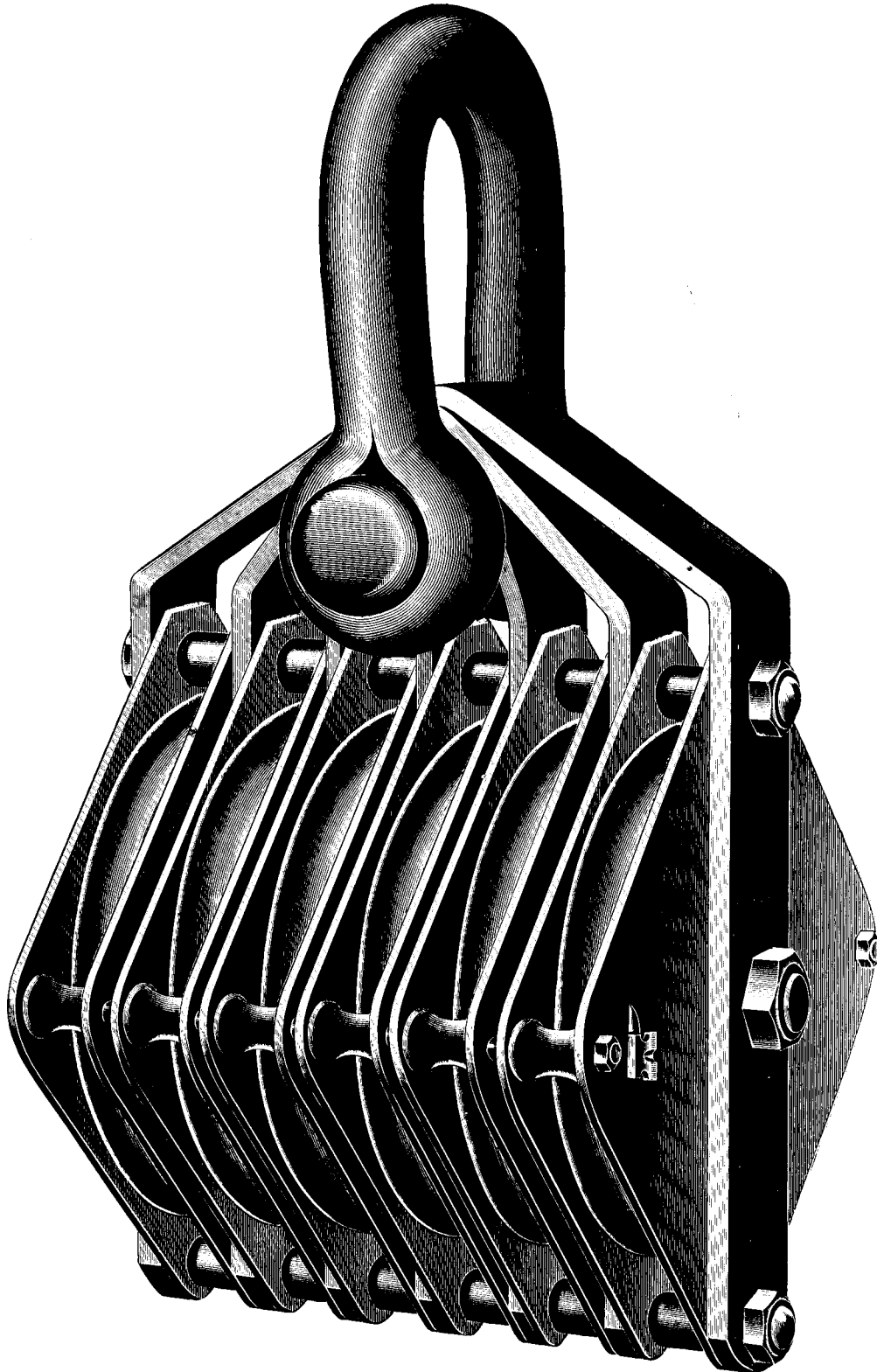
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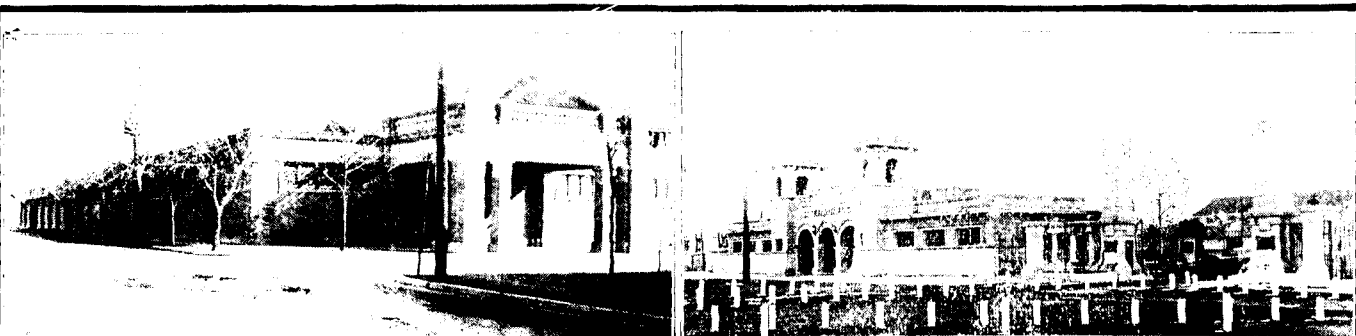
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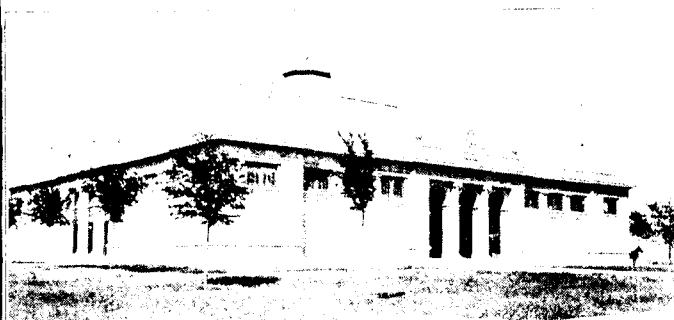
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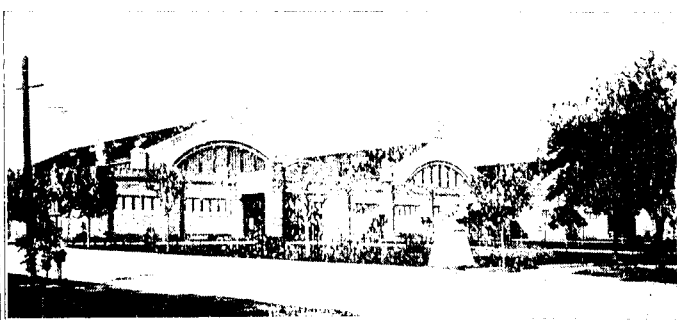


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GARRY,
SQUARE TWIST,
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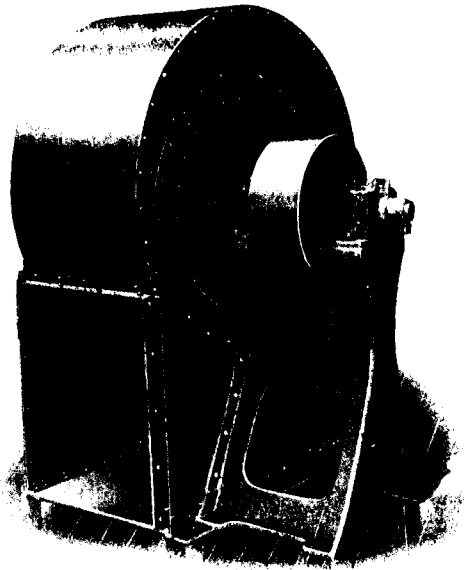
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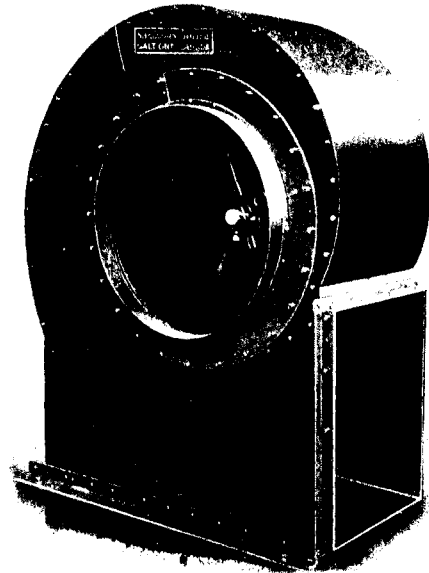
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(Pronounced E-O-LOS)



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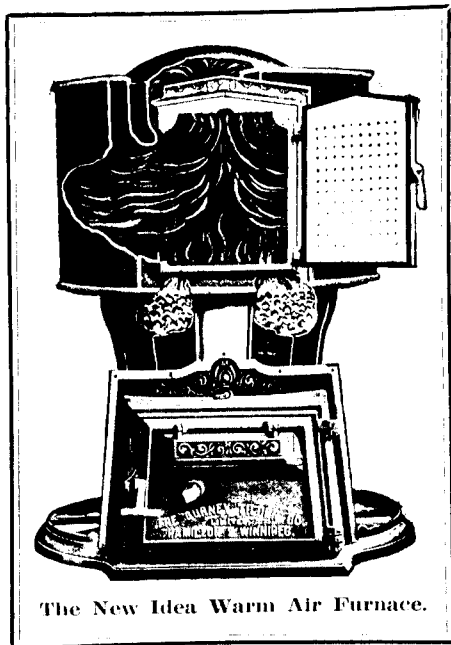
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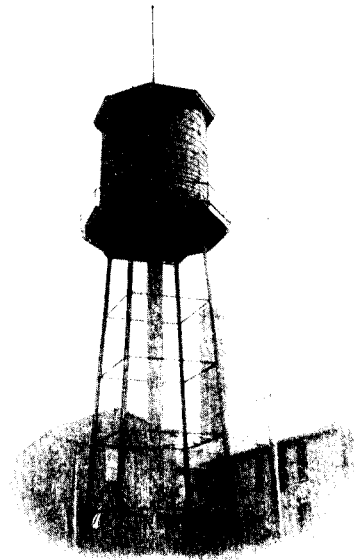
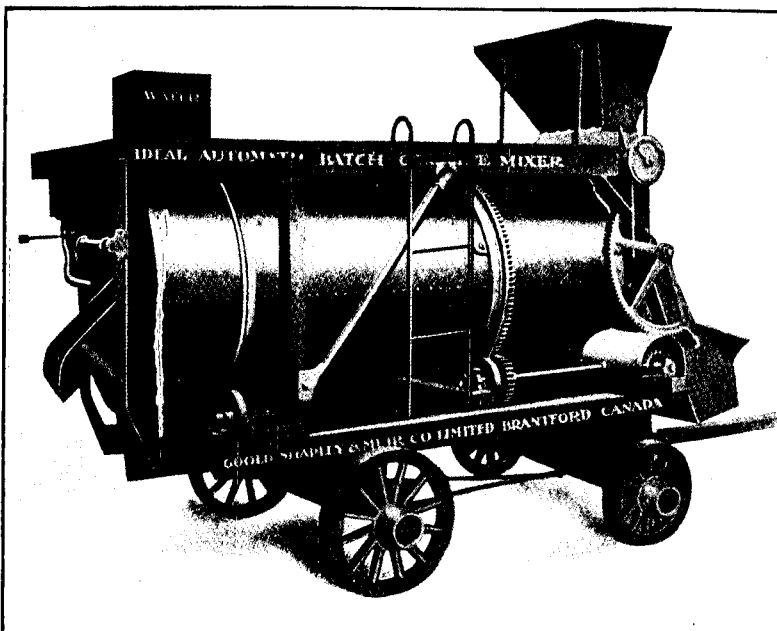
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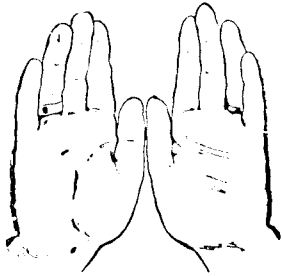
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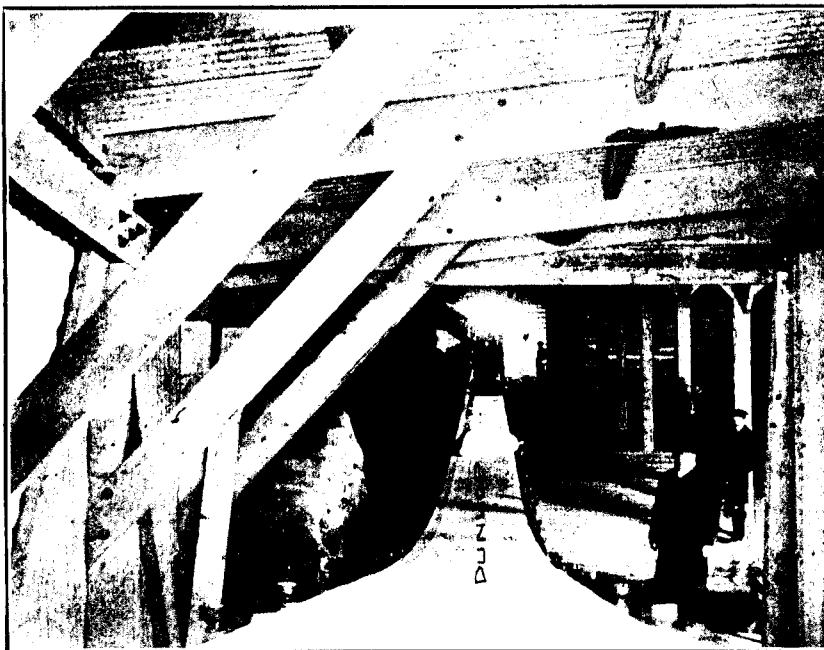
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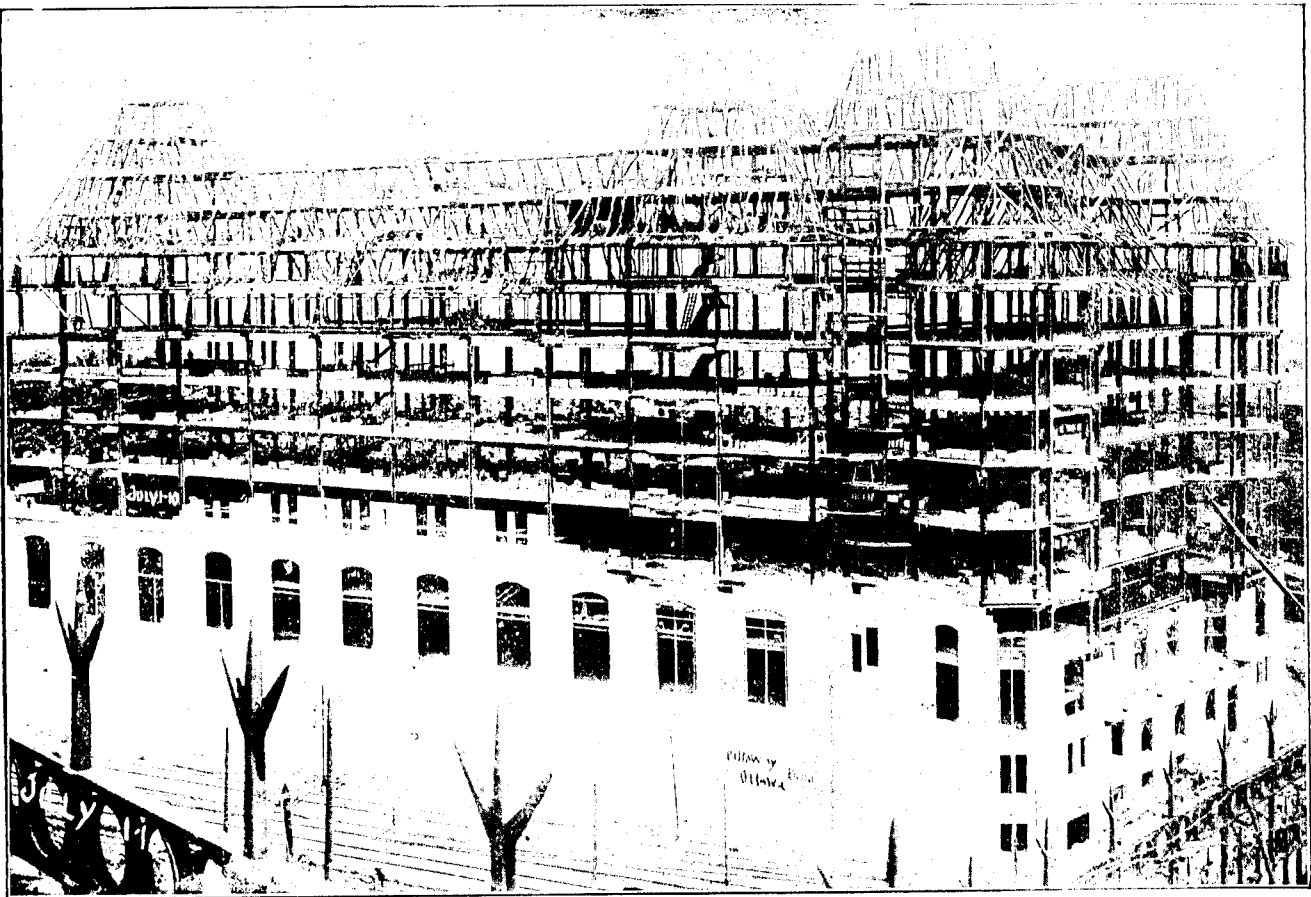
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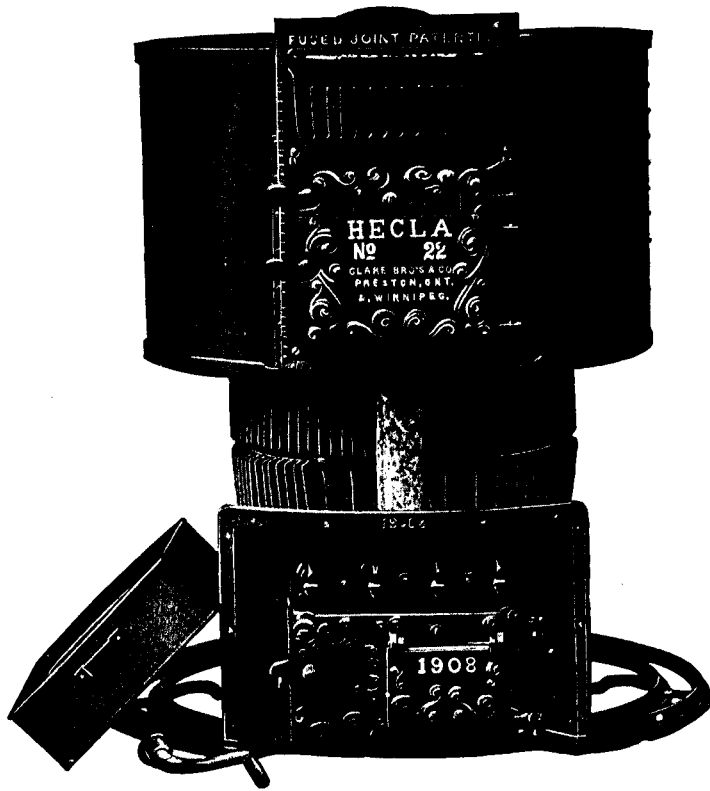
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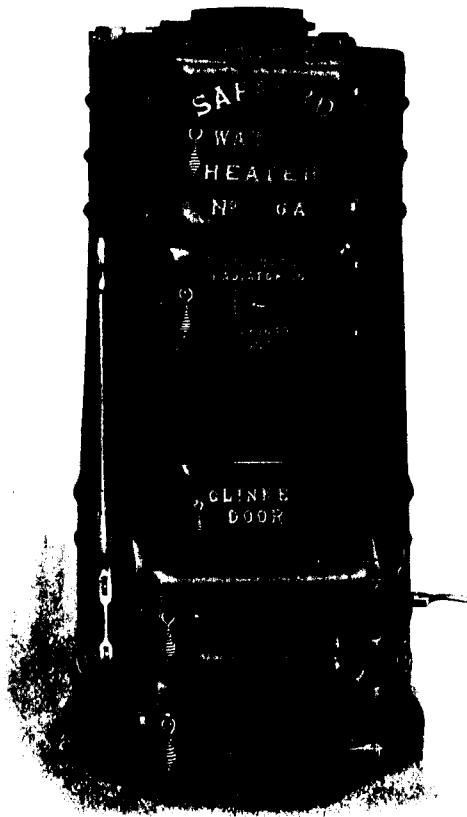
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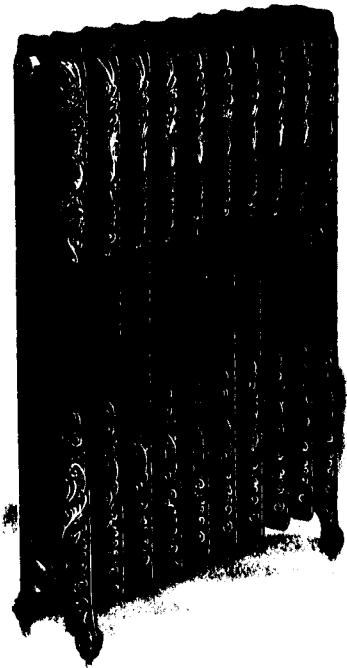
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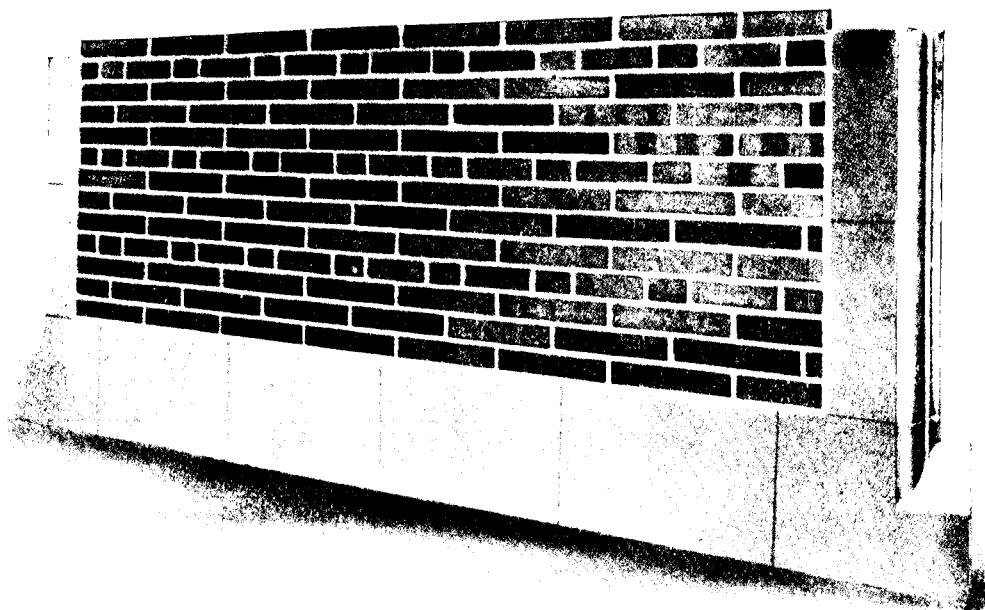
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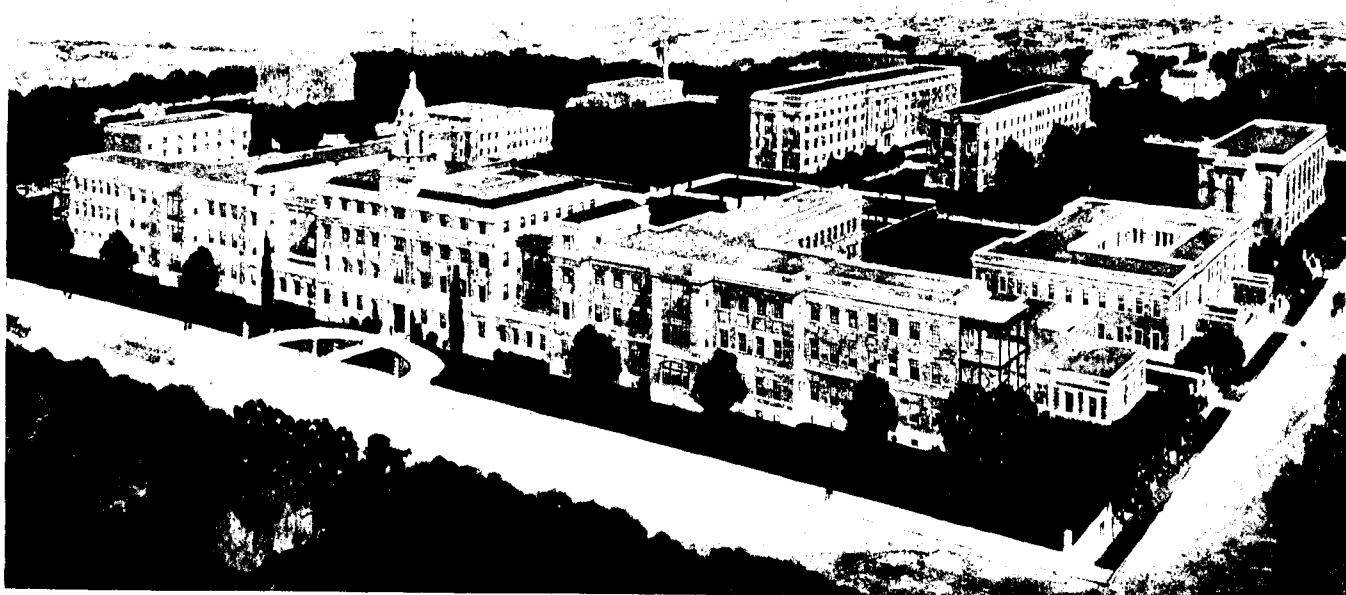
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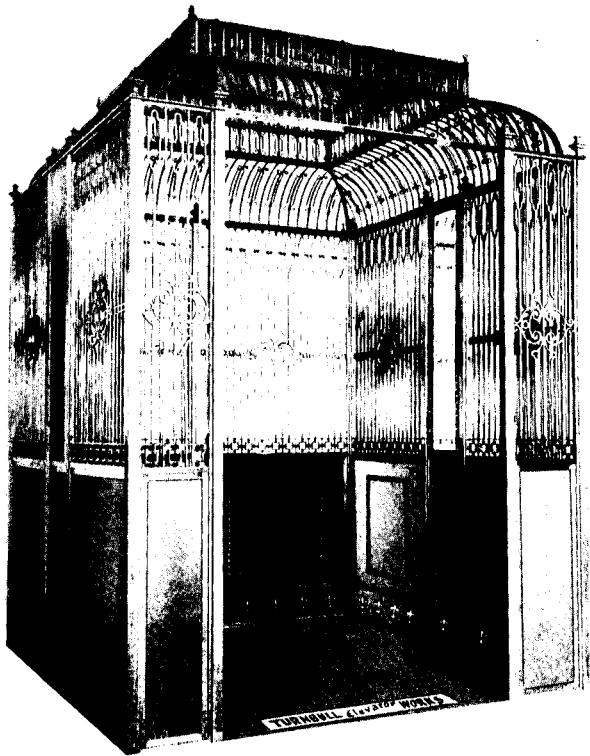
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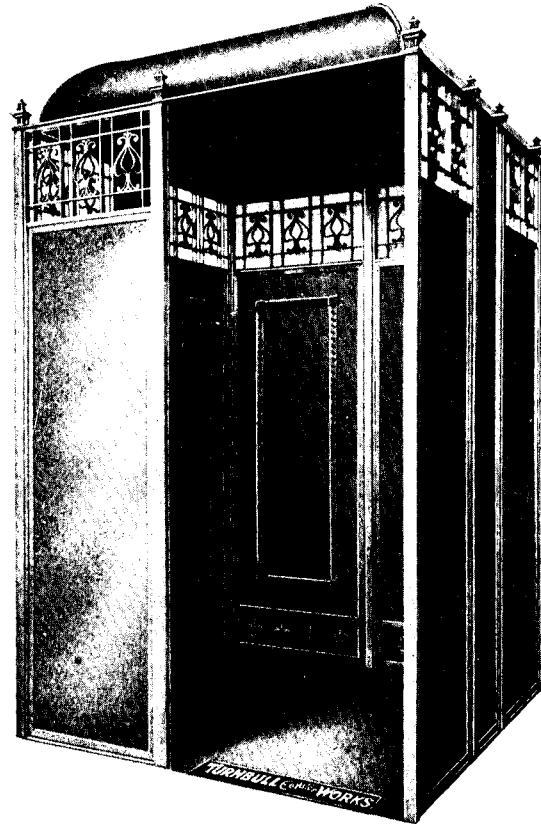
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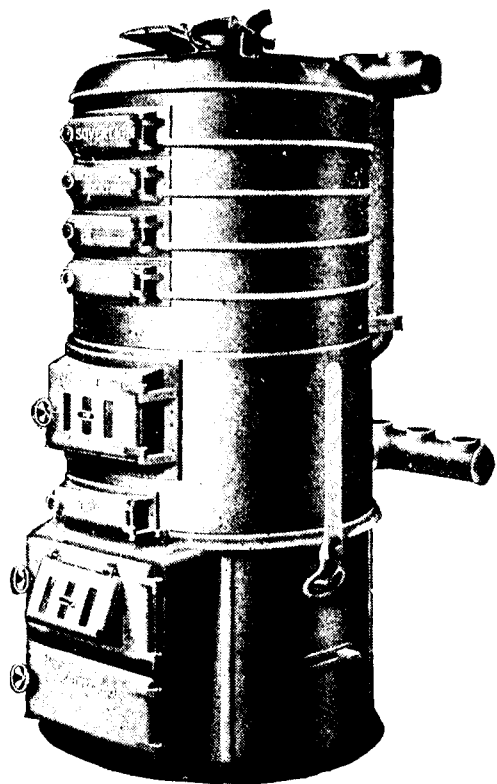
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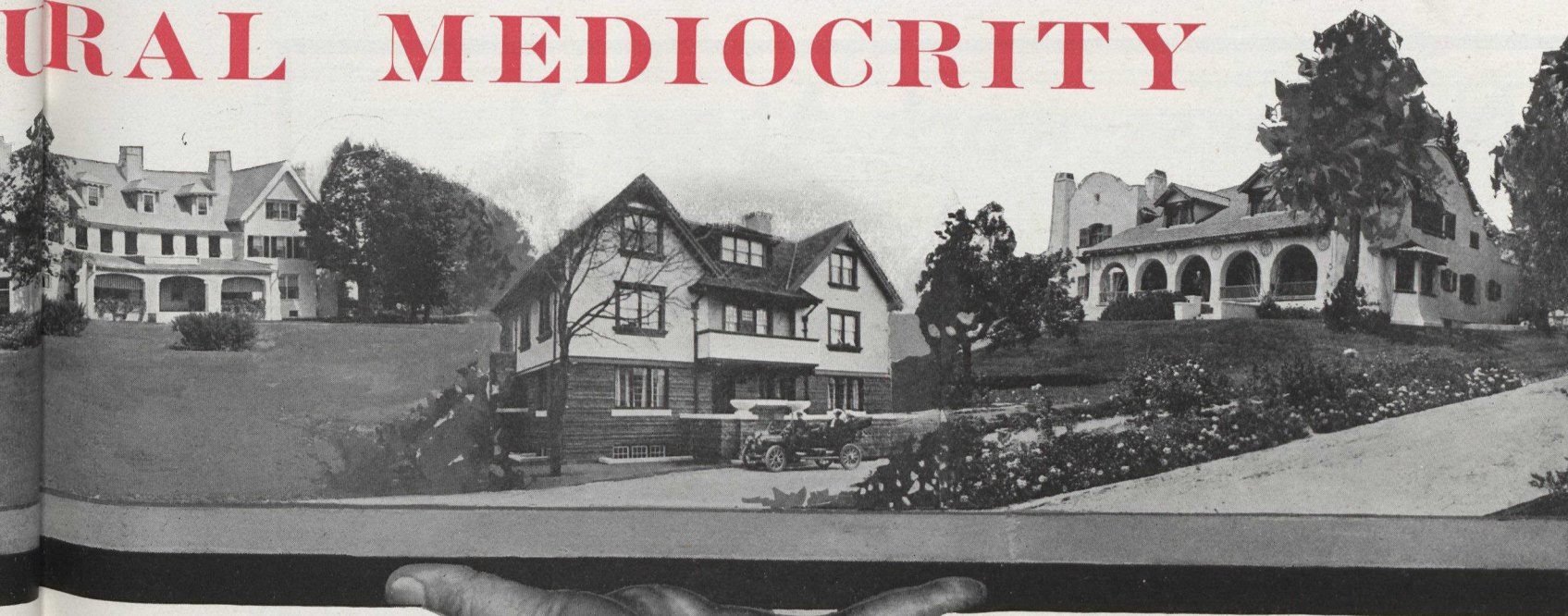
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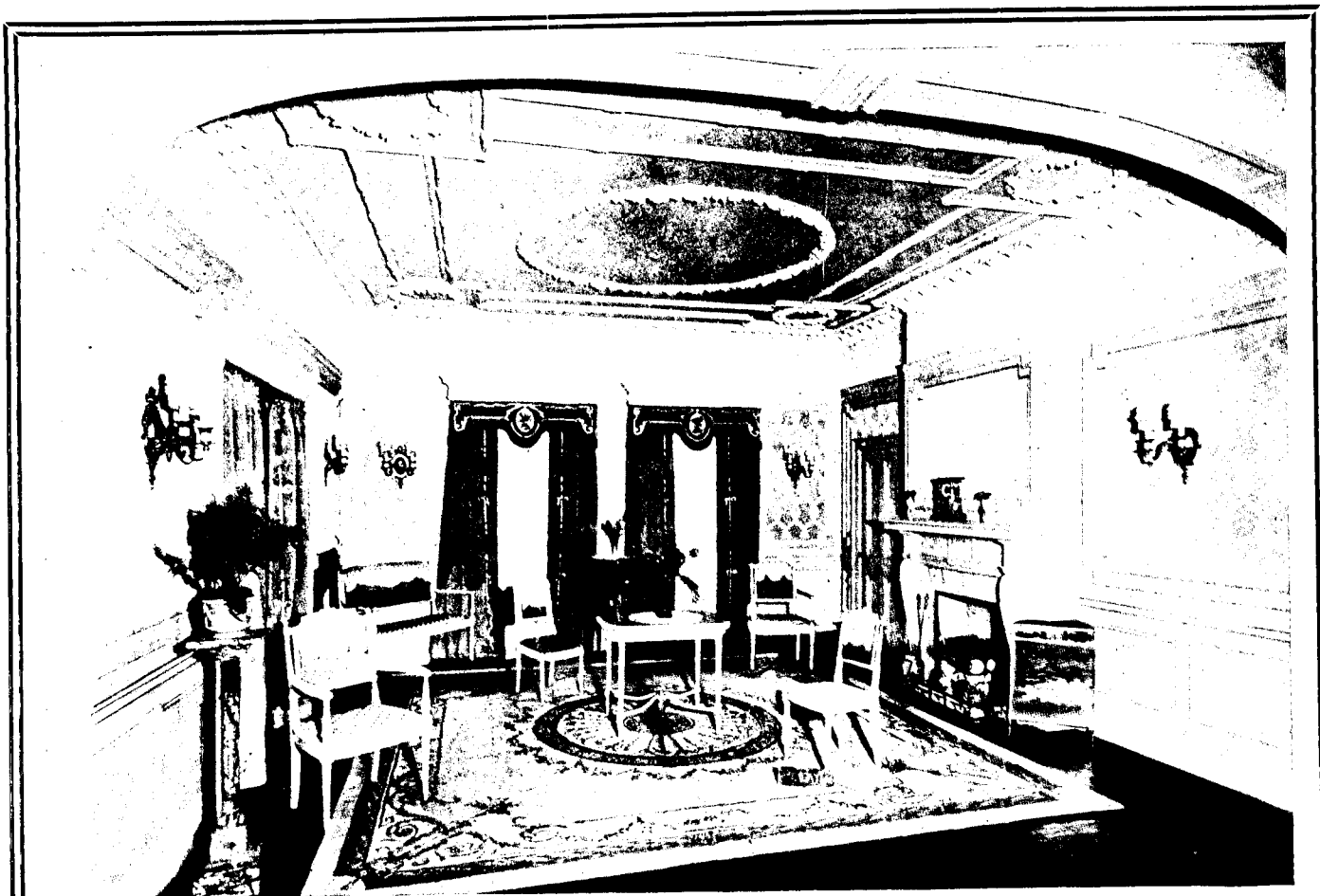
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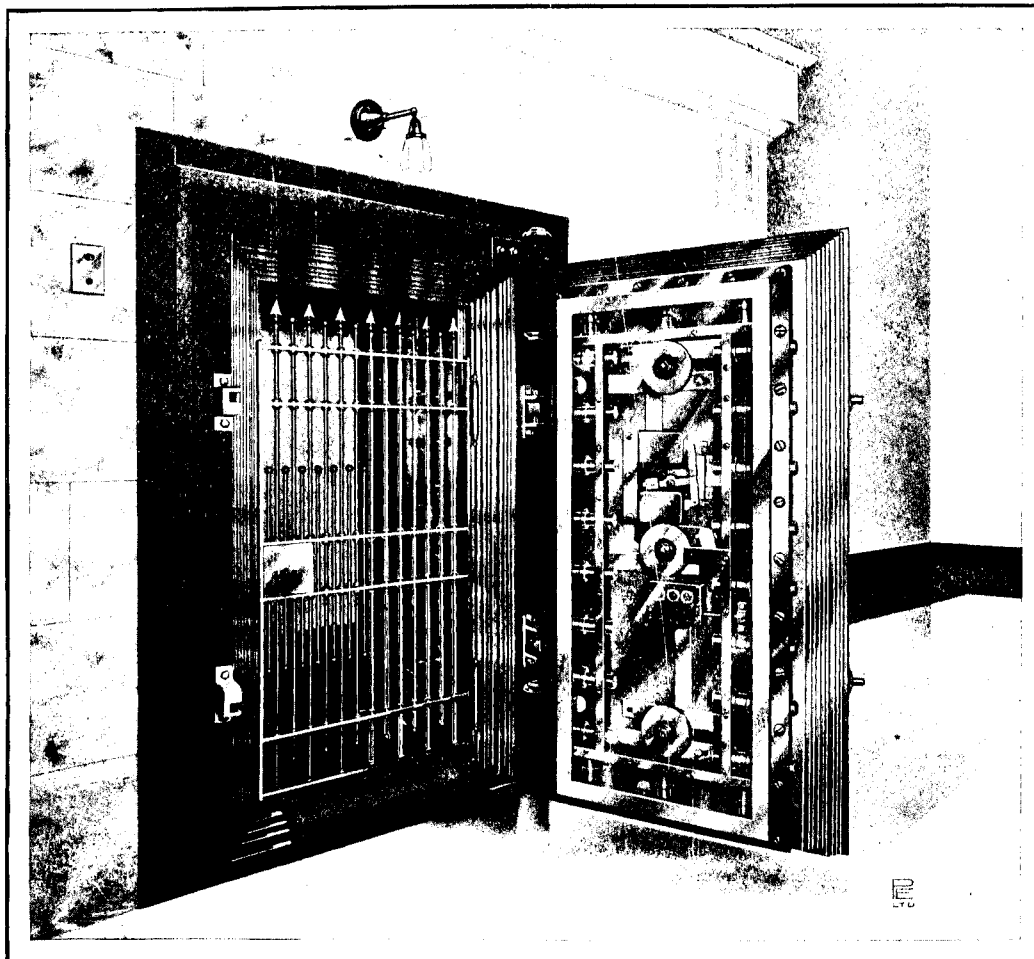


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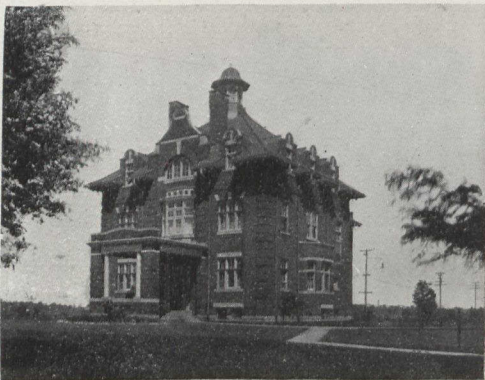
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Panoramic View of Hospital for Epileptics, Woodstock, Ont. F. Heakes, Architect. Purdy, Mansell Co., Ltd., Plumbers.



Administration Building, Asylum for Epileptics, Woodstock, Ont. F. Heakes, Architect. Purdy, Mansell Co., Ltd., Plumbers.

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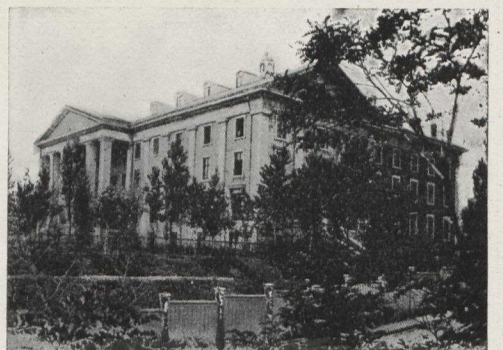
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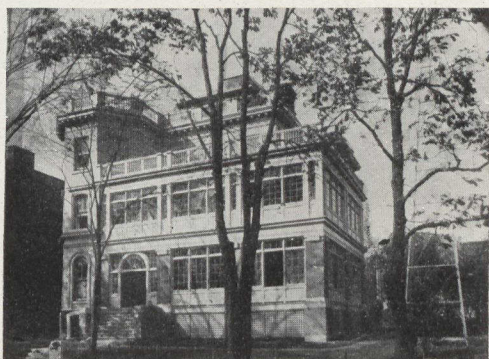
General Hospital, Sault Ste. Marie, Ont. H. W. Angus, Architect. Moore & Brown, Plumbers.



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Home for Incurables, Toronto. Denison & Stevenson, Architects. Purdy, Mansell Co., Ltd., Plumbers.



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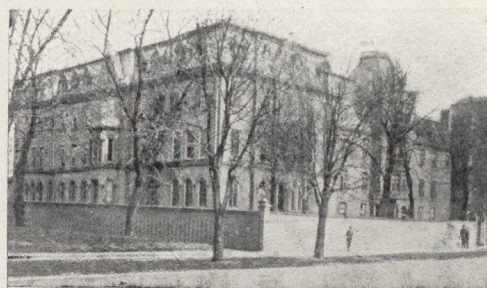


Cottages, Muskoka Sanitarium, Gravenhurst, Ont. Burke & Horwood, Architects. Purdy, Mansell Co., Ltd., Plumbers.

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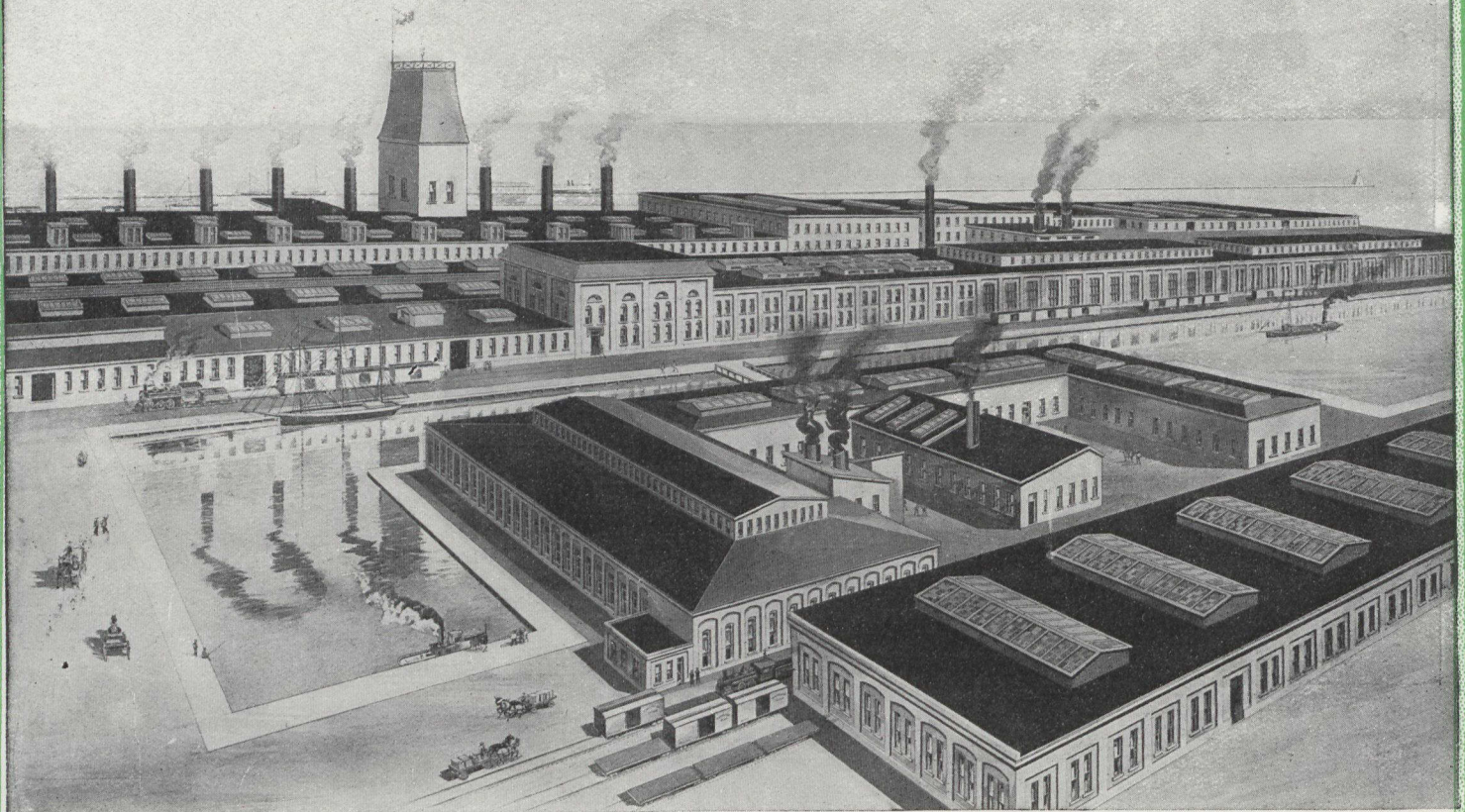


House of Providence, Toronto. A. W. Holmes, Architect. John E. Gray, Plumber.



Main Building, Muskoka Sanitarium, Gravenhurst, Ont. Burke & Horwood, Architects. Purdy, Mansell Co., Ltd., Plumbers.

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Vol. 3

TORONTO, OCTOBER, 1910.

No. 11

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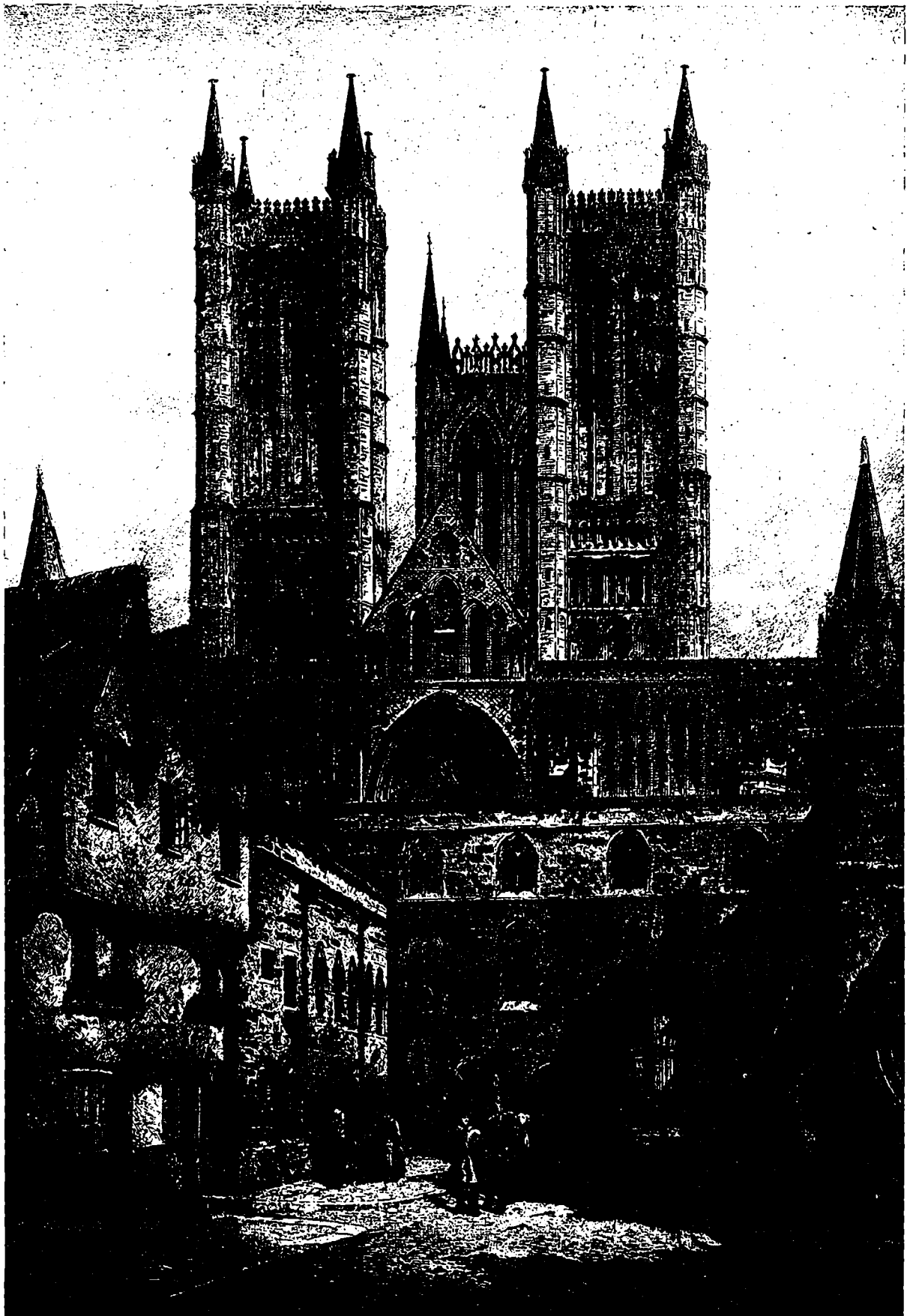
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Saturday Night Building

TORONTO CANADA

BRANCH OFFICES

MONTREAL—Board of Trade Building. LONDON, ENG.—Byron House, 85 Fleet St. E.C



Lincoln Cathedral—View showing the Great West Front with its Massive Twin Towers and the Great Central Tower in the Background. (See page 45.)



Building returns show brisk activity—Substantial advances noted in eighteen out of twenty-four important centres—Average gain for August, 24 per cent. . . .

BUILDING OPERATIONS throughout the Dominion still remain strikingly brisk with little or no signs of an approaching subsidence. On the contrary, the outlook for fall work was never more promising. August wound up the summer season in a manner quite in keeping with the marked development which has continued throughout since the beginning of the year. Permits issued in twenty-four important centres reporting to CONSTRUCTION, total \$8,257,984, as against \$5,799,800 for the same period in 1909. This gives an average increase of 42 per cent., a gain which can be taken as being fairly representative of the situation in general.

While all sections fared exceedingly well, the West in particular, enjoyed a most consistent expansion. Omitting Vancouver's loss of 11 per cent., which borrows but little from the splendid total gain already made by that city, not a solitary break is noted. Saskatchewan presents in itself an array of statistics which show a most marvelous state of development. Saskatoon has an increase of 927 per cent., Prince Albert a gain of 586 per cent., and Moose Jaw an advance of 502 per cent., thus giving this province the highest increase per cent. recorded for the month in one, two, three order. Regina also shows a very gratifying total although the gain, 5 per cent., is not nearly as pronounced.

Equally as prosperous was the condition in Alberta. Calgary made a gain of 82 per cent., representing an investment of nearly a half-million, and Edmonton and Lethbridge surpassed their corresponding figures to the extent of 34 and 67 per cent. in order named. Aside from these places, other gains noted are: Victoria 50 per cent.; Winnipeg 27, and Brandon 55 per cent. Winnipeg total is second largest amount registered, permits having been issued for new buildings aggregating value \$1,449,100 as against \$1,135,250 in August 1909.

In Ontario three losses occurred, viz: Windsor 23 per cent., Ottawa 54, and London 30 per cent.; but these are effectively counteracted by the heavy investments made and the high percentage attained in other centres. Hamilton made an excellent showing, netting a gain of 123 per cent; as did also, Port Arthur, where the total was 186 per cent. greater than last year. Fort William and Brantford are ahead by a margin of 21 and 10 per cent., respectively, while Toronto, with an advance of 28 per cent., registers the highest amount (\$1,713,040) recorded in the Dominion. Berlin does not submit comparative figures, but an amount which places operations for the month at \$17,400.

In Quebec the condition seems to be clearly indicated by the figures of Montreal, which show a rise of approximately \$700,000; the exact value of permits being \$1,

393,047, and the increase noted 99 per cent. It is quite likely, in view of the pronounced activity in this case, that other cities in the province also made substantial strides. Further east, St. John and Sydney annex gain of 22 per cent. and 17 per cent. respectively; although Halifax is in arrear with a decrease of 45 per cent., the comparative amounts recorded, however, being quite small.

	Permits for July, 1910.	Permits for July, 1909.	Inc., Per cent.	Dec., Per cent.
Berlin, Ont.	\$17,400	.....	.....	.....
Brandon, Man.	45,450	\$29,200	55.65	.....
Brantford, Ont.	56,680	51,218	10.66	.....
Calgary, Alta.	440,998	242,175	82.09	.....
Edmonton, Alta.	133,900	99,707	34.29	.....
Fort William, Ont. ..	204,580	168,935	21.09	.....
Halifax	13,800	25,117	.....	45.06
Hamilton, Ont.	230,100	102,755	123.93	.....
Lethbridge, Alta.	122,325	73,100	67.33	.....
London, Ont.	40,705	64,137	.....	36.54
Montreal, Que.	1,393,047	699,255	99.21	.....
Moose Jaw, Sask.	314,275	52,150	502.63	.....
Ottawa, Ont.	146,800	321,600	.....	54.36
Port Arthur, Ont.	75,200	26,600	182.70	.....
Prince Albert, Sask. ..	212,750	31,000	586.29	.....
Regina, Sask.	175,615	166,924	5.20	.....
St. John, N.B.	69,825	56,900	22.71	.....
Saskatoon, Sask.	348,330	33,850	929.04	.....
Sydney, N.S.	22,250	18,950	17.41	.....
Toronto, Ont.	1,713,040	1,335,332	28.28	.....
Vancouver, B.C.	745,235	841,020	.....	11.39
Victoria, B.C.	212,814	141,040	50.88	.....
Windsor, Ont.	63,775	83,625	.....	23.74
Winnipeg, Man.	1,449,100	1,135,250	27.64	.....
	\$8,257,984	\$5,799,840	42.38	.....

R.A.I.C. holds successful assembly in Winnipeg—Federation of Provincial bodies completed—Importation of foreign plans and the labor situation discussed. . . .

IN THIS ISSUE we give considerable space to a report of, and papers read before the Royal Architectural Institute of Canada. This national organization of architects has journeyed through many difficulties, but has eventually arrived at the point where it may be termed a "going" institution. We have said much in these columns with regard to the organization of the Institute, and with the various difficulties that have had to be overcome by its organizers, and the fact that these difficulties have been overcome, and that the Royal Architectural Institution of Canada is a real effective working organization is evidence of the consistency, good judgment and untiring energy of its promoters.

The banquet was one of the largest, if not the most fully attended of any ever held by an architectural organization in Canada. The speeches were bright and the western hospitality, which is so well known by Easterners who have had the privilege to have had experience

in the West, showed conclusively that the West is surely a substantial arm of Canada.

The control of labor in the building trades by United States officials was dealt with by President F. S. Baker, and his remarks were very much emphasized by those of Mr. Carter, President of the Winnipeg Builders' Exchange with reference to the existing lock-out of buildings trades employees in Winnipeg. President Baker also made some very terse remarks with regard to the employment of American architects in Canada, stating that the Dominion Government should view with a greater concern the inefficiency of our present tariff laws on architectural plans. Mr. Baker recommended an increase in the duty on imported plans. A very interesting coincidence occurred during the Convention of the R. A. I. C., which we have reason to assume was prompted somewhat by the operations of the Institute, in the seizure of the plans of the Bank of Montreal, prepared by Messrs. McKim, Meade & White, of New York. The action of the customs authorities was unanimously approved of by the members in convention. President Baker, who was re-elected, is to be greatly commended upon the success of his efforts in arranging for the adoption of a constitution that has been approved of by the various provincial bodies in the Dominion.

American contemporary deprecates CONSTRUCTION'S attitude toward the employment of United States architects in Canada—Believes that better reciprocal relations should exist.

WE PRODUCE HEREWITH an editorial from our contemporary, "The Western Architect," and from its contents one would assume our American friends were really desirous of being reciprocal, but are they? How many Canadian architects have ever had a commission in the United States? And if a prominent Canadian architect did secure a commission to erect a building in the United States, how would they get their plans over there? We know of one or two of our Canadian architects who have had some experience in this direction. This editorial reads very much like a letter that was received by a prominent Canadian architect from a fellow architect of New York, who deprecated the unethical attitude of CONSTRUCTION toward the interview that appeared in "The Toronto Star," and stated that he was rather sorry to learn that Canadian architects did approve of such severe criticism. He also spoke of some work he had done in Canada, and of the fact that he believed Ontario architects were too broad-minded to approve of such methods. He further stated that the line between Canada and the United States was purely an imaginary one and thought that American architects should not find it a barrier.

We are perfectly free to admit that it would not be a bad plan if there were some reciprocal relation between Canada and the United States in the matter of architectural plans, but we are not free to admit that the plans of American architects should be admitted into Canada, and that those of Canadian architects should be barred from the United States.

In regard to the statements of our contemporary relative to the interview in "The Toronto Star," we would state that they know little or nothing about the affair, and are in no position to make any intelligent comments upon the same. We would state that we do not require American architects to erect Canadian buildings. It is perfectly true and right that the architectural profession of this country and of the United States should be friends, but until such time as Canadian architects are permitted to prepare plans for buildings to

be erected in the United States, we have no right to believe that American architects have a right to assume that the boundary line between this country and the United States is purely an imaginary one. The remarks of our contemporary in question are as follows:

"The happily infrequent 'growing pains' of latter day architectural progress on the North American continent have broken forth during the past month over statements said to have been made by Eustace G. Bird, of the firm of Carrere and Hastings, of New York, who have designed the proposed Bank of Toronto building in Toronto. The editorial pages of 'Construction' for July quote Mr. Bird in an interview said to have been given to the Toronto 'Star' in which the American charges Canadian architects with being inferior to American architects. We cannot but surmise that Mr. Bird has been misinterpreted by his original interviewer. Inasmuch as Canada and the United States are both straining every nerve and sinew to attain the best, the benefit to both countries as an undivided unit always has been and will be sought. 'Construction' knows that the very enterprise that sends American architects into Canada hails the Canadian artist to Washington or New York. Both countries need each other, and both will build up the cities of each. After all the word 'best' is comparative when viewed in the light of individual needs. Mr. Bird may be the best for this particular work, and the prominent gentlemen mentioned as the exponents of the best in Canadian architecture are needed for their special ability in design. It is a case of give and take. In so far as Mr. Bird's alleged remarks are concerned, it must be remembered that the American and Canadian press have sunk more navies in time of battle than ever floated the high seas. Let us grasp hands and keep on with the upward march."

Architects as advertisers—The ethical importance of professional dignity in the practice of architecture—The difference between the business and the profession of architecture. . . .

IS IT PROFESSIONAL for an architect to advertise? If so, why should an architect not pay for the connecting of his name with a building which he has designed? We maintain that an architect, as a professional man, has a right to demand that his name should be connected with his work in the public press, whether the work is commendable or otherwise. In other words, the public press has the right to connect the name of an architect with a failure; it also has the right to connect his name with a success. The provincial attitude maintained by our Canadian press in assuming that the name of the architect is not entitled to be published with the illustrations of his building, is peculiar to Canada for the reason that the press does not view architecture as a profession. If a prominent man is taken seriously ill, the press mentions the name of the physician that is in attendance. If a prominent case before the law courts is under discussion, the press assumes that the name of the attorneys are of interest to the public; but when illustrating or describing a building it, unfortunately, is the custom of Canadian publications to omit the name of the architect, for the reason that they are not inclined to give "free advertising." But when an architect, after having contended that he has these rights, as a professional man, undertakes to apply business methods (in the way of advertising) to his profession, he not only brings the profession of architecture into disrepute but he undertakes to employ a business advantage in professional work. If architects have a right to demand professional recognition as do lawyers and doctors in the daily press, then they must adhere to the principles as laid down in the ethics of their profession.

We reproduce herewith two advertisements, each of which occupy a page in a special edition issued by a Vancouver paper, in which certain architects have undertaken to show (in a business way) their ability to design and execute work. It is reasonable to assume that every architect in Vancouver and Victoria was solicited for like advertisements, and it is also reasonable to assume that there are several architects in these two cities who could have shown work that would have been

quite as much to their credit as those illustrated in the two advertisements in question. The layman, as a rule, does not understand the ethics of the profession of architecture, and it is unfair to those architects who adhere to the ethics as established by the profession, to have professional men use business methods in the prosecution of their profession (if it might be so called).

If the advertising department of the daily press can insist upon architects paying the price for space in their special or regular editions, then how can we expect the press to give the architect credit for his work in their news columns? If doctors advertise they would be obliged to pay a fee to have their name connected with a prominent case, likewise with the lawyers, also painters, sculptors too, and it is the same with architects. Canada is a new country and it is quite within reason that there should be ambitious men engaged in the architectural profession the same as all other avenues of our progressive, industrial activity, some of whom may be more or less impatient for immediate success. That success in the view of some may be obtained through the use of money in giving publicity to the character and quality of their work, but if the public press has reason to believe that money may be secured for giving publicity to the buildings erected by these architects, then it has the reason to assume that it should deal with the architect in the discussion of his work, the same as with ordinary business institutions. We deal with this matter only to point out to architects generally, that if they expect to be treated professionally by the press, they must assume a professional attitude towards the press.

If, in the columns of this paper, we should undertake to publish illustrations and plans of buildings and solicit the architect for a remuneration for connecting his name with such photographs or plans of buildings, we would be told that our policy in this connection was professionally indecent. If architects feel that they should be looked upon as professional men they must conduct themselves as such.

There is a clearly marked line in the practice of architecture which every designer should not fail to recognize. On one side is an adherence to certain defined principles laid down to preserve and promote the best interests of


both the art and the profession. On the other, a condition which, if adopted and persisted in, is to engender a disregard or perversion of architectural effort in the interests of pure commercialism. The line is strictly defined and all too obvious, and a designer is known according to the side on which arrays himself.

SEPTEMBER 23, 1910 THE DAILY PROVINCE CONVENTION NUMBER PAGE 4

Two Fine Modern Buildings Under Construction in Vancouver


Office: 413-414-415 Cotton Building, Vancouver.

This modern office building will be erected on Hastings street near No. 11. Details and plans to be found in the Daily Province.



To be erected in the northwest corner of Broadway and West Avenue for Mr. H. O. Lee.

Telephone 7031



Designed by **W. C. Stevens, Architect**

THE DAILY PROVINCE CONVENTION NUMBER PAGE 11






HENRY B. WATSON ARCHT
323 PRINCE ST. VANCOUVER, B.C.



Jobe Watson

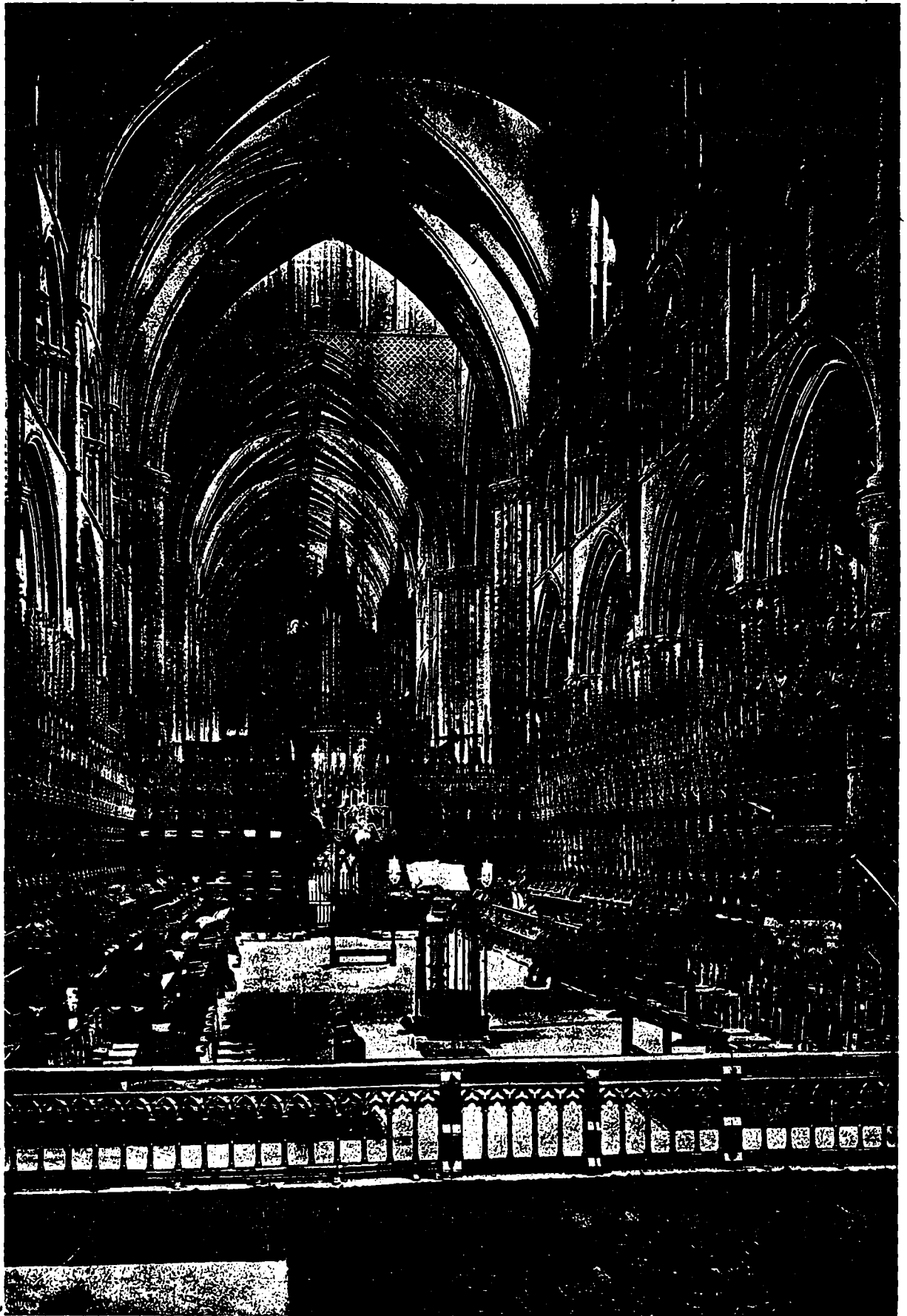


Sam Watson

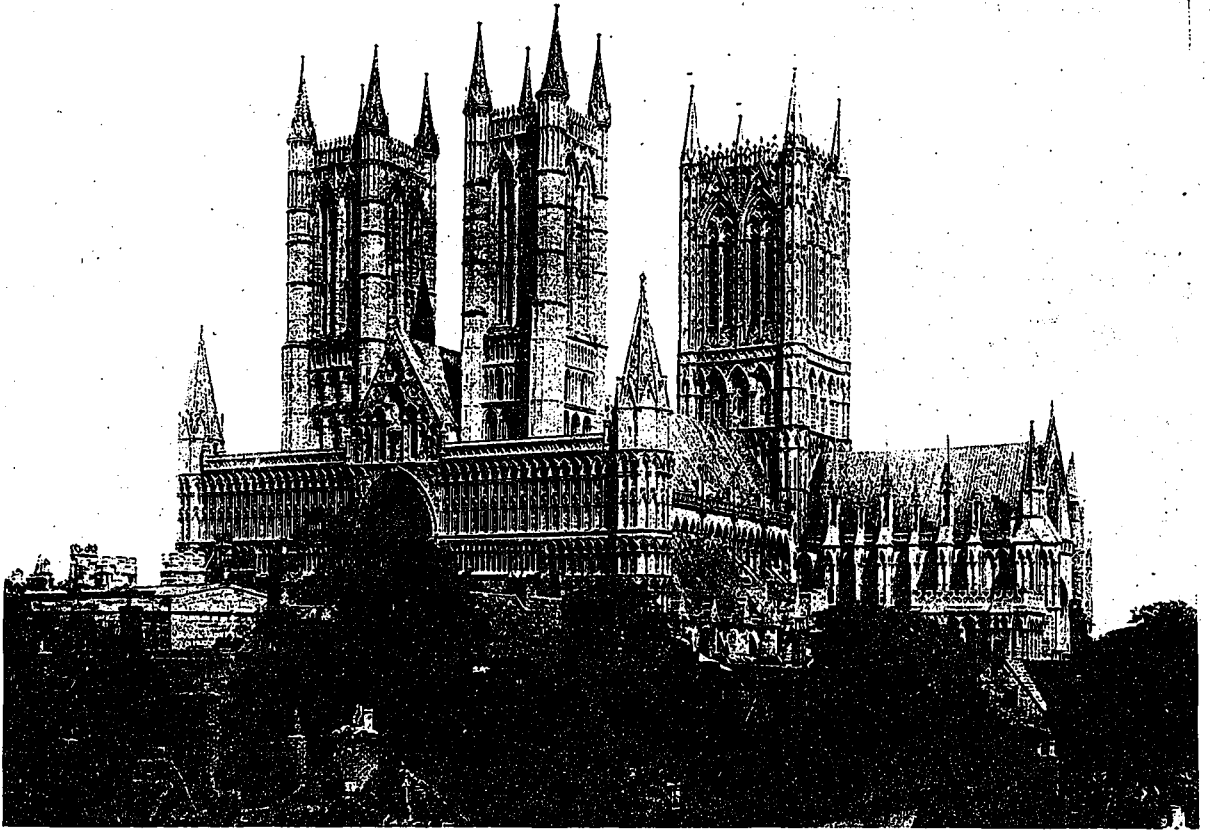
Some of the largest works completed by Henry B. Watson, architect, the past three and a half years: Kitlano Presbyterian Church, completion plans designed; the Exhibition Building, which was won in open competition; the Alexandra Schools competition plans; Florence Court, apartment block, corner Georgia and Bute streets, for J. D. Byrne; Roman Catholic Church, St. Patrick's, Mt. Pleasant; Indian Mission, North Vancouver; Empress Hotel; Sedney Rooming-house; Stuart's Apartments; Moody Block; Grandview; Majestic Apartments Block; and several others out and in the city.

JOHN WATSON BROS., VANCOUVER, B. C.

The Kitlano Presbyterian Church is our first job on this continent. We wish all who are contemplating building to see our work and us before doing anything further. We have the ability and can give you the best for your money. JOHN WATSON BROS.



West Choir, Lincoln Cathedral, as it Appears Looking Towards the Great Organ.



Lincoln Cathedral—View showing the Beautiful Detail and Outline of Structure, as it Lifts Itself in Majestic Grandeur above the Neighboring House Tops.



LINCOLN CATHEDRAL

ONE OF ENGLAND'S OLDEST CHURCH EDIFICES

The least known of England's Great Churches. Started in 1074 A.D. during the reign of William the Conqueror. An historical description compiled and arranged by Oscar Raven.

SITUATED ON THE RIDGE of a steep hill dominating the city, and about 250 feet above the level of the plain around, stands the beautiful Cathedral of Lincoln, where it has stood for more than six centuries almost unchanged in its general outline.

The first cathedral church was begun about the year 1074 by Bishop Remigius, who was one of William the Conqueror's followers. It was ready for consecration in 1092. This original church followed the Norman model of which so many examples were then rising in every part of England in that it was cruciform in plan, ending at the east in a semi-circular apse. The structure was designed for a pair of Western towers, which so commonly formed a part of the Norman design. Of this original pile the only parts remaining are the central portion of the west front, with its three deeply recessed portals, whose arches are unrelieved by any moulding or ornament, and a fragment of the first bay of the nave and the lower stories of the two western towers. Remigius's work is characterized by the stern, almost savage plainness of the early Norman style.

In this Norman portion of the west front, now re-

maining, is a curious band of rude bas-reliefs, representing Scriptural subjects and extending in a fragmentary band along the facade; the date of these is uncertain, but they probably belong to a period anterior to the time of Remigius and were inserted by him in his new cathedral as sacred relics of an earlier age.

An accidental fire in 1141 entirely destroyed the flat timber ceiled room and otherwise damaged the church. It was restored "with subtle artifice," writes the chronicles, "that it looked fairer than in its first newness."

Alexander "the Magnificent" was bishop. He vaulted the whole church with stone, and to him may probably be ascribed the three beautiful western doorways with their richly carved shafts and grotesque arch mouldings in the deep recesses of the Norman front. The interesting arcade above the two side recesses of the west front and the lower visible stories of the western towers are also his work. These are all in the later Norman or Transitional style.

In 1185 the cathedral was shattered by an earthquake, and when in the following year Hugh of Avalon was made bishop, he found his cathedral rent from top to



Lincoln Cathedral—The Great East Window is Seen in the Foreground with the Chapter House situated at the Right of Main Structure.



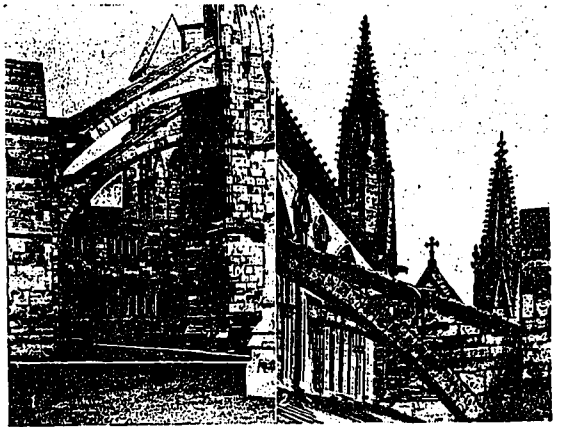
East Choir, Lincoln Cathedral, Showing Great East Window in the Background.

EDITOR'S NOTE.—While chronicling the work of present day designers of the new world, with all its modern utilitarian influences, it is well that we do not let pass from before us the beautiful old work of the designers of earlier times—times when the architect was left free to carry out his conceptions, unhampered by any of the modern influences that show themselves so conspicuously in the architecture of our present commercial age. It is well that we keep before us the work of men who were not obliged to build for profit, to build within a stipulated sum, to build to meet the demands of a money-mad age. It is only in the complete understanding and thorough appreciation of the work of these old masters that we can look for a toning influence on present-day tendencies in architectural design. By this it is not argued that we should undertake in this age to reproduce the work of mediaeval times, but we do maintain that the aesthetic in our present-day architecture is measured to a great extent by our appreciation of the wonderful work of earlier ages.

With the object of bringing the younger members of the profession closer to the masterpieces of the old world, we undertook some months ago to run a series of notable pieces of European architecture in "Construction" from time to time. This month we give herewith an illustrated, detailed description of the least known of England's famous cathedrals—Lincoln Cathedral—written and compiled by Mr. Oscar B. Raven. Mr. Raven is a native of Lincoln, where this famous old pile has stood with its many additions, alterations, misfortunes and glories, through the centuries of changing conditions, through conquests, rebellions, wars within and wars without, through famine and prosperity since the days of William the Conqueror. The Cathedral is the pride of every native of Lincoln, and Mr. Raven's description of the structure, with its history as compiled by him, together with the many illustrations of its beautiful detail, reproduced from photos selected from his very large collection, we believe will prove of interest to Canadian architects generally.

bottom. Its restoration was one of his first cares, but he rebuilt it from the foundations in the new style. Early English Gothic, which had been developed step by step out of the rude Norman. It was determined to build it in every part as worthy of its high purpose as human skill could make it. Six years were spent in preparing for so great a work. The plan of Canterbury Cathedral was followed; the choir was provided with a second pair of transepts, each with two apsidal chapels on the east side, and it is said that Hoeffery de Noiers was the architect. In 1192 the foundations were laid, and before the death of Bishop Hugh in 1200 the choir and eastern transepts

capitals. The walls of the triforium above consists of two pointed arches in each bay springing from clustered piers, and subdivided by a single shaft from which spring smaller arches, the spandrel of the arches being pierced



1. Flying Buttress of Chapter House. 2. Flying Buttress Connected on Exterior of Clerestory to Resist the Thrust of the Stone Vaulting.

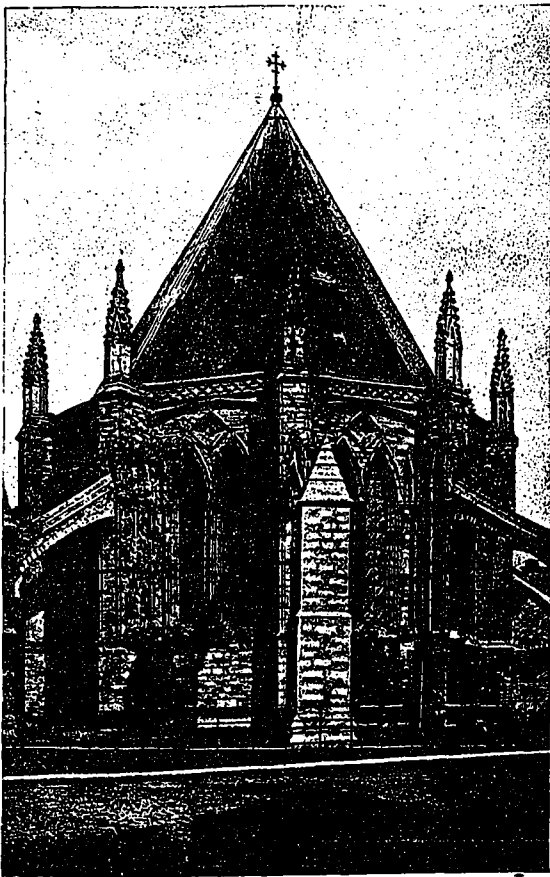
by a quatrefoil. The wall of the clerestory is pierced by three narrow lancet windows, each bay containing good modern stained glass.

The aisles of the choir have two tall lancet windows in each bay and the wall beneath enriched by the wonderful double arcading, which is also continued around the transept walls.

At the western angles of the choir aisles and the transepts are two very remarkable piers of almost unique design, which call for special attention. Eight detached Purbeck marble shafts, four cylindrical and four hexagonal with hollow sides all banded and having rich capitals surround an octagonal stone pier, from four sides of which sprout crockets from base to capital, between the marble shafts.

The east end was, like Westminster Abbey, in the form of a polygonal apse with a six-sided Lady-chapel behind. This portion of the cathedral, built by Bishop Hugh, affords the earliest known example of the pure Lancet Gothic or Early English architecture in England, free from any trace of Norman influence.

The western transepts were completed and the nave gradually carried westward in the Early English style most one, opening into the eastern transepts, the remaining four bays having deeply moulded pointed arches springing from clustered piers with delicate foliage during the 50 years following the death of Bishop Hugh. To the close of this period, namely, the middle of the



Lincoln Cathedral—Chapter House.

and a portion of the east walls of the western transepts were built. The choir consisted of five bays, the easter-

13th century, may be assigned the two western chapels, the arcaded screen wall of the west front, the chapter house on the south and the Galilee porch and the vestries on the north.

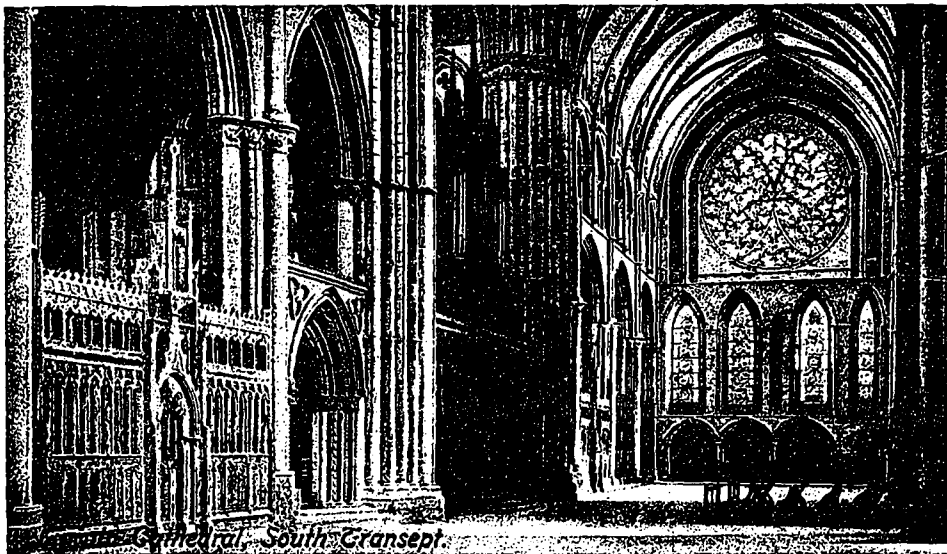
The plain wall of Remigius's Norman west front is set in a kind of frame of richly arcaded work of Early English date, and probably contained at one time an army of statues, though architecturally a mistake (for it does not honestly answer to anything behind it, and is little more than an ornamental screen wall, and moreover hides the lower portion of the



Lincoln Cathedral, North Transept.

North Transept, Lincoln Cathedral, Showing Rose Window, "Dean's Eye" in the Background.

lifetime and bequeathed them to the fabric of the cathedral.



Lincoln Cathedral, South Transept.

South Transept, Lincoln Cathedral, Showing Rose Windows, "Bishop's Eye" in the Background.

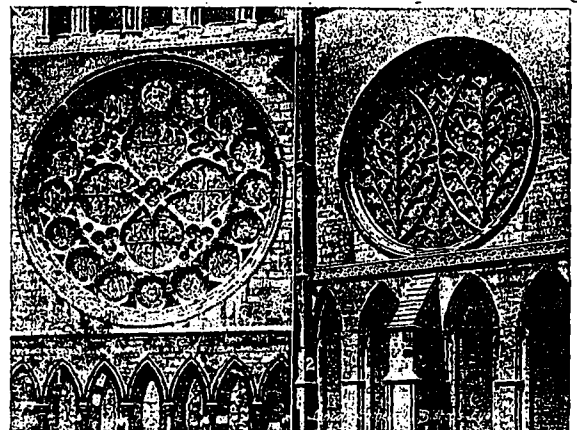
The west front was restored in 1852. The nave consists of seven bays in the Early English style, and exhibits that bold disregard of rigid uniformity, combined with general harmony, which imparts to mediæval buildings a living character, as things that have grown bit by bit, not monotonously fashioned by rule and measure. The piers supporting the superstructure consist alternately of moulded shafts of solid coursed stone, and detached shafts of Purbeck marble sur-

rounding a central cove, all bearing rich foliage capitals of varying design. The thrust of the stone vaulting is western towers), it cannot be denied the west front is a composition of singular grandeur of outline and beauty of detail. The centre recess of the front had its semi-circular Norman arch removed, probably by Bishop Grossteste (1232-1253) and replaced by a pointed arch, ornamented with rich mouldings and carvings. In the head of this arch is an Early English unique-foil rose window, containing ancient stained glass with the figure of Remigius in pontifical vestments, holding the church of which he was founder.

Below this window and above the main doorway is a window of later date, an excellent example of the perpendicular period, below this again is a row of statues of English kings.

The two octagonal turrets at the extremities of the west front contain spirel stairs crowned with spirelets; that to the south bears on its summit a statue of St. Hugh, the holy bishop, who may be truly called the second founder of the cathedral. On the north spirlet is a figure known as the "Swineherd of Stew," blowing his horn to call his herd together. According to tradition, this swineherd collected a peck of silver pennies in his

rounding a central cove, all bearing rich foliage capitals of varying design. The thrust of the stone vaulting is



Rose Windows, Lincoln Cathedral. 1. "Dean's Eye." 2. "Bishop's Eye."



Lincoln Cathedral—1. Nave West. 2. Triforium in Angel Choir. 3. Interior Chapter House.

resisted by massive "flying" buttresses on the exterior connected to the clerestory by means of an arch over the nave aisles.

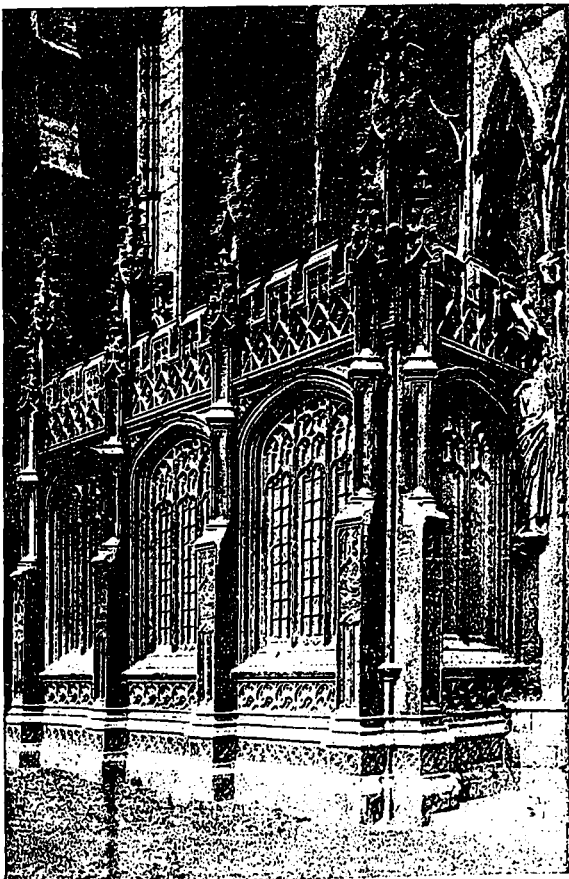
The nave aisles are uniform in general design though varying in detail, each bay containing two rather broad, single light lancet windows filled with modern stained glass.

The wall below these windows is relieved by a contin-

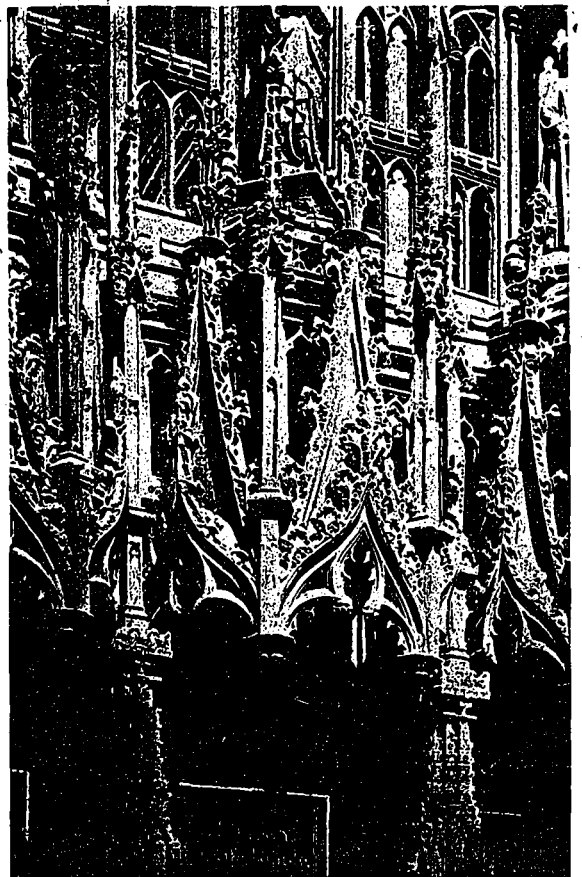
uous single arcading, differing in design on the two sides of the nave.

The two Early English chapels at the west end open by lofty arches from the aisles; that to the north having its stone vaulted roof supported by a central group of Purbeck marble shafts of remarkable lightness.

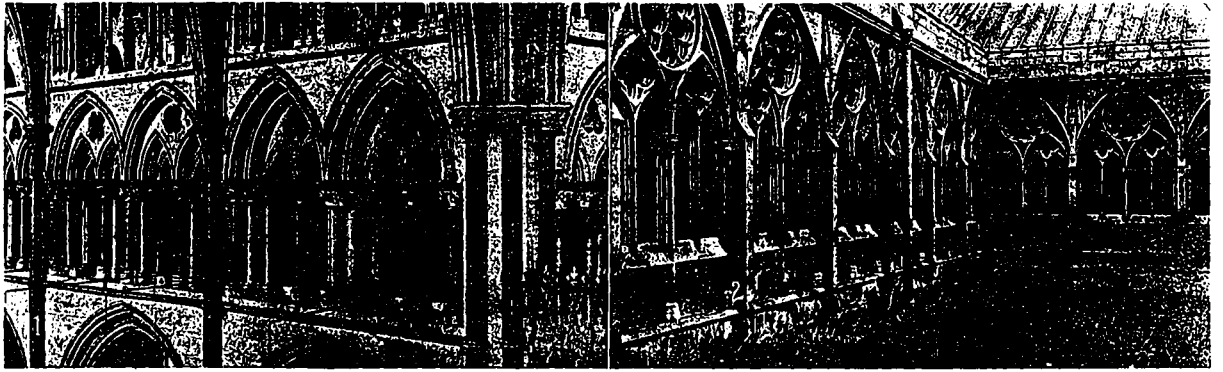
The central tower is supported on four lofty arches, springing from four enormously massive piers, composed



Lincoln Cathedral—Rectangular Chantry on the West, Erected as a Monumental Chapel to Bishop Longland.



Lincoln Cathedral—State Canopies.



Choir Triforium.

Window Detail, South-East Cloister.

of a central cove surrounded by twenty-four shafts with rich foliage capitals alternately of stone and Purbeck marble.

The spandrels of the arches are enriched by the characteristic diaper work which covers their whole surface.

The great or western transepts open on either side of the central tower, each having an aisle on the east side, divided into three chapels, but having no aisle on the west side. The north arm has a magnificent rose window with "plate" tracery which is filled with priceless stained glass of the same date as the window—1220.

The south arm has also a rose window, originally of lead plate tracery similar to the northern one, and of the same date, but the window which supplanted it is a century later and has delicate flowing tracery in the form of two leaves with veins. The glass in this window consists of a collection of confused fragments of ancient glass, the survival of Puritan devastations.

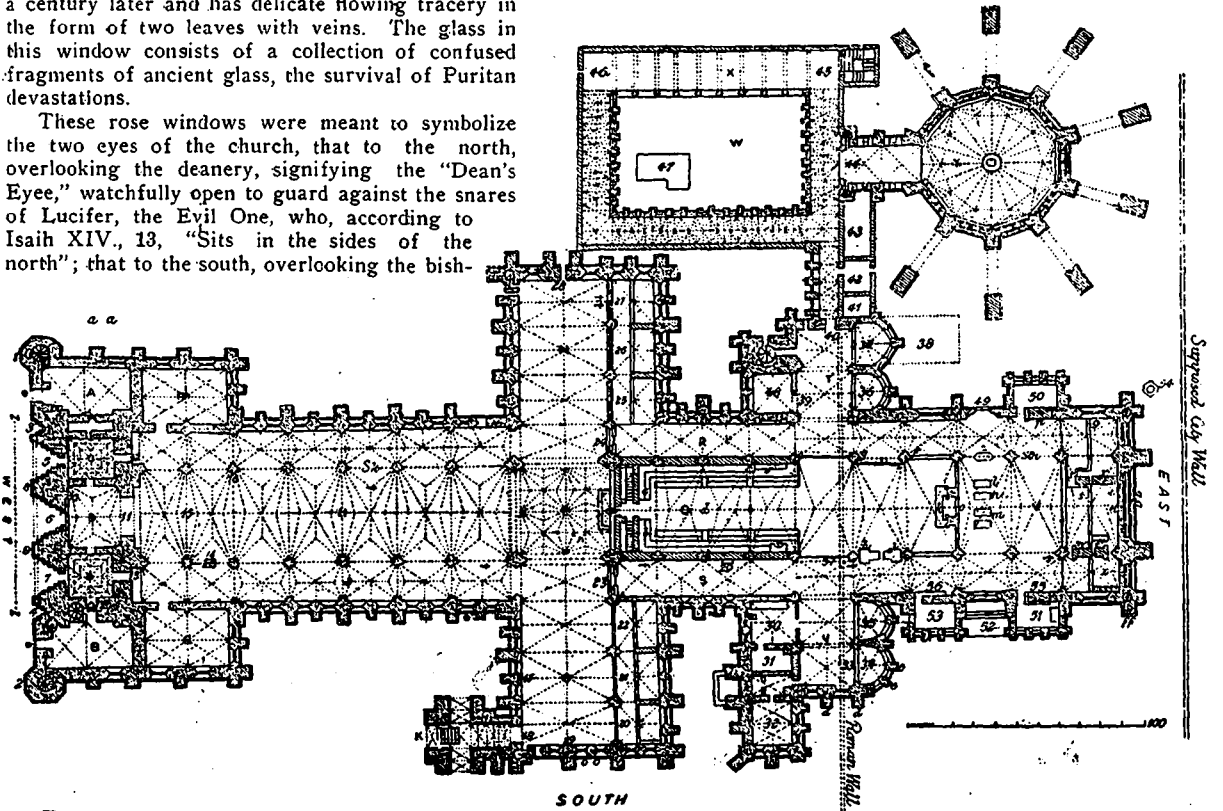
These rose windows were meant to symbolize the two eyes of the church, that to the north, overlooking the deanery, signifying the "Dean's Eye," watchfully open to guard against the snares of Lucifer, the Evil One, who, according to Isaiah XIV., 13, "Sits in the sides of the north"; that to the south, overlooking the bishop's

palace, known as the "Bishop's Eye," inviting the genial influence of the Holy Spirit.

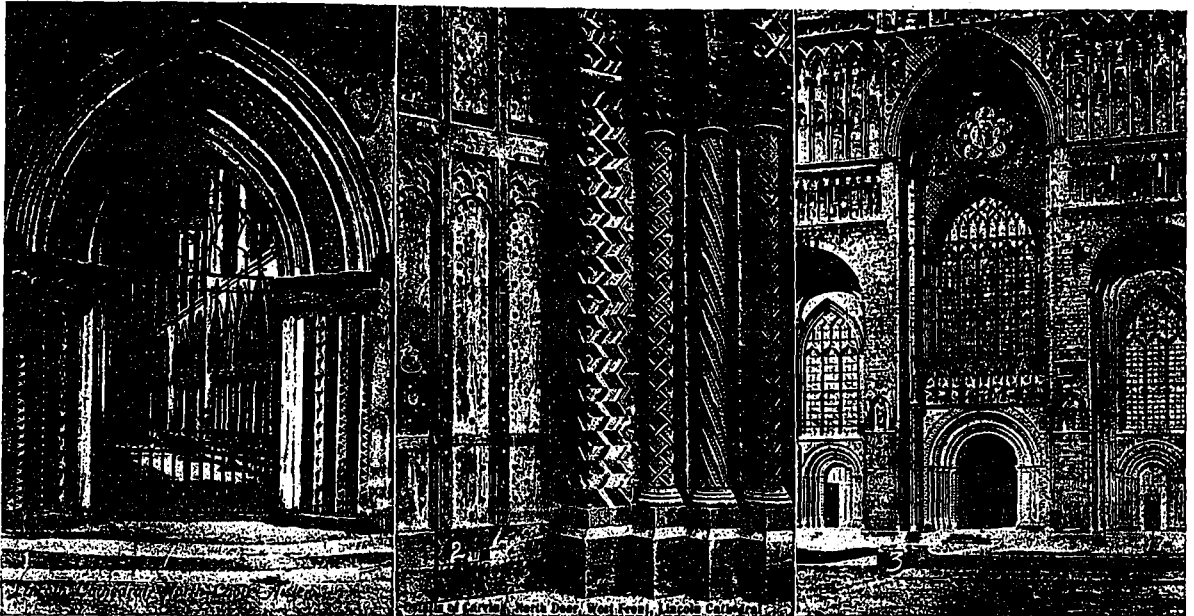
The windows above these rose windows light the false roof and are not seen from the inside of the cathedral.

The lancet windows beneath the rose windows contain very rich ancient glass. The walls below and all around the transepts are enriched with single arcading, except where it joins the double arcading of St. Hugh, which was not continued beyond the first bay of the transepts, where he left it at his death.

At the southwest corner of the south transept stands the two storeyed "Galilee Porch," a cruciform structure with large open arches on three sides, and a rich double doorway on the east side, opening into the transept. This



LINCOLN CATHEDRAL.—REFERENCES TO PLAN.—A. North-West Chapel; B. South-West Chapel, St. Hugh's or Ringers' Chapel; C. St. Mary's Tower; D. St. Hugh's Tower; E. The one remaining Norman Bay; F. Morning Chapel; G. Consistory Court; H. Nave; I. North Aisle of Nave; J. South Aisle of Nave; K. Galilee Porch; L. Former Churchyard; M. Dean's Green; N. O. North and South Transept; P. Bourd Tower; Q. Choir; R. S. North and South Aisles of Choir; U. Lesser Transept; V. Board Tower; W. Cloisters; X. Library; Y. Chapter House; Z. Limits of Norman West Front; a. Choir Screen or Rood-Loft; b. c. Stalls; d. Litany Desk; e. Bishop's Throne; f. g. Easter Sepulchre; h. i. Monuments of Katherine Swynford and Duchess of Westmorland; k. Altar; l. Reputed Site of St. Hugh's Grave; m. n. Tombs of Bishop Gardiner and Bishop Fuller; o. Altar Screen; p. Monument of Bishop Fleming; q. Monument of Bartholomew, Lord Burghersh; r. Monument of Bishop Burghersh and Father; s. Base of Shrine; t. Monument of Queen Eleanor; u. w. Monuments of Lord Cantilupe and Prior Wymbush; x. Monuments of Hilton and DeWint; z. Monument of Bishop Wordsworth; 1. 2. Northwest and Southwest Stair Turrets; 3. 4. Recesses of Remigius Front; 5. 6. 7. Bishop Alexander's West Doorways; 14. Font; 17. Site of Bishop Daldurby's Shrine; 18. Entrance from Galilee Porch; 20. 21. 22. Chapels; 23. 24. Ornamented Doorways to Choir Aisles; 25. 26. 27. Chapels; 28. Dean's Door; 29. Shrine of Little St. Hugh; 30. Chorister's Vestry; 31. 32. Vestry and Ante-Vestry; 34. St. Peter's Chapel; 35. St. Paul's Chapel; 36. Chapel; 37. St. John Baptist's Chapel; 38. Foundation of Extension of St. John Baptist's Chapel; 40. Entrance to Cloisters; 41. 42. 43. Anciently the "Common Chamber"; 44. Vestibule to Chapter House; 45. Stairs to Library; 46. Doorway to Deanery; 47. Site of Roman Tessellated Pavement; 48. Dean's Chapel, formerly the Dispensary; 49. Northeast Door; 50. Bishop Fleming's Chantry; 51. Bishop Russell's Chantry; 51. Southeast Doors; 53. Bishop Longland's Chantry; 54. Minister Well.



Lincoln Cathedral—1. Door to North Choir Aisle. 2. Detail of Carving North Door, West Front. 3. Entrance to West Front.

porch with its simple but elegant vaulting, its deeply moulded wail arcades and vaulting ribs, and its multitudinous dog-tooth ornament may be justly considered one of the chief beauties of the cathedral. The upper storey, lighted with lancet windows, is finished with a richly panelled parapet of the perpendicular period.

At the end of the north arm of the transept is a rich doorway, curious for having a flat stone lintel.

St. Hugh's choir is entered from the nave under a very richly carved and vaulted stone screen of the 14th century, originally resplendent with gilding and color, on which in earlier days stood the Great Rood or Crucifix, with the image of the B. V. M. and St. John on either side. This screen now supports the organ. On either side of the screen is a doorway of uncommon richness, the arch containing a band of carved foliage deeply undercut. These give entrance to the choir aisles.

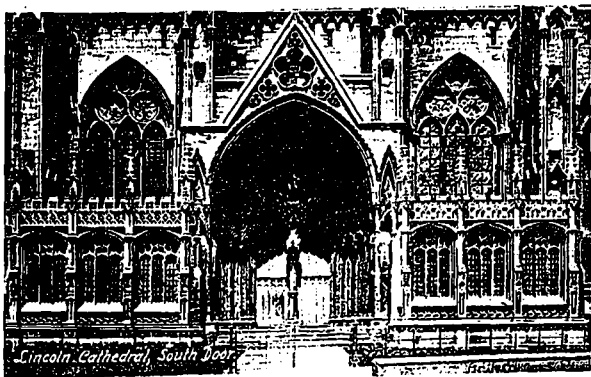
In 1232 the central or broad tower fell, and the two lower storeys of the present tower were built during Bishop Grossteste's episcopate (1232-1253). The walls are encrusted with the diaper work seen also in the gable of the west front, and popularly known as "Grossteste's mark." The upper storey of the tower was not added until the beginning of the 14th century; it is the crowning ornament of the tower, and is as pure an example of the decorated style as the lower storeys are of the Early English. The whole tower is a most beautiful combination, and is the chief and crowning glory of the cathedral. Originally it had a timber spire covered with lead, the

loftiest, it is said, in England, being 524 feet high. It was destroyed by a tempest in 1548 and was not rebuilt. The pierced parapet was not added until 1775. As it now stands the tower is 271 feet to the top of the corner pinnacles, and it is the highest tower in England, excluding spires.

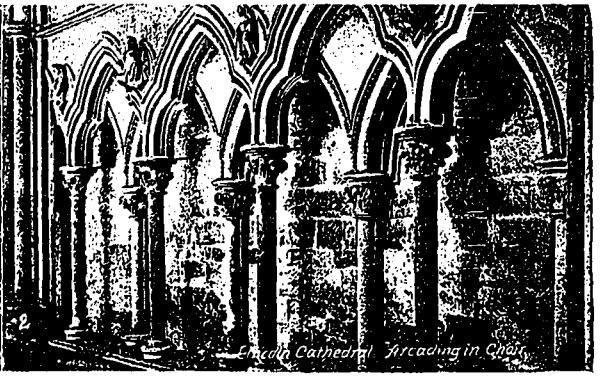
The western Norman towers were originally capped with tall timber spires, which were removed at the close of the 14th century when the lofty belfry storeys were added; these, too, were finished with timber spires, but having fallen into decay, and needing constant repair, were taken down in the early years of the 19th century, to the great indignation of the people of Lincoln, who were with difficulty persuaded that they were unsafe. These towers are 206 feet high to the top of the pinnacles.

The Chapter House was commenced in 1225 and is a polygon of 10 sides; 60 feet internal diameter with a stone vaulted roof springing from a clustered central pillar and supported by huge flying buttresses externally. Nine of its sides contain two tall lancet windows, each filled with excellent modern stained glass; the other side contains the entrance, through a vestibule, from the cloisters. The walls beneath the windows are relieved by a continuous arcade whose mouldings are enriched by the dog-tooth ornament.

The remains of Bishop Hugh were deposited in a chapel at the east end of the cathedral, but so great was the reverence with which he was regarded, and so many miraculous cures, according to the belief of the age, be-



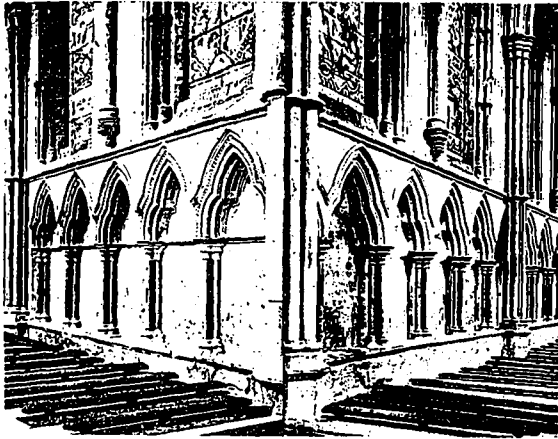
Lincoln Cathedral, South Door.



Lincoln Cathedral, Arcading in Choir.

South Door.

Arcading in Choir.



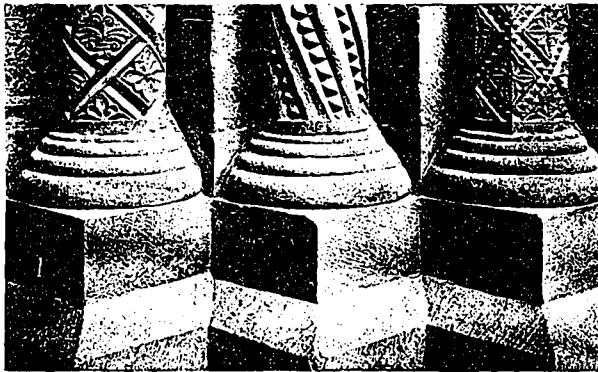
Vall Arcade, South Side, and Nave Arcade, North Side.

gan to be worked at his tomb, that he received canonization from the Pope in 1220, and the immense influx of pilgrims to his shrine rendered more space necessary. As a result of the offerings of devotees who supplied the necessary means, it was decided to demolish the eastern apse and chapels of St. Hugh's chair and to erect a building worthy to receive the shrine of the sainted founder. The foundations of the apse and chapels still remain

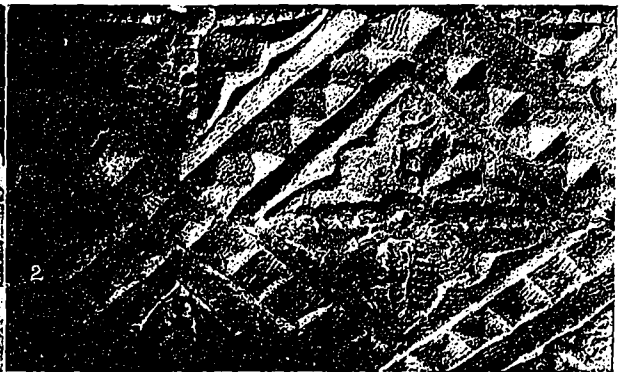
riched by an arcading consisting of arches with tracery similar to that of the windows.

The illustration of this portion of the cathedral will give a better idea of its magnificence than any description.

The great east window of eight lights is the noblest example of geometrical tracery in the Kingdom. It is 57 feet high and 34 feet wide, occupying the entire east end as seen from the inside. It is filled with stained glass (depicting the work of Our Lord), put in by public subscription a few years back in place of some very miserable kaleidoscope patterns executed in 1762. The east windows of the aisles are smaller examples of the same design as the large one, and contain ancient glass of great beauty. The large window in the gable above the east window lights the false roof. A remarkable feature in this portion of the cathedral is the great south porch. No other example of a porch of this character, or in this position occurs in an English cathedral, though common in France. This entrance occurs in the middle bay of the Angel Choir on the south side. It is formed of a very deeply recessed arch under a pedimented canopy, and is divided by a central shaft into two openings with unique-foiled heads. The recessed sides are lined with canopied niches, the southermost containing excellent statues of kings, unfortunately with their heads broken off by Cromwell's soldiers, who did much damage in other parts of the cathedral, chiefly by breaking ancient stained



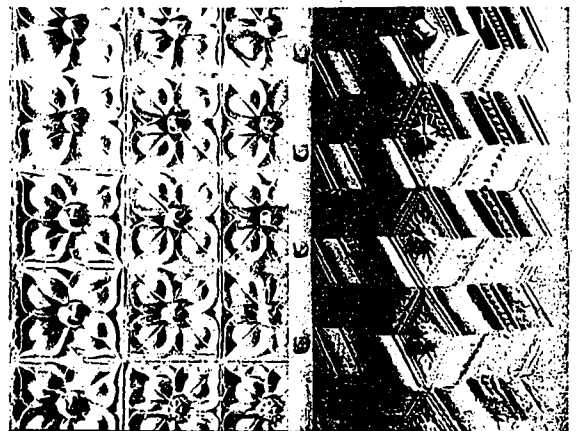
1. Detail of Base and Pillars, North-West Door.



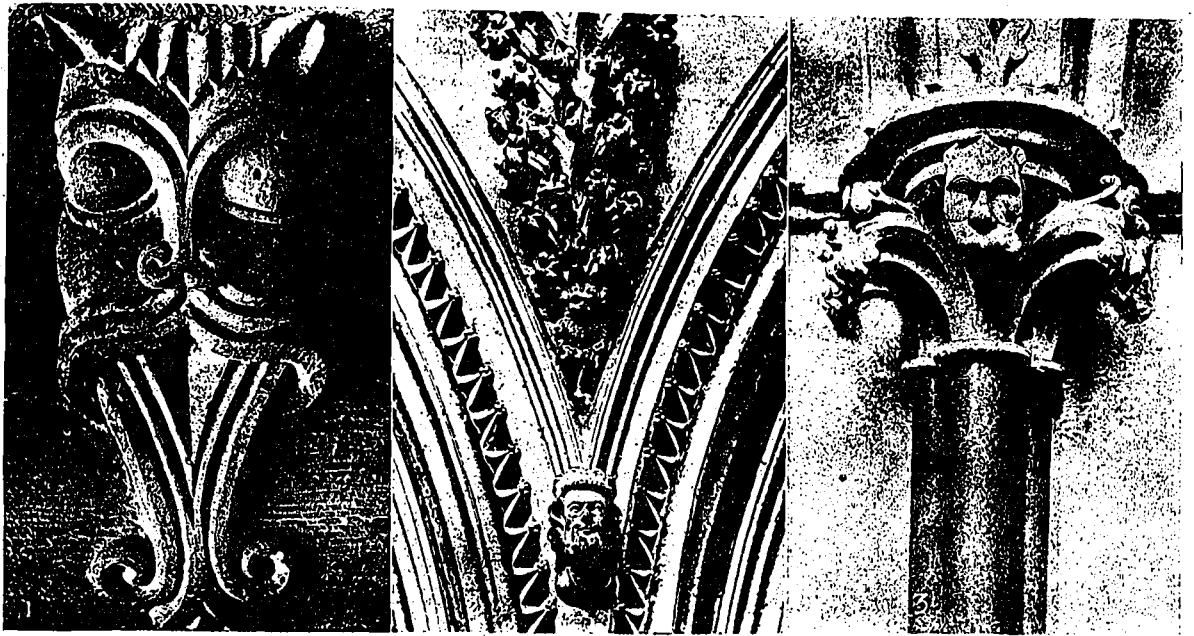
2. Detail of Pillar, North-West Door.

under the pavement of the choir, and were seen during excavations some few years ago. Five bays were added east of St. Hugh's transepts. This addition, popularly known as the "Angel Choir" from the sculptured angels which fill the spandrels of the triforium arches, was begun in the year 1255 and was ready to receive St. Hugh's shrine in 1280. It belongs to the period of transition between the Early English and the decorated styles, just when Gothic architecture was touching its highest development, and exhibits a refinement and elegance as well as delicacy of finish which has rarely been equalled and never surpassed. The piers supporting the superstructure are alternately composed of solid moulded Purbeck marble and stone. The arches springing from these piers are beautifully moulded and are enriched with the dog-tooth ornament. The triforium is of most exquisite design. Each bay contains richly moulded arches, springing from clustered piers of stone surrounded by marble shafts. These again are divided by a cluster of three Purbeck marble shafts from which spring trefoiled arches, all the piers having delicate foliage capitals. The spandrels are occupied by sculptured angels, which give proof of the excellence attained by the native sculptors of that period. The clerestory windows of geometrical tracery are remarkable as having a double plane of tracery, contributing much to the richness of the effect. The aisles contain pointed windows with tracery of beautiful design, one in each bay. The walls beneath the windows are en-

riched by an arcading consisting of arches with tracery similar to that of the windows. The arch mouldings of this entrance contain a hollow fretwork of carved leafage, containing statuettes of the Apostles and other saints. The Tympanum or head of the door is occupied by a carving of the "last Judgment." Our Lord is seated in the centre, to his right the



Diaper Screen South Choir Aisle and Moulding on North-West Door.



1. Moulding, West Door. 2. The Imp. 3. Capital in Chapter House.

blessed are rising from their tombs, and are borne upwards by angels, to his left, demons are dragging the lost to the mouth of hell.

The doorway on the opposite side of the choir is of Early English design. It is divided by a pillar of later date, on which is a shield of Edward IV.

With the erection of this Angel Choir the main portion of the fabric was completed. The small side chapels and the cloisters were added later. The whole work of re-edification forms the laying of the first stone of St. Hugh's Church to the completion of the portion built to contain his shrine occupied less than a century (no unduly long time for so great a work). The rectangular chantry chapels on either side of the south porch are very rich examples of the late Perpendicular Period, that to the east is the monumental chapel to Bishop Russell (d. 1496), to the west is that of Bishop Longland (d. 1547), the confessor of Henry VIII. They are entered from the choir

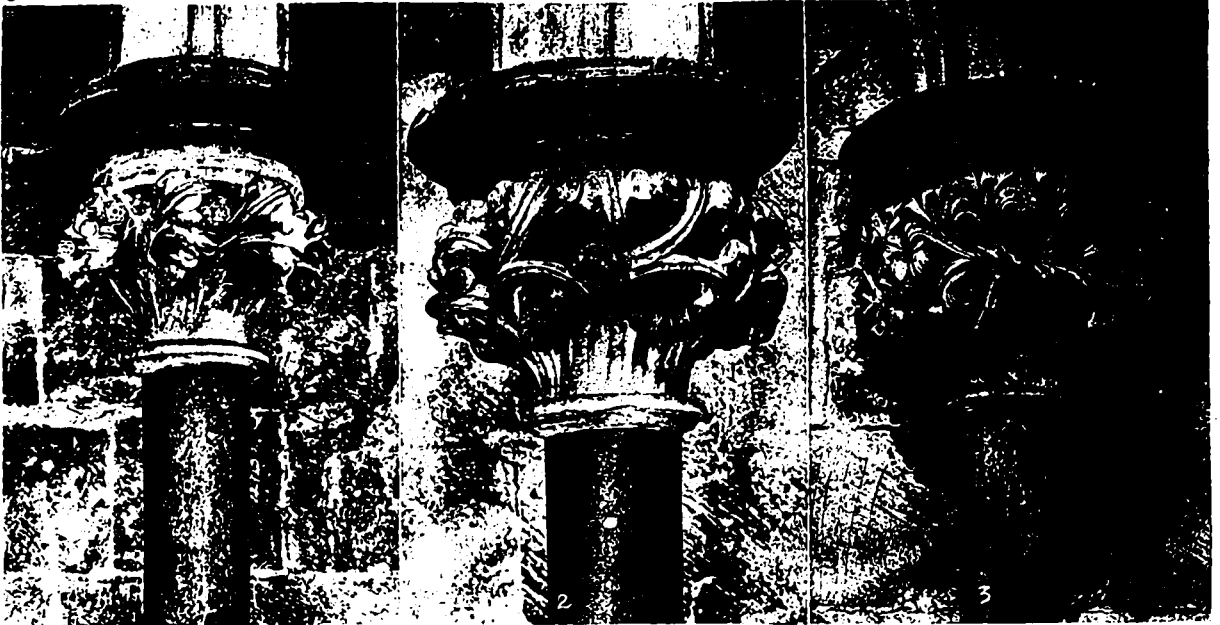
aisles. Opening into the north aisle, opposite to Bishop Russell's Chapel, is another chapel of similar design, to the memory of Bishop Fleming (d. 1431). Each of these chapels has three wide windows with perpendicular tracery, between slender buttresses richly carved and finished with crocketed pinnacles, the battlemented parapets are enriched by carved work of various patterns.

The choir stalls of oak, which occupy the west end of the choir, next the organ screen, and the north and south sides of St. Hugh's choir up to the eastern transepts, are crowned with spire-like canopies of great beauty. They are of late decorated date.

They have no equals in England for "variety and beauty of design and accuracy of workmanship." The niches in these canopies, long vacant, are now occupied by statuettes of the saints of the Anglican Calendar, and have been put in in recent years and are all voluntary offerings. Each stall has a hinged turn-up seat with a



1. Bases of Columns, West Door. 2. Capitals of Columns, South Choir Aisle. 3. Column Base, Gallilee Porch.



1. Capital in Arcade, North Choir Aisle. 2. Capital in Arcade, South Choir Aisle. 3. Capital in Arcade, South Choir Aisle.



Rich Foliage Stone Carving in Easter Sepulchre.



1. Caps and Crockets, Angel Choir. 2. Caps and Crockets, North-East Door. 3. Caps in Triforium of Nave.



Capitals of Columns in Vestibule to Cloister.

projecting bracket on the under-side, known in old times as Misericords or Misereres. This name they gained from being merciful provisions for the relief of wearied human nature, offering a partial support to the body during the protracted services of the earlier church, without adopting the attitude of sitting during prayer, then considered irreverent. Those who used them, however, had to beware lest drowsiness overtook them. If the body was thrown too far forward the seat lost its equilibrium, and the sleeper was in danger of being hurled down, to

The eastern transepts are divided from the choir by beautifully wrought iron grilles.

The cloisters are entered from a door in the north wall of the northeastern transept, and are connected by a vestibule of the decorated period, having windows of geometrical tracery.

The cloisters, erected during the episcopate of Bishop Oliver Sutton (1289-1300) are small, but excellent examples of the decorated style, having unglazed windows of graceful tracery on three sides. They are vaulted in



1. Capital of Pillar, South Transept. 2. Capitals in Triforium, South-East Transept.

his own disgrace and the derision of others. All these misereres leave quaint carvings, some of sacred subjects, some of grotesques.

Beyond the stalls, on the south side in the bishop's "throne," the cathedral or official seat of the bishop, from which a cathedral receives its title. It was erected in the last century from the designs of Essex. The exquisitely carved oak pulpit opposite the bishop's throne on a marble base, and surmounted by a very elaborate canopy, was erected in 1866 from the designs of Sir Gilbert Scott.

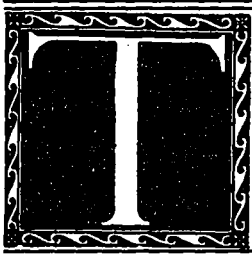
oak, and have carved bosses at the intersections of the ribs. The north side of the cloister is occupied by the library, which contains many valuable documents and books. It was built by Sir Christopher Wren in 1674 in the classical style, not at all in harmony with its surroundings, but still, an excellent work in itself. It consists of a gallery 104 feet by 17 feet, supported on the south side, over the cloister, by doric columns.

A few facts and figures concerning the cathedral will
(Concluded on page 64.)



Capitals, Clerestory, South-East Transept.

Detail of Carving, South Choir Aisle Door.



THE ARCHITECTURE OF CANADA

By PROF. PERCY E. NOBBS

"Art is a simple and natural human activity, not an inexplicable quintessential mystery."
Paper read before Third Annual Assembly R.A.I.C.

I FEEL VERY GRATEFUL for the honor of this opportunity to address you on a subject so intimate, so general and so important to us all—"Canadian Architecture"—the work of our heads and hands and hearts. And as Canadian architecture is as yet a small affair, though, I verily believe a thing of mighty promise for the future, I hope I shall not bore you if I deal very little with its facts and rather profusely with its theories. Theories are, of course, invented to help us to "bear our ignorance," so I take it they are the proper medium wherein to discuss that which is not yet.

And before going any further it is necessary, in justice to those who will disagree with what I have to say, to state the fundamental artistic creed underlying what follows, so that they may at once perceive wherein "their doxy" and "our doxy" differ, and leave it at that without further ado; for nothing in this world is less profitable than an argument on matters aesthetic (and I would add on matters ethic) when the disputants erect their retorts on foundations different in kind.

The Epicurean sty in which those wallow who eternally do sing "Art for Art's sake" and base their aesthetic satisfaction on the mere charm of the senses, is an unsavory quag wholly unfitted to be considered even as a possible site on which to rear our structure. This Hedonistic Theory which measures the Arts in terms of pleasure has, unfortunately, permeated the literature of the last century so that it is now in all men's minds—and that is why the public and the artists of to-day are more thoroughly out of sympathy with each other than ever they were since history began.

Purpose of Art.

And even less suited for a foundation do we consider the clouds of mystification where the idealists flap their undisciplined wings in search of artistic delights "to utterly utter" to be expressed by the aid of any known syntax. To come to the point let me state briefly that Art is a simple and natural human activity, not an inexplicable quintessential mystery, that its purpose is always expression, that the subject matter of this mode of expression is that whole range and gamut of emotion and sentiment, and that the means employed—the raw material of this expression—is sensuous pleasure. It is by arrangement that this raw material undergoes its transmutation into that very elusive thing called beauty, best described in the words of Santayana as "pleasure regarded as a quality of a thing." Pleasure and pain are, as it were, the light and shade of consciousness. Beauty you see is just a state of mind. Without producing that state of mind the Arts are dumb.

Now pleasure and beauty and arrangement and emotion and expression are all matters that take a thousand pages to define in the light of at least five sciences, physics, anatomy, psychology, ethnology, and archaeology, and all these sciences have made vast strides in the last twenty years. That alone would justify an attempt to modernize the theory of Art.

An example will make this common-sense modern view of the aesthetic problem clear. I suppose we all know that terrible architectural tragedy, Old Newgate Prison (recently pulled down to make way for the stately

new Old Baily). Poor Peter Ibbotson knew it also in his early dreams; one of the grandest achievements of our art. Truth, not in the minor veracities merely of having stone walls on more than one side, and windows and doors where they are wanted, but truth in the very sentiment of its dreary purpose.

This subject was a goal, and there is every reason to believe that as goals were done then the thing was up to date and scientific and fulfilled its purpose. But it did far more. It expressed not only its purpose but the sentiment with which the great sympathetic soul who designed it, Mr. Dance, to wit, regarded that purpose, so that no one could behold its grim distorted arches without becoming a partaker with him of the horror of crime and the yet greater horror and responsibility of retributive justice. There you have the activity to express a sentiment so that others may realize and hear it with you and so ease your pain, which accounts for so much of the Art of the world, and the thing is done by the arrangement of pleasure sensations, for every truly cut stone with its rustic face making play with the blessed sunshine is a potential pleasure. For all its tragedy we experience the sense of a peculiar satisfaction and interest as mere beholders; we are infected with thoughts and feelings not our own which we intimately associate with the object arousing them. The very ugliness of the thing is beautiful—especially beautiful.

As another example take the Percy Shrine at Beverley from the heart of the Middle Ages. This monument, to a lady of the Percy family, in the Minster Church at Beverley, is in very truth a monument to the spirit of Edwardian England. It must date from about 1370. In structure it is nothing more than a canopy above a tomb, set between two of the thirteenth century piers of the choir arcade. But what a canopy! No period has produced a conventional folias at once more stony and more vital, than the abstract vine and hawthorn of English fourteenth century art, and nowhere do these flowers of a well-ordered fancy show more brilliant handling or better composition in relation to the structure they adorn. The vaulting, the tracery, the enrichments, the grotesques and the figure sculpture of this one small monument would provide rich inspiration for the detail of a whole cathedral, so lavish is their invention. To perfection of execution and an exuberance of imagination is added an astounding liveliness of insight. From the kindly dignity of the Christ to the humors of a grotesque orchestra and the fine frenzy of the wave-maned lions, there is rhythm and life and power and feeling or fun in every stroke. What human sympathy those carvers had, what warmth and temper. But the monument is no chaso of sporting feeling. The structure is as individual and emphatic as it can be, a simple climax of effect enriched to the very limit of ingenuity, yet with no dissipation of interest, an orderly unit after all. This treasure house of gems of fourteenth century thought and feeling, when regarded as a whole, is a very epitome of the pomp and pageantry of those heroic days when England was newly made and her heart beat high with the zest of feudal chivalry. The tombs of the great in that period alone evince this spirit of gallant pride and gay virtue—a very scorn of death

but a happy scorn, with no bravado and much of faith about it.

Now these two works of architectural art are typical. In any work of Art there are three main elements—the individual subject, some bank, church, theatre, love song, elegy, landscape, portrait, goal, tomb or whatever it may be. Then there is the far more important matter of the sentiment with which the artist invests that subject—the life and meaning he puts into it. And lastly, there is the element of sensuous beauty in his medium expression. This last is all a matter of skilful arrangement. Form, mass and color are what we use. The musician's code is made up of aural sensation, as in the last resort is also that of the poet. But this indispensable element of sensuous beauty on our own or any other art is the mere instrument of art, not its aim or object, and the subject of a work of art is after all little more than an excuse or opportunity. It is the sentiment of the thing that really matters most, and the one criterion by which to judge of the excellence of a work of art is its potency to infect the emotions of the public it is made for.

A little illustration will show you what I mean by artistic expression in this connection, for there is no art in merely expressing. Such expression merely informs us and leaves us cold. But when form or arrangement enters into the expression its effects are magical. It was many years ago this point was first brought to our attention by an old painter. "If you are leaving the country," said he, "and sup at a restaurant with the lady of your choice before train time, and say, 'Waiter! Wine list! Thanks! No. 93, Moët & Chandon! That's right,' there is no art, although the mere act of incurring the expense has expressed an emotion. But if you say or sing:

"Gae bring to me a pint o' wine
And put it in a silver tassie,
That I may drink afore I gae
A service to my bonnie lassie."

that is art, and every man with bowels of compassion who hears not only knows just how you feel, but feels that way himself."

Now this is, I believe, a common-sense view of the great aesthetic problem. Any mere bank director or cabinet minister or dry-goods clerk could by applying it get an infinite insight into the arts, but persons of these classes, as a rule, much prefer, if they deign to give arts a moment's attention, to content themselves with what they call their likes and dislikes; to approach the arts, that is, as we approach a bar where mixed drinks are sold, for the sake of just as much sensuous pleasure as the arts convey. And the worst happens when artists are content to put themselves in the position of purveyors of sensuous pleasure. If a building only "pleases the eye" as the phrase is, it fails utterly as architecture. And how many buildings there are concerning which that is about all that we can say. Now, the builders of past generations have succeeded marvellously well, not only to express through what may be called pure design (i.e. structural truth and honest relation between planning and elevating, etc.), but also through the use of ornament added thereto, a wealth of feeling and emotional thought.

Architecture and History.

The styles of various periods convey to us the very spirit of the ages that brought them forth. If no Greek or Latin or Early English literature had come down to us we could still reconstruct from extant monuments not only much of the actual history of Greece and Rome and Mediæval England, but what is far more important, the sentiment with which these people at certain periods regarded life in general. But more than that, going behind the generalization of periodic style, we can realize the very spirit in which various types of buildings were wrought, and more yet, the individual feelings of the individual man who gave character to individual buildings. For architecture is essentially monumental, history writ large and lastingly.

And from such a point of view it is a matter of no small satisfaction to our national interest to realize that

at certain periods Englishmen, Scotchmen and Irishmen had sentiments to express and a power to express them in no sense inferior to the best in the glory that was Greece or Rome or Italy or France.

And perhaps our art, so near to nature in the matter of materials and science, so close to humanity in her dependence on social conditions, has expressed better than any other art the peculiar characteristics of nationalities. Certainly it is the most democratic of all arts—no affair of luxurious personal patronage or public treasure houses, but a very adornment of popular life both private and public.

When men have had great feeling to express and great power of expressing them, happily joined with great opportunities, styles have been developed and evolved and brought to perfection, and from these we can deduce something of the everlasting laws and principles of our art in the light of which to model all sorts and conditions of designs.

Think of a real cosy Jacobean dining room in some old English manor house. With you I know I need not dwell on the elements of such a composition with any searching description. You know how the two great oak beams carry the lesser joisting of the ceiling, and how the plaster is put up between them. You know the mullioned with its leaded glazing and iron casements?—the broad brick hearth on which the crimped iron dogs keep quiet company within the delicately moulded jambs and lintol, the panneling on the walls, the heavy floor boards, the tapestry at the end, the tall-backed chairs, the squat, pot-bellied table legs—yes, you know! And it is all to speak to you of a certain kind of life and character which, as I am a builder and not a historical novelist, I shall say nothing more about.

Without a gradually evolved tradition behind it, in those chief matters of scale and proportion, and a naturalness in construction, the thing could convey no impression at all. The ultimate laws of design are all respected there just as truly as in the Doric temple or the Early English abbey, the great Italian palazzo, or city church by Wren. The thing possesses an essential unity of its own, not fortuitous or accidental.

Now, when a firm of decorators or any other style monger, whether tradesmen or architect, offer to fit out anywhere on the face of the earth, "from Greenland's icy mountains to India's coral strand," a Jacobean dining room "just like that" they are doing a very clever, a very scientific, and perhaps a very honest thing, in that they are acknowledging that they can't design worth a rap, but they certainly are not creating a work of art as they are apt to pretend, they are not expressing a sentiment which is very much to do with the subject—a modern dining room—and in ninety nine cases out of a hundred such a room has a false beam ceiling made of boards instead of logs. The thing would be partly legitimate if the owner of the room had close family association with just such a room, and if the constructions were all quite true and also natural to the district in material and technique. "It's clever, but is it Art?" Certainly not. But the original old room had something of the good sentiment of all English rooms of all English centuries, and as all good things that are English form, I believe, an essential part of the inheritance of this land and people, I make no apology for stating that something of that sentiment should be expressed in many of our Canadian dining rooms.

Schools of Architectural Thought.

But how is this to be done? Especially if we are not to imitate good old English things as they have been left to us. It is a matter of the spirit, not of the letter of the law. Extract the sentiment from your traditional models and leave alone the mere sense of forms. So may you arrive at the higher beauty of true design. Of schools of architectural thought to-day there are two (and I purposely ignore the claims of the Secessionists and Art Nouveautists to form the third. Let the heathen rage!) The great exponents of the academic school recognizes

the eternal principles of design and composition, the everlasting unities, and they use for purposes of exemplification and instruction a convenient cut and dry set of forms—the order and arches, etc. They fail utterly to interest their votaries and neophytes in the technique of the crafts. To them a column is a column, whether made of big stones or little ones, plaster wire lathe or pine boards, cast iron or trellis work, and their lintol may be one stone or a hundred pieces of terra cotta. On the other hand, the non-academic school knows nought of the grand manner and cares still less about the abstract proportions of columns, so they are big enough to last, and do their work in whatever material they have their being. Craftsmanship and the regeneration of ornament and decorative art are their main cares. This they hope to attain chiefly by the study of mediæval technique.

The stronghold of the academic school is, of course, the Ecole des Beaux Arts in Paris, and as there is wonderfully little building going on in France its fruits are to be found chiefly in the United States of America. And London is the stronghold of the modern craftsman architect, with his imitation guilds and highly colored politics.

Now, if the academic school could be induced to pay more attention to the far-flung vault of Beauvais and the jewelled walls of Blois, there would be more hope for them, and if the English exponents of architectural culture would realize that the grand manner as practised in Egypt and Babylon and the cities of Alexander's Empire and the Imperial Rome and gay Versailles, has that in it which would impart a discipline to their planning and a coherence to their compositions, they, too, would gain in power of expression. But the rival systems are too deeply rooted, each in its own conceit, to afford much hope of widened horizons.

To come nearer home, there is an interesting development going on. The Anglo-maniacs of New York have so far challenged the supremacy of the Beaux Arts influence that in a recent novel the author makes bold to write the following:

"Architecture!" said Smagg one day, "there's been no such thing since that first drunk and disorderly Dago tripped over and smashed Corinthian capital and saw it for the first time after he and the rest of 'em had been messing around it for a thousand years. That there Renaissance you have been talking about was nothing but a surgical operation for the emulcation of thought, the first idiot 'correspondence school' for the suppression of intellect. Fenestrations and ratios! Men were so crazy about their foot rulers they'd rather measure an old cornice than figure out a new groined arch. It took brains and blood to build Korak and the Parthenon and St Marks' and Durham and Chartres! But these modern monkeys are only working out puzzle pictures for fools! A man would think the Parthenon had gone wrong and come over and littered all over Manhattan! Greek temples for bun-shops, Greek temples for subway entrances, and Greek temples for garages! Judging from the Pennsylvania Station, how far have we advanced from the Taj Mahal? Is the Singer Building better than the Doge's Palace? And how about that bum cathedral, that garbage box with the badly fozzled approach? Is it up to the standard of any little old parish church in England?"

"Oh, I've been talking with these architect-chaps who think on a scale of one sixteenth of an inch to the foot, and I know what's wrong. There's a bucket shop called the Ecole des Beaux Arts over in Paris where the little Yankee kid goes and gives up the last bit of small change of feeling they have, and they get in return a bunch of stock certificates in a bum gold brick mine that was played out before it was ever dug, and is now nothing but a *rive gauche* Rathskeller where the menu is harsh, sausage and dope. Then they chest themselves back over the Atlantic, and the ha' seeds of high-life gurgle, 'Oh, aint them colyums and cnsolos and cartouches elegant!' That's all they get—a Parisian version of a Renaissance

misunderstanding of a Roman translation of the original Greek! Gawd! every time I see an Ionic column I know its a vulgar gravestone in memory of the unknown dead. Yes, I know there's a few men trying to do Gothic, though they ain't got no Gothic minds. Well, they're butchering a real style, anyway; and they're to be pitied, because they know right from wrong. But these academic asses, I envy them. They don't even know there is any such thing as right!"

(1) *Lady Mechantc or Life as It Should Be,*
by Gilett Burgess.

Should Not Imitate U.S. Designers.

The great leading influence of McKim in American taste has tended latterly towards Roman Renaissance, rather than French models, and from that it is but a step to the sobriety of Georgian tradition, the vogue for which is undoubtedly on the increase. But architecture in the States is not a question of evolution of styles, but merely of the institution of fashions, and that is a matter wherein we should do well to fail to flatter our great neighbors by imitating their example.

If the true teaching lies, as I believe, somewhere between the Beaux Arts and the Arts and Crafts, we are indeed well situated to develop a sound foundation for the future structure of Canadian design. Though the French-Canadians have little enough in common with Parisian ideals, they must always constitute a channel through which French influences, both old and new, will find their way to us and we can rely on the pushful beaux-artist from across the border not to let it be his fault if our cities lack splendid follies, bedight with columns and cartouches. The English culture of the crafts is also with us, and gives every promise of forming a strengthening tie to the bond of our British ideals. Let us hope that our own academically inclined designers will learn to realize that wrought iron and cast iron are two perfectly different things, and that if the tender comes in too high to do their will in marble, they will at least take the trouble to redraw the details before calling for its execution in mahogany; and also that the arts and crafty ones among us will try and find out the meanings of the words "scale" and "proportion," and apply that knowledge even in their efforts in opal glass.

Tradition grows it cannot be made, and with reasonable goodwill it might grow very quickly among us. Without tradition we cannot evolve an art at all and must content ourselves with going on being clever. But if we can see our way to attaining a tradition that is only one matter out of many affecting the future of our art in Canada.

The Question of Labor and Workmanship.

Labor and artizanship—these are the most discouraging questions we have to face. Trades unionism, in its early days, did much good, but of late it has tendered to produce a degrading slavery which robs the nations of the best effort of their sons of toil. I try to know, and I hope I love my partner the working man, but I feel the realization of his pet political hobby would destroy utterly what is left of the soul he once had in abundance.

Ruskin and Mauris sought to regenerate the arts through the revival of the happy conditions of the Middle Ages, when a man's chief pride was in his work, as what time has left of it to us most clearly shows. But since labor has made unnatural laws for itself, to exist by skilled employment or the strength of the hand has come to be a humiliation. Ruskin and Mauris failed egregiously. I suppose we architects realize more clearly than other people that the working man, when taken individually, is not as black as he is painted by any means, and that if his master, the contractor, on the one hand, and his master, the union, on the other, would only let him, he would be willing enough to develop a higher ideal of execution and ability to think for himself. I have no hesitation in stating that in the ordinary trades—stone-cutter, mason, bricklayer, plumber and joiner—this country is rapidly going back to a barbarous standard. Eighty,

sixty, forty, yes, twenty years ago, all these things were better done in this country than they are to-day. For neither love nor money can I get a ceiling put up in Montreal that will not crack inside three months, and Montreal has lots of ceilings half a century old without a shake in them, and so all through.

Of course, in ordinary work to-day we must just do without ornament and decoration (which quite as much as reward are able to sweeten labor) except mere enrichment of the most perfunctory, cast-by-the-yard, stamped-by-the-mile, kind. Yet, but five hundred years ago, any cottage, any village church had lavished upon it a taste in design and a skill in execution which would to-day obtain for its author a reputation as a past master.

Well, we must adapt our work to the conditions of our age, and do without a great many nice things, and above all, we must avoid the temptation to resort to imitations and shams of better things. That, I think, is the great blot on the taste of our time here—that neither architects, nor contractors, nor workmen, nor clients, nor the general public seem to resent the most palpable sham and hypocrisies, and it is in the churches that the defect of stage carpentry instead of building is most in evidence. Canadian churches are sometimes well ventilated, usually well heated, nearly always comfortably pewed, and invariably full of structural and material lies. In notable contrast to the cheapness and vulgarity of our places of worship of all denominations is the good taste and extravagant outlay (and these things do not necessarily always have to go together) on the banks of most of the financial corporations. I am not here to judge between the banker and the parson on the question of which vocation is most necessary. Every community builds its best monuments in honor of that which it most reveres; that has been true since the dawn of civilization. Undoubtedly the future of Canadian architecture is bound up with the evolution of the banking hall. There has been no visible effort in any section of the community to advance the art of church building, which has from the beginning of historic times been the main problem of the art.

We shall therefore expect that the sentiment of unbounded wealth, rolling prairie, limitless forests, and all that sort of thing, converted into barrels, nay, cargoes of gold, will yet fail to evince itself in Canadian architecture.

Just as the fourteenth century architecture of our race is inspired in the main by the sense of pageantry and chivalry—the zenith of feudalism in all its glory—while the temper of our art in the thirteenth century was by contrast an affair of disciplined monastic refinement, and in the fifteenth a decidedly bourgeois affair, so we must expect to see a barbaric plutocracy as the backbone of our social system affecting our art just as did the abbot of 1250, or the baron of 1350, or the burgess of 1450. But that is neither your affair nor mine, gentlemen; what is "our affair" is to express in our designs the temper of the time we live in and, just for the initiated, a little of what we feel about it; and we are beginning to do it.

Canada and Architectural Art.

But perhaps I am dwelling too much on the difficulties before us and not saying enough about the great prospects for architecture as an art in this country.

In art as in war it is the opportunity that makes the master, and surely nowhere in the world is our profession better situated. Study and training can perhaps lay the foundations of skill in design, but it is only by actually designing and carrying out work that a man can master this art, trade and mystery. Wren was about in middle life before he built anything. His early efforts were neither better nor worse than those of other much younger architects, but he got the opportunity, and he had the head and the heart to profit by it. And Michel Angelo had architecture forced on him late in life, and his earlier efforts were preposterous absurdities, but he profited by experience, lived a great age, and abandoned all the other arts of which he was a master for "the mistress art," and his masterpiece, the Dome of St. Peter's, means something.

Truly, we have the opportunity if we have but the power to avail ourselves of it. Arid apart from this question of actual chances of practising, we have another very great advantage in our miraculous climate. A friend of mine considers the climate, or rather climates of Canada, excellent, but complains that we have too much of them, and I believe there have been very few normal days during the last ten years. To the climate I shall add the material available and their market forms, and to the materials I shall add the technical devices for handling them.

Here we have three sets of conditions unlike anything that our ancestors who built so well know. Surely we can rely on these to help us out of the rut of *style mongering* towards the evolution of sane design. Originality in art is not a thing worth striving after for its own sake, and when so sought is fatal to success, but inventiveness has always been the life and soul of our art, and we have got to be inventive whether we like it or not.

It seems from the look of the plates in the British professional press to be very difficult to be at all inventive over there. The Georgian plaster ceiling and the Elizabethan plaster ceiling seem to have come to stay. The mullioned country house and sash-windowed country house seem to be fixed quantities down to their least details, each type maintaining its respectful relation to the work of 1600 and 1750, and this is not unnatural since the climate and materials are as they were in 1600 and 1750, and the type of window and roof thereby evolved to perfection at these dates cannot be improved upon.

But we should in establishing our type derive great benefit from the fact that we have to invent our own solutions of the roof problem and not accept our great grandfather's, and as to the window question, there is no really satisfactory solution in sight yet that I am aware of. If we remember that it is the roof and the window that makes the architecture, we see then we have our work before us. The feature of the English architecture—chimneys, parapets, bays, ranges of lights, rain heads and all the rest of it, are absolutely inappropriate for our use. But the simple inventive spirit in which these things were evolved and welded together in vernacular use, and the reserved but kindly sentiment which these evinced, we can surely take to heart and apply now.

Our predecessors in this country up to about 1825 were doing pretty well in this matter. The stone houses of Quebec and Nova Scotia, and the clap-board houses of New England showed real evolution of style, and in them a good many of our problems were solved at an early date. The lamentable thing is that the secret has been lost, and we have now to substitute architectural education at universities and other temporary expedients till such time as it is regained. To think that neither for love nor money could such a thoroughly sound piece of work, sound in taste and sound in construction, be put up to day in any town or village throughout this broad Dominion as can be found, once at least in five miles, on the shore all the way from Mulgrave Straits to Ottawa City, and all dated before 1840.

Scholarships.

Now, when I say we cannot borrow a tradition ready-made from Europe or anywhere else, I must not be understood as deprecating the study of European architecture. It is for this very reason that the study of ancient architecture can do us nothing but good. The master builders of 1370 did not study any ancient architecture at all, but then they had traditions, and the same applies to the master builders of 430 B.C.

When, for a variety of causes, which it is quite beyond the scope of the present paper to analyze, the eighteenth century tradition was lost, in the nineteenth century revivals and scholarship was resorted to as a substitute. Artistic achievement in design ceased altogether for the space of half a century and more. But certainly we need have no fear of scholarship as long as we do not misuse it and regard it as technology. The masterpieces of the past, if approached in the light of the theory with which

we started, can show us many a useful principle in design—how to express sentiment by means of the beauty that is in stone and brick and other common things. And besides that, they can fill our hearts with the very soul and spirit of many a bygone poet in stone, when for a time we drop the enquiry of how the thing is done and are content to apprehend the resulting meaning, for to that end were these things created.

But we allow the false hedonistic theory of art to possess us, and what can scholarship do for us? We would then approach the very Parthenon not for its meaning but for a sensuous satisfaction. We would conclude that this building was very successful because so many people "liked" it, and we would assume some magic virtue to "please" in the proportions of its part as such and probably miss the spirit of the thing as a significant whole. Then, in the hope of giving as much "pleasure" as is possible in this sad world, and getting as much credit for it in fame and dollars as we could, we would proceed to put up things as like it as we could—which I believe is the practice of fellows of the baser sort who, having eyes, yet do not see. Scholarship pursued in that spirit leads nowhere.

Responsibilities of the Architect.

Our responsibilities are immense. Every time we put up a meaningless ornament, a blank cartouch, run a moulding round three side of a stair wall in plaster and the fourth in cast iron, build a stone front with brick flanks, ryle ashlar joints in Caen stone cement, make a false construction or emulate a superior material, we prostitute the ideals of our art. All these things come so easily, naturally and logically once we accept the theory that is in the function of the arts to please. But when art is recognized as the most potent of modes of expression, these devices fail utterly.

It may be some time before the new philosophy of art gains general acceptance among designers. It will be longer still before it becomes common knowledge, and till then our lot will remain a hard one, out of sympathy with our public and our executant labor.

In the present lamentable state of ignorance, or rather positive misinformation on the subject, beauty is taken to be a matter of prescription like a peach melba or a mint julep. "Take four, Ionic columns, put them in a row with the caps uppermost, flank with ashler pilons pieced with bull's eyes, garnished with cartouches on top; over the column place an entablature with blocking course or parapet to taste, serve as a bank. If the columns are large and ripe, flute them, roof with a skylight powdered with snow and serve as a picture gallery. If the columns are small and meagre, then pierce the pilons with windows as required and serve as bank manager's house. *Note.*—The other ingredients will in all cases be proportionate to the columns as explained in preliminary chapter of this cook book."

There is probably a really best way to build a bank of given size in Canada, just as there is to build a temple of given size in Greece, or a parish church in England. Then again a post office, a museum, a private house, should be very different from the bank, temple or church, and from each other, not only in size and form, because the practical requirements are different, but in sentiment and expression, because the ideas associated with these things are so very different.

Yet if all these things are in Canada and done in one decade, they should express that to a certain technical similarity. Now, I think we all have a good deal to learn, because we have not established the type of our cycle very clearly, and we are still at sixes and sevens with our traditions. The French, who profess to know, say: "L'Art c'est d'etre toujours soi meme."

These, gentlemen, are the conditions of our competition, designs should be sent in to-morrow and the award will be made on doomsday.

A Canadian Architecture in 50 Years.

I verily believe that the next fifty years will decide the type and character of Canadian architecture for cen-

turies to come. Is it to become a blind, second-hand, late-in-the-day imitation of the art of luxurious cosmopolitanism, which passes muster in the United States? Or is it to express something distinctive and characteristic of our aspirations and institutions and the sources from which they spring? If we have any hopes or intentions towards this latter alternative, it is high time we bestirred ourselves to that end.

The first and most essential step to take is the institution of travelling studentships that our young men may go to Europe and see for themselves that the traditions of our civilization are something more than the tricks of manner invented for the delectation of Louis X. and watered down in the practice of the U.S.A. offices to which our best draughtsmen drift at present for wider experience.

Such scholarships should involve at least as much attention to the architecture of the United Kingdom as to that of France and Italy.

The next matter to consider is that of museums. The splendid model of the Trocadero Museum of Paris should find its counterpart in each of our great cities. At the Trocadero there is a historically arranged collection of many thousands of casts and full sized models of French architecture and sculpture with subsidiary collections representing the typical achievements of different countries. It has been my endeavor for several years past to make such collections possible for us. The great difficulty has been the lack of initiative at South Kensington, where one can buy a cast or photograph of almost any subject of art in Europe in five minutes, and where neither for love or money can you obtain a photograph of an English building or cast of an English archmould or niche figure. It is therefore with very great satisfaction that I can announce to you that a beginning will be made at the Victoria Memorial Museum at Ottawa forthwith, and that within a couple of years I hope to see there a collection of architectural ornament and sculpture in three dimensions of equal scope.

A.—Classic and Italian.

B.—French.

C.—English—at last!

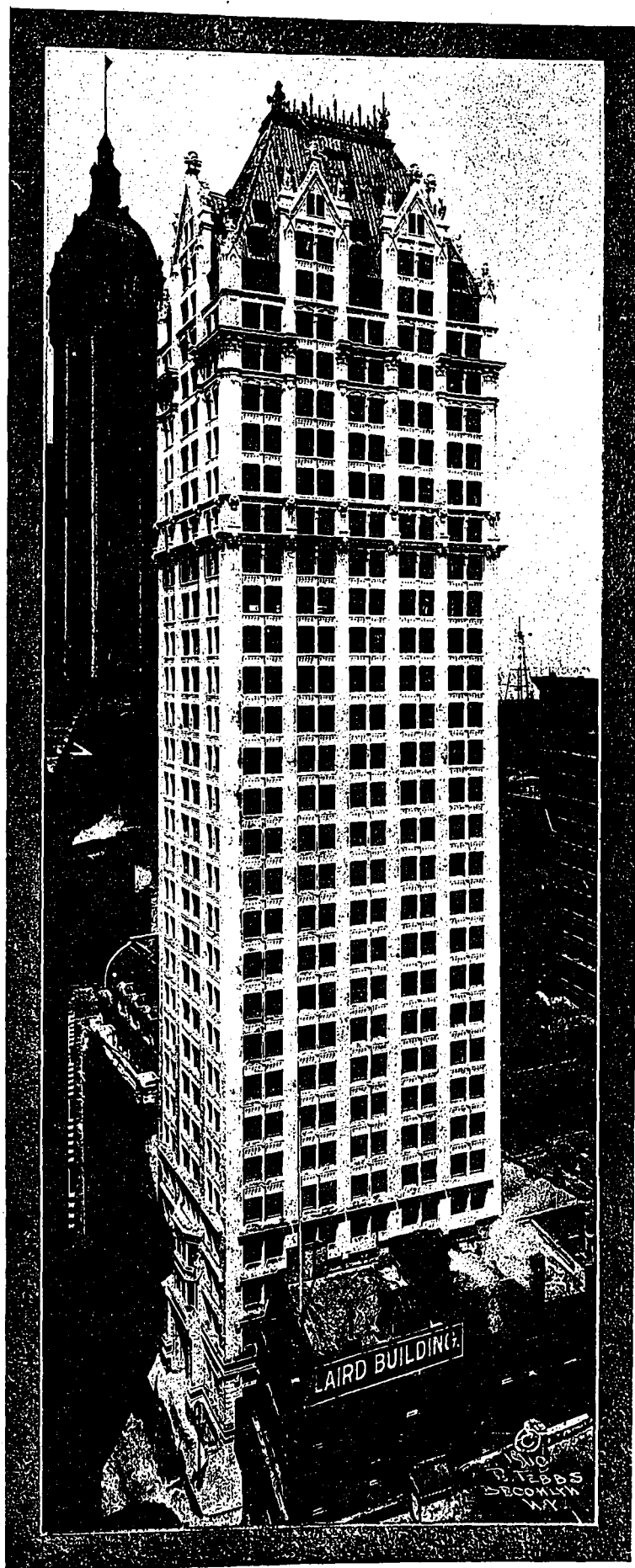
Also, that the museums now in course of erection at Toronto and Montreal will ere long be provided with a properly selected set of casts and models to illustrate the evolution of British art. Let us hope that the other cities will see their way to provide themselves with similar collections. A set of invaluable examples varying from casts a couple of feet long to models, say, 14 feet x 6 feet x 4 feet can be got for a mere \$5,000. How often is such a price paid for an indifferent and perhaps dubious example of the Dutch daubster's art. Such a collection as I propose would be an educational force of immense value in any community to the designers and to the general public alike.

A third matter would be the establishment of a proper system of indentured pupilage. Our young architects learn their trade too cheap, and like anything else that is too cheap, what they get in the deal is often not worth having. I am a strong believer in the good old system of apprenticeships in the interest of the student, the principal and the art.

We are prone on this continent to expect too much of schools of architecture at universities. The result is that such schools have to do a lot of teaching which is mere technology, and are unable to find time in the curriculum for the foundations of culture so essential to our vocation as artists and as professional men.

Gentlemen, I have endeavored to enunciate a plain, common sense, theory of art, which would guide us to use our art rather than to play with it—to express rather than to please. I have endeavored to suggest what some of the main meanings and feelings contained in our art might be. I have enumerated the disabilities under which

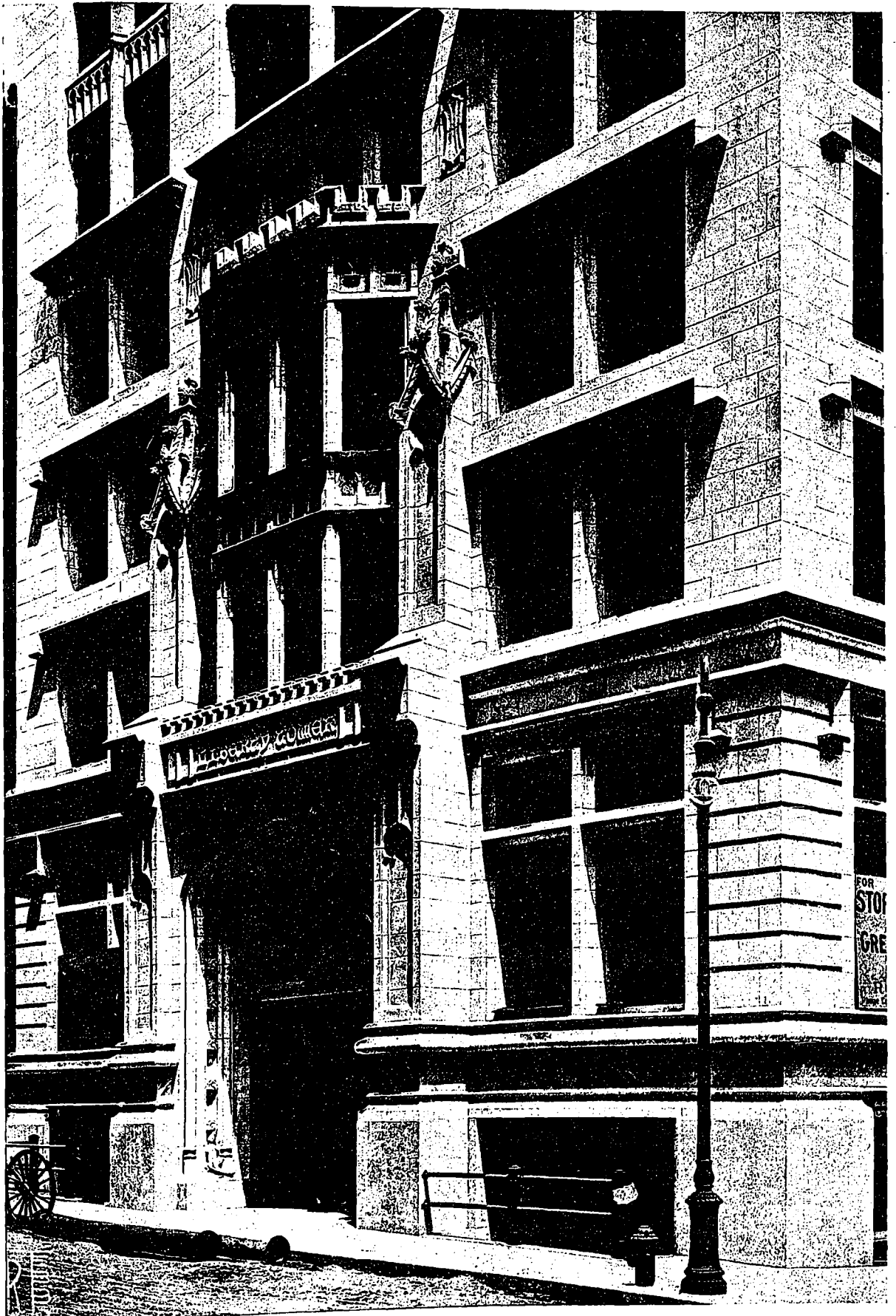
(Concluded on page 64.)



Liberty Tower, Liberty and Nassau Streets, New York.—A Recently Erected Thirty-story Structure which Beautifully Illustrates the Successful Adaptation of Gothic Detail to Tall Office Building Design, and Demonstrates in a Practical Manner the Extent to Which Terra Cotta Is Being Employed in the Field of Modern-Day Commercial Architecture. Henry Ives Cobb, Architect.



Liberty Tower, New York.—View of Upper Stories, Showing the Detail of Cornice and Pinnacles, together with the Treatment of Roof and Apex. Henry Ives Cobb, Architect.



Liberty Tower, New York.—View of Lower Portion of Structure, Showing the Detail of Entrance and Treatment of Bay Forming the Central Feature Over Doorway. Henry Ives Cobb, Architect.



THIRTY STOREY OFFICE BUILDING IN GOTHIC DESIGN

Liberty Tower, New York's latest skyscraper.—An interesting study of Gothic detail as applied in the architectural treatment of a modern business building.

A QUARTER OF A CENTURY AGO speculation was rife as to what would be the ultimate effect of the tall office building, or, as the more common allusion expresses it, the skyscraper, on commercial architecture. To-day it is a quantity less conjectural, as the skyscraper has become sufficiently common to admit of conclusions more definite and affixed.

Its advent, which demonstrated the ingenuity of man in meeting even changing conditions, could perhaps be consistently regarded more as an engineering than an architectural undertaking. Originally adopted in New York, where the capabilities of steel fabricators first made possible the erection of buildings greatly in excess of the then present prescribed height, it was an experiment purely economic. Restrictions in the way of natural limitations, coupled with a rapidly congesting district and a growing geographical and commercial importance, gave the city practically no other alternative but to build upwards. Since, then, however, and under circumstances less mandatory, excepting, perhaps, the case of Montreal, where the condition is somewhat analogous, the construction of the tall office buildings has been generally adopted as a means of centralizing business and exploiting to the utmost increased land values, until it has become a conspicuous fixture closely associated with the growth and development of cities of even secondary importance.

The constructive formula once established, it remained with the architectural profession by applying approved principles of design to save the skyscraper from a prosaic fate, give it grace of outline, symmetry and eloquence of expression, and in architectural writ to tell the coming generations of the enterprise and art of people who have gone before them. For, if the tall office building is nothing else, it is at least a splendid monument to the commercial and industrial enterprise of the present age.

No less a person than Professor S. D. Adhead, of the University of Liverpool, in a recent visit to the American metropolis, declared that the street architecture of New York was the finest of any architecture in the world, that there was nothing trivial, and that everything was on a grand scale; and while there is undoubtedly a vast difference of opinion on this point, it is, nevertheless, true that New York is a city of *modern babels*, and it might be added incidentally, owing to its cosmopolitan character, a city also essentially polyglot.

Being the first to adopt the skyscraper as a means of solving a problem one time peculiarly its own, it is only natural that one should turn there for some of the best examples of tall office buildings, both in construction and design. That work of this character offers a fertile field for architectural endeavor, is made abundantly plain in the splendidly considered Liberty Tower building recently erected at the corner of Liberty and Nassau streets. Rising to a height of thirty stories, and terminating with a French attic roof with dormered windows, this handsome structure beautifully illustrates the successful adaptation of Gothic detail to tall office building design, and it is regarded by many to be architecturally the most consistently considered structure of its kind that has as yet been erected. It is as much the adaptation as the style itself which gives the structure its eloquence of outline and beauty of expression. There is no excess of ornamentation or over-studied effect. Instead the detail is simple, rich and expressive, the effect of the treatment being at once majestic, dignified and refined.

The construction of the building, it is needless to say, has been carried out according to approved fireproof

methods. The exterior is of granite and marble to the sills of the second floor, with white mat-glazed terra cotta above, and the roof is covered with rolled sheet copper. In addition to the superstructure there is a basement and sub-basement, making the structure in all thirty-two stories. The foundations consist of concrete caissons extending down to bed-rock and averaging in depth ninety feet below the curb. These support the footings of the steel columns. In floor construction the bottom arched type of reinforced concrete floor has been adopted, and the interior partitions are of four-inch plaster blocks finished in hard plaster with steel trim and doors. The window frames and sashes throughout are of the hollow metal type, and the main corridors and toilet rooms have marble wainscot and floors. The building has a total height from curb to roof of 385 feet, having a frontage of 57 feet 11 inches on Liberty street and a depth of 82 feet and one inch on Nassau street. It has its own electric light, heat and power plant, with the usual plumbing installation, the fixtures being porcelain throughout. Henry Ives Cobb, New York, was the designing and supervising architect.

In the commercial centres of Canada a decided tendency has developed towards the construction of tall office buildings, and it might be said in this connection that it is greatly to the interest of the architects of the Dominion to study closely not only the constructive features and equipment of such buildings, but what is more important, the advantages of the tall office building from a standpoint of investment, and the opportunities of which it admits in the way of design and architectural expression.

THE ARCHITECTURE OF CANADA.—By Prof. Percy E. Nobbs.—Continued from Page 60.

we labor, and the advantages we enjoy, and I have ventured to suggest certain steps for the fuller realization of these great advantages.

In closing, I shall say just two words and no more on Canadian architecture as it appears to me; they are capable of expansion into many phrases of high commendation and bright augury which I will leave unsaid. Our art in this land has plenty of head behind it and plenty of hand in it, but it still lacks something in matters pertaining to the heart. I have no doubt but that the heart will come in time, and if I have said anything to-day which might hasten that consummation by a day or an hour, or which might tend to influence that heart at all for good, I am amply repaid for the real sense of guilt which I suffer for intruding so long on your patience and good nature.

LINCOLN CATHEDRAL.—Cont'd from Page 55.

perhaps not be out of place here and will form a fitting conclusion. The entire inside length of the cathedral is 481 ft., the nave being 215 ft. long, and, with the aisles, 80 ft. broad. The height of the nave vault is 82 ft. and that of the choir 74 ft. The western transept is 223 ft. long and 61 broad; the eastern transept 171 ft. long and 36 ft. broad. The interior area of the entire building is 57,200 sq. ft. The height of the central tower is 271 ft. and the outside measurement of each face is 54 ft. 6 in. The height of each of the western towers is 206 ft. The internal diameter of the Chapter House is 60 ft. and the height 40 ft.

The bell, known as "Great Tom of Lincoln," hangs in the central tower. It weighs 5 tons 8 cwt., is 6 ft. $\frac{3}{4}$ in. high, 21 ft. 6 in. in circumference at its base. The hammer striking the hours weighs 224 lbs.

The eight bells, which are rung as a peal, hang in one of the western towers. The roofs throughout the whole building are covered with lead. A staff of stonemasons is kept employed the whole year round, restoring and renewing. The organ was remodelled and enlarged in 1897 at a cost of over £25,000, and is blown by means of dynamo connected with the city electrical supply.

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

Vol. 3 Toronto, October, 1910 No. 11

CURRENT TOPICS

THREE HUNDRED THOUSAND DOLLARS will be spent under the terms of the Good Roads Act, in improving the main highways leading to Toronto. The expense is to be borne equally by the city in question, the County of York, and the Ontario Government. Unless present plans miscarry, the work will be started early next spring.

* * *

OPPORTUNITIES ARE ABUNDANT, according to Ernest L. Harris, U.S. Consul-General at Smyrna, for the installation of electric power in Asia Minor. The probabilities are that the near future will see great progress, and already the electrical plants of Europe are maintaining permanent agents in Turkey in anticipation of the boom. No attempt has been made yet to utilize the water power of that country, and this is explained by the fact that up to within two years ago the importation of all electrical devices and equipment was prohibited.

* * *

FORT WILLIAM IS CONSIDERING a number of improvements that are designed to bring the city up to a higher aesthetic standard. Plans are now being formulated whereby the present wooden electric-light poles along the main streets will be replaced by ornamental electroliers and elaborate iron trolley wire standards. Another project in contemplation is the widening of Victoria avenue, the principal business thoroughfare, where the abutting property holders for a distance of five blocks have agreed to deed to the city, property valued at \$50,000. The avenue at the present time is 66 feet wide, and in order to increase the width to 80 feet, the landlords have asked the city to accept a strip 14 feet deep from every lot between Syndicate and Franklin avenues.

STEPS ARE SHORTLY TO BE TAKEN by the Government of France to relieve the congestion of traffic at Paris, a problem of constantly increasing difficulties. The work is to include the electrification of the city's surface lines, and the railway service out of the St. Lazare station. It is estimated that the expenditure will amount to \$40,000,000.

* * *

AN ADDITIONAL EQUIPMENT of two hundred stamps, now being installed on its property at Juneau, Alaska, will give the Alaska Treadwell Mining Company the distinction of having the largest stamp mill in the world. When the new equipment is in operation, the mill will have 1,100 stamps in all, or 100 more than the famous Home-take Mine, which formerly topped the list in this respect.

* * *

A FEDERAL EXPERIMENT STATION, to be used exclusively for testing wood pulp, is being established by the United States Government at Wausau, Wisconsin. It is the intention of the forestry service department of that country to conduct investigations for the purpose of determining the value of native growths as wood pulp, with a view to developing methods and materials for making paper heretofore unknown. The sum of \$40,000 has been appropriated for research work during the first fiscal year. The plant will be the first of its kind in the United States.

* * *

A COAL HANDLING BRIDGE, said to be the most modernly equipped of its size in the world, and the only one of its kind in Canada, has just been set up at the Mission docks of the Fort William Coal Company at Fort William, Ont. It is one of two portable bridges of similar type that the company is installing. The bridge is operated by a cantilever attachment, which provides for the conveyance of surplus coal to outside yards when the inside yard is filled. Together with its boom and cantilever, it is 319 feet in length. The operation of both bridges will be done by two 15 h.p. motors.

* * *

CAMPBELLTOWN (N.B.) IS RAPIDLY REBUILDING from the disastrous fire that wiped out \$3,500,000 worth of property on July 11. So far, approximately four hundred buildings have been erected. These include dwellings, stores, warehouses, etc. Activity in this direction promises to be marked for some time to come. One thing conspicuously noticeable is the large amount of concrete work—both block and monolith—that is being undertaken. This is due partly, it is said, to the remarkable performance of concrete during the fire, and again to the fact that the establishment of fire limits has demanded better construction.

* * *

A WALL OF OLD BROKEN CHINA, laid in kaleidoscopic pattern and striking in the combination of its varied tints and hues, has been built by a Mrs. Denler, the wife of a Detroit, Mich., police captain, in the conservatory of her residence at 300 Dragoon avenue in that city. This unusual mosaic, towards the fashioning of which have gone thousands of bits of shattered bric-a-brac, exemplifies what feminine ingenuity and patience can do in partially offsetting the effect of "the bull in the china shop," and destructive propensities of the average housemaid. The fragments are inlaid on a plaster of paris bed, and the patterns were formed by first placing the pieces under water and arranging the particles according to their size and color. A highly glazed over-finish imparts to the whole an enhancing touch, and brings the colors out in a vivid yet harmonizing contrast. The scheme in its every detail was entirely carried out by Mrs. Denler, and it is decidedly novel in both its conception and execution.

HARNESSING THE WIND and the sun is a novel scheme which Prof. Fessenden, a British scientist, has in mind to produce electrical energy. As to what could possibly be attained by exploiting these forces was outlined at the recently held meetings of the British associations, where Prof. Fessenden stated that a number of windmills around the coast could give power enough to run all the railways, factories, and electric light stations in Great Britain. The practicability of the scheme is strongly doubted, as the uncertainty of the source of energy owing to atmospheric changes makes it decidedly defeasible and visionary.

* * *

RECENT TESTS MADE AT SANDY HOOK, says the *WASHINGTON STAR*, to determine the resisting power of reinforced concrete as a defence against high-powered projectiles, confirm the calculations of the penetrating power of the twelve-inch gun. A concrete wall twenty feet thick, heavily reinforced with steel beams, was pierced by a twelve-inch projectile fired at high velocity. The blow delivered was sufficient to penetrate twenty-two inches of armor plate, and the reinforced concrete withstood the attacks so well that it will probably be used in the construction of the new coast defence fortifications in the Philippines. A similar attack is to be made with the fourteen-inch gun.

* * *

ONE OF THE LARGEST TRAVELLING CRANES ever built is now being constructed at the wharf of the Western Lumber Company at Fraser Mills in the vicinity of New Westminster, B.C. It is 80 feet long and 40 feet wide and will be run on rails the full length of the loading wharf, which is almost 400 feet in length. The arm of the crane is 105 feet in length and is strong enough to pick up several tons at one lift. It will be driven by electricity from a motor situated on one end of the car. When in operation the great machine will not lift one load like an ordinary donkey engine crane and deposit it aboard the ship, but it will be possible to load the car on which the crane is situated with thousands of feet of lumber.

* * *

HIGHWAY IMPROVEMENTS IN ONTARIO during the past twenty years, according to approximate figures, amounted to over thirty million dollars. This is based on a recent report issued by Mr. W. A. McLean, Provincial Engineer of Highways, which gives the township expenditure for the years 1880-1908 as \$19,017,343, and the statute labor in the latter year as 1,141,976 days. Since 1902, \$2,128,122.93 has been spent on county roads, of which amount \$709,374.30 has been borne by the Province. In good road grants the Province contributes one dollar for every two dollars raised by the counties. Since county road systems have been undertaken the total amount spent on construction has been \$1,040,497.88. As near as can be estimated 1,125 miles of roads have been built at an average cost approximately of \$1,250 per mile.

* * *

BOTH YOKOHAMA AND TOKYO, two important Japanese cities, have as yet seen very little of reinforced concrete construction. Tokyo has not much more to show in this regard than the Hirso bridge, built with ordinary merchant bars, while the most important work so far undertaken at Yokohama is the Yoshida bridge. This latter structure is being built according to the Kahn system across the Oka River, and will have a total length of 120 feet. Concrete blocks, however, have been used in quite a number of buildings, and it is quite probable, in view of the interest lately manifested, that reinforced concrete will eventually find itself in much greater demand. At the present time the construction is of a type involving moderate original expenditure. The form popularly used is a wooden frame, faced with flat tiles and cement or plaster, or sheathed with brick.

CIVIC IMPROVEMENTS being carried out this year in Montreal include permanent sidewalk construction amounting to \$500,000, alone. The marked activity in this direction, it is said, is due to the continuous criticisms which have been leveled at the city regarding the bad condition of the streets and pavement. The work, according to a rough estimate, involves over twenty miles of permanent sidewalks, including 25,000 square yards of flag stone, 80,000 yards of asphalt, and 50,000 of cement.

* * *

RUINS OF AN ANCIENT CIVILIZATION, says the *SLATE TRADE GAZETTE*, of an age that no one has been able to estimate, are sprinkled over the length and breadth of Lower Mexico. The remains are stone, sometimes a soft limestone, sometimes marble, and sometimes granite, and show not only large extent but massive details, and, moreover, artistic adornment in the shape of sculpture, carried to a high plane. Some of the existing facades of temples and palaces are made of huge blocks of stone, bearing on their surface elaborate friezes and pictures of men and animals, deeply cut or in high relief and there is every indication that these carvings were done before the stones were placed in position, thus showing the use of designs or cartoons by artist-architects. Of this advanced civilization there are now few ethnogenic remains. The natives of the country have no idea who the people were who built those great monuments and they possess none of the art of those ancient days. The supposition is that the civilization caused national weakness, and that barbaric peoples overwhelmed the civilized people and blotted them out. The land relapsed into jungle, and the ruins are half hidden, even when known to exist.

* * *

REGULATIONS IN EUROPEAN COUNTRIES regarding the erection of buildings are more drastic in their enactment and more stringently enforced than are those employed for similar purposes on this continent. The collapse of a building or structure of any kind is practically unknown, and loss from fire, owing to the character of materials and type of construction demanded, is reduced to a figure incredibly small. A specific instance in this connection is offered in the case of Prague, a Bohemian city with a population of over 500,000, where, in the past 15 years, not one loss of life has been chargeable to fire, while the average destruction of property in the past three years has been less than \$20,300 annually. The building department of that particular city consists of two sections—the administrative and the technical, with several subdivisions. This enables the authorities to exercise a vigilant supervision of all work undertaken. When applications for permits are presented they must be accompanied by plans in duplicate. A commission from the administrative department is then appointed, consisting of two officers from the city building department (one an administration official and the other a technical expert), one city councilman, and one officer from the sanitary department, whose duty it is to examine the plans and proposed site and see whether everything is according to the building laws. No building can be erected that will exceed twice the width of the street on which it fronts, and no exposed woodwork is permitted except in doors and window frames—and even this in a large number of cases is not allowed. The construction in general is brick, stone, concrete and terra cotta, with fire-proof floors, hallways and kitchens. In the latter case, the floors are concrete and the walls tiled. As a result, the city is under a much less expense in the way of fire protection than would otherwise be necessary. The equipment is not nearly up to the standard of that of the average city in Canada and the United States of equal size, nor is it necessary that it should be, owing to the form of construction adopted and the care and supervision with which all buildings are erected.



MYTOON

A * MEDIAEVAL

CASTLE * IN * THE * WOODS

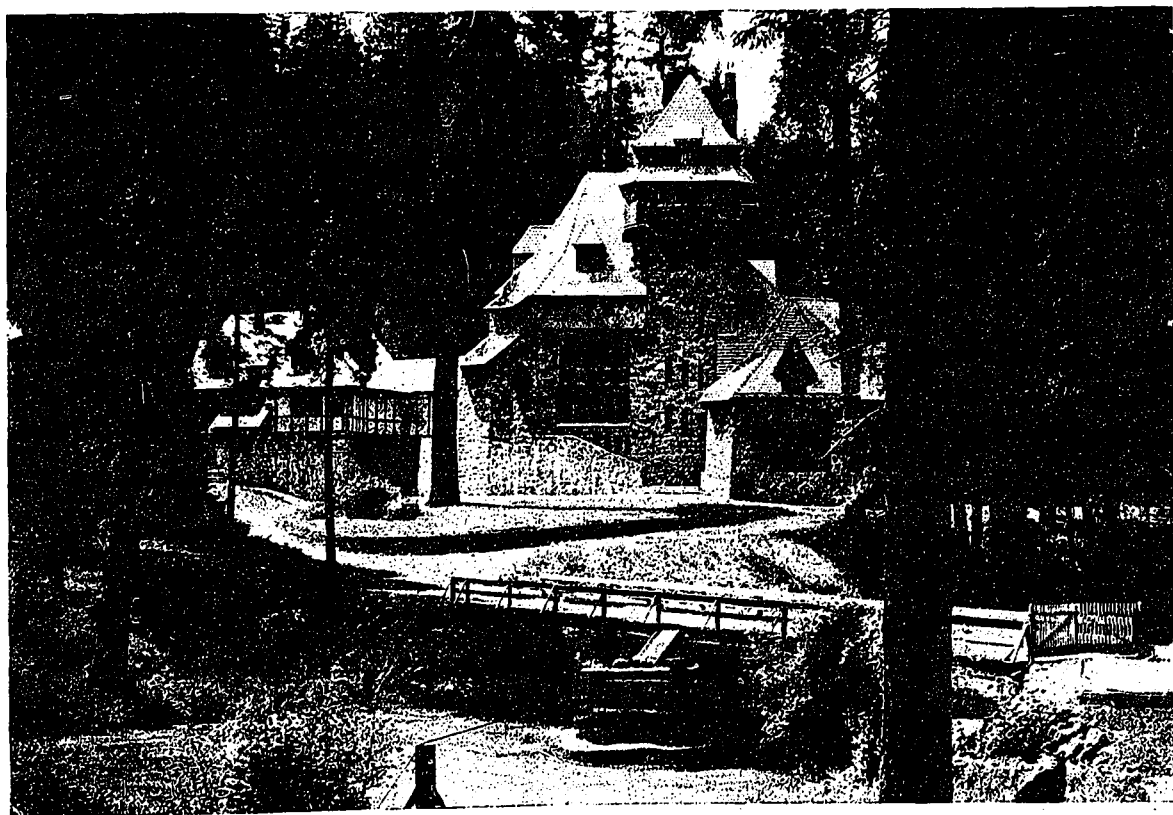
An unusual design in a Summer Home in the primeval forests of Northern California. A design that harmonizes well with the romantic environments.

ONE OF THE MOST REMARKABLE summer homes on the North American continent is that of Mrs. Phoebe A. Hearst, the mother of Wm. Randolph Hearst, the well-known American newspaper owner and politician.

Mrs. Hearst's home is situated at the base of Mt. Shasta, in the far northern part of the State of California, and may truly be termed a "mediaeval castle." It is questionable if any more beautiful or romantic site could have been selected for a summer home, so exceptional in its every particular. The base of Mt. Shasta is three hundred

has built her picturesque "Castle in the Woods," which, from the standpoint of design and construction, is something absolutely new in the architecture of this continent, and is exceptionally noteworthy, because of the harmonious manner in which the architect has carried out his quaint scheme in keeping with the romantic environment of the site.

This exceptional "summer house in the woods" is situated on a site at an elevation of 3,000 feet, close to the banks of the St. Cloud River and affords an inspiring view of Mt. Shasta, as well as a mag-



"Mytoon"—"A Mediaeval Castle" Designed for a Summer House for Mrs. Phoebe Hearst in the Primeval Forest of Northern California. Note How Perfectly the Architect has Succeeded in Creating a Design that Conforms with the Site and Harmonizes with the Clusters of Giant Trees that Surround it. The Crowning Walls on the Tower and Main Building as well as the Projecting Attics Were Necessary Because of the Heavy Snowfall. Maybeck & White, Architects.

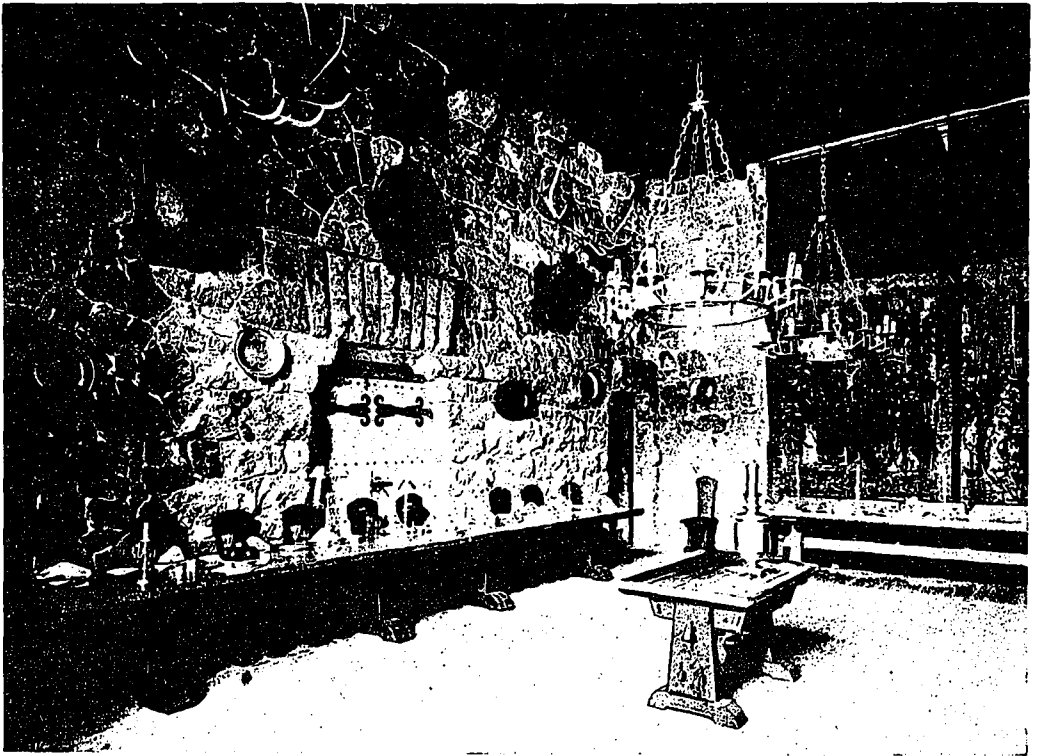
miles in diameter, and within this circle lies a country for the most part with primeval forest and broken up into valleys and elevations, through which hundreds of rivulets, flowing from never disappearing banks of snow, seek a lower level, finally to be lost in the larger volume of the Pit and McCloud rivers. The McCloud river is the most limpid, clear and impressive of all California streams. Its flow is incessant and rapid. From its source in the crest of Mt. Shasta to its junction with the Pit, it falls 14,000 feet; its course is a succession of water-falls, and its meanderings have never a restful moment. It is in the midst of such inspiring surroundings that Mrs. Hearst

nificent prospect visible in every direction. "Mytoon" (the name it bears) for its originality of design, massiveness, picturesqueness and attractive features would be difficult to surpass.

Here on the slopes of the great Western mountains has been reproduced, in every minute particular, a feudal castle of mediaeval times, as perfect in architecture and interior furnishings as those structures which were the pride of overlords of Germany centuries ago, modified only to meet the exigencies of modern habits and life. Fortunately the architects were not limited in the construction, motive, material, color and form by economic

considerations, and were enabled to develop the ideas of the owner and produce a structure correct as to historical tradition as well as to embody a true idea of baronial life on European frontiers toward the end of the Gothic period, and to harmonize it with the great trees which

The plan of the castle was made to conform to the original character and slope of the ground and to fit into a cluster of enormous trees which grew upon it. Considerations of sunlight and prospect also influenced the form adopted. The dimensions of the structure are great



"Mytoon"—The Baronial Hall Faithfully Portrays the Mediaeval Spirit. Note the Massive Heavy Detail of Whole Scheme. The Tables are Placed Against the Walls with Seats for Guests on One Side Only. Maybeck & White, Architects.



"Mytoon"—The Great Living Room,—Eighty Feet Long and Thirty-six Feet Wide—is Illuminated at One End by a Stained Glass Window of Thirteenth Century Design. This Room Takes the Place of a Mediaeval Chapel, the Place of the Altar being Occupied by a Massive Fire-place. Maybeck & White, Architects.

surround the castle, the beautiful river rushing by, and in the seclusion from the outside world maintain the inspiration which the unequalled and splendid environment of the situation affords.

enough to admit the introduction of all the necessary detail which it was decided to incorporate into it. From east to west, the length of the castle proper is 120 feet, the greatest width, from north to south, being 56 feet.

A great cellar, 45 feet in depth, extends below the entire structure. The foundation walls are 6 feet thick.

The axis of the castle is the central tower, 75 feet in extreme height and built of stone throughout. Halls, being a modern innovation, were discarded, the one referred to in the plan representing the piscatoribue or lavatory, where the spoils of the chase were displayed and the hunters cleaned up their arms and washed away the evidences of the conflict. In the chamber below is the wine cellar. There are six stories of sleeping-rooms, entered from the tower through doors placed at each half revolution of the stone stairway.

The stone of which "Mytoon" is constructed was quarried near-by, and is a bluish grey lava, common to the locality, a stone of enduring quality and fine texture. The massive timbers were felled upon the estate and shaped in a neighboring sawmill. The walls are massive in fact as in appearance, and the impression of great strength is fully borne out in construction as suitable to the character of an edifice representative of great qualities for defence. The buttresses are designed to accentuate the



"Mytoon"—The Chief Feature of the Exterior is the Central Tower which is Seventy-five Feet High.

solidity of the structure as well as to give stiffness to the walls, tower and roof. As it was impossible to have the modern porch without creating opposition to the prejudices of the higher senses, this architectural feature was dispensed with and mediæval substitutes adopted, hence the entrance loggia, outer stairs, terrace to dining room, etc.

Crowning walls on tower and main building with projecting attic was architecturally necessary owing to the occasional immense snowfalls, many feet deep, which if not provided for would crash roofs not protected against such an emergency. To harmonize the tints of the building with the environment, and to create a color scheme in unison with the grey of the Shasta forest, bright red for the tiles was manifestly too brilliant and glaring. A green, glazed tile were selected, and as they were not to be had in this country were especially manufactured in Holland. The temporary bridge spanning the McCloud River in the foreground is to be replaced by a stone arch 100 feet in length.

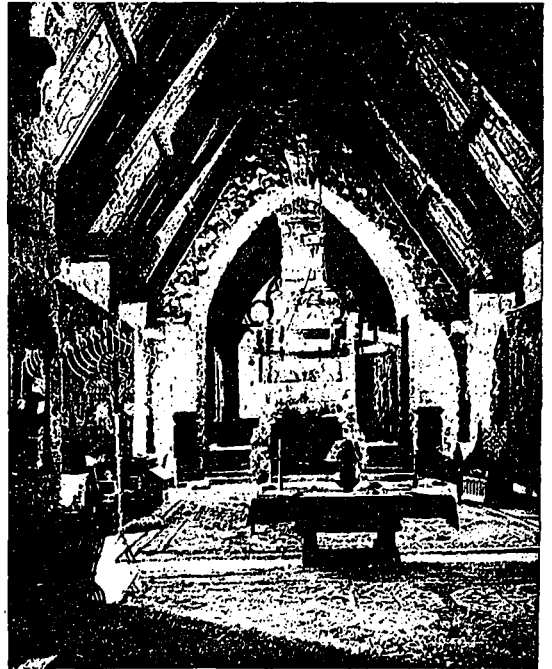
To impart a mediæval type to the exterior of the castle was a task easy enough for the designer, whose difficulty lay in the successful treatment of the interior,

and to create, as a whole, an impression of absolute harmony both without and within. In this respect a notable success was attained. The great living-room is the prin-



"Mytoon"—The Structure Stands on an Elevation of 3,000 ft. not far from the St. Cloud River.

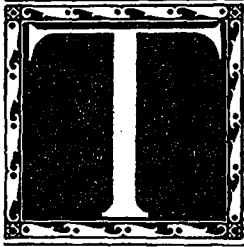
cipal feature of the interior and is 80 x 36 feet in dimensions and 36 feet high to the apex of the roof. The walls



"Mytoon"—The Great Fire-place in Which a Man can Stand Separates the Alcove from the Living Room and takes the Place of the Altar in the Chapel of a Mediæval Castle.

of stone, where the buttresses join, are 7 feet thick. The timber construction is without ties. On the west is the

(Concluded on page 72.)



THIRD ANNUAL GENERAL ASSEMBLY OF R.A.I.C.

Winnipeg Convention adopt motion to amend Charter in compliance with joint resolutions for federation of provincial bodies. To ask Government for higher import duty on plans.

THE ROYAL ARCHITECTURAL INSTITUTE of Canada, at its third annual assembly recently held at Winnipeg, has resolved to incorporate a policy of federation among the provincial architectural associations of the Dominion, and also to appeal to the Dominion Government for a higher import tariff on the services of foreign architects employed on Canadian work. These two questions, which were the most important considered by the Institute, were disposed of unanimously by the assembly. On the question of an increase in the duty to be imposed upon foreign plans, the stand taken was quite pronounced and without hedging; it was declared that the architects were entitled to the same protection that is already afforded other professions in the Dominion.

The movement for federation, which had been thoroughly dealt with in council, was a matter of but slight comment when it came officially before the assembly. A joint resolution from the four existing provincial associations was read, asking the assembly to consider definite action in the matter of federation. The issue, which has been a live one for the past eighteen months in the association, was apparently thoroughly understood by all the delegates. Messrs. Gardiner (representing Quebec), Russell (Manitoba), and Burke (Ontario), took places on the platform with the president during the discussion.

A motion for amending the charter, which read as follows, was moved by Edmund Burke, Toronto, and seconded by E. L. Horwood, of Ottawa:

"The council be hereby empowered to obtain amendments to the charter of the Royal Architectural Institute of Canada, and to take the other steps necessary to alter the constitution of the Royal Architectural Institute of Canada, to comply with the request in the joint resolution of all the official provincial associations throughout Canada to form the R.A.I.C., into a federation of official provincial architectural bodies, with the approval of such official bodies."

President F. S. Baker explained that the federation movement was probably the most important one to come before the assembly. The chief object of the motion, if carried, would be to make the R.A.I.C. the central body of the provincial associations, whereas it was at present an absolutely independent institute. There was some argument as to whether or not the council should be clothed with arbitrary power in the matter of amendments, but on a final vote the motion as presented carried unanimously.

In consequence of this action, it is quite within reason to predict that federation will shortly become a manifest reality. Representatives of the provincial bodies are to be approached as early as possible with a view to obtaining a draft of the changes necessary before the next session of Parliament, when the amendments to the charter will be applied for.

Election of Officers.

The election of officers for the Institute virtually resolved itself into a vote to continue the present incumbents in office for another year. Practically every member of the old council and executive was re-elected. The report of the scrutineers was as follows:

President—F. S. Baker, Toronto.
Vice-presidents—J. Z. Resther, Montreal; Edmund Burke, Toronto; S. Frank Peters, Winnipeg.
Hon. Secretary—Alcide Chausse, Montreal.
Hon. Treasurer—J. W. H. Watts, Ottawa.
Council—W. H. Archer, Vancouver; C. B. Chappell, Prince Edward Island; A. F. Dunlop, Montreal; D. Ewart, Ottawa; H. E. Gates, Halifax; C. E. Fairweather, St. Johns; H. B. Gordon, Toronto; E. L. Horwood, Ottawa; J. P. Hynes, Toronto; R. P. LeMay, Quebec; C. P. Meredith, Ottawa; G. A. Monette, Montreal; James A. Wise, Edmonton, and Sam Hooper, Winnipeg.

The convention opened Thursday, morning, Aug. 25, in the Manitoba University, but owing to the absence of Secretary Chausse, who was unfortunately detained *en route*, a large volume of the important business scheduled for early disposal was laid over until later during the convention. W. P. Over, of the Manitoba Association, undertook the duties of secretary, *pro tem*.

Mayor Evans, in extending to the assembly a civic welcome, entered into the technicalities bearing on the surface of the architects' profession, and appealed to them as a body to use every influence in favor of fireproof buildings, and also to act as missionaries for architectural beauty both in specific structures and in maintaining harmony of architectural design in streets and districts, so essential to the city beautiful.

The question of the employment of American architects by Canadian capital was dwelt upon by President Baker in his opening address. It was pointed out that the object of the Institute in seeking a higher import duty on the plans of foreign architects was solely to protect the interests of the architects and the building fraternity in Canada. The training of Canadian architects was such as to remove all doubt as to their ability to design such structures as we require in Canada.

There was a unanimity of feeling on the point, and when it was moved by Mr. Peters that the Government be asked to increase the duty on the plans of foreign architects, the motion passed without a dissenting voice. The Institute has been promised the support of the Canadian Manufacturers' Association and of other bodies in this fight for protection, and the matter will now be placed before the Dominion Government for consideration.

Among the papers read before the assembly were those of Professor P. E. Nobbs of McGill University, Isaac Campbell, K.C., and S. Frank Peters of Winnipeg.

To the architects, the papers of Professor Nobbs and that of Mr. Campbell were of deep interest. Discussing the conditions under which the architect worked, Mr. Campbell, in his paper on "Architectural Jurisprudence," summarized all the legal aspects of the profession and dealt exhaustively with the relation of the architect to the contractor and owner.

Professor Nobbs took as his subject, "Canadian Architecture," the full text of which is published in this issue.

Montreal was chosen as the place of the next annual meeting.

During the convention a number of pleasant functions were arranged and carried out. These included the annual banquet which took place Friday night in the Royal

Alexandra hotel, a dinner given by the Vulcan Iron Works at the same hostelry, and a trip to the Tyndall marble quarries and to St. Andrew's Locks on the Red river. Friday morning a sight-seeing trip was made through the business and residential sections of the city.

PRESIDENT BAKER'S ADDRESS.

WE ARE EXCEEDINGLY GRATIFIED by these kind expressions of welcome, and are glad to find ourselves here once more assembled to conduct the business of the third general annual assembly of the Royal Architectural Institute of Canada.

Nothing could be more hearty than the kind welcome which has been held out to us.

I was rather interested in hearing Mayor Evans say that he fully realized the complexity of the architect's work, but I am rather afraid that even the man above the average does not entirely take in the complexity of the architect's work. However, when he spoke of the modesty of the architect I think he was quite right.

Since our last meeting, there has occurred a very important event to which I should refer, and that is the death of our late King, Edward VII., who was a great supporter of architecture and patron of the Royal Institute of British Architects, with which this institution is in alliance.

He upheld what was good in architecture and supported it at all times. Among his personal friends I believe could be counted several prominent English architects. However, it is the way of the world that a man cannot remain here for more than a certain length of time, and in his place we now have King George V., who has already consented to become the patron of the Royal Institute of British Architects, which we regard as the leading institution in the world of architects, and I have no doubt that he will encourage and advance good architecture in every possible way.

You will be asked at this assembly to consider a very important matter, and that is, the proposed federation of all the official provincial architectural bodies in this Royal Architectural Institute, and you will be asked to consent to the necessary amendment of the charter and bylaws of this institute to comply with the joint proposal of these official provincial bodies.

That matter will come up for discussion this afternoon, and I hope the meeting will be largely attended, so that the matter may be fully discussed pro and con, and that so important a step may not be taken without the most careful consideration.

It is a matter of gratification that this institute has been asked by the Royal Institute of British Architects to conduct the examinations held in Canada in future for the British Institute, and the first of these examinations will be held in Toronto in November.

There has been a great deal of discussion during the past year and previously upon the question of the employment by Canadian capitalists and corporations of architects practising in the United States, who have no interest in this country other than the commission which they may derive from the work placed in their hands.

In some ways, no doubt, it may have been very useful to the Canadian to see on our territory the work of these skilful gentlemen, but it seems to me that the time has come when Canadians can be quite properly and satisfactorily taken care of by the professional men of all the professions within the boundaries of this country.

To overcome this there seems to be only one way, and that is by urging the Government to establish heavy import duties upon the services of these foreign architects. I am sure it will be fully understood that it is a matter of self-protection purely with us, and that we are always glad to welcome visiting architects from foreign countries as visitors and to show them all honor and to make their visits here happy and pleasant ones. But I

think it is the duty of this institute, if it is to be considered a representative Canadian body, to take steps to protect the architects of the country in the same way that the other professions or the Manufacturers' Association or any other Canadian body or power protects its members.

We submitted this matter, for instance, to the Canadian Manufacturers' Association; and their answer was: "Certainly. We will give you every possible support, but we expect that you will specify goods of Canadian manufacture and that you will support Canadian manufacturers."

It is not only the local architects who suffer through the foreign architects coming in to execute work here, but the manufacturers and the supply men are also thrown into competition through the bringing in of foreign workmen and contractors and the long train of resources and supplies which follow in connection with all large contracts. I hope that this meeting will take earnest steps to meet this growing difficulty.

I was interested to read in the papers this morning the remarks of a prominent Canadian contractor referring to labor difficulties, and I believe that what he said was good common sense.

He said that he would maintain an open shop as long as the international unions of labor existed in Canada. But as soon as the Canadian working men would get together on a basis of national federation, properly incorporated, he would give them his full support.

Now, it does seem a reasonable thing in a vast country like this, that the working men should make their own regulations, and any funds which they are pledged to contribute should be contributed to Canadian coffers instead of those of foreign countries.

It also occurs to me that in the incorporation of such a federation the classes of labor might be placed in three grades, a first class, a second class, and a third class, and that then the employer would know exactly what to expect in the men he employed and the wages could be regulated accordingly. I may be wrong, but it would seem to me a wise move.

We must have labor and we want to see our laborers as comfortably situated as possible and deriving the largest benefits possible from their work.

I also read in this morning's paper, though I have not been very long in town, that there are some two hundred new towns in course of construction west of Winnipeg at the present time.

I don't know whether it has come home to you architects that in any centre, large or small, it is the duty of the architect as a man of culture and taste and considerably more knowledge in that direction than any other class of citizen, to see that the laying out of towns should be very carefully considered.

Mr. Evans has referred to this matter in a way which is very hopeful, and if it were possible that he could be relieved of all the other duties of the chief magistrate for a time, I have not the least doubt but that he would soon plan a very beautiful Winnipeg, but the enormous amount of work that officers in towns and cities are called upon to perform seems to send to the wall those things which seem unimportant just now, but which are really exceedingly important in the development of this country, which should avoid the mistakes of other countries, having so many horrible examples before it.

There are throughout the United States some large and some smaller cities which it is a great joy to visit, and the reason of this is their well-paved streets of sufficient width—streets that are well planned. The spaces between the houses are ample, and instead of the street being simply a cast-iron, dusty thoroughfare, it is a restful park, which costs very little more to produce than the ordinary street. But where pulling down has to be done, producing wide streets is a very expensive matter.

I urge upon you the desirability, and it is the duty of the architect in the various centres to bring the attention of the authorities to these important matters.

There is to be held in London this fall a town-planning conference, and if any of the members contemplate a visit to England in October I would be very glad indeed if they would let us know so that we could be officially represented at the meeting.

There is another matter which is one that has always been with us and upon which considerable complaint has been raised, at the same time it has been condoned by the larger men. I refer to the accepting of commissions by architects under salary, commissions whereby they carry on private work, outside of their office hours presumably. But I think the personal feelings of these gentlemen in the end should overcome the desire for this class of work because it is surely an injustice. It is surely not intended that the salaried man in a salaried position should go outside and do work at rates which he fixes himself.

I think also that architects should take a firmer stand in connection with the building bylaws of municipalities. In a great many cases they are simply monstrous, and on the other hand some are quite insufficient.

In Toronto the city architect takes the trouble to go over every one of the plans and specifications in their entirety.

On the other hand, in Montreal, according to the by-law, the architect of the city looks to the architect, and seeing that he is a member of the provincial association he puts his seal of approval on his plans.

I don't know how you do it in Winnipeg, probably the same as in Toronto, although I believe that you have a new law providing for the qualification of architects which perhaps may relieve the Department, as in the case of Montreal.

We have had during the year several important competitions, and I am sorry to say that they have not all been satisfactory.

All we can do in this direction is to keep on urging on the promoters of the competitions the necessity of adopting a sane and reasonable method of holding competitions for the purpose of selecting an architect. Most people think that the object of the competition is to select or to secure plans and ideas. The real object of the competition should be for the purpose of selecting an architect, and I hope that we will see a great improvement in this direction.

We have a great deal of business to take care of and I will ask the secretary to read the report of the council for the past year.

SUMMARY OF REPORT OF COUNCIL.

The report of the Council showed that the past year had been a busy one. Three meetings had been held, one following the Annual Assembly in Toronto on Oct. 6, 1909, one on Jan. 18th of the same year, and the other on July 11, 1910. The principal business at the first meeting was the election of Mr. F. S. Baker to fill the vacancy in the Council occasioned by the resignation of Mr. A. H. Gregg, and the providing of a sum not to exceed \$200 per year to be paid to the Honorary Secretary's assistant.

At the second meeting, it was proposed in view of the alliance which had been effected between the Royal Institute of British Architects and the Royal Architectural Institute of Canada, that all future examinations in Canada for admission to the former organization should be conducted by the latter body. This has since been arranged through Mr. Baker, the representative of the R. I. B. A. in the Dominion. Upon the proposal of Mr. John A. Pearson, Fellow, that the Royal Architectural Institute should conduct a competition for a Tower to be erected near Halifax, in commemoration of the Federation of Canadian Provinces, a committee of two members of the Council and Mr. Pearson were appointed to make the necessary arrangements. A report from the Secretary stated that a delegation of members of the Institute in a visit to Ottawa had urged the Hon. Mr. Pugsley, Minister of Public Works, to employ architects in private practice, to design and erect the more important public buildings, including the proposed Departmental buildings, in collaboration with the Government's Department. The Minister promised to give the matter his serious consideration. Other business consisted of the polling of letter ballots regarding the application of Mr. J. H. Noel and Mr. A. B. Von Staffeldt for associate membership. Both were declared elected. Consideration was also given to a letter addressed to the President from Prof. P. E. Nobbs asking the endorsement of the R. A. I. C. of a project to accumulate details and to establish in various parts of Canada, architectural museums, a movement to which the Council promised to give its fullest support. Through the instrumentality of the Hon-

orary Secretary, a collection of plans and projects of municipal improvements in Canada was exhibited at "Congrès de l'Association de l'Architecte de Montréal" and the "Association de l'Architecte de Catalogne" at Barcelona, Spain. In addition, the Council commented on a new society of architects in Winnipeg, and elected Mr. F. S. Baker to the Presidency, to succeed Mr. A. F. Dunlop whose resignation was received with both reluctance and regret, and who was then elected to fill the vacancy in the Council occasioned by Mr. Baker's elevation.

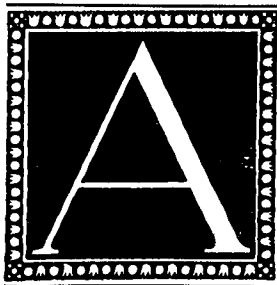
At the third meeting, July 11, 1910, a formal request from the R. I. B. A. that its future examinations in Canada be conducted by the R. A. I. C. was received, and a committee consisting of Messrs. P. E. Nobbs, Frank Darling and F. S. Baker was appointed a duly authorized Board for this purpose. Attention was also directed to the new class of members (licenciates) established by the R. I. B. A., admission to which can only be obtained during the current year. An announcement was made by the President that he had forwarded to the Honorary Secretary of State a letter of condolence respecting the death of His Late Majesty, King Edward the Seventh, and that negotiations had been carried on with Sir Wilfrid Laurier and the Hon. Minister of Public Works respecting the employment of an architect in private practice to design and erect the new departmental buildings at Ottawa, and also suggesting the appointment of a member of the Institute to act upon the Advisory Arts Council of the Government, and that in the future this council should pass upon the designs of all important public buildings before they were published. Further business dealt with correspondence carried on with the Hon. Dr. Reaume, Minister of Public Works for Ontario, regarding the published terms for a proposed competition for a new Lieutenant-Governor's residence in Toronto. In this connection the President was authorized to write the members of the Institute advising them to refrain from entering the competition and to call their attention to Clause 9 of the Code of Ethics. It was also reported that the conditions of competition for the proposed Memorial Tower at Halifax had been issued, and that twelve competitive designs had been received and were under consideration. The progress in the matter of the proposed Confederation of Provincial Architect Associations with the R. A. I. C. also came up for consideration and it was resolved to submit resolutions regarding same at the Winnipeg Assembly after each member had been duly notified as to the proposed amendment to the charter. Another matter considered was a letter from Prof. Nobbs proposing that in view of the alliance with the R. I. B. A., some arrangement be made with that body, whereby some reductions in the amount of fees and some increases in the amount of benefits would be conceded to its members in Canada. Messrs. Watts, Burke and Horwood were appointed a finance committee to pass upon and approve of all expenditures, and to collect all amounts due, on behalf of the R. A. I. C., in accordance to the provisions stated in the existing by-laws. Mr. J. Foulis was declared elected an associate of the Institute.

MYTOON—Cont'd from Page 67.

alcove, lighted by a great stained glass window of thirteenth century design, and fabricated in Holland. Between the alcove and the living room is a great fireplace, with an opening in which a full grown man can stand upright. The room is the chapel of the ancient castle, but the altar is replaced by the fireplace. The west end of the room has its fireplace also. The hangings are tapestry, of antique design, and, as in earlier periods, serve to conceal the stone walls and to add to the mediæval atmosphere of the apartment. The chandelier of the room is Gothic in pattern. The dining room follows closely the living room in general effect, and has also a double fireplace. The tables stand against the walls, the guests sitting on benches. The furniture in all the rooms is Gothic.

The kitchen wing is approached from the dining room through the butler's hall, and is spacious and well appointed. Its dimensions are 40 x 40 feet and include a room for the servants. It is entered from the outside through a portecoullisse and stairway. This wing has a foundation of rubble stone. The upper construction is one-half each, stone and rubble, and is surmounted by an attic of light grey slate.

The cellar extends under the entire main building to a depth of 15 feet and contains storeroom for various purposes and the steam heating apparatus for the castle. A rear entrance porch gives access. The entire structure presents a fair idea of conditions in the feudal period before forests had disappeared from European countries. A critic has found fault with the prominence of the kitchen wing, but this will be modified with the growth of shrubbery. The pain and sorrow of the feudal age is not depicted, but all else is so interwoven with the forest that the influence the structure wields leaves the mind and body healthier for having been a guest at "Myntoon." The architects of this interesting structure are Maybeck and White, San Francisco.



ARCHITECTURAL JURISPRUDENCE

By ISAAC CAMPBELL, K.C.

A paper read before the Third Annual Assembly of the R.A.I.C. at Winnipeg, dealing with the legal rights of contracting parties in the erection of buildings.

THE TITLE ASSIGNED me is a very wide one, and in the limits of a paper cannot be treated as a whole. Some features of the law pertaining to architects and to the contracts with which they deal, though, more can be discussed.

The architect is the recognized head of the building trade. His professional knowledge is the element in this pre-eminence. His character, energy and attention must sustain it.

As to the architect himself I have noticed a remarkable paucity of reported law cases in which the architect is directly a party. The contests between owners and contractors are numerous. Rarely does the architect appear except as a witness or as one whose previous exercise or non-exercise of authority is relied upon by any contestant. We lawyers are not so fortunate, perhaps we are more in the open. Some cynics say that the doctors bury their mistakes. Let us assume that the absence from the index of the law reports of the heading "architect" is due to the superior qualities of the men who have chosen your profession. I remember the late Dr. Kelly, of Brantford, an eminent educational authority, used to maintain that amongst the best means of educating conscience and to secure ethical strength in the character of youth was the careful teaching of mathematics. And I remember him once amidst some amusement to put forth his contention. He admitted, of course, some proficiency in the handling of arithmetical figures, mere dollars and cents, might enhance the skill of a future scoundrel, but that mathematics, even if somewhat elementary, relating to the external and accurate relations of form, the diameter to its circumference, the sphere to its segment, and those concepts upon which the various series of progression are based, demanding accuracy of thought and result, apart from any sordid suggestion of gain to the student, must in harmony with truth itself promote the very love of truth which results in honesty. And he used to claim with some appearance of triumph that while supple arithmeticians give the criminal courts and the detectives a good deal of trouble mathematicians never do so. In their quest for truth they themselves become that which they sought. This might explain why the word "architect" occupies such a small space in the digests of the law courts.

Duties and Power of the Architect.

It is a maxim of high and immemorial authority that no man can serve two masters. As applied to the architect his position under such a rule makes his profession a most responsible one. He is, to begin with, the agent of his employer. He is required to secure certain results by changing labor and material into a finished structure and in doing this to control the contractors, the artisans and workmen who fashion and finish the fabric. As such agent, if authorized, he can do what the employer can do in adding to or subtracting from the work, and in all this he would make available his professional knowledge and skill. Certain implied powers and implied duties arise from this agency. I am speaking now of the architect limited entirely to his professional position as an adviser, and as an agent clothed with the rights and responsibilities which the common law of nearly every

country gives him. But in practice, and arising out of contract, there is added what is sometimes his most important and most difficult work. He is created a quasi-judicial officer to decide questions of difficulty and dispute between his employer and the contractor. He thus has a double function to perform. He is required to produce results, to produce them within a reasonable minimum of time and at a reasonable cost, and if the contract so provides, upon him is thrown the duty of deciding most serious questions between two or more parties whose interests and opinions may greatly differ. It is not surprising, therefore, that lawyers and judges in discussing these varied relations of the architect, have not been able to adopt a uniform opinion, at least, have not been able to express in any brief formula an opinion concerning his position. Mr. Gregory, who wrote his work after his experience of twenty years as an architect, and twenty years as a lawyer, recognizes the difficulty by saying that from the very force of circumstances there is an admitted tendency to bias in the position of the architect; and starting with that he proceeds to discuss the practical means of meeting it. In short, he recognizes the difficulty which might be expressed by the formula; the architect is the agent of one of the parties, yet he is made a judge between the two. The old common law rule, "No man can be a judge in his own cause," is departed from when by the modern written contract the architect is clothed with all the powers now found therein.

The author I have referred to thinks the necessity of the case demands the apparent inconsistency of position. He assumes the architect's loyalty to the owner or builder, and discusses the question from the point of view of the contractor, namely, as to the motives which would induce the latter to place himself in the hands of a professional man who at least might be assumed to be subject to a "tendency to bias." I do not notice that he discusses at any time what sometimes is the case with a contractor of widely extended interest. There might be an opposite tendency.

Authority as Arbitrator Invested by Contract Only.

You must keep in mind that an architect does not by virtue of his profession or employment become an arbitrator between parties. That authority is given him only by contract, or agreement, and is not implied from his employment as architect. That employment in itself merely regards him as a highly skilled agent. It is the agreement of parties which makes him an arbitrator or a judge. The difficulty of position being thus pointed out (a difficulty which architects must have fully appreciated and have endeavored to solve), let me point out some matters of practice that the architect should remember. It is said there may be complete detachment in the study of pure mathematics, but absolutely mental detachment from environment in the ordinary affairs of life is impossible no matter how judicial a man's temperament may be. Honest men will to the end of time by reason of their limitations differ in opinion.

The architect receives a reward for his work either as stipulated or in accordance with a generally understood rule or scale of his profession. This reward should be paid him only by his employer. The architect should not

have a further personal or pecuniary interest. He ought not to be a part owner of the property or of the building or structure to be erected and completed. If he is such then he or his co-owners must give the fullest information to the contractor or proposing contractor concerning the facts. If he is so closely related to the owner, has intimate business dealings with him, especially if he is indebted to him, these too are circumstances which so affect the tendency to bias, that there should be the most absolute good faith in communicating a notice of them. A contractor may agree even with the owner himself that he will leave the decision of all questions to that owner. A contractor may agree that he will leave them to the owner, agent, architect or superintendent. In such cases, having acted with his eyes open, he will be bound by any decisions given against him unless these decisions are so palpably perverse as to raise in the mind of a court the presumption of fraud. If, therefore, there be relationships between the agent, the architect or superintendent, and the owner which gives such agent, or architect, any interest greater than the interest of working for salary or professional reward, all these relationships should be notified to the man on the other side. He has a right to know about them.

If, in any specific case, the architect has entered into an undertaking with the owner as, for instance, to what a building will cost, so that in consequence of such undertaking his judicial discretion may be interfered with, that fact should be known to the contractor. The consequences of omitting to furnish such information may not immediately react upon the architect, but where the injustice is gross or palpable the failure to notify the contractor would relieve him from the binding obligation of a contract which committed to the architect the right of final decision, and if the court thought that a contractor had not been properly dealt with, it would proceed to ascertain how much he should be paid by the owner or builder. Later on, the latter and the architect might have to dispute over the loss between themselves. Let me give you some illustrations of the above principles.

Court Interpretations.

Kimberly vs. Dick, an English case, in 1871.—The architect entered into an undertaking with his employer that a manor house should be erected at a cost not exceeding £15,000, including architect's commission and all expenses, and he engaged the services of a contractor who without being informed of the undertaking and without close verification of a bill of quantities given him by the architect, entered into a contract with the employer for the completion of the work from the architect's plans and under his supervision for £13,700, with power to the architect to order extra work and with a clause providing that all questions arising between the parties should be settled by the award of the architect. On a suit by the contractor, claiming to be entitled to be paid by the owner for all work executed by him beyond what was included in the estimate and for certain extra work, it was held that on the evidence the architect was the agent of the employer, that his undertakings as to cost having been concealed from the contractor the arbitration clause in the contract could not be enforced and the plaintiff was entitled to an account for what was due him for any works executed by him under the architect's direction not included in the contract, and for any works so included in the contract the price for which was therein included, and for any variation made under the architect's direction. The undertaking referred to by the architect was contained in a letter sending down from London, a report upon a building suggested for the owner, in which this language was used: "So that you may safely rely upon the £15,000 covering everything unless you want more done than I have proposed. Indeed, I can now promise it shall not exceed that sum." In another case, language which scarcely rose to the height of an undertaking, but was in the form of a strong assurance, was pronounced as sufficient for the same result, although, as I understand the report, the case really went off on another point. An

architect should therefore be very careful as to the language he employs in furnishing estimates of cost. Where the written contracts for the work are made for the whole work, practical difficulty will not often arise, but even in such cases in view of "changes" and "additions," an architect should exercise care in the representations he makes to his employer, and between the two of them they should let the contractor know of any such undertaking. In the case cited the owner of the building would have had to pay what the Master of the Court may have found against him. There is no further report showing how much that was, neither do I find anything indicating how the owner of the manor house and the architect may have settled it between themselves.

In the case of *Ludlam vs. Wilson* in the Province of Ontario it was brought out in evidence that the owner's superintendent was his uncle, who was greatly indebted to him as a result of certain business dealings. These facts were not known to the contractor for a large amount of building material which went into the house. One judge of the Ontario Court of Appeal held directly that this want of knowledge on the part of the contractor would absolve him from the arbitration clause of the contract. The other judge who gave a reasoned opinion referred to the circumstances as being objectionable, but based his decision chiefly upon the fact that after the work was stopped, the owner had discharged the contractor from its completion. As I read the report, therefore, it is not a new authority on the point I have noted, but it indicates, plainly enough, the duty of parties.

The Contract and its Wording.

The architect's powers as a judge or arbitrator arise from contract or agreement. Without that, in case of dispute the courts of law must ascertain the rights of the parties as to compensation or damages. By agreement the architect is almost universally appointed as arbitrator, and those who prepare such contracts endeavor if possible to completely oust the jurisdiction of the courts. The inconveniences from tendency to bias or otherwise, that might arise from this are thought to be less than the inconvenience and delay and loss arising from a trial that might take place for many months after the work was done and after the evidence on the ground was lost except so far as preserved in the defective memory of fallible witnesses. Better have the matter decided while it is open to inspection than to delay it long after when the evidence will depend upon memory and the decision has to be given by a man who cannot be so well qualified as a skilled architect or engineer. From this results a warning or advice which should be given always to those interested: "What is the language of your contract? What is the contract? What does it say?" Because only to the extent that it varies the common law, does it confer new powers.

Such contracts usually give the architect powers to add or to subtract from the work, and of an arbitrator or valuer to determine the compensation, to determine even the number of days' delay for which the contractor has to make recompense or to suffer punishment, and usually to determine the construction of the contract itself and all disputes arising out of or respecting it. This latter clause makes the architect a judge in every sense. In a case of dispute, where each of the parties has an opposing view to put forward, "an arbitrator," in the strict sense in which the term is used, should be careful to give both sides a hearing in the presence of each other; but where in a building contract it is provided that the engineer or architect to be appointed by the employer for the directing and superintending of the work, shall certify the completion of the work or the amount to be paid to the contractor, or the fulfilment or the measure of any other contract undertaking, the intention is not that he shall before certifying be required to afford the parties an opportunity of a formal hearing. It is his own knowledge and skill and his own observation that it is intended he shall act upon, and not upon facts to be established by

the evidence of witnesses nor upon the evidence of expert witnesses.

But as a matter of good practice, I would recommend in a case where the owner or employer has taken an active part in the oversight of his building, and especially where it is known that he has either in the presence of the architect or otherwise, discussed questions with the contractor during the progress of the work, if there be a dispute, or if a dispute be likely, that the architect bring the two parties before him, let him thrash out the difference, and as a judge give his decision. In a good many cases such a course will obviate an appeal to any other tribunal.

There must be no collusion between the architect and his employer to the disadvantage of the contractor. The architect must not be submitted to, or be subject to, any pressure from his employer as to his decision. To act under the orders of an employer in measuring or certifying work would, if accompanied by evidence which left room for the court to draw an inference of unfairness, have the effect of setting aside the architect's decision. What is fraud in such a case has not received a general definition. Each case must depend upon its own circumstances.

Defective Plans.

The editors of the American and English Encyclopedia of Law state generally as follows: "In England it is held that where plans and specification for the execution of a certain work are prepared for the use of those who tender bids for its execution, the person asking for the bid does not impliedly warrant that the work can be successfully executed according to such plans and specifications. In the United States, however, it seems that there is an implied undertaking on the part of the builder (the owner) that the plans and specifications are sufficient for the successful construction of the work, and where the work is constructed by the contractor to the plans and specifications, there is no agreement upon the part of the contractor that the work when completed will be safe and fit for the purposes intended." In the United States there are now some forty-seven different judicial jurisdictions, each of which is final in itself and without appeal in matters not involving constitutional questions nor business or works extending over State limits. So that a general statement as to the law of the American States usually seems no more than that a large majority of the courts of the several States have concurred in a decided principle. In most of the cases that have arisen there has been something in the language of the contract which affected the decision. In all such cases, the first question is: "What was the contract? What was its language?" The leading English case for the principle referred to is that of *Thorne vs. The Mayor of London* in respect to the Blackfriars Bridge across the Thames, Vol. I., Appeal Cases, page 129. An eminent engineer drew plans for the bridge including caissons, instead of the usual coffer dams. It was found that above low water the caissons could not resist the force of the current. This resulted in great delay and loss to the contractor, who sued for damages on the ground that there was a warranty that the works could be executed according to the plans provided. The final court, House of Lords, held "there was no warranty . . . and that the plaintiff should have elected either to refuse to tender or should have asked for a warranty if the novel mode of procedure alarmed him. He must take his chances. If he goes on he must either obtain an express agreement or take the risk."

In the case following, Lord Justice Brett held, where the foundations were found defective: "If the proposition is that the thing shall be done in a particular time, it does not seem to me unreasonable that he must consider and calculate for himself whether the proposed work can be done within the time; and it is but a step further to say that he must consider also for himself and calculate whether the work can be done at all, so as to enable him to earn the price to be paid. I think it may be said that both parties must make their own calculations, that if the

contractor finds that the employer is proposing to him something that cannot be done he ought not to offer to do the thing which, in his mind, cannot be done; and if he does not enquire into the matter, or runs the risks, he must take the consequences, or if he thinks it doubtful, he ought to correct the agreement by an express covenant."

Important questions must from time to time arise which have not been as yet anticipated in the decision of the courts. Most of them will turn upon the question of what was the contract. The structures to which damage is important enough to lead to litigation, are usually provided for by contract. With the increased height and weight of buildings, with the increased loads that warehouses are now required to carry there is usually provision made, especially in the latter class of cases, from which a warranty is at least implied. Contracts are made from time to time providing for a cargo or storage load of so many pounds per square foot of floor space. Such a warranty would necessarily extend beyond the final certificate and the time of acceptance of the building. Its nature must be derived from its language, and whatever the contract is, it would be enforced. Where apart from such warranty a contractor agrees to erect and finish a building he must erect and finish it. He must fulfil his agreement. The contractor must at least hand over the building. The contract is there and must be complied with. It would be impossible to discuss in a short paper the varying decisions due to variation of language employed in such contracts. But where the contractor is eliminated, and the question of the architect's responsibility to his client comes in question, then the principles of the ordinary law of negligence apply. The contractor may become bankrupt, leaving a cumbersome ruin on the owner's land. The architect holds himself forth as a man of professional and superior skill. If natural conditions are unknown to him he should so report and let the owner take the risk. In short, the old Roman maxim translated into our language, "The trusted man must show the utmost good faith," will apply. In the large cities this question will often be important. I understand that certain soils vary in their capacity to resist pressure from 500 pounds per square foot up to as many thousands. Further, that it is not merely a question of vertical pressure, but a matter of slipping or of lateral escape that is to be feared, because you tell us that if water could be confined laterally it could be built upon. Therefore, the existence of neighboring heavy buildings will seriously affect the problem. To anticipate exactly what will happen is, therefore, impossible. The architect cannot always know. He should make the possibility of this a matter of trouble. He should make the possibility of this No matter how he multiplies his margin of safety, there clear in any case where there is room for suspicion.

Miscellaneous Rulings.

In the case of *Money Penny vs. Hartland*, Vol. I., Carlington & Payne, page 352, the following is the language of Chief Justice Abbott: "If a surveyor who makes an estimate sues those who employed him for the value of his services, and it appeared that he was so negligent that he did not inform himself, by boring or otherwise, of the nature of the soil of his foundation, and it turned out to be bad, this goes to his right of action, and if he went upon the information of others which now turns out to be insufficient, he must take the consequences; for every person employed as a surveyor must use due diligence, whether the plaintiff has used due diligence or not is a question for the jury; and if the plaintiff went on the statements of others that is no excuse, as it was his duty to ascertain how the fact was or to report to his employers that he only went on the information of others, or that the fact was not certain."

I conclude also that whatever may be the rule of decision as between the English and American courts, the difference is found in contests arising between contractor and owner, and that the law as to the architect's relation to his own client is practically the same in both juris-

dictions. The English courts may have been slower to accept evidence imputing negligence as conclusive than the courts of some of the States, but they may have in some of the States men not so well qualified who had assumed certain judicial functions.

The rule in France is that the architect is responsible to both the employer and the contractor, and there is a double responsibility as to all recommendations he may make, if he should make any in connection with the work at all. It is suggested that some of the Quebec Province decisions have almost gone as far as that, but I don't understand that to be the case in the other provinces. But our rule is that the responsibility exists between the professional man and his client. He is not responsible to a third party. There are some cases where the architect's authority has some judicial authority. Without an agreement, however, the architect is only the skilled agent of his client.

In an American case a mason took a sub-contract to do the work of a principal contractor, and the fact that when the owner saw the stone piers being built he made no objection, did not amount to an acceptance of the benefit of his labor, as he had a right to suppose it was being done by the principal contractor (Campbell vs. Day, 90 Ill. 363). In such a case as this the architect should have been careful to have kept an index showing the names of the principal and the various sub-contractors. Further, in such a case as this the architect should be careful not to misrepresent his authority. Where a party holds himself out as an agent for another with authority to bind him, he is held to his representation. If he had not authority to bind, he might be made personally responsible. That is not peculiar to the architect, but it applies to all professional men. If a representation is made to some other one, and there is no authority existing, he has to make good the loss which the party which relied upon his assertions may suffer.

Where there is a difference between the contract and the plans and specifications referred to for details of construction, the contract controls.

So where there is an inconsistency between a copy of the plans and specification furnished to the contractor, upon the faith of which his bid is made, and the contract entered into and the original plans retained by the builder, the former will control, and the builder (owner) cannot take advantage of such inconsistency to the prejudice of the contractor.

Where there is a variance between the plans or drawings and the written specifications, the latter will prevail. This is upon the principle that the drawing are illustrative of the specifications; but I think that the following rule should apply in such a case, namely, that where there is a variance between the terms of the contract, the plans and specifications should all be reconciled in a practical manner, if possible.

I can conceive that very often the contractor or his foreman would follow the plans as a matter of course rather than the specifications. Therefore, the rule should be to take all the parts together to find the consistent meaning, if possible. If not, then the specifications would govern, the plans if clearly in contradiction to them.

If the contract is ambiguous, great and sometimes controlling weight will be given the construction which the parties themselves on previous occasions placed upon it.

Written matter will control printed in a case of repugnancy. It is assumed to have been the result of deliberation.

Technical meanings are to be given to trade terms rather than the ordinary meaning of the separate words.

Apart from agreement conferring the authority, an architect has no implied authority to bind other parties by his construction of the contract. This again illustrates the importance of the question: "What is the contract?"

The amount of damages, general or specific, for delay is nearly always a subject for a certificate of the archi-

tect; but he has no implied power and this must be provided for by the contract.

The architect may "approve" of work so as to make his employer liable, without writing. The contract providing for his approval would be satisfied by evidence of his actual approval. For the purpose of preserving evidence, it is always best to provide that the written certificate be required.

The courts have been reluctant to interfere with an architect's decision where the contract has given him complete authority. Under the English decisions collusion is necessary. There may not be derict evidence of the collusion. That may have to be gathered from injustice and wrong on the part of the architect or engineer, so palpable and so perverse that it leads to a presumption of fraud.

Manitoba Legislation.

In Manitoba there is nothing special to report on the legislation affecting architects. Provision was made by 1910 statute for examinations to be conducted by a board appointed by the Provincial Government. The architects in practice at the date of the statute are, by right of that fact, entitled to register with the board without examination. Your profession is in a somewhat peculiar position with regard to its corporate rights in each province because so much can be done without your jurisdiction.

Your president referred this morning to men from over the international boundary getting so large a patronage in the Dominion. . . . That is a matter which will have to be dealt with by the federal authorities in order to give you protection.

Of course, architects are affected by the vast body of municipal legislation empowering municipal councils to provide as to the height and strength of walls, the access of light, provision for sanitary appliances, and the multitude of other details which are common in any municipal Act and in any body of municipal by-laws. I understand that there is not much difference in the Canadian provinces between either the empowering legislation given by the various provincial parliaments, or in the subsequent civic legislation enacted by urban councils. The city of Winnipeg not long since enacted a very comprehensive by-law. After a good deal of deliberation the draft was submitted to the architects practising in the city, and their suggestions were invited, and many of them were embodied in the by-law finally enacted. It is desirable that architects should not merely give their individual suggestions, but that, in their corporate capacity, they should be consulted freely as to the general body of civic regulations.

Architects in Manitoba are entitled to the benefit of the Mechanics' Lien Act, but, along with material men, they are postponed to mechanics and workmen for the 15 or 20 per cent. rebate, as the case may be, which an owner has to hold back, up to thirty days' wages. This right comes under the statute, and in reading a statute, as in a contract, the question always is, "What does the statute say?" In the American States the rule is not at all uniform. In Pennsylvania, the architect gets the benefit of the statute if he superintends the work of the building. The one, however, who merely draws the plans is not entitled, nor is a consulting architect. They have done no work on the building. But in Manitoba, "Any person who performs any work or service upon or in respect of, or places or furnishes any materials to be used," etc., "in a building, wharf, etc., is entitled to a lien." So that the statute is clear in favor of the lien in this province. There was a considerable amount of interesting discussion in an Ontario case some years ago, where the language of the statute gave the benefit to "builder or other person," in which the right was found in the affirmative.

Uniform Contract.

In previous sections of this paper, I have referred to the architect's powers, as usually found in contracts and referred to in the law books. In the city of Winnipeg,

what is styled "the uniform contract" has come to be almost invariably adopted. It subjects the architect's final authority to several limitations. Provision is made for arbitration by way of appeal from his decisions in several cases, such as the valuation of work added or omitted, and the amount of expense to an owner who has taken the work out of the contractor's hands, when audited and certified by the architect. The duration of the extension of time to which a contractor in certain contingencies is entitled is also a matter for arbitration, if either party is dissatisfied with the architect's allowance. Loss to the contractor by owner's delay in furnishing materials outside of contract to other trades is first fixed and determined by the architect, but is subject to appeal. There is a clause providing that if the work be substantially completed, except in some details, the completion of which, owing to the time of the year, would involve disproportionate delay, the architect shall estimate the actual cost of these, add fifty per centum and issue a final certificate. This clause would seem to have much equitable merit. The owner is made liable for fire or tempest, and is required to insure so as to protect the contractor. Combined with this is a provision giving the owner the right of election as to rebuilding. If he elects to rebuild, the contractor is entitled to the actual additional cost of completion and restoration which the fire and tempest had occasioned. If he elects not to rebuild, the architect makes a proportionate estimate of the work done and material supplied up to the time of the disaster, and this is to be treated as a final estimate. I understand that there have been comparatively few arbitrations since this form of contract was adopted. How far members of the Winnipeg profession may have been conscious of its provisions when making their decisions, I cannot determine, nor, probably, can they.

Municipal Extensions and Improvements.

I had intended to devote the larger part of my paper to a discussion as to future legislation regarding city building, the laying out of streets and parks and providing for separate districts for manufacturing, mercantile and residence purposes. You will all have noticed not long ago that commission has recently made a report to the government of the city of Berlin, embodying recommendations which anticipate at the end of forty years a population for that city of 10,000,000. They intend to deal with the railway question and railway terminals with a view of abating railway noise and smoke. I am not sure how they propose as to the manufacturing and other districts, where smoke, noise and offensive odors are inevitable, whether by way of zones from a common centre, or by way of sectors, like the spaces between the spokes of a wheel. They propose to control the right of private property, to interfere to a considerable extent with the views of the individual real estate owner, and they also propose that the administration of their plan shall be committed to a body of skilled men—engineers for the laying out of streets, architects for the buildings, and landscape men for the parks. Probably such a plan would be difficult for general adoption in Western communities.

I have not been able to get such a plan, but some of my architect friends have asked that such a plan be sent over.

Who can anticipate the growth of an urban population? The real estate owner who buys acreage at \$100 and sells it in four or five years at \$5,000, could not fairly complain of such an administration reasonably exercised. The rapidly increasing value of his land is due to the community, and in most cases to nothing else. If, then, the good of the community requires a modern and enlightened plan for civic betterment, the community has the right to secure it. Delay in securing information, however, has prevented me entering upon a discussion of this Berlin plan. I understand that the proposals have advanced beyond the stage of a mere outline, though authority has not yet been given to make them law. In any such matter the assistance of skilled men should be called in; not merely for advice, but they should be

clothed with authority to make their decision effective. But you, gentlemen, can do much in your local and your larger provincial and national meetings, to educate the public in such matters. There is certainly much yet to be done. For the city of Washington, the president recently appointed a commission with authority for the construction and administration of both the present and future public buildings and grounds in that city, with a view to securing artistic uniformity and beauty. It cannot be contested that the present individual freedom does not lead to a great deal of inartistic incongruity, which a central advising authority with some power to act and control might greatly improve for the public benefit.

The trend of population from rural to urban life during the last hundred years has been remarkable. The figures, indeed, are startling. The invention of labor-saving machinery is accountable probably for most of it. Whether some of the inventions which ameliorate country residence may not make a difference in the future, it is difficult to say.

City problems have become more and more pressing, therefore. Doubtless most thinkers are agreed that the moderate sized city is a better haven for the average welfare of its inhabitants than the very great city. But we cannot close the gates. How to provide, therefore, for the future city is a matter for the good citizen. It is certainly a matter for the profession which designs the business blocks, the factories and shops where the people work and the houses in which the people dwell.

The challenge of the great city is becoming more and more insistent. The smoke nuisance, the noise, the dust, the anxiety of the rush hour, to say nothing of the older problems of drainage and water, are increasing. At any rate, our comprehension of them is growing more plain and positive, and unless they are taken hold of in a broader and more comprehensive way, we will still be using the old inadequate methods of dealing with them.

The city councils have large authority, and they are criticized because they are slow, but when I think of the multitude of matter that they deal with, and of the numerous cross-currents and interests which bear on a city council, it is surprising to see how well its work is done. But it is not fully well done, and in matters of this kind there must be the fullest information which would come best from an organized body like yours.

I don't know that the sky-scraper has yet become very troublesome in our city, where there are only two buildings of ten stories or upwards in height, but from what we hear from observing men who talk of it in other cities, it is a serious question there. While not germane to a legal paper, we may ask if in New York City the sky-scraper is a necessity. Manhattan Island is not so congested as to need sky-scrapers. If you take the city below Forty-second street, take that as the line from the Battery up, three and a half or four miles to Forty-second street, and if all the stories were stratified or spread all over the other buildings, they would not increase the height of Lower New York by three-quarters of one single story. Individual owners may need the sky-scraper as an advertisement, and a building where tenants can announce themselves as in "Suite No. 3044," for instance.

The Germans with more phlegm are wiser. They say they don't want the sky-scraper and they won't have it. When an American applied in Berlin for permission to build a sky-scraper, he was met with the response: "You want a big building to spread yourself. Then spread out instead of up." That, however, is only a side issue. The fact is the sky-scraper cannot become universal. The streets could not handle the traffic. If you make New York City twenty stories higher, the rush hour with last practically all night.

These, gentlemen, are some of the matters which I thought might interest you. Some of them may have been new to you, or have recalled what has not been in your minds all the time, although I fear a lot of the points have been commonplace. When I get a complex building case I go to a friendly architect and talk over the law practice that is germane to the point, and I find that al-

most universally they have the articulation of the various principles much better in mind than I have. So I hope that I have not unduly wearied you.

He was an architect who planned the first cave and hut; later on, but long ago, the architect defined three great ideals—firmitas, utilitas, venustas—stability, utility, and beauty, and while there has been age-long discussion as to whether beauty is an end in itself, or whether it should be derived from the other two, yet architects have not to-day enlarged the definition of their ideals. Firmness, utility and beauty still express them.

I don't know that in this northern country beauty will be too much loved for its own sake. Heating and lighting constrain us to certain types of buildings which cannot be radically departed from.

Lord Brougham has made us familiar with the boast of Caesar Augustus who "found Rome brick and left it marble." But his days marked the beginning of the great city's decadence. It was only a little time after when the tribes of the north came down on the plains of Italy, and the men who occupied the palaces were unequal to their defence.

It is well to co-ordinate the third ideal of the architect with the other two. Severity and justice will be more beautiful than generous prodigality.

Your annual meetings should have increasing importance. It is satisfactory to be assured that on each succeeding occasion your progress has been notable. As an old member of a sister profession, I cannot but congratulate you. I hope you will continue to build wisely and well, maintaining the high traditions and enhancing the honor of your great profession.



ARCHITECTURE OF THE WEST

By S. FRANK PETER

Full text of paper read at Winnipeg before Third Annual Assembly of the Royal Architectural Institute of Canada.

AS STATED IN THE GENERAL PROGRAMME, this subject was to have been handled by Mr. Joseph Greenfield, an ex-president of the Manitoba Association of Architects and F.R.A.I.C., than whom there could be no one more suited to do justice to the subject, owing to his natural ability in this way, and also to the fact that he has had a large experience in the West which would undoubtedly have made his remarks most interesting and instructive.

Unfortunately, Mr. Greenfield is unable to fill this position on account of serious illness, for which, I am sure, we are all very sorry, and none more so, I can assure you, than the member who is now about to endeavor to outline the architecture of the West. I can only hope, therefore, that you, sir, and fellow architects, will extend to me that generosity—which I believe to be characteristic of the profession—while I try to undertake this duty, the call for which, while not sudden, as least was not expected, and which, had longer time been available for preparation, might have resulted in less opportunity for severe criticism in considering such an important subject.

It seems to me that the first point to be observed in connection with the architecture of the West is the vastness of its extent as well as the varied character necessarily accompanying it. Like the West itself—what a boundless prospect. Who can attempt adequately to describe its extent and possibilities? At the threshold of its development, so to speak, one's vision is limited and we have to indulge in imagination, which of itself, however, affords a large amount of satisfaction and gratification, at least to members of the architectural craft, ac-

customed as they are to indulge in "dreams"—so to speak—of well proportioned, beautiful and stately buildings.

Doubtless many present have come west of the Great Lakes for the first time, and they are just commencing to see for themselves the glorious vista spread out before them, and realize more fully than is possible from the study of either pen, pencil, or brush sketches, the grand opportunities of the architect in the preparation of suitable designs of all classes of buildings for the many millions of inhabitants who will yet dwell in the land.

To those of you who might possibly take a run further west or north on the occasion of this visit, the numerous villages and towns of but yesterday's growth will seem truly marvellous, and with the continued growth of population this building up of such centres in the different section must continue. And in addition to the vast extent of growth, it must be borne in mind the class of settlers is a very superior quality over that usually found in the settlement of new countries, and which will materially affect the development of architecture in the West, and at the very commencement the class of buildings will be much superior to that possible under less favorable conditions.

As we are all aware from trade and municipal returns many of our Western cities are establishing record growths. Commencing with Winnipeg, the "Gateway of the West," statistics have already shown a more rapid growth than even Chicago, the great internal metropolis of the United States, could ever claim. And it looks very much as though Vancouver, on the coast, is going to establish a similar record, to say nothing of the enormous development of Port Arthur and Fort William at the head of the Lakes and the enormous possibilities there.

Calgary and Edmonton in Alberta, Regina and Saskatoon in Saskatchewan—the latter of which places only ten years ago with a little over 100 citizens, now boasts a population of nearly 15,000—and many other places in the West and away to the far North, which time will not permit me to mention, are all showing phenomenal growth.

It is unnecessary, I think, to describe to this association the class of habitations of early days—the Indian tepees, the mud huts and log houses of the early settlers, the shack of the railroad contractors and prospectors, and gradually trace them in their different stages, excepting that a reference to the old Hudson's Bay Post is always interesting. One known as Fort Garry, which used to stand where our Main street now runs, near the junction of the Assiniboine and Red Rivers—a single gateway of which only has been saved from the hand of the ruthless destroyer—was a most interesting piece of good old masonry, built by clever Scotchmen, who knew more of good masonry than all the labor unions put together. Fortunately, the post known as Lower Fort Garry—about 27 miles down the river—still remains, and it is to be hoped will be preserved for all future generations to admire as opportunity favors them to visit this interesting spot.

Next to the vast extent of our field for labor in connection with the architecture of the West, is the fact of the necessity of looking out for suitable materials with which to erect and furnish our structures. At present even material of ordinary use in vast sections of our country in the West is being imported from foreign countries, or at least freighted enormous distances. That this condition of affairs will continue is impossible, as it is not consistent with the spirit of the West, which from investigation is proving from day to day that it will be able to supply material of all kinds that may be necessary for the construction of the largest and most costly buildings. Following the development of material will come the permanent residence of many new and well qualified mechanics and artisans, who are already arriving in large numbers, and those who are not so already, will undoubtedly ultimately become good Canadians and be able to adapt their knowledge to the peculiar requirements in the establishment and practical building up of a national architecture status.

It might not be out of place here to refer to the importance in buildings of all kinds in this Western land, to be careful of our foundations. In many localities the subsoils are deceptive, and in addition to the usual enquiries most thorough tests should always be made, particularly for the larger buildings, so as to avoid the unsatisfactory distinction of having leaning towers of "Pisa" as a result. Wind pressure is also a most important factor to consider, as with a wide sweep of prairie comes also the strong and steady wind pressure, against which due provisions must always be made.

As regards the style of architecture of the West, it must, of course, be based on classic and ecclesiastical lines, the foundation of all good work in our public structures, and also in our domestic architecture. This will undoubtedly be secured as the result of the efforts that are now being made to provide suitable education and opportunities for the student, both by the Governments of the day and by the associations themselves, which are so greatly interested in the work. And while on this subject, Mr. President, I cannot help expressing the hope that the R.A.I.C. will be recognized by all provincial and subordinate associations as the parent organization, so to speak, and that we shall continue to work together to secure the ends in which we are all so much interested, viz., the establishment of a national style of architecture which while necessarily varied according to the different sections, will all maintain the elements of good design and national characteristics.

To assist in obtaining this object it will certainly be desirable that errors of the past—in admitting settlers to this country who are exempt from real Canadian citizenship in many ways—should be rectified. This is particularly noticeable in certain sections of the great West, where foreigners have been allowed to come and settle under conditions, the result being that there is no progress in those portions, such as there should be along the architectural lines referred to.

Another point I would like to refer to, as it is most intimately connected with architectural designing, is the importance of town planning, the laying out of parks and the other great centres of attraction. There is no doubt it is most important for every municipality, instead of waiting till the days after the first stage of progress shall have been accomplished, to set to work at the start to establish definite lines on which to build, by the engagement of artists and men of skill in that line of work and after careful consideration by the best business men of the community. What, sir, is a magnificent pile of buildings, no matter whether smaller or larger in extent, without suitable and well laid out grounds and approaches, so that the impression of the mass itself may be adequately benefited by its surroundings and so that the surrounding areas may be properly appreciated from the site itself?

There is no doubt the West affords an opportunity of magnificence unsurpassed by any other portion of the country, and while it is never creditable nor desirable to copy designs of foreign countries, I cannot help thinking that, take for instance the so much talked of Government owned elevators, what a grand chance that would be to erect such a class of buildings if grouped in each locality instead of being scattered and thus made a reasonable and attractive "sky-scraper" in each of the different central grain sections through the West.

On the other hand, for our cities, I cannot help expressing my regret, and I believe that a large number of my fellow architects will join me, in that there is such a tendency amongst the business men of our communities to copy the sky-scraper kind of building for office purposes, and which is so often of such unsightly shape and proportions. No doubt such buildings may prove financially successful to the fortunate owner who is allowed to erect them, but I believe the beauty of our cities would be greatly enhanced if there were a reasonable limit placed to their height. Take for instance the most beautiful capitals of Europe—the sky-scraper is practically

unknown there, and who will think of comparing the skyline of New York, for instance, with many of the beautiful cities of the Continent? Of course, New York has a style of its own, and it may be that the sky-scraper is a necessity in that city, but I believe there are a great many wise men living in New York who hold the opposite opinion. However, even if New York decided that the sky-scraper style of building was necessary for them, surely such a style is totally unnecessary in a city like Winnipeg or in other cities—at least of the West—surrounded as they are by boundless prairie, and where there can be no necessity for cooping up a mass of hard workers within such a restricted area.

A most important point comes in here with the subject, the architecture of the West, viz.: that the rising generation should be thoroughly trained on artistic lines in conjunction with their regular practical work so that they may fully appreciate the beautiful in all departments of life, in which case they would certainly be brought up to admire and cultivate good architectural work, which should be a constant source of pleasure, instead of being compelled to view structures conveying very different feelings as are often experienced under less favorable conditions.

It is also to be hoped, sir, that in the erection of the many large and important public buildings that will be required in the development of the West, all proper efforts will be made to secure suitable designs by fair and honorable competition. Our public men should realize that meritorious designs for all large public buildings—no matter to which class they belong, can only be secured by engaging the best talent in the land, and where such is not secured directly, then by the institution of a set of conditions for competition so that the best of our architects will be glad to avail themselves of, resulting not only in the advancement of architecture in the West, but also of architecture throughout the entire country, and in the ultimate erection of public buildings which will be not only a credit to the designer but also a standing monument to the wisdom of the citizens of the country. Federal buildings in the different provinces, as well as provincial should certainly be carried out on these lines—of course, always in conjunction with the Department, whose chief architect should be called in as consulting or even supervising architect. Also as regards style for the Western country, which is of such gigantic extent it must necessarily vary from that suitable for a broad expanse of level prairie to that of the more picturesque and romantic mountain scenery, thus giving opportunity of developing artistic work under such vastly different conditions.

To sum up, sir, it seems to me that it would be much more preferable for us to take our ideas from the work at large, and not tumble too hastily into the styles set by our neighbors to the south, much as their is to admire in their work, and who are establishing what is known as the American School. Let us, on the contrary, by all means in our power, assist in establishing a Canadian architecture which shall have close touch and sympathy with the dear old mother land, and together help to perpetuate and extend any architecture that shall be known throughout the world as British architecture, holding the same relative position in future generations to that of Rome and Greece in the "grand old days of old."

ALL BUILDINGS of five or more stories erected hereafter in Calgary will be of fireproof construction. Owing to the rapid growth of the city, the municipal authorities have deemed it both wise and necessary to pass a by-law demanding the use of only incombustible material in the construction of the more important structures undertaken in the future. In this step Calgary displays a progressive spirit which other cities might well cultivate, as it means economy and protection to both the community and the individual.



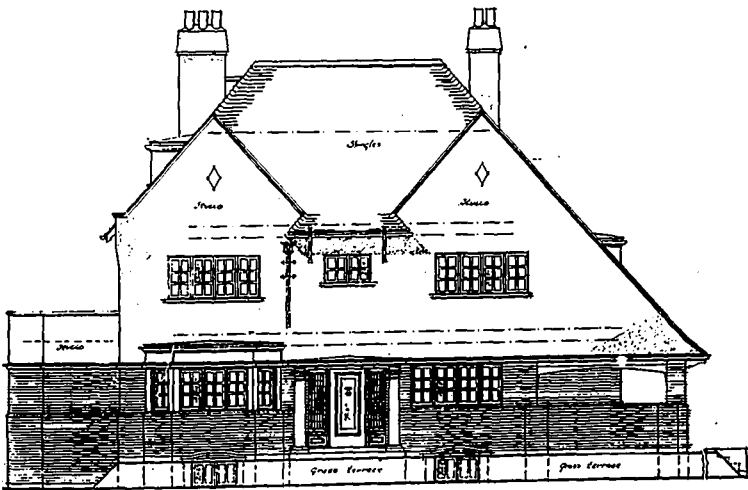
Living Room, Residence of F. A. Coryell, Jameson Avenue, Toronto. An Inviting Interior with a Simple Architectural Scheme, having Walls done in Dark Orange Paper below Plate Rail and Freize and Ceiling in Gray Stucco. The Fireplace is Built of Red Brick and the Woodwork is Stained a Golden Brown. Chadwick and Beckett, Architects.



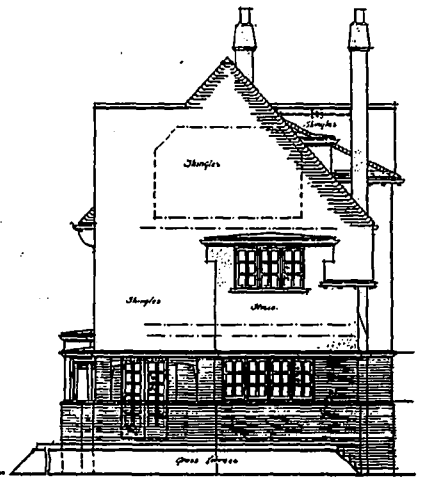
Dining Room, Residence of F. A. Coryell, Jameson Avenue, Toronto. Finished in Mahogany Stained Lum-Wood with Wall Panels of Light Green Muslin and Gray Stucco Ceiling. Chadwick and Beckett, Architects.



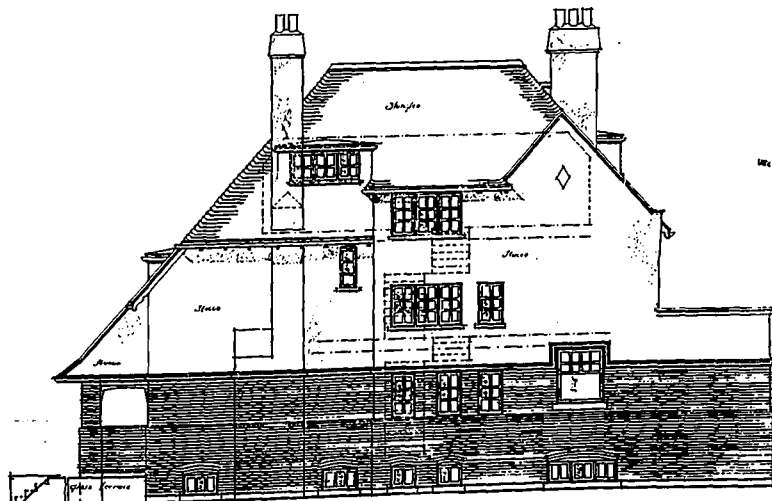
Residence of F. A. Coryell, Jameson Avenue, Toronto. Chadwick and Beckett, Architects.



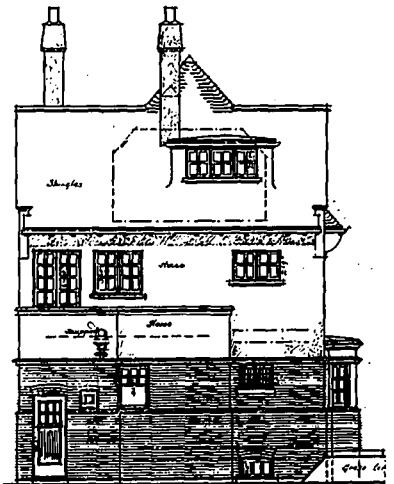
South Elevation.



East Elevation.



North Elevation.



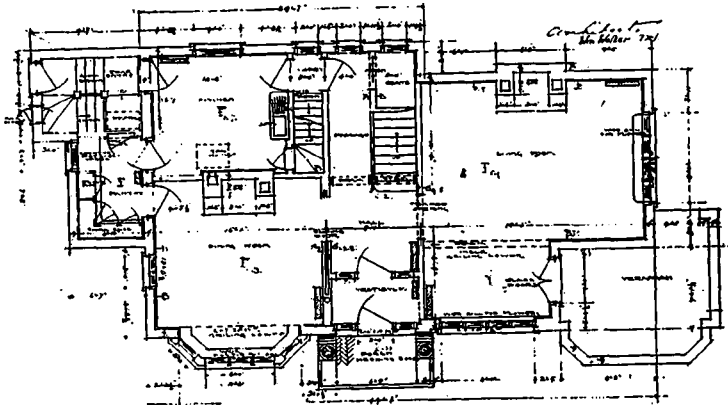
West Elevation.



AN ATTRACTIVELY DESIGNED HOUSE ON A NARROW LOT

Residence of F. A. Coryell, Jameson Avenue, Toronto. Situated and adapted in plan to obtain the full advantages of its surroundings.

THE NARROW LOT is not the most infrequent nor the least vexatious of the architect's problem in house-planning, yet when such limited advantages as sometimes obtain are fully taken into consideration, the undertaking of a residence to fit a site of this character is not wholly destitute of opportunities for individu-



Ground Floor Plan, Residence of F. A. Coryell, Jameson Avenue, Toronto. Chadwick and Beckett, Architects.

ality and highly pleasing results. In the residence of F. A. Coryell, Jameson Avenue, Toronto, illustrated herewith, the designers, Messrs. Chadwick and Beckett, have not only admirably met the conditions imposed by a somewhat restricted site, but have produced a structure that is eminently satisfactory both in its design and architectural setting.

The lot of this house is 40 by 200 feet, running east and west with the approach from Jameson Avenue on the east. To the south is the lake with two parallel lots intervening on which the houses are so situated as to provide an unbroken vista between the two. In order to take advantage of this opening, it was decided in planning Mr. Coryell's residence to set the structure slightly back on its site with the main elevation and entrance to the south. By doing this it was possible to adopt an arrangement giving all main rooms the benefit of an unusually splendid outlook, in addition to keeping the entrance private, and providing ample space on either side.

In the exterior construction, the house is of red brick with white mortar joints for the lower story and cement plaster on metallic lath above; the roof and woodwork being stained brown and the entrance and window sashes finished in white paint. The porch has a brick floor in herringbone pattern, and the vestibule and hall are centrally located with the main staircase and a coat room at the rear. A feature of the living room which occupies the entire floor space to the right, is a depression in the ceiling to form an angle connecting with the large verandah overlooking the east lawn. This interior is finished in white pine stained a golden brown, with dark orange paper below the plate rail, and a gray stucco freize and

ceiling. The fire place is built of red brick, and the sills across the windows at either side of the room are sufficiently deep to serve as a convenient place for flowers.

In the dining room the fireplace is of buff brick. Here the trim is in mahogany-stained gum wood, with strapped dado walls having light green muslin panels. The freize and ceiling are in stucco, similar in tone to that in the living room. The pantry and kitchen adjoin conveniently, and these are arranged to effectively obviate unnecessary steps in both the itchen work and service.

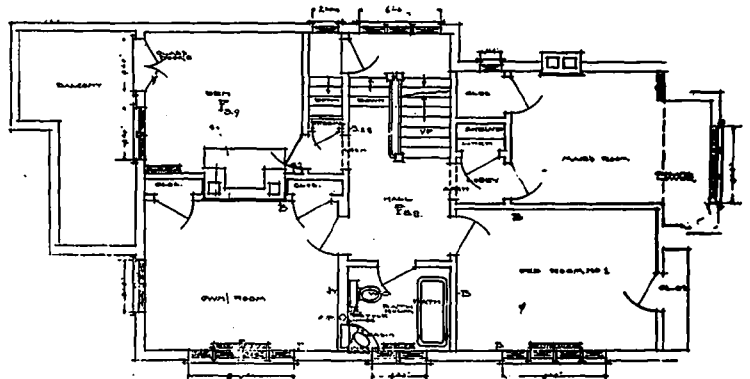
Upstairs the woodwork is painted a French gray, with the exception of the den, which is finished in a fumed oak color with brown ceiling. This room has also large red brick fireplace and a doorway opening onto a balcony to the west. The floors throughout the house are of Georgian pine, and the bath room is equipped with modern enamel sanitary fixtures.

A MODEL COTTAGE.

A FULL SIZE MODEL of a working-man's cottage, to be built from the design awarded first prize in a competition conducted by the National Congress on Tuberculosis, is to form one of the interesting features of the Cement Show to be held in Madison Square Garden, New York City from December 14 to 20. This house was designed by Architect Milton Dana Morrill, of Washington, D.C., and it has been described and illustrated in a previous issue of CONSTRUCTION. The Cement Show is to be one of the biggest affairs of its kind ever held, and it will give a splendid opportunity to bring the economic, hygiene and sanitary features

of this type of house to the attention of the public and municipal authorities. The house is to be of reinforced concrete throughout, and is a two-story, five-room cottage. A number of these houses are now being built at Virginia Highland, a new suburb of Washington.

Every room has windows on at least two sides, thus giving ample light and ventilation. The windows are of the casement type, swinging out, with no trim. While the



First Floor Plan, Residence of F. A. Coryell, Jameson Avenue, Toronto. Chadwick and Beckett, Architects.

house is of a plain box-like appearance, much has been done to enhance its beauty by the use of window boxes, flowers and vines and a little exterior decoration in ornamental concrete. The house is so built that it may be thoroughly cleaned with a hose, the cement floors being graded to plugged spout to discharge on the lawn. There are absolutely no places inside the house for the shelter of dust, vermin or insects.



MANITOBA ACT FOR ARCHITECTURAL REGISTRATION

First province in the Dominion to adopt legislation regulating the practice of Architecture. Provides for admission to the profession by examination only.

Editor's Note.—Since September 16th just passed, according to legislative enactment, it has become unlawful for any person in the province of Manitoba to carry on the practice of architecture, or to advertise as thus being engaged, without an authorized certificate of registration. The law which was assented to by the Lieutenant Governor-in-Council on March 16th of the present year, went into effect two months later, with a time allowance of four additional months for practicing members of the profession to duly qualify. In draft, the measure is modelled after the "Illinois Licensing Act," and the power of enforcement is invested in a provincial Board of Examiners, consisting of four practicing architects and a member of the faculty of the University of Manitoba. As the subject of registration has been a topic of broad discussion for some months past in various parts of the Dominion, the operation of the law, the first of its kind in Canada, will undoubtedly be closely watched, and we believe that in this connection, the full text of the Act published herewith will prove to be of no little interest to our readers.

MANITOBA is the first province in the Dominion to adopt a bill providing for the licensing or registration of architects. The draft of the measure is modelled after the Illinois Licensing Act, and its full text is as follows:

The expression "architect" means any person who shall be engaged in the planning or supervision of the erection, enlargement or alteration of buildings for others, and to be constructed by persons other than himself; but nothing contained in this Act shall prevent draughtsmen, students, clerks of works, superintendents or other employees of those lawfully practising as architects under certificates of registration as hereinafter provided for, from acting under the instructions, control or supervision of their employers, nor prevent the employment of superintendents of buildings paid by the owners from acting if under the control and employment of a registered architect.

The term "building" shall be understood to mean a structure consisting of foundation, walls and roofs, with or without other parts:

The term "board" means the board of examiners appointed under the provisions of this Act.

There shall be appointed by the Lieutenant-Governor-in-Council within sixty days after the passage of this Act a provincial board of examiners of architects, to be composed of five members, one of whom shall be a member of the faculty of the University of Manitoba and the other four shall be architects residing in the Province of Manitoba, who have been engaged in the practice of architecture for a period of at least five years. Two of the said architects appointed as examiners shall be designated to hold office for two years from the date of the passage of this Act, and the other two, together with the member of the faculty of the University of Manitoba shall hold office for four years from the passage of this Act; and thereafter upon

the expiration of the term of office of the person so appointed, the Lieutenant-Governor-in-Council shall appoint a successor to each person whose term of office shall expire, to hold office for four years, and the said persons so appointed shall have the above specified qualifications. In case the appointment of a successor is not made before the expiration of the term of any member, such member shall hold office until a successor is appointed and duly qualified. Any vacancy occurring in the membership of the board shall be filled by the Lieutenant-Governor-in-Council for the unexpired term of such membership.

The members of the board of examiners shall, as soon as organized and annually thereafter in the month of January, elect from their number a president and a secretary, who shall also be the treasurer. The treasurer shall file a bond for the penal sum of one thousand dollars with, and to the satisfaction of, the Provincial Secretary before entering upon his duties. The board shall adopt rules and regulations to govern its proceedings not inconsistent with this Act, and shall also have a seal of office, to be kept in the custody of the secretary.

The secretary shall keep a record of all the proceedings of the board, which shall be open at all times to public inspection. The secretary of the board shall receive a salary which shall be fixed by the board, but which shall not exceed the sum of six hundred dollars per annum. He shall also receive his travelling and other expenses incurred in the performance of his official duties. The other members of the board shall each receive the sum of \$16 for each day actually engaged in this service, and all legitimate and necessary expenses incurred in attending the meetings of the said board. The above salary, fees and expenses shall be paid from the fees received by the board, as provided for by this Act, and no part of the salary or other expenses of the board shall be paid by the Province of Manitoba.

All moneys received by the treasurer in respect of the fees hereinafter mentioned shall be held by the treasurer as a special fund for meeting the expenses of the said board and the payment of salaries and allowances of aforesaid and the costs of the annual report of the proceedings of the provincial board of examiners of architects.

At any meeting of the board three members thereof shall constitute a quorum. Special meetings of the board shall be called by the secretary upon the written request of two members, by giving at least seven days' written notice of the meeting to each member, not including the day on which the notices are mailed, telegraphed or personally delivered.

The board may, subject to the approval of the Lieutenant-Governor-in-Council, adopt rules and regulations for the examination of applicants for certificates of registration to practise architecture in accordance with the provisions of this Act, and may amend, modify and repeal such regulations from time to time; provided however, that any such amendment, modification or repeal

shall not become operative until sanctioned by order of the Lieutenant-Governor-in-Council.

The board shall immediately upon the election of each officer thereof, and upon the adoption, repeal or modification of its rules of government or its rules and regulations for the examination of applicants for certificates of registration, file with the Provincial Secretary, and after approval thereof by the Lieutenant-Governor-in-Council, where such is required, shall publish in The Manitoba Gazette for at least two insertions a statement signed by the secretary, setting forth, in the case of the election of an officer or officers, the name and address of each officer, and in the case of the adoption, repeal or modification of the rules and regulations, a copy of such rules and regulations and the amendment, repeal or modification thereof.

Provision shall be made by the board hereby constituted for holding examinations at least twice in each year for applicants for certificates of registration to practise architecture, and any person over twenty-one years of age, upon payment of a fee of fifteen dollars to the secretary of the board, shall be entitled to an examination for determining his qualifications. All examinations shall be made directly by the said board, or a committee of two members delegated by the board, and due notice of the time and place of holding such examinations shall be published, as in the case provided for the publication of the rules and regulations of the said board provided that in special cases such publication may be dispensed with in the discretion of the board. The examination shall have special reference to the construction of buildings, and a test of the knowledge of the candidate of the strength of materials, and of his ability to make practical application of such knowledge in the ordinary professional work of an architect, and the duties of a supervisor of mechanical work in buildings, and shall also seek to determine his knowledge on the laws of sanitation as applied to buildings. If the result of the examination of any applicant shall be satisfactory to a majority of the board under its rules, the secretary shall, upon an order from the board, issue to the applicant a certificate to that effect, and upon payment to the secretary of the board by the candidate of a fee of \$25 he shall thereupon issue to the person named therein a certificate of registration, permitting the holder thereof to practise architecture in this Province in accordance with the provisions of this Act, which certificate of registration shall contain the full name, birthplace and age of the applicant and be signed by the president and secretary and sealed with the seal of the board.

All papers received by the secretary in relation to applications for certificates of registration shall be kept on file in his office and a proper index and record thereof shall be kept by him.

Notwithstanding anything herein contained, any person who shall by affidavit prove to the satisfaction of the provincial board of examiners that he or she was engaged in the practice of the profession of architecture in the Province of Manitoba on the date of the passage of this Act, shall be entitled to a certificate of registration without an examination, provided such application shall be made within six months after the passage of this Act. Such certificate of registration when granted shall set forth the fact that the person to whom the same was issued had been practising architecture in the Province of Manitoba at the time of the passage of this Act, and is therefore entitled to a certificate of registration entitling him or her to practise architecture without an examination by the board of examiners.

The fee payable by any person so applying for a certificate of registration by affidavit shall be twenty-five dollars, upon the payment of which sum the secretary shall, with the approval of the board, issue to the person named in said affidavit said certificate of registration, in

accordance with the provisions of this Act.

In the case of two or more architects carrying on their business in co-partnership, each member whose name appears as a member of the firm must hold a certificate of registration under the provisions of this Act.

No joint stock company or corporation shall be registered under the provisions hereof, but such company or corporation may employ duly registered architects.

Every architect registered in accordance with the provisions of this Act shall have a seal, the impression of which must contain the name of the architect, his place of business, and the words "Registered Architect, Province of Manitoba," with which he shall stamp all working drawings and specifications issued from his office for use in the Province of Manitoba.

After the expiration of six months from the date of the coming into force of this Act, it shall be unlawful for any person not holding a certificate of registration in this Province under the provisions of this Act to advertise or put out any sign, card or other device for the purpose of, or with a view to, indicating to the public that he or she is entitled to practise as an architect.

Any person transgressing any of the provisions of this Act shall incur a penalty of not less than fifty dollars and not exceeding one hundred dollars for the first offence, and for each offence committed subsequent to any conviction hereunder a penalty of not less than one hundred dollars and not exceeding three hundred dollars, and the cost of the prosecution, to be recovered by a summary conviction before any two justices of the peace, one of whom may take the information and issue the summons, or before a police magistrate, one moiety to belong to the prosecutor and the other to the treasurer of the board for the use of the board. In default of payment and of sufficient distress, the defendant shall for the first offence be liable to imprisonment for any term not exceeding one month, and for each subsequent offence for any term not exceeding one month. Every prosecution under this Act shall be commenced within six months from the date of the alleged offence.

Notwithstanding anything contained in this Act, it shall be lawful for any person, mechanic or builder to make and prepare plans and specifications for, or to supervise the erection, enlargement or alteration of, any building that is to be constructed by himself or his employees.

No civil engineer shall be considered an architect within the meaning of this Act unless he plans, designs or supervises the erection of buildings, in which case he shall be subject to all the provisions of this Act and be considered as an architect.

All certificates of registration issued in accordance with the provisions of this Act shall remain in full force until revoked for cause as hereinafter provided. Any certificate of registration so granted may be revoked by unanimous vote of the board for gross incompetency or recklessness in the erection of buildings, or for dishonest practice on the part of the holder thereof, or for failure to stamp working drawings and specifications with the seal of the holder thereof in accordance with the provisions of this Act; provided, however, that no certificate of registration shall be revoked until the holder thereof shall have received at least twenty days' notice in writing of the charge against him and of the time and place of the meeting of the board for the hearing and determining of such charge.

After the expiration of six months from the revocation of a certificate of registration, the person whose certificate was revoked may have a new certificate issued by the secretary upon certificate of the board issued by them on satisfactory evidence of proper reasons for his reinstatement and upon payment to the secretary of a fee of five dollars.

For the purpose of carrying out the provisions of this Act relating to the revocation of certificates of registra-

tion, the board shall have the power of a court of record and the power to issue subpoenas to compel the attendance and testimony of witnesses. All witnesses subpoenaed by the board shall be entitled to the same fees as witnesses in the Court of King's Bench, to be paid in like manner. The accused shall be entitled to obtain from the board subpoenas for his witnesses, and shall be heard in person or by counsel as in open public trial; provided that any architects subpoenaed to give evidence under the provisions of this section shall be entitled to be paid the sum of four dollars per diem and travelling expenses, as in the case of professional witnesses in the Court of King's Bench.

Every registered architect of this Province who desires to continue the practice of his profession shall annually during the time that he shall continue in such practice pay to the secretary of the board during the month of July a fee of five dollars. The secretary shall thereupon issue to such registered architect a certificate of renewal for the term of one year. Any registered architect who shall fail to have his certificate renewed during the month of July in each and every year, shall be liable to have his certificate of registration revoked at the discretion of the board, but the failure to renew such certificate of registration within a reasonable time shall not deprive such architect of the right to renewal thereafter; provided, however, that the fee to be paid on the renewal of registration after the month of July shall be ten dollars in each case.

Within the first week of December after the organization of the board, and annually thereafter, the secretary of the board shall file with the Provincial Secretary a full report of the proceedings of the board, and a complete statement of the receipts and expenditures of the board, attested by affidavits of the president and secretary, subject to the approval of the Provincial Secretary.

This Act shall come into force on the day it is assented to.

Passed by the Legislative Assembly of Manitoba, in the Third Session of the Twelfth Legislature held in the Tenth Year of His Majesty's Reign, and assented to in the King's Name by His Honour the Lieutenant-Governor on Wednesday, the Sixteenth day of March, A.D., 1910.

Headquarters and Examinations.

The headquarters of the Board shall be at Winnipeg, and the examinations shall take place at the University of Manitoba at Winnipeg, or such other place as shall be designated by a vote of the Board.

Finance

All funds collected shall be deposited in a chartered bank to the credit of the Board, and all cheques shall be signed by the Secretary and Treasurer and countersigned by the President, and no disbursements shall be made except on the order of the Board. There shall be an auditing committee of two to pass on all accounts of the Treasurer. Bills of members for time and expenses shall be audited by the Board when presented at regular meetings.

Meetings.

Regular meetings of the Board shall be held on the second Monday of each month at 8 p.m., at the Board Room, unless the time and place be otherwise ordered.

Examinations.

The Board shall arrange a programme for the examinations for registration and all other matters connected therewith.

Class Examinations.

The regular class examinations shall be held in April and October and shall occupy not less than three days. Two days shall be devoted to written examinations, and one day shall be devoted to ascertaining the ability of the candidate to make practical application of his knowledge in the ordinary work of an architect, which will include

an effort towards ascertaining the qualifications of the applicant in accurate draughtsmanship and the proper distribution of constructional members from a practical standpoint.

Applications will be received at any time. If the number and urgency of the applications received make it seem expedient to the Board to institute class examinations at any other than the times mentioned in the semi-annual advertisements, due notice of such additional examinations will be forwarded by the Secretary to those whose applications are on file at his office. Applications for the regular class examination should reach the Secretary's office one week before the date set. All applications must be upon the form provided and must be accompanied by the examination fee of \$15. If the applications are in regular form, notice will be mailed to applicants, with detailed information as to the time, place and extent of examinations. No certificate shall be issued to those having taken the class examinations unless their percentage of marks on each subject of the examination be 60 or more. All applicants who fail to receive the above percentage of 60 on not more than two subjects shall receive a certified statement from the Secretary of the Board of their success or failure in the various branches of the examinations and they will be entitled to receive special examinations in those subjects in which they failed. Said special examination shall be held semi-annually at such place and time as may be determined by the Board.

Special Examinations Before the Board—In What Cases Allowed.

In cases where an applicant for examination shall cite to the Board existing buildings erected from his or her design and under his or her supervision and when the character of such erected buildings and the applicant's connection with the design and supervision thereof, as ascertained by this Board, are such as to satisfy this Board that the said applicant for examination is possessed of the necessary knowledge and of the ability to apply the same as required in section No. 10 of the Act, then and in such case the demonstration of the applicant's knowledge and ability so made may, if found sufficient by this Board, take the place of written or oral examinations. Such examination in all cases must be accompanied by the usual examination fee of \$15. Applicants failing to satisfy the Board in such exhibit-examinations shall be allowed to take the regular examination upon a further payment of half the regular fee for such regular examination.

Application for registration, without personal appearance, from practising architects, may also be considered at any meeting of the Board and certificates issued upon payment of the registration fee where the qualifications submitted are in the opinion of the Board of such satisfactory nature as to render the examinations unnecessary. Applicants failing to convince the Board of their standing will be required to take the exhibit examination as required above.

Rules Applicable to All Applicants.

Due notice of the result of examinations will be sent to candidates. All certificates shall bear the date of the time when finally approved by the Board and must be renewed July 1st every year.

In all cases in which applications for examinations have remained on file one year or more and the applicants have not appeared for examinations two-thirds of the examination fee will be returnable and the applications cancelled.

Lost or Destroyed Certificates.

When a certificate previously issued has been lost or destroyed, a charge of one dollar \$(1.00) for a duplicate thereof shall be made ~~to cover the expense of such du-~~

uplicate certificate. No such duplicate shall be issued except by order of the Board.

Publication.

All publishers of directories or journals shall be allowed to have free access to the files of the Board for the purpose of publishing lists of registered architects.

Architects' Seals.

The seals of registered architects shall be circular and two inches in diameter. The words "Province of Manitoba" shall appear at the top, between two circular lines, and the words "Registered Architect" at the bottom, between the same lines. The name and place of business of the architect, to which the street and number may be added if desired, are to be placed within the inner circle. Where there is a co-partnership of architects the individual names of the several members registered may appear on one seal. As stated in the law, the seal is to make an impression, hence a rubber or inking stamp will not be lawful.

PROGRESS OF WORK ON HAGUE PEACE PALACE

Description of Building which will be the headquarters of the International Court of Arbitration. To be completed in 1913.

BEFORE THE OLD TOLLGATE, which marks the former boundary of the Hague, stands a great forest of scaffolding, a little distance from the road. Among these scaffold poles is rising the Palace of Peace, the future headquarters of the International Court of Arbitration, toward the erection and maintenance of which Mr. Andrew Carnegie handed over to the Netherlands Government the sum of £300,000, "believing" (as the Trust Deed of October 7, 1903, has it) "that the establishment of a permanent Court of Arbitration by the Treaty of the 29th of July, 1899, is the most important step forward of a world-wide humanitarian character which has ever been taken by the joint powers, as it must ultimately banish war, and further, being of opinion that the cause of the Peace Conference will greatly benefit by the erection of a Court House and library for the Permanent Court of Arbitration."

To the architectural profession this wonderful Peace Palace is of more than passing interest, for there is no work of modern times for which so many designs were submitted by the world's most prominent architects as for this great International Court House.

The usual accuracy of the current "Baedeker" has been betrayed by the abandonment of the site first proposed, which lies a mile away on the other side of The Hague. The present site forms part of the grounds of the miniature palace which belonged to and in which died, Princess Anna Pantowna, wife of King William II., and grandmother of the reigning Queen. Passing, in course of time into the hands of a company, the grounds, to the extent of at least sixteen acres, were acquired by the Government at a cost of over £58,000. The old palace still stands by the gate and, with its lofty rooms and old-fashioned decorations, forms charming quarters for the architects and their drawing staff. It will, however, be swept away when the time comes for laying out the grounds of the Palace of Peace.

To make room for the great building now in course of construction, a large space had first to be cleared in the thick wood which covers the grounds. The authors of the scheme have shown equal wisdom and good taste in setting the building well back from the road. The palace, built in brick and stone, with roof of blue Welsh slate, of an architecture partly Dutch and partly Flemish in char-

acter, has the noble proportions of some of the old town halls in Belgium. The architect is M. L. M. Cordonnier, of Lille, who has associated with him the resident architect, J. A. G. van der Steur of Haarlem. His design was selected out of 216 from all countries by a jury composed of six leading architects of Great Britain, Holland, France, Germany and the United States, and an inspection of some of the "next best" designs which hang in the workrooms of the old palaces leaves no doubt in the minds of the visitor that the jury chose rightly. M. Cordonnier's original design has, however, been very considerably altered, thereby gaining greatly in compactness of internal arrangement as well as in lightness of external appearance.

The palace, on which 200 men are at work and of which the roof was begun yesterday, is expected to be finished in 1913. It consists of a half-basement containing press rooms, a telegraph and other offices, a heating and lighting plant with fourteen boilers, accommodation for the staff of the building, and (most important of all) a spacious restaurant. It is creditably asserted that the more tangible success of the first Peace Conference as compared with that of the second was largely due to the facilities afforded the plenipotentiaries at the House in the Wood of getting to know one another over their lunch. However that may be, the convenience of being able to feed on the spot or smoke a lone cigar in the garden afterward will be immensely appreciated by those whose duties bring them to conferences or arbitrations in the Palace of Peace.

The main entrance is approached by curving slopes, not steps. An arcade with bannisters in front extends on either side. On the left rises a square tower to the height of about 260 feet. At the opposite corner of the facade and in the outer wall of the Great Court is the foundation stone, laid on July 30, 1907, by M. de Netidoff, president of the second Peace Conference, with the inscription, "Paci Justitia firmandae Hanc aedem Andreae Carnegie Munificentia Dedicavit." The Great Court, which is, of course, the inner shrine of the Temple of Peace, is a hall about 70 feet long, 40 feet wide and 83 feet high. On one side is three large windows, on the other three galleries. At one end is a fourth large window; at the other the dais for the Tribunal. At the other end of a corridor lined with beautiful Greek and Italian marble, and behind the base of the tower above mentioned, is the Small Court, almost exactly half the size of the Great, and having also three galleries.

The ceiling of the Great Court has a barrel-vaulting; that of the small is flat and heavily moulded. The latter seems likely to produce the better acoustic properties of the two. The remainder of this floor is occupied by reading rooms, a map room, consultation rooms and other appropriate accommodation for the parties to a case. On the upper floor, approached by a magnificent staircase projecting into the central courtyard, are the rooms of the Administrative Council and other officials of the Permanent Court of Arbitration, and a library capable of containing 200,000 volumes, with a booklift to the reading rooms below. The centre of the building is occupied by a courtyard 144 feet long and 111 feet wide, with a fountain in the centre, where the air to be breathed in the building will be washed before being filtered and otherwise dealt with by the ventilating apparatus. The whole building is, roughly, 260 feet square.

All countries are contributing after their kind to the adornment of the palace. Great Britain gives the four stained glass windows of the Great Court; France a picture by Besnard for this court and Gobelins tapestries, designed by Luc O. Mercon, for the Small; the Dutch Government a collection of paintings by Ferdinand Ball for a room over the Small Court and seven stained glass windows for the staircase; Germany the monumental entrance gates to the grounds; Italy part of the marble for the corridor; Austria the bronze and crystal candelabra; Norway the granite for the entrance slopes; Sweden gran-

ite for the basement and certain columns; Denmark the porcelain for the fountain in the courtyard; Switzerland the works of the clocks; Russia a jasper vase over 11 feet high for the central hall; the United States a large marble group representing the purpose of the building, "Peace Through Justice," for the first landing for the staircase; Mexico onyx for the staircase; Belgium probably the bronze doors of the building, and Japan some gold embroidered tapestries for the room of the Administrative Council, which is panelled in wood from Brazil.



THE LEGALITY OF EXTRAS IN BUILDING WORK

Decisions of the English Court in which the liability and right of disputant parties are defined.

THE MATTER OF EXTRAS is one of the vexations and ever-recurring phases of building construction with which architects and contractors have to contend. Quite often an unintentional omission or a deviation from the working drawings, as well as the substitution of a material other than that specified, necessitates additional services and expense that brings the cost of the work to a greater figure than that originally agreed upon. The position and rights of the contracting parties in such matters forms the subject of a timely article in *THE ARCHITECTS' AND BUILDERS' JOURNAL*, in which the legality of extras, as based on decision of the English Court is interestingly discussed.

Extras, says our contemporary, may be defined as work not expressly or impliedly included in the original contract. The matter has to be considered from several points of view. The building owner, who probably reckons on the work being done for a fixed sum, does not want the limit to be exceeded. The builder may find the task he has undertaken to be impossible unless he is allowed to charge for extras. Consequently the architect, who is in a middle position, is often in a dilemma. On the one hand, he does not want to make a slovenly job by refusing to allow as an extra something which has been inadvertently omitted from the specification; for unless his skill be something more than human, it will be almost impossible to provide for everything when executing a very large contract. On the other hand, he does not like to ask the building owner, who has employed him, to pay a large bill for extras.

The Position of the Architect.

The first thing an architect should do when called on to decide as to extras is to look at the terms of the contract. Sometimes it defines his duty very clearly. Thus it usually provides that the builder shall have no claim for extra payment beyond the contract price in respect of any work done by him for the employer, whether executed before or after the completion of the contract, unless such payment is expressly ordered. The duty of ordering payment is left to the architect, the contract providing that he is to grant a written order expressly stating that the work is to be the subject of an extra charge, and then only for the amount which the architect in his final certificate shall certify to be due to the builder in respect of such alterations and additions. The contract should also provide that extras shall be executed subject to the same conditions as the other work specified for, and that the prices contained in the bill of quantities shall be applicable as far as possible.

The Burden of the Building Owner.

It often happens that when proceeding with the work something occurs to increase the burden which may have to be placed upon the building owner. In order that the architect shall be kept informed of any such additional

expense, it is well to provide that the builder, in proceeding with the works in accordance with any supplementary detail or other drawing, sketch, or instruction, that will cause any additional expense, he shall immediately intimate the same to the architect.

Lump-sum Contracts.

If the contract is a "lump-sum" contract, it is obvious that anything extra must be done and paid for under some contract express or implied which is distinct from the original contract. Unless there is such an express or implied contract, the builder does the extra work at his peril; he cannot recover the price of it. For instance, if work is to be done at a given price, and the builder does the work better or uses better materials, the employer is not liable to pay any greater price (*Wilmot v. Smith*, 1828, 3 C. and P. 453). But the "extra" clause does not apply to work wholly outside the original contract. Thus, where plasterers who were employed to do the inside of a house under a written contract were verbally requested to do the entablature outside, it was held that they might sue for the price of this without producing the written agreement. (*Reed v. Batte*, 1829, M. and M. 413).

Contracts Under Seal.

Where the contract is under seal, as where, for instance, a builder agrees to do work for a corporation or other local authority, the original contract cannot be varied or altered except by a new contract under seal. Consequently, if the builder, at the verbal request of the local authority or one of their officers, does some extra work, he could not recover anything in respect of it. But where such a contract contains the usual clause allowing the extras to be ordered by the architect, his order need not be under seal.

Authority for Extras.

It is a general rule that the architect cannot order extras without authority. In other words the cost of extras done pursuant to an order which the architect has no authority to give, cannot be recovered from the employer. For instance, in (*Cooper v. Langdon*, 1841, 9 M. and W. 60), a builder was sued for not building a house in accordance with his contract. He pleaded that he deviated from the drawings, etc., by the direction of the architect. It was held that this was no answer to the claim, as it was not proved that the architect had power, under the terms of the contract, to bind the employer by allowing deviations from the drawings.

Further, he must authorize extras in the manner in which he is directed to authorize them. If an express order or direction in writing is necessary, nothing less than an express order or direction will suffice. (*Russell v. Sa Da Bandeira*, 1862, 13 C.B.N.S. 149). So, a mere sketch made by an architect was held not to be a sufficient written direction for extras. (*Myers v. Sarl*, 1860, 30 L.J.Q.B. 9). These cases will show that the architect who is called upon to allow for extras should exercise the greatest care in complying with the requirements of the contract.

Architect's Liability.

The architect may become personally liable for extras if he orders them on a representation that he has authority to do so. The authority of the architect to order extras does not extend to things wholly outside the contract. The extra clause must not be construed as authorizing the architect to allow the contractor to depart materially from the general design of the work under execution. Dealing with the "extras" and "omissions" clause in the old case of *Rex v. Peto* (1826, I.Y. and J. 53), Alexander C.B. said: "Everyone who is at all conversant with building knows that, in the course of building, it occurs sometimes to add, and sometimes to desire, that certain things may be omitted; this appears to have been in the contemplation of those who prepared this instrument; and accordingly they have introduced that clause, which was clearly inserted to prevent in the first place any such direction affecting the rest of the contract, and in the next

place to provide for the manner in which the contractor was to be paid in case that event should happen." After reading the clause, he said: "Is it possible that this clause was intended to give to the surveyor, a person who ought to be in general but an overlooker of the owner, to see that the work is accurately performed, a power to vary the whole scheme of the building? Or, if it were so intended, that it could have been expressed in such language? In sound construction it should be limited to that to which the condition has confined it, namely, to such extra work as may be done, or something which is to be omitted; but it cannot refer to the substitution of one thing for another, more especially anything so important as the making of the foundation on which the whole validity and security of the building depends."

Employer Ordering Extras.

If it can be distinctly proved that the employer ordered extras, he will be liable to pay for them, as in that case a new contract will have come into existence. But an allegation that he assented to alterations will not be sufficient. In *Lovelock v. King* (1831, 1 Moo. and Rob. 60), a carpenter had agreed to alter certain premises for a fixed sum. Considerable deviations were made from the original plan, which it was alleged the employer had seen and had not objected to. The carpenter sued for the "measure and value" price of all the work done. It was laid down that the employer was not liable for any larger sum than that fixed by the contract, by reason of his assenting to deviations unless he was expressly or impliedly informed that such deviations would increase the cost.

The Final Certificate.

The architect's final certificate may have an important bearing upon the question of extras. The result of many cases appears to be that even where extras must be ordered in writing, the final certificate of the architect is conclusive, both in the case of the employer and the contractor, whether the order in writing was actually given or not. As an illustration, reference may be made to the Irish case of *Connor v. Belfast Water Commissioners* (1871, 5 Ir. L.R.C.L. 55). There the plaintiff contracted to do certain works for the defendant commissioners. The contract provided that no extras should be made without an order in writing, and that such extra works should be valued by the engineer, and that the valuation should be final. It also provided that if extra works were ordered, the contractor should send in accounts within a month, and that in default of his so doing, the defendants should not be bound to pay for them. It was also provided that the defendants should not be bound to pay for any works, except upon the production of a certificate signed by some principal or resident engineer, and that the principal engineers or engineer for the time being should be the exclusive judges of the execution of the works and of everything connected with the contract; and that the certificates under their hands or hand should be binding and conclusive on both parties. It was held that the engineers having given a certificate for the extra works, the defendants were precluded from setting up as defences to the action for the price of the extra works; that the extra works had not been ordered in writing, and that no accounts had been sent in for them, as required by the deed.

The final certificate may also amount to a determination by the engineer as to whether certain things are extras or not. This was held to be so in a case arising on a contract which provided that all extras or additions should be paid for at the price fixed by the surveyor appointed by the contractor's employer. It was held that extras was conclusive (*Richardson v. May*, 1883, 10 Q.B.D. 400).

AN UNFORTUNATE OCCURRENCE which happened recently in England was the shattering of a fourteenth century window in the Parish Church of Ashton-under-Lyne by culprits whose object was the robbing of the offertory.

PRELIMINARY WORK STARTS IN ERECTION OF LONDON COUNTY HALL

Foundation work well advanced for important structure to be built in the English Metropolis, and the construction of superstructure soon to be undertaken.

THE LONDON COUNTY COUNCIL ACQUIRED the premises between Belvedere road and the Thames, formerly occupied by (a) Peter Brotherhood's engineering works; (b) Crosse & Blackwell's riverside pickle and jam factory; (c) the Lambeth Borough Council's yards, stables, and premises, which were formerly in the possession of Messrs. Maudslay, the well-known marine engineers; (d) the premises known as Westminster Bridge Wharf; (e) the row of shops abutting on the north side of the eastern approach to the bridge.

Most, if not all, of these premises, stood upon a site known for centuries as Pedlar's Acre, by which name the road itself was commonly known until it was decreed that it should be called Belvedere road. Legend has it that some 350 years or more ago, a pedlar with his dog appeal-

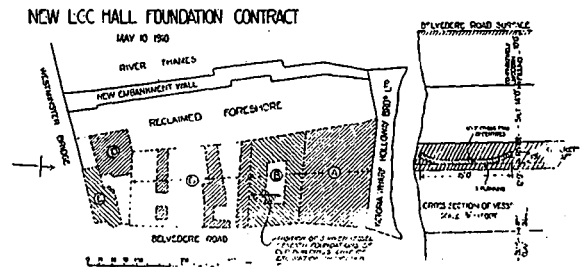


Diagram of Site and Foundation Work for the Proposed London County Hall.

ed for assistance and shelter to the priest in charge of Lambeth Parish Church, and having been kindly treated he demised at his death, in gratitude for this small benefit, some land bordering the river and a little way north of Lambeth Palace and church. Since that time this land has been the property of the Parish of Lambeth, until its late compulsory acquirement by the London County Council for their County Hall site.

In addition to the above-named premises, the Council have acquired, with a view to ultimate extension, the new premises, northwards, at present in the occupation of Messrs. Holloway Bros., Ltd., and beyond them again there are the old London County Council Works Department premises, of which the Council are already the freeholders, so that future requirements would seem to be amply provided for.

Besides the land area at present involved, comprising a little more than 2½ acres, the Council have reclaimed foreshore to the extent of nearly two acres more, making over four acres as the area of the land to be covered by the buildings now in contemplation, and the embankment wall, etc.

Excavation.

The whole of the site is being removed to a depth of about 25 ft. from the street level in Belvedere road, and the strata dealt with has turned out to be a top layer of comparatively modern rubbish filling of 10 ft., followed by 14 ft. of river silt, hardened into a clay of the consistency of cheese, at the bottom of which the river gravel is reached, one foot of which is removed, and upon the level thus reached the concrete raft, 5 ft. thick, is to be laid.

on the surface of which the nine great blocks comprising the greatest town hall in the world will presently be placed.

Discoveries.

Various small objects of interest have been unearthed, but in no case either so ancient or so numerous as might from the situation have been expected. There, however, has come partly to light a sunken ferry barge of exceeding interest, the date of which has not yet been determined, but which probably belongs to the period of the Roman occupation. The point to which the excavation has at the moment proceeded has cut the vessel obliquely, as indicated upon the plan annexed, and the section has revealed a ship 16 ft. width by length at present unascertained, and a depth of 11 ft. 9 in., having a flat bottom, roughly represented by an inverted ellipse. It has cross-ribs 6 in. by 5 in. at 12 in. centres, and an outer covering of 3 in. planking, all being of oak, black and nearly perished. It is intended shortly to remove the earth down to the level of the sides, and then, under careful inspection, to clear out the remainder, so as to obtain a perfect view of the vessel before its removal, which unhappily cannot be effected otherwise than by demolition, owing to its state of decay. Some articles of interest also may be discovered among its immediate contents.

Its position in the strata above-named is at the bottom of the river deposit, and resting upon the sandy gravel. From this situation it is quite clear that it must have sunk at a time when the full flow of the river was over this spot, since which time the centre of the channel has changed, or been diverted westwards, with the result that the mud began to silt up over it, which process continuing for ages, the 14 ft. of accumulation has accrued by the time that the mud bank foreshore was bequeathed by the pedlar to the Lambeth Parish.

Concrete Raft.

About one half of the material to be removed under the contract has been cleared, and the concrete raft has been begun. The Council requires the mixture to be deposited in 12 in. layers, and well rammed. The lowest of these layers is being covered with a damp-proof course of washed sand, and cement $\frac{3}{4}$ in. thick, above which the remaining four layers are placed, breaking joint vertically where for any cause the work has to be temporarily stopped off.

Composition of the Concrete.

The concrete is composed of broken brick and old concrete, obtained by the demolition of the old buildings and foundations upon the site, adjusted to contain two-thirds coarse and one-third fine material, with Portland cement from Strood, in the proportions of six of the aggregate to one of cement.

Mixing Machines.

It is being mixed in machines of ingenious and novel construction, invented and patented by the contractors, in conjunction with one of their managers. These machines are triangular in form, having hoppers for aggregate and cement at one end of the base, and from these up one of the sides two elevators operate, one placed over the other, the buckets from which fill themselves as they pass through the hopper bottoms, and are immediately struck off by weighted strikers, ensuring accurate measure. When the lower or aggregate bucket reaches its highest level point the cement elevator bucket immediately overhead overturns its contents upon it, whence at once the contents are discharged down the other side of the triangle, which takes the form of a trough in which are four mixing drums, each having four wings or blades, which pick up the material on its descent, and turn it completely over. The first two drums mix it dry, when it encounters a sponge pipe, the remaining two turning it in a wet state. Thence it emerges at the opposite end of the base as mixed concrete ready for depositing in position.

These machines are so placed that their tops are about at the old ground level, and the hoppers are extended upwards, and into these extended hoppers the aggregate and cement are wheeled and tipped, and the concrete is delivered at the foot into contractors' narrow railway trucks, and run away to its destination.

From the architect's and engineer's point of view, the machines appear to afford two great advantages: (1) The mixing of the concrete in small quantities at a time, ensuring the proper and regular distribution in the mass of cement and aggregate; (2) the impossibility, provided the hoppers are kept filled, or errors and irregularity in the proportions of one to the other. The cement buckets can be altered at pleasure, to suit any desired proportion of cement by increasing or reducing the thickness of the packing pieces which are placed on one side of every bucket for the purpose.

The motive power is derived from an electric motor placed on the platform forming the base of the triangle, whence it is applied by a system of belt and pinion wheels, so that all parts of the machine work at the same pace.

The output of each machine continuously worked may be taken at about 150 yards per day, but its capacity is really only limited by the ability to remove the resulting mixture.

All the excavated material unsuitable for manufacture into aggregate is being trucked and craned to the contractors' own jetties, alongside, where it is deposited into barges and taken down the river to fill up low-lying lands bordering the stream at its lower reaches.

WINNIPEG ADVANCEMENT.

CANADA, COMMERCIALLY CONSIDERED, is making rapid progress. Roughly speaking, the East manufactures and the West consumes. The farms of Western Canada are producing a gross income of \$250,000,000 annually and the men who make the farms produce this large sum of money are free spenders of their income. They buy heavily of all lines of manufactured goods from farm machinery down to wearing apparel and nearly all of these goods are brought in from Eastern Canada, Great Britain and the United States. This producing and purchasing power of the West was strongly impressed upon the two hundred manufacturers from Eastern Canada, who recently passed through the Western Provinces on their way to the annual convention of the Manufacturers' Association at the Coast. They saw—some of them for the first time—the great progress the West is making and the great opportunities the country offers for large increase of a traffic which is already enormous and highly profitable.

Effective Methods Employed.

In the West, cities and towns are bidding for new enterprises by the establishment of municipal leagues and bureaus through which advertising campaigns are being vigorously pursued. Winnipeg is an example of what can be accomplished by the united efforts of this nature. Four years ago that city formed an official institution composed of representatives of several business bodies, headed by the City Council, Board of Trade, Bankers' Association, etc., and known as the Winnipeg Development and Industrial Bureau. It is a perfect organization, that now has representatives of sixteen business bodies on its Board of Directors, having 3,700 affiliated members, 425 of whom are business firms who contribute to its financial requirements. These firms pay annual membership fees of \$20 and every year they appoint a delegation to wait upon the City Council and ask for a sum they deem to be essential outside of members' contributions, to carry on the work of advertising for the current year. They get it too. In 1906, the city grant was \$1-

500; in 1907, it was \$3,000; in 1908, \$6,000; in 1909, \$10,000; and in 1910, \$25,000.

Civic Advertising Pays.

In welcoming the Canadian Manufacturers' Association to that city on September 13th, Mayor W. S. Evans, in his remarks, directed attention to the growing importance of Winnipeg as a manufacturing city. Mayor Evans pointed out that in 1900 the value of the manufactures produced in Winnipeg was \$8,686,000. In 1905, it reached \$18,983,248 and, according to a census taken by the Civic Bureau, the annual output has now reached \$38,500,000. Fourteen thousand hands are now employed who receive a monthly wage exceeding \$750,000, and \$20,000,000 is invested in industrial enterprises. Mayor Evans pointed out to the four hundred guests at this banquet, that there was room and opportunity for all, as the wholesale houses of Winnipeg handled in addition to the local manufactured output, a total of over \$100,000,000 of goods made elsewhere during the year.

Offers Cheap Power.

That Winnipeg welcomes the manufacturer is shown, by the fact that the city has under construction one of the largest and best equipped power plants on the continent that will cost, when completed, \$3,500,000. The Dominion Government has in the past month officially opened St. Andrews Locks on the Red River, thus placing Winnipeg in direct water communication with Lake Winnipeg—a lake 2,000 square miles larger than Lake Ontario, and surrounded by a country in which raw materials of various kinds abound, a country of vast undeveloped resources that will surely yield richly for the upbuilding of Winnipeg industries.

AN ARCHAEOLOGIST'S HOME.

WHAT IS REGARDED from a decorative standpoint as one of the foremost examples of the artistic use of concrete is found in a home now rapidly approaching completion near Doylestown, Pa. It is the design and handiwork of Mr. Henry C. Mercer, known as an archaeological student of some renown and as a producer of artistic pottery.

Mr. Mercer, says THE PHILADELPHIA RECORD, was in charge of an archaeological expedition into Yucatan some time ago, and he has conducted a great deal of other valuable work along this especial line. He has travelled all over the world in following up his line of work and has made many notes and sketches, which he has drawn upon in the building of his prospective home. He devoted considerable time and money to a collection for which he is entirely responsible, now in the custody of the Bucks County Historical Society, known as the "Tools of Nation Makers," which consists of implements of all kinds used about the homes and farms of the earliest settlers.

During the course of this work he took up the subject of stove plates, the old iron-castings which comprised the essential feature of the old-time oven on which it was the fancy of our forefathers to impress their family emblems or some favorite design or inscription. Around these old pieces of iron, taken from old stone walls and uncovered in old vaults, he has woven a thread of romance which makes their study positively entrancing.

It was in endeavoring to transfer some of these castings into clay that he became interested in the subject of pottery and tile-making, and to-day his "tile-mosaics" are to be found in the most approved architectural efforts of the country. The particular building under discussion has every appearance of an ancient structure reared hundreds of years ago. As one contemplates it, it seems impossible that its lines and curves should have been formed within a year's time.

There are massive pillars supporting noble arches, the surfaces all chastely decorated with the use of deli-

cately-tinted tiles and colored cement. The pillars represent a variety of lines, some round; others square; some heavy and others slender; yet all in absolute harmony. The designer has done this deliberately, for he says you might as well require that the trees of the forest should be all of the same size and shape.

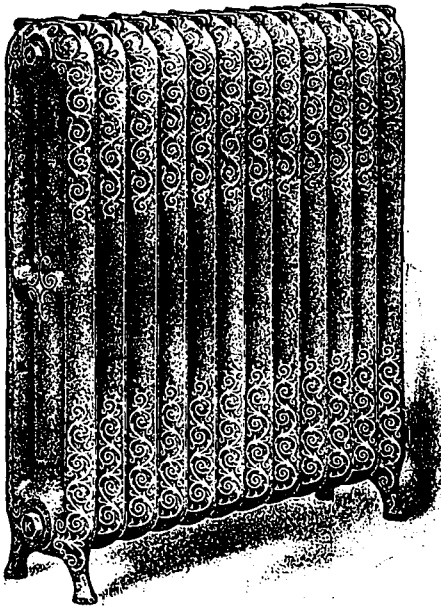
Neither architect nor engineer, Mr. Mercer has made himself familiar with the principles of the plastic material of which the house is built, and has clung tenaciously to the rules and formulas laid down by the leading authorities. He has allowed a wide margin of safety, and his house is strongly built as the rock itself. He has followed some remarkable ingenious methods in accomplishing results.

For instance, the building of an arch is usually a very serious matter, and elaborate processes are usually followed, such as the construction of much false-work of a rather slow and expensive nature. He has made a successful short cut of this problem in the present case. When he reached this point of the building operation, a dozen or two old packing boxes were piled one on the other until the desired height was approached, after which a layer of straw and similar materials was placed on top. The whole was shaped off according to design, and a final covering of sand laid. On this the metal reinforcements were laid and then the cement poured into place. After the mass had hardened the boxes were taken away, and the arch was complete, except for the finishing decoration. In some instances tiles were laid as desired in the sand before the pouring in of the cement, and in this manner the tiles took their place as part of the ceiling decoration.

MOVING A CHURCH TOWER.

THE REMARKABLE FEAT of moving a church tower to permit of the church being enlarged, says the SLATE TRADE GAZETTE, (Hull, Eng.) is being accomplished at Bocholt, Belgium. The work is being done by two American engineers and the vast undertaking occupies only eight workmen. New foundations have been prepared for the tower about 30 ft. away, and along the machinery constructed for its transport the tower, which dates from the fourteenth century, and is said to weigh 2,700 tons is now being moved. The work began some weeks ago. The tower commenced moving last week. It had been raised by the insertion of a movable platform over steel cylinders, which in their turn move along a railway line. The first day the tower moved 4 in., the second 17 in., the third 34 in., the fourth 6 in., and the fifth time 6½ in. It is said that the engineers have proposed to the Italian Government a similar method of removing and placing in new foundations the tower of Pisa, regarding the safety of which there has been of late much apprehension.

THE AMERICAN RAILWAY AND MAINTENANCE OF WAY ASSOCIATION has issued a very useful bulletin (No. 117), containing the report of the Committee on Iron and Steel Structures. In any bridge (the committee say) the qualities to be desired are: adequate strength, freedom from vibration and excessive deflection, economy in first cost, economy in maintenance, and permanence. The theory of flexure of reinforced concrete is sufficiently well understood to enable safe and economical designs to be made of this material, and experience with reinforced concrete structures carrying dead loads only has been abundant. Experience with such structures carrying heavy live loads and subjected to the shock and vibration of these loads, moving at high speed, has not been so extensive, but reinforced concrete girders can be designed and built in short spans of any strength required, or likely to be required, by railway loads. In the event of overloading or defective construction, reinforced concrete will give quite as much warning of probable failure as other materials.



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See them—then compare with others

THE KING RADIATOR CO., LIMITED

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STAVED COLUMNS.

BETWEEN THE PRODUCT of old planing mill and the product of the modern wood working plant there is a vast difference. The old planing mill still has a tenureship in some parts, but gradually it is being superseded by manufactories in which operations are being established strictly on the basis of an industrial art. With the development in this direction has come a specialization in which the output of certain plants are confined to certain materials and products. Prominent among concerns working in specific lines, is Batts Limited, with offices and mill at 308-388 Pacific Avenue, West Toronto. This firm's forte is the manufacture of staved columns, pine and veneered doors, newels, balustrades, interior trims, flooring and kindred materials relating to building construction. Since its inception the plant of the company has been marked by a consistent and steady expansion, until now it has an operating space of 54,500 feet, exclusive of kilns and offices. Each department is equipped with specially designed machinery, and all work is closely supervised by competent heads, so that each and every product turned out is perfect both as to workmanship and finish. The ability of this firm to meet the requirements of the architect and builder was practically demonstrated at the Canadian National Exhibition recently held. During the two weeks that this event was in progress, the splendid display of columns and other products shown proved an irresistible attraction to prospective owners and members of the building fraternity. A section of the columns exhibited is illustrated in connection with the company's advertisement in this issue. These columns are made with a lock joint to prevent the staves from opening and to insure perfect sealed joints in all parts. In their manufacture careful study is made to obtain a true entasis, and every feature is carefully considered so as to be absolutely correct in architectural detail. The company's 1910 catalogue, which can be obtained upon request, is profusely illustrated, and exceptionally well arranged throughout. In addition to a wide variety of columns, it also shows the line of high grade veneer doors, together with such products as newels, balustrades, green house frames, etc., in which the Company specializes. It is a book that can be used to great advantage in specifying materials for either exterior or interior work, and one that architects and builders should not fail to have in their possession.

AN INCIDENT AT THE BRUSSELS FIRE.

DESTRUCTIVE ELEMENTS seldom set to work without demonstrating something of value to the structural world. In fact, it is only by observing the effects of ravishing forces that the true worth of materials and appliances are fully recognized. *THE L'AMI DE L'ORDRE*, a prominent Belgium daily, prints an account of the remarkable performance of "Adroisite" Cement slates in a test that was rather unexpected. It says in part: "During the disastrous fire which caused such heavy damage last month to the Brussels Exhibition buildings, specialists witnessed an incident quite without precedent. The roofs of the large restaurant, "Le Chien-Vert" with all its towers and domes covered with "Adroisite" cement slates sustained the assault of the raging flames for

over one hour. That the fire did not spread to the other side of this part of the Exhibition was solely due, they unanimously say, to the roofing of the restaurant. After the fire, experts inspected the roof and found that not a single slate had even been cracked." This evidently speaks very highly for the unflammable and durable character of this particular product. Mr. Frederick Nicolai, who represents the manufacturers of this article in Canada, was quite elated on reading the report in question, as he believes that this incident, in connection with the publicity already given the fire at the Brussels Exhibition will materially assist him in acquainting architects and builders with the advantages of the product which he is at present introducing in the Dominion. The office of Mr. Nicolai is Room 15, Saturday Night Building, Toronto, and a request for specimen slates and further information will receive prompt attention.

SANITARY CHEMICAL CLOSETS.

A DISTINCTLY UNIQUE INVENTION, and in many cases an essential hygienic requisite, is the "Parkyte" Sanitary Chemical Closet, manufactured by Parker and White, Ltd., Montreal. This closet is made for the purpose of establishing sanitary conveniences in houses where the advantages of a water system and sewer connections do not obtain. It has a number of important features that well merits the investigation of architects and builders in providing modern sanitary facilities, under such conditions. The company has just been awarded a special diploma by the Board of Directors of the Winnipeg Exhibition, for their comprehensive and attractive display made in connection with the recent event of this annual affair. Offices are maintained by the company in the principal cities of the Dominion. An illustration of the "Parkyte" Closet can be seen in this firm's advertisement, page 97 of this issue.

STEEL PLATE FANS.

BULLETIN 54, consisting of separate sheets bound in book form, is a handy little booklet on "Steel Plate Fans," just issued by Sheldons Limited, Galt, Ont. The purpose of the booklet, which is attractively illustrated and printed on book coated paper, is to better acquaint those who may be interested in fans for heating and ventilating, exhaust, or down-draft purposes, with the many important features and advantages of the particular types of apparatus which the company manufactures. The Sheldon steel plate fans stand inestimably high in the minds of those who are competent of judging the efficiency and construction of such products. They are designed to give a maximum amount of air with a minimum expenditure of power. In their construction only patent levelled and rolled steel plates, free from buckles and of the greatest rigidity, are employed. These sheets are riveted to angles to ensure perfect solidity to the whole structure. The inlet rings to which the bearing brackets are bolted, are of cast iron; and the bearings are swiveled, or self-aligning to prevent the shaft from springing should the fan be placed on a defective foundation. The "Bulletin" in question is quite explanatory of their many other essential features, which time and space makes it impossible to dwell upon here. It also contains tables and much other useful information that makes it of value to those in whose hands it might happen to fall.

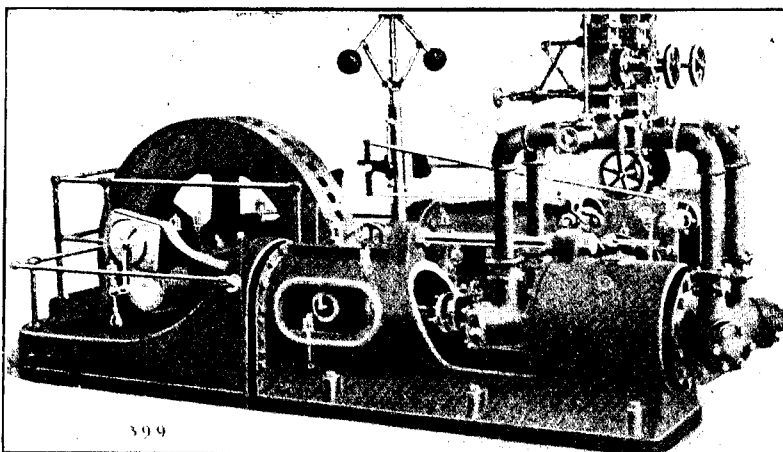
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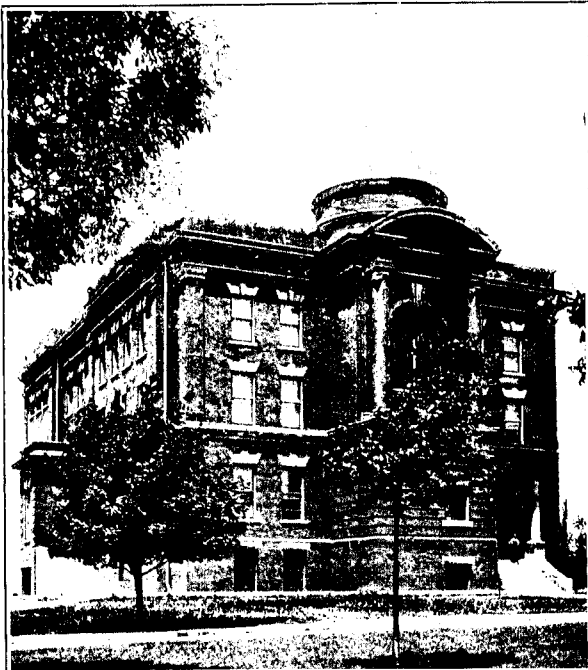
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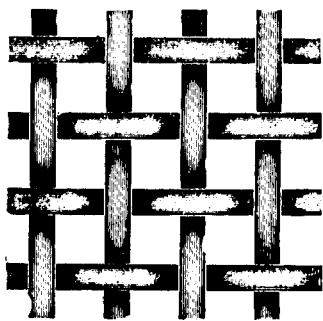
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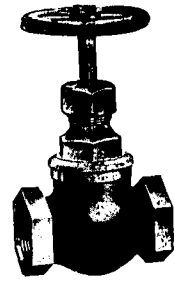
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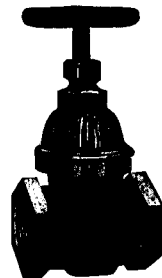
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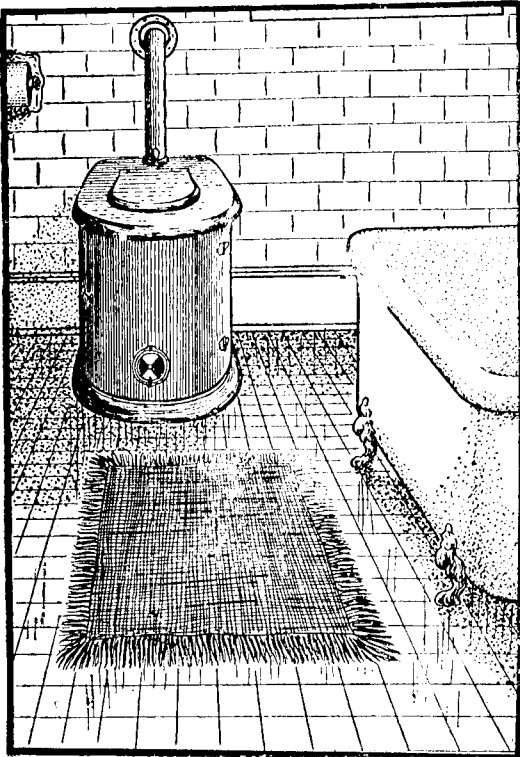
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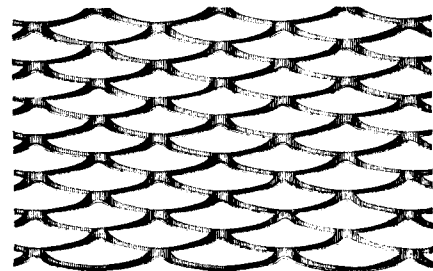
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Ottawa Separate School, O'Meara Avenue. C. P. Meredith, Architect.	Fuel Testing Plant, Division Street. Dominion Government. Doran & Devlin, Contractors.
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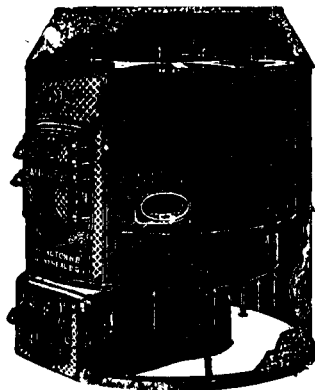
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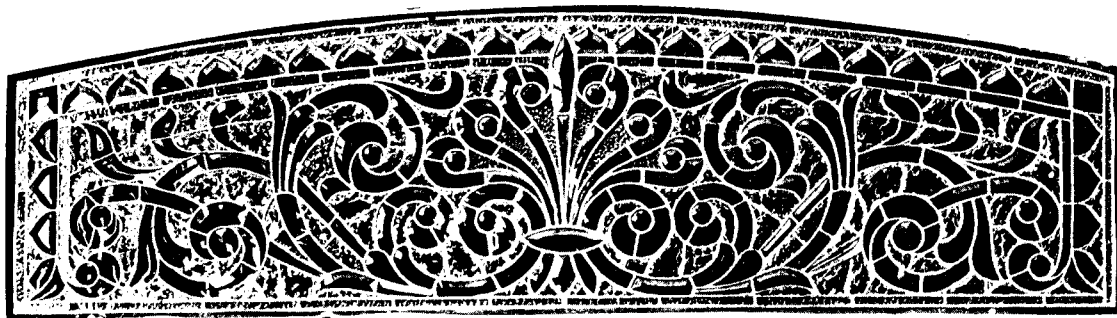
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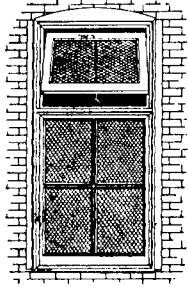
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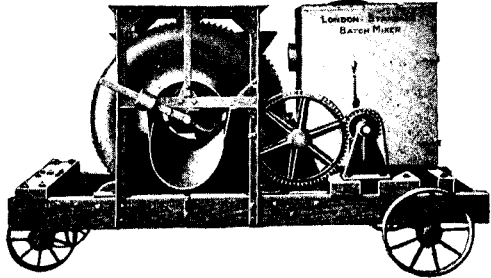
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