The Internal Architectural Anxidate of Canada

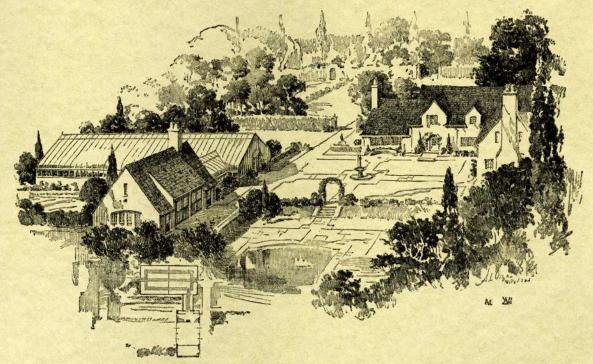
VOL. 1

TORONTO, JANUARY TO MARCH, 1924

No.

First Quarterly Issue

Glass Gardens



Our Blanket Greenhouse Contract

IT COVERS everything from turning the first shovel of dirt, to turning on the heat in the fully equipped house.

It solves the labor problem for you and your client.

If preferred, we will erect only the greenhouse superstructure.

Or furnish complete materials and equipment, and you arrange for the erecting.

The house shown is 25 x 50 with connecting house 8' 6" x 16' 8".

Prompt shipments. Quick erections.

Iord & Burnham 6. Limited

Builders of Greenhouses and Conservatories

CHIEF SALES OFFICE

Harbor Commission Bldg.

Toronto

Montreal—124 Stanley St.

Factory: St. Catharines, Ont.

Architects:

John A. Pearson

J. O. Marchand



General Contractors: P. Lyall & Sons Construction Company, Ltd.

Centre Block, Parliament Buildings, Ottawa, Ontario

Why 851,389 Pieces of NATCO HOLLOW TILE

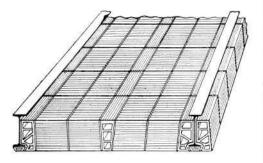
were used in the Central Block, Parliament Buildings, Ottawa, for Floor Arching, Partitions, and Wall Furring.

Because

After careful consideration and numerous tests on various types of material—

NATCO HOLLOW TILE

was chosen as the best material to meet the requirements, and consequently was used for the floor arching and for fireproofing the steel frame.



Typical NATCO Flat Arch, the accepted type of Standard Fireproof Construction

NATIONAL FIRE PROFING COMPANY OF CANADA, LIMITED

Factory: HAMILTON Dominion Bank Building, TORONTO





Above: View showing construction of Lister Building, Hamilton, Ontario, as at October 15th, 1923.

Right: View showing rapid progress made by November 13th, 1923

Unique Performance in Re-inforced



EVIDENCE of the possibilities of working in re-inforced concrete construction is given in the erection of the Lister Building, Hamilton, Ontario. The stability, permanence and other features of concrete construction are well known to the architect, but here is evidence of the speed with which such work can be done.

Thirty-seven and a half Working Days from Basement to the Roof

is the record established on this building—a structure 138 by 100 feet and six storeys high, all re-inforced concrete, solid slab and beam construction.

Here are some of the figures in connection

with material used: Concrete 2,911 cubic yards, form work 154,477 square feet, reinforcing steel 225 tons. To make the work more difficult the building is "F" shaped and is off square.

The construction of this building constitutes a record worthy of the consideration of every architect. It proves the possibility of speed in concrete construction.

Canada Cement Company Limited

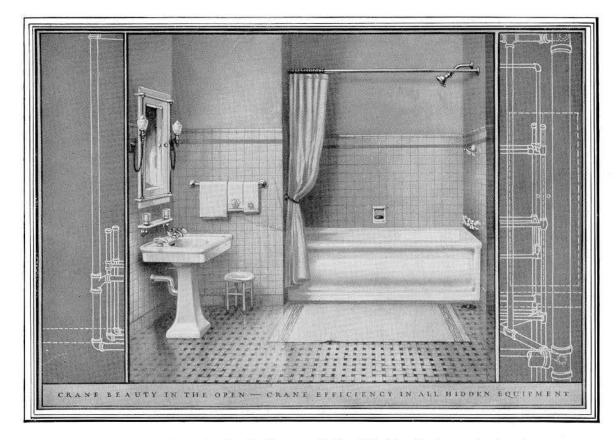
CANADA CEMENT COMPANY BUILDING MONTREAL CANADA

Sales Offices: Montreal

Toronto

Winnipeg

Calgary



Crane Limited is a leader in its specialized field. It is producing heating and sanitation equipment that meets the needs of the small dwelling and satisfies the exacting requirements of great town and country houses, towering office buildings, huge hotels, hospitals, schools and clubs.

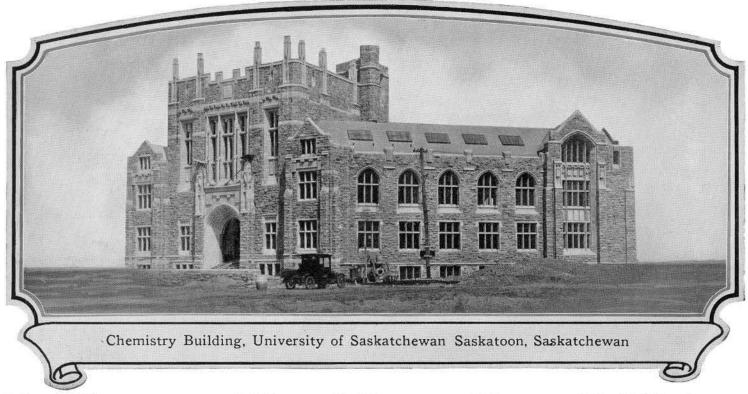
Since 1855, Crane engineers and designers have striven successfully to create and perfect valves, fittings and specialties used in the piping equipment of industrial power, heating, refrigeration, water, oil and gas installations—in fact, "anything for any pipe line."

CRANE

CRANE LIMITED, GENERAL OFFICES: 386 BEAVER HALL SQUARE, MONTREAL CRANE-BENNETT, LTD., HEAD OFFICE: 45-51 LEMAN STREET, LONDON, ENG.

Branches and Sales Offices in 21 Cities in Canada and British Isles Works: Montreal, Canada, and Ipswich, England





It Opens Up New Possibilities

ABIT ruts are so easy to fall into and so easy to travel in. Many good men are beginning to realize that they have been running along in a rut as far as hardwood flooring has been concerned.

The men who visioned, planned and built the splendid new Chemistry Building of the University of Saskatchewan realized that any type flooring would not do. The building demanded a floor of exceptional warmth and beauty, yet a flooring that possessed unique wearing qualities.

They decided that the floor must be Selected Red birch. And they chose Red Deer brand Birch, grown and milled in the Muskoka (Ontario) Highlands.

Why? Because Red Deer brand Birch is birch at its best. Not only for its hard toughness, superb wearing qualities and sheer beauty, but because of its rare uniformity of finish. Ends match ends to the tiniest fraction. Tongues fit grooves with glovelike faultlessness. When laid it requires a minimum of scraping or sanding. It fits the floor like a sheet of glass.

Red Deer brand Birch is for men who are not content with a commonplace piece of work. It figures bigger than ever in the 1924 building programme. Please write us for figures and facts.

MUSKOKA WOOD MANUFACTURING CO., LIMITED Huntsville - Ontario.

Red Deer Brand BIRCH HARDWOOD FLOORING



the Surface?

Truscon Steel Joist floor construction with wood floor finish Equally satisfactory for cement or other floor finish.

WHAT is underneath is more important than what is on the surface. Every architect realizes that the fundamentals (good Construction) come first, design, color treatment and finish second.

Truscon Steel Joists are the factors which give to the structure that everlastingly good construction which is the pride of both architect and owner.

They were designed to furnish supporting members which may be used in the permanent, fireproof construction of floors and non-bearing partitions of light occupancy buildings, such as apartment houses, schools, hospitals and office buildings.

Truscon Steel Joists

are economical because they eliminate all form work even to temporary supports. Joists can be handled easily and speedily. No expensive hoisting equipment is necessary. They reduce amount of concrete to be handled and save labor and equipment.

This high school illustrated above is one of a great number of public buildings where Truscon Steel Joists insure complete satisfaction, not only when new, but during the years to come.

Our Truscon Steel Joist Data Book contains a great deal of information of real interest to you. May we send you a copy?

Trussed Concrete Steel Co. of Canada, Limited WALKERVILLE, ONT.

Branches: Montreal, Toronto, Winnipeg, Calgary, Vancouver.

Warehouses: Toronto, Montreal, Winnipeg, Calgary.



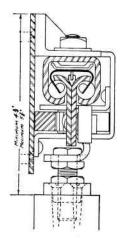
Ideal Elevator Fixtures

FOR HIGH GRADE JOBS

"Ideal" Fixtures have been used in many of the largest office buildings in Canada and United States for many years and are giving excellent service. Examination of this material after years of the hardest kind of service shows practically no wear on the bearings or track so that we do not hesitate to claim for these fixtures exceptional durability and low maintenance cost.

Customs House Montreal Bank of Toronto Montreal Elevators Equipped with "Ideal" Hangers Customs House at Ottawa

"Ideals" operate silently and effici-ently. The weight of the door is centre-hung. The sectional illustration below to the left, shows how the hanger bar is suspended between two rows of steel balls and hangs directly from the centre of the tube track. The hanger bar is as long as the door, and is supported its entire length by the bearings. There is no overhang.

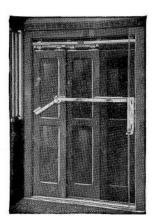


Cross Section of " Ideal '

Among the many fine Canadian buildings equipped with "Ideals" are:

The Mount Royal Hotel, Montreal The King Edward Hotel, Toronto The Chateau Frontenac, Quebec The Prince Edward Hotel, Windsor The New Union Station, Toronto The T.T.C. Building, Toronto The Parliament Buildings, Ottawa

May we send you a copy of our "Architectural Detail Folio," containing complete time-saving technical information on elevator door installations? It is the only book of its kind. You can make blue prints directly from it.

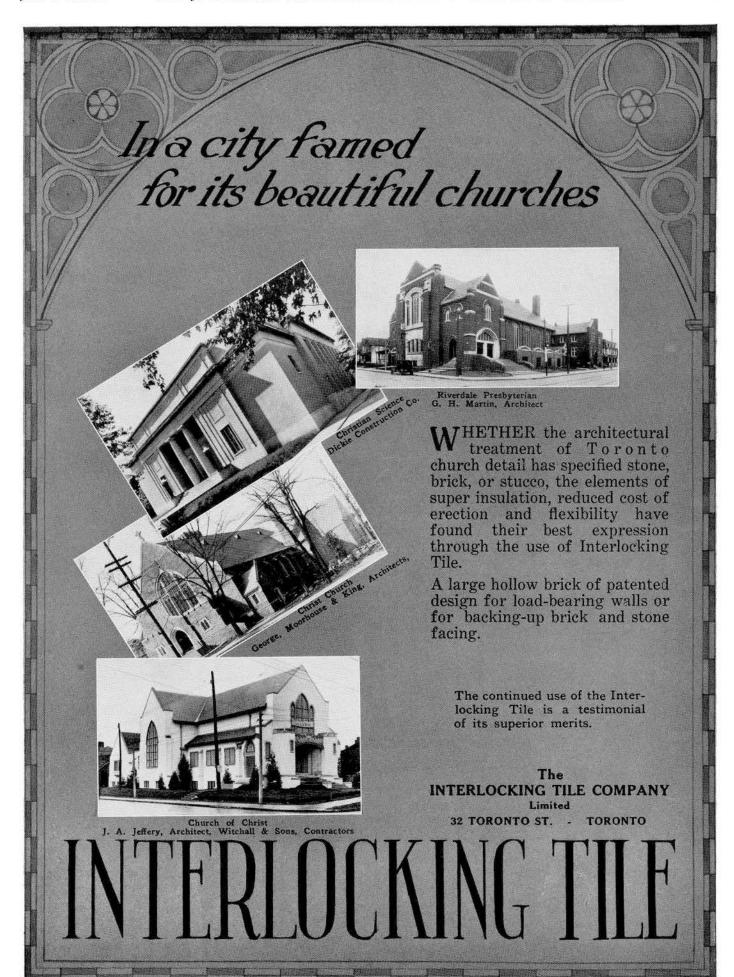


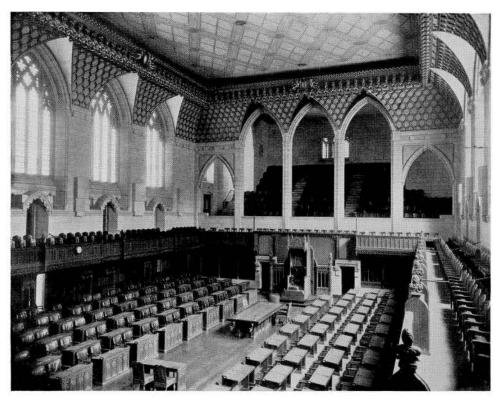
"Ideal" Fixtures include the R-W No. 743 Closer, which also acts as a check. Doors cannot be opened from the corrider side without key

ichards-Wilcox Canadian Co.[td. Winnipeg London Ontario

Montreal

Hanger for Any Door that Slides





COMMONS CHAMBER OF THE DOMINION PARLIAMENT BUILDINGS, OTTAWA

John A. Pearson (Darling & Pearson) Architect. John O. Marchand, Associate

TUTTLE & BAILEY GRILLES AND REGISTERS USED THROUGHOUT THESE BUILDINGS

STANDARD OF COMPARISON FOR SEVENTY-EIGHT YEARS

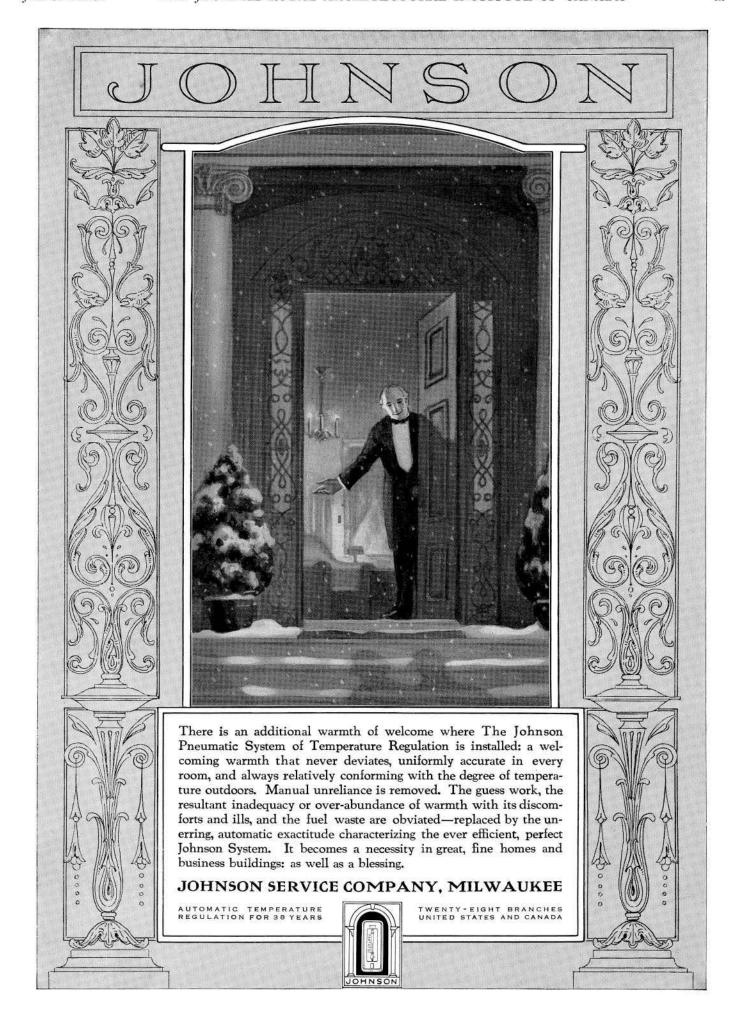
Manufacturers of Registers, Ventilators, Grilles and Screens of Stock or Special Designs in Bronze, Brass, Cast Iron, Steel or Wire

TUTTLE & BAILEY MFG. CO.

OF CANADA, LIMITED

259 Stanley St. WINNIPEG, MAN.

BRIDGEBURG ONTARIO





Bathroom accessories that are permanent

WE ARE the originators of built-in china bathroom fixtures. From the very start, we have made it a point of honor to produce fixtures as good as can be made.

Through our advertising, Fairfacts Fixtures are generally known and accepted. Our business has had a remarkable growth. We feel that no house is really modern without these China fixtures. They have stood the test of time and are unquestionably superior to fixtures of metal or enamel.

If you are convinced of the merits of Fairfacts Fixtures and if your clients also desire them, they should be designated by name in the specifications and not merely called built-in fixtures. The yellow

and red Fairfacts label pasted on each fixture is your protection. If you take the precaution of seeing this trademark before it is removed, you may be sure they are genuine Fairfacts Fixtures.

Fairfacts Fixtures meet every bathroom need, soap holders, tumbler holders, shelves, safety wall grips, tooth paste and brush holders, paper holders, towel bars, electric radiators and a wide variety of combinations.

Fairfacts Fixtures are installed by tile contractors—the only trade that does this work—and should be included in the tile contract.

Send for Catalog F. Details and specifications also appear in Sweet's Architectural Catalog.

THE FAIRFACTS COMPANY, INC.

Manufacturers

Dept. 2D

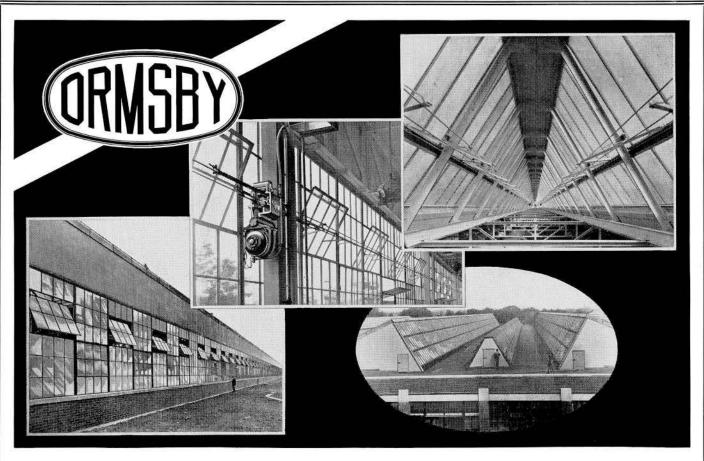
234-236 West 14th Street, New York City

Jairfacts

Fixtures

Jairfacts

BATHROOM



THE NEW FORD PLANT AT TORONTO

LOWER LEFT—Continuous run of Ormsby Lupton sidewall sash 440'-0" long by 10'-3 1/8" high. CENTRE—Shows mechanical power which operates run of sidewall ventilators using Lupton type operator. UPPER RIGHT—Interior view from end of typical "A" frame installation. Note upper runs of sash controlled by motor driven Pond operating device.

OVAL—Exterior of 2 complete monitors and one "A" frame.

Ormsby Co-operates with the Architect

An integral, vital part of the Ormsby organization is the Ormsby draftingengineering department, the very definite purpose of which is to lay out such portions of building plans as directly involve installations of Ormsby Products. In no sense is this service an encroachment upon the architect's field, but in every sense is it intended to be of assistance to the architect when laying out plans and specifications.

ORMSBY PRODUCTS

Ormsby Lupton Steel Sash Ormsby Hollow Metal Sash Ormsby Rolling Steel Doors Ormsby Kalemein Copper Doors Ormsby Kalemein Bronze Doors Ormsby Tin Clad Doors Ormsby Revolving Doors Ormsby Kalemein Doors Ormsby Counterbalanced Doors Anything in sheet metal up to 10 gauge Ormsby Skylights Ormsby Swartwout Ventilators Ormsby Tanks Welded Ormsby Tanks Riveted Ormsby Transformer Tanks

Ormsby Garages Metal Clad Ormsby Special Building Ormsby Corner Bead Herringbone Metal Lath Expanded Metal Lath Roofing of all kinds Jobbing Contractors.

THE A. B. ORMSBY COMPANY, Limited

48 ABELL ST., TORONTO, ONT.

Associated with

The Metal Shingle & Siding Co., Limited PRESTON AND MONTREAL

Agents: New Brunswick, J. Charlton Berrie, St. John. Nova Scotia: F. A. Gillis Co. Ltd., Halifax. British Columbia: A. T. Chambers, Vancouver.
Ottawa, Ontario: The Canada Engineering & Construction Co., Ltd.
Western Canada Representatives: Western Steel Products, Limited
Winnipeg, Regina, Saskatoon Calgary, Edmonton

The Royal Architectural Institute of Canada

FOUNDED 19TH AUGUST, 1907

Incorporated by the Dominion Parliament 16th June, 1908, and 1st April, 1912

ALLIED WITH THE "ROYAL INSTITUTE OF BRITISH ARCHITECTS"

FEDERATION OF

The Alberta Association of Architects
The Architectural Institute of British Columbia
The Manitoba Association of Architects
The Ontario Association of Architects
The Province of Quebec Association of Architects
The Saskatchewan Association of Architects

President .		3		-	Lewis H. Jordan	8	i i		8		Winnipeg
Vice-President	e i		14	596	J. S. Archibald	*	19	100	•		Montreal
Second Vice-Presid	ent	(X)	38	(10)	J. P. Hynes .	Æ	52	2.00	*	*	Toronto
Honorary Secretary			33	100	Alcide Chausse	×	82	•	8		Montreal
Honorary Treasure	r		16	84	A. Beaugrand-Cha	MPA	GNE	13	60	×	Montreal

THE JOURNAL

Royal Architectural Institute of Canada

Volume 1	TORONTO,	JANUA	RY	ТО	MA	RCH	, 19	24		N	umb	oer 1
		CON	TEN	NTS								Paul CO
												Page
THE PRESIDENT'S ME	SSAGE	ki (a)	Œ	*	040	86	50.	53		#8	6	3
Editorial .	£2 981 96		œ	10	7	*	•:	S*	*	55	9	4
THE NEW PARLIAMEN	T BUILDINGS AT O	TTAWA	2	٠	ě	•	٠		8			5
Why Architectural	Competitions?	22 3	86	F2	8.	•	25	98	v	160	32	21
Membership List	262 8 8	8 8	*	160	⊗	×	: (6)	39	*	€		22
STRUCTURAL SERVICE	DEPARTMENT		8	165		2.	URS	S.		•26	19	27
THE SECRETARY'S PAG	Ε	# SI	*		587	8	2	ž	8	•	•	31
Activities of Provin	ICIAL ASSOCIATION	s .	*	£	9	×	₹X	89	*	(6)	19	32
SIR WILFRED LAURIER	MONUMENT COM	PETITION	٠	8	•		g			6	7	xxvi
		Plate Il	lustra	tions:								
OLD HOUSES IN A COU	RTYARD, MONTRE	AL .	2	116	14	T	<u> 23</u>	•	8	\mathbf{Fr}	ontis	spiece
Confederation Hall	, Parliament Bui	LDINGS	18	*	(*)	18	×	1963	*	Xi	(14)	13
SENATE CHAMBER LOB	BY, PARLIAMENT I	Buildings	**	50	82	*	20	201	38	*	#9	15
COMMONS CHAMBER, I	Parliament Build	INGS .	27	82	9	27	9-	9	8	323	7	17
THE LATE FRANK DAI	RLING		*	¥0	(A)	39	×	2:	39	*	10	19

Published Quarterly by The

Royal Architectural Institute of Canada

Publicity Committee:

J. P. HYNES, Chairman

JULES F. WEGMAN

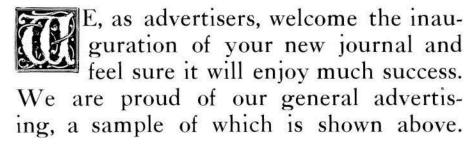
RALPH K. SHEPARD

Publication Office
160 Richmond Street West, Toronto

EDITORIAL OFFICE
73 King Street West, Toronto

Two Dollars Per Year





Standard Sanitary Mfg. Co., LIMITED

General Office and Factory: Royce and Lansdowne Aves., Toronto, Ont.

TORONTO SHOWROOM:

WINNIPEG SHOWROOM:

55-59 Richmond St. E. 145 Market St. E.

HAMILTON STORE: 20-28 Jackson St. W.

MONTREAL: 705 McGill Building CALGARY: 354 Eleventh Ave. W. VANCOUVER: 860 Cambie St.

MADE IN CANADA

THE JOURNAL

Royal Architectural Institute of Canada

Volume 1

TORONTO, JANUARY TO MARCH, 1924

Number 1

The President's Message

THE JOURNAL OF THE ROYAL ARCHITECTURAL INSTITUTE OF CANADA is born. Let us "rejoice and be exceeding glad." May the newcomer have a steady and sturdy growth!

Year after year the question of publishing a JOURNAL has come up for hopeful discussion at our meetings only to recede between times until we felt that we were pursuing a will-o-the-wisp. But the evasive thing has at last been bagged and we are in possession of, and have before us in this initial number of the JOURNAL, the materilization of our hopes.

Now that we have it, what shall we do with it

We are apt to find ourselves believing that there is something somewhere apart from ourselves that constitutes the Institute and with which we have an irresponsible connection. We speak of this supposed something as "headquarters," "they," "the Institute," etc., and possibly expect therefrom a responsible service. There is, however, no such differentiated entity to be found. The Institute is ourselves, a democratic body of which each member is a unit of equal importance and responsibility.

The general officers, elected annually, are distributed through several provinces of the Dominion and never meet as a governing body. The Council, also elected annually and composed at present of 23 members scattered throughout all the provinces whose associations form the Institute, never meets as a whole. A fairly good number of the councillors get together at the time of the general annual meeting and a smaller number, perhaps a half dozen, meet say once, or possibly twice, during the year for routine work. A general meeting of the members is called once a year, the attendance consisting almost entirely of the general officers and of the members in the locality where the meeting is held. It is quite common for some of the provincial associations not to be represented at all at these meetings.

Between meetings there is practically no contact, the officers and members being scattered, each attending to his own personal affairs and the Institute probably out of mind. Under these circumstances is it surprising that interest lags, that one wonders what he is getting for the cost and if the Institute is really worth while.

It is opportune that the JOURNAL should appear at this juncture to fulfil what is probably the greatest present need of our Institute, a practical means of systematic communication reaching every member. The JOURNAL is a forum for the exchange of views and the promulgation of original ideas; a place to record complaints and suggestions and to answer others; a general source of information; an educator; a messenger to remind us of our relationship and obligations to our profession and to our Institute, and a witness testifying that the Institute has at least one activity that is producing. It is hoped that in all these capacities and others, the JOURNAL will function to the full.

A copy of this issue will be sent to every member of the Institute, as will also a copy of three other issues this year, for the Journal is to be published quarterly. The Journal is starting without subscription price to Institute members, but the wisdom of continuing this policy may be questioned. If the Journal is to grow in usefulness, and if the Institute is to effectually undertake other aggressive activities for the benefit of its members, it is quite certain that more funds must be had than the present arrangement is providing. The question of what activities the Institute should engage in, and the problem of financing, could well be opened for discussion in the columns of the Journal.

The Journal will be just what the members make it by their active and financial support, and this applies equally well to every other department of the Institute It has been proposed that each member, when he receives this first copy of the Journal, send it to the secretary of the Institute, as a voluntary contribution and as an appreciation, such an amount as he considers a fair annual subscription price for the Journal. This is merely a suggestion cast upon the waters. It is also suggested that the members write in to the editorial department of the Journal giving their comments on the Journal and upon the other activities of the Institute. A degree of co-operative action in this respect will do wonders.

Even though there may be differing views on Institute matters, and different degrees of interest and action, the advent of the JOURNAL indicates a spirit of progressive activity that surely must strike a responsive chord in every one of us. And to the extent that this response becomes motion, to that extent will The Royal Architectural Institute of Canada become a recognized benefit to the Canadian architect.

Just before sending the foregoing as copy to the editorial committee, a confrere was asked to look it over and, after reading it through, he remarked: "It's not bad, but no one will read it." He may have said something worth thinking about.

L. H. JORDAN.

Editorial

T is perhaps too early in the first issue of the JOURNAL to attempt to outline a policy for it. No doubt, one will develop from the experience it will bring to the publicity committee and from the discussions at the annual conventions of the Institute. Some few points of policy have however been guiding the efforts laboring the JOURNAL into existence.

The need of the JOURNAL to stand for the existence of the Institute both to the members and the public has been long recognized; that it might stimulate the activities of the one and fittingly represent them to the other. This is perhaps the first objective to be attained.

To stress both to the architect and the public that architecture is an art and as such is not to be overshadowed by the scientific and business activities that must accompany its practice, important as those may be admitted to be, is another.

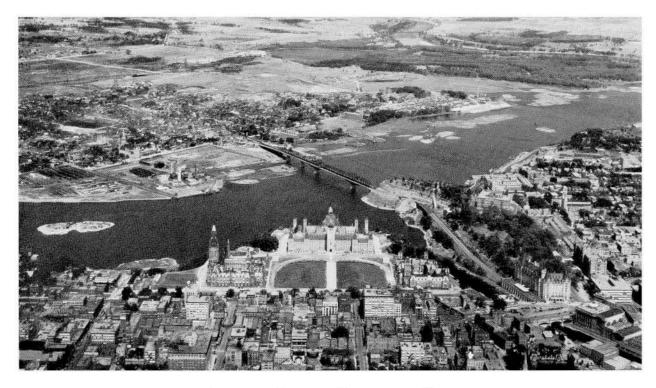
That the JOURNAL may stand for architecture in Canada it will be its aim to draw its illustrations principally from Canadian work of national importance. Illustrations of current work, excepting for some outstanding reason, will not be drawn on, in order to avoid any appearance of discriminating amongst the works of members of the Institute.

It was the intention that this first issue should contain an article in French from one of our compatriots, but through no fault of theirs this objective has not been attained. It is hoped, however, that every future issue will have something of this character.

For the present the JOURNAL will appear quarterly with the objective of developing into a monthly issue that matters of current interest may be quickly circulated amongst the members.

The appearance of the Journal brings an opportunity and a responsibility to every member of the Institute, and it is hoped that constructive criticism will be quickly offered by those who have it to make, for nothing could be as damaging to the Journal and the Institute as indifference on the part of the members.

When the publishing of the Journal was brought to the attention of the prospective advertisers it was represented to them that it would appear early in the year. Unfortunately, the publicity committee is being initiated in the journal business by this first issue and has been unable to command the fulfillment of its standard of what the Journal should be without taking extra time for it. The indulgence of the advertisers, whose patronage we very deeply appreciate, is asked on this point.



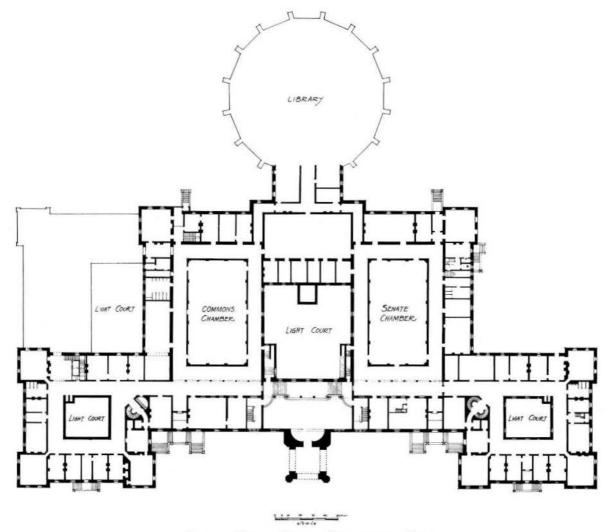
AIR-PLANE VIEW OF OTTAWA AND HULL

The New Parliament Buildings, Ottawa

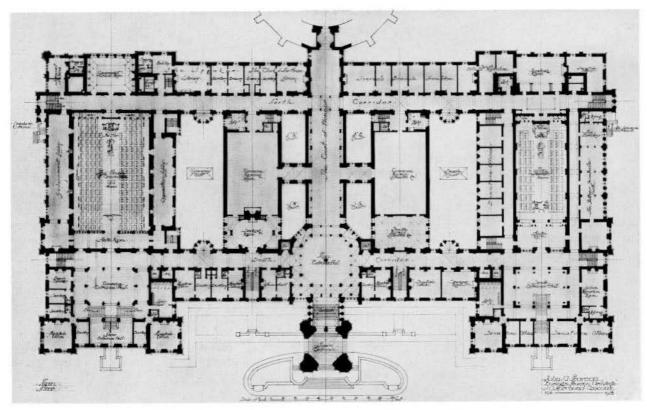
HE new Parliament Buildings at Ottawa replace those erected for the Dominion of Canada when it started housekeeping in 1867. The original buildings were designed by the late Messrs. Fuller and Iones as the result of a competition. Mr. Fuller had previously been the successful competitor for the Capitol Building at Albany, New York, and in his later years served as chief architect of the public works department, Ottawa. However it is the new buildings and not the old ones that are to occupy our attention here. The original buildings were completely destroved by fire on February 3rd, 1916. The government immediately called in Mr. John Pearson of Toronto, and Mr. J. O. Marchand of Montreal, to report on the possibility of re-erecting the buildings, using as much of the remaining walls as possible in order that they might be re-occupied with the least possible delay.

Upon their report a parliamentary committee was appointed to take charge of the rebuilding and Messrs. Pearson and Marchand were retained as architects. The general contract for the new buildings was entrusted to the P. Lyall & Sons Construction Company Ltd. of Montreal. The committee determined that the building should be re-erected to present as similar an appearance to the old ones as possible and that the chambers for the Senate and Commons should be so placed as to receive light from the outside instead of being entirely surrounded as formerly. It was also decided that private offices should be provided for the Senators and Members of the House of Commons. Other requirements determined upon from time to time not only resulted in the northeast and northwest corners being built out in line with the front of the buildings, but the new buildings developed into five stories height whereas the original had only been three.

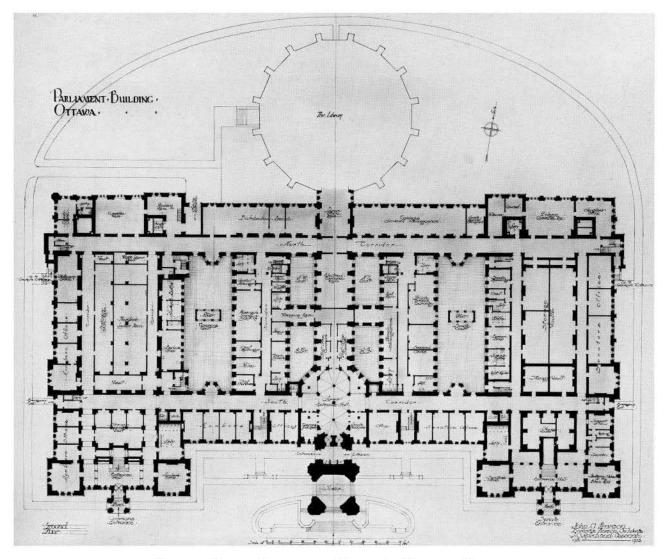
In order that these differences may to some extent be compared the ground floor plans of the old and new buildings are herewith printed to the same scale.



GROUND FLOOR PLAN—BEFORE THE FIRE



Main Floor, Parliament Building, Ottawa, Canada



GROUND FLOOR, PARLIAMENT BUILDING, OTTAWA, CANADA

John A. Pearson (Darling & Pearson), Architect J. O. Marchand, Associate

As stated previously the fire occurred on February 3rd, 1916. The corner-stone of the new buildings was laid by the Prince of Wales on September 1st of the same year and Parliament occupied the building in January, 1919.

It requires a personal inspection of the buildings to realize their magnitude and what an achievement it was to erect them in the time in which it was accomplished, especially so when it is remembered that the walls are of solid masonry and not steel skeleton construction.

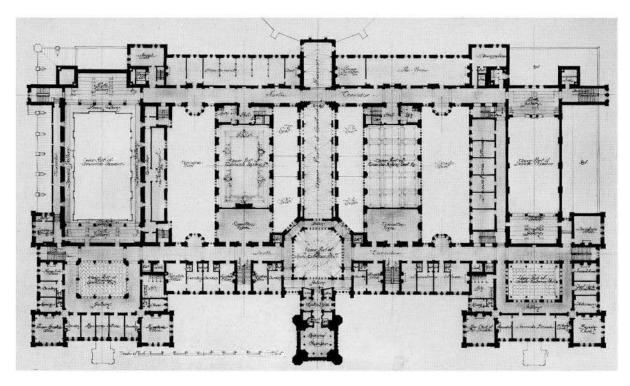
Canadian materials and workmanship were used throughout as far as possible. The stone for the external general masonry was local stone while the trimmings were of Wallaceburg stone supplemented by Indiana limestone.

Stone and marble are used very extensively throughout the interior, the stone being Tyndal stone from Manitoba and the marble various kinds of Mississquo marble from Quebec.

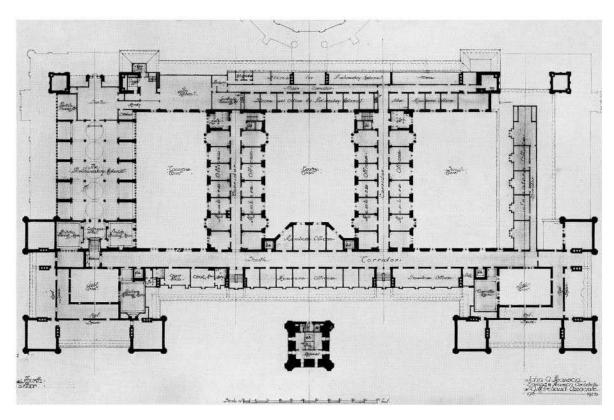
Special features of artistic merit are the main entrance lobby with its chapter house shaft known as Confederation Column and The Hall of Fame running from this lobby to the library which has a stone groined roof of very elaborate character.

The newspaper room is quite a departure from the gothic character of the building in general, being renaissance with a number of very beautiful mural panels painted by Arthur Crisp. The dining hall on the top floor at the northwest corner of the buildings is also of renaissance, being a series of vaults carried on columns. An outstanding feature of the decorations is the skilful wrought iron work to the fireplaces of the Members' lobby, the newspaper room and the screens to the Senate and Commons chambers.

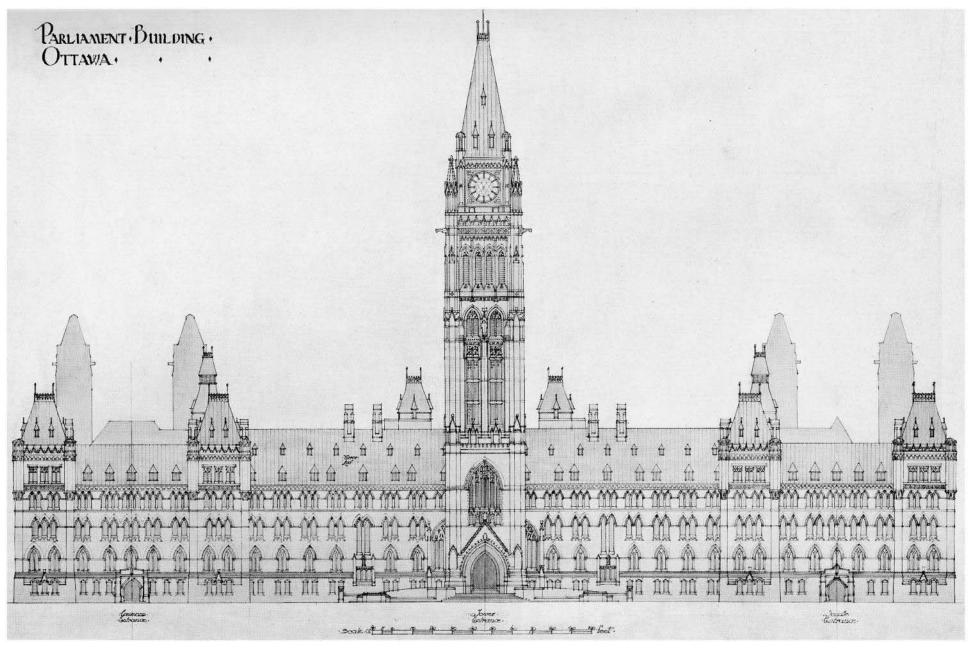
The tower, which is now being built, is to be known as the Tower of Peace and Victory. It is of massive proportions and stands clear of the building, the portals to the main entrance being in its base. It is 210 feet high to the centre of the



FIRST FLOOR, PARLIAMENT BUILDING, OTTAWA, CANADA



FOURTH FLOOR, PARLIAMEN'T BUILDING, OTTAWA, CANADA John A. Pearson (Darling & Pearson), Architect J. O. Marchand, Associate

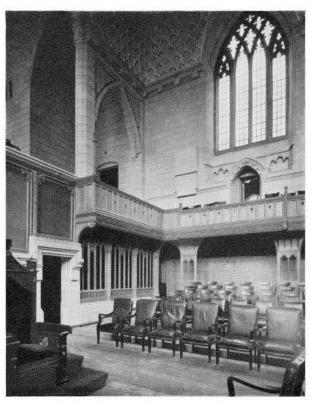


Page 9. The Journal, Royal Architectural Institute of Canada, Jan. to Mch., 1924

South Elevation
Parliament Building, Ottawa, Canada

John A. Pearson Darling & Pearson, Architects . J. O. Marchand, Associate.

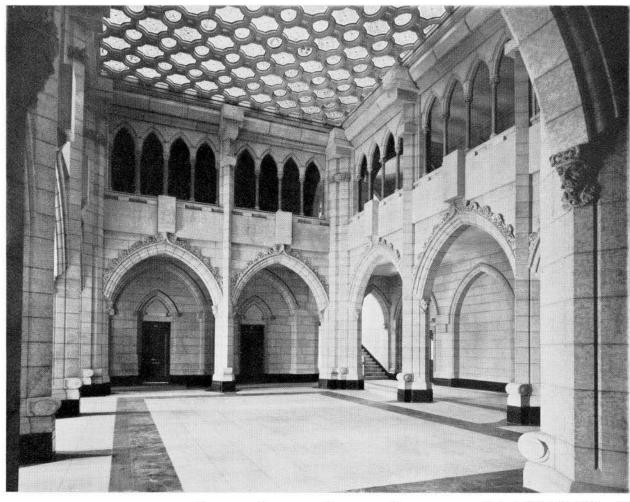
clock dial, 295 feet high altogether exclusive of the flag pole, and 42 feet 2 inches square at its base. To those who saw the new buildings before the tower was erected it is surprising to what a degree it has added interest to the whole composition and justified its existence apart from any utilitarian service that it performs. A special feature of the tower is the chamber immediately over the portal arches. In this chamber will be placed the Book Remembrance which will be recorded the name of each of the sixty thousand Canadian



A Corner of the Commons Chamber

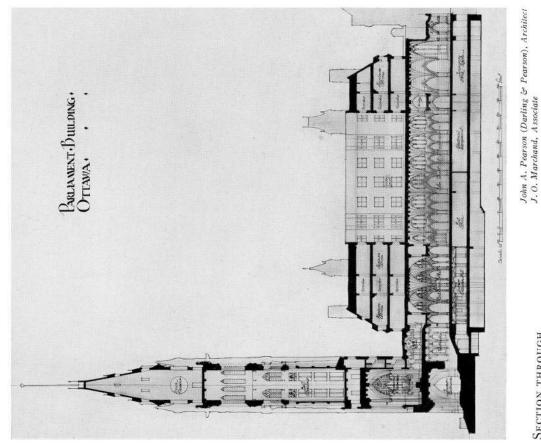
soldiers who gave up their lives in the Great War.

The above condensed description of the new Parliament Buildings is only intended to call attention to some of the aspects of the building that might first occur to an architect who wished to get an understanding of the general scheme of the building. Space will not permit of an exhaustive article and the present condition of much of the most important parts as yet incomplete in detail preclude doing justice to this very large and important work by attempting a detailed description or criticism.



COMMONS CHAMBER, ENTRANCE LOBBY

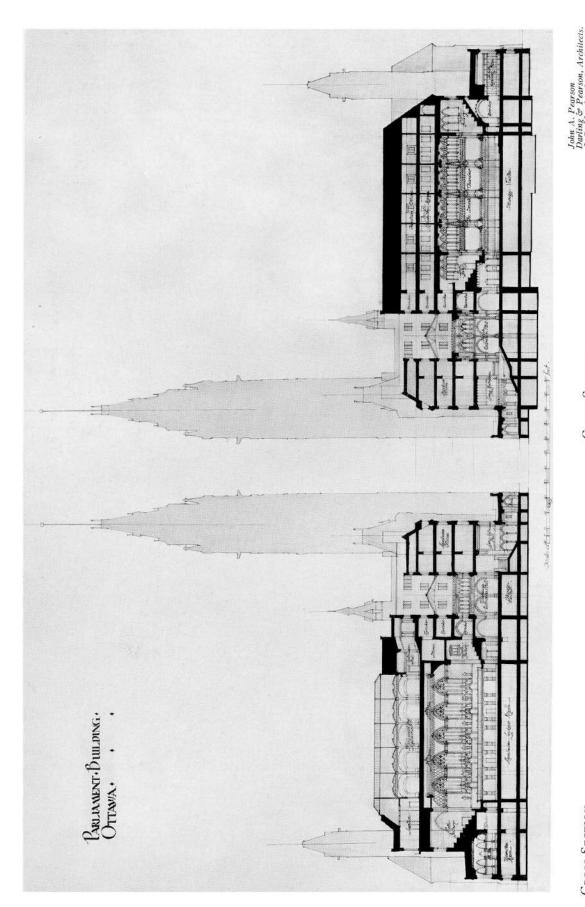
Photos. by British Colonial Press, Ltd.



Section through

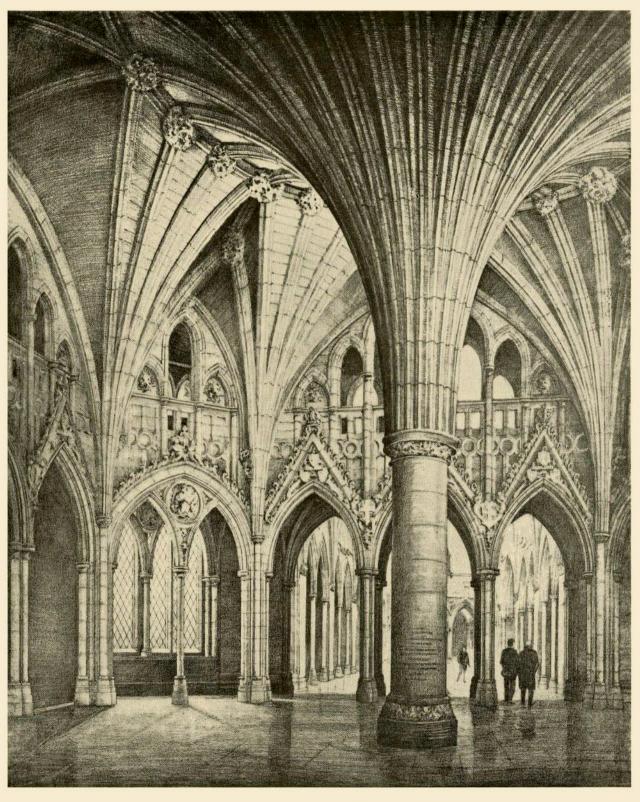
Tower and Court of Honour

West Elevation



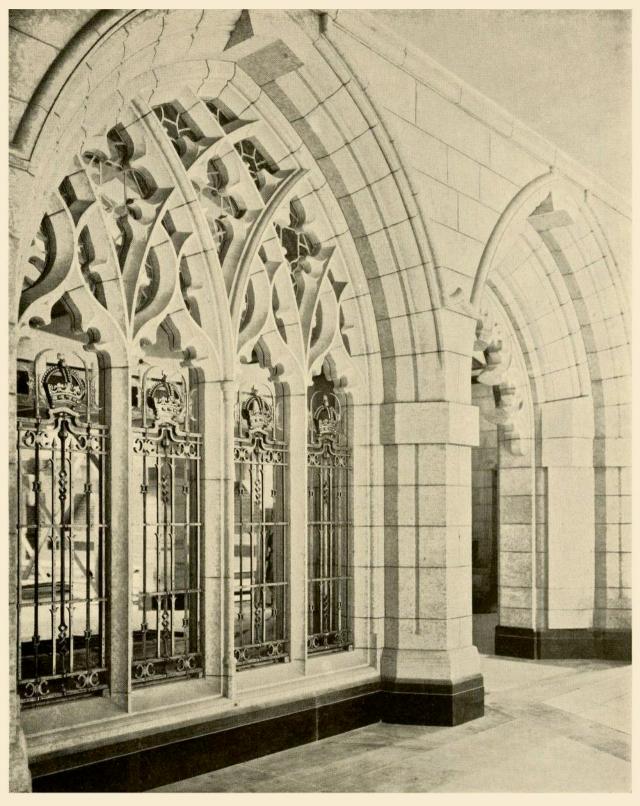
CROSS SECTION
THROUGH THE SENATE CHAMBER
LOOKING WEST

CROSS SECTION
THROUGH THE HOUSE OF COMMONS
LOOKING EAST



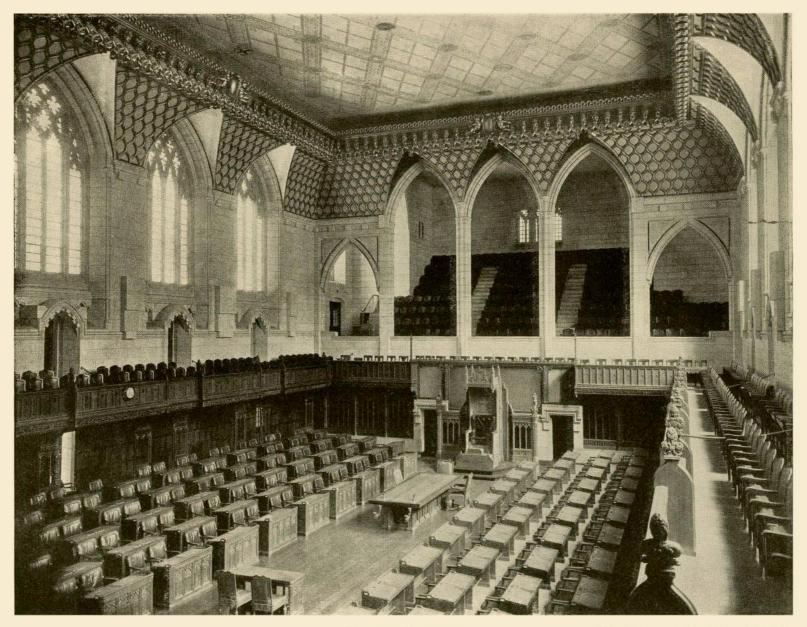
Confederation Hall Parliament Buildings, Ottawa, Canada

John A. Pearson (Darling & Pearson), Architect J. O. Marchand, Associate



Senate Chamber Lobby
Parliament Buildings, Ottawa, Canada

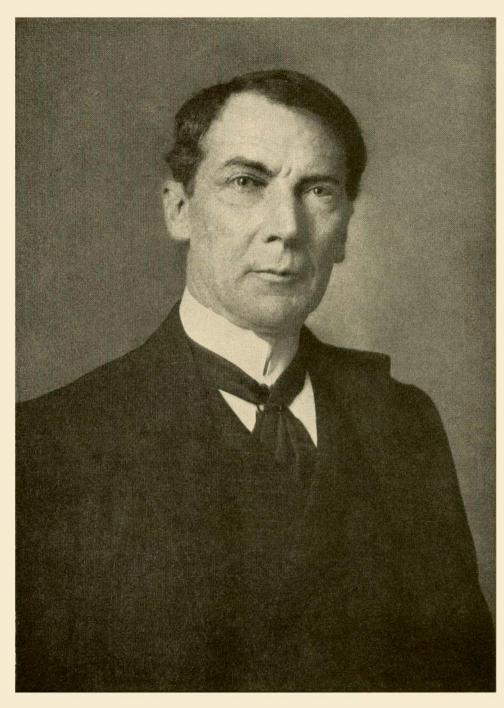
John A. Pearson (Darling & Pearson), Architect J. O. Marchand, Associate



COMMONS CHAMBER
PARLIAMENT BUILDINGS, OTTAWA, CANADA

John A. Pearson (Darling & Pearson), Architect J. O. Marchand, Associate

Page 17. The Journal, Royal Architectural Institute of Canada, Jan. to Mch., 1924



Frank Darling, IL.D., R.A.I.C., R.C.A., F.R.I.B.A. GOLD MEDALLIST, R.I.B.A., 1915

Born February 17th, 1850 Died May 10th, 1923

Why Architectural Competitions?

By STANLEY T. J. FRYER

President, Ontario Association of Architects

T was not my wish, this writing about competitions. I confess to some small knowledge of them in several parts of the world; no more perhaps than many others, however.

Architectural competitions! what blasted hopes, what shattered dreams-you who have suffered

bear with me now.

As one recalls those efforts of the past the question may well arise, "Why architectural competitions?" Do they achieve the object intended? What is that object? I suppose the obvious answer to the last is—for the purpose of selecting the best design. As to whether they achieve the object intended, that's a moot question and conditional on whether we accept the obvious answer—which

in turn governs the question-why?

The young architect, full of what is sometimes called the "arrogance of youth," would probably say, "Architectural competitions? Why of course" for they're as the breath of life to him full of enthusiasm, with the light of battle in his eye and the joy of the designer in his heart. With these what better than a competition—a striving with others for the same object, a contending for a prize; the architectural adaptation of the survival of the fittest.

Yes, I suppose most of us have felt the joy of the competition while our "masterpiece" was in the making, and the fear and trembling during the judging period, and as the case might be-heaped anathemas on the heads of the assessors, those cold-blooded, misguided mortals who passed us by and plunged us into the depths; or blessed those splendid beings who sang the praises of our work and crowned our efforts with victory, for some have known the supreme satisfaction, the thrill that comes once in a lifetime—the winning of a competition.

For myself—I won my first architectural competition at the immature age of nineteen, since

when I've won no other.

But this does not answer "Why architectural competitions?" Perhaps, if we look into their object, namely, to select the best design, we may find the answer. How is that best to be selected? By the appointing of architectural assessors of recognized ability who, in addition to judging the designs submitted, will prepare carefully the con-

ditions of competition.

If one accepts competitions as a necessary evil, this appears to be the fairest way to go about selecting the best design. How often though is this plan followed in Canada? I venture the opinion, in very much the minority of cases. What is the usual procedure? The average so-called competition peculiar to the small town board or committee is very much the usual procedure. Here we have the unhappy spectacle of three or more architects falling over each other to place the result of years of training, for judgment, before a committee consisting of, let us say, a lawyer, a farmer (two farmers if you like), a doctor, a small-town builder and perhaps several other entirely ignorant (architecturally) but otherwise perfectly harmless

members, and these undertake to say whether my design is the best as against the three several other designs submitted. It might be funny if not so wretchedly true. Were I to suggest my judging the merits of the one or two farmers' plowing efforts or butter-making, their expressions would probably be better left unsaid. So with my opinion as to their ability to judge my architectural efforts.

This is no exaggeration, as most of us know, but unfortunately far too prevalent a method of selecting designs and a most deplorable condition of affairs—degrading to the profession and to those who countenance it by submitting their designs under such conditions. The remedy lies largely in our own hands, not only as individuals but as associations and societies. Man cannot live unto himself. By this same token, architects cannot live their professional life without due regard for the profession at large.

So again I ask myself, Why architectural com-

petitions?

When competitions are governed by careful conditions and judged by architectural assessors do they select the best design? Do they achieve their

object?

I have seen designs ruled out by one group of assessors as being too obviously copies, a new competition being called and the second group of assessors selecting a design ruled out by the first group. An unfortunate and controversial result.

We had the Chicago *Tribune* competition in which many place the beautiful adaptation of the octagonal lantern of Ely Cathedral second to the strikingly original design awarded second place by the assessors. Some may say, "But it's not a question of originality." I'm sorry if it isn't, for it seems to me true art must be original, an outpouring of the artistic soul—true and sincere—and a copy, no matter how beautiful, is not truly sincere.

I have also seen designs which almost entirely ignored the conditions of competition, win out, and win because they stood far above the others, being masterpieces of design, strokes of genius. They recognized no cramping conditions of competition; genius needs no competition to give it birth.

The architect who plans and designs for the sheer joy of it needs no competitions to spur him to his best efforts; if the spark of genius is there it will be lighted in spite of them.

So I still ask myself the question, "Why archi-

tectural competitions?"

However, the cold facts must be faced. Styles may come and styles may go but competitions seem to be with us always. Therefore must we work to have them conducted in as fine and fair a way as possible, with proper conditions and judges of recognized architectural ability and, unless these, to refrain from competing. When the profession as a whole refuses to countenance the present lamentably ludicrous apologies for competitions, then architectural competitions may achieve the object intended—or more nearly it— then one may find the answer to "Why architec-tural competitions?"

The Royal Architectural Institute of Canada

List of Members, 1923-24

(Members are requested to report any corrections to The Journal Office.)

Province of Alberta

BENNETT, H. L. BLAKEY, R. P. BLAKEY, W. G. BURGESS, C. S. CALDERON, A. M. DUFF, R. J. FORDYCE, GEO.	Canada Life Bldg., Calgary Institute of Technology, Calgary Parliament Buildings, Edmonton Canada Permanent Bldg., Edmonton University of Alberta, Edmonton 14 Dominion Bldg., Edmonton 1621 Twelfth Ave. W., Calgary 226 Eighth Ave. W., Calgary Parliament Bldg., Edmonton	MACDONALD, G. F. MAGOON, H. A. MAJOR, W. P. MARTLAND, JOHN. MCDONNELL, R. MCILROY, D. S. MILLAR, R. A. MITCHELL, R. M.
Hay, Charles		Morehouse, E. W Piche, Alp. Richards, J. B. Stevenson, Jame Underwood, Edw. White, M. A.

Macdonald, G. H
Magoon, H. A
Major, W. P
MARTLAND, JOHN City Engineers' Office, Edmontor
McDonnell, R. E Home Bank, Bldg., Hamilton
McIlrov, D. S
MILLAR, R. A
MITCHELL, R. M Muircroft, Auchterarder, Perthshire, Scot
Moreнouse, E. W Philadelphia Ave., Detroit, Mich
Piche, Alp
RICHARDS, J. B City Engineer's Office, Calgary
STEVENSON, JAMES M
Underwood, Edward Canada Permanent Bldg., Edmontor
WHITE, M. A

Province of British Columbia

Augustine A. P. Mitchell Block, Penticton
Ranges R P 12 Mt Edward Apartment Victoria
D. D. A. C. 1. 21 C. L. D. 100 V.
Augustine, A. P
Bell, R. B
Benzie, James A
BERRILL, RALPH Brown Block, Broad St., Victoria
BIRDS, S. B Metropolitan Bldg., Vancouver
Ring Anguin I City Hall Vancouver
BIRD, ARTHUR J. City Hall, Vancouver BLACKADDER, H. 209 North West Bldg., Vancouver
BLACKADDER, FI
BOWMAN, Jos. H
Bow, WM
Broderick, C. ATrail
BOWMAN, Jos. H. Yorkshire Bldg., Vancouver Bow, Wm. 618 Standard Bank Bldg., Vancouver BRODERICK, C. A. Trail BROWN, J. G. Department of Public Works, Victoria CARRIE, ALEX. P.O. Nelson CHADNEY, R. W. 2485 Fifth Ave. W., Vancouver Gov. A Apprilled.
Carrie, Alex
CHADNEY, R. W
COX, A. ARTHUR. 909 Birks Bldg., Vancouver COCKRILL, H. W. 232 25th St. W., North Vancouver
Cockett H. W. 232 25th St. W. North Vancouver
CORBY, P. E
CORBY, F. E
Cross, Franklin
Cullin, H. J. R
CURTIS, RICHARDVernon
CURTIS, GEORGE D 850 Hastings St. W., Vancouver
CULLERNE, HAROLD
Cullerne, Harold 606 Yorkshire Bldg., Vancouver Dalton, W. C 6369 McDonald, Vancouver Dodd, W. M. 826 Standard Bank Bldg., Vancouver Downing, Max B 504 Yorkshire Bldg., Vancouver
Darro W.M. 926 Standard Bank Bldg Vancourer
Dobb, W. M
Downing, Max B
EVANS, ENOCH
Evans, G. Norris
EVELEIGH, S. M
EVELEIGH, S. M. 615 Hastings St. W., Vancouver Fee, T. A. 570 Granville St., Vancouver
FORD G S 1050 St Patrick St Oak Bay Victoria
FORD, G. S. 1050 St. Patrick St., Oak Bay, Victoria Fox, Percy 3 Brown Block, Broad St., Victoria
C P C O27 0 Pints Plats V
GARDINER, FRANK G
GARDINER, FRANK G. 827-8 Birks Bldg., Vancouver GARDINER, W. F. 701 Vancouver Block, Vancouver GILLINGHAM, H. H. 1502 Tower Bldg., Vancouver HALDANE, WILL, c/o Edward & W. S. Maxwell, 360 Beaver Hall
GILLINGHAM, H. H
HALDANE, WILL, c/o Edward & W. S. Maxwell, 360 Beaver Hall
Square, Montreal, Que. HATCHARD, O. B. Barnard Ave., Vernon HARVIE, ROBERT 1924 Second Ave. F., Vancouver
HATCHARD, O. B Barnard Ave., Vernon
HARVIE ROBERT 1924 Second Ave. E., Vancouver
HARGREAVES, L. W. 2378 Pacific Ave., Willows, Victoria
Universe M. 2015 Vancouver Plack Vancouver
Helyer, M
HENDERSON, A. E
HENDERSON, J. B. 1246 Robson St., Vancouver Henslowe, J. C. E. Box 257, P. O., Duncan
Henslowe, J. C. E Box 257, P. O., Duncan
Hodgson, Hugh A. 309 Carter-Cotton Bldg., Vancouver Honeyman, John J. 850 Hastings St. W., Vancouver
HONEYMAN, JOHN I
Horwood, J. C. B
LAMES DOUGLAS Dungan
James, Douglas. Duncan James, P. Leonard. 322 Sayward Bldg., Victoria
TAMES, T. LEONARD

JEFFERS, A. M. Prince Rupert Hotel, Pt. Ruper	.+
IOHNSON H G 750 O'Farrell St Vancouve	>1"
Jones, William 623 Richards St., Vancouve	r
KEITH, I. C. M. Sayward Bldg. Victori	a
KERR, R. C. 805 Yorkshire Bldg. Vancouve	·r
KEITH, J. C. M. Sayward Bldg., Victori KERR, R. C. 805 Yorkshire Bldg., Vancouve Lort, Ross A. 850 Hastings St. W., Vancouve	r
LOTHIAN, ALBERT J	τ.
Lyon, Robert Front St., Penticto	n
MacAulay, W. H. P. O. Box 453, Kamloon	S
Macey, F. W. Box 394 G. P. O., Vancouve Mackenzie, J. C. 322 Winch Bldg., Vancouve	r
Mackenzie, J. C	r
Mackay, A. S. W. 209 North West Bldg., Vancouve Matheson, Robt. M. 325 Homer St., Vancouve	r
Matheson, Robt. M	r
Marsden, William A. Church Hous	P
McCarter, John Y 509 Richards St., Vancouve	r
McIntyre, John 460 Ocean View Ave., Powell Rive	r
McLure, Sam 404 Union Bank, Victori	a
Menzies, Allan	r
Mercer, Andrew I	r
MIDDLETON, W Department of Public Works, Victori	a
Morris, G. Rider	r
NAIRNE, GEORGE 509 Richards St., Vancouve	r
OWEN, W. A., Canadian Collieries, Ltd., (Dunsmuir), Cumberland	d
MIDDLETON, W. Department of Public Works, Victori Morris, G. Rider. 1925 Eighth Ave. W., Vancouve Nairne, George. 509 Richards St., Vancouve Owen, W. A., Canadian Collieries, Ltd., (Dunsmuir), Cumberlan Palmer, Bernard C. 850 Hastings St. W., Vancouve Parr, J. E. 505 Carter-Cotton Bldg., Vancouve Ridgway-Wilson, W. 418 Pemberton Block, Victori Carter Cotton Block, Victori Carter Carter Cotton Block, Victori Carter Car	r
PARR, J. F	r
KIDGWAY-WILSON, W	a
Savage, Hubert 424 Sayward Bldg., Victori Sedger, Thomas D 512 Bastion Square, Victori	a
Semeyn, W. J	a
Sharp, G. L	a
Shewbrooks, Bernard P. O., Central Par	L
Simmonds, H. H	K
Simmonds, fl. fl	r
Swan, H. L. Penticto Spurgin, K. B. 426 Sayward Bldg., Victori	n
Spurgin, K. B	a
Stewart, Hugh	Г
Taylor, J. S. D	r
THOMPSON, C. J	1
Totty, Elliott	r
Townley, Fred L	r
TWIZELL, R. P. S	r
TWIZELL, G. S Metropolitan Bldg., Vancouve	г
Watkins, C. Elwood	a
WHITBURN, JAS. B Westminster Trust Bldg., New Westminste	r
WHITE, MURRAY A	
WHITTAKER, HENRY Department of Public Works, Victori	a
WILSON, HENRY	
WILSON, ROBT	r
The state of the s	-6

Province of Manitoba

Province of Ontario

HONORARY MEMBERS

CURRY, S. G		GREGG, W.	R			Oakville
Dick, D. В	7 Nicholas Lane, London E.C., Eng.	LANGTON, W	. A	Rusholme	Road,	Toronto
	MEREDITH, LTCOL. C. P	245 Ra	nge Road, Ottawa			

HONORARY ASSOCIATES

REGISTERED ARCHITECTS

(Under the provisions of the Ontario Architects' Act)

ABREY, F. E. L Canadian Methodist Mission, Szechuan, W. China
ALLASTER A STHART 77 King St. W. Brockville
Angus, Robert Y
ARNOLDI, F. Telfer 527 Confederation Life Bldg., Toronto
BAKER F. S. F.R.L.B.A Bank of Hamilton Bldg., Toronto
BALLANTYNE, H. F., B.A.Sc 120 Hawthorne Ave., Ottawa
BARBER, A. H
BARBER, LLOYD Dc/o Albert Kahn, Marquette Bldg., Detroit
RABCIAN ARTHUR I 487 McLeod St. Ottawa
Веск, J. Jackson
BLACKWELL, VICTOR J 24 King St. W., Toronto
BLACKWELL, WALTER R. L., Bank of Commerce Bldg., Peterborough
BLACKWELL WILLIAM
Blanchard, George707 Whelan Bldg., Port Arthur
Bodley, Frederick C
BOND, C. H ACTON 4 Wellington St. E., Toronto
BOYDE, JOHN R 2 Bartlett Bldg., Windsor
BRIDGMAN, L. GORDON Bank of Commerce Bldg., London
Brown, Frank B., B. Archc/o Chapman & Oxley, Toronto
Brown, J. Francis
Brown, J. Hodge
Brown, J. Hodge
Burden, C. F
Burgess, Cecil
BURRITT, CLARENCE J
BURRITT, CLARENCE J 63 Sparks St., Ottawa CAMERON, DAVID J Bartlett Bldg., Windsor CARTER, HAROLD 101 King St. W., Toronto
Commo Davista W RASe 4/ King St W Loronto
CAUCHON, J. E., JR. Public Works Department, Ottawa CHADWICK, VAUX. 132 Church St., Toronto CHALMERS, WILLIAM C. Public Works Department, Ottawa
CHAPTER VALVE 132 Church St. Toronto
CHAIMERS WILLIAM C Public Works Department Ottawa
CHARMAN A H Harbor Com Blog Loronto
CLEVELAND C BARRY C/o Darling & Pearson, Toronto
COON BURWELL R B.A.Sc 4 St. Thomas St., Toronto
CLEVELAND, C. BARRY
CRAIC I H RASc /U/ Longe St. Loronto
DARRACH, NEIL R. 430 Talbot St., St. Thomas DE HUECK, BORIS CO Toronto Carpet Company, Toronto Denison, Arthur 542 Confederation Life Bldg., Toronto
DE HUECK, BORIS c/o Toronto Carpet Company, Toronto
DENISON, ARTHUR
Dolphin, Chas. B
Domville, Paul

ne Ontario Architects Act)
Dyson, C. E. Cyril. Board of Education, Toronto Ellis, J. A. 189 Church St., Toronto
Evans John 30 Water St N Galt
Evans, George T
Evans, William G 46 Main St. W., Hamilton
EVERETT, A. J
FINDLAY, CLAUDE A P. O. Box 534 Sault Ste. Marie
FOULIS, JAMES P. O. Box 534 Sault Ste. Marie FRYER, STANLEY T. J 46 Main St. W., Hamilton
FRYER, STANLEY T. I 46 Main St. W. Hamilton
GEORGE ALLAN 65 Victoria St. Toronto
GIBSON, C. J. 106 Excelsior Life Bldg., Toronto GILLIES, K. S. City Architect's Department, Toronto GORDON, H. B. 526 Confederation Life Bldg., Toronto
GILLIES, K. S City Architect's Department, Toronto
GORDON, H. B 526 Confederation Life Bldg., Toronto
GOVAN, JAMES Provincial Secretary's Dept., Toronto
GOVAN, JAMES. Provincial Secretary's Dept., Toronto GREGG, A. H. Temple Bldg., Toronto HACKETT, W. B. Provincial Architect's Dept., Toronto HARVEY, J. A. 2 Gould St., Toronto HAZELGROVE, A. J. 209 Sparks St., Ottawa HEDLEY, GEORGE E. Toronto Transportation Commission, Toronto
HACKETT, W. B Provincial Architect's Dept., Toronto
HARVEY, J. A 2 Gould St., Toronto
HAZELGROVE, A. J
Hedley, George E. Toronto Transportation Commission, Toronto
HELLIWELL, GRANT526 Confederation Life Bidg., Toronto
HENNIGAR, D. M
HORSBURGH, VICTOR D., F.R.I.B.A. 21 King St. W. Toronto
Horwood, Allan W
Horwood, J. C. B
Howland, W. Ford
Husband, Lester B. Bank of Montreal Chambers, Hamilton
HUTTON GORDON I 804 Rank of Hamilton Ridge Hamilton
HYNES, J. P
Hynes, J. P
Kelly, B. Frank701 Bank of Hamilton Bldg., Hamilton
Kelly, B. Frank 701 Bank of Hamilton Bldg., Hamilton Langley, Charles E 146 King St. W., Toronto
Lakue, J. Albert, Assist. Professor of Arch., University of Montreal
Lawson, J. Irving Toronto Transportation Commission, Toronto
LEE, FREDERICK C., B.A
Lennox, E. J
LYLE, JOHN M
McBride, H. C
McConnell, A. Wellesley, B.A.Sc., Assoc. Prof. of Arch.,
McDonnell, R. E
MCDONNELL, R. EHome Bank Bldg., Hamilton

Province of Ontario (continued)

McGiffin, C. V	Robertson, J. A. Bank of Montreal Chambers, Hamilton Rolph, E. R. 1162 Bay St., Toronto Russell, James S. Gordon Block, Stratford Salisbury, A. E. Toronto Hydro-Electric System, Toronto Salisbury, H. G. 17 Bowden Ave., Toronto Saunders, F. F. 116 Concord Ave., Toronto Secord, Herbert F. 43 Victoria St., Toronto Secord, Herbert F. 43 Victoria St., Toronto Secord, Louis O. 48 Home Bank Bldg., Hamilton Shannon, Roy D. 121 Glen Rose Ave., Toronto Sheppard, Ralph K. 36 Toronto St., Toronto Sheppard, Hugh P. Dowler Bldg., Windsor Smith, Eden. 81 King St. W., Toronto Smith, Harold J. c. Stevens & Lee, Toronto Smith, Ralph Eden. 81 King St. W., Toronto Smith, Sandford F. 219 Bay St., Toronto Somerville, W. L. 2 Bloor St. W., Toronto Somerville, W. L. 2 Bloor St. W., Toronto Souter, William R. 804 Bank of Hamilton Bldg., Hamilton Spence, D. J. 246 Beaver Hall Hill, Montreal Sproatt, Henry, LL.D. 1162 Bay St., Toronto Stevens, Edward F. 62 Charles St. E., Toronto Taylor, L. Fennings. Fraser Bldg., Ottawa Temple, Eric E. Public Works Department, Ottawa Tempison, H. H., c/o Chapman & Oxley, Har. Com. Bldg., Toronto Taylor, L. Fennings. Fraser Bldg., Ottawa Tempison, H. H., c/o Chapman & Oxley, Har. Com. Bldg., Toronto Taylor, L. Fennings. Fraser Bldg., Ottawa Tempison, H. H., sold Chapman & Oxley, Har. Com. Bldg., Toronto Warrson, A. E. 518 Fort Washington Ave., New York City Watson, Harold R. 518 Fort Washington Ave., New York City Watson, Harold R. 518 Fort Washington Ave., New York City Watson, Harold R. 518 Fort Washington Ave., New York City Watson, A. Frank. Temple Bldg., Toronto Wegman, Jules F. c/o Darling & Pearson, Toronto West, Gordon M. 43 Victoria St., Toronto With Mitte, George. Public Works Department, Toronto With Hitte, George. P
ASSOC	CIATES
Baldwin, L. C. Martin	Menges, Edwin Murray, John J C/O McPhie & Kelly, Hamilton O'Gorman, P. J Paisley, J. E. H C/O F. H. Marani, Toronto Sheppard, Earl L C/O Chapman & Oxley, Toronto Waters, MacKenzie D Wilkes, Ward A C/O Gilbert J. P. Jacques, Windsor Wilson, William M. Sawelland Ave., St. Catharines Young, T. J C/O F. H. Marani, Toronto

Province of Quebec

1 Tovince o	n Quebec
Adamson, J. J. 14 Amesbury Ave., Montreal Adams, W. D. 285 Beaver Hall Hill, Montreal Adams, H. A. 271 Prince Arthur W., Montreal	BOOTH, PERCY BOSTROM, R. E BRAIS, SIMEON
AIRD, J. A., A.R.I.B.A. Bell Telephone Bldg., Montreal	Brodeur, Chas Brown, D. R Cardinal, Dolor
Amos, L. A	CARDINAL, DOLOR CARLESS, WM., F.R.I.B CARON, L. J
AUDET, L. N	CARON, J. H CARON, JULES CARON, J. W
BARWICK, O. A	CARMICHAEL, W. J CARTIER, J. A. E
Bastien, Paul	CHARBONNEAU, RENE CHAUSSE, ALCIDE, S.N CHENEVERT, R
Beaugrand-Champagne, Prof. A., B.A.A., 345 Bloomfield Ave., Montreal	COMBER, SYDNEY CONTENT, ALP
Beaupe, Donat	CONTENT, L. A CORMIER, ERNEST COTE, GASTON
Bergeron, Hypt, 3967 Ave. Souligny, Quartier Mercier, Montreal Bergeron, J. Simeon	Courval, E. J. P Cyr, S. A
BERNIER, ALBERT	David, Charles Davis, H. W Decary, A. R

1 Quebec
BOOTH, PERCY
BOSTROM, R. E
Brais, Simeon 55 St-Francois-Xavier, Montreal
Drobbox, Chas
Brown, D. R
CARDINAL, DOLOR
CARLESS, WM., F.R.I.B.A
CARON, L. J. Nicolet, P.O.
CARON, J. H 710 Delorimier, Montreal
CARON, JULES 21 St-Joseph, Trois-Rivieres, P.Q.
CARON, J. W 76 St-Gabriel, Montreal
CARMICHAEL, W. J Bell Telephone Bldg., Montreal
Cartier, J. A. E
CHARBONNEAU, RENE 194 Parc G. E. Cartier, Montreal
Chausse, Alcide, s.n.f., s.c.b., P.O. Box 304, 70 St-Jacq., Montreal
Chenevert, R
COMBER, SYDNEY
CONTENT, ALP
CONTENT, ALP
Cormier, Ernest
Cote, Gaston St-Hyacinthe, P. Q.
COURVAL, E. J. P
Cyr, S. A
DAOUST, J. F. C
DAVID, CHARLES
Davis, H. W
DECARY, A. R

Province of Quebec (continued)

DARBYSON, ALLAN B	Morissette, J. A
DENONCOURT, E. L	Nobbs, Prof. P. E., F.R.I.B.A. 14 Phillips Square, Montreal
DENOROURI, L. B	One of The Property of the Control o
DEPATIE, J. O. 294 Est Ste-Catherine, Montreal	OUELLET, J. P
DESHAIS, J. C	Painchaud, D. E
DIONNE, J. A. T	Parant, Louis
DOUCET, E. A	PAYETTE, EUGENE
DUFORT, CAJETAN. 195 Est Ste-Catherine, Montreal	Peacock, T. R., f.r.i.b.a. 81 St-Peter, Quebec
DUFORI, CAJETAN	Description of State
Dufresne, Marius 436 Ave. Pie IX, Montreal	Pearson, J. A
Dumfries, Frederick	Peck, Hugh A 128 Bleury, Montreal
Durnford, A. T. G 9 Simpson, Montreal	Peden, Frank 65 McGill College Ave., Montreal
Dussault, J. P. E	Pepin, E
Bushell, J. I. B. H. I. S. Colombia Marchell	Perrault, Joseph
FETHERSTONHAUGH, H. L., A.R.I.B.A85 Osborne, Montreal	FERRAULT, JOSEPH
FINDLAY, FRANK R	Perram, Hugh C 492 Melrose, ND. de Graces, Montreal
FINDLAY, R	Perrault, Jean Julien2100 Avenue du Parc, Montreal
Forbes, A. P., A.R.I.B.A	Piche, Alp
FORTIN, J. E	PILON, J. E
Foster, Frank R., A.R.I.B.A84 St-Francois-Xavier, Montreal	PINSONNAULT, J. L
Frappier, S 2238 Ave. du Parc, Montreal	PITTS, GORDON McL
Frechet, R. A	Poivert, Jules, Prof Ecole Polytechnique, Montreal
GAGNON, WILLFORD A	Post, William S 101 Park Ave., New York
GAGNON, WILLTOND A	Dos, William S
GARDINER, J. RAWSON	Post, J. Otts
GARIEPY, J. RAOUL	Potvin, Alfred
Gascon, D. A	Prairie, Edgar
GAULIN, J. F	RAINE, HERBERT, A.R.C.A
CAUDIN I A	PAY A G ADIDA 127 India Waster
GAUDIN, J. A	RAY, A. G., A.R.I.B.A
GOODMAN, C. D	REA, KENNETH G., F.R.I.B.A 285 Beaver Hall Hill, Montreal
GORDON, D. M., A.R.I.B.A	Reeves, C. A Immeuble Power, Montreal
GRAVEL, ANASTASE	RICHARDSON, W. S 101 Park Avenue, New York
Gregoire, J. W	RICHER, G. RENE St-Hyacinthe, P.Q.
Great I A	Description C. D. 200 B. H. I. C. M.
Grise, J. Arthur. 112 St-Jacques, Montreal	RITCHIE, S. D
HARRIS, J. O'GILVY	ROBB, FRED G
HAWKINS, STUART S	ROBERT, J. ANTONIO 293 Workman, Montreal
HAZELGROVE A I 185 Sparks Ottawa	ROBITAILLE, LUDGER 30 Lindsay Bldg., Quebec
Humayyan P. M. s.y.n. 420 Constine Plda Mantagal	ROBITAILLE, GUSTAVE
HAZELGROVE, A. J	Robinal L. S. Gustave
HEROUX, J. P	Ross, G. A Belmont, Montreal
Houle, I. A. S	Ross, G. A
Huoт, J. E 304 Universite, Montreal	Rye, R. C
HUTCHISON, W. B	SAWYER, Jos
Home Con T and a second of the life Con Monte of	
Hyde, Geo. T., s.B., B.s.c. 14 Phillips Square, Montreal	SAXE, CHAS., R.C.A
HYNES, J. P	Scott, R. Allan Canada Cement Bldg., R 1019, Montreal
James, H. G	SHENNAN, DAVID
Jones, Hugh G., A.R.I.B.A Drummond Bldg., Montreal	SHOREY, H. E
KARCH, J. A	SMITH, J. ROXBURGH85 Osborne, Montreal
	Smith, J. Rozbergh
KEROACH, LUCIEN F 294 Est Ste-Catherine, Montreal	SMITH, J. S
LABELLE, ERNEST A Shawinigan Falls, P. Q.	SINGER, PAUL
LABELLE, H. S	Spence, D. Jerome
Laberge, Hel	SPROULE, S. M
LAFRENIERE, J. L. D	St-Jean, E
LALIBERTE, J. E	St-Louis, A
LALIBERTE, J. E	
LAMONTAGNE, ALFRED	St-Louis, J. C
Lapierre, A. H	STAVELEY, HARRY
Larue, J. Albert	STAVELEY, EDW. B
LATOURELLE, EDMOND 103 St-Francois-Xavier, Montreal	STEVENS, E. F
Lawson, Harold	STEWART, GEORGE M
LEBLANC, L. 197 Designations, Montreal	Tivorus C F
LEBLANC, L 197 Desjardins, Montreal	TANGUAY, G. E
LEMAY, Chs. Aug	TETLEY, C. R., A.R.I.B.A
Lemieux, Ludger	THACKER, A. D., A.R.I.B.A
LEONARD, J. A	THOMPSON, G. D
Levesque, Pierre	TRAQUAIR, RAMSAY, F.R.I.B.A McGill University, Montreal
LITTLE, H. B. 201 McLeod, Ottawa	
Little, H. B	TRUDEL, Z
LORNE, FRANCIS, A.R.I.B.A	Trudel, Ad Hotel de Ville, Quebec
Lyman, Gordon	Turgeon, J. O
Macfarlane, D. H	TURNER, PHILIP J., F.R.I.B.A 274 Beaver Hall Hill, Montreal
Macvicar, D. N., A.R.C.A	VALLANCE, HUGH
Mann, Eric	VANIER, J. E
Mann, Bric	
MACDONALD, R. H 1 Belmont, Montreal	VAUTRIN, IRENEE
MARCHAND, J. O	VENNE, ALPH
Marrotte, Edgar S 101 Park Ave., R. 1004, New York	Venne, Jos
MAXWELL, W. S	VENNE, LUDGER 85 Osborne, Montreal
McDougall, J. Cecil, A.R.I.B.A85 Osborne, Montreal	VENNE, EMILE
Molaren T Artha 264 Page II II III M	
McLaren, T., A.R.I.B.A	VENNE, ADRIEN
MERCURE, ALBERT	VIAU, J. D
MILLER, J. M., A.R.C.A	VINCENT, ARTHUR
MITCHELL, C. A	WARREN, W
MITCHELL, C. GORDON	Wood, A. Campbell
Monette, G. A	Wood, Geo. W
, or , or , or outcor, orang, montreal	, monteet

Province of Saskatchewan

BUNYARD, R. G	Hammond Bldg., Moose Jaw
BLACKWOOD, ROBT	Canada Bldg., Saskatoon
	Southam Bldg., Montreal, Que.
CARMICHAEL, THOS	Grayson Bldg., Moose Jaw
CLEMESHA, F. CHAPMAN	Credit Foncier Bldg., Regina
Dawson, Harold	Westman Chambers, Regina

DELAY, EMILE	. Western	Trust	Bldg.,	Regina
Dunning, N. Max Kimb	all Bldg.,	Chicag	o, Ill.,	U. S. A.
Evans, Wm. H	W. 3rd St	reet, Lo	s Angel	es, Cal.
FORTIN, Jos. E.	85 Osl	orne,	Montrea	il, Que.
GREIG, PROF. A. R Univers	ity of Sas	katchev	van, Sa	skatoon
HACKETT, CHAS, M				

Province of Saskatchewan (continued)

Province of Saskat	chewan (continued)				
Gilbert, Edward James, Department of Public Works, Regina Hynes, J. P	Russell, J. H. G. McArthur Bldg., Winnipeg, Man. Stephenson, G. J. Dom. Dept. Pub. Works, Regina Sharon, M. W. Provincial Architect, Regina Storey, Stan. E. McCallum Hill Bldg., Regina Swan, Wm. Punnichy Stewart, Hugh 445 Richards St., Vancouver, B.C. Semmens, John Nelson, Gt. West Permanent Bldg., Winnipeg, Man. Thompson, R. M. Bank of Nova Scotia Bldg., Saskatoon Thompson, Norman L. Dominion Bank Bldg., Moose Ja w Turnbull, F. L. 453 Glenwood Ave., Grand Rapids, Mich. Van Egmond, W. G. McCallum Hill Bldg., Regina Vallance, Hugh Southam Bldg., Montreal, Que. Webster, Dave C.P.R. Bldg., Saskatoon Woodman, John Lindsay Bldg., Winnipeg, Man.				
Province of Prince	ce Edward Island				
Baker, George Summerside	Chappell, C. B Des Brisay Block, Charlottetown				
Province of	Nova Scotia				
Busch, Walter J. 60 Bedford Row, Halifax Booth, J. H. P.O. Box 131, North Sydney Dumaresq, S. P. Royal Bank Bldg., Halifax Fairn, Leslie R. Aylesford	Gates, Herbert E. 149 Hollis St., Halifax Johnson, J. A. Halifax McKean, Melville. Antigonish Spencer, Freeman. Glace Bay				
Province of New Brunswick					
Anderson, A. E. St. John Brodie, F. Neil. 42 Princess St., St. John Frechette, Rene A. 30 Bonaccord St., Moncton	Sincennes, Albert				
Newfou	ındland				
BUTLER, W. P	GREENE, W. H. P.O. Box 161, St. John's				
R. A. I. C.					
Honorary Corresp	oonding Members				
M. René BlondelArchitecte, 15 rue Neuve, Versailles, France, Brown, Mr. Glenn, Architect, The Octogon, Washington, D.C. U.S.A. Lapiedra, Sr. D. Luis Ma. Canello vArchitect, 5 Columela Madrid, Espagne Cannizarro, M. Mariano-EduardoArchitecte 89B, Via Panisperna, Rome, Italy Clason, M. I. GustavArchitecte 10 Kammarkaregatan, Stockholm, Suede Davoust, M. Leon, Architecte, 5 rue des Saints-Pères, Paris, France Dhuique, M. Eug., Architecte, 11 rue du Vieux Marche aux Grains Bruxelles, Belgique Favrel, M. HenriIngéneiur, 337 rue des Pyrénées, Paris France	HARMAND, M. GEORGES. Avocat de la Cour d'Appel 134 rue de Rivoli, Paris, France MARSLAND, MR. ELLIS Architect, 244 Camberwell Road London, S.E., England NAGY, M. VIRGIL Architecte, 11 Meszutcza, Budapest, Hongrie REY, M. A. AUGUSTIN Architecte, 119 rue de la Faisanderie Paris, France ROZET, M. GASTON Architecte, 118 faubourg Saint-Honoré Paris, France LOS TERREROS, SR. D. LUIZ SAINZ Y DE, Architecte, 16 Plaza del Progresso, Madrid, Espagne TERRA, SR. VENTURA Architecte, 149 rue Alexandre-Herculano Lisbonne, Portugal VAUTRIN, M. ADOLPHE, Architecte, 12 rue Jaucourt, Paris, France ZAMBONI, M. FÉLIX Architecte, Rome, Italie				
Honorary	Members				
LORD ATHOLSTAN, G.C.M.G., Hon. M.R.A.I.C, 538 Sherbrooke St. W Montreal BLONDEL, M. Frantz, Architecte, 15 rue Neuve, Versailles, France BONNIER, M. LOUIS, Architecte, 31 rue de Berlin, Paris, France BREASSON, M. I., Architecte, 350 rue Saint-Honore, Paris, France GEORGE, SIR ERNEST, R.A. Architect, 18 Maddox St., Regent St. London, England GILBERT, MR. CASS. Architect, 11 East Twenty-Fourth St. New York, U.S.A. GIRAULT, M. CHARLES. Architecte, 36 avenue Henri-Martin Paris, France POUPINEL, M. JACQUES-MAURICE. Architecte 45 rue Boissy-d'Anglas, Paris, France SALM, M. ABRAHAM G., Bzn. Architecte, 26 Weesperzyde Amsterdam, Holland	Santiago, Sr. D. Castellanos y Urizar, Architecte 3 Florida, Madrid, Espagne Simon, M. O. Architecte, 1 Place Armand-Steurs Bruxelles, Belgique Stubben, M. Hermann Josef. Architecte, 10 Gneistrass Grunewald, Berlin, Germany Suzor, M. Le Comte Paul de Architecte, 21 Lique des Cadets Petrograd, Russia Vaudremer, M. J. A. Emile. Architecte, 23 Quai Conti Paris, France Wagner, M. Otto Architecte, 3 Schillerplatz Webb, Sir Aston. Architect, 19 Queen Ann's Gate, Westminster London, S.W., England				

Structural Service Department

EDITED BY FRANK P. MARTIN

Member Saskatchewan Association of Architects

STUDIES ON COOLING OF FRESH CONCRETE IN FREEZING WEATHER

By Tokujiro Yoshida University of Illinois, Bulletin No. 123

PRELIMINARY—The practice of placing concrete in freezing weather renders important a knowledge of the rate at which this material will cool and the effects of the various methods of protecting the freshly placed concrete from the cold.

The experiments herein recorded furnish test data on the length of time required for concrete of a given temperature to lose its heat and become cold enough to freeze when it is exposed to temperatures lower than freezing point of water.

The values of two thermal constants, diffusity and the ratio of emissivity to coefficient of thermal conductivity, were determined for freshly placed concrete. Some experiments were made on the protective effects of coverings. While a number of applications of experimental data are presented, no originality can be claimed for the underlying mathematical theory, which dates back, of course, to the time of Fourier.

It is not considered that these solutions will give complete data regarding concreting in freezing weather under various conditions; however, it is hoped that they will throw some light on the behaviour of fresh concrete at low temperatures and will indicate the necessity of protection or other precautions.

Concrete Materials—The materials used were similar in character and quality to those used in other concrete and reinforced concrete specimens made and tested by the Engineering Experiment Station in recent years. Universal portland cement was used in all specimens. It fulfilled the requirements of the specifications of the American Society for Testing Materials.

The sand used came from pits at Attica, Indiana, and passed a ¼-inch screen. It weighed 111 pounds per cubic foot. The sieve analysis of this sand, using the sieves commonly known as the Tyler standard sieves, is given in Table 1.

Clean gravel from the same pits was used. It passed a 1½-inch screen and was retained on a ¼-inch screen. The weight of this gravel was 99 pounds per cubic foot. A sieve analysis of the material is shown in Table 1.

Concrete of three proportions, 1-3-6, 1-2-4, and 1-1-2, by volume, was tested as indicated in Table 2. To insure accuracy in proportioning, the materials for each specimen were weighed out separately and mixed.

Table 1
Sieve Analysis of Sand and Gravel
(Tyler standard sieves used)

Material	Sieve Size	Size of Square Openings (ins.)	Per cent. Passing
Sand	3/8 in.	0.371	100
	No. 4	0.185	91
	No. 4 No. 8	0.093	66
	No. 14	0.046	49
	No. 28	0.0231	19
	No. 48	0.0116	19 3
	No. 100	0.0058	1
Gravel	1½ in.	1.49	100
	$1\frac{1}{2}$ in. $\frac{3}{4}$ in.	0.742	57
	3/8 in.	0.371	11
	No. 4	0.185	5 3
	No. 8	0.093	3

*Each value represents the average of four tests.

The fineness modulus and surface modulus of these concrete aggregates are 5.98 and 4.69 respectively. From these figures it appears that the materials are rather coarse, but they are undoubtedly similar to the materials used in common practice. It is believed that the experimental data are applicable to any other well proportioned concrete.

Table 2
Properties of the Concrete Used in the Experiments

Proportion by Volume	Water- Cement Ratio	Slump Test on 6 x 12 Inch Cylinders, Inches	28 Day Compression Tests of 6 x 12 Cylinders Lbs. per Sq. In.
1-2-4 (all except Experiments Nos. 13, 14, 18 and 20)	1.01	2	1300
Nos. 13 and 18) wet consistency 1-2-4 (Experiments	1.26	9	700
Nos. 14 and 20) dry consistency 1-3-6 medium consis-	0.81	0	2200
tency	1.29	08900	800
tency	0.72	500	2900

The cylinders were stored in damp sand at an average temperature of 70 degrees F. Each value is the mean of tests on three cylinders.

MIXING OF CONCRETE—The amount of water used in mixing the concrete was designed to produce the wettest concrete which could satisfactorily be used in freezing weather, except in Experiments Nos. 13 and 18, and 14 and 20, in which very wet and very dry mixtures, respectively, of 1–2–4 concrete were used. An idea of the mobility of these concretes may be obtained from the slump tests made on 6-inch by 12-inch cylinders noted in

Structural Service Department (continued)

Table 2, as well as from the properties of the concrete aggregates and the water-cement ratio (ratio of volume of water to volume of cement) also shown in Table 2

The mixing of the concrete was done by hand. The dry cement and sand were first mixed to a uniform colour and spread out in a thin layer in a large mixing pan; the stone was then added, and the whole mass turned with shovels until thorough incorporation of the dry materials was secured. Water was then added and the materials turned until thoroughly mixed.

The temperature of the concrete thus made was practically uniform and was the same as the temperature of the room in which the concrete was

mixed.

GENERAL FEATURES OF THE EXPERIMENTS—Sixteen experiments were made to obtain data on the cooling of fresh concrete exposed to freezing temperatures. One experiment was made on concrete

which was 31 days old.

Experiments Nos. 1-6, 10, and 13-15 were made with the purpose of determining the thermal constants of fresh concrete which are necessary in applying the theory of heat conduction to the cooling of fresh concrete, and others were made to obtain information on the effect of protection of the concrete surface. Experiment No. 17 was made to determine the thermal constants of concrete 31 days old.

These experiments were made at the plant of the Smith Ice and Cold Storage Company at Champaign, Illinois. The size of specimen, the concrete mixtures, and the conditions of the surface are

given in Table 3.

TABLE 3 DATA OF THE SPECIMENS

Experiment No.	Proportion by Volume	Depth of the Specimen, Cm.	Condition of the Surface
1	1-3-6	50	No protection at the sur- face under a still air condition.
2	1-2-4	50	do.
3	1-1-2	50	do.
4	1-3-6	30	do.
Ś	1-2-4	30	do.
6	1-1-2	30	do.
2 3 4 5 6 7	1-2-4	30	Surface cooled by air cur- rent from fan.
8	1-2-4	30	Surface covered with a board 3/4 inch thick.
9	1-2-4	30	Surface covered with can- vas.
10	1-2-4	20	No protection at the sur- face.
11	1-2-4	20	Surface covered with a board.
12	1-2-4	20	Surface covered with can- vas.
13	1-2-4	30	No protection at the sur- face.
14	1-2-4 (wet consistency)	30	No protection at the surface.
15	1-2-4 (dry con- sistency)	25	No protection at the surface.
16	1-2-4	10	Surface covered with a board.
17	1-2-4	30	No protection at the sur- face.

All the specimens are 12 inches square in horizontal section.

PREPARATION OF TEST SPECIMENS—The mould for the test specimens was a wooden box 12 inches square and from 12 to 24 inches deep, inner dimensions. It was made of 11/2-inch pine boards. This mould was placed inside another wooden box 3 feet deep. The space between the two was filled with dry sawdust to prevent cooling of the fresh concrete at the sides and at the bottom of the mould.

The inner surface of the inner box was coated with parowax to prevent the absorption of water from the concrete by the wood.

As each specimen was being poured, the thermocouples were inserted one by one through small holes in the side of the mould and embedded in the concrete, their joints being at specified depths below the upper surface and in the vertical axis of the specimen. A thermocouple was also embedded in the sawdust to measure its cooling. The temperatures of the concrete, the boxes, and the sawdust were practically the same as the temperature of the room at the beginning of all experiments.

The specimen thus made was removed to the adjoining cold storage room about twenty minutes after the water was added to the concrete mixture. The wires of the thermocouples were carried across the door sill from the cold room to the room in which the measuring instruments were arranged. The temperature of the cold room was measured by a thermocouple.

PHENOMENA OF EXPERIMENTS—In Experiments Nos. 1, 2, and 3, specimens 50 centimetres in depth, of 1–3–6, 1–2–4, and 1–1–2 concrete, respectively,

In these first three experiments the thermocouple measuring the temperature of the sawdust at the underside of the mould always showed a lower temperature than that at the bottom of the specimens, and it was clear that there was a flow of heat. through the bottom of the mould from the specimen to the sawdust. The rise in temperature during the setting of the concrete was also marked with so great a depth specimen. For these reasons, the data obtained from these three experiments were not used in calculating the thermal constants.

In Experiments Nos. 4, 5 and 6, specimens 30 centimetres thick and of 1-3-6, 1-2-4, and 1-1-2 concrete, respectively, were used. This depth was used in order to reduce the effect of the rise in temperature produced in the setting of the concrete, and also to minimize the flow of heat through the bottom of the mold. For the latter reason further insulation was obtained by filling in the bottom of the mould with a 3-inch layer of sawdust, placing upon this a 3/4-inch pine board, and adding a 11/2-inch layer of parowax. The inner sides of the mould were also given a covering of parowax 1/8 inch thick. With these precautions the thermocouple in the sawdust below the bottom of the mold showed practically the same temperature as that of the bottom of the specimen, and it was considered that the bottom of the mould was thus kept sufficiently impervious to the flow of heat. This condition was assumed in calculating the thermal constants of the concrete from the test data. The specimens used in Experiments Nos. 7, 8

and 9 were of the same material as that used in

Structural Service Department (continued)

Experiment No. 5; they differed in surface con-

In Experiment No. 7 the surface of the specimen was subjected to an air current produced by an ordinary electric fan operating at medium speed. The distance between the fan and the concrete was about one foot, the direction of the current making an angle of about 30 degrees with the surface. The velocity of the air current was about ten miles per hour. It was intended by this method to obtain information on the effect of the wind on the cooling of fresh concrete. The cooling of the concrete surface was very striking. The time required for the freezing temperature to penetrate the surface in this experiment was about one-tenth of that under a still air condition.

It is clear that the evaporation of water from the surface had a very great effect on the cooling of the surface; within the mass the effect was slight.

In Experiment No. 8 the surface of the specimen was covered with a pine board 1.9 centimetres (34 inch) thick. The small opening between the edge of the board and the box was sealed with parowax. This experiment was made to determine the effect of wood forms on the cooling of fresh concrete. The board protected the surface very

In Experiment No. 9 the top of the inner and outer boxes was covered with 10-ounce duck. There was about a 3-inch air space between the canvass and the surface of the specimen. experiment was made to investigate the effect of protection by using canvass in cold weather. The protection is seen to be about the same as with a 3/4-inch board.

The specimens used in Experiments Nos. 10, 11 and 12 were 20 centimetres in depth. The depth of the inner box was changed to 16 inches; other conditions were the same as before. Experiment No. 10 was made as a check on No. 5; the conditions of the specimen were the same as in No. 5 except for the depth. The conditions in Experiments Nos. 11 and 12 were the same as in Nos. 8 and 9 except as to depth of the specimen.

The two experiments, Nos. 13 and 14, made to investigate the effect of the amount of water in the mixture upon cooling of fresh concrete, had conditions of specimen the same as No. 4 except for the consistency of the mixture.

In Experiment No. 13, 1-2-4 concrete of wet consistency was tested. The concrete was so wet that after making the specimen its surface was covered with water to the depth of about 3/16 inch. After six hours in the cold room at an average temperature of 12.2 degrees Centigrade, the surface was covered with laitance about 3/8 inch thick which had the appearance of soft chocolate ice cream. The thermocouple which was set at the surface was at first also covered with the laitance. It may be the laitance offered some protection to the cooling of the surface.

In Experiment No. 14 a concrete of very dry consistency was tested; much difficulty was experienced in placing this concrete. In Experiment No. 15 the depth of the specimen was 25 centimetres, other conditions being the same as in Experiment No. 5; this experiment was made as a check on the results of Experiments Nos. 5 and 10.

In Experiment No. 16 the specimen was 10 centimetres in depth, and was covered with a board at the surface; other conditions were the same as in Experiment No. 11.

For Experiment No. 17, to determine the thermal constants of concrete 31 days old, a specimen in the form of a 30-centimetre (12-inch) cube of 1-2-4 concrete was made in the concrete laboratory at the university. Two thermocouples were used at both the surface and the bottom and one at the center. Two days after the specimen was made the forms were taken off, and the cube was stored in damp sand. After 24 days it was taken out of the sand and dried in the laboratory for one week. It was then put in a wooden mold, the small spaces between the specimen and walls of the mould being filled with parowax.

The specimen and the temperature measuring apparatus were arranged as in Experiment No. 1. Before it was carried into the cold room the temperature of the specimen at different points was about the same, and the mean was taken as the initial temperature of the specimen.

RISE IN TEMPERATURE DURING SETTING OF CONCRETE AND MORTAR—The chemical combination of water with portland cement is an exothermic reaction, the heat evolved being sufficient to raise materially the temperature of concrete and mortar during the period of setting and hardening.

In Experiments Nos. 18-26, this rise in temperature of concrete and mortar was measured in order to study the relative importance of these phenomena in the preceding experiments.

These experiments were made in the concrete laboratory of the university. The apparatus for measuring the temperature was the same as previ-ously described. The water-cement ratio of the four different mixtures of neat cement, 1-1 mortar, 1-2 mortar, and 1-3 mortar was 0.38, 0.48, 0.60,

0.85, respectively.

The concrete or mortar to be tested was poured into a wooden mould with inner dimensions for holding a 12-inch cube. The mould was made of 1½-inch pine boards. Two thermocouples were embedded to measure the temperature, one at the center of the cube and the other at three inches away from the center. The mould was put in the center of the large box, and the space around all six surfaces of the mould was filled with sawdust eight inches thick, to prevent the cooling of the specimen.

The initial temperature of the fresh concrete or mortar was the same as that of the laboratory. The two thermocouples showed about the same temperature. After 48 hours the rise in tempera-

ture was very small in all cases.

The total rise in temperature, the rate of increase, and the time interval before the maximum temperature was reached were all variable, depending upon the proportions of the mixture, the amount of water used in the mixing, and the initial temperature of the concrete or mortar. It showed very clearly, however, that considerable heat is produced during the setting of concrete or mortar at ordinary temperatures, and its effect is very

Structural Service Department (continued)

noticeable from 6 to 12 hours after the pouring of the concrete.

CALCULATION OF THE THERMAL CONSTANTS OF FRESH CONCRETE—In order to apply the theory of heat conduction to concreteing in cold weather, it is necessary to determine certain thermal properties of the concrete from the preceding experiments

Even in a homogenous material such thermal properties are variable and may be considered constant only for a certain range in temperature; in fresh concrete the properties will be found to vary with other conditions as well as temperature.

It is the purpose here to determine certain thermal properties for a limited range of temperatures near freezing, and for purposes of application these properties will be termed "thermal constants."

From the time that water is added to the concrete materials, a chemical reaction begins with an accompanying rise in temperature, and the mass solidifies after a few hours under ordinary temperatures. In temperatures below about 10 degrees C. (50 degrees F.) the setting takes place very slowly and produces a small amount of heat, while if the temperature falls below 0 degrees C. (32 degrees F.) the fresh concrete will freeze and little setting can be expected. Therefore, even though the effect of heat produced in the setting of concrete be neglected, the coefficient of thermal

conductivity of fresh concrete will vary from time to time according to the degree of its setting and its temperature. The specific heat and density of the material also vary considerably with different conditions of setting, as well as with the mix of the concrete and the temperature.

When the surface of the concrete is worked and finished, there is more or less water remaining on it. Therefore, the cooling at the surface of concrete is due not only to radiation and convection, but also to evaporation of water, which, of course, depends upon the humidity and other conditions of the surrounding air.

It is obviously impossible to give certain and definite values of the thermal constants of fresh concrete. However, it is considered useful to determine fair average values of the constants which may be used for practical problems. The execution of concrete work in general practice does not compare in refinement with measurement of temperature to one degree centigrade or of a time interval to one minute. It is usually possible, however, to make observations with an accuracy of within a few degrees in temperature or a few hours in time, and this will usually be sufficient for application of information regarding concreting in freezing weather. Hence, the constants determined here should be useful in applying the mathematical theory of heat conduction to practical problems.

Architectural Crimes

Londoners with a feeling for the past are in arms against the modernization of their beloved Regent Street. A generation ago it was acclaimed not only as the most fashionable shopping street in the world, but the most distinguished. Its characteristic feature, the long crescent of buildings of uniform design with facades of stone-colored plaster and paint, was the work of John Nash, who was chosen for the task over a century ago by the Prince Regent, after whom the thoroughfare was named. But the march of improvement, so called, has overtaken the fine old street. Old buildings make way for new ones, but each is planned without regard to the other or to any general scheme or system. There was something stately even in the monotony of the original street, but it has been steadily losing its dignity. "What a horrible mess it is now," exclaims George Moore, the writer. "It used to be the prettiest thing we had in London. All the foreigners who came here used to admire it. The only thing we can do is to pull it down."

Probably the outcry over Regent Street was one of the factors which brought about the appointment of a Fine Arts Commission by the late Government. It has no disciplinary powers, but its services are at the disposal of every community and public body desirous of erecting statues, fountains or buildings and planning parks, streets or towns. But it may be too late to save the remainder of old Regent Street, and there is little likelihood that, out of deference to the Commission, speculative builders or unimaginative official bodies will spare the beauties of the past. In most parts of Canada the architecture of a former period, excepting odd buildings, left little worthy of preservation apart from sentiment, but when we are building for the future it is a pity that so much that is aesthetically worthless is growing up, even under public auspices. It is the more deplorable because architecture is a highly developed art in Canada. We have a school of architects whose work in classical design rivals that of older countries.—The Toronto Globe.

The Secretary's Page

ALCIDE CHAUSSE

Honorary Secretary Royal Architectural Institute of Canada

ORD has been received at McGill University that the department of architecture in the faculty of applied science has been recognized by the Royal Institute of British Architects as a "recognized school." This recognition has been granted to only three other architectural schools outside of Great Britain.

At the Fire Prevention Conference, held at Montreal on the January 14th last, in association with the Province of Quebec Fire Prevention League, an address on "Building Construction and Fire Waste" was read by Alcide Chaussé, honorary secretary of the R.A.I.C.

As a result of the Christopher Wren bicentenary celebrations last year in England, the Wren Society was formed. Those who would like to know more about this organization can communicate with Ian MacAlister, secretary, R.I.B.A., 9 Conduit Street, London, W.1, England.

A great many Canadian architects who are not members of the R.I.B.A. might be glad to become regular subscribers to the R.I.B.A. Journal if it could be supplied to them on terms which would just cover the actual extra cost of printing and postage. Apart from the matter of interest to architects generally which is contained in the Journal, it is now the regular medium for giving publicity to the proceedings of the Allied Societies, and its wider distribution would do much to maintain interest in their work and to bring their members into closer touch with one another. R.I.B.A. is now in a position to supply the R.I.B.A. Journal (post free) to the members of the R.A.I.C. for an annual subscription of 12 shillings. Address: Ian MacAlister, secretary R.I.B.A., 9 Conduit Street, London.

John A. Pearson, architect, Toronto, Ont., has been appointed by the R.A.I.C. to assist the subcommittee of the Federal Cabinet and the Advisory Arts Council in judging the designs to be submitted for the Sir Wilfrid Laurier memorial.

The Royal Canadian Academy of Arts announce a travelling scholarship in architecture to the value of \$1,500. The scholarship is restricted to Canadian citizens of at least six years residence in Canada and not over thirty years of age. The object of the scholarship is to promote the conception of architecture as the mother of the arts by encouraging an understanding by architects of mural decoration, sculpture, ornament and craftsmanship. Further particulars can be obtained by applying to E. Dyonnet, secretary, Royal Canadian Academy, 255 Bleury Street, Montreal.

The following letter has been received by the Royal Canadian Academy of Arts:-

> Royal Institute of British Architects, Conduit Street, Hanover Square, London, W.1, 7th Dec., 1923.

The Secretary, Royal Canadian Academy of Arts, Montreal.

I read with great pleasure in the Times of the 6th December the announcement of the offer by the Royal Canadian Academy of Arts of a travelling scholarship for Architecture. I should be very much obliged if you will kindly send me, for the information of the Board of Architectural Education, fuller particulars

of this Scholarship.

Our advice and help in the matter of this scholarship are entirely at your disposal, and if you would care to give the travelling scholars appointed in the future, letters of introduction to me, I shall be delighted to help them in any way in my power. If they spend any of their time in England they will find the R.I.B.A. library of great use to them, and our Travelling and Sketching cards will be at their disposal. If they are travelling on the Continent, we shall be able to give them letters of introduction to our Honorary Members abroad and also our Continental

Travelling cards.

If they wish to spend any time at the School at Rome, we shall be able to help them materially there.

Yours very truly,

IAN MACALISTER, Secretary.

J. Cecil McDonald, architect, Montreal, has been appointed by the R.A.I.C. as their representative on the Canadian Engineering Standards Association's committee on Canadian electrical code.

The Royal Canadian Academy of Arts will elect architects as associates on the following conditions:

- 1. To have resided permanently in Canada for at least two years prior to his nomination;
- 2. To be an architect by profession;
- 3. To have exhibited at two annual exhibitions of the Royal
- 4. To be proposed and seconded by two academicians;
- 5. To receive a majority of two-thirds of the votes cast at the General Assembly;
- 6. To pay an annual subscription of \$5.00.
- E. Dyonnet, secretary R.C.A. 225 Bleury Street, Montreal.

Colborne P. Meredith, architect, Ottawa, has been appointed to represent the R.A.I.C. on the Canadian Social Hygiene Council which had its annual meeting at Ottawa on December 10th, 1923.

Reports on Activities of Provincial Associations

NOTE

Secretaries of Provincial Associations and Ontario Chapters will please be advised that all reports of their activities to be inserted in the next quarterly issue of the R. A. I. C. Journal must be mailed to the office of publication, 160 Richmond St. West, Toronto, not later than April 1st, 1924.

The Alberta Association of Architects

THE annual general meeting of this association was held on January 31st, 1924, in the Civic Building, Edmonton. The retiring president, Mr. Cecil S. Burgess, made the following report, which has been somewhat condensed for the purpose of this publication.

PRESIDENT'S REPORT—"In common with other institutions, we have been compelled to practice strict economy. All council meetings have been held in the office of Messrs. W. G. Blakey and E. Underwood, thus affecting considerable saving in rent. The thanks of the association are due to these gentlemen for affording us this convenience.

"In the course of the year one member of council, Mr. Frank Lansdown, retired owing to continued absence from the province. The vacancy was filled by the election of Mr. J. Martland.

"The following are some of the more important matters of business dealt with by council:—

"Two candidates applied for admission as members of the association. After consideration of their credentials both of these candidates were recommended to the Senate of the University as eligible for examination; one withdrew his application, the other sat the examinations in Calgary, but his papers failed to satisfy the examiners.

"The Provincial Legislature having suggested the discontinuation of the course in architecture at the University of Alberta on grounds of economy, the council presented a petition to the government appealing for a reconsideration of their position in the matter. This petition will be brought up for consideration at the present session of legislature by the University to whose board of governors a copy was forwarded.

"During the year letters of goodwill and greeting have been received from the retiring and from the newly elected president of the R.I.B.A. The minutes of the meetings of this association are now regularly forwarded to the Alberta Association.

"Reports of the general meetings of the R.A.I.C. are also being received and show signs of some activity. The project for the publication of the Journal of the Royal Architectural Insti-

TUTE of Canada is now well advanced and it is the intention to publish the first number as soon after January 1st, 1924, as it is found possible."

The president's report was very favorably received and Mr. J. Henderson referred to the able manner in which Mr. Burgess had conducted the affairs of the association during the past two years with untiring zeal and care.

Officers for 1924—The following officers were elected for the ensuing year: President, W. G. Blakey; first vice-president, G. Fordyce; second vice-president, J. M. Stevenson; honorary secretary, E. Underwood; honorary treasurer, R. P. Blakey; representative to the Senate of the University of Alberta, C. S. Burgess; honorary auditor, J. Martland; honorary librarian, A. M. Calderon.

PLACE OF NEXT ANNUAL MEETING—It was recommended that selection of the place of the next annual general meeting be left in the hands of council with a recommendation that it be held in Edmonton.

By-Laws—C. S. Burgess, as chairman of the committee on standardization of the R.A.I.C., introduced the question of obtaining greater coordination in the various by-laws affecting the province with a view to securing better conditions with regard to health, fire protection, structural stability, etc. It would be better to eventually aim at such regulations being dominion-wide, which he thought could best be done through the R.A.I.C. and the committee on standardization and suggested that they might approach the various provincial governments. The discussion of these matters aroused keen interest amongst the members.

J. Henderson expressed the opinion that the Association should take steps to advise the Provincial Government that it was interested in the study of provincial legislation regarding public health, housing, etc., and endeavour to enlist their support, and also that the secretary should refer to the subject in sending his report of the meeting to the press.

The Alberta Association of Architects

(continued)

It was moved and carried that this meeting instruct council to deal with the matter and suggested that a committee of not more than three members be appointed to consider the whole question, also, that if council see fit, to appoint a delegation to interview the Provincial Government.

LIEN LAWS—J. M. Stevenson asked that a committee be appointed to obtain information regarding the Mechanics' Lien Act, particularly as it affects architects and their clients.

LIBRARY—C. S. Burgess made a suggestion regarding the library of the association, that the books might be placed in the reference department

of the Edmonton public library so that they might be more accessible to members and others, also that as the association was receiving a regular issue of the R.I.B.A. Journal that these be kept and bound annually. After some discussion it was decided that council explore the methods to be adopted to put the library to the best possible use. J. M. Stevenson asked that when the matter came before council some consideration be given to the possibility of the Calgary members having some of the books.

Delegates to R.A.I.C—The President, Mr. W. G. Blakey and the 1st vice-president, Mr. G. Fordyce, were appointed delegates to the R.A.I.C.

The Manitoba Association of Architects

The annual meeting of the Manitoba Association of Architects was held in the architectural department of the University of Manitoba. The president, Mr. G. W. Northwood, opened the meeting by an address outlining the activities of the council during the past year and giving an encouraging outlook for the future. Mr. Jordan, president of the Royal Architectural Institute of Canada, told the members about the annual assembly in Montreal and spoke strongly in favor of general publicity, outlining a dominion-wide propaganda bringing the advantages of employing architects before the public. The association

decided to enter into a local advertising campaign in the newspapers during the coming year.

A scholarship was presented to the department of architecture, University of Manitoba, and one to the Winnipeg School of Art. It was also decided to hold an exhibition of architect's work in the fall, showing drawings of actual buildings recently erected, perspectives, elevations, sketches of proposed projects, water color and other drawings that would make an exhibition attractive to the public.

The following officers were elected for the ensuing year: D. A. Ross, president; J. Manuel, vice-

president; E. Fitz Munn, secretary.

Ontario Association of Architects

At the recent convention, held in Windsor, the following officers were elected for the current year: president, Stanley T. J. Fryer; first vice-president, Frederick C. Lee; second vice-president, Gilbert J. P. Jacques; registrar, L. Gordon Bridgman; honorary treasurer, Gordon M. West; councillors, C. J. Burritt, Gordon J. Hutton, J. P. Hynes, H. E. Moore; secretary, R. B. Wolsey, 96 King St. West, Toronto (Adelaide 3956).

The convention decided to press for a passage of the Architects Act at the next session of the

Legislature.

Council meetings of the O.A.A. have been held in the following cities on the dates mentioned: December 22nd, Toronto; January 19th, Ottawa; February 16th, Toronto. Other council meetings will take place as follows: March 15th, Hamilton; April 12th, Windsor; May 10th, Toronto. The next convention of the O.A.A. will be held in Toronto sometime during October. The council of the O.A.A. intends to take action

The council of the O.A.A. intends to take action along the lines suggested by the Ottawa chapter, which will, it is hoped, put a stop to the practise of civil servants in Ottawa doing work "on the side" and, in many cases, much below the proper

fees.

The department of colonization and development of the C.P.R. has written the O.A.A. for suggestions as to a plan by which their company could co-operate with the O.A.A. in bringing out and placing skilled help in drafting and the building trades generally. Any suggestions along this line can be forwarded to us, or direct to the chief commissioner, J. S. Dennis, Department of Colonization and Development, C.P.R., Montreal.

A ruling was asked from the council by a member who was having some difficulty in collecting fees for partial service. The job had been tendered and cost more than the original estimate made by the architect. The ruling was as follows:

"That a correct interpretation of the schedule of fees would be to base your commission upon the tendered cost of the work, provided this does not exceed the preliminary estimate by more than a 'reasonable' variation.

by more than a 'reasonable' variation.

"This 'reasonable variation has in some cases been decided by the Courts to be 10% either way, but it would of course be greater or less owing to varying circumstances over which the architect would have no control."

Our secretary has prepared a schedule showing the rates of fees which are recognized by the associa-

tion in the various provinces.

Efforts of the O.A.A. have been successful in securing the appointment of an architect as one of the assessors in the Wilfred Laurier memorial

competition.

The O.A.A. is asking the provincial secretary to make provision in the Municipal Act to regulate the erection of memorials in public places.

BORDER CITIES CHAPTER O.A.A.

At a meeting held at the Windsor Club on Wednesday, January 30th, Mr. Gilbert J. P. Jacques was elected chairman and Mr. A. J. Riddell, 350 Ouellette avenue, Windsor, secretary for the current year.

The meeting discussed a letter received from the Contracting Plasterers Association of Canada relative to the patching clause in the plastering specifications. While sympathizing with the plastering contractor in this matter the chapter could

not see its way to recommend a departure from their usual practice.

Further discussions arose out of the fact that a former member still displayed upon his office door the words "registered architect," but the secretary advised the meeting that the association's secretary had this matter in hand.

Our members are desirous of knowing the present status of the Architects' Bill, and as our council representative was without information the secretary is writing headquarters on the question.

HAMILTON CHAPTER, O.A.A.

The chapter was very fortunate in inducing John M. Lyle, of Toronto, to speak before the meeting on January 23rd. A dinner was held at 6.15 p.m. at the Royal Connaught hotel, and at 8.15 Mr. Lyle gave a very interesting and instructive lecture, taking for his subject "English Interior Decoration from the Adams to the Tudor Period," illustrated with slides. The public were invited to the lecture and the chapter was very

pleased at the turnout, about a hundred and fifty being present.

The meetings of the chapter, in the form of luncheons, have been held regularly during the season on every other Wednesday with occasional evening meetings. The attendance has been exceptionally good.

ceptionally good. Mr. G. T. Evans is chairman of the chapter, and

J. A. Robertson is secretary.

LONDON CHAPTER, O.A.A.

Mr. L. G. Bridgman, secretary of the London chapter, reports that a meeting of the members will be held in the very near future and an increase in enthusiasm and activity is confidently looked for. It is hoped that a more complete report of the activities of the chapter will be ready for the next issue of the JOURNAL.

Mr. John M. Moore is chairman of the London

chapter.

OTTAWA CHAPTER, O.A.A.

The Ottawa chapter of the Ontario Association of Architects unfortunately lost its stride during the years of the great war. The executive officers, having removed from the city, contributed largely to the inactivity which took place until the year 1923

Lieut.-Col. C. J. Burritt, taking the chair of the chapter that year, was able to resuscitate the interest amongst the members. The visit of the council of the association to Ottawa enabled long outstanding contentious points to be settled, which

action was considered necessary before the chapter could be operated on a satisfactory basis. It is anticipated that good constructive activities will now ensue.

As evidence of the influence of the new executive upon local conditions, it is to be noted that the Ottawa contractors have invited the chairman of the chapter to speak at their annual dinner, the subject chosen by Lieut.-Col. Burritt being that of "The Relationship Between Architect and Contractor."

Mr. B. Evan Parry is secretary of the chapter.

TORONTO CHAPTER, O.A.A.

At a meeting of the chapter held recently at the King Edward hotel, the following officers were elected for the ensuing year: Col. W. H. Moorhouse, chairman; A. H. Chapman, vice-chairman; I. Markus, secretary; MacKenzie Waters, treasurer; Jules F. Wegman, Gordon M. West, A. J. Everett, members of executive committee.

It was unanimously decided to send a letter of congratulation to Mr. E. J. Lennox, architect, on his appointment on the Toronto Transportation Commission.

Mr. A. H. Chapman and Mr. James Govan were appointed to represent the chapter on a special

committee formed by the Toronto Real Estate Board in the interests of town planning.

Two of the recent speakers at the chapter luncheons were Mr. E. R. Arthur, of the University of Toronto, and Mr. John Moyle Duncan, consulting engineer. Mr. Arthur outlined briefly some of the characteristics of recent architecture in London, England. Mr. Duncan spoke on "Some Recent Developments in Centralized Heating for Groups and Communities."

It is expected that Mr. Stanley T. J. Fryer, president of the O.A.A., will address the chapter shortly on the subject of competitions. Members of the Hamilton chapter have been invited to be present.

The Province of Quebec Association of Architects

The thirty-third annual meeting of the Province of Quebec Association of Architects was held on the 26th of January, 1924. The president, Mr. L. A. Auger, gave the following report:—

"The council has the honour to lay before its members the following summary record of a busy year. While a few of the aims with which it assumed its duties a year ago still remain unachieved, all have been advanced materially towards consummation, and numerous items of entirely new business have come before it, few of which have

not been disposed of.

"The attendance of the officers and council has been as follows, twelve council meetings having been held: L. E. Auger, 3 meetings; P. E. Nobbs, 12 meetings; Ernest Cormier, 7 meetings; E. Payette, 11 meetings; W. A. Gagnon, 7 meetings; J. S. Bergeron, 1 meeting; A. Beaugrand-Champagne, 12 meetings; Frank R. Foster, 11 meetings; J. Cecil McDougall, 9 meetings; Ramsay Traquair, 5 meetings; Philip J. Turner, 9 meetings. "In addition to the standing committees mentioned in the Year Book, some twenty sub-com-

"In addition to the standing committees mentioned in the Year Book, some twenty sub-committees were appointed and the committee work generally has been both prompt and thorough. Without the generous help of many outside the council, and notably of past officers of the association, the work herein recorded could not have

been accomplished."

Examinations and Memberships—During the year examinations were held in Montreal in January, and in Quebec in July. At the January examination the following were admitted to registration: O. A. Barwick, A. W. Caron, Gordon McL. Pitts, L. Deshaies. At the July examination, Emile Dumontier was admitted as student in architecture.

The following members were admitted to registration on their credentials from the Polytechnic School: Gustave Robitaille, Adrien Venne, J. Z. Gauthier; also Raphael Boilard, a member of the American Institute of Architects.

We regret to announce the death of the following members: G. E. Tanguay, M. Doran, Josephe Perrault, past presidents; Frank Darling, Edward Maxwell.

Code of Ethics—Early in the year the council took in hand the study of the code of ethics, and a general meeting was held on June 8th, 1923, at which the new by-law was put in force and the council instructed to revise the code of ethics in accordance therewith. The new by-law and the new code were circulated on October 5th, 1923.

The form of agreement and conditions of contract adopted some years ago by this association and the Builders' Exchange of Montreal, has been revised with the approval of both parties and was issued for sale to members at ten cents per copy.

was issued for sale to members at ten cents per copy.

Professional Practice—On the complaint of a member, legal action was taken against a certain party for illegal practice as architect and the decision was favourable to our association. Other cases were investigated and several problems of

this kind will require the attention of the incoming council.

Legislation—The council was honoured with a request to advise and assist the provincial public health authorities in the matter of the new by-law on buildings to come before the legislature at its present session, and it is satisfactory to record the friendly spirit in which the authorities met the views of our representatives. An opportunity was afforded in this connection to press upon the attention of the government the desirability of a town planning act for the province.

Montreal City By-Laws—At the last general meeting the council was urged to leave no stone unturned in pressing the promulgation of the new building by-law for Montreal which has been ready for promulgation since 1910. After a careful investigation of the situation it was decided to co-operate fully with the Civic Improvement League and other bodies by appointing delegates to a joint committee. Progress can be reported but the by laws are not vet issued.

but the by-laws are not yet issued.

Montreal Town Planning Commission—On April 26th, 1923, a strong representative delegation waited on the mayor of Montreal at the City Hall, Montreal, to urge the nomination of architects on the Civic Improvement League Commission. The past work of the association in studying the town planning problems of Montreal was reviewed. It is understood that two architects will serve on the commission.

ENTERTAINMENTS—On March 31st, a dinner was held at the Ritz Carlton hotel, Montreal, the first since the war. The drawings of the Chicago *Tribune* competition were on view. Mr. Egerton Swartwout, of New York, was guest of honour, and delivered an interesting address on competitions. The president and representatives of the Montreal Art Association were also guests and fifty-nine members of the association attended.

On the occasion of the Royal Architectural Institute of Canada meeting in Montreal in October, the association entertained the delegates from other provinces to lunch at the Arts Club, on October 10th, 1923, at which sixty were present. The association was also responsible for the arrangements made for the very successful dinner of the R.A.I.C. the same day, at which the provincial secretary, and representatives of the artistic educational institutions, including both universities, were present, the party numbering 106.

In addition to the above entertainments, a committee carried out the arrangements for the architects' section of the Arts and Crafts Exhibition, held in co-operation with the Canadian Handicrafts Guild, at the galleries of the Art Association of Montreal, from October 9th to October 31st. The opening took the form of a reception to the R.A.I.C. delegates then in the city. Work designed by architects of this province and executed by Canadian craftsman was shown by drawings, photographs, models and by actual objects, to the number of over 200. The craftsmen of the city, and the general public, took full advantage

The Province of Quebec Association of Architects

(Continued)

of the exhibition. The Committee responsible is to be congratulated on the success of its efforts.

YEAR BOOK-The Year Book was issued as usual but in a somewhat simpler form, the catalogue of the library being omitted.

LIBRARY-No additions were made to the library beyond the usual periodicals. It is felt that the extension and the use of the library are bound up with the questions of accommodation and attendance which are recommended to the attention of the incoming council.

ROOMS—The retiring council has given earnest study to the question of purchasing a house, and thoroughly investigated several desirable proper-ties, but was unable to find a solution in consonance with the resources of the association.

Scholarship was awarded, Mr. J. B. Soucy being the recipient. He made measured drawings of the ancient church of St. Etienne de Beaumont, dating from 1733. The collection of measured drawings is now assuming considerable dimensions, but publication should still be deferred for two or three years. A circular was issued calling attention to the numerous scholarships available for students in this province. The advantage of these opportunities does not appear to be realized by the students. The Royal Canadian Academy scholarship in architecture (value \$1,500) has been announced. The council recommends that the

P.Q.A.A. scholarship be made available again this coming year.

THE R.A.I.C.—The delegates of this association to the R.A.I.C. have taken an active part in its On the occasion of the annual meeting of the R.A.I.C. in Montreal in October, serious modifications of the by-laws were discussed, at the instance of your council and your representa-tives in the central body. These are now in complete form and submitted to the provincial bodies. Your council has given its approval. The intention of these changes is to secure greater economy and efficiency enabling a reduction to be made in the per capita contribution from \$5.00 to \$3.00, a relief for this association of \$360.00. In the discussion of these matters, ample opportunity arose to define the proper limits and scope of the activities of the central body.

Competitions—Members have been advised to abstain from two competitions instituted without professional assessors, until such time as this requirement of the association had been met. In the case of the Ste. Madeleine Church Outremont competition, the promoters readily accepted the advice and good offices of the council, and an assessor was appointed. In the case of the Laurier monument, the department of public works has accepted the advice of our council and assessors will be named by the presidents, Royal Canadian Academy and Royal Architectural Institute of

SASKATCHEWAN ASSOCIATION OF ARCHITECTS

The secretary, Mr. Francis B. Reilly, reports that at a general meeting of the association, which was held at Regina on February 12th, it was decided to revise the by-laws and code after a general

canvass of the situation was made.

Special committees were appointed to draft reports to be presented at the meeting to be held in October.

Members of the Profession are asked to co-operate with the Institute in the publication of this Journal by giving every possible consideration to the advertisers.

"Specific information and accurate data is what I want"

S O speaks a leading Canadian architect depreciating the character of the advertising with which most offices of the profession are besieged.

We believe he is speaking for architects as a whole and we would remind you that OTIS-FENSOM is organized to supply data and information on vertical transportation which will enable the architect to intelligently plan his elevator plant to suit the requirements of his building, giving consideration to the nature of the tenancy, the building population, the transportation period and the interval suitable to the needs of the occupants.

Our standard layouts giving clearances and load diagrams furnish valuable information, essential even in the architect's preliminary studies.

We would consider it a privilege to have you use this data.



Specialists in Vertical Transportation

OTIS-FENSOM ELEVATOR COMPANY

LIMITED

HEAD OFFICE - 170 BAY STREET TORONTO

COOKSVILLE BRICK For Durability and Economy

THE dignity and grace of Brick is only equalled by its charm, and owing to the convenience of size, it has a flexibility in relation to design which surpasses all other building materials



There is a Cooksville Brick for Every Purpose



COOKSVILLE SHALE BRICK COMPANY

LIMITED

GENERAL & SALES OFFICES: Crown Office Building 26 Queen St. E., Toronto *Main 4265



The New Building of the T. Eaton Company, Limited, Toronto
Architects: Sproatt and Rolph Plastering Contractor: A. D. Grant

Greening Trussed Wire Lath was used throughout this building, one of the largest structures in Canada

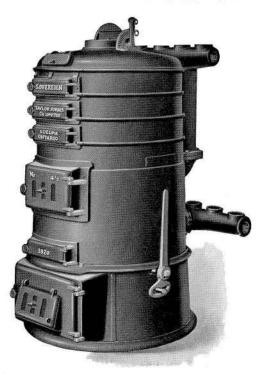
The B. Greening Wire Company

HAMILTON

ONTARIO

SOVEREIGN BOILERS

FOR STEAM AND WATER



Sovereign Hot Water Boiler



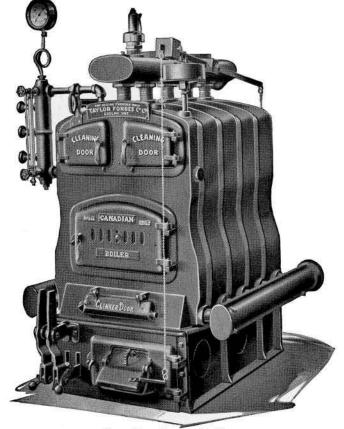
Adanac Laundry Heater



Improved Giant Tank Heater



Fireside Tank Heater



Canadian Steam Boiler

MANUFACTURED BY

TAYLOR-FORBES COMPANY LIMITED

GUELPH

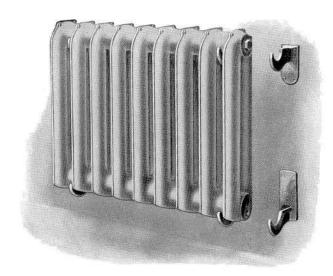
TORONTO

MONTREAL

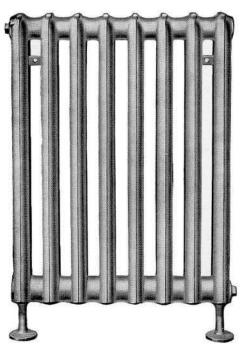
VANCOUVER

SOVEREIGN RADIATORS

FOR STEAM AND WATER

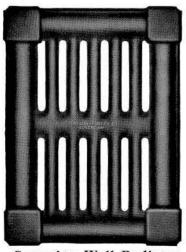


Sovereign Legless Hospital Radiator



Sovereign Pedestal Leg Hospital Radiator





Sovereign Wall Radiator

MANUFACTURED BY

TAYLOR-FORBES COMPANY LIMITED

GUELPH

TORONTO

MONTREAL

VANCOUVER



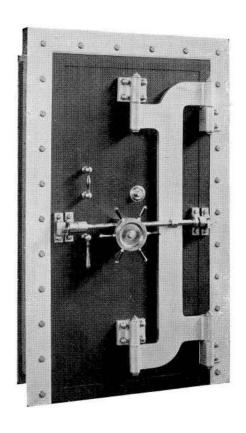
A CANADIAN product, superior to any Enamel, either domestic or imported.

Whiter, more elastic and more durable. Supplied in High Gloss and Egg Shell White-also Ivory and Gray.

Refer to your Referendex File for Canada Paint Company catalogue containing full specifications.



J. & J. Taylor Limited



VAULT DOOR No. 72 B

THIS door illustrated is designed to offer an unusually handsome and substantial vault entrance at comparatively low cost.

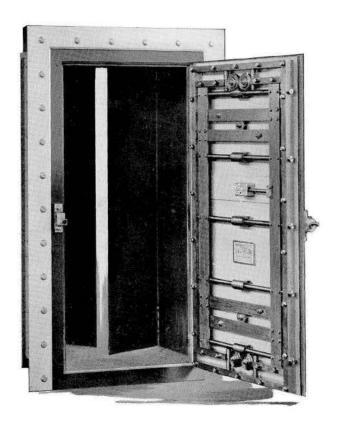
The general appearance is enhanced by the frame being widened with an architrave.

Day gate and plate glass door over bolt-work can be added.

As designers and manufacturers of safes, vault doors, etc., we will gladly co-operate in an advisory capacity or in compiling specifications.

We manufacture—

Safes
Vault doors and vault linings
Steel cabinets
Deposit Boxes
Jail Cells
Steel grilles and gates
Window shutters and grilles.
Steel vault shelving, steel cupboards, etc.



J. & J. Taylor Limited, Toronto

Branches:

MONTREAL

WINNIPEG

VANCOUVER



Architects Stevens & Lee Toronto Consulting Engineer: H. H. Angus Toronto

Plumbing and Healing Contractors:
The Garth Company
Montreal

MAIN BUILDING

New Notre Dame Hospital

MONTREAL

Equipped with Jenkins Valves

Day and night, every minute of the twenty-four hours, the valves in hospital equipment must be ready to serve—100% efficient—without risk of failure or breakdown.

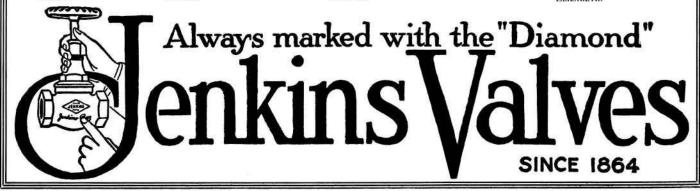
The Notre Dame Hospital shown above is thus equipped. For Jenkins Diamond Marked Valves are here installed by men who fully realize the part that good valves play in the matter of efficient hospital service.

Striking proof indeed of Jenkins Valve de-pendability.

If you would see how complete the Jenkins line is, and wish to read in detail about the many types and sizes, including the justly popular Jenkins Radiator Valves, write for free catalog—No. 9.

JENKINS BROS., Limited

Head Office
and Works: 103 St. Remi St., Montreal.
Sales Offices: - Toronto—Vancouvean.
European Branch: London, W.C.2, England.
Factories: - Montreal, Bridgeport,
Elizabeth.



The Canadian Bridge Co., Limited

WALKERVILLE, ONT. Main Office and Works

Designers, Manufacturers and

Railway and Highway Bridges Locomotive Turntables and Train Sheds Office Buildings and Manufacturing Plants Crane Girders and Runways, Coal and Ore Handling Bridges Grain Elevators, Storage Bins and Conveyor Bridges Tank and Plate Work, of all kinds Blast Furnaces, Ore Bins, Coal Bins Lock Gates, Regulating Gates, and Penstocks Plain Structural Material furnished from stock.

An adequate engineering staff is prepared to advise and to co-operate with prospective clients by furnishing specifications, designs, estimates, reports and tenders.

> Special Attention Given to the Design and Manufacture of ELECTRICAL TRANSMISSION TOWERS

> > Sales Offices:

New Birks Building, MONTREAL, P.Q.

907 Union Trust Building, WINNIPEG, MAN. EDMONTON, ALTA.

Efficient Oil Burning is an Accomplished Fact

FESS OIL BURNERS

OF CANADA, LIMITED

FUEL OIL ENGINEERS

THE PIONEERS IN CANADA

The important factors in successful fuel oil burning are correct installation and suitable equipment of high efficiency.

Our experience over a period of many years and our large variety of equipment to meet all conditions ensure both the above factors being properly taken care of in all our installations.

We would like to discuss your heating and power propositions with you.

Hundreds of installations in successful operation for many years.

Head Office and Works: TORONTO 47 King Street West

AGENCIES IN ALL LARGE CITIES Branch Office:
MONTREAL
323 Beaver Hall Hill

MARBLE AND CUT STONE

We are specializing in High Grade Imported Marbles for interior work, and carry in Blocks the following Stock:

WHITE ITALIAN
PINK TENNESSEE
BLACK AND GOLD
BOTTICINO

NAPOLEAN GREY ITALIAN TRAVERTINE BLUE BELGE TAVERNELLE

VERDE ANTIQUE

Enquiries solicited for all Marble and Cut Stone requirements

GEO. OAKLEY & SON, LIMITED

Office and Stone Plant: 278 Booth Avenue

Marble Mill: 355 Logan Avenue

Gerrard 2248

TORONTO Gerrard 4815

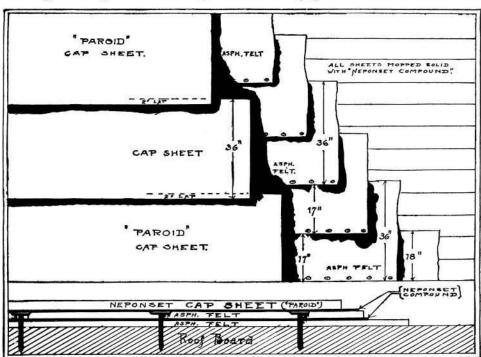
IMPORTERS OF EVERY GRADE OF MARBLE

BIRD'S ROOFS

The short list below mentions a few well-known buildings protected by Bird's Built-up Roofs. These buildings testify to the high regard in which Bird's Built-up Roofs are held by engineers, architects and large property owners.

Ford Motor Co. of Canada—Ford, Ont	344,000	sq. ft.
Toronto Transportation Commission, Car Barns, Toronto.	266,800	***
Match Co. Ltd.—Berthierville, Que	240,000	"
Dominion Sugar Co. Ltd.—Chatham, Ont		"
British American Nickel Corp.—Deschenes, Que		"
Can. Westinghouse Co.—Hamilton, Ont		66
Dominion Foundries & Steel—Hamilton, Ont	100,000	"
Ford Assembling Plant—Toronto, Ont		"

For application over wood sheathing, concrete or tile. Bird's Built-Up Specification Roof is adaptable for all flat roofs and used extensively on factory, warehouse and public buildings. The Paroid cap sheet eliminates the need of gravel or slag, so there is nothing to weigh the building down or clog gutters and drains.



STANDARD SPECIFICATION FOR APPLICATION OVER WOOD SHEATHING.

EXTRA HEAVY SPECIFICATION FOR APPLICATION OVER WOOD SHEATHING.

STANDARD OR EXTRA HEAVY SPECIFICATION FOR APPLICATION OVER CONCRETE OR TILE.—Add 1 gallon Bird's Asphalt Priming Paint and extra layer Bird's Asphalt Compound to each square.

BIRD & SON, LIMITED

Head Office: Hamilton, Ont.

Factories at Hamilton, Ontario, and Pont Rouge, Quebec.



GYPSUM BOARD AND PLASTER

In place of wood lath and Plaster—More Efficient in every way—Economically and quickly erected, forming partitions Fireproof, Soundproof and of high insulative value.

If your files do not contain complete information regarding the various uses and specifications of Gypsum products drop us a card.

Ontario Gypsum Co.

Head Office: Paris, Ontario

MINES AND MILLS:

CALEDONIA, ONT.

LYTHMORE, ONT.

BRANCH OFFICES:

MONTREAL - 10 CATHCART ST.
TORONTO - 106 DON ESPLANADE
WINDSOR - 30 LA BELLE BLDG.

AGENTS for Simplex Steel Products

What You Should Know About

LIME

Perhaps there is no other material which plays so important a part in our building and construction activities as lime. That is why we have had a specially illustrated booklet prepared, and as it contains so much information of great value to builders and contractors who use it, as well as architects and engineers who specify it, we want to place a copy in the hands of everyone who is interested.

The labor costs on any construction work can be materially reduced by the use of HYDRATED LIME. Delivered in convenient packages of uniform size, it is ready for instant use, no slaking or ageing being necessary.

We have brands specially adapted for brick mortar, for waterproofing concrete, for whitewashing, and especially for white putty coating. Star, Velvet, Crown, Alabaster, National and White Rock Brands are recommended for white coat plastering. Our Beaver Brand Mason's Hydrated Lime is unexcelled for bricklaying, brown coat plastering and concrete waterproofing.

Just tear out this advertisement, put you name and address in the margin and mail it to us. We will send your copy by the next mail.

THE ALABASTINE CO.,

HEAD OFFICE - PARIS, ONT.

Plants at Elora and Teeswater, Ont.



REG. U.S. PAT. OFF.



The new Colonial Hotel, Nassau, Bahama Islands Kenneth Murchison, Architect Purdy & Henderson, Construction Engineers

PROTECTION INSURES PERMANENT STRUCTURES

There is no one material which can be made to serve for every purpose of protection. The various materials required are so different in texture and are used under such different conditions that they cannot be protected by one paint or compound. Architects and Engineers, therefore turn to—

R.I.W. PROTECTIVE PRODUCTS

—among which they find a scientific paint compound, varnish or enamel for each different purpose of protection. Each is specially designed to waterproof, dampproof, acid-proof, harden, penetrate, decorate or preserve under actual service conditions.

Write Dept. N for information on the proper "R.I.W." Protective Product to employ for either ordinary or extraordinary purposes.

CANADIAN AGENTS:

ALEXANDER BREMNER, LTD., 100 Bleury Street, Montreal, Que. CANADIAN EQUIPMENT & SUPPLY COMPANY, Calgary, Alta., Canada

Drummond & Reeves, Ltd., 43 Jarvis Street, Toronto, Ont., Canada.

A. H. Bruneau, 111 Cote de la Montague, Quebec, Canada.

N. G. Dehaas, 651 Queen St., Sault Ste. Marie, Ont., Can.

Gandy & Allison, North Wharf, St. John, N.B., Canada. Western Paint Co.,

121 Charlotte St., Winnipeg, Manitoba, Can.

"R.I.W." DAMP RESISTING PAINT CO., Limited

ESTABLISHED 1848

och

Incorporated 1922

TECHNICAL AND SCIENTIFIC PAINT AND VARNISH MAKERS

110 EAST 42nd STREET, NEW YORK Works: Long Island City, N.Y.

Notice to Sculptors, Architects and Artists

The Government of Canada propose erecting in the Parliament Grounds at Ottawa a monument to the memory of the late Sir Wilfrid Laurier.

Parties are invited to submit designs in the form of sketch models in plaster

made at a uniform scale of one and a half inches to the foot.

The design must take the form of a portrait statue.

The competition is open to architects, artists or sculptors throughout the world. The Minister of Public Works, however, reserves the right other things being equal to give preference to architects, artists or sculptors of British birth resident in the British Empire or elsewhere.

The author of the best design who is awarded first place, will be given the commission of the work, and the author of the second best will be awarded a prize of One

Thousand Dollars (\$1,000.00).

The memorial including pedestal above the level of the ground, when completed and in position, is not to cost more than Twenty Five Thousand Dollars, (\$25,000.00).

The designs must be addressed to and received by Mr. Eric Brown, Director of

National Art Gallery of Canada, Victoria Museum, Ottawa, Canada, not later than the 2nd day of April, 1924.

Copies of the conditions, etc., and photographs may be obtained on application at the office of the Secretary of the Department of Public Works, Room 784, Hunter Building, Ottawa.

Parties who intend to compete should notify, at once, the undersigned of their

intention to do so.

By Order, L. H. GOLMAN, Secretary.

Department of Public Works, Canada, Ottawa, October 24, 1923.

WE wish to take this opportunity to thank the advertisers and advertising agencies for their co-operation in furnishing us with copy for this first issue of the Journal promptly upon request. The next quarterly issue, April to June, will be published in April and advertisers and agencies are respectfully requested to have all copy in not later than April 1st.

List of Advertisers

ALABASTINE COMPANY, LIMITED.	Parisxxv
Bird & Son, Limited	Hamiltonxxiv
CANADA CEMENT Co., LIMITED	Montrealii
Canada Paint Co., Limited	Montrealxx
CANADIAN BRIDGE CO., LIMITED	
Conduits Co., Limited	TorontoBack Cover
COOKSVILLE SHALE BRICK Co., LIMITED	Torontoxvi
Crane Limited	Montrealiii
FAIRFACTS COMPANY, INC.	New Yorkx
Fess Oil Burners of Canada, Limited	Toronto
B. Greening Wire Co., Limited	Hamiltonxvii
HOBBS MANUFACTURING CO., LIMITED	London Inside Back Cover
INTERLOCKING TILE Co., LIMITED	Torontovii
JENKINS BROS., LIMITED.	Montreal xxii
JOHNSTON SERVICE COMPANY	Milwaukeeıx
Lord & Burnham Co., Limited	Toronto Inside Front Cove
MUSKOKA WOOD MANUFACTURING Co., LIMITED	Huntsville
NATIONAL FIREPROOFING CO. OF CANADA LIMITED.	Torontoi
G. Oakley & Son, Limited	I oronto
ONTARIO GYPSUM Co., LIMITED	Parisxxv
A. B. Ormsby Co., Limited.	Torontoxi
OTIS FENSOM ELEVATOR Co., LIMITED.	Torontoxv
RICHARD WILCOX CANADA Co., LIMITED	Londonvi
STANDARD SANITARY Co., LIMITED	Torontoxiv
TAYLOR FORBES CO., LIMITED	Guelphxviii, xix
J. & J. Taylor Limited	
Toch Brothers	New Yorkxxv
TRUSSED CONCRETE STEEL CO. OF CANADA LIMITED	
TUTTLE & BAILEY MANUFACTURING CO. OF CANADA LIMITED	

——GLASS—— FOR BUILDING PURPOSES

Be Sure and Specify

HOBBS GLASS

Our Quality is Right. Deliveries can be made promptly from any of our four warehouses to any part of Canada

WE STOCK OR MANUFACTURE:

Hobbs Libbey Owens Flat Drawn Window Glass

Polished Plate Glass

Figured Obscure Glass

Leaded Art Glass

Memorial Windows

Bevel Plate Glass

Plain and Bevel Plate Mirrors

Framed Mirrors

Sidewalk Prism

Thorne Holdfast Metal Bars for Storefronts

ASK FOR OUR CATALOGS AND DESCRIPTIVE LITERATURE

The Hobbs Manufacturing Co. Limited

LONDON TORONTO

TORONTO MONTREAL

WINNIPEG



GLASS



CONDUITS

FOR

INTERIOR CONSTRUCTION

"GALVADUCT"



"LORICATED"