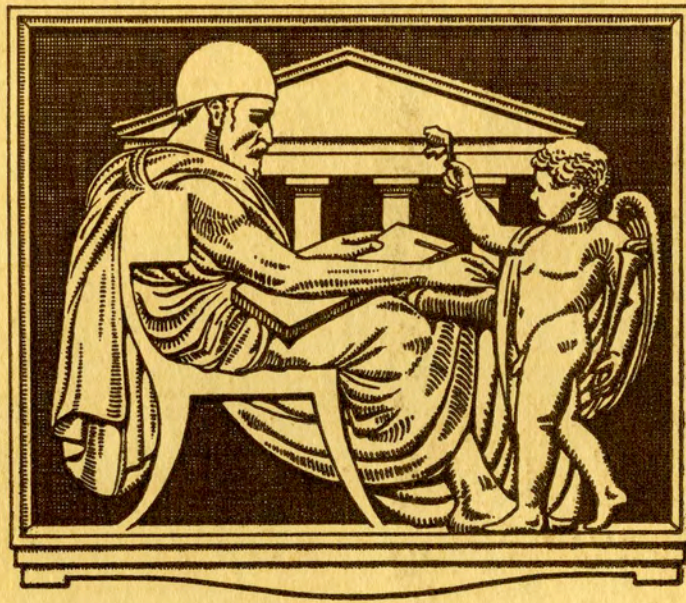


# THE JOURNAL

## ROYAL ARCHITECTURAL INSTITUTE OF CANADA



SEPTEMBER  
1929

VOL VI • No. 9

TORONTO • CANADA

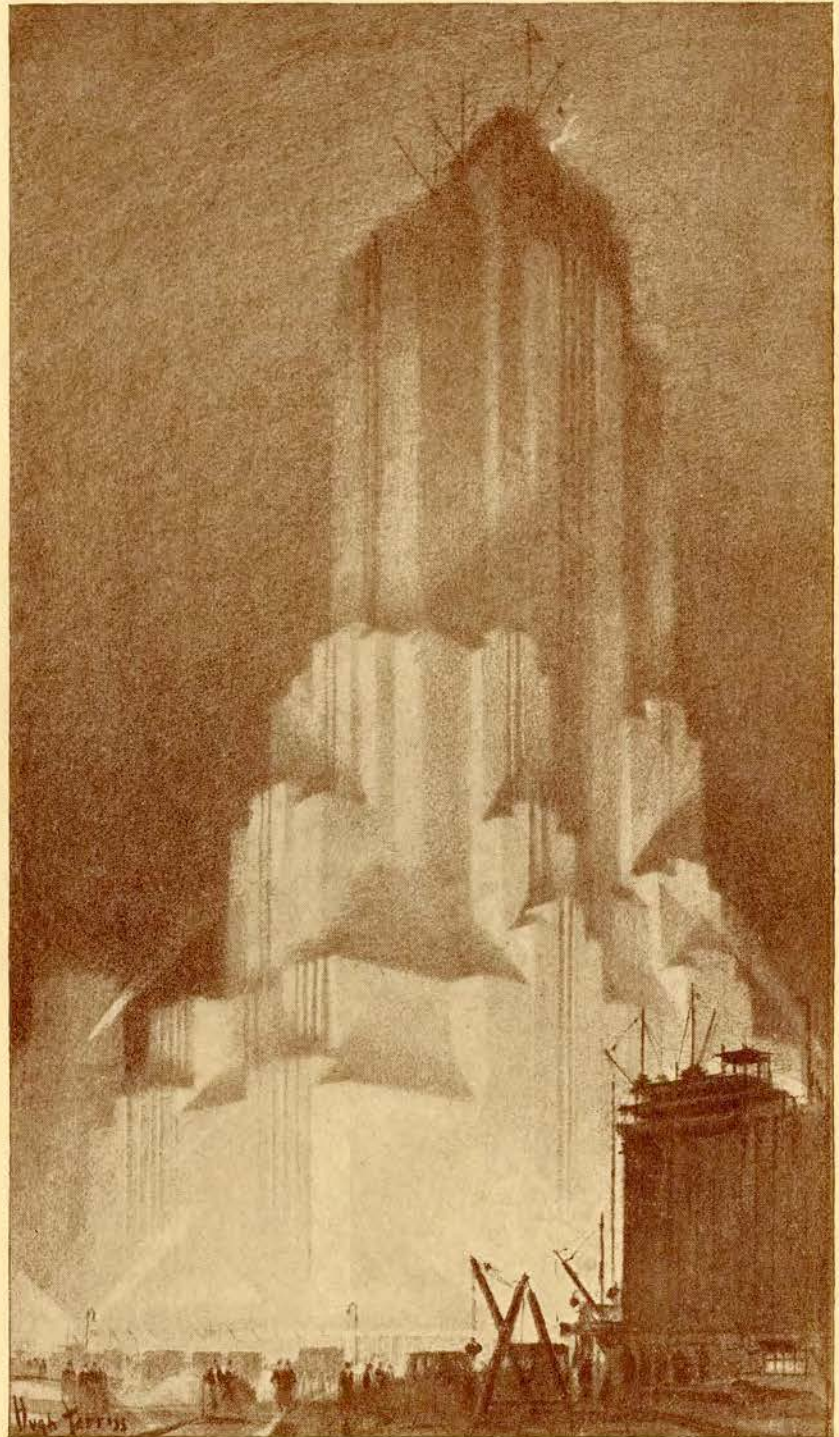


## ACRES IN THE AIR

Who hasn't marveled at the progress of a skyscraper? Planted on precious ground, it must grow quickly . . . swiftly bear the fruit of profits. Floor on floor it climbs, spreading acres from street to street. How can it rise so fast . . . reach up so high . . . *safely?* . . . with *Steel!*

Structural steel comes to a building site ready to go into place . . . ready for immediate action . . . ready to speed the building process with perfect adaptability and efficient fitness. Freezing . . . intense heat . . . rain cannot impair the strength of steel or hinder its erection. Here is the one building material that *always* can be depended upon to do its duty any time, anywhere . . . in small apartment houses and dwellings as well as in huge skyscrapers and bridges.

A Technical Service Bureau is at the disposal of architects, engineers, owners and others who have need of any information which can be supplied through the American Institute of Steel Construction, Inc.



*A reproduction of this rendering by Hugh Ferriss, suitable for framing, will be mailed free of cost to any architect*

## AMERICAN INSTITUTE OF STEEL CONSTRUCTION, INC.

The co-operative non-profit service organization of the structural steel industry of the United States and Canada. Correspondence is invited. 200 Madison Avenue, New York City. District offices in New York, Worcester, Philadelphia, Birmingham, Cleveland, Chicago, Milwaukee, St. Louis, Topeka, Dallas and San Francisco. The Institute publishes twelve booklets,

**STEEL**  
**INSURES STRENGTH**  
**AND SECURITY**

one on practically every type of steel structure, and provides also in one volume, "The Standard Specification for Structural Steel for Buildings," "The Standard Specification for Fire-proofing Structural Steel Buildings," and "The Code of Standard Practice." Any or all of these may be had without charge, simply by addressing the Institute at any of its offices.



STAR BUILDING  
Toronto

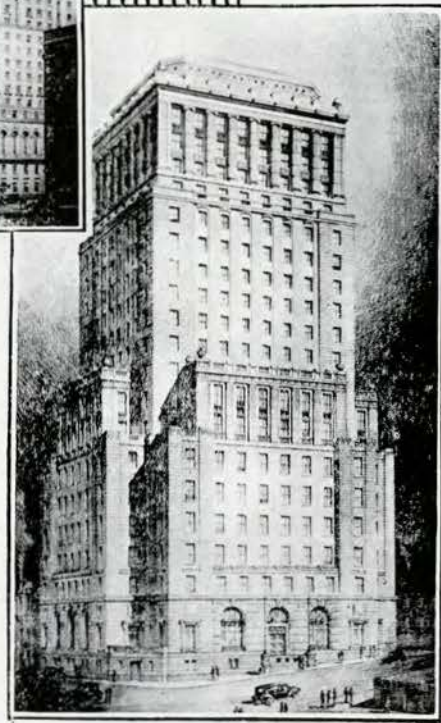
*Chapman & Oxley, Architects  
Thompson Starret Co.  
General Contractors*



ROYAL YORK HOTEL  
Toronto

*Ross & Macdonald—Sproatt & Rolph  
Associated Architects  
Anglin-Norcross Limited, Gen. Contractors*

# “From Pit to Penthouse”



BELL TELEPHONE BUILDING  
Montreal

*Barott & Blackader, Architects  
George A. Fuller Co., General Contractors*

EVERY detail of our elevator equipment is manufactured in our own plant. Motors, controllers, car cabs, signals, hollow metal elevator entrances, and other essential accessories are all designed and constructed to operate with each other at maximum efficiency.

This is to the distinct advantage of the owner of the building because of the undivided responsibility in which Otis-Fensom guarantees each part for satisfactory operation.

**OTIS-FENSOM ELEVATOR COMPANY LIMITED**

HAMILTON

ONTARIO

*Offices in all principal cities*

# The New MANOIR RICHELIEU



Built for Permanence  
 . . . and Fire-Safety  
 with CONCRETE

This magnificent new hotel at Murray Bay on the Lower St. Lawrence is an architectural gem in the old French chateau style . . . built for permanence with "Canada" Cement concrete.

It is a notable example of the adaptability of this modern material to period design.

Fire-safe and permanent . . . an impressive structure in every way . . . the new Manoir Richelieu ably upholds the traditions of Canada's Newport.

We maintain a Service Department to co-operate with you in all lines of work for which concrete is adapted. Our library is comprehensive and is at your disposal at all times without charge. Write us.

**CANADA CEMENT  
 CONCRETE  
 FOR PERMANENCE**



*Always specify "Canada" Cement. It is uniformly reliable. "Canada" Cement can be secured from over 2,000 dealers in nearly every city, town and village in Canada. If you cannot locate a convenient dealer, write our nearest sales office.*

**CANADA CEMENT COMPANY LIMITED**

CANADA CEMENT COMPANY BUILDING,  
 PHILLIPS SQUARE - MONTREAL

Sales Offices at — MONTREAL TORONTO WINNIPEG CALGARY



*Armstrong's Corkboard applied to the walls of M. J. Schubert's residence, Pierre, S. D.*

## *Armstrong's Corkboard* "The Best Investment" for "Perfect Comfort"

THE experience of Mr. M. J. Schubert with his cork-lined home in Pierre, S. D., affords convincing proof of the effectiveness of Armstrong's Corkboard in extremely cold weather. Mr. Schubert built his home in 1926, insulating the walls with 2,200 square feet of Armstrong's Corkboard 1½ inches thick and the second-floor ceilings with 1,500 square feet, 2 inches thick. His letter, after he had lived in his house more than two years, reflects the enthusiasm invariably displayed by clients of architects who specify Armstrong's Corkboard. The letter follows:

"We have never been as warm in winter and as cool in summer as we have been since living in this house. Perfect comfort at all times. Do not notice the wind at all. The last two months have been a good test, as we have had some severe cold weather. The Armstrong's Corkboard Insulation is the best investment anybody could make when building a house. Wouldn't build one without using it—knowing what I do about it."

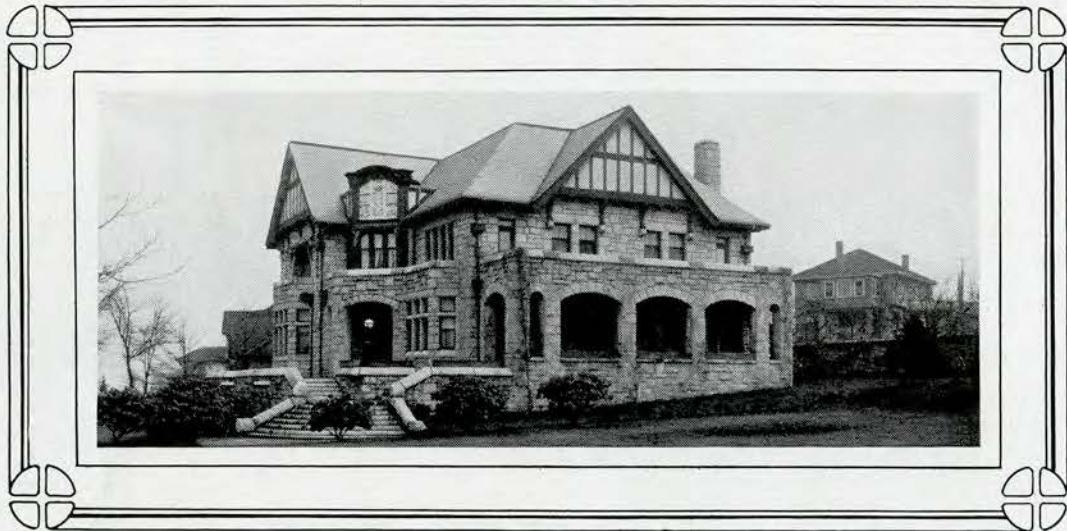
In specifying insulation for residence work, the proper thickness is of paramount importance. For best results, that is, for the maximum of comfort and saving of fuel per dollar invested in insulation, 1½ inches of Armstrong's Corkboard is recommended for the wall and 2 inches for the ceiling or roof.

If you do not have the Armstrong Catalog for Architects in your files, send for it at once. Armstrong Cork & Insulation Company, Limited, McGill Bldg., Montreal; 11 Brant Street, Toronto 2. Confederation Life Bldg., Winnipeg.

# Armstrong's Corkboard Insulation

*A Heatproof Lining for Walls and Roof*

# There's a FRIGIDAIRE for every home or apartment you design



**N**OT the least of Frigidaire's outstanding qualities is its exceptional versatility. Frigidaire cabinets and the Frigidaire cooling mechanism are made with a view to meeting the requirements of every conceivable kitchen design. No matter what the plan of the house or apartment kitchen, or whether it is large or small, there is a Frigidaire model which fits in perfectly to become an integral part of it. And in fact the inclusion of Frigidaire in your plans as a selling aid actually makes your kitchen planning easier. You need not consider the iceman's visit in placing the refrigerator. All your thought can be put to saving the housewife the most steps and giving her the maximum kitchen space.

As to Frigidaire's ability to please and serve your purchaser or tenant well—take the word of Frigidaire owners. "My Frigidaire is certainly proving all the claims made for it," says Mr. James Rae of Vancouver, B. C. "It is not only a great pleasure and convenience for us to be rid of the muss and fuss of daily icing, but I have also found the cost of operation to be surprisingly low." Hundreds of such letters are in our files.

Information that every architect and builder should have is contained in a book "Frigidaire Information for Architects and Builders", which we would like to send you free. Signing and mailing the coupon will bring it to you.

Frigidaire Corporation  
Dept. 9, Sterling Tower, Toronto 2, Ont.  
Please send me your free book "Frigidaire Information for Architects and Builders."  
Name.....  
Address.....

Frigidaire Corporation, Toronto, Ontario

# FRIGIDAIRE

PRODUCT OF GENERAL MOTORS

# WORKMANSHIP...



Fig. 300



ONLY the painstaking, thorough workmanship applied to the manufacture of every genuine Jenkins Valve could possibly assure the high standard of quality for which Jenkins Valves have been famous since 1864. . . .

*Made at Montreal*



Always marked with the "Diamond"

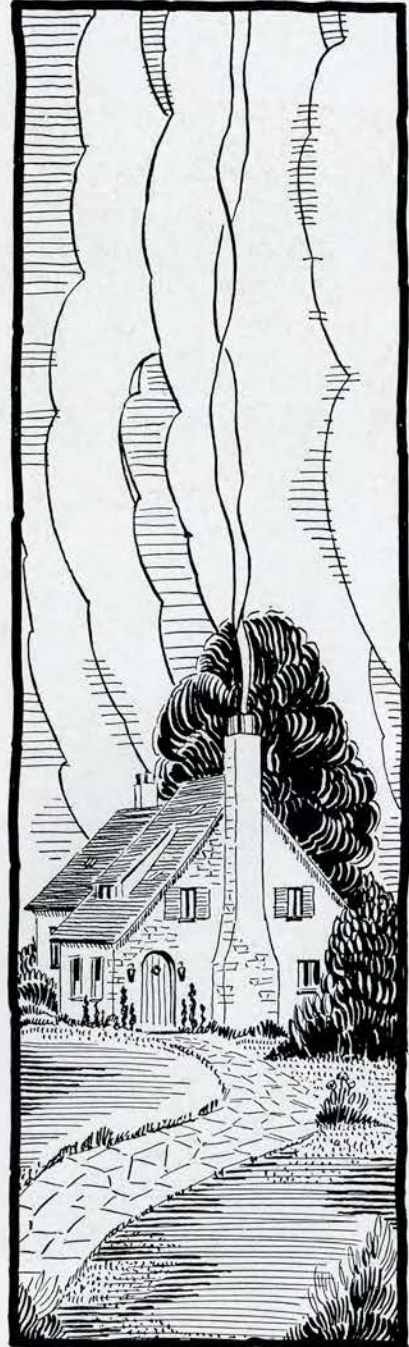
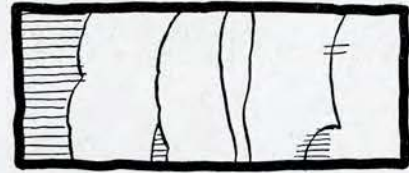
# Jenkins Valves

SINCE 1864

# MAKE THE MATERIAL FIT THE DESIGN!

**A**FTER THE PLANS have been submitted and approved, after the client has accepted them—stop and think whether the facing you have specified is the best for that particular type of home. It's important, this matter of facing—many an otherwise acceptable house has suffered through failure to consider the question carefully.

We want to sell you ASHTONE—but we *don't* want you to use ASHTONE in a home which demands another facing. In the right style of home ASHTONE looks better and wears better than anything else, but it is not adapted to all homes. Neither is any other material. Play safe; design the home that will look well with ASHTONE, specify ASHTONE and get the best stone facing produced. Then you have a house which is a credit to you and a delight to your client.



## BLOOMINGTON LIMESTONE COMPANY

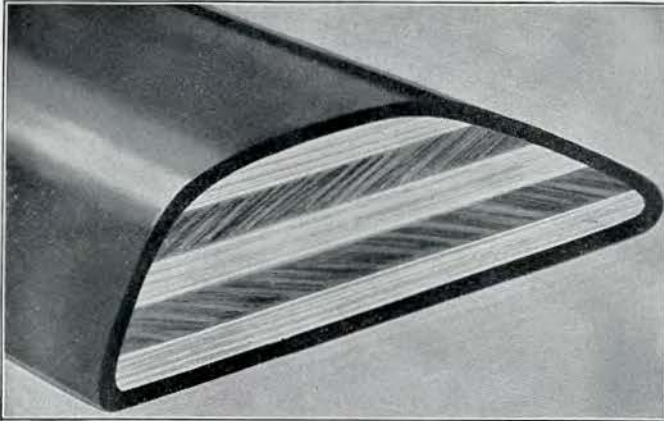
Bloomington-Indiana

DETROIT KANSAS CITY CINCINNATI CHICAGO NEW YORK TORONTO



# *Non-shatterable Glass . . . and Whale-Bone-ite use same source of Strength . . .*

## **LAMINATED CONSTRUCTION**



*Note the Laminated Construction—a core of alternating-grain layers of hardwood—sealed and bonded to the whole by Whale-bone-ite. It is warp-proof and is guaranteed against warping, cracking and splitting.*

Many automobile accidents that might not have been serious except for flying glass led to the development of stronger, LAMINATED, non-shatterable glass.

The excessive cost of replacing toilet seats smashed by the slam-bang abuse of the careless public led to the development of indestructible Whale-bone-ite LAMINATED construction—the only construction that can be guaranteed for the life of the building—the only construction that immediately ends all replacement expense.

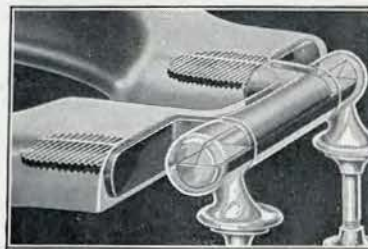
We and others have tried to make toilet seats as strong, as light and as sanitary by other methods. But it can't be done. Only laminated construction can give the abuse-defying strength of Whale-bone-ite—the careless abuse that every public toilet seat receives. Fourteen years and a million Whale-bone-ites in use have proved it. Today, nearly all seats going into public toilets are of laminated construction.

Whale-bone-ite Seats are found quite generally in the guest bathrooms of fine hotels as well as in public institutions where service requirements are severe. Many new apartment houses are equipping all toilets with them.

*Send for free cross-section  
—see its strength yourself*

Figures show that on the average ordinary seats have to be replaced about every three years. If you want to end this needless expense, just as it already has been ended in more than a million public toilets in modern

and remodelled buildings, simply install Whale-bone-ite Seats as fast as other seats wear out. Not only will the replacement expense end, but the toilets will be cleaner as Whale-bone-ite is easier to keep clean. Without obligation send for a free Whale-bone-ite cross-section. Simply address Dept. E-7, Seat Division, The Brunswick-Balke-Collender Co., 408 Bond Building, Toronto, Ont.



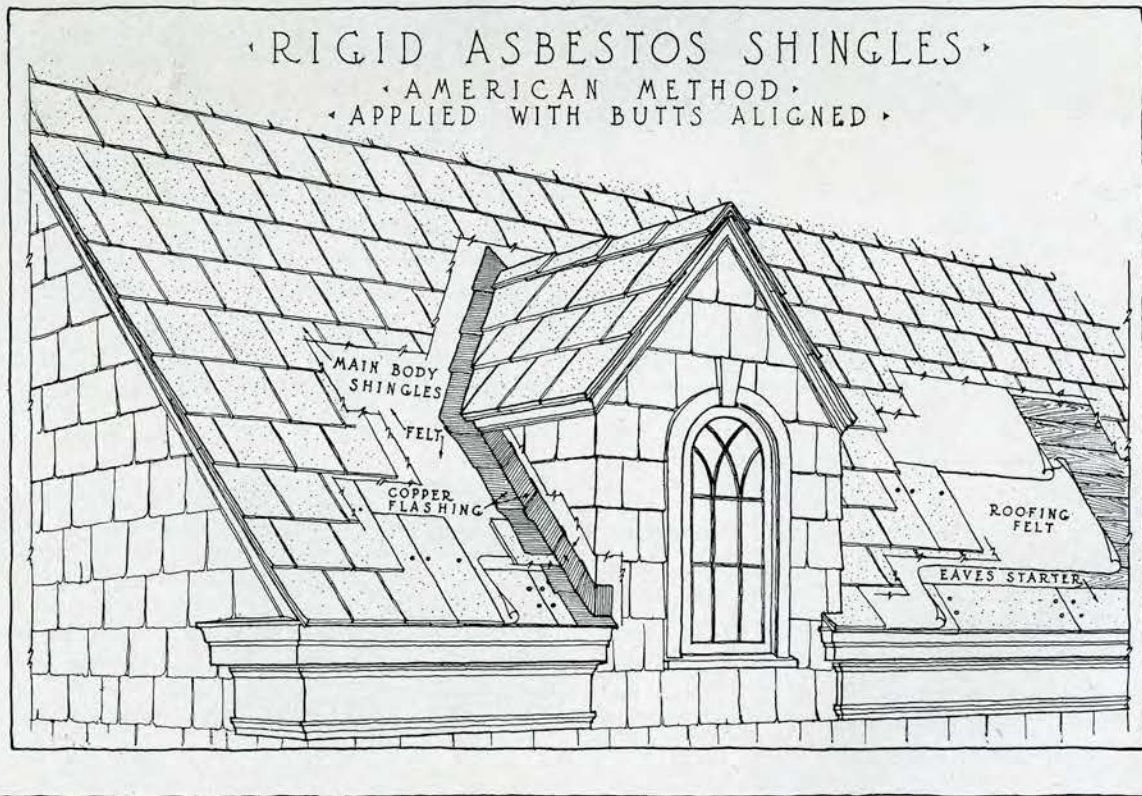
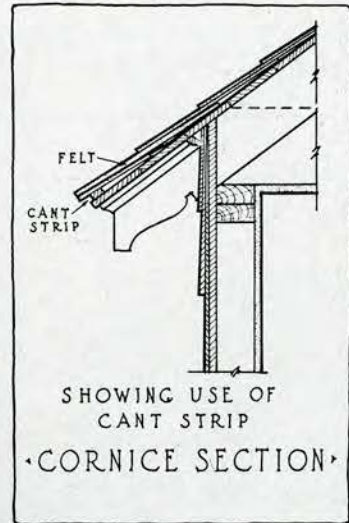
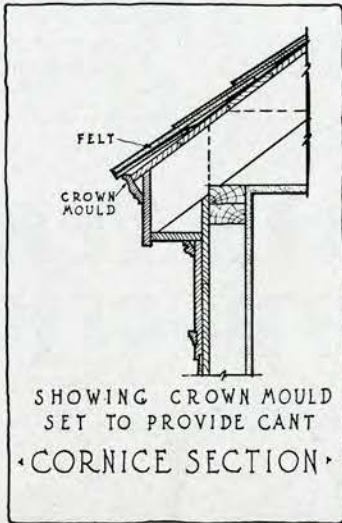
*THE Whale-bone-ite steel hinge is moulded integral with the Seat forming an unbreakable unit. Covered with Whale-bone-ite, the hinge is as handsome as the Seat. It cannot tarnish. It is easy to clean.*

## *Brunswick* **WHALE-BONE-ITE TOILET SEATS**

THE BRUNSWICK-BALKE-COLLENDER CO.  
408 Bond Building, Toronto, Ont.

OTTAWA

MONTREAL



ACOUSTICAL TREATMENT  
RIGID ASBESTOS SHINGLES  
ASPHALT SHINGLES  
BUILT-UP & READY-TO-LAY ROOFING

**Canadian Johns-Manville Co., Limited**  
MASTER OF ASBESTOS  
*Asbestos Mines and Factory: Asbestos, Quebec*  
*Sales Offices: Montreal, Toronto, Winnipeg, Vancouver*

TRANSITE-FLAT & CORRUGATED  
INSULATIONS AGAINST HEAT & COLD  
COMPOSITION FLOORING  
WATERPROOFING & DAMPPROOFING

• NEW YORK • CLEVELAND • CHICAGO • SAN FRANCISCO • TORONTO •  
• ARCHITECTURAL SERIES • PLATE N° 1



## *Guarding the Wealth in the Business World*

**T**HE above is a picture of our Toronto Central Station, one of seven maintained and operated by this Company in the larger Cities of Canada to protect business property from fire and theft.

We are proud of these Central Stations, and invite Architects and others interested to visit one of them and see for themselves the modern facilities for recording burglar alarms, fire alarms and probably most wonderful of all, see the signals come in from plants equipped with our Sprinkler Supervisory Service. These instruments indicate exactly what is wrong at the protected building.

You will find at these offices a staff of experienced men, ready at all times to look after the subscribers' interests and respond to any alarm.

Dominion Protective Services include—

*Bank Vault Burglar Alarms*  
*Mercantile Burglar Alarms*  
*Sprinkler Supervisory Service*  
*Watchman Supervisory and Manual Fire Alarm*  
*Watchman Compulsory Tour*  
*Hold-up Alarms*

If you cannot visit us and see for yourself one of these Central Stations, we will gladly send you a booklet on request concerning any of our systems and the service we render.

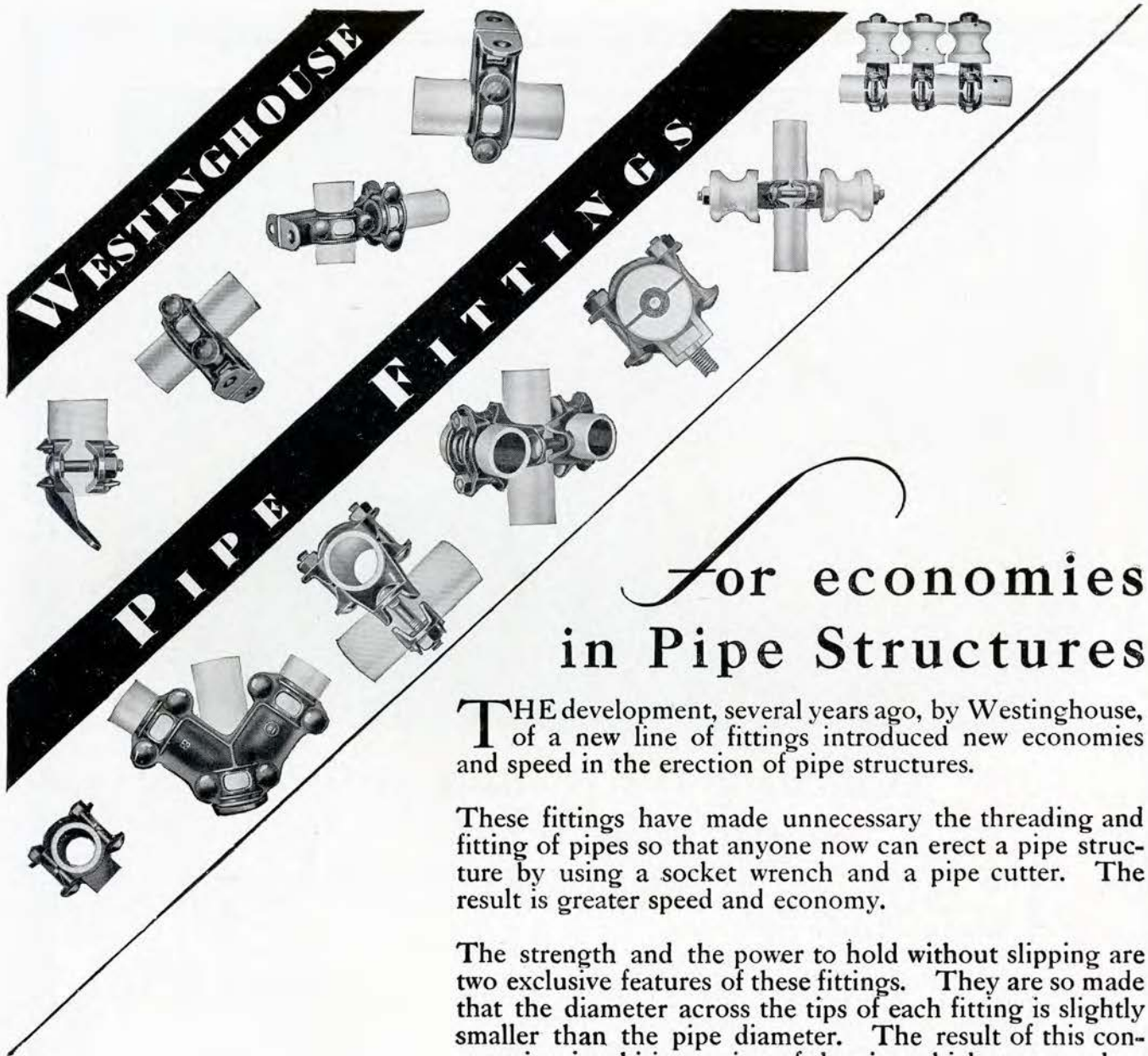
### **DOMINION ELECTRIC PROTECTION COMPANY**

HEAD OFFICE: TORONTO, ONT.

CENTRAL STATIONS:

Toronto, Montreal, Quebec, Ottawa, Hamilton, London, Winnipeg





## For economies in Pipe Structures

THE development, several years ago, by Westinghouse, of a new line of fittings introduced new economies and speed in the erection of pipe structures.

These fittings have made unnecessary the threading and fitting of pipes so that anyone now can erect a pipe structure by using a socket wrench and a pipe cutter. The result is greater speed and economy.

The strength and the power to hold without slipping are two exclusive features of these fittings. They are so made that the diameter across the tips of each fitting is slightly smaller than the pipe diameter. The result of this construction is a biting action of the tips which occurs when clamping bolts pull the fitting into place. Holding power, far superior to any other type of fittings, is thereby obtained. The ribbed construction of each fitting gives reserve strength to withstand severe strains.

No—you don't have to carry a large stock of these fittings to fill your needs. A stock of only 30 fittings will give more than 10,000 combinations.

Canadian Westinghouse Company, Limited

General Offices—Hamilton, Ontario

Sales Offices and Repair Shops in all Principal Cities



# Westinghouse

2913

### Other

#### Switchboard Devices

Bus-bar supports  
Adjustable inserts  
Carbon circuit-breakers  
Oil circuit-breakers  
Steel panels  
Indicating lamps  
Disconnecting switches  
Rotary switches



ASHEVILLE HIGH SCHOOL  
Asheville, North Carolina  
Group of 5 buildings completely  
equipped with Johnson Control.

Douglas D. Ellington, Architect  
Pickard & Company,  
Heating Contractors

## ASHEVILLE HIGH SCHOOL ANOTHER JOHNSON EXAMPLE

The group of five buildings of Asheville High School are completely equipped with Johnson Temperature Control. Remote Electro-Pneumatic control of steam shut-off valves and vent dampers from the school's Power Plant is also used.

This is another example of the recognized value of automatic heat

control, and the preference given The Johnson System.

The Johnson System applies to every form, plan and system of heating and ventilating. Write now for the interesting Johnson literature.

JOHNSON TEMPERATURE REGULATING CO.  
of Canada, Limited

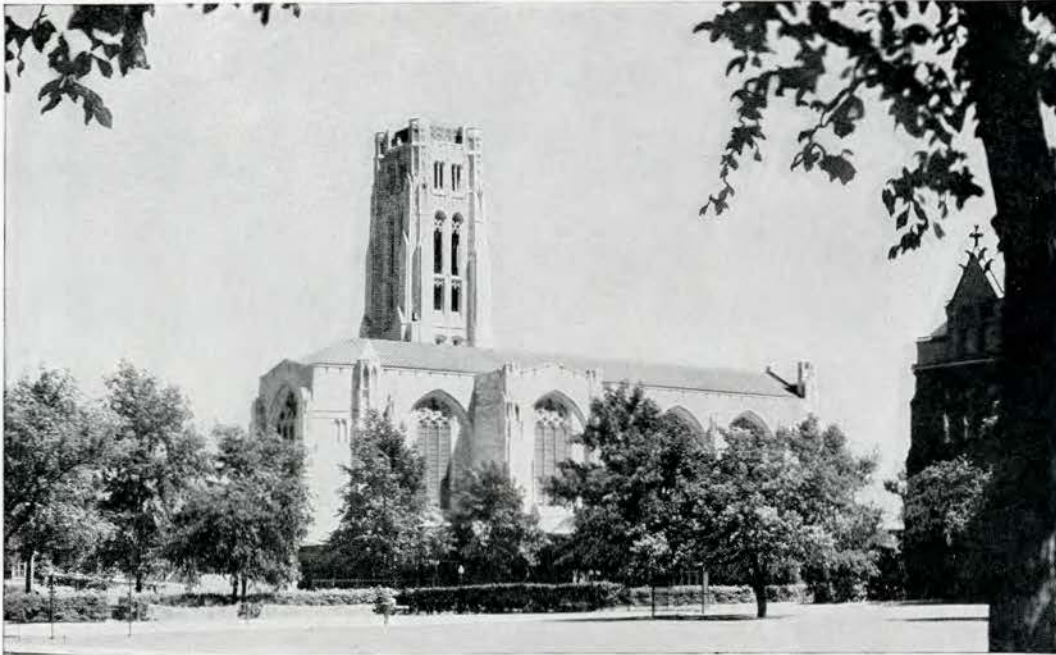
100 Adelaide Street East, Toronto  
Also at Montreal, Winnipeg, Calgary and Vancouver

# JOHNSON HEAT and HUMIDITY CONTROL

The All Metal System: The All Perfect Graduated Control Of Valves & Dampers. The Dual Thermostat (Night and Day) Regulation: Fuel Saving 25 to 40 Per Cent.

## TUTTLE & BAILEY AGAIN SOLVE A PROBLEM

*this time with Ferrocraft Cast Grilles*



**A** GAIN TUTTLE & BAILEY have come to the aid of the architect. Bertram Grosvenor Goodhue, Associates, of New York, were faced with the problem of concealing the recessed radiators in the Chapel of the University of Chicago. In Ferrocraft Cast Grilles they found the solution. Architects have come to rely on Tuttle & Bailey for the solu-



tion of problems of how to hide radiators. Where recessed radiators are involved T&B offer a profusion of designs in Ferrocraft Cast Grilles of iron and bronze. And they have available for the uncovered radiator a wide variety of radiator cabinets, technically correct in designs and construction and finished for inclusion with fine furnishings.

## TUTTLE & BAILEY MFG. CO.

OF CANADA, LIMITED

Headquarters for all kinds of Registers and Grilles  
for Heating and Ventilating

Bridgeburg, Ontario

WINNIPEG  
259 Stanley Street

TORONTO  
58 Wellington St. E.

MONTREAL  
1070 Bleury St.

ENGLAND  
London, E.C.

§ -- NEW ARTISTRY IN -- §  
**RADIATOR CONCEALMENT**

Narowetz Heating & Ventilating Co., Chicago, Contractors

Bertram Grosvenor Goodhue, Associates, of New York, Architects

# Decorated with Walpamur



## Arcadian Court

*in the new building of  
The Robert Simpson Co.  
Toronto*

*Architects: Chapman and Oxley  
Toronto*

## Look at that Ceiling!

**I**T IS decorated with Walpamur, the famous flat finish, applied with an ordinary kalsomine brush, on sand finished plaster.

The effect is obtained by a judicious combination of two of the 54 shades of Walpamur, No. 18 Cream and No. 27 Buff, with an overglaze of aluminum.

The soft light diffusing effect of the ceiling decoration, enhances the lofty spaciousness of this magnificent room.

The Decorating department of the Robert Simpson Company selected Walpamur for its economy, permanence, and ease of application, and carried out the entire scheme of decoration themselves.

### WALPAMUR PRODUCTS

- WALPAMUR  
The popular flat wall finish
- MUROMATTE  
Flat oil paint
- DURADIO  
Enamel paint
- MIRABOL  
The supreme English enamel
- YEOMAN  
English varnishes
- TWO LEOPARDS  
Pure white lead

### WALPAMUR DISTRIBUTORS

- EMPIRE WALL PAPERS  
LIMITED  
Montreal Toronto Winnipeg
- STEWART & WOOD  
Toronto
- GARVIN HARDWARE CO  
LIMITED  
Hamilton
- THE WESTERN PAINT CO.  
LIMITED  
Winnipeg

*The*  
**Walpamur Co.**  
**Limited**

Montreal Toronto Halifax  
Factory - Darwen, England

# COMFORT



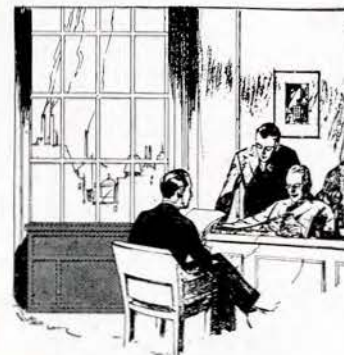
...without conspicuous  
steam connections

Broadway Savings Bank, Lawrence, Mass.  
Architect : James E. Allan, Lawrence.  
Heating & Ventilating Contractors: Bride,  
Grimes Co., Lawrence.

Unit Heater-Ventilators fitted in well with the requirements of the Broadway Savings Bank at Lawrence, Mass. The Units were specially finished to match mahogany woodwork . . . and all steam connections were enclosed within the cabinets. They present a particularly pleasing appearance — thoroughly in keeping with the dignity of the institution.

Sturtevant Unit Heater-Ventilators are designed to draw in — from out-of-doors — controlled quantities of air; filter it clean, warm it to desired temperature and admit it to a room, noiselessly, safely,—without the hint of a draft. The temperature-controlling mechanism is simple and trustworthy . . . it may be entirely automatic or each unit may be manually operated if desired.

If you would be interested in a collection of pictures showing the application of Sturtevant Unit Heater-Ventilators to buildings, old and new, it will be a pleasure for our nearest Branch Office to send you our new Catalog No. 361.



**B. F. STURTEVANT COMPANY**  
OF CANADA, LIMITED

Works in Galt, Ontario

MONTREAL—553 New Birks Bldg.; Phone Lancaster 7965 . . . . . WINNIPEG—  
Kipp Kelly, Limited, 68 Higgins Ave. . . . . TORONTO—1010 Lumsden Building;  
Phone ELgin 5643 . . . . . EDMONTON—Empire Engineering & Supply Company



**Sturtevant** *the Silent* Unit Heater-Ventilator  
TRADE MARK  
SUPPLIES OUTDOOR AIR ~ FILTERED CLEAN ~ AND TEMPERED





# BONDED

## Modern Builders Demand Bonded Plaster Walls

**E**XPERIENCE is teaching thousands of plasterers the advantages of Gyproc Lath over old-fashioned lath. Gyproc Lath and plaster make a solid bonded wall—stronger, more economical and faster to apply than any other material on the market. Use Gyproc Lath on your next job and note the difference. It reduces to a minimum the chance of plaster falling or cracking because it bonds so perfectly. Gyproc Lath is also fireproof and non-buckling. Comes in compact, easy-to-handle bundles of convenient wood lath lengths, each bundle protected to eliminate breakage. Gyproc Lath is 16" x 48" and of a uniform thickness of  $\frac{3}{8}$  of an inch.

Write for information or see your dealer in builders' supplies.

### PLASTIC PARISTONE

is the last word in Hardwall Plaster. It spreads with great ease, dries out quicker and goes further. Sets in a few hours with many times the density and hardness of Lime Mortar. A standard specification of leading architects.

### STAR HYDRATED LIME

is the favorite of modern plasterers for many reasons. It is 99½% pure. Its whiteness and plasticity enable you to trowel Star Lime to a smooth white wall. Uniformity of color and quality insures perfect results.

## CANADA GYPSUM and ALABASTINE, Limited

PARIS

CANADA

Montreal Office  
901 Confederation Bldg.  
Telephone LANcaster 2420

Toronto Office  
701 Federal Bldg.  
Telephone ADelaide 4262-3

VANCOUVER

WINNIPEG

WINDSOR

# GYPROC LATH

BUNDLED GYPSUM LATH

# Will There Be

Red

or

Rusty

WATER

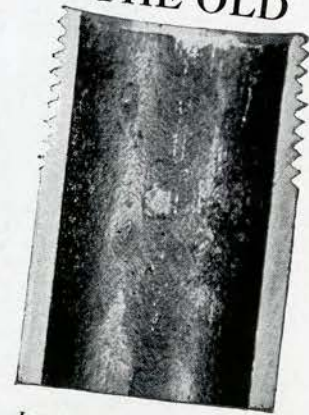
?

THE NEW



Interior view of pipe cut through the Scale Free Process

THE OLD



Interior view of pipe made by the ordinary Butt Weld Process

## It Depends on the Pipe you Specify

By the Pioneer  
Makers of Pipe  
in Canada



Red, rusty water is caused in ordinary butt weld pipe by water seeping round and under loose welding scale or by particles of scale settling at low points in the line and corroding. By using "Stelco" Pipe which has been made "scale free" the cause is eliminated—the trouble avoided.

You can eliminate red, rusty water—gain full delivery capacity—minimize corrosive condition—speed up installation—secure tight joints by specifying "Stelco" scale free pipe for all plumbing installations under your supervision.



SCALE FREE

COLD STRAIGHTENED

IMPROVED COUPLINGS

# P I P E

## THE STEEL COMPANY OF CANADA, LIMITED

HAMILTON - EXECUTIVE OFFICES - MONTREAL

SALES OFFICES: HALIFAX, ST. JOHN, MONTREAL, TORONTO, HAMILTON, WINNIPEG, VANCOUVER  
WORKS: HAMILTON, MONTREAL, TORONTO, BRANTFORD, LONDON, CANANOUZ



MATHERS & HALDENBY  
*Registered Architects*

RESIDENCE OF THE HONOURABLE VINCENT MASSEY  
Canton, Ontario

THOS. GARNET & SONS  
PORT HOPE  
*Mason Contractors*

## JOHN PRICE STOCK BRICK USED

*The Standard of Quality for  
Over Fifty Years*

---

*Manufactured at one of the five plants of the*

# Toronto Brick Company Limited

Head Office: 897 Bay Street

Phone: Kingsdale 1186

*Plants:* DANFORTH, SWANSEA, MILTON, COBOCONK

JOHN PRICE, Greenwood Avenue, Toronto



## Chosen for BEAUTY, ENDURANCE and Lighting Qualities

**T**OWERING above its neighbours, the Terminal Building, on Craig Street, is another striking addition to Montreal's fine office buildings. Conveying an impression of strength and endurance, it was but natural an enduring finish was chosen for the interior decoration of this building. Mill White Paint was used, not only for its permanence, but for its beauty and especially because of its superior lighting qualities. An additional reason was the ease with which it can be cleaned.



DUCO is a registered trade name.  
Only one Canadian Company can  
legally make DUCO.

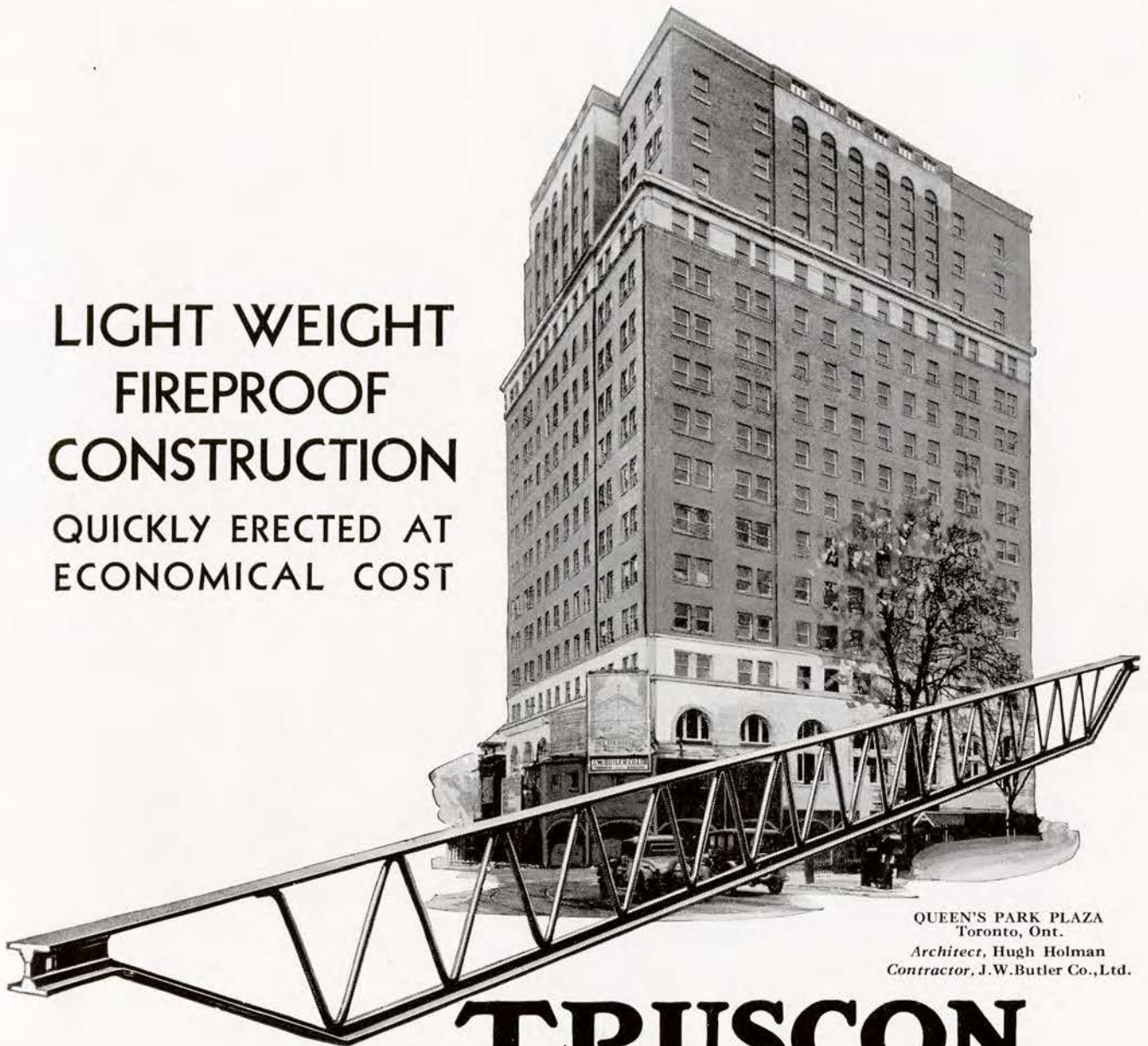
Only articles finished in Flint  
DUCO can legally be described as  
"DUCO FINISH."

### CANADIAN INDUSTRIES LIMITED FLINT PAINT AND VARNISH DIVISION


*Factories: Toronto, Regina.*

*Branches: Halifax, Montreal, Winnipeg, Calgary, Vancouver.*

**LIGHT WEIGHT  
FIREPROOF  
CONSTRUCTION  
QUICKLY ERECTED AT  
ECONOMICAL COST**



QUEEN'S PARK PLAZA  
Toronto, Ont.  
Architect, Hugh Holman  
Contractor, J.W. Butler Co., Ltd.

**TRUSCON**  
  
**OPEN TRUSS (O-T)**  
**STEEL JOISTS**  
**MADE IN CANADA**

As no centering is required with Truscon Steel Joist construction, several floors can be installed at one time and erection proceeds rapidly. Its light weight effects savings in the supporting structural work and foundations. The superior design and workmanship of Truscon Open Truss (O-T) Steel Joists assure great strength, rigidity and accuracy. The open web permits passage of conduits in any direction through the floor.

*We will gladly furnish literature and quotations*

**TRUSCON STEEL COMPANY OF CANADA, LIMITED, WALKERVILLE, ONTARIO**  
*Branch Offices in Montreal, Toronto, Winnipeg, Regina, Calgary, Vancouver and Halifax*

# THE ROYAL ARCHITECTURAL INSTITUTE OF CANADA

1410 STANLEY STREET - MONTREAL, QUE.

FOUNDED 19th AUGUST, 1907

INCORPORATED BY THE DOMINION PARLIAMENT 16th JUNE, 1908, 1st APRIL, 1912, and 14th JUNE, 1929

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; THE MARITIME ASSOCIATION OF ARCHITECTS

---

## OFFICERS 1929

PRESIDENT.....PERCY E. NOBBS.....14 PHILLIPS SQUARE, MONTREAL  
FIRST VICE-PRESIDENT.....EDWARD UNDERWOOD.....21 UNION BUILDING, EDMONTON  
SECOND VICE-PRESIDENT.....ANDREW L. MERCER.....827 BIRKS BUILDING, VANCOUVER  
HONORARY SECRETARY.....ALCIDE CHAUSSE.....30 ST. JAMES STREET WEST, MONTREAL  
HONORARY TREASURER.....GORDON M. WEST.....43 VICTORIA STREET, TORONTO

EXECUTIVE SECRETARY, I. MARKUS, 160 RICHMOND STREET WEST, TORONTO

## COUNCIL 1929

REPRESENTING THE ALBERTA ASSOCIATION OF ARCHITECTS.....A. M. CALDERON AND EDWARD UNDERWOOD  
REPRESENTING THE MANITOBA ASSOCIATION OF ARCHITECTS.....J. HAWKER, J. H. G. RUSSELL AND E. PARKINSON  
REPRESENTING THE ONTARIO ASSOCIATION OF ARCHITECTS.....J. H. CRAIG, J. P. HYNES, MURRAY BROWN,  
E. L. HORWOOD, H. E. MOORE AND GORDON M. WEST  
REPRESENTING THE PROVINCE OF QUEBEC ASSOCIATION OF ARCHITECTS.....ALCIDE CHAUSSE, EUGENE PAYETTE,  
PHILIP J. TURNER, ERNEST CORMIER, J. O. MARCHAND, W. S. MAXWELL AND P. E. NOBBS  
REPRESENTING THE SASKATCHEWAN ASSOCIATION OF ARCHITECTS.....M. W. SHARON AND F. P. MARTIN  
REPRESENTING THE ARCHITECTURAL INSTITUTE OF BRITISH COLUMBIA.....S. M. EVELEIGH, ANDREW L. MERCER  
AND J. J. HONEYMAN  
REPRESENTING THE MARITIME ASSOCIATION OF ARCHITECTS.....RENE A. FRECHET AND H. CLAIRE MOTT

---

REPRESENTATIVES OF THE R.A.I.C. ON THE COUNCIL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS  
PROFESSOR CHARLES HERBERT REILLY, O.B.E., M.A., Cantab., F.R.I.B.A. (*Liverpool*), *England*  
PERCY E. NOBBS, F.R.I.B.A., *Montreal*

REPRESENTATIVES OF THE R.A.I.C. ON THE ALLIED SOCIETIES' CONFERENCE (R.I.B.A.)  
J. P. HYNES, *Past President, R.A.I.C.* PERCY E. NOBBS, *President, R.A.I.C.*  
SEPTIMUS WARWICK, F.R.I.B.A., *London, England*

---

## EXECUTIVE COMMITTEE

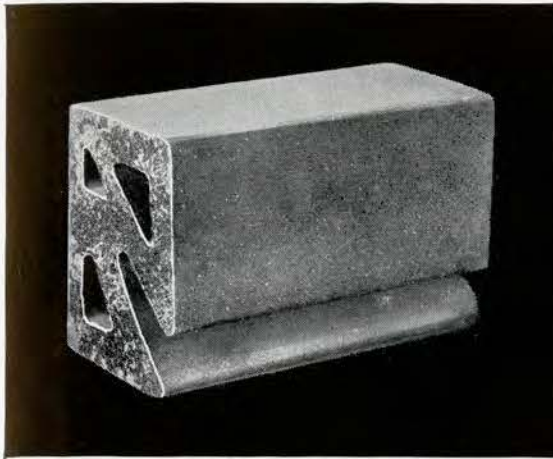
PERCY E. NOBBS, *President*; ALCIDE CHAUSSE, *Honorary Secretary*; GORDON M. WEST, *Honorary Treasurer*; EUGENE PAYETTE, PHILIP J. TURNER, ERNEST CORMIER, J. O. MARCHAND, W. S. MAXWELL AND I. MARKUS, *Executive Secretary*

---

## PAST PRESIDENTS

\*A. F. DUNLOP, *Montreal*. . . . .1907-08, 1908-09, 1909-10 \*F. S. BAKER, *Toronto*. . . . .1910-11, 1911-12  
J. H. G. RUSSELL, *Winnipeg*.1912-13, 1913-14, 1914-15 J. P. OUELLET, *Quebec*. . . . .1915-16, 1916-17, 1917-18  
A. FRANK WICKSON, *Toronto*. . . . .1918-19, 1919-20 DAVID R. BROWN, *Montreal*. . . . .1920-21, 1921-22  
LEWIS H. JORDAN, *Winnipeg*. . . . .1922-23, 1923-24 JOHN S. ARCHIBALD, *Montreal*. . . . .1924-25, 1925  
\*Deceased J. P. HYNES, *Toronto* . . . . .1926, 1927, 1928

# BONDED FLASHINGS



*Announced by*

The  
*Barrett*  
Company  
LIMITED

FOR many years The Barrett Company, Ltd., has devoted itself conscientiously to the task of assisting architects and engineers with their roofing problems. It has now taken important forward steps in extending and perfecting its roofing service.

1. Barrett Flashings, constructed according to Barrett Specification and used in conjunction with Barrett Specification Bonded Roofs, will now be bonded for the same period as the roof itself is bonded. The Barrett Specification provides definite construction features and the use of Barrett Flashing Blocks for brick walls or Barrett Flashing Forms in concrete parapets.

2. The Barrett Company, Ltd., will also guarantee for 10 years Barrett Flashings constructed without Barrett Flashing Forms or Blocks, but built according to definite Barrett Specifications and used in conjunction with Barrett Specification Bonded Roofs.

Barrett Bonded Flashings to match the famous Barrett Specification Bonded Roofs are in line with the established thoroughness of Barrett's complete roofing service. They are bonded against repair and maintenance expense for 20 or 10 years and—like the Barrett Specification Roof—they are built to outlast by many years the liberal provisions of the bond. Now, more than ever, a Barrett Specification Roof on your building is a roof off your mind.

Architects, construction engineers, roofers and building owners everywhere are invited to write us for details and complete specifications.

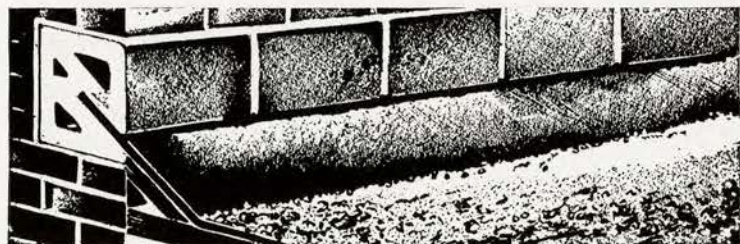
The *Barrett* Company  
LIMITED

MONTREAL

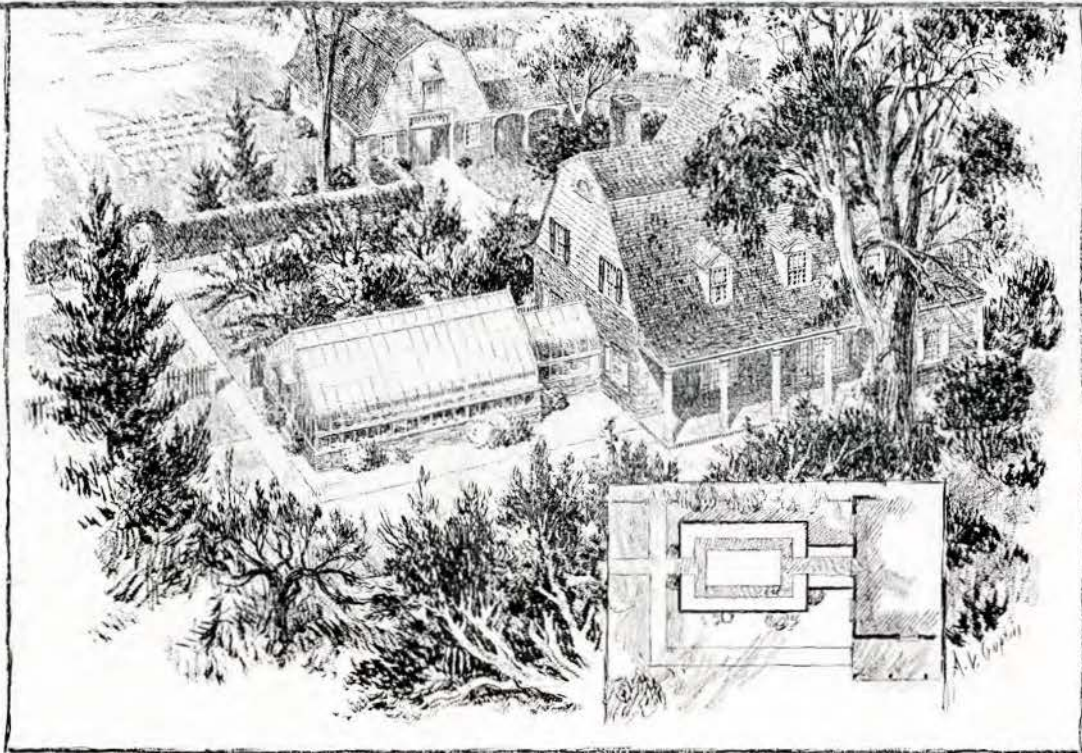
TORONTO

WINNIPEG

VANCOUVER



## FOR FOUR GENERATIONS BUILDERS OF GREENHOUSES



*Hi-lites  
on  
Glass  
Gardens*

### 6. Wherein Architect and Doctor Joined Hands

**F**ORCED, because of a breakdown in health, to temporarily give up his business and move into the country, this client purchased a small farm and enlarged the old Dutch farmhouse to suit his needs.

His physician suggested adding a greenhouse. His wife thought of attaching it directly to the residence where he would be tempted to spend many hours fussing among the flowers. He himself, decided on the size of 18 feet wide and 25 feet long, not counting the connecting passageway. His architect advised as to the design selected, and determined its exact placing.

The pitch of the gambrel roof of the residence is the same as is used on the greenhouse, permitting an harmonious arrangement of roof planes.

Now that business is again claiming his time, this man persistently contends the greenhouse was largely responsible for his restored health.

And by the way, the greenhouse is painted the same color as the residence instead of the usual white. Note how the connecting passageway overcomes all interference with the windows.

**Lord & Burnham Co. Limited**

*Builders of Greenhouses and Conservatories*

MAIN SALES OFFICE: HARBOUR COMMISSION BLDG., TORONTO, ONT.

Eastern Sales Office: 920 Castle Bldg., Montreal, Que.

Head Office and Factory: St. Catharines, Ont.



# THE JOURNAL

## ROYAL ARCHITECTURAL INSTITUTE OF CANADA

Serial No. 49

TORONTO, SEPTEMBER, 1929

Vol. VI. No. 9

### CONTENTS

EDITORIAL .....	309
INTERNATIONAL HOSPITAL CONGRESS AND ANNUAL CONVENTION OF THE AMERICAN HOSPITAL ASSOCIATION .....	310
THE MAURICE CODY SCHOOL .....	314
LIBRARY BUILDINGS, THEIR PLANNING AND EQUIPMENT, BY PHILIP J. TURNER, F.R.I.B.A. ....	325
FIVE-DAY WEEK FOR THE BUILDING TRADES .....	345
PROPOSED CONFEDERATION PARK AND RELATED CENTRAL AREA FOR THE CITY OF OTTAWA ....	346
ACTIVITIES OF THE INSTITUTE .....	347
NOTES .....	xxviii
BOOKS REVIEWED .....	xxx
OBITUARY .....	xxxii

### PLATE ILLUSTRATIONS

DURHAM CATHEDRAL, FROM LITHOGRAPH BY WENDELL P. LAWSON .....	FRONTISPIECE
ENTRANCE DETAIL, RESIDENCE OF C. L. BURTON, ESQ., TORONTO .....	317
ENTRANCE DOORWAY, "SHADOWBROOK," ESTATE OF HAMILTON B. WILLS, ESQ. ....	319
EGLISE ST. AMBROISE, MONTREAL .....	321
OXFORD UNIVERSITY PRESS, TORONTO .....	323
DETAIL, MUSEE DE CLUNY, PARIS (EUROPEAN STUDIES) .....	343
DETAIL, MUSEE DE CLUNY, PARIS (EUROPEAN STUDIES) .....	344

PUBLISHED EVERY MONTH BY THE  
ROYAL ARCHITECTURAL INSTITUTE OF CANADA

*Editor*—I. MARKUS

#### EDITORIAL BOARD

*Chairman*: J. P. HYNES  
Ontario Association of Architects  
JOHN M. LYLE  
Ontario Association of Architects  
PERCY E. NOBBS  
Quebec Association of Architects

PROF. RAMSAY TRAQUAIR  
Quebec Association of Architects  
ALCIDE CHAUSSE  
Quebec Association of Architects  
E. J. GILBERT  
Saskatchewan Association of Architects  
H. CLAIRE MOTT  
The Maritime Association of Architects

GILBERT PARFITT  
Manitoba Association of Architects  
S. M. EVELEIGH  
British Columbia Association of Architects  
W. G. BLAKEY  
Alberta Association of Architects

*Publication, Editorial and Advertising Offices* .....160 Richmond Street West, Toronto  
*Chicago Representative* .....Macintyre & Simpson, 75 East Wacker Drive, Chicago  
*New York Representative* .....L. Ray Nelson, 250 West 57th Street, New York

#### SUBSCRIPTIONS

Canada and Newfoundland—Three Dollars per year. Great Britain, British Possessions, United States and Mexico—Five Dollars per year. All Other Countries—Six Dollars per year. Single Copies—Canada 50 Cents; Other Countries 75 Cents.

# DOMINION BATTLESHIP LINOLEUM

## The Royal York

*Ross & Macdonald,  
Montreal, Architects;  
Sproatt & Rolph, To-  
ronto, Associate Archi-  
tects; Anglin-Norcross,  
Ltd., Montreal, General  
Contractors.*



**I**T IS fitting that the British Empire's largest and finest hotel should include among its furnishings, a notable installation of the finest of modern public floors . . . Dominion Battleship Linoleum.

19,800 square feet have been laid in various rooms, while passenger elevators are floored with Dominion Walnut Jaspe Linoleum.

For banks, offices, stores or any public building requiring permanent, dignified, easy-to-clean floors . . . Dominion Battleship Linoleum is ideal.

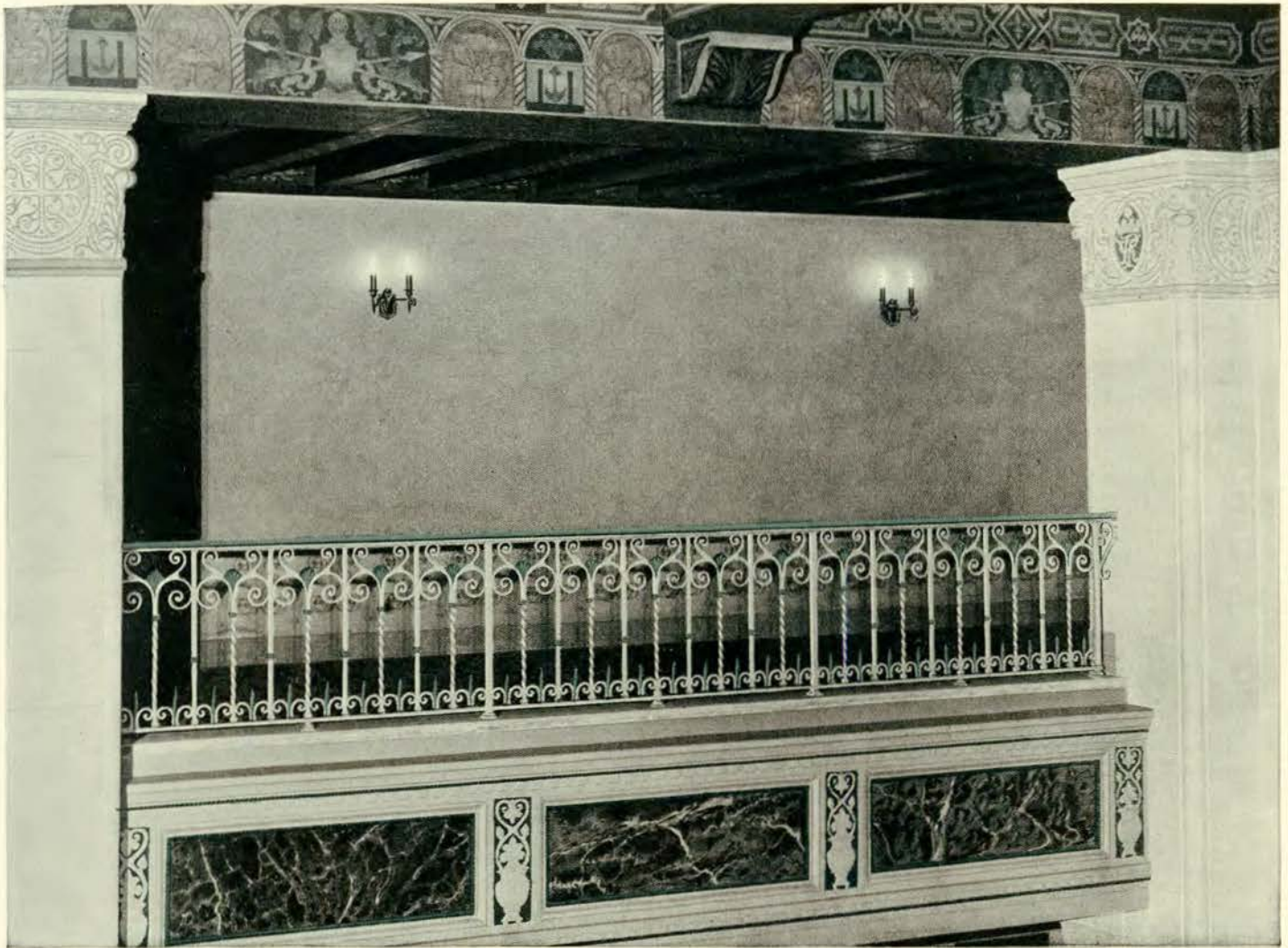
It is quiet, comfortable, odourless and quick and easy to lay. May be waxed and polished as desired.

Three qualities, AAA in eight shades; AA and A in four. Special colours for large contracts. Installed by all large house furnishing and departmental stores. Write us for samples and literature.

**DOMINION OILCLOTH & LINOLEUM  
COMPANY, LIMITED**

**MONTREAL**

Makers of Floor Coverings for over 50 years



THE SECOND of a series illustrating notable pieces of metal work created by The Robert Mitchell Company Limited for the Royal York Hotel, Toronto, Ontario.

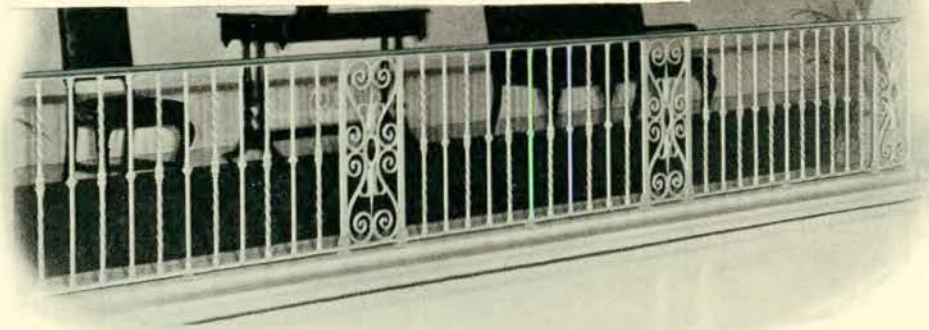
—Being an iron railing with bronze hand rail on the main lobby mezzanine—and showing a wrought iron railing, with bronze hand rail, on the convention floor mezzanine.

THE ROBERT MITCHELL CO. LIMITED  
MONTREAL - TORONTO

ROSS AND MACDONALD  
Architects

SPROATT AND ROLPH  
Consulting Architects

ANGLIN NORCROSS LIMITED  
Contractors



METAL WORK IS ESSENTIAL TO MODERN ARCHITECTURE

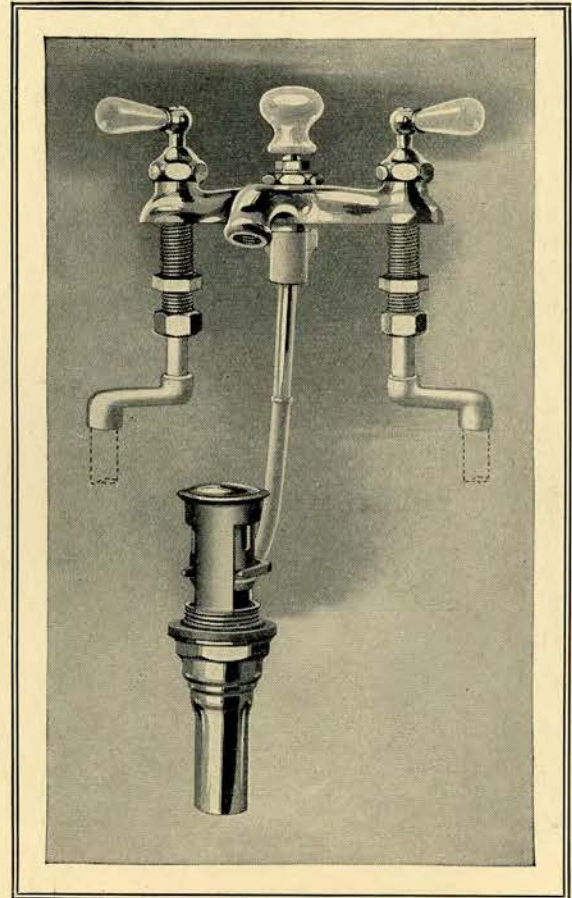
150 Pounds Pressure  CRANE VALVES  2500 Pounds Pressure

*A fixture to fit  
the new  
compact lavatories*

1

Especially designed for the newer compact style of lavatory, the *Securo Jr.* combination supply fixture is saving of slab space, as the lavatory itself is saving of floor space. And as the compact lavatories have done away with a clumsy, crowded appearance in small bathrooms, this supply does away with the over-balancing clumsiness of large faucets on a small lavatory.

In operation, it is convenient and time-saving. The quick-draining direct-lift waste needs only a pull and the water rushes from the bowl, with no wait, carrying along floating particles. Supply valves are quick compression, with renewable seats. Spouts are tapped for shampoo tail-pieces. The whole is in one handy piece, easy and economical to install.



*Securo Jr. Combination Lavatory fixture C32274.  
Only six inches between handle centers*

This improvement, embodying the latest ideas, is typical of the quality and convenience of all Crane brass goods. Architects and builders, seeking for clients maximum convenience, will find many such new ideas in plumbing at nearby Crane Exhibit Rooms.

# CRANE

CRANE LIMITED, GENERAL OFFICES: 1170 BEAVER HALL SQUARE, MONTREAL  
CRANE-BENNETT, LTD., HEAD OFFICE: 45-51 LEMAN STREET, LONDON, ENG.

*Branches and Sales Offices in 22 Cities in Canada and British Isles  
Works: Montreal and St. Johns, Quebec, Canada, and Ipswich, England*



DURHAM CATHEDRAL

From a Lithograph  
By WENDELL P. LAWSON

# THE JOURNAL

ROYAL ARCHITECTURAL INSTITUTE OF CANADA

Serial No. 49

TORONTO, SEPTEMBER, 1929

Vol. VI. No. 9

## EDITORIAL

*The Editorial Board and staff of the Journal do not take the responsibility for any opinions expressed in signed articles.*

THE frontispiece in this issue is from a lithograph of Durham Cathedral, by Wendell P. Lawson, B.Arch., Toronto. The original of this sketch was shown at the Forty-Sixth Spring Exhibition of the Montreal Art Association, which was held in the Montreal Art Gallery a few months ago.

### THE FEATURE ARTICLE

Mr. Turner's article on public libraries, which appears in this issue, completes a series of three articles on "Libraries—Their Planning and Equipment," the first and second of which appeared in the May and July issues of THE JOURNAL, respectively. The study given to this subject by the author assures our readers of an authentic and valuable reference work. We hope that Mr. Turner's efforts in this connection will be appreciated, and that the information which he has compiled will prove of much benefit to members of the profession in the planning and designing of libraries.

### A REQUEST FROM THE R.I.B.A.

Mr. Boies Penrose, an American citizen now living in London, England, has contributed the sum of \$5,000.00 to the funds of the Society for the Preservation of Rural England, and has further intimated that he will increase his gift to \$50,000.00 if a similar amount is contributed from other sources.

The Royal Institute of British Architects, who have taken a large part in the organization of this society, are most anxious that people who sympathize with its objects should send in subscriptions, in order that full advantage may be taken of Mr. Penrose's generous offer. To this end they have requested the R.A.I.C. to appeal to its members for funds to carry on the work of this society. Many of our architects who have had the privilege of travelling through England in recent years, must have realized that much of the beauty of the English countryside is endangered by the destruction of fine or historic old buildings, the erection of unsightly signs and incongruous buildings. As architects we are naturally interested in the preservation of the beauty of the English countryside and, if funds will encourage the worthy objects of this society then we should not hesitate in giving material assistance.

### ARCHITECTURE AS A SCHOOL SUBJECT

Is general ignorance about literature so much more regrettable than general ignorance about painting, sculpture, or architecture? In these days of widespread building, the elements of architecture and the history of its development constitute a subject with a very strong claim to be taught. Just as in the sixteenth century every gentleman could write a sonnet, so in the eighteenth century every gentleman knew the five orders and could criticize a building: the result was excellent. In the Victorian age there was little or no public conscience in the matter, and the result was, on the whole, deplorable. What is to be said of our own age by future generations?

Every architect will admit that there is a general lack of appreciation in this country of the importance of the arts in the lives of our communities. Among the arts, that of architecture is perhaps the most important, as it has a direct influence upon our daily lives. This lack of appreciation is undoubtedly due to the fact that the teaching of the arts has been overlooked in the planning of the educational system of this country.

Architecture is a good school subject for a number of reasons: First—It offers opportunities for drawing, and a very large number of boys enjoy drawing; moreover, one tends to remember a thing when one has drawn a picture of it. Second—It helps the teaching of history, simplifying the almost overwhelming task of getting a boy to "see the centuries" as different entities; and, no less than the study of dead languages, it connects the modern world with the ancient. Third—It is not entirely an abstract subject; the practical advantage of the pointed arch in ecclesiastical architecture, or the solution of simple household problems in domestic architecture, bring what the book reviewers call "a welcome touch of reality into the class-room." Fourth—The present age is an age of architectural transformation and, generally speaking, an age of architectural activity, and this should help to arouse interest in the subject.

Mr. Walter Tapper, in his presidential address to the Royal Institute of British Architects, emphasized the need of introducing the art of design into the curricula of the schools and colleges. An education, he claimed, which knows nothing of beauty and is blind to the arts, is not an education

at all. The country is suffering from an invasion of ugliness and vulgarity, and will continue to do so until something is done to remedy the cause. To deal effectively with the cause, the R.I.B.A. appointed a special committee to consider and report upon the methods of interesting boys and girls in the schools on architecture and kindred subjects. The following recommendations were made by this committee:

- (1) To prepare a list of books on architecture suitable for inclusion in school libraries.
- (2) To found an annual prize for an essay, or for sketches, or for other evidence of interest in the subject, to be open to pupils in public and secondary schools.
- (3) To urge the headmasters of all public and secondary schools to encourage and develop interest in architecture by means of existing school societies, and by the establishment of school archi-

ture societies.

(4) To draw up a list of lecturers who are willing to deliver lectures in public and secondary schools in all parts of the country.

(5) To draw the attention of all headmasters to the existence of these lectures, and to assist them in arranging lectures.

(6) To approach the public and secondary schools by means of circulars urging the importance of interesting all their pupils in architecture as an essential element in any minimum liberal education, and outlining the method by which their object may be obtained.

We feel confident that if something along these lines were followed by our own Institute, the results would be far-reaching, and would eventually bring about a more favourable attitude on the part of the general public for art and architecture.

## The International Hospital Congress and Annual Convention of the American Hospital Association

BY B. EVAN PARRY

*Supervising Architect,*

*Department of Pensions and National Health, Canada*

ATLANTIC CITY was truly the mecca of the hospital world during the early part of June. Forty-four countries were represented, including South, Central and North America. Egypt viewed this meeting as being of such importance that four delegates attended, representing medicine, administration, architecture and construction. This action doubtless was prompted by the fact that the Egyptian Government is planning a large medical school in Cairo, including a 1,300-bed hospital with an out-patient department having a capacity for 3,000 patients per day.

Canadian speakers on the programme were Dr. J. J. Heagerty, chief executive assistant, Department of Pensions and National Health, Canada; Dr. George F. Stephens, of Winnipeg, Manitoba; Dr. A. K. Haywood, of Montreal, Quebec; Dr. Harvey Agnew, Canadian Medical Association, Toronto; and the writer. Language did not prove a handicap, inasmuch as addresses delivered in English, French or German were concisely translated by Dr. Rene Sand of Paris, President of the Congress.

The architectural profession may be interested to learn that architects in practice and government architects all contributed to the discussions initiated by the medical men and hospital administrators, with the result that personal contacts formed were invaluable, and can not be otherwise than beneficial to the profession at large.

Dr. S. S. Goldwater, hospital consultant, New York City, gave a paper under the caption of "Economic and Administrative Aspects of Hospital Planning," stressing the importance of hos-

pitals generally in the social budget, as also the fact that approximately one million dollars per day is being poured into hospital construction in the U.S.A. (It will be recalled by those who attended the last annual meeting of the Royal Architectural Institute of Canada, held in Toronto, that a similar note was struck by Professor Percy E. Nobbs.) He called attention to the fact that there is need of a theory of the economics of hospital planning, and that basic principles are not commonly understood or that they are not uniformly applied. Dr. Goldwater said that to trace the far-reaching effects of hospital activities is to perceive that hospital planning has many implications that it is a complicated art; that it involves grave social responsibilities and that proper evaluation of the usefulness of a hospital building can not be made without much study.

The actual cost of a hospital building is of great practical importance to the building committee, but in a theoretical approach to hospital planning, the mere cost of construction can not be accepted as the ruling factor. The size or mass of a correctly planned hospital building and the character of its equipment, which basically determine cost, are not deduced from available funds, but from functional needs. A logically conceived hospital plan is not one in which a given space or mass is arbitrarily assumed and then subdivided to the best of the architect's ability, but one in which the requirements of the various hospital functions are first studied separately, the forms and space allowances thus ideally conceived for individual departments being afterward put together in the least disadvantageous combination possible.

"What are the proper proportions of the parts that go to make up the hospital as a whole?" was a question raised at the congress. How can these parts be so united—to borrow an analogy from human anatomy and physiology—as to produce as much gland or productive tissue and as little unproductive connective tissue as possible? It is in combining hospital departments into a well proportioned, smoothly functioning, and not unduly expensive whole that the hospital planner achieves success or registers failure.

In the United States today, carefully planned general hospitals range in mass from 8,000 to 16,000 cubic feet of construction (occasionally even more) for each patient's bed. Variations are caused by space-consuming professional departments which lie beyond the area which is devoted to the shelter and immediate care and treatment of bed patients. Dr. Goldwater cited the case of two neighboring general hospitals of about 600 beds each. One of these hospitals estimates its dispensary requirements at 200,000 cubic feet; the other demands a dispensary of 500,000 cubic feet. The larger of these two dispensary buildings will be used for undergraduate teaching; the smaller will not.

The growth of the out-patient department has had a marked effect upon the total cost of hospital construction during the past decade. The development has been both quantitative and qualitative. Hospitals that considered out-patient departments unnecessary twenty years ago now find them indispensable. Comparable to the expansion of the out-patient service is that of the X-ray department. Instead of departments which at one time were content to occupy 300 or 400 square feet, we find modern departments occupying from 3,000 to 10,000 square feet. Likewise the growth of laboratory work in hospitals has considerably increased. All of the clinical departments of the hospital now demand laboratory support.

There is a widespread belief in the U.S.A. for the usefulness of physiotherapy more comparable to that which obtains in Europe. On this account, prudent architects will endeavor to locate it strategically, with an eye to its future expansion. The creation of a department for the investigation of medical physics in one of the U.S.A. great medical schools is an event of significance to hospital planning. Then again, modern operating room planning is greatly in excess of that which was deemed sufficient twenty years ago.

Although the ordinary hospital is not a teaching hospital, yet the modern hospital constantly uses its clinical conference room, and with the introduction of formal and informal post-graduate medical education, other lecture and demonstration rooms are required.

Conspicuous among the forces which have added to the cost of hospital construction, is the growth of the department of nursing. Twenty years ago, the nursing department of a general hospital expected that accommodations for nurses would be provided in the ratio of one nurse for each three hospital patients. In certain parts of the country, today, the current ratio is one to two, an increase of 50 per cent; elsewhere hospitals are adopting a ratio of two to three. An advance from a ratio of one to three to a ratio of two to three implies an increase of 100 per cent in the cost of building for the nursing department; actually the increase

has been much greater, for while the number of nurses has doubled, the character of nurses' homes has undergone radical changes.

The public health authorities of New York City believe that every general hospital should maintain at least a small isolation ward for the care of occasional contagious cases that can not be prevented from cropping up and that are not suitable for transfer to a central contagious hospital; the beds in these small contagious wards are often unoccupied for months at a time, yet the inclusion of this space in the building programme is doubtless justified.

Dr. Goldwater stated that it is his belief that the next decade will witness a distinct movement toward individual care in the preparation of food for hospital patients. He stated that he suggested many years ago, half seriously, that if a perfect hospital were ever built, it would be a hospital in which each patient would have a private room, an individual nurse, a private balcony, and a private garden, and, today, he thinks he might have added that a perfect hospital would provide a private cook for each patient as well, and that the best French cook obtainable would be none too good.

The multiplication of hospital personnel partly contributes to the increased cost in hospitalization, and about a dozen years ago a bold man in a middle-western city undertook to establish a large general hospital without resident nurses or other resident employees. The employees were all expected to provide their own meals. That this experiment, a revolutionary one for this type of hospital in the U.S.A., did not turn out precisely as it was expected, may be inferred from the fact that this hospital subsequently built the most sumptuous nurses' residence, with an independent kitchen and a number of attractive dining rooms.

Space allowances for laundry purposes vary considerably, 12 to 15 square feet (for laundry together with receiving, sorting, and distributing rooms) for each occupied bed may be set down as a fair average. The use of a double shift of workers has often been suggested, but rarely tried; this would materially diminish space and necessary equipment.

Emphasis was made as to the necessity for the architect to consult the purchasing department about advantages of a plan for the purchase of merchandise in bulk at reduced prices. Storage space can not be had for nothing, but such space must be paid for only once, whereas the purchase and consumption of costly supplies goes on forever.

The consensus of engineering opinion is that hot water plants, while a little more costly to install, are cheaper to operate, if properly regulated. From the standpoint of economy, the shorter the hospital corridor the better, but if corridors are reduced to the vanishing point, the hospital may pay the penalty of a loss of other desirable qualities. Stairways are not much used today in the multi-storey hospitals, and, therefore, are limited in number and size to the minimum requirements of the law. As the speed, control, and general effectiveness of elevators increase, the number of elevators required in large hospitals should diminish; if this actually happens, space will be gained, but it does not follow that money will be saved, for the cost of installing each elevator, with its superior equipment, will rise. In this connection, it is interesting to note that hospital administrators are now mak-



ing an intensive study of this phase of hospital construction and equipment.

Stress was laid on the fact that the skill of hospital architects can nowhere be applied to greater purpose than in the development of hospital plans which render mechanical ventilation almost, if not quite, superfluous. Although hygienic principles are everywhere the same, their application calls for hospital planning of one kind in cold countries, another in the tropics, for in the one case the direct rays of the sun are a blessing, in the other an evil to be guarded against. The advantages of sun exposure (in the temperate zone) of ample air space, and of free ventilation, are generally conceded, and that it is the duty of the hospital planner to conserve these and all other values which contribute to the health and welfare of hospital patients.

Motion studies will accomplish wonders for medical efficiency through improved hospital planning. The patient who must be carried to and from a distant operating room, X-ray room, or laboratory, is not often benefitted by the journey. The sterility of a surgical instrument is not enhanced by its prolonged exposure to contamination after it is taken from the sterilizer.

Briefly summarized, the greatest single contribution which the hospital planner can make to medical efficiency is to foster the development of general hospitals composed of all the clinical and laboratory departments that are logically related to each other in modern clinical practice.

Mr. Lang, state architect of Berlin, Germany, was very apt in his statement that a hospital was "not a monument but an instrument." Mr. Hermann Distel, architect, Hamburg, Germany, stated that the time was ripe for an intelligent research programme upon hospital planning, in which most of the delegates concurred.

Many of the delegates informed the writer that the type of general hospital to be seen in the U.S.A. was not comparable to their requirements, while some of those they had seen in Canada were quite satisfactory.

The writer, in speaking to Dr. Goldwater's paper, suggested that a well-regulated earthquake every twenty-five years may be a good thing, which remark, curious to relate, was echoed by a prominent surgeon from Montevideo, except that he suggested it should be every twenty years.

There was no doubt in the minds of the delegates, when agreeing with the writer's expressions, that economy in hospitalization meant reduction of time bed occupancy; health centres, not disease centres, should be the slogan of hospitals; also that the boarding house type of hospital was a financial drain upon the public purse; co-operative buying and deletion of duplication of scientific consultative and technical services should be considered, and that the care of custodial patients, such as chronic cases, in cities, was an economic waste.

The American Hospital Association's Convention opened on June 17th, 1929, in the Auditorium, Atlantic City, whereat over four thousand delegates attended and the largest educational exhibit ever assembled under the auspices of hospital and nursing professions was on display throughout the week. The exhibit of the American Institute of Architects was comprehensive, interesting by its variety, and informative, and the American Hos-

pital Association is to be congratulated in having the co-operation of the A.I.A. in presenting such valuable data.

The writer, during the course of conversation with Mr. C. Herrick Hammond, president of the American Institute of Architects, Mr. Edward F. Stevens, of Stevens & Lee, and Mr. Charles Butler, of New York City, discussed the advisability of the Royal Architectural Institute of Canada combining with the A.I.A. for an exhibition of drawings in connection with the American Hospital Association's Conventions in the future. It may be opportune for the Institute to take this matter up with the American Institute of Architects, so that arrangements can be made for the next convention of that association, which will be held in New Orleans, 1930. The members of the A.I.A. above referred to are of opinion that during the next decade the most important venue for hospital building will be in Canada, even to a greater extent than that in the U.S.A.

Particularly interesting was the close attendance of the United States architects at the Canadian exhibit, although perhaps some of the Canadian architects who visited the convention found more interest in the American exhibit, at least, that was gathered by the fact of them not visiting the Canadian exhibit. The exhibit prepared by the Dominion Government covered representative hospitals of every province, and excited the enthusiasm and interest of the International Hospital Congress delegates, as also the prominent U.S.A. hospital consultants and hospital architects of that country.

Perhaps the most outstanding work of interest to the international delegates, as also the United States architects, was that of the University of Montreal, designed by Mr. Ernest Cormier, P.Sc.A., D.P.L.G.F., R.C.A. Requests were made by the delegates from Cairo, Germany and South Africa to be furnished with photographs, as each and every country has under consideration a similar project. Dr. Jos. Wirth, delegate from Frankfurt, Germany, was quite enthusiastic over the grouping and general composition of the design, particularly so as regards its dignity.

Another exhibit created quite a sensation, more particularly its planning and construction, the project being the hospital constructed last year at Ile a la Crosse, Northern Saskatchewan. Delegates from South Africa, Egypt, Norway, Switzerland, Poland and Australia, as also several others, desired to be furnished with photographs and details of construction. Many of these delegates thought that it was inconceivable that such construction would hold up under such rigorous conditions obtaining in the district wherein this hospital is built. Further, the compact and efficient co-ordination of the different services made a very strong appeal, as also the low cost of construction. (The writer was the architect for the above, and James Govan, consultant).

The Stevenson Memorial Hospital, Alliston, Ontario (James Govan, architect), excited great interest, more particularly so the out-patient department and clinical accommodation, and copies of these plans were requested by the delegates.

The Toronto General Hospital, private patients wing (Messrs. Darling & Pearson, architects), intrigued many of the visitors by a most ingenious arrangement in planning which has been effected

in the routing of the patients from the private rooms to other departments of the hospital.

From observation, one was led to think that the principles, practice and construction of infectious diseases hospitals have not yet been fully grasped by hospital superintendents and architects engaged upon hospital planning, especially in connection with infectious units in general hospitals.

Medical directors of sanatoria from every part of the world were interested in the standard tuberculosis unit for general hospitals designed by the writer, and copies are being sent, with description, to over two dozen applicants. Orientation, co-ordination and cost were the factors which were responsible for the interest.

The historical hospitals of Canada (reproductions from illustrations in "Four Centuries of Medical History in Canada," Dr. J. J. Heagerty) proved to be a great draw in the exhibit.

The exhibit of Messrs. Stevens and Lee, architects, covering the Ottawa Civic Hospital; Notre Dame Hospital, Montreal; Royal Victoria Maternity Hospital, Montreal; and Hotel Sacramento, Quebec, received much attention, although perhaps the exhibit lost in interest by the fact of not having plans of these various buildings.

The Regina hospitals, namely, Regina General and Regina Grey Nuns', as also the hospitals of Manitoba and Alberta, were much admired, both in arrangement and general conception.

The sanatoria, as represented by the Prince Albert Sanatorium, Sask.; Muskoka Sanatorium, Gravenhurst, Ontario; and the Royal Ottawa Sanatorium, were discussed in detail by prominent sanatorium superintendents and architects engaged upon such projects.

The new General Public Hospital, St. John, N.B. (Messrs. Pond & Pond, Martin & Lloyd, architects), proved an attraction. Amazement is perhaps the best way to describe the effect on many of the delegates upon such an undertaking. Mr. Irving Wright, of Messrs. Pond & Pond, Martin & Lloyd, was in close attendance, as inquiries were many, much time being taken up in explaining low cost of construction and the planning

generally. Criticisms were offered as regards planning and Mr. Wright spent quite a lot of time in answering the points raised.

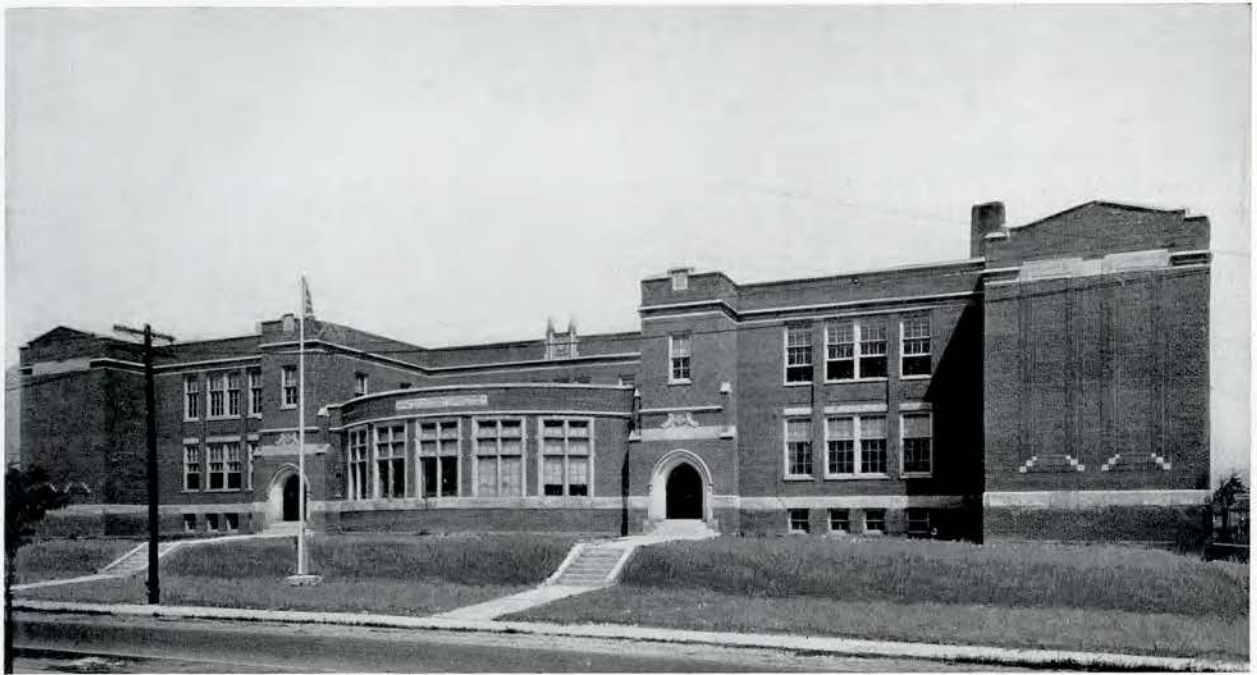
The exhibit of the soldiers' hospitals of Canada was studied, principally by the medical officers and architects of the U.S.A. Army Service. It was interesting to note upon inspection of the United States exhibit of similar hospitals, great emphasis and value has been placed upon occupational therapy. The U.S.A. veterans' hospitals, generally speaking, are of more solid construction than the Canadian soldiers' hospitals, which may possibly be explained by the fact that the U.S.A. planned their hospitals for occupation of a more lengthy period than those originally built in Canada. The U.S.A. hospitals are administered by the U.S. Army authorities, and one was much impressed by the ample provision of amenities and utilities in conformity with up-to-date standards.

Highland View Hospital, Amherst, N.S. (A. J. Hazelgrove, architect, the writer consultant), proved a subject of interest, especially to Nova Scotian doctors and nurses now practising in the United States, partly due to the fact that they were conversant with the old hospital before it was partially burned down in 1928. Dr. MacEachern, of the American College of Surgeons, was eulogistic in the arrangement conceived for the operating and maternity departments, as also the re-alignment of the walls of the nursing units. Both the architect and the consultant, he thought, were to be congratulated.

It is hoped that upon some future occasion the government will be inspired to get an even more representative exhibit of Canadian architects' work in the hospital field.

The writer, in conclusion, apologizes for the scappy way in which these notes are given, but would take this opportunity of emphasizing the outstanding impression formed by contact with the delegates, including those from the U.S.A., namely, that it behooves Canadian architects to give some intensive study to hospital work so that they may be prepared for the large field which is opening during this next decade.





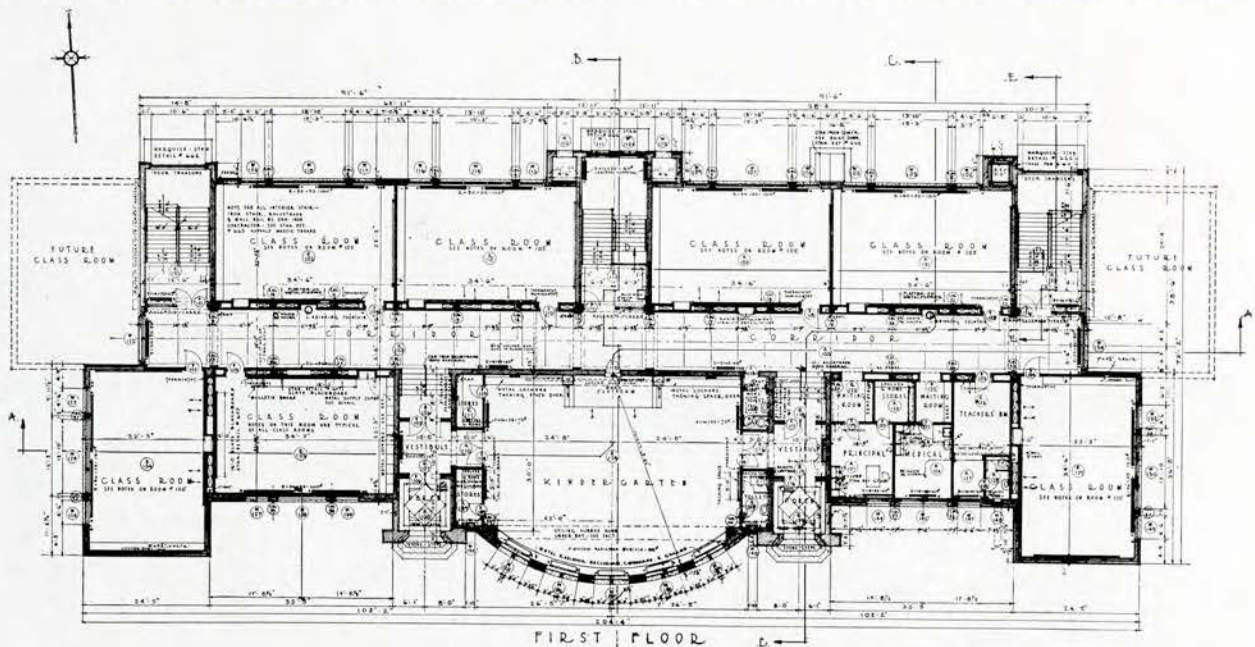
## The Maurice Cody School, Toronto

**T**HIS school, which has been dedicated to the memory of the late Mr. Maurice Cody, son of the Rev. Canon H. J. Cody, is one of the recent schools erected by the Toronto Board of Education.

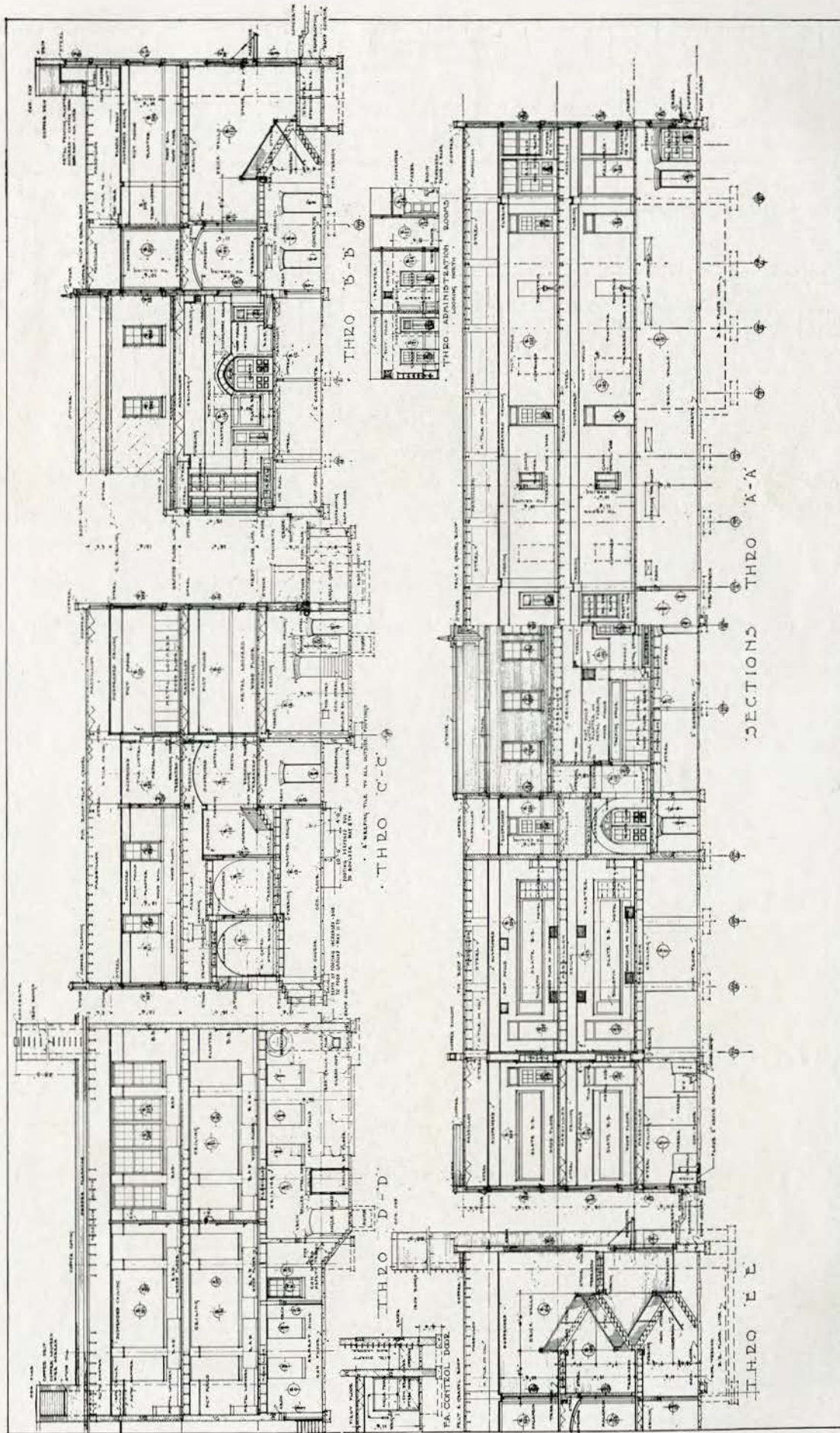
The building is located on Belsize Drive in the northern part of the city and has a length over all of 204 feet and a depth of approximately 80 feet. It consists of two storeys and a basement, and contains fifteen classrooms, a kindergarten, library and administration rooms. The kindergarten, which is one of the features of the school, has a large circular bay at the front of the building,

between the two entrances. A platform has been provided in this room, so that it can also be used for auditorium purposes.

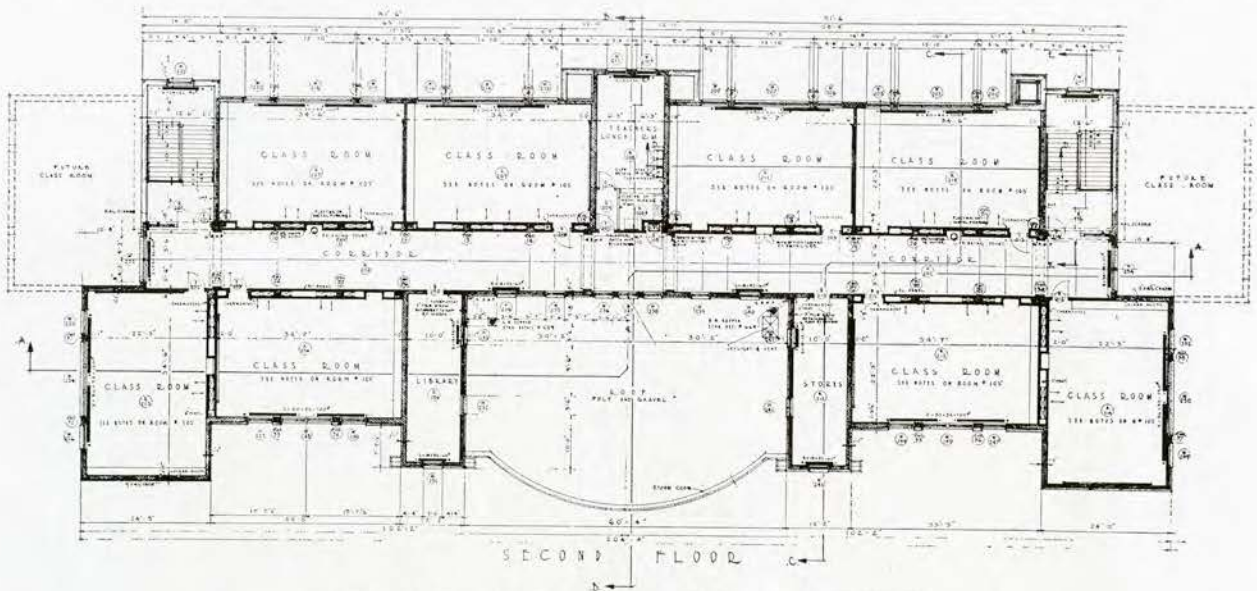
The school is of fire-proof construction with floors of bar-joists on steel. The exterior of the building is faced with red stock brick, trimmed with Indiana limestone. The floors of all the corridors are of terrazzo with terrazzo cove base, while the floors in the classrooms are of maple laid on wood sleepers. Corridors have suspended furred segmental ceilings, and the space between the ceiling and the floor construction is used for the horizontal ducts. The walls of the corridors



FIRST FLOOR PLAN—MAURICE CODY SCHOOL, TORONTO  
C. E. C. Dyson, Architect for Toronto Board of Education



SECTIONS—MAURICE CODDY SCHOOL, TORONTO  
C. E. C. Dyson, Architect for Toronto Board of Education



SECOND FLOOR PLAN—MAURICE CODY SCHOOL, TORONTO

are of sand-finished plaster, while those of the stair towers are faced with grey stock brick. Classrooms are provided with metal lockers at the rear of the rooms, these lockers being ventilated and connected with the mechanical ventilation system. This system is arranged for re-circulation. Two fan units have been provided, each handling one-half of the school and sufficiently large enough to

carry future extensions. The classrooms have been provided with supply cupboards of metal construction, and display cabinets for trophies and other objects have been built into the classroom walls.

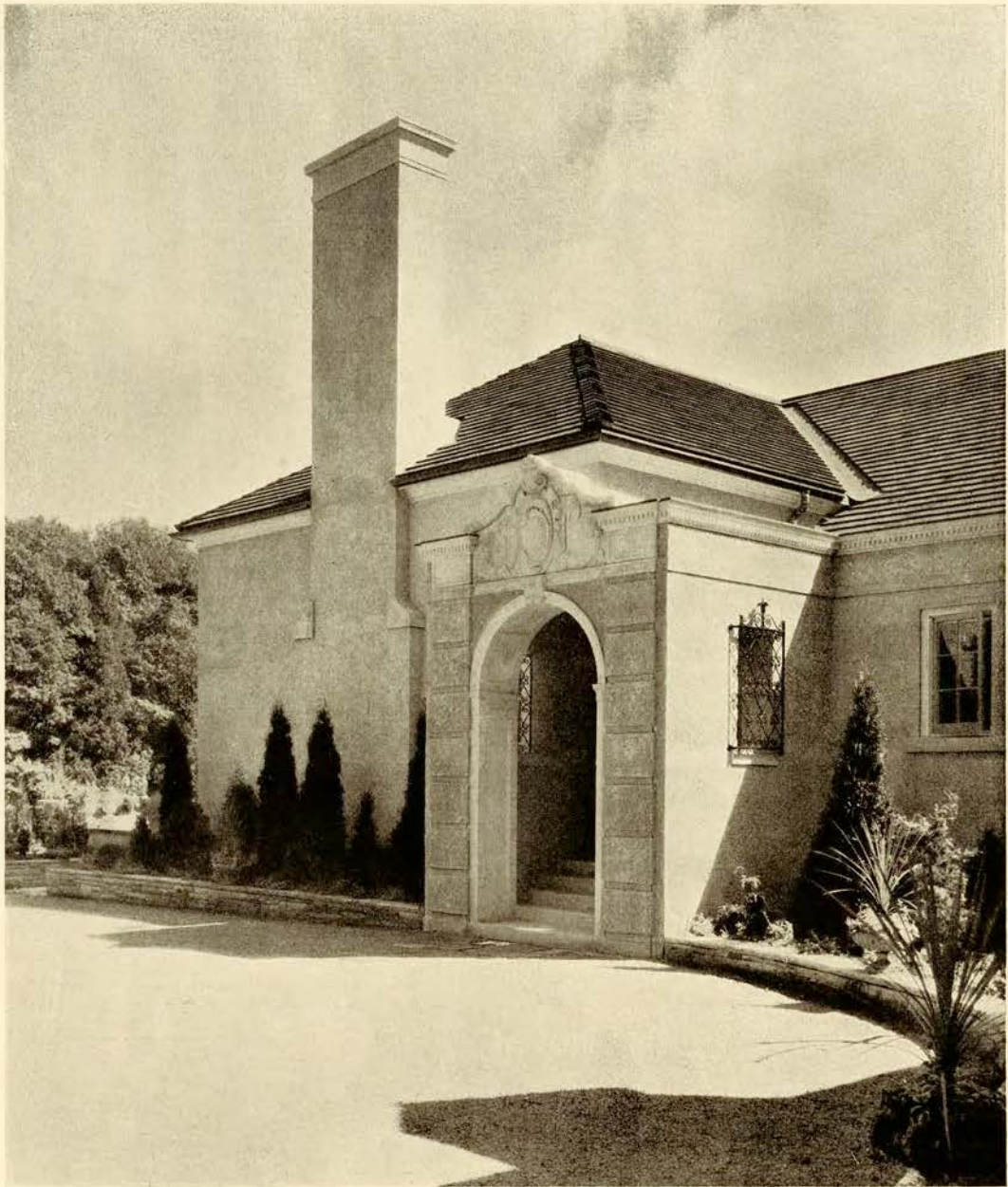
The building was designed by the architectural department of the Toronto Board of Education, of which Mr. C. E. Cyril Dyson is the chief architect.



DETAIL OF MAIN FACADE—MAURICE CODY SCHOOL, TORONTO  
*C. E. C. Dyson, Architect for Toronto Board of Education*



ENTRANCE DETAIL, RESIDENCE OF C. L. BURTON, ESQ., TORONTO  
*Douglas E. Kertland, Architect*  
(Shown at the 1929 Toronto Chapter Exhibition of Architecture and Allied Arts)

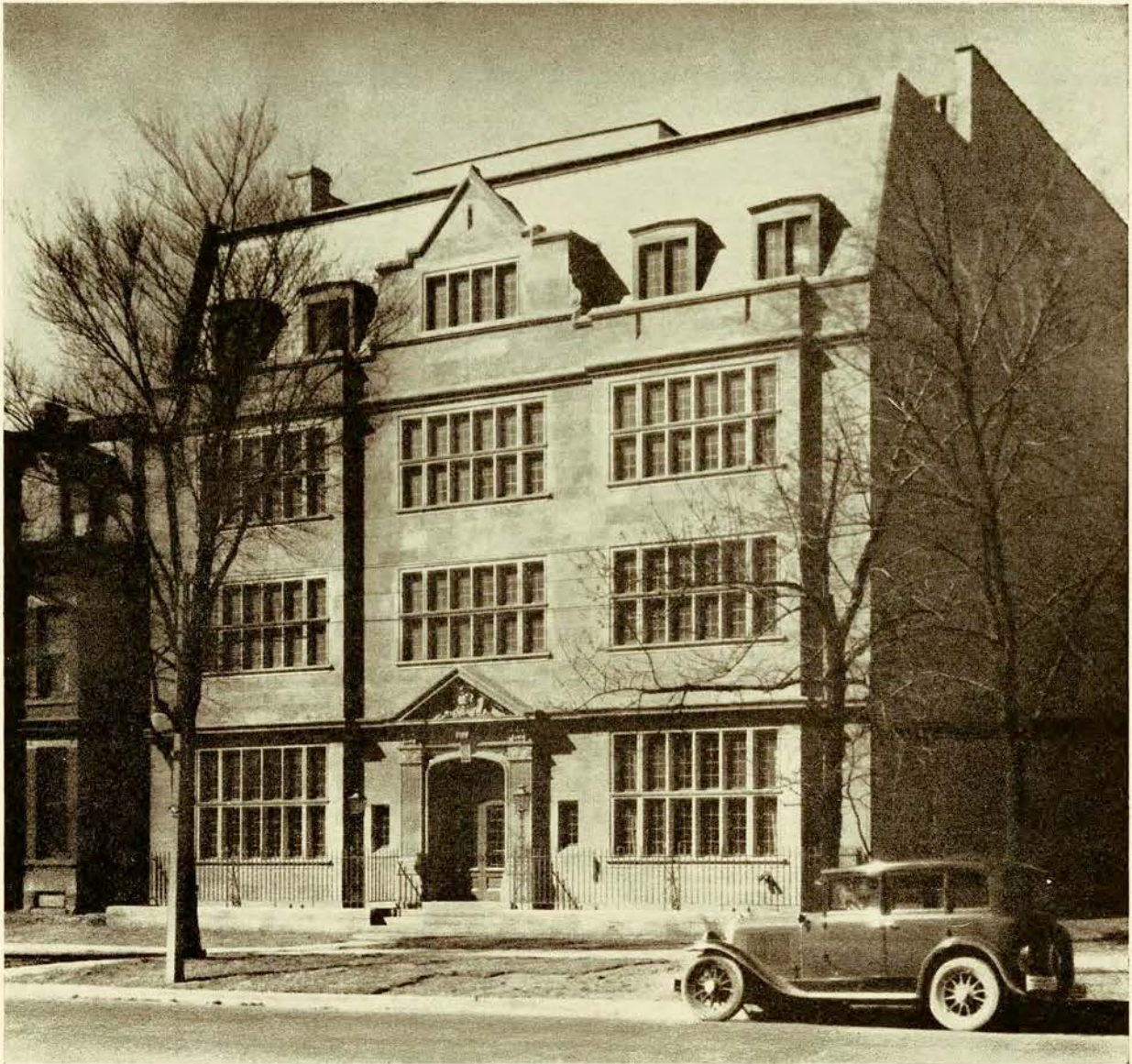


ENTRANCE DOORWAY, "SHADOW BROOK"  
ESTATE OF HAMILTON B. WILLS, ESQ., WILLOWDALE, ONT.  
*Mathers & Haldenby, Architects*  
(Shown at the 1929 Toronto Chapter Exhibition of Architecture and Allied Arts)



EGLISE ST. AMBROISE, MONTREAL  
*Ernest Cormier, F.R.I.B.A., R.C.A. Architect*





OXFORD UNIVERSITY PRESS, TORONTO  
*Sproatt & Rolph, F.F.I.B.A. Architects*



MONTREAL PUBLIC LIBRARY  
*Eugene Payette, Architect*

## Library Buildings

(Their Planning and Equipment)

By PHILIP J. TURNER, F.R.I.B.A.

(*Special Lecturer, Department of Architecture and Library School, McGill University*)

(*These articles are copyright and must not be reprinted without permission*)

### III—PUBLIC LIBRARIES

THE requirements of a large city library are varied and complex. Though the same general principles that govern the small library (see Article I) will also apply to the larger building, provision has to be made for a number of departments not found in the small building and the problem becomes complicated.

The word "library" means to the minds of many a mere storage for books, but although it is this, it is also a great deal more, and to house the many departments that are now necessary to bring about adequate contact between book and reader, is quite another thing.

Public libraries have become in these modern days community reading clubs, and it is as such that their problems should be considered.

To indicate the many divisions of work that function under the roof of a public library, not only is a library building a store for books as contained in the now general book stacks, but, in most buildings, it is an art gallery and museum in its exhibition of rare books, prints, etc.; a shop in its arrangement and display of periodicals and books on open shelves; a school or college in the provision made for study; a public hall in

its lecture rooms; an office in its clerical departments; a workshop with its bindery; and a warehouse in its reception and distribution of books for the branch libraries as served from the main building.

"It is," as Mr. L. S. Jast says, "all these in its units and in its units welded together to form a related and inter-connected whole, it is a library."

Its complexity indicates how libraries have grown in size and function during the last seventy years of their existence, both in England and America.

Library buildings soon grow out of date, and that is why the older buildings are so handicapped in trying to keep up with the demands now made upon them.

The note of the public library can be said to be the democratisation of books and learning, just as the chief general requirements of such a building are space, air and light.

The public library idea was first developed in England, but owing to the lack of funds since the Great War, library planning and new buildings have not developed in such a general and grandiose way as elsewhere.

With the exception of the Mitchell Library at Glasgow (1911) and the National Library of Wales at Aberystwyth (1914), no library buildings of large scale have been erected in the British Isles during the last eighteen years.

Those that have been built give one the impression that those responsible for them have always had in mind the cutting down of expenses for lack of sufficient funds with the possible exception of the John Rylands Library at Manchester, which is a building that has great distinction in the beauty of its work.

In America, on the other hand, many municipal libraries have been built in recent years costing anything from one to five million dollars and, in some instances, even more.

These are fitted up in the most luxurious style with every requirement, mechanical contrivance and the best of fittings provided throughout.

In showing such a splendid public spirit for the good of the community the American people are to be congratulated, for, as a general rule, wherever municipal or public library buildings have been built, the matter of expense never appears to have been seriously considered in the desire to obtain the best of everything in the finished building.

These buildings vie in splendour with the many office buildings and others that are devoted to commerce.

Though the skyscraper is the most typical building of the United States, it is more especially suited to offices and hotels, and although there are libraries in skyscrapers, they like museums and art galleries, extend in the horizontal rather than the vertical plane, and follow the European model in this respect.

Criticism has been made regarding the very elaborate and decorative character of some of these libraries. It has been pointed out that after all, these costly buildings have become rather museums of art, and that the architecture and decoration shout down the books. And, after all, a properly designed library should express its purpose clearly, and should consist primarily of books contained in a building rather than a building containing books!

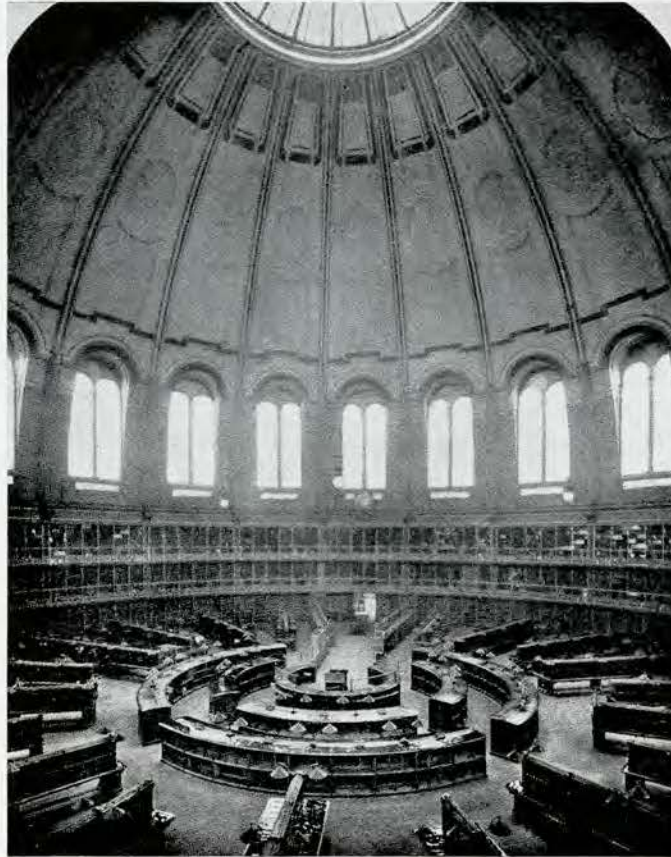
To illustrate these two points, one can appreciate why the reading room of the British Museum appeals to students and book-lovers. Although no longer modern, it has, without question, the qualities of space, proportion, and books and nothing else.

On the other hand, in the Boston Public Library, Massachusetts, which is beautifully designed in its elevations and decoration, one has a building which is very unsatisfactory in its plan, especially from the librarian's point of view, and art, as such, is found in the wrong place. The famous "Abbey" frieze, which visitors to the library make a point of going to see, is in the Delivery Room, and through being placed here, forms a distraction and annoyance to those who are there for the set purpose of studying the books. A library should, from first to last, be a setting of books and every thing that detracts from this principle is out of place.

In semi-public institutions excellent and well-proportioned library rooms with the right book atmosphere are to be found in some of the more famous London clubs of the early 19th century, such as the Athenaeum, Reform (see page 340) and Travellers. These have had considerable influence on the design of modern libraries of today. The good points and general form of the famous reading room of the British Museum are seen influencing, in part, the design of such

famous buildings as the Library of Congress at Washington and Columbia University. It is to be noted with interest also, that the accepted designs for the new reference library at Manchester, and for Leeds University (see Article No. II), have the circular form.

As showing the importance of the librarian acting in close conjunction with the architect in planning important buildings of this class, the most successful public libraries of the present day in the United States such as Cleveland, Philadelphia are the outcome of the existence of this relation. Of admittedly well-planned buildings to mention only two, the British Museum reading room in London, (1855) and the New York Public Library (1911) were largely the development of a librarian,



READING ROOM—BRITISH MUSEUM, LONDON

*Designed by Sidney Smirke from sketches by the famous librarian, Sir Anthony Panizzi; built in 1855-57. The dome of the reading room is 135 feet interior diameter. The library is from its most cosmopolitan qualities, the most interesting in the world, and has no rival in this respect. It has 2,000,000 printed volumes, 56,000 manuscripts, and over 5,000,000 items in all.*

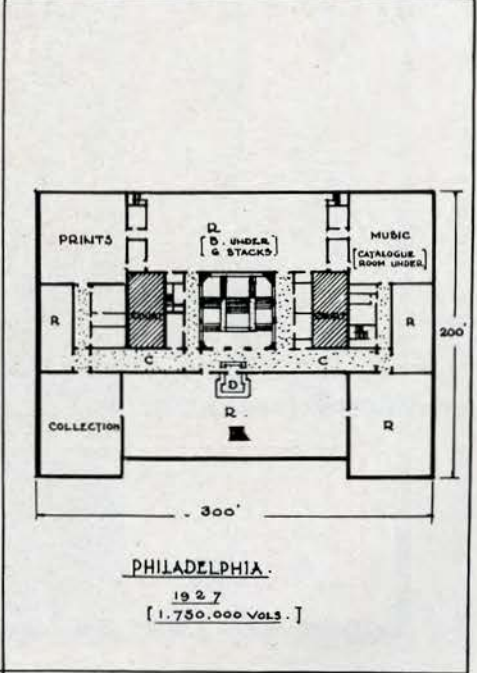
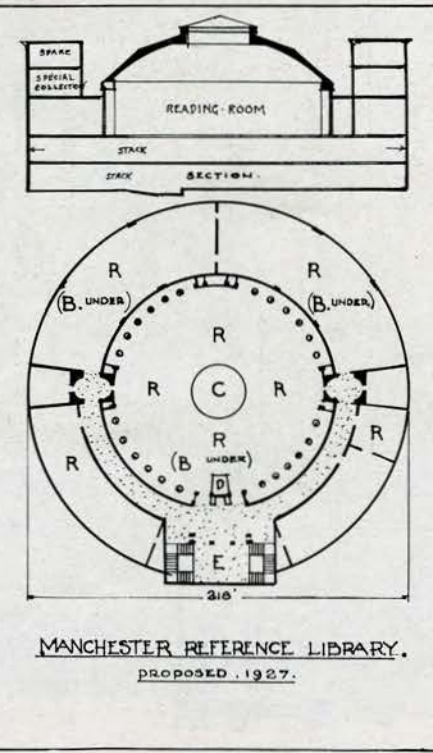
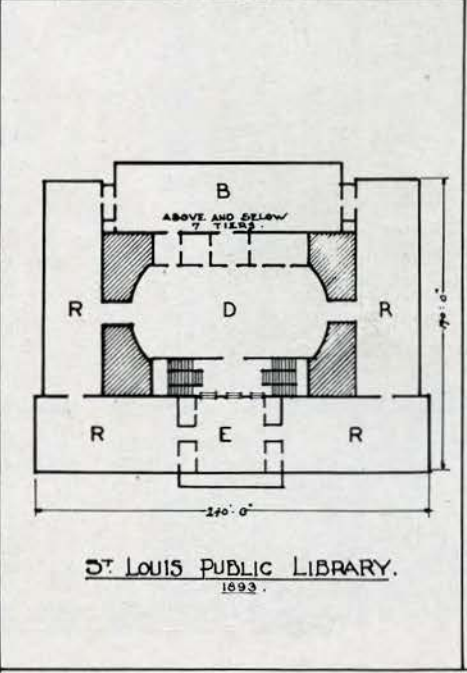
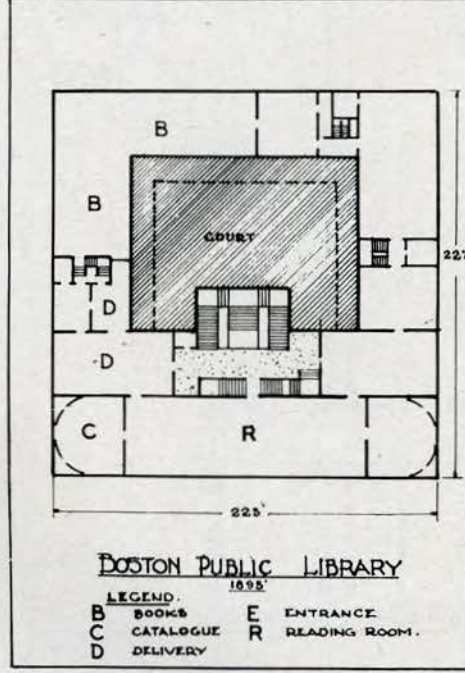
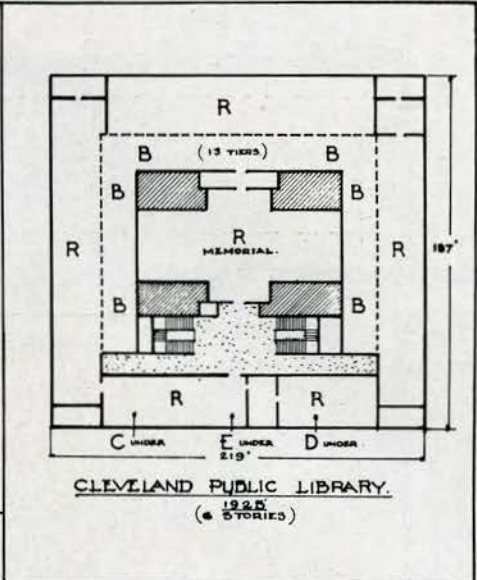
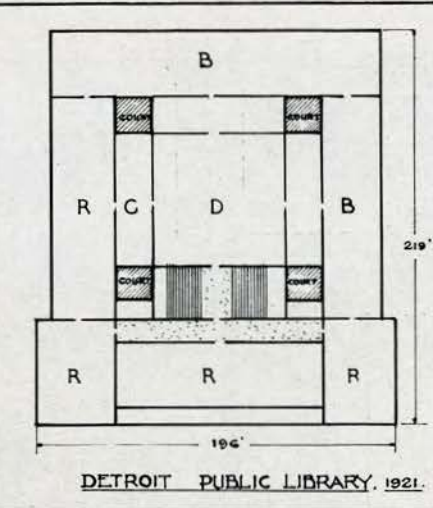
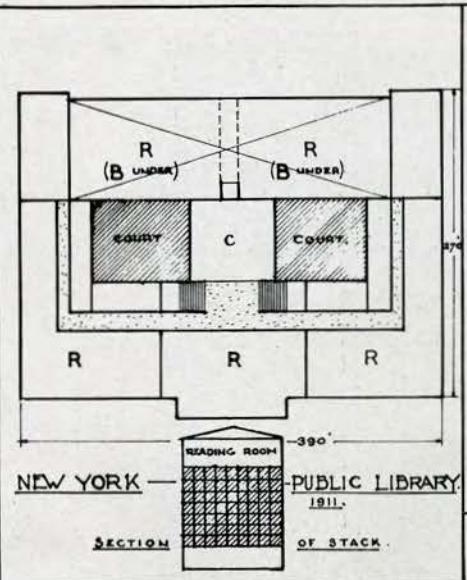
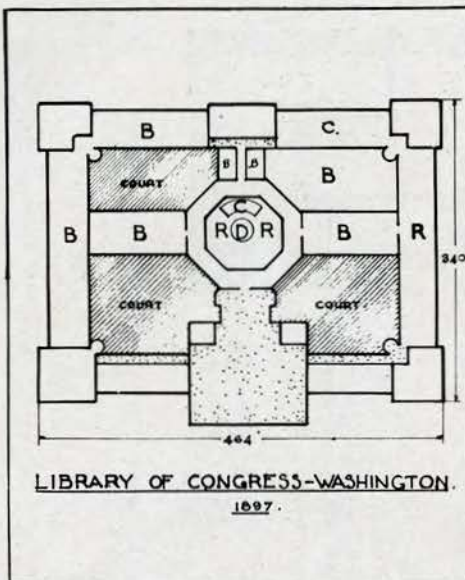
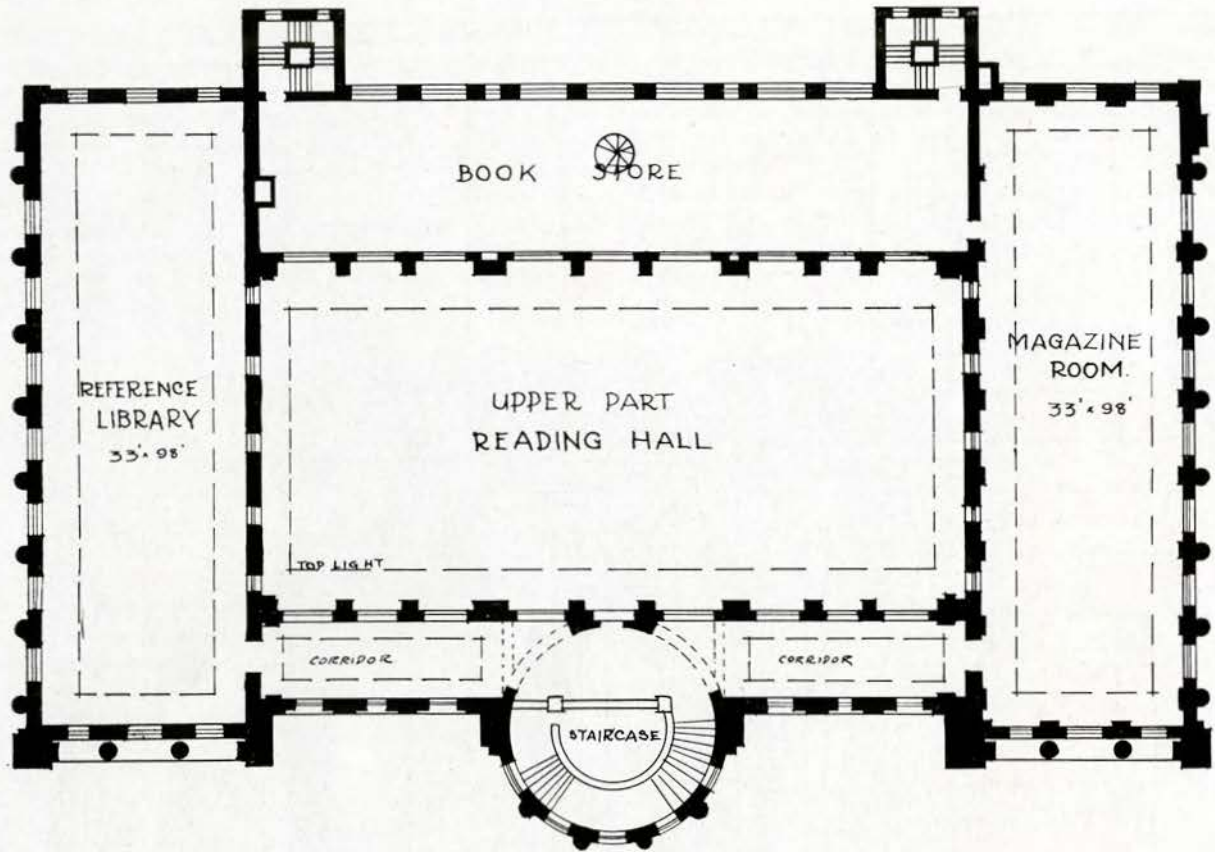


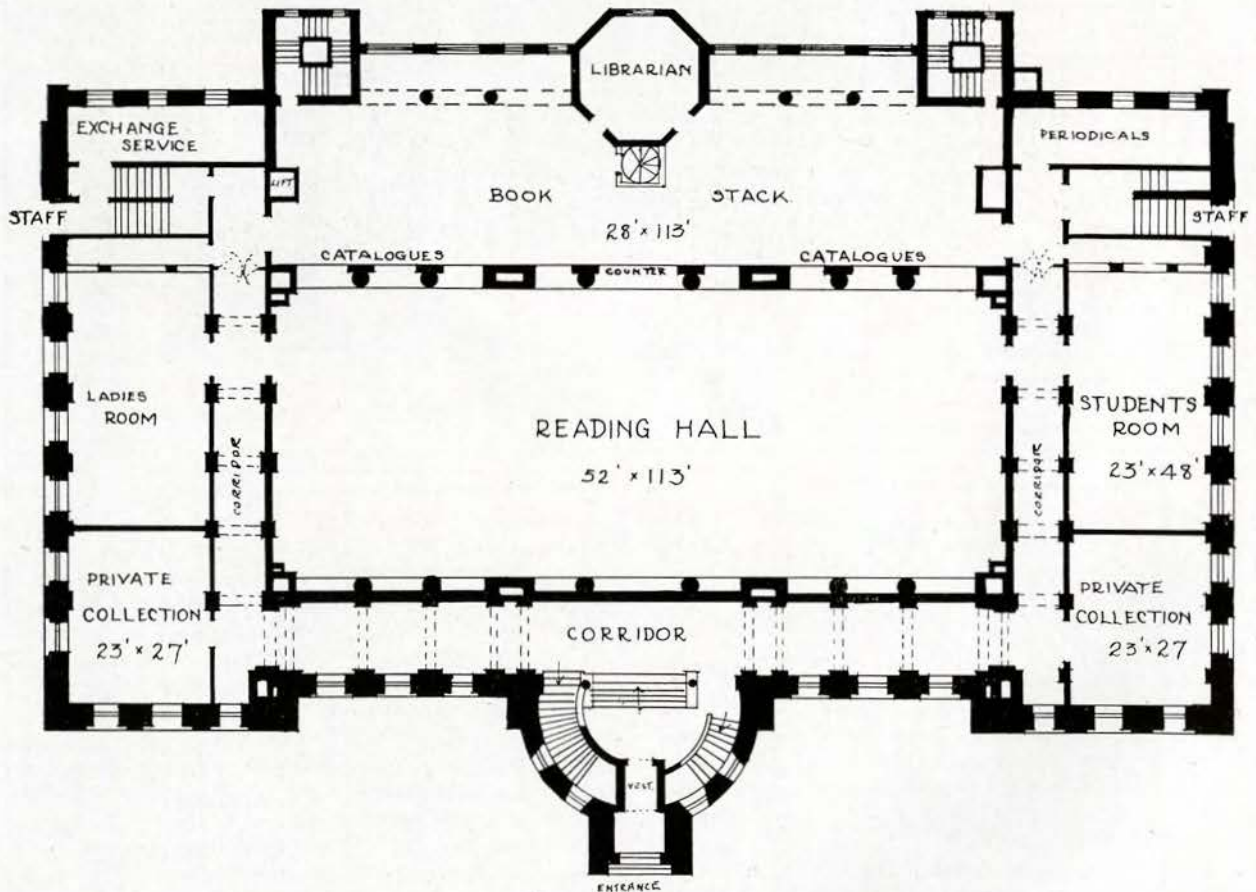
DIAGRAM PLANS—FAMOUS LIBRARIES

P. J. Turner, del.



FIRST FLOOR PLAN

SCALE 0 10 20 30 40 50



GROUND FLOOR PLAN

THE MITCHELL LIBRARY, GLASGOW  
Wm. B. White, Architect

Panizzi in the first case, and Dr. Billings in the other.

Amongst the economic considerations that enter into a plan, apart altogether from the expenditure of money for the construction of the building and its maintenance after erection, there are such vexed questions as the distinction to be drawn between the various classes of readers, and "these distinctions," as Mr. C. W. Andrews says, "sometimes require the balancing of directly contrary forces. Thus the time of children and of those who frequent the newspaper room cannot be considered as valuable as those of older and more serious readers, yet

It furnishes of necessity a maximum of well lighted space, but as it has eight facades it is expensive to build, maintain and heat but what is worse it gives the maximum dislocation of books, readers and staff.

The *circular* type is exemplified by the British Museum, the proposed new library at Manchester and the library at Leeds University. These have top lights and administration rooms and special departments placed round the large central reading room. Where one large reading room is the main requisite, this type has many attractive features.



READING ROOM—THE MITCHELL LIBRARY, GLASGOW  
Wm. B. White, Architect

*Built in 1911. A good straightforward plan (q.v.) The building is one of the finest examples of modern municipal architecture in the United Kingdom. Reading room is 113 by 52 feet, for 322 readers, and is entered by the public direct from the vestibule. The counter faces the entrance, behind which is a portion of the reference library, consisting of 40,000 volumes of the books most frequently in demand.*

it has been found advisable in the modern public library to provide for these classes space near the entrance." In the case of the children it is especially important, for it is obvious that they cannot expect to remain quiet if they are forced to travel a long distance from the entrance, and with regard to newspaper readers, a visit to that room will convince one of the undesirability of the frequenters of this place permeating the rest of the building.

A comparison of the economic advantages of the plans of some of the larger libraries is illustrated by the diagram on page 327.

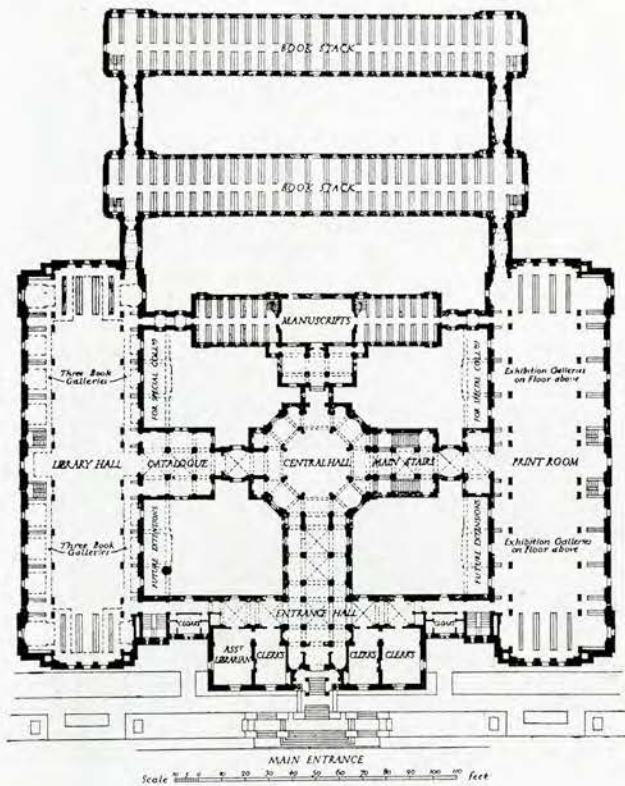
There is the *hollow square* which is common in Europe but the only conspicuous example in this continent is at Boston.

It is a natural solution to a problem of this kind and lends itself to good architectural treatment.

The Library of Congress is the best example of the *Greek cross inside a hollow square*. As the open spaces are not large they do not require elaborate ornamentation, and the cost of heating is less than the hollow square. The passages through the arms greatly facilitate the movements of readers and staff.

The New York Public Library when extended as the original scheme provides will also be of the same type.

The *rectangular with two light wells* finds favour in such libraries as Cleveland and at St. Louis where the four courts are connected and form two above the principal floor. This form seems to be



MAIN FLOOR PLAN

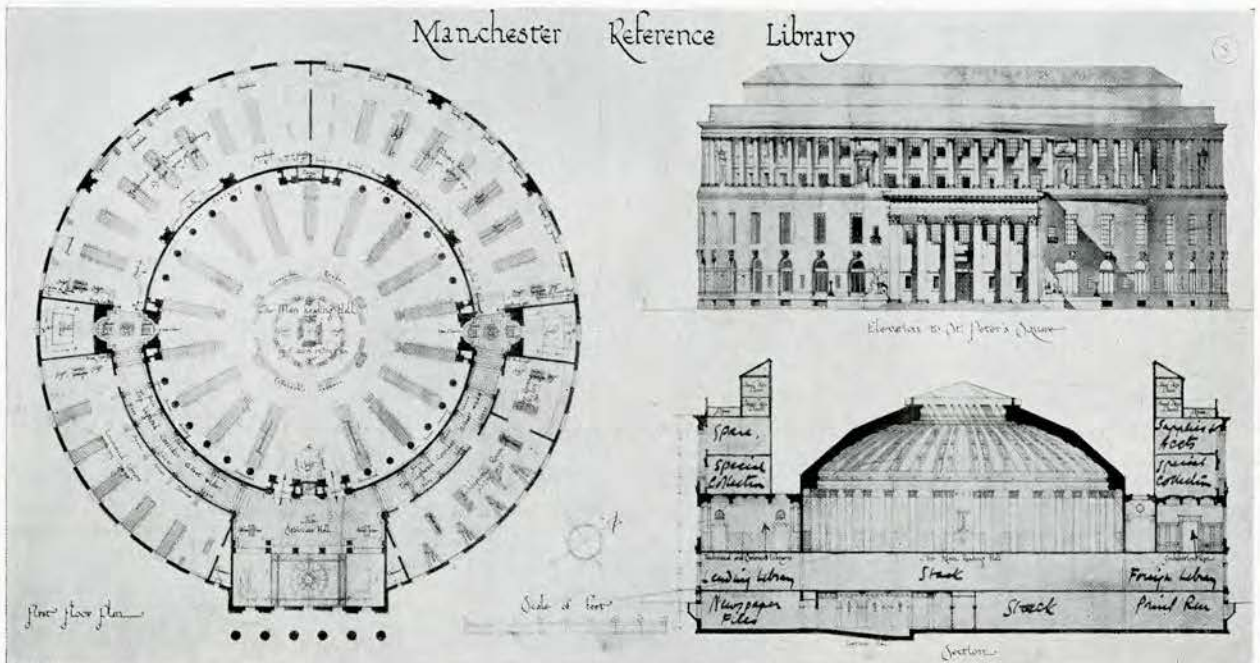
NATIONAL LIBRARY OF WALES, ABERYSTWYTH

S. K. Greenlade, Architect



INTERIOR OF THE LIBRARY HALL

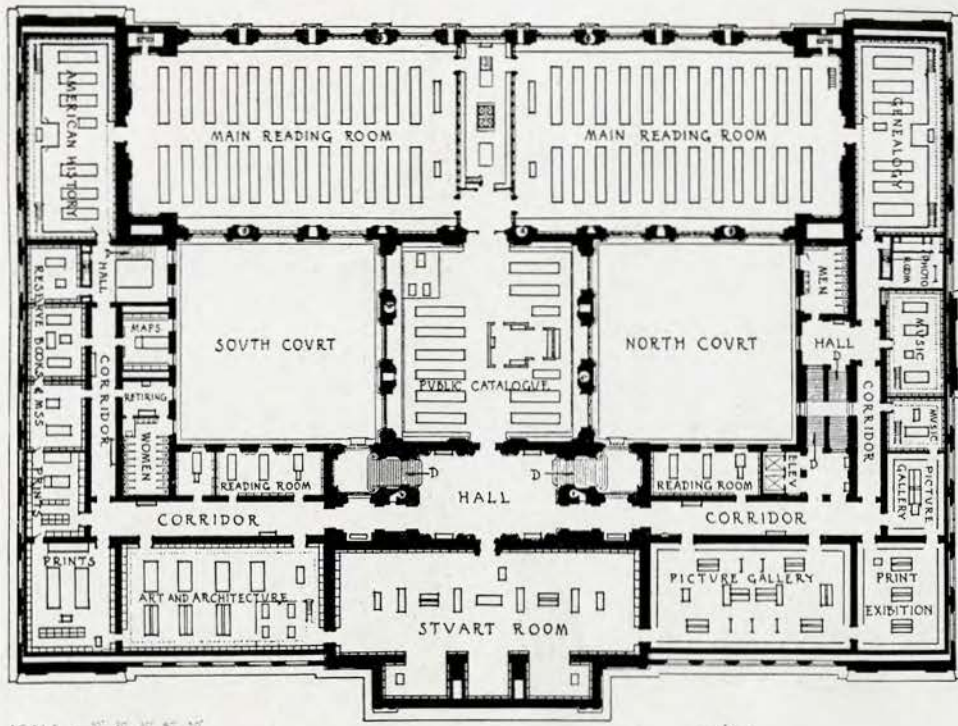
Built in 1914. Main building forms four sides of a square, with a frontage of just over 250 feet. The central hall, 42 feet diameter, gives access on one side to the great library hall, 165 by 47 by 38 feet high; this is provided with alcoves 27 feet wide; on the corresponding side is the exhibition block, with the department of manuscripts connecting the two at the rear. Accommodation has been made for building twelve special collection rooms when required. Total storage of the building will be just 1,500,000 volumes.



MANCHESTER REFERENCE LIBRARY, ENGLAND

E. Vincent Harris, Architect

This building illustrates the stack type advocated by the "verticalists" (see article). The two floors below the main reading hall contain the book stacks, lending library and workshop. The upper floors, which are carried entirely round the central court above the reading hall, are given up to special collections, order and cataloguing room, offices, library school, etc.

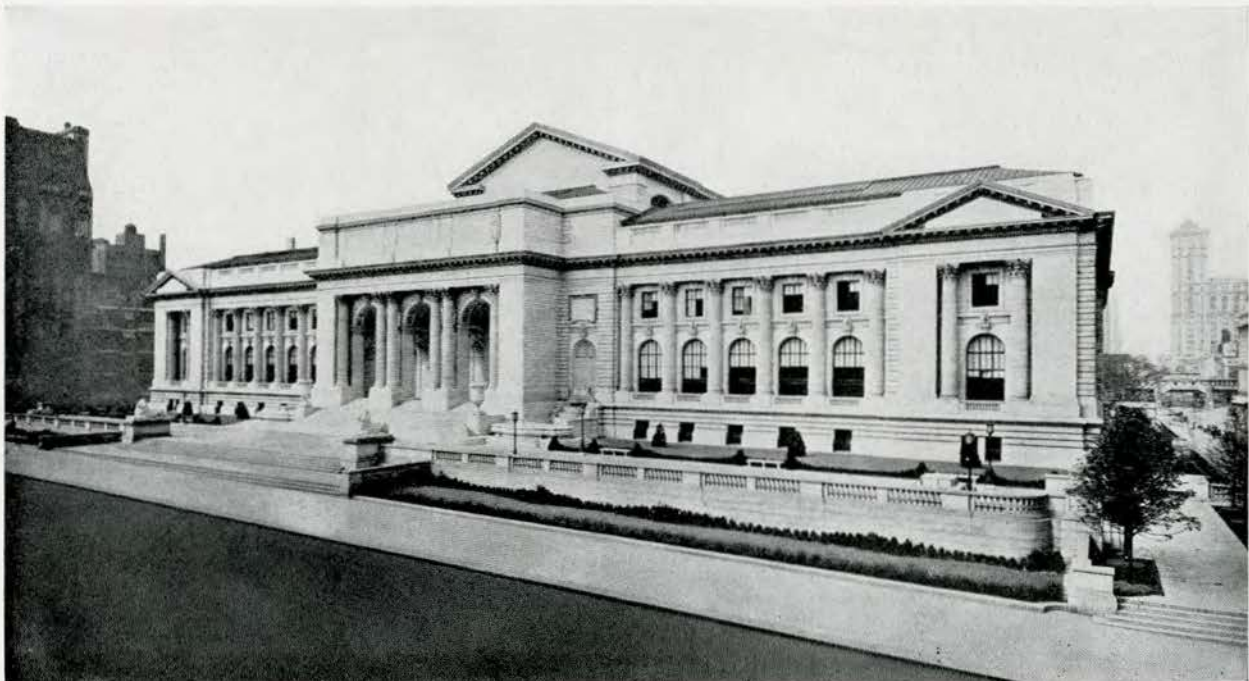


THIRD FLOOR PLAN—NEW YORK PUBLIC LIBRARY

*One of the finest monumental libraries in the world. It was opened in 1911 at a cost of \$9,000,000.*

*The main reading room, 274 by 72 feet, is 52½ feet high and the most spacious room in America. With a floor area of half an acre, it seats 768 readers. Situated at the rear of the building and high above the street, it is well placed clear of street noises.*

*The shelves on the walls of this room contain a collection of about 22,000 volumes and the stack below, which supports the floor, is seven tiers high, contains 63 miles of shelving and gives storage space to about 2,500,000 volumes.*



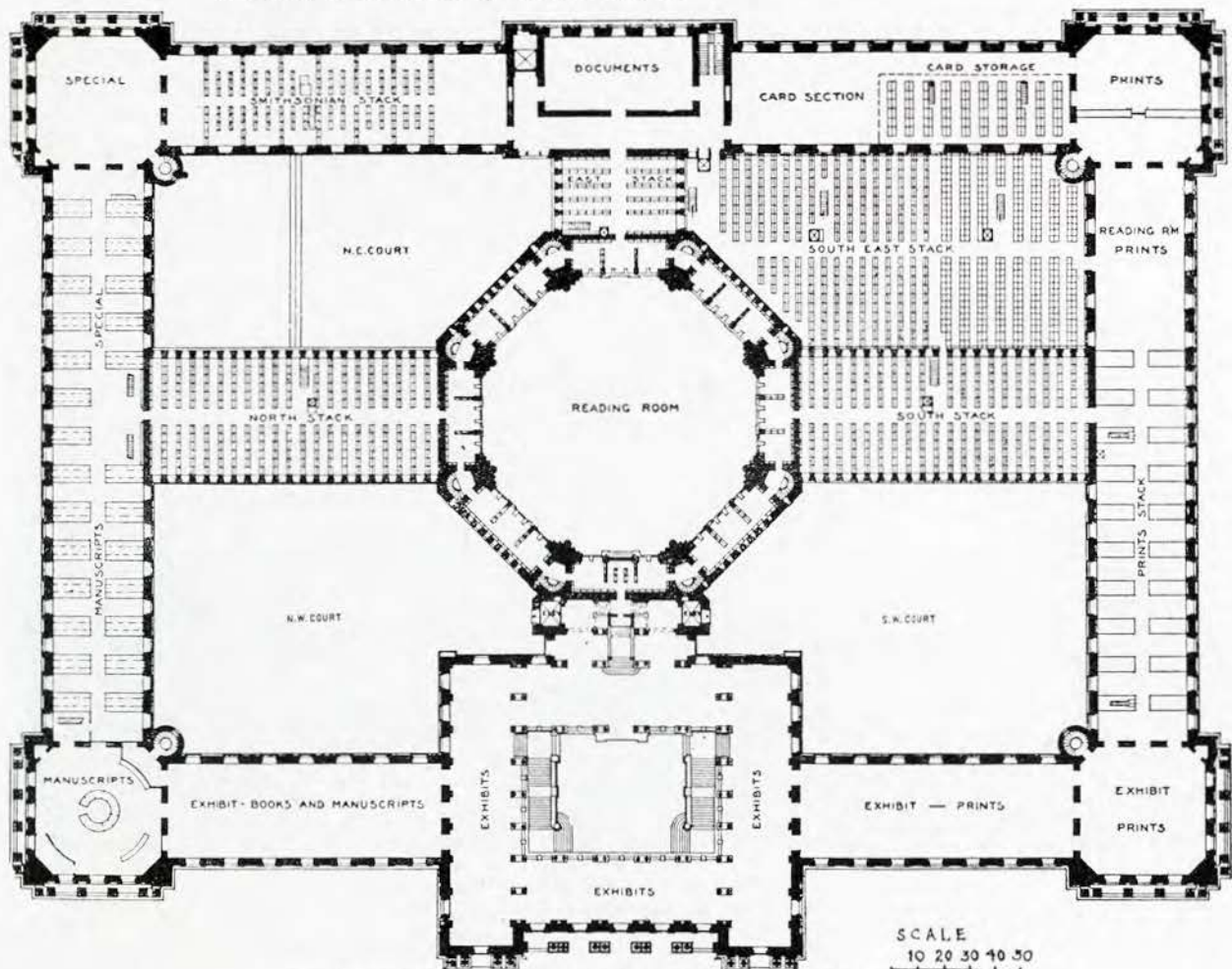
NEW YORK PUBLIC LIBRARY  
Carrere & Hastings, Architects





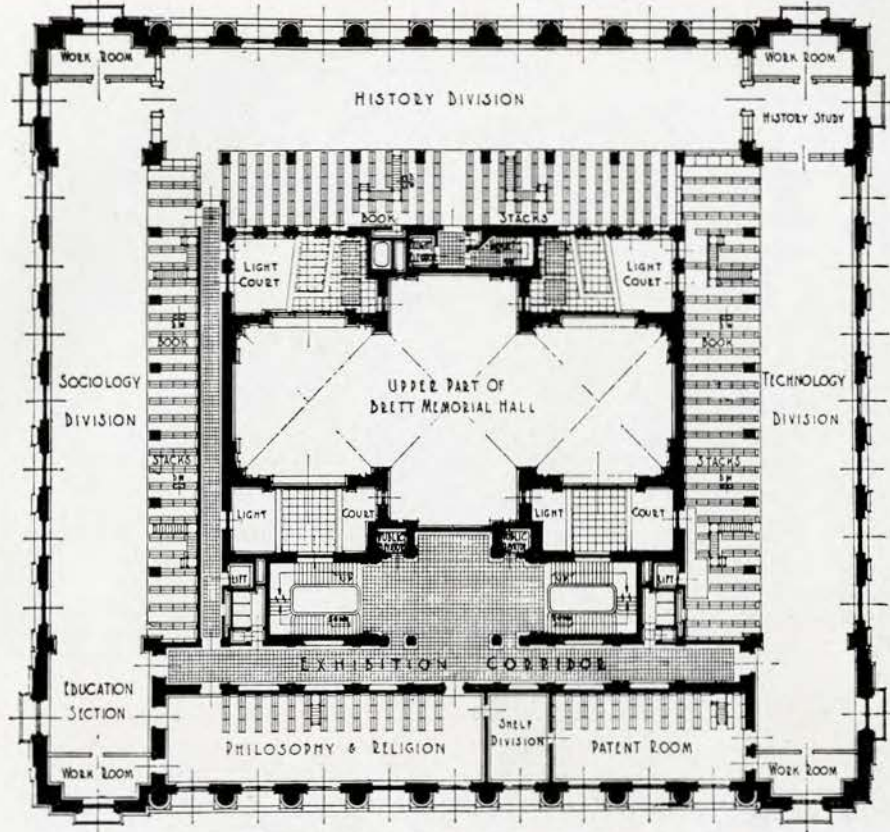
LIBRARY OF CONGRESS—WASHINGTON, D.C.

*Built in 1897. 470 by 349 feet. The central feature is the main reading room 100 feet in diameter and which is about 125 feet high to the centre of the dome. This room can accommodate 200 readers at one time. The four main stacks, which are nine decks high, have a capacity of 2,645,000 volumes.*



SECOND FLOOR PLAN—LIBRARY OF CONGRESS, WASHINGTON, D.C.

*Smithmeyer & Peltz, Architects*



SECOND FLOOR PLAN, CLEVELAND PUBLIC LIBRARY

*Cleveland Library is almost identical in size to the building at Detroit; 219 by 197½ feet. The inner court above the second floor is 78 by 114 feet, with four smaller courts extending down to the basement-floor level. The stacks are built around the court, the reading room being to the outside.*



CLEVELAND PUBLIC LIBRARY  
Walker & Weeks, Architects



INDIANAPOLIS PUBLIC LIBRARY  
*Paul Cret, Zantzinger, Borie and Medary, Architects*

*A clever adaptation of Greek Doric to a modern building with refined detail, and the right placing of ornament. Building is 120 by 92 feet deep.*

as good a type as any for public libraries in large cities.

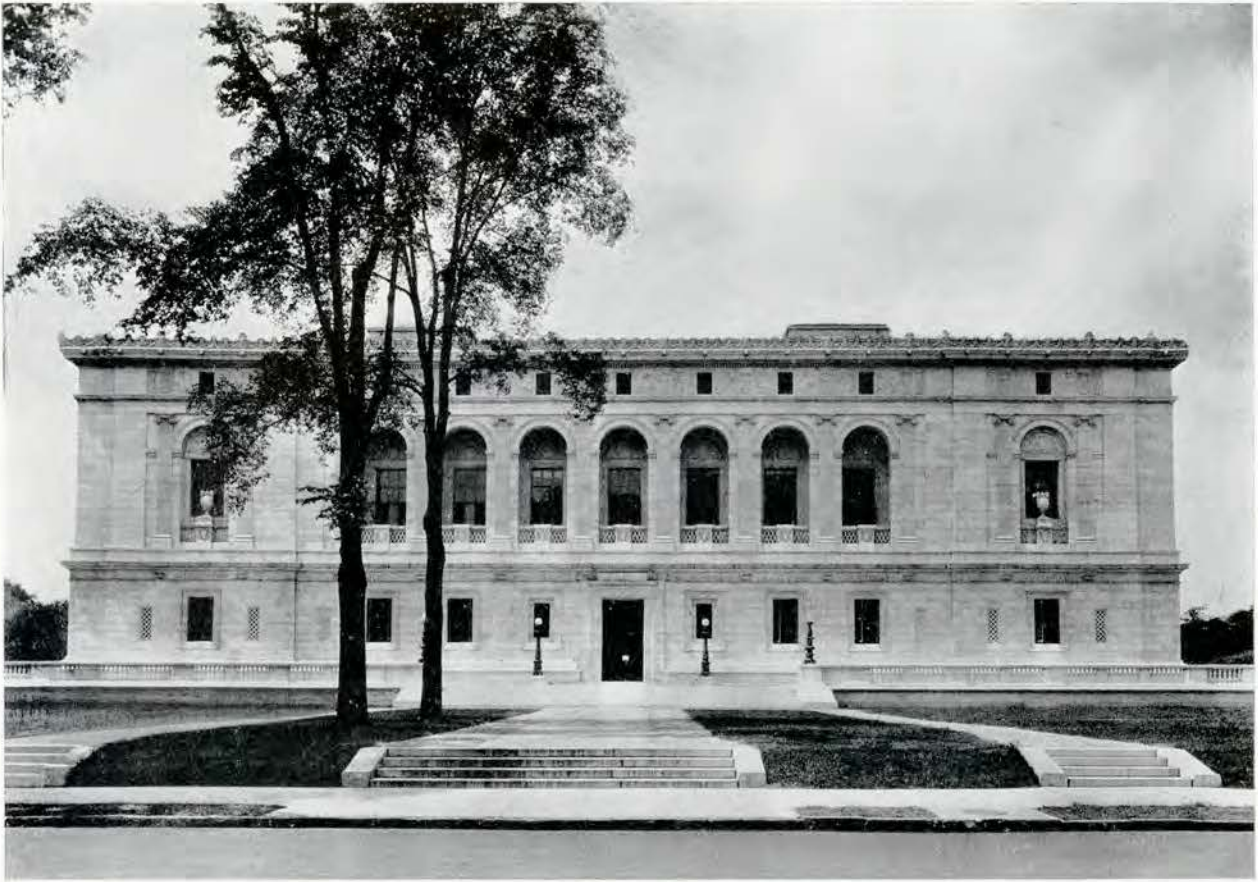
The recent completed library at Philadelphia is a very compact plan with two small courts, and Detroit another fine building has four courts of comparatively small dimensions.

It goes almost without saying, that all large public libraries should be placed on island sites, for a fine building deserves a fine setting apart altogether from the fact that allowance should be made for expansion. This has been invariably the



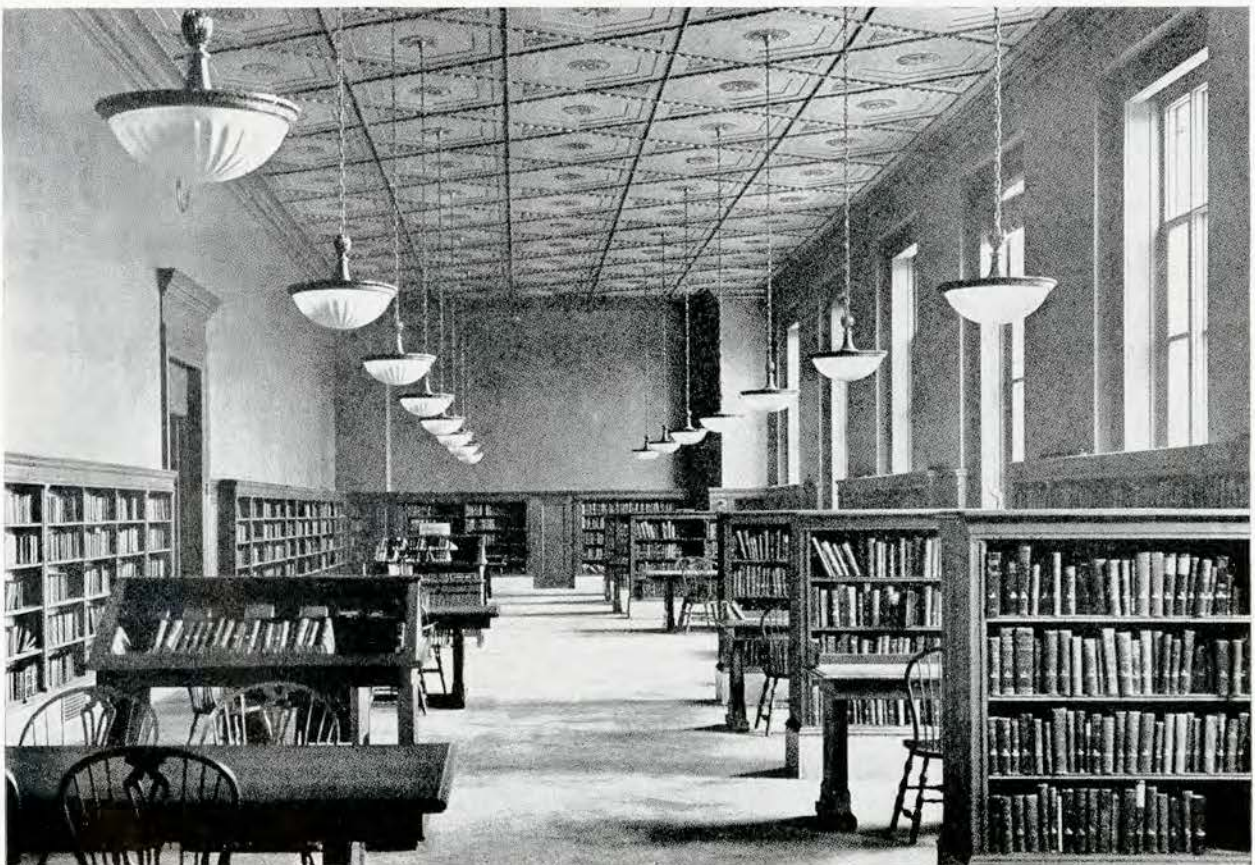
ST. LOUIS PUBLIC LIBRARY  
*Cass Gilbert, Architect*

*Built in 1893. The stackroom, seven tiers in height, has storage for about 800,000 volumes. It has an impressive, central delivery hall, top lighted. The stackroom, as is very usual in this type of building, is at the rear. Bridges across the two courts give access from the delivery hall to the reference room on one side, and the open shelf room on the other (see p. 327). On the ground floor are placed the children's and newspaper rooms.*

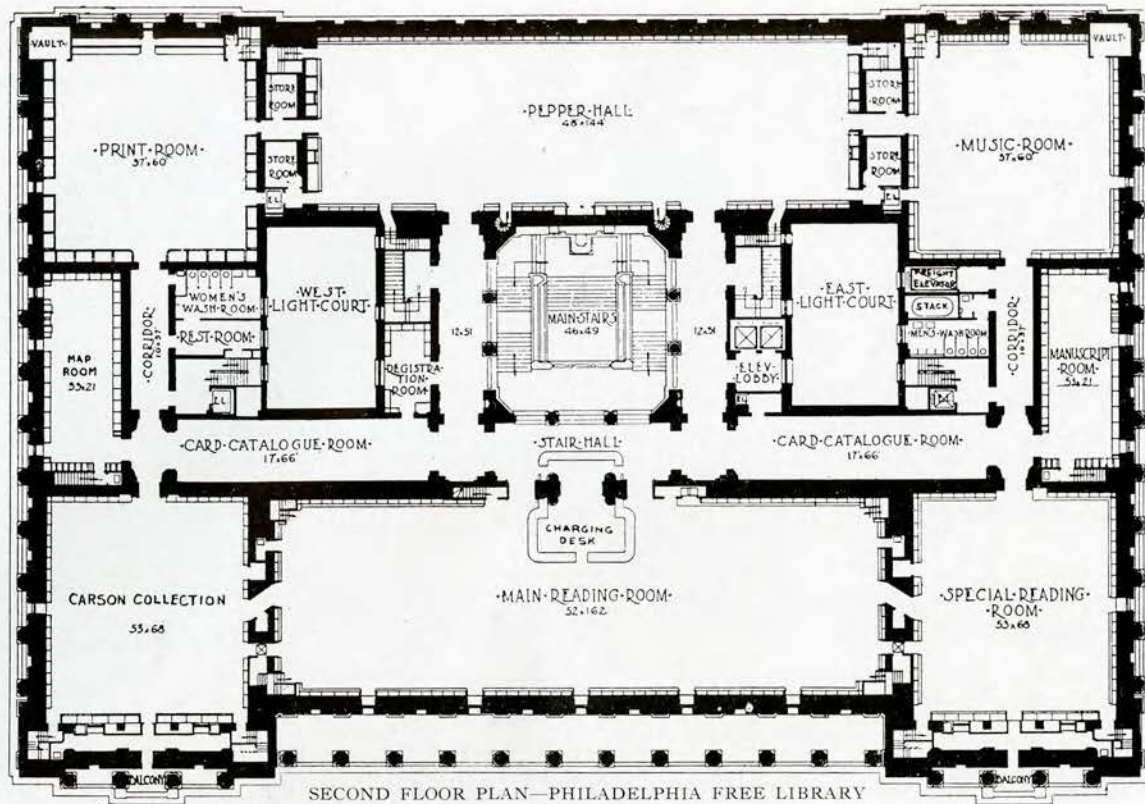


DETROIT PUBLIC LIBRARY

*Built in 1921 of white marble. Its cost was \$2,775,000, exclusive of the site. The building has a present capacity of 800,000 volumes. The showroom of the library is the great delivery room, 75 by 75 by 36 feet high (see p. 327).*



OPEN SHELF ROOM—DETROIT PUBLIC LIBRARY  
*Cass Gilbert, Architect*



Opened in July, 1927. One of the most recent and best-equipped libraries in the world. It has a frontage of 300 feet and a depth of 200 feet.

All the equipment shelves, furniture, etc., are of metal, the library having a capacity of 1,750,000 volumes.

The main reading room is 162 by 52 feet, with a balcony all round and a book capacity of 30,000 volumes.

The total cost of the site, building and furniture was \$6,300,000.



PHILADELPHIA FREE LIBRARY  
Horace Trumbauer, Architect

rule adopted in the United States. In England, however, on account of costly land values and difficulty in obtaining central sites, library buildings very rarely have the right setting, and fine buildings usually rise up sheer from the street front and are shorn of half their effect as a consequence. The John Rylands Library at Manchester is a tragic example of this, a fine building which one hardly notices until dead in front of it.

It is not so many years ago that the reading room was the ruling factor in deciding on the plan of a library building, now-a-days it is the stack room that holds first place.

In the older libraries the books are stacked on shelves in the reading room, now a separate book-

heights of ranges, etc., and it is manufactured by a few specialists in this type of construction from whom useful information on such particulars can be obtained.

Mr. Edward L. Tilton in the "Architectural Forum," of December 1927, gives some interesting figures as to costs and capacities of bookstacks. As a general guide 20 volumes may be assumed to require an area of 1 sq. ft. i.e., where only one tier of seven shelves is provided, forty volumes if two tiers are installed, sixty if the stack is three tiers high and so on.

Consequently if a library wishes to store in the stackroom 500,000 books it may be assumed as a general guide that the floor area or size of stack-



PEPPER HALL—PHILADELPHIA FREE LIBRARY  
*Horace Trumbauer, Architect*

*Pepper Hall, a fine room 144 by 48 feet, placed directly over the book stacks. It has 25,000 volumes distributed on its shelves.*

store of ranges of shelves rising one above the other is the general rule. This special form of construction of the steel shelf and the vertical bookstack with its range of hand high shelving, resting on nothing but itself, has revolutionized the idea of the bookstore and affected materially the plan of library buildings.

This bookstack department must in a properly planned library be in organic and intimate connection with the other parts of the building which it serves.

This storing of books in a separate department instead of on shelves on the walls of the reading rooms has affected materially the planning of library buildings during the last thirty years. The process has been a gradual one and it is still being developed.

The shelving itself has become more or less standardized as to spacing, widths of aisles,

room—one tier of seven shelves in height—would be 25,000 square feet or 500,000 divided by twenty, if 2 tiers in height divide by forty, if three, divide by sixty, and so on.

As the weight of each tier with its complement of books can be figured at 125 lbs. per square foot, and two tiers high will be 250 lbs., one can understand the heavy weights these steel frames of bookstacks have to carry when they rise many tiers in height. Working on such a basis the stack at the new Sterling Library at Yale University which is to be 16 stories high would figure out at 16 by 125 lbs. or 1 ton per square foot over the whole area.

As a fairly reliable guide the standard form of stackroom may be figured to cost with shelving, floors, etc., complete, fifty cents for each cubic foot.

Mr. Tilton gives the following general rules regarding the design of stacks which are of service to anyone who has to make a selection from the

different types obtainable, all of which have their respective good points:—

(a) Narrow upright supports between shelves make for economy. The space of a half-volume gained means  $1\frac{1}{2}$  to 2 per cent increased volume capacity; that is 1,500 to 2,000 volumes additional in every 100,000.

(b) The provision for electric wires and switch plates on the stack ends is a point to be observed.

(c) The method of support for the electric con-

ducts which permits an appreciable increase in volume capacity.

(g) The shelves are usually made of solid sheet steel, but there is also a shelf consisting of a parallel series of inverted U-shaped sections, connected with separators, which is stiffer than the plate shelf and which is often used.

(h) The ventilating slit below the bottom shelf, at the floor, should be vertical, not horizontal, as it is in the older stack types (see p. 341).



LOS ANGELES PUBLIC LIBRARY  
Bertram G. Goodhue, Architect

*Built in 1926. In this building this great architect gives of his best, and has produced a design, Spanish in type, that is distinctly refreshing, as being less formal in character than those found in most cities.*

*The stackroom has been decentralized, and arranged in four sections adjacent to the departments which they serve. Mr. Perry, the librarian states: "We discarded the usual interior arrangement and substituted a plan which makes ours unique among libraries of the country with the exception of Cleveland which, though dissimilar in detail, furnished part of our inspiration. The main three-storey building is 200 by 209 feet, it has book capacity of 1,212,500 volumes and cost, with equipment and furniture, \$2,300,000.*

*The building, in its clever massing and proportions, is frank to the last degree. Limited as to cost for so large a building, Mr. Goodhue has designed a building where plain surfaces devoid of ornament predominate. Column arches and a dome of the original scheme have disappeared for pylons, lintels and a square tower, and the building is distinctly very satisfactory and expressive of its purpose.*

duits along the stack ceiling is important. They should not be wired to small beams but holes should be drilled through the beams to support conduits.

(d) Many stacks are finished green, the color baked on. It is possible, however, to have the stacks finished in cheerful, light tones, though they soil more easily with the constant use they receive.

(e) If several superimposed stack stories are required, some makes of stacks are to be preferred.

(f) The usual length of shelves is 3 feet, but there is an alternate length of 3 feet 6 inches,

(i) The shelves should be adjustable every inch in height. The story height from floor to floor of each tier should be approximately 7 feet 6 inches, in some cases it can be 7 feet. Less than that allows insufficient headroom for the ceiling lights in the gangways. The heights given admit of seven shelves with an average spacing of 11 inches and permit the lowest shelf to be raised above the floor with a vertical ventilating slit, and also allow for thickness of supporting steel and flooring of the tier above, which are important details.



REFERENCE ROOM—LOS ANGELES PUBLIC LIBRARY  
*Bertram G. Goodhue, Architect*

(j) For the stack flooring avoid glass, once much used from a fallacious idea that it admitted light to the upper shelves of the tier beneath. The light reflected from white marble, painted concrete, or similar flooring is better."

The two general types of metal stack are illustrated in the diagram shown on page 341 and though the "bracket type" is a little more economical it is not so serviceable or good looking as the "standard type."



NEWSPAPER ROOM—LOS ANGELES PUBLIC LIBRARY  
*Bertram G. Goodhue, Architect*



The small section that accompanies the diagram plan of the New York Public Library indicates clearly the position of this world famous reading room, which is built over the seven floors of book tiers that form the stackroom (see p. 327).

The stackroom at the rear of a square or rectangle is a very usual form in the American library plan. It is to be seen at St. Louis and Detroit where the stackroom is 7 tiers in height. At Philadelphia it is 6 tiers in height, the fine reference room known as "Pepper Hall" being placed over the stackroom, in a similar way as the main reading room at New York.

The public library at Cleveland (1925) six stories in height has adopted a plan which is a radical departure from the hitherto accepted practice of a main stackroom extending from basement to roof.

"In place of this time-honored scheme, the plan devotes practically the entire perimeter of the building to reading rooms, with a belt of stacks immediately inside the reading area, separating the reading rooms from the central area of the building. In addition to this, the floors throughout have been designed of sufficient strength to carry a double or triple tier of stacks, according to the height of the story. By this provision stacks can be placed



LIBRARY—REFORM CLUB, LONDON, ENGLAND  
*Sir Charles Barry, Architect*

*Built in 1837. The club has always maintained a literary atmosphere which is realized at its best in its splendid library. This room is of excellent proportions, 108 feet long by 25 feet wide. The detail is virile and individual. The window over the chimney-piece on the left looks into the central hall.*

In the Library of Congress (1897) which is almost a square the original bookstacks connect up the main octagonal reading room with the smaller reading rooms and as placed are of immense service to the fine central main room.

This monumental library building has suffered for want of sufficient book storage, and already two of the original light courts have been given over to additional stackrooms.

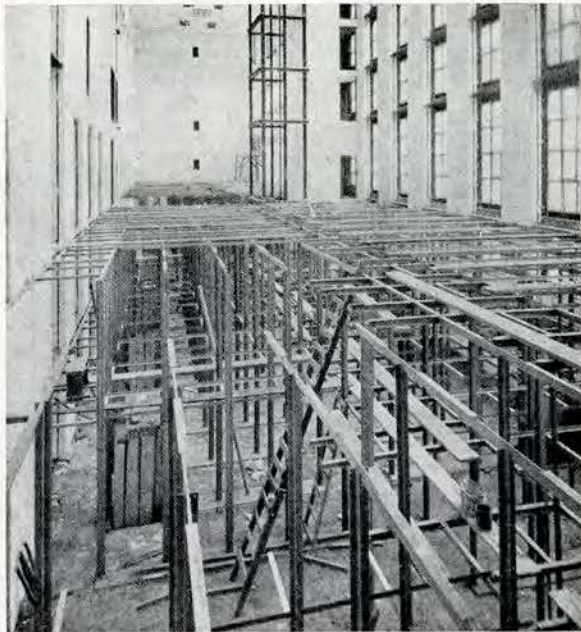
One appreciates the fact that the purely utilitarian type of building that has grown from the requirements of the stackroom, has given the architect an opportunity to develop a distinctive library style so far as the departments containing the stacks of books are concerned.

The long vertical lines on the elevation with the small windows lighting the aisles of the bookcases have been very effectively treated in such buildings as Detroit, Washington, New York and elsewhere.

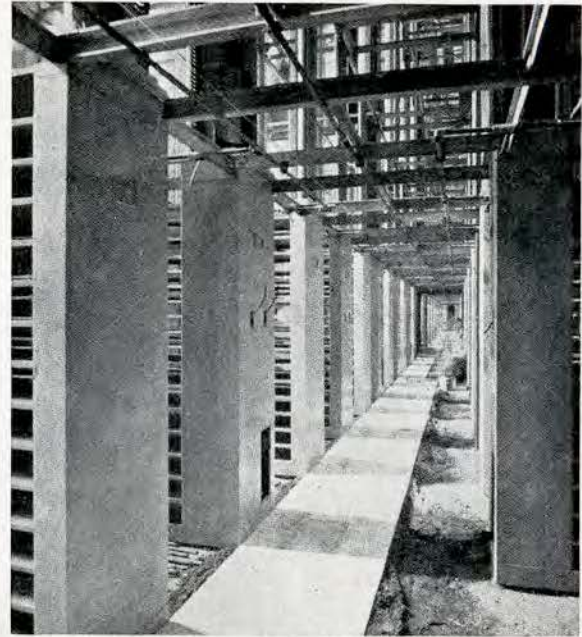
in any desired location, bringing the books on each floor adjacent to the places where they are to be used, and making a general open shelf policy practicable.

"There are in all thirteen tier levels of bookstacks supporting 250,000 linear feet or over forty-seven miles of shelving. The books are shelved in a divided arrangement according to subject. The building contains sixteen reading rooms, some of them being from one hundred to nearly two hundred feet in length."

The lighting of these rooms is very efficient, as the bookstacks are on the inner side of each room. Such a library requires naturally, a large income to administer and this means a very competent and efficient staff to supervise the large number of reading rooms, the cataloguing of the books as well as placing them according to their right subject in the various reading rooms. It is of interest to



Erecting the framework for stackroom



Beginning the installation of book shelving

DETROIT PUBLIC LIBRARY

note that the one large general reading room entirely loses its preeminence at Cleveland and that the Brett Memorial Hall given up to periodicals entirely occupies the central position.

The overall sizes of the libraries illustrated by the diagram on Page 327 are as follows:—

		(Feet)
Library of Congress, Washington	1897	464 x 340
Boston Public Library	1895	223 x 227
New York Public Library	1911	390 x 270
St. Louis Public Library	1893	240 x 190
Detroit	1921	196 x 219
Cleveland	1925	219 x 197
Manchester (England) proposed	1927	318 dia.
Philadelphia	1927	300 x 200

In practically all the large libraries on this continent it will be noticed that the relationship of bookstacks and reading rooms is a horizontal one, that is, the floor of the reading room is on the same level as one of the ranges of the stack.

Mr. Jast, of the Manchester Public Libraries, contends that the ideal relation of the stack to the public services is the *vertical* relation. This is exemplified in the reading rooms of the New York Public Library and also at Philadelphia. But it exists in both examples only in the case of one reading room, and the special libraries and other rooms have no such intimacy with the stack.

An interesting development of this principle is to be found in the accepted designs for the new Manchester Reference Library and also for the proposed Leeds University (see Article II). The stackroom in these examples has been continued for the whole area of the building under the main floor. In this way it is contended by those who advocate this position for book storage, that the more books you can store on one level the better, in a word that breadth of stack is more convenient than height. To put the proposition in another form it is agreed that the better way is to store the books horizontally *through* the building rather than concentrating the books at the rear of the building.

There exist among librarians advocates of both systems, and one might refer to them as the "hori-

zontalists" and "verticalists" and though the former have had things pretty well their own way up to the present, there are certainly many good features in the "verticalists" programme which no doubt will affect library plans in the future.

In the diagram section of the Manchester Library it will be noticed that a certain convenience is occasioned and economy of labour secured by this method. Formerly ventilation and the lack of natural lighting would have been considered an objection to this system, but this does not carry much weight now-a-days when natural lighting is not by any means an essential.

Plans for libraries are always changing and from the point of view of economy experts are seriously considering the advisability of having certain of the departments that go to form the whole work of a library located *away* from the main building together with many of the less used books.

In the heart of a large, growing city it can readily be understood that it is economically unsound to store books that may be referred to only once or less in six years. Very often such books will be occupying in floor area thousands of square feet of land that may be worth fifty dollars and more a foot, and such storage becomes then absurdly expensive.

Consequently, the plea made by Professor Eliot of Harvard in 1900-1, that books in the older libraries would be better reclassified as "live" or "dormant," and that the latter group should be housed in a special storage structure of simple construction on relatively cheap land, is a good one.

Though the suggestion did not find favour at the time, owing to the absence of any easy and rapid transportation between a central library building and the cheaper bookstore placed a mile or so away, the motor-truck of the present day has overcome the objection.

Providence, R.I., following out the idea, has recently adopted such a scheme by purchasing an old building and making it fireproof, and have now a bookstore located away from the Central Library in which they can store "dormant" books at about

ten cents a volume, that formerly cost approximately a dollar a book, when under the roof of the main library.

The tendency at the present time is for other departments that are at present housed in the Central Library to find accommodation outside its walls. Take the bookbindery and printing departments for example. No printing establishment, running on an independent business basis, would find it practicable to maintain its plant in a granite building on a main street of a great city, as the rent would be prohibitive, but some public libraries can and do, and the same applies to repair shops, garages, etc.

Cleveland has set a good example, by establishing its workshop and garage elsewhere than at the main building, so planning the garage that it will provide an overflow book storage space to the Central Library whenever that becomes necessary.

No doubt other libraries will be adopting, as time goes on, the example set by Cleveland and Providence.

As the librarian of Providence said at the recent American Library Association Conference at Washington:

"The past half century has witnessed the beginning of the breaking down or the decentralization of the big single library, and the next half century will be characterized by a further breaking down of other administrative activities of the Central Library. Book storage is, of course, the most important and the biggest of all influences. But others—bindery, printing plant, repair shop or garage—will all pass under careful scrutiny as they cling tenaciously to their traditional places."

Libraries will grow and expand in their activities and they are not exempt from the operations of the universal law of evolution under which organisms develop from the simple to the complex. What exactly will be the form that this growth will take in the future it is hard to say, but the provision of some space, at all events, beyond current requirements is a reasonable precaution to take at all times. If the ground is too limited to permit of the building being added to, a necessary safeguard will have been made against the too rapid arrival of that bugbear and snag of all libraries, congestion.

*NOTE—Descriptions and illustrations of Canadian Libraries have appeared in former R.A.I.C. Journals as follows: Toronto Public Library (May-June 1926); Montreal Public Library (July-Aug. 1926); Edmonton Public Library (July-Aug. 1926).*

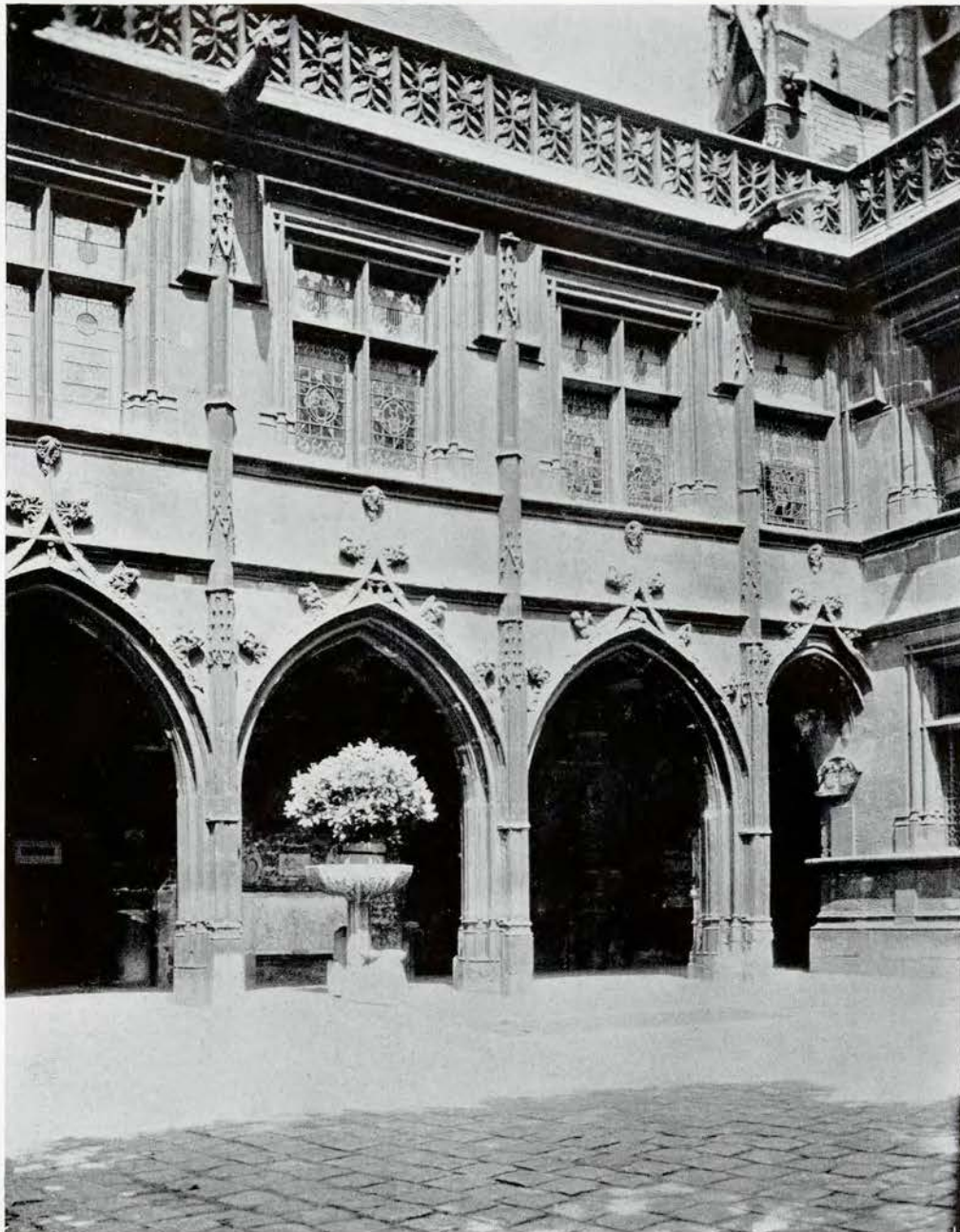
#### BIBLIOGRAPHY

- "The Planning of a Great Library"—(L. Stanley Jast, Libraco Ltd., 1927).  
 Special Library Number—(Architectural Forum, December, 1927).  
 Economics of Library Architecture—(C. W. Andrews, Library Journal, May, 1921).  
 Library Planning, Bookstacks and Shelving—(Snead & Co. Iron Works Ltd.).  
 Planning the Library for Protection—(Art Metal Construction Co.).



EUROPEAN STUDIES  
From Photographs by F. Bruce Brown, M.Arch.

NUMBER XLVII



DETAIL, MUSÉE DE CLUNY, PARIS

## EUROPEAN STUDIES

From Photographs by F. Bruce Brown, M.Arch.

NUMBER XLVIII



DETAIL, MUSÉE DE CLUNY, PARIS

## Five-Day Week for the Building Trades

ACCORDING to a United Press despatch more than 60,000 workers in various crafts of the building trades in New York will be granted a five-day week, as a result of an agreement recently promulgated between the Building Trades Employers Association and the Building Trades Council. In this connection it is interesting to note that the Building Trades Council of Vancouver has approached the Architectural Institute of British Columbia with an enquiry as to their attitude concerning the adoption of a five-day week for building trades craftsmen in the cities on the Pacific coast.

It is claimed that Saturday morning work is both unsatisfactory and uneconomical for the contractor, and that the five-day week would provide employment for more craftsmen, without increasing the cost to the owner. The Architectural Institute of British Columbia has given much thought to the matter, and has advised the Building Trades Council of a resolution unanimously adopted by their council, about two months ago, favoring the adoption of the five-day week.

As the matter is of considerable importance to the profession, the full text of the reply to the enquiry is printed herewith.

MR. W. PAGE, Secretary,  
Building Trades Council,  
531 Beatty Street,  
Vancouver, B.C.

Dear Sir: Replying to your letter in which you enquire concerning the attitude of the council of the Architectural Institute of British Columbia on the problem of the adoption of the five-day week for Building Trades craftsmen.

I should first, perhaps, inform you that the council of the Architectural Institute of B.C., in order to save duplication of officials, is also the committee in charge of the chapter affairs for the Lower Mainland, representing about 65 per cent. of the members of this Institute, so this reply is from both the Institute and the local council.

From time to time during the last two or three years my council has considered the question of the five-day week, and about a month ago, by unanimous resolution, declared that it was in favor of its adoption by all branches of craftsmen comprising the building trades, in this district, just as soon as existing agreements are fulfilled.

The curious condition that building trades craftsmen do not get as many days' work per year in this district in this very favorable climate as they do in districts where there are long periods of heavy frost, has always been a matter of comment as far back as the writer can remember (1888). It is a condition which is so often the cause of a craftsman having to take any kind of job in order to make a living, and is very detrimental to the development of a high order of trades craftsmanship. It is clear that the five-day week, when applied to a job that has to be completed on a contract date, will mean the employment of ten per cent. more men (or a man having ten per cent. more employment) without adding to the cost of the operation.

In other words, a job that takes ten men to accomplish in five and one-half days, as arrange-

ments exist today, will be accomplished in five days by eleven men.

For some time it has been a matter for discussion amongst the architects as to the very unsatisfactory results of the Saturday morning work. Of course a certain amount of work is always done, but the accomplishment never seems to stack up against the production of any other half day. It is absolutely unsatisfactory for some of the building trades to work Saturday morning and for some not to work—because in modern methods of construction the building trades must synchronize, and in many process details interlock, and if some trade is not on the job when it is wanted there is a monetary loss, which always falls on the owner, notwithstanding some contractors would like the owner to believe that they absorbed this loss. Of course, on certain occasions of specific contract, they may do so; but it is not often, especially as the trend of business seems to be to grant the contractor a fixed sum of percentage on costs for the use of his services, organization and plant—and so all losses which occur when work is delayed from some trade not being on the job falls on the owner.

Of equal importance, with the technical service of preparation of plans, details and specifications, is the common law duty of protection of the owner's interest by the architect, which, amongst other things, involves co-operation with the craftsmen in an endeavor to obtain the quantity, quality and nuance of the work called for in the plans and specifications, which the owner is purchasing, and on the measure of this co-operation depends the success or failure of the design both in its artistic realization and craft workmanship—so that, in the opinion of my council, any rearrangement of the hours or conditions of labor that will produce improvement, or economy, in the intricate operations of building processes, will be found to be of benefit also to the owner.

In the adjustment of any labor matters the building crafts in all trade union subdivisions should remember that the conception of a building operation and the arrangement for money to pay for wages and material are the function and duty of the owner, and not of the contractor, and the owner's opinion on labor matters can be obtained from any organization of architects, hence, as representing the owner in building operations, our opinion in these matters is of more importance than that of any group of contractors, whose function, whilst necessary and worthy of proper remuneration, is only one of organization and the supply of plant, with a private speculation on a rising and falling material market for a little additional profit on the side. The material supply firms should not be considered. Their function is to supply the material specified at market prices, and they have nothing to do with the craftsmen on a building or how many hours they work, or their remuneration.

Modern processes and material have increased building production, notwithstanding the reduction in the hours of daily labor which have steadily decreased during the last twenty years, as it has increased the production of other commodities.

It is also very interesting to note that the cost of building does not seem to have much effect on

the volume of work. Take the statement compiled by the Associated General Contractors of America, as published by the United States Department of Commerce, Survey of Current Business, February, 1929, pages 64-65 (being the latest half-yearly book)—the unit cost of building in 1913 is taken at 100, the unit cost for 1928 is 199—about double the cost.

The construction volume for 1913 is taken at 100 and the volume is 197 for 1928, or about one per cent. less building in 1928 than in 1913; this on a Canadian and United States building programme

of six billion, eight hundred million for 1928, which in 1913 would have cost only half that amount.

I make no apology for this rather long letter, the importance of the subject demanded a full explanation of our viewpoint as architects, representing the owners, who provide the credit for the construction of building operations.

Yours very truly,

S. M. EVELEIGH

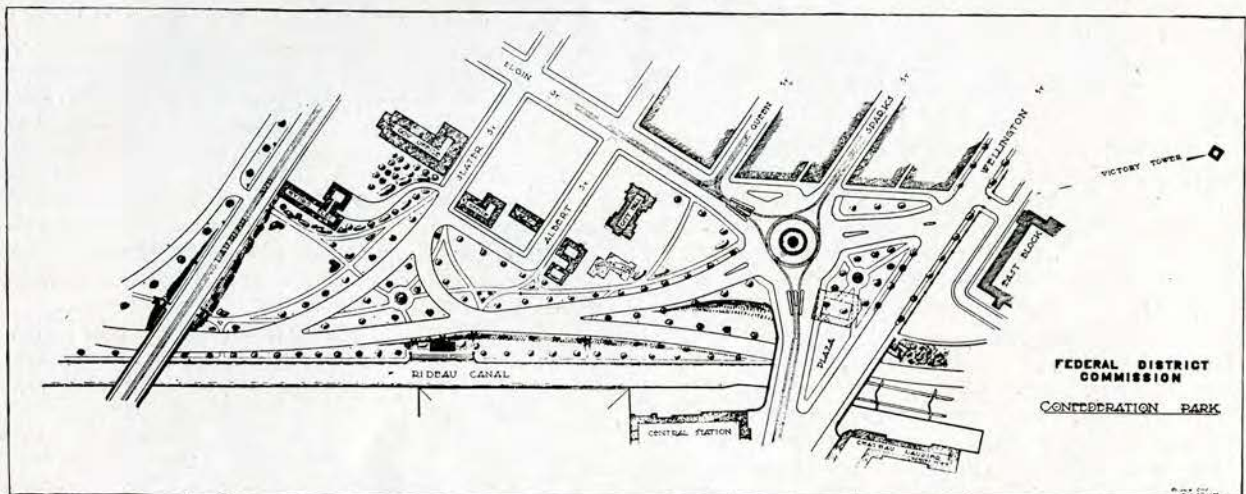
Hon. Secretary, Architectural Institute of British Columbia

### Proposed Confederation Park and Related Central Area for the City of Ottawa

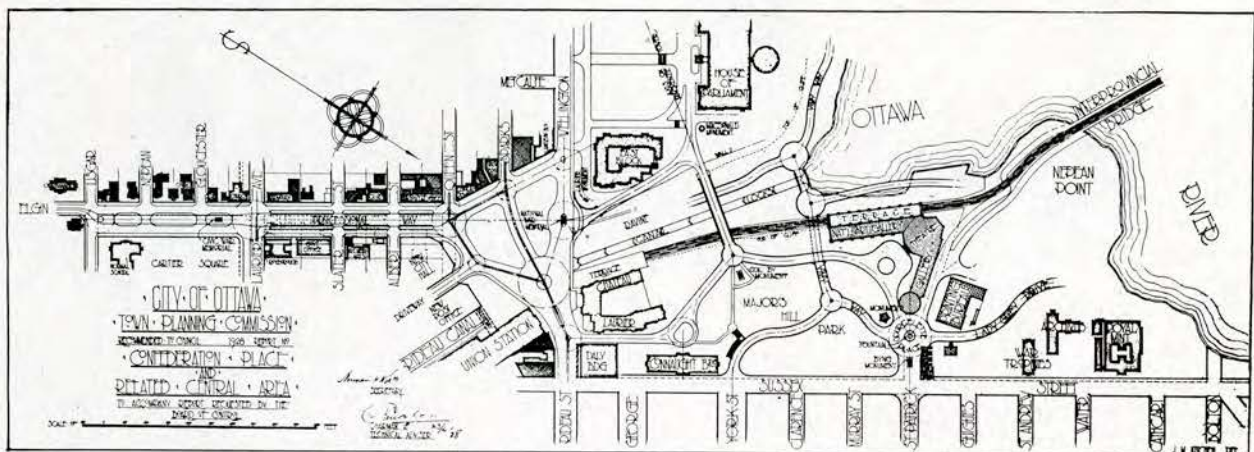
**F**OLLOWING the publication of a plan about a year ago for a proposed Confederation Park by the Federal District Commission, Mr. Noulon Cauchon, on behalf of the Town-Planning Commission of the City of Ottawa, submitted an alternative scheme, which met with the approval of the Ottawa Board of Control. As the two schemes submitted were entirely different in character, the Federal Government decided to secure an independent report, and Mr. Henry Sproatt, Architect of Toronto, was appointed by the Government to consider the proposals and submit his

recommendations to the Government. Up to the present time Mr. Sproatt's report has not been published, and no official announcement has been made, either by the Federal Town-Planning Commission or the Dominion Government.

Mr. Cauchon's scheme provides not only for Confederation Place, but also for the widening of Elgin Street, and a new entrance to Parliament Hill. According to the report, which was submitted together with his plan, Mr. Cauchon proposes to use Confederation Place as a clearing house for traffic, and as the forum of public and official receptions.



PROPOSED PLAN—FEDERAL DISTRICT COMMISSION



PROPOSED PLAN—CITY OF OTTAWA TOWN PLANNING COMMISSION  
Noulon Cauchon, Chairman and Technical Adviser

## Activities of the Institute

**A** MEETING of the executive committee of the council of the Royal Architectural Institute of Canada was held on Thursday, August 22nd, 1929, at 5 o'clock p.m., at "Le Club Canadien," 438 Sherbrooke St. East, Montreal, Que.

Those present were Messrs. Percy E. Nobbs, president; Gordon M. West, hon. treasurer; Ernest Cormier, W. S. Maxwell, Eugène Payette, Philip J. Turner, and Alcide Chaussé, hon. secretary. The president, Mr. Percy E. Nobbs, was in the chair, and Mr. Alcide Chaussé, hon. secretary, acted as secretary, Mr. I. Markus, executive secretary, being absent through sickness.

*Reading of the Minutes:* The minutes of the meeting of the executive committee of the council held at Montreal, on Wednesday, June 19th, 1929, were read and approved.

*Official and Salaried Architects:* A letter from Mr. S. M. Eveleigh, of Vancouver, B.C., on the subject of official and salaried architects, was referred to Mr. David R. Brown, convenor of the special committee on this matter.

*R.A.I.C. Committee on Examinations:* The hon. secretary reported that the executive secretary had on the 5th July, 1929, sent to members of the executive committee a copy of the draft schedule of examinations, as submitted by Prof. Wright to the executive committee on June 19th, 1929. It was resolved that consideration of this matter be postponed until after the new by-laws have been disposed of.

*Hospital Planning:* A letter dated June 26th, 1929, was read from Mr. B. Evan Parry, to the effect that he had attended the annual convention of the International Hospital Congress at Atlantic City, where he had met Messrs. Edward F. Stevens and Charles Butler, both outstanding architects in hospital work. The convention, he stated, was highly interesting. The next annual meeting of the American Hospital Association will be held in Texas, U.S.A. Mr. Parry advised that he had forwarded an article for THE JOURNAL—R.A.I.C., covering the congress. This communication was referred to the president for his information, when he will communicate with Dr. Bazin, of Montreal, president of the Canadian Medical Association.

*Canadian Rome Scholarship:* The president read a letter he had sent to the Premier, the Hon. Mackenzie King, in connection with this matter, and reported progress.

*Royal Institute of British Architects:* The secretary gave communication of the following correspondence received from the Royal Institute of British Architects:

June 25th, 1929—Asking information for incorporation in the coming edition of the "R.I.B.A. Calendar." This information was sent by the hon. sec.

July 2nd, 1929—Respecting the representatives of the Royal Architectural Institute of Canada on the council of the Royal Institute of British Architects, session 1929-30. The hon. secretary has informed the R.I.B.A. that our representatives were the same as those of last session, *viz.*: Professor Herbert Reilly (Liverpool) and Mr. Percy E. Nobbs, president of the R.A.I.C.

July 4th, 1929—Respecting the Allied Societies' Conference, giving the dates of the regular meetings up to May 12th, 1930.

July 4th, 1929—Respecting the publication of "Isometric Drawing of St. Paul's Cathedral," by Mr. R. B. Brook-Greaves.

July 15th, 1929—Respecting the R.I.B.A. subscriptions and rebates. The president is requested to confer with Mr. J. P. Hynes on this matter, and will write to Allied Societies' Conference suggesting a revised downward subscription fee for overseas members of the R.I.B.A.

*Resignation of Mr. R. B. Bunyard:* A letter dated August 13th, 1929, from the executive secretary, was read, informing the executive committee that Mr. E. J. Gilbert, secretary of the Saskatchewan Association of Architects, had advised that Mr. Frank P. Martin, of Saskatoon, had been appointed on the council of the Royal Architectural Institute of Canada, in place of Mr. R. G. Bunyard, who recently resigned.

*R.A.I.C. Architectural Exhibition:* The president suggested that in connection with the coming annual meeting of the Royal Architectural Institute of Canada, that a special committee, composed of officers of the Institute and of the Province of Quebec Association of Architects, be formed for the organization of an architectural exhibition. Mr. Gordon M. West suggested that this committee get in touch with the Toronto Chapter of the Ontario Association of Architects, who could give valuable information in connection with the matter of architectural exhibitions.

*"Comité Permanent International des Architectes":* A communication was read from the "Comité Permanent International des Architectes" respecting the Canadian section, which is composed of Messrs. John S. Archibald, as member of the "Comité," and Alcide Chaussé, as member of the council of the "Comité."

*Fourth Pan-American Congress of Architects:* The hon. secretary read the two following communications which he had received from the executive committee of the Fourth Pan-American Congress of Architects:

July 6th, 1929—Informing the R.A.I.C. that the Fourth Pan-American Congress of Architects will be held in the city of Rio de Janeiro, Brazil, from the 19th to the 30th June, 1930; giving the composition of the executive committee of the congress and of the other committees.

July 20th, 1929—Asking that Canada be represented at the Fourth Pan-American Congress and Architectural Exhibition, and that the executive committee had asked the following Canadian architects to be their delegates in the Dominion of Canada: Messrs. Alcide Chaussé and John S. Archibald, of Montreal; Fred L. Townley, of Vancouver; and J. H. G. Russell, of Winnipeg, Manitoba, and asking that the Royal Architectural Institute of Canada choose other Canadian architects to serve as the Canadian delegation of the executive committee of the congress. Canadian architects are invited to attend this congress and to send exhibits for the architectural exhibition.



The name of Mr. Gordon M. West was added to those already chosen by the executive committee of the congress.

The editor of THE JOURNAL, R.A.I.C., was requested to give publicity to this congress and exhibition, and the hon. secretary will advise the executive committee of the congress that the Institute will probably see that individual or collective exhibits are sent for their exhibition.

*Resignation of the Clerk of the Montreal Office:* The secretary informed the executive committee that Miss Victorine Morin, who had been in the service of the Institute as clerk and assistant to the hon. secretary for the last twenty-two years, had been forced to resign through illness on August 1st, 1929, and that she is to be replaced by Miss Hélène Duchesne, who is also in the service of the Province of Quebec Association of Architects, her salary to be the same as that of Miss Morin.

*Trust Fund:* It was suggested that the editor of THE JOURNAL, R.A.I.C., be requested to write an editorial respecting the creation of an Institute Trust Fund.

*Amendments to Charter:* The hon. secretary informed the executive committee that he had received the official copy of the recent amendments to the charter, now known as "An Act respecting The Royal Architectural Institute of Canada" (19-20 Geo. V., chap. 96). Assented to June 14th,

1929. Copies of these amendments, he reported, had been sent to the Provincial associations by the executive secretary.

*Revision of the By-laws:* The hon. secretary reported that as instructed by the executive committee, he had prepared a tentative draft for the new by-laws, made necessary by the recent amendments to the charter, which by-laws would replace and abrogate the present by-laws of the Royal Architectural Institute of Canada, and be in full conformity with the requirements of the charter and its various amendments.

The proposed new by-laws were considered, clause by clause, and it was resolved that a revised draft, as suggested by the executive committee, be prepared by a committee composed of the president and the hon. secretary, and to report at the coming meeting of the executive committee. The executive secretary is to forward copies of the revised draft of the by-laws to all members of the executive committee a few days before the date of the next meeting of the executive committee.

*Vote of Thanks:* It was unanimously resolved to offer sincere thanks to "Le Club Canadien" for having given us the privilege of having this meeting in the library of the club.

*Adjournment:* There being no other matter before the chair, the meeting was consequently adjourned to a date that will be fixed by the president.

## Form for Bequest of Legacy to The Royal Architectural Institute of Canada

THE attention of the members of the Institute is called to the following legal form of bequest which has been prepared for the use of those who may desire to bequeath to the Institute, certain funds for the creation of scholarships or for the furthering of any of the Institute's activities:

I GIVE, DEVISE AND BEQUEATH unto the  
Royal Architectural Institute of Canada, the  
sum of....., free of  
succession duties, to be applicable in the discre-  
tion of the council of the said Institute for gen-  
eral purposes or for such special purposes as the  
said council shall determine. (*If the Testator  
desires to leave legacy for particular purposes,  
insert after words "to be" such purpose as may  
be desired*). And I direct that the said legacy  
shall be paid to the president for the time being  
of the said Institute, whose receipt shall be an  
effectual and sufficient discharge for the same.



*The*  
**ROYAL YORK**  
TORONTO

**NATCO**  
THE COMPLETE LINE *of*  
HOLLOW BUILDING TILE

HAMILTON **NATIONAL FIRE-PROOFING COMPANY OF CANADA LIMITED** TORONTO

## NOTES

A meeting of the executive committee of the Institute was held in Montreal on Thursday, August 22nd, 1929. The members present were the guests of the honorary secretary, Mr. Alcide Chaussé, at a dinner held in the "Le Club Canadien," Montreal.

\* \* \* \*

Messrs. Weatherhead & Wall, architects and structural engineers, of Saint John, N.B., announce the removal of their offices from 60 Prince William Street to the Willis Building, 80-82 Prince William Street. They will be glad to receive catalogues and samples from manufacturers of building materials.

\* \* \* \*

The Concrete Products Association of Canada tendered a special dinner to the Ontario architects on Thursday evening, August 29th, at the King Edward Hotel, Toronto.

The purpose of the dinner was to give the architects an opportunity of hearing an interesting address delivered by Mr. W. D. M. Allan, of the Portland Cement Association, on the "Three Main Uses of Concrete."

\* \* \* \*

Mr. Phillip J. Turner, of Montreal, member of the executive committee of the Institute, will visit Vancouver during the latter part of September. While there he will deliver an illustrated lecture on Liverpool Cathedral and also meet the officers of the Architectural Institute of British Columbia.

Mr. Gordon M. West, of Toronto, honorary treasurer of the Institute, will attend the annual meeting of the Canadian Chamber of Commerce, which will be held in Calgary and Edmonton during September. Mr. West will confer with the officers of the Alberta and Manitoba Associations of Architects while on his visit to the western provinces.

\* \* \* \*

Mr. L. B. Husband, architect, of Hamilton, announces the removal of his office from 26 James Street South, Hamilton, Ontario, to Room 404, Birks Building, corner of King and James Streets, Hamilton, Ontario.

\* \* \* \*

Diego Rivera, famous Mexican artist, recently awarded the Gold Medal of the American Institute of Architects, has been accused by Governor Terrones Benitez, of Durango, of organizing a movement as head of the communist party to overthrow the government. Rivera has denied the charges and declares that he has not been an active member of the communist party for three months.

\* \* \* \*

Messrs. Barott and Blackader, architects, of Montreal, received first award in an architectural competition for a building to be erected for the Bank of Montreal in Ottawa. The assessor for the competition was Mr. Alexander B. Trowbridge, consulting architect, of Washington, D.C.

*(Concluded on page xxx).*

**For all  
Electrical  
Installations**

**Manufactured by  
National Conduit Co., Limited  
Toronto**

Manitoba Agent: T. W. MacKay, 913 Royal Bank Bldg., Winnipeg.  
British Columbia Agent: John A. Conkey, Yorkshire Building, Vancouver.  
Alberta and Sask. Agent: H. E. Canham, 2509 Wallace St., Regina.

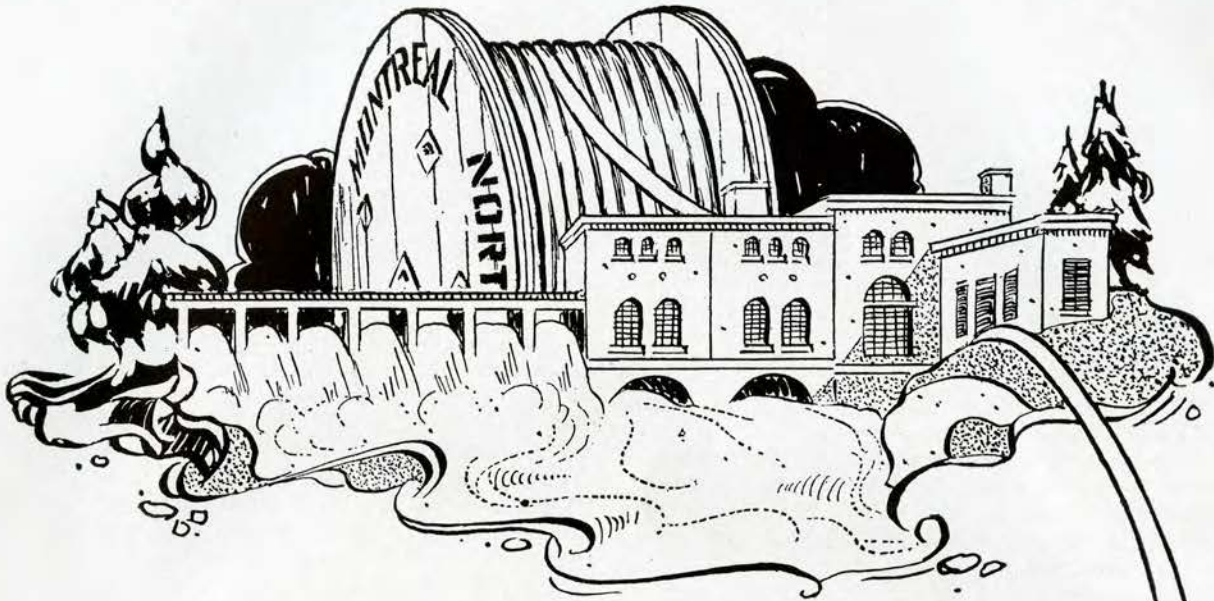
**Made in Canada  
Conduit**

**For  
Electrical Wiring**

*Labelled under supervision of Underwriters' Laboratories*

**XCELADUCT**

*(GALVANIZED)*



# Power TRANSMISSION Cables

A LARGE proportion of the load carried from the central station to the various sub-stations throughout Canada, is carried on Northern Electric cables. These cables have been selected by the designers of the systems because they can be relied upon to give the maximum service. With our modern plant and experienced workers we are in a position to meet the most exacting demands of engineers for all kinds of power cable. Specialists at every branch will be glad to co-operate with engineers on all their transmission problems.

### Paper Insulated Power Cables

Northern Electric Paper Insulated Lead Covered Power Cables are made up in either single or multiple conductor form. The conductors are insulated with the highest grade of insulating paper and are impregnated with special high dielectric strength compound. A close fitting lead sheath prevents the access of moisture.



# Northern

COMPANY



# Electric

LIMITED

WC42

A NATIONAL ELECTRICAL SERVICE

ST. JOHN N.B. HALIFAX QUEBEC MONTREAL OTTAWA TORONTO HAMILTON LONDON WINDSOR NEW LISKEARD SUDBURY WINNIPEG REGINA CALGARY EDMONTON VANCOUVER

## Notes—Concluded

The ashes of Sansovino, the great Italian renaissance architect (1479-1570), were recently removed from the Church of the Salute to the Cathedral of St. Mark, Venice. The ceremony created unusual interest, the procession passing over a bridge built on boats especially for the occasion.

\* \* \* \*

The American Institute of Architects lost one of its recent past presidents in the person of Mr. Milton B. Medary, who died on August 7th, 1929, at his home in Philadelphia. Mr. Medary was born in Philadelphia on February 6th, 1874, and after studying at the University of Pennsylvania, commenced the practice of architecture with Mr. Field. For nineteen years prior to his death, he was a member of the firm of Zantzinger Borie & Medary. Mr. Medary served as President of the American Institute of Architects from 1926 to 1928.

\* \* \* \*

The Trussed Concrete Steel Company of Canada, Limited, desire to announce that the name of the company has been changed to the Truscon Steel Company of Canada, Limited. No change is being made in the organization. For a number of years this organization has been popularly referred to as "Truscon," so that the new name merely conforms to general practice.

\* \* \* \*

The Northern Electric Company has just completed the construction of another branch warehouse in Regina, Saskatchewan. Mr. W. T. Hunt is manager of this branch.

## BOOKS REVIEWED

*PUBLISHERS' NOTE:*—We wish to remind our readers that any books reviewed in these columns, as well as any other Architectural book, can be secured through the Journal of the R.A.I.C., at the published price, carriage and customs duties prepaid.

COLLEGE ARCHITECTURE IN AMERICA—And its part in the development of the Campus. By Charles Z. Klauder and Herbert C. Wise. Published by Charles Scribner's Sons, New York. Price \$5.00.

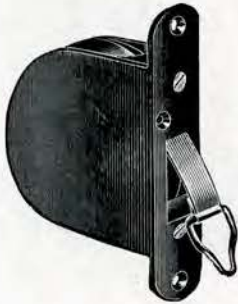
To what extent the student mind at school is affected by its architectural surroundings is a matter for some speculation. I think that all will agree that a mind which has been developed in the midst of good taste is less likely to be satisfied with things which are in bad taste. Whether this ability to discriminate will bring happiness or discontent depends on the individual. Its exact effects we do not know.

We do know, however, that beauty stimulates sentiment, that sentiment is good for the individual because it takes him out of himself. It is also good for a school as it promotes esprit-de-corps and strengthens the support of both the students and the alumni. The advertising value of good architecture is unquestioned, but it has other powers just as important which are not so obvious and are seldom described.

To quote from the authors of "College Architecture in America."

"The affection of the college man for his alma mater has at least one picture sufficing to command his devotion. It is the college scene. Now the college scene is impossible to think of without its setting of architecture. What student sensibility is there unresponsive to the beautiful nave where the daily chapel was held, the stately portico where the class would group itself to be photographed, the window of the study where Caesar was conned under sheltering eave and overlooking roofs and chimneys? And many an old grad has reflected that students may come and go, classes enter and graduate; but that venerable walls and carved chimney-pieces, picturesque gables and vaulted archways endure forever. These remain his own because always present in his mind's eye and he prays that change and decay may never reach them.

(Concluded on page xxxii).



## CALDWELL SASH BALANCES

*Backed by Forty Years' Experience*



Each Caldwell Sash Balance has a quality built into it that assures satisfaction, and maximum length of service.

Box frames can be eliminated, thus contributing greatly to making a building of warm construction. They also permit the use of narrow mullions and trim. Mortises can be cut at the mill to one size.

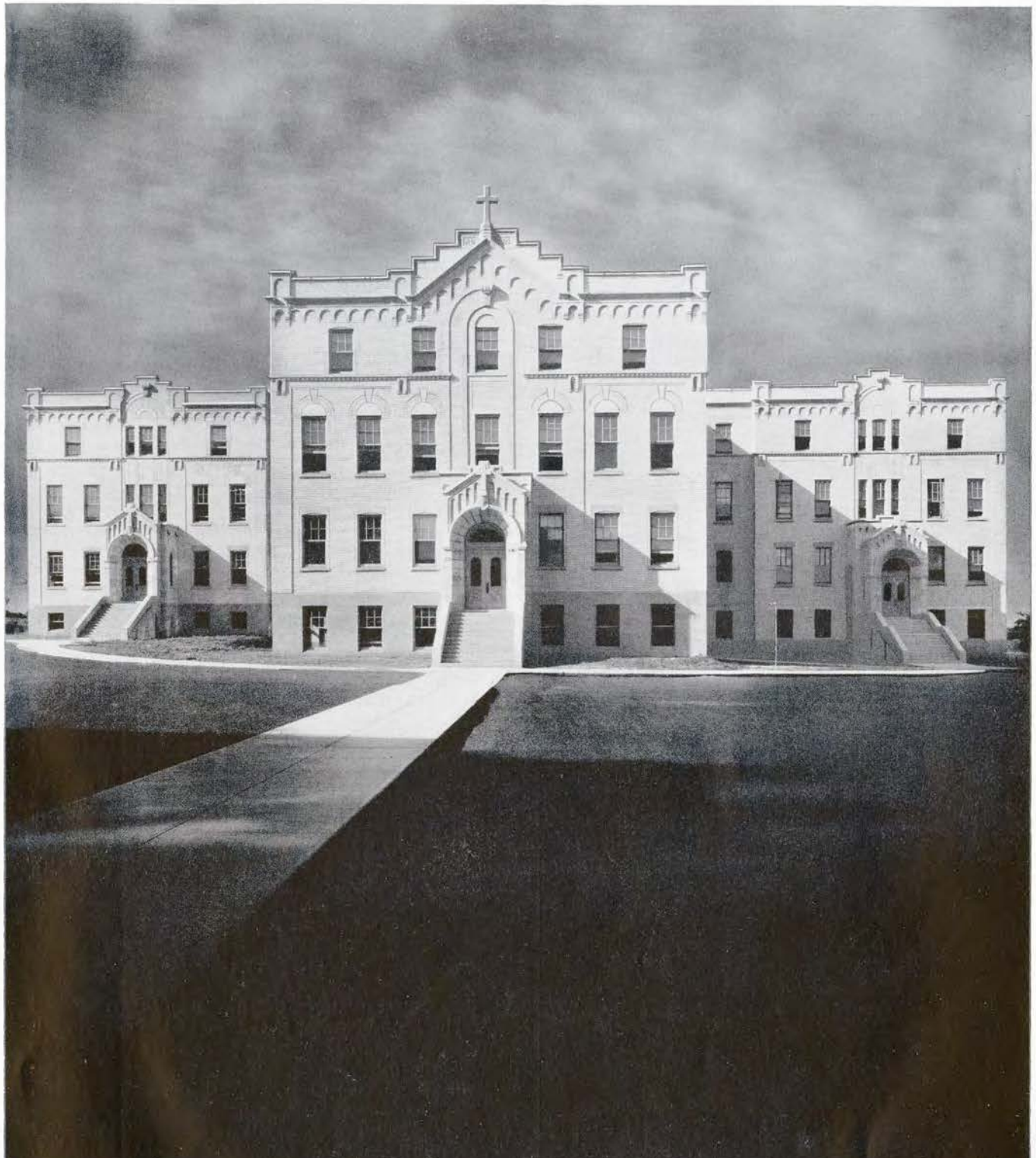
When the saving of labor and material is considered, they cost no more than ordinary weights and cords.

**CALDWELL MANUFACTURING COMPANY**  
ROCHESTER, NEW YORK, U.S.A.

*Western Canada Representatives: H. W. GLASSCO & CO.*

628 Royal Bank Building

Winnipeg, Manitoba



*Architect:*  
JOSEPH SAWYER

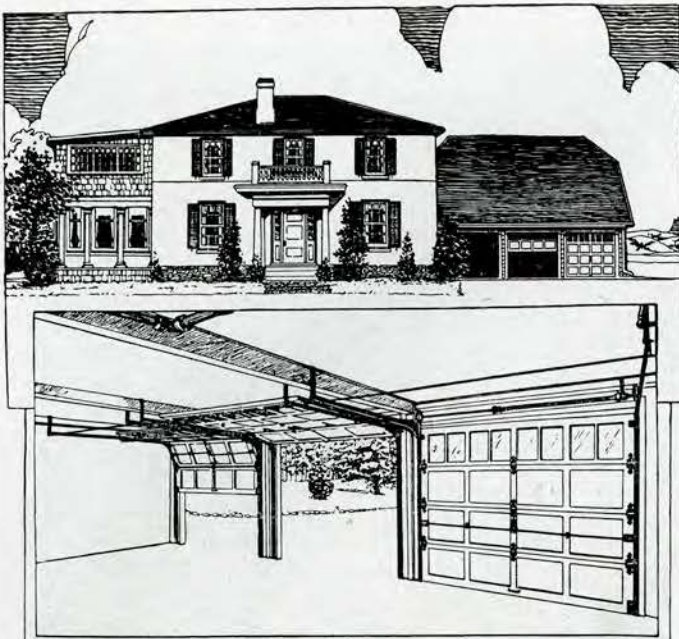
**HOLY CROSS CONVENT**  
COTE-DES-NEIGES, MONTREAL

*Contractor:*  
DAMIEN BOILEAU  
Limited

CANADIAN **BENEDICT STONE** LIMITED

MONTREAL, QUE.

“MAKERS OF BUILDING STONE”



# Rolltite

*The Space-Saving over-head Door*

It rolls up overhead and occupies a minimum of room. Snow and ice cannot block it, and winds cannot blow it open or shut.

## Rolltite Doors

are made in any width up to twenty feet. The sections are hinged together and operated by a heavy spring winding on a ball-bearing shaft. The larger doors may be electrically operated if desired.

*Special features include: malleable hinges, heavy steel guide frames with every joint electrically welded, and hardened steel guide rollers with ball-bearings. Door sections are made of selected white pine with three-ply fir veneer panels.*

Rolltite Doors are sturdily built, tight-fitting, and extremely easy to operate.

In case of individual preference, or where space is not limited Slidetite Doors are suggested. They slide and fold aside and permit a clear opening in any width from eight to thirty feet. They also open inward and are not affected by snow, ice or wind.



*"Modern Design in Doors and Windows" tells about Rolltite and Slidetite. May we send you a copy?*

## Richards-Wilcox Canadian Co. Ltd.

MONTREAL

LONDON

CANADA

WINNIPEG

## Books Reviewed—Concluded

"It is with this physical aspect of the college or university that we are to deal. By the telling effects of the architectural setting is the graphic portrayal of the institution made possible. This portrayal centres attention upon and soon comes to symbolize the institution, for however beautiful a natural scene, landscape alone can not identify itself until architecture enters and completes the pictorial quality."

The authors of this book have not intended it as a treatise on architectural design but rather as a "body of suggestion to institutions contemplating physical improvement." While the importance of good architecture is presented completely and convincingly, the book is really a comprehensive text book on the problems connected with the building up of a school or university plant. Over seventy institutions were personally visited by the authors to supplement their thirty years' experience in designing college buildings.

The information thus accumulated is systematically tabulated and the arguments for and against certain types of planning are convincing. One of the most interesting chapters is that dealing with general development plans. How few of our Canadian schools or university groups have followed any definite plan or have even sought expert advice as to how their future buildings should be designed or placed. Each new building as it is required is turned over to this or that architect who is only allowed to consider it on its merits alone without regard to existing buildings or future expansion.

Among the other chapters, the various buildings which go to make an educational group are dealt with very completely. Administration buildings, libraries, chapels, men's and women's dormitories, dining halls, science, engineering and central heating plants, art buildings, athletics and student and faculty welfare all have chapters devoted to them.

It is a book which should be of great use to any architect who has a college problem on his hands. What is more important to my mind, it should be in the library of the chief executive of every school and university in the country. For, unless those who control our schools and universities realize that there is this problem and really desire beauty and orderliness in the arrangement of their buildings and grounds, the architectural profession will be powerless to help.

There are, we know, many institutions in this country, and the number is steadily growing where the building program has been very intelligently handled. There are many more, however, where a great opportunity has been missed through the apathy or lack of knowledge of a school or university authority.

Architects themselves are far from blameless in this regard, but there are poor architects just as much as poor lawyers or business men. Books like this must impress those who read them with the necessity for great care and good judgment in working out so important a factor in the destiny of their institution.

—F. H. MARANI.

## OBITUARY

We regret to note the passing of Mr. Samuel Maclure, of Victoria, B.C., one of the best-known architects in British Columbia. After some weeks in the hospital, Mr. Maclure underwent an operation, but failed to rally, and died on August 8th, 1929.

Mr. Maclure was born in New Westminster sixty-nine years ago, and was a son of the late Mr. John Maclure, a civil engineer, of Scottish extraction, and one of the earliest settlers in the colony. At the age of twenty Mr. Maclure went to Philadelphia to study architecture, and upon his return to New Westminster opened an office for the practise of architecture. In his thirty-five years of practice he has designed some of the finest residential properties in Victoria, and in Vancouver. His work was such that he commanded the highest regard from his confreres.

Mr. Maclure is survived by his widow and three daughters. It is the intention of Mrs. Maclure to continue the professional connection of her husband.



# REPRESENTATIVE

of 700 buildings in which the Dunham Differential Vacuum Heating System has been installed or is being installed

## Buildings in the Dunham Skyline

1. Barlum Tower, Detroit.  
*Architects: Bonnah & Chaffee.*
2. Edgewater Beach Apartments, Chicago.  
*Architect: Benjamin H. Marshall.*
3. La Fontaine Apartments, Quebec.  
*Architects: Robitaille & Desmeules.*
4. Dunham Building, Chicago.  
*Architects: Burnham Bros.*
5. Baltimore Trust Building, Baltimore.  
*Associated Architects: Taylor & Fisher and Smith & May.*
6. Marlborough House, Seattle.  
*Architect: Earl Morrison.*
7. First National Bank Building, Philadelphia.  
*Architects: Ritter & Shay.*
8. Carbide & Carbon Building, Chicago.  
*Architects: Burnham Bros.*
9. Milwaukee County General Hospital, Wauwatosa, Wis.  
*Associated Architects: Van Ryn & DeGellecke, Milwaukee; Armstrong & DeGellecke, New York.*
10. Marshall Field Garden Court Apartments, Chicago.  
*Architect: Andrew J. Thomas, New York City. Associated Architects: Graham, Anderson, Probst & White, Chicago.*
11. Toronto Star Building, Toronto.  
*Architect: Chapman & Oxley.*
12. Gulf Building, Houston.  
*Architect: Alfred C. Finn, Houston. Consulting Architects: Kenneth Franzheim and J. E. R. Carpenter, New York.*
13. Pigott Building, Hamilton, Ont.  
*Architects: Bernard H. Prack and F. Prack.*
14. Grant Building, Pittsburgh.  
*Architect: H. Hornbostel. Associated Architects: Eric Fisher Wood & Co.*
15. Battle Creek Sanitarium, Battle Creek, Mich.  
*Architect: Merritt J. Morehouse, Chicago.*

### Look for the name DUNHAM



The Dunham Differential Vacuum Heating System and individual parts of the apparatus used in that system are fully protected by Canadian Patents Nos. 282,193; 282,194 and 282,195, and United States Patents Nos. 1,644,114 and 1,706,401. Additional patents in Canada, the United States and foreign countries are now pending.

The fifteen buildings shown in this composite skyline illustration are typical of the 700 structures in Canada and the United States in which the Dunham Differential Vacuum Heating System has been or is being installed. These fifteen outstanding buildings are located in twelve cities. They reflect the widespread and genuine international acceptance of this advanced system of heating by owners, architects, engineers and heating contractors.

The total amount of radiation contained in the buildings illustrated is 679,802 square feet. This huge total is but a small fraction of the vast amount of radiation now utilizing the Dunham Differential System which automatically supplies steam that is "hot," "medium hot" or "lukewarm" as weather conditions require.

What led the owners of these buildings to install the Dunham Differential Vacuum Heating System? Economy of operation was one deciding factor. Reduction of overheating, another. An abundance of warmth exactly suited to the needs of the prevailing outdoor temperature, a third. The assured comfort of tenants and the increased efficiency of workers under proper temperature conditions, a fourth. These are results which follow the installation of the Dunham Differential System in any type of building, in any climate, and with any type of fuel.

C. A. Dunham Co. Limited, through its many offices, gladly cooperate with architects, consulting and heating engineers and contractors and owners in every part of Canada on heating problems and in supplying details concerning the installation and operation of the Dunham Differential Vacuum Heating System.

## C. A. DUNHAM CO.

LIMITED

1523 Davenport Road TORONTO

Halifax, Montreal, Ottawa, Toronto, Winnipeg, Calgary, Vancouver, St. John's, Nfld., London, Eng.



# Economize in Nervous Energy and Pencil Outlay!



*The man who uses Mongol Coloured Pencils enjoys their amazing strength, durability, adaptability!*

\* \* \*

*Test the astonishing strength of a coloured Mongol for yourself! Sharpen it—punch it through thirty-ply cardboard—it won't break!*

*For the assortment of twelve colours, send one dollar with the attached coupon.*



**E**BERHARD FABER has achieved a *quality coloured lead pencil* which is saving nerves and money for architects, artists, engineers and other professional men whose pencil requirements are exacting.

The Mongol Coloured indelible pencils have extra-tough, extra-sturdy coloured leads *guaranteed not to break with ordinary use!* There are no snapping points to get on your nerves. The leads wear down very slowly—you get extraordinary value from every lead!

*Use Coloured Mongols for Water-Colour Work*

Any of the 12 coloured Mongols will serve as a *water colour-pencil*, as well as a regular colour pencil. For a fine, even wash, shade in the colours with pencil—then “wash” them with a brush dipped in water!

## EBERHARD FABER



Eberhard Faber Pencil Co. RA-4  
37 Greenpoint Ave., Brooklyn, N. Y.

Enclosed is \$1.00 for a box of the 12 new *Mongol Coloured Indelible Pencils* which make up assortment No. 741.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_



## DOMINION RUBBER TILE FLOORING

IN the new Masonic Temple at Calgary, Alberta, a building of note in Western Canada, Dominion Rubber Tile Flooring was specified.

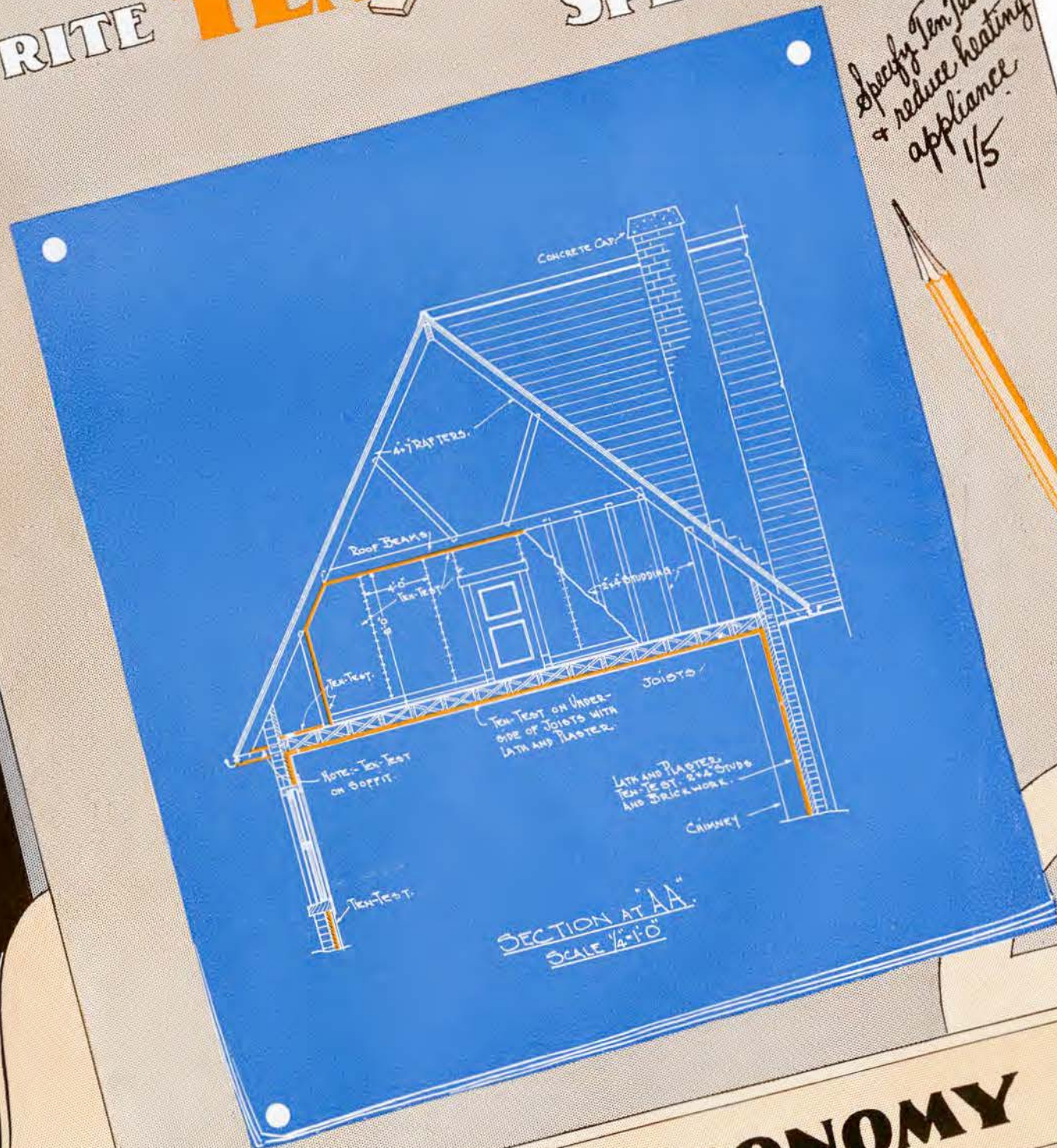
For lodge rooms, auditoriums, hospitals, churches, court rooms, theatres, libraries, museums and offices, as well as private residences, there is no flooring better suited to the requirements.

In colours to harmonize with any colour scheme or architectural treatment.

**DOMINION RUBBER COMPANY LIMITED**

Branches in principal cities throughout Canada

# WRITE **TEN/TEST** IN YOUR SPECIFICATIONS



*Specify Ten/TEST & reduce heating appliance 1/5*

TEN/TEST SAVES ONE TON OF COAL IN EVERY FOUR

## TEN/TEST Roof Insulation

**ROOF (with TEN/TEST Insulation)**  
 TEN/TEST on the roof or ceiling joists is the most effective and necessary point to insulate in the homes you build.

The blueprint on the left suggests an effective insulating method.

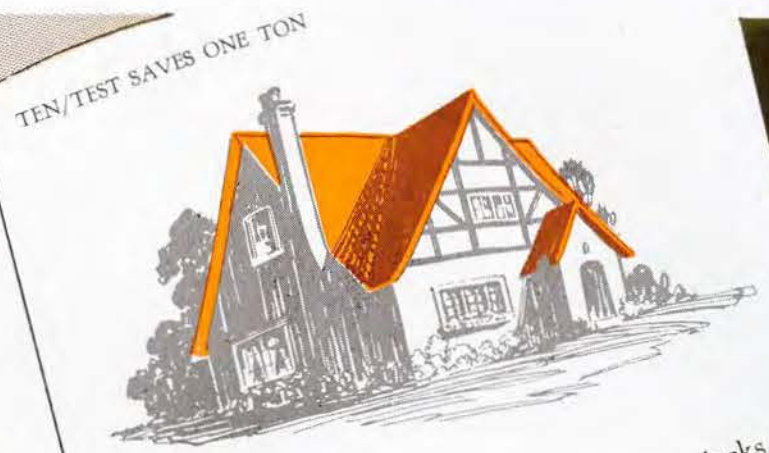
### PEAK ROOFS

TEN/TEST can be used on exterior of rafters and furring, shingles to be applied direct to furring. The most economical method — and one that will give you the greatest possible insulation — is to use TEN/TEST as shown in the blue print. In this way you allow an extra room in the attic which will always be as comfortable as any room in a TEN/TEST built house.

### FLAT ROOFS

TEN/TEST can be used on the inside of the ceiling joist as shown in the blueprint, and forms an effective plaster base.

The best result is obtained by using TEN/TEST on the upper side of the wood deck and finishing the roof in usual manner.



### CONCRETE ROOFS

TEN/TEST can be used on concrete decks and will positively stop all condensation. The roof deck should be mopped over with asphalt and TEN/TEST applied before asphalt hardens. All joints should be mopped over to fill up the crevices before applying felt or gravel.

INTERNATIONAL FIBRE BOARD LIMITED  
 GATINEAU, QUEBEC  
 MIDLAND, ONTARIO

Sales & Service Dept.:  
 Montreal, Que.

# ECONOMY **TEN/TEST** SATISFACTION

The ROYAL YORK  
Dominates Toronto's Sky Line



Dominant on the  
modern roof line ~

On the flat  
roofs of the  
Royal York



Built-Up  
Coal Tar Pitch and  
Gravel Roofs

—Bonded  
for 20  
years

MURRAY-MADE COAL TAR  
PITCH and GRAVEL ROOFS

Wherever you find outstanding buildings, there you will find Murray-Made Built-Up Coal Tar Pitch and Gravel Roofs. Architects, builders and building owners know that the extremely long life of this roof, and its complete freedom from maintenance expenses, make it the most economical and most satisfactory type of roofing known.

Roofs of this type built 30, 40 and even 50 years ago are in perfect, weather-tight condition today, without one cent having been spent for repairs.

This unusually long life is due to the fact that coal tar pitch is protected and preserved by the same water and dampness which are so destructive to ordinary roofs. And climatic variations, which so seriously injure other roofs, do not harm this roof at all, for the coal tar pitch readily adjusts itself to all changes.

The Murray specification for this roof insures correct application, and highest grade materials. The roof is laid by approved roofing contractors, under the supervision of a trained Murray Inspector.

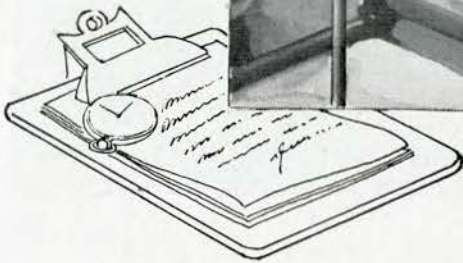
It will pay you to get the facts on the Murray-Made Bonded Roof, from any of our branches, or from any Murray Roofing Contractor.



*Alexander* **MURRAY** & Company  
LIMITED

Montreal Toronto Halifax Saint John Winnipeg Vancouver

Western Steel Products, Ltd., Distributors for AlexanderMurray & Co., in the Prairie Provinces.



# 26 Hours of *this* leaves Liquid Granite *unharm*ed

Liquid Granite is the amazing floor varnish that can withstand 26 hours of live steam under pressure without turning white or losing its luster. This is an actual test conducted by an independent laboratory. The condensation that dripped from the varnished panel was hotter than boiling water.

Clearly, a varnish that will survive such a test will outwear ordinary finishes. Specify Liquid Granite. No other varnish will give your clients the same lasting satisfaction. The architectural department can demonstrate the superiority of this and other finishes designed for your use.

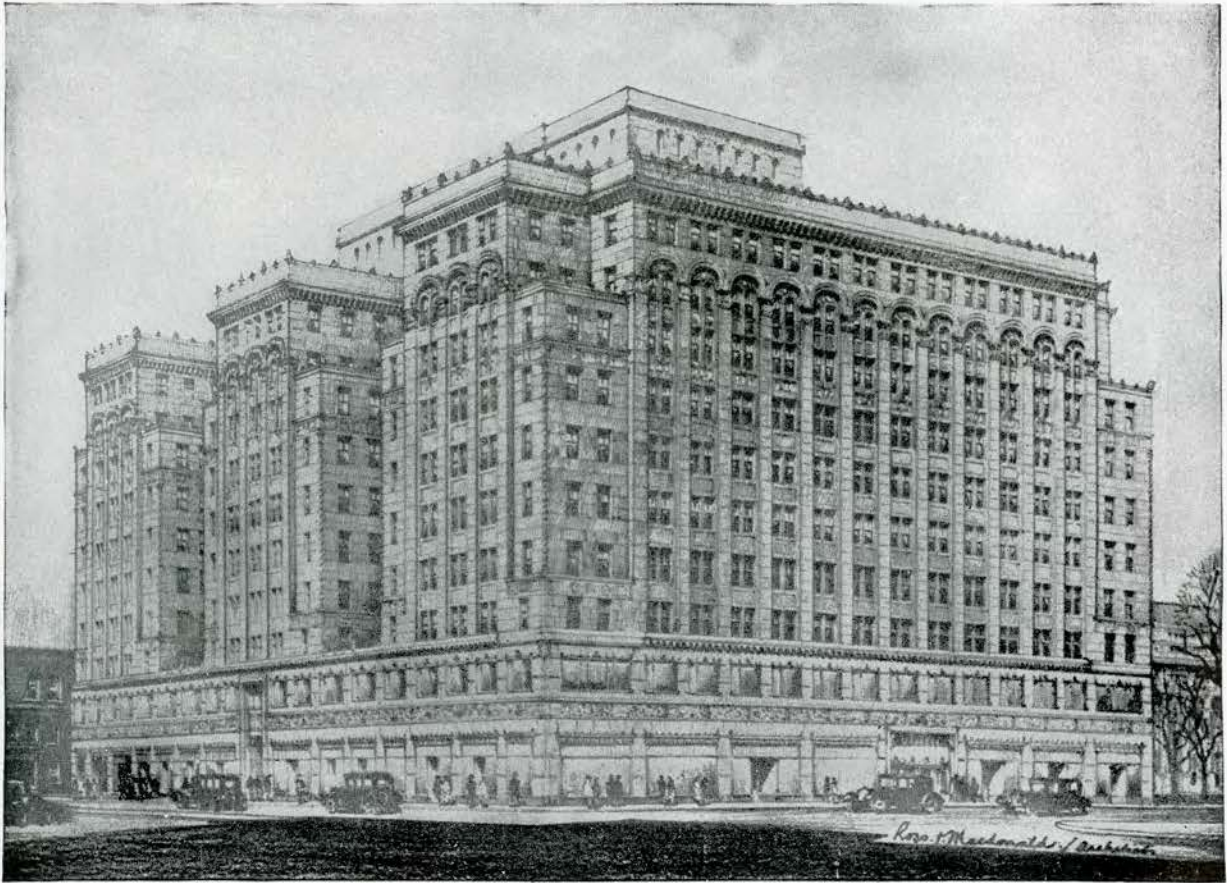


Architectural department will furnish complete details

**BERRY BROTHERS** INC.  
Varnishes Enamels Lacquers

Manufacturer of wear resisting architectural finishes

Walkerville, Ont.



GEO. A. FULLER CO.  
*General Contractors*

RCSS & MACDONALD  
*Architects*

## DOMINION SQUARE BUILDING MONTREAL

This splendid new office building on St. Catherine St., Montreal, is equipped with eight High Speed Geerless WESTINGHOUSE TURNBULL Electric Passenger Elevators with automatic stopping at floors and automatic opening of doors.

THE TURNBULL ELEVATOR COMPANY, LIMITED  
TORONTO

MONTREAL  
EDMONTON

WINNIPEG  
SASKATOON  
QUEBEC

VANCOUVER  
WINDSOR  
HALIFAX

CALGARY  
LONDON  
ST. JOHN

REGINA  
OTTAWA

*Roof insulated with two layers of one-half inch TEN/TEST.  
Architects: Darling & Pearson Toronto  
Contractors: W. H. Yates Construction Company Limited, Toronto  
Roofing Contractors: A. B. Ormsby & Company Limited, Toronto  
Insulation supplied by: W.A. Arque & Son Limited, Toronto*



The New Private Patients' Pavilion of the Toronto General Hospital is insulated throughout with



**I**N HOSPITALS more than in any other kind of structure is there need for insulation of the finest type—insulation which will ensure uniform indoor temperature in every weather. TEN/TEST prevents condensation, retains the furnace heat in winter and in summer keeps the blazing sun from penetrating to the rooms below, thus giving year-round comfort to the patients. Moreover, TEN/TEST conserves fuel and possesses great structural strength—two other important reasons for its selection by architects and contractors everywhere.

Those responsible for the construction of the new Private Patients' Pavilion of the Toronto General Hospital chose TEN/TEST in preference to any other insulating material. Their faith in TEN/TEST is corroborated by leading architects not only in Canada but in Great Britain, too. For example, the War Office, the Admiralty and the London County Council are regularly using TEN/TEST in construction work. TEN/TEST has also been used in the Bank of England (both old and new buildings), the Royal and Ancient Golf Club, St. Andrews, the King's Reviewing Pavilion at Aldershot and in scores of other instances.

*Write for full information about TEN/TEST*



INTERNATIONAL FIBRE BOARD LIMITED, 1111 Beaver Hall Hill, MONTREAL, Que.

# Anaconda *now* offers Brass Pipe to meet all conditions

*for normally corrosive waters—Anaconda 67\* Brass Pipe  
for highly corrosive waters—Anaconda 85\* Red-Brass Pipe*

**C**HANGING conditions due to the chemical treatment of water to insure purity and to the rapid growth of population, with the consequent need of going far afield for water supplies have brought about new problems which seriously affect the average life of water pipe.

Sixteen years ago the American Brass Company, anticipating present day corrosion problems, undertook through exhaustive tests to determine the alloys of copper and zinc which most effectively resist various degrees of corrosion.

From 1912 to 1922, pipes made of different metals were subjected to the constant action of extremely corrosive water at a regulated temperature of 70° F. Conditions were carefully controlled to insure uniform comparative results and at the conclusion of the tests, the specimens were carefully examined and analyzed.

During the succeeding six years these laboratory results were checked by further experiment and actual usage. As a result of this

research, The American Brass Company now offers two kinds of Anaconda Brass Pipe to meet every degree of corrosion.

When normal water conditions prevail—when waters are not of high permanent hardness—Anaconda 67\* Brass Pipe is recommended for distribution lines. This pipe contains not less than 67% copper and is semi-annealed, seamless and guaranteed to be structurally sound and physically perfect.

For conveying filtered waters and surface waters, particularly when drawn from sources of peaty origin, which may be high in carbonic acid content and low in alkalinity, Anaconda 85\* Red-Brass Pipe is offered as the best corrosion-resisting pipe commercially obtainable. It contains not less than 85% copper, is

semi-annealed, seamless and guaranteed.

For underground service lines with threaded fittings, and for other pipe lines subjected to corrosion from the outside as well as the inside, Anaconda 85\* pipe is recommended regardless of the water conditions.



Sixteen years ago the American Brass Company's metallurgists began exhaustive tests to determine the copper alloys which best resist various degrees of corrosion encountered by water pipe.

\*The trademarks "67" and "85" are registered in Canada.

Anaconda American Brass Limited is prepared at all times to co-operate with Architects and Engineers in determining the character of local water supplies and to recommend the correct alloy of Anaconda Pipe to use under specific conditions.

**ANACONDA AMERICAN BRASS LIMITED**

Main Office and Mill: New Toronto, Ont.

Montreal Office: 1253 McGill College Ave.

MEMBER COPPER AND BRASS RESEARCH ASSOCIATION

# ANACONDA BRASS PIPE





# *There won't be any* **TROUBLE**

**O**N this job—because Massillon Bar Joist Fire-proof Floors are being installed throughout.

Massillon Bar Joists, apart from being the most modern type of floor joist—speed up building, reduce labour and material costs, eliminate unnecessary high-priced supervision and facilitate the work between steel worker and sub-contractor.

Massillon Bar Joists Floors provide the necessary

fire resisting qualities insisted upon to-day—act as efficient barriers to sound and in the initial cost and over a period of many years are the most economical as well as the most satisfactory floors available to-day.

No matter what size or type of building—residence, factory or office—Massillon Bar Joist Fire-proof Floors have many features in their favour.

*Write for full information.*

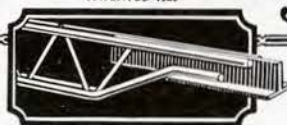
**SARNIA BRIDGE COMPANY, LIMITED**  
SARNIA CANADA

Branch Offices—Toronto and Montreal.

Agents in all Principal Cities.

**MASSILLON**  
PATENTED 1926  
**BAR JOISTS**

*Made in Canada*



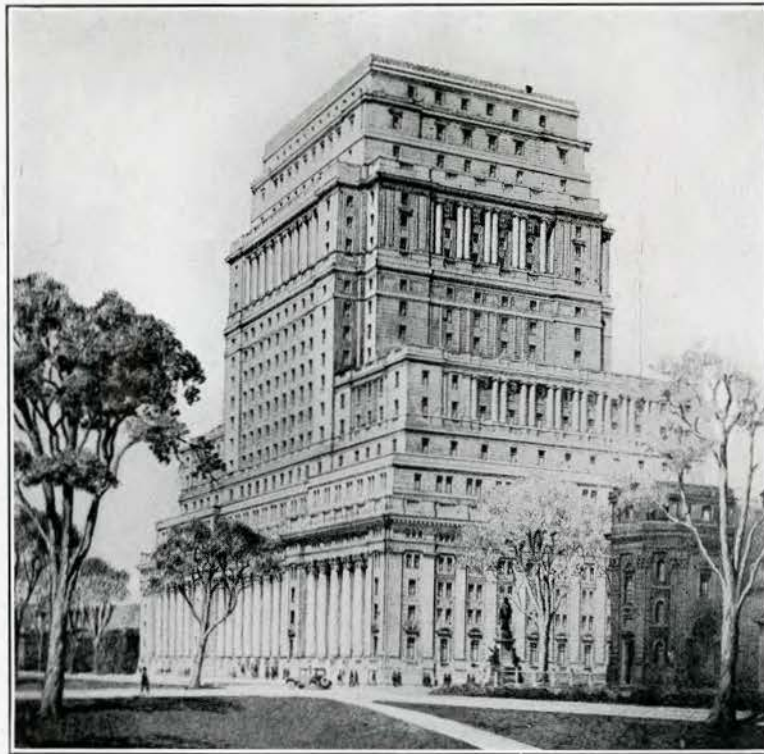
*of Canadian Steel*

# NEW BILLET STEEL REINFORCING BARS

*Hard, Intermediate, Structural*

*New building of the Sun  
Life Assurance Company,  
Montreal, as it will appear  
when completed.*

*Darling & Pearson  
Toronto  
Architects  
Cook & Leitch  
Montreal  
General Contractors*



The reputation of Engineers and Architects depends on the quality of material called for in their specifications.

No better grade of Steel Bars is obtainable anywhere than Steel Bars made from New Billet Steel.



## THE STEEL COMPANY OF CANADA, LIMITED

HAMILTON - EXECUTIVE OFFICES - MONTREAL

SALES OFFICES: HALIFAX, ST. JOHN, MONTREAL, TORONTO, HAMILTON, WINNIPEG, VANCOUVER  
WORKS: HAMILTON, MONTREAL, TORONTO, BRANTFORD, LONDON, GANANOQUE

# WHAT ARCHITECT EVER WILLINGLY SPECIFIED AN IMITATION PRODUCT?

Imitations of course have their legitimate uses, particularly for those who cannot afford the real thing.

Some kinds of floor coverings for instance can be made to imitate tile, or marble, or oak parquetry.

Birch flooring can be stained to imitate walnut, or mahogany, but:

## SEAMAN-KENT HARDWOOD FLOORING DOESN'T NEED TO IMITATE ANYTHING!

It is just its own natural self! And all the better for it, because it's more beautiful, more durable, and more permanently satisfying!

**SEAMAN KENT COMPANY LIMITED**  
*Largest Producers of Hardwood Flooring in the British Empire*  
WALLACE AVE. - TORONTO - PHONE LLOYDBROOK 3101

Warehouses at Montreal, Quebec,  
Winnipeg, Regina, Edmonton and  
Vancouver. Factories at Meaford,  
West Lorne and Renfrew.

# SEAMAN-KENT HARDWOOD FLOORING

PRODUCED IN CANADA



**J**UST as the refinements and luxuries of hotel service today have supplanted and surpassed the accommodations of a generation ago . . .

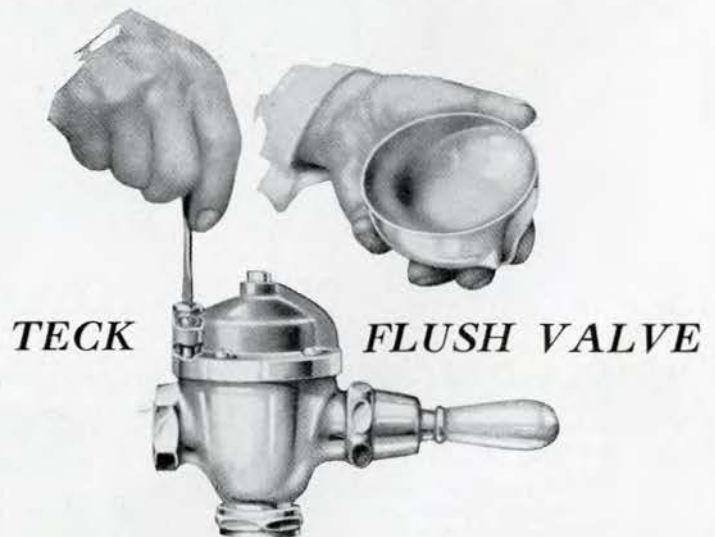
So the accurate functioning and handsome appearance of the Teck Flush Valve have supplanted and surpassed the crudities in old time sanitary equipment.

In the new Manoir Richelieu, as in many other fine Canadian hotels . . . the installation of Teck Flush Valves is positive assurance that this important part of the service is of the same high standard as every other refinement the hotel offers.

*The New Manoir Richelieu, at Murray Bay, Province of Quebec*

*Architect,  
John S. Archibald, Montreal*

*Plumbing Contractor,  
James Ballantyne, Montreal*



**THE GALT BRASS CO., LIMITED**

Head Office and Works: Galt, Ont.

Toronto Showrooms, 75 Adelaide St. W.  
Telephone ELgin 2921

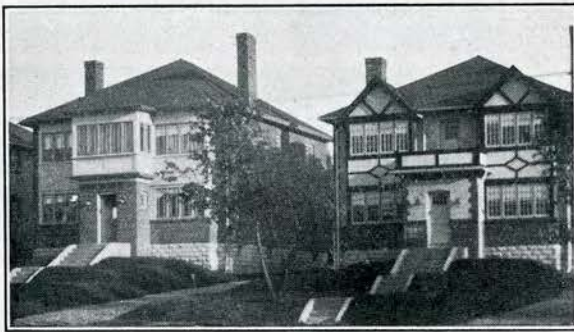
*Makers of the quiet "T-N" the one-piece toilet unit  
and the Vitro leak-proof tank.*

Only in Teck Flush Valves will be found this exclusive design of casing and by-pass, which permits easy and instant regulation of the valve while under pressure. No dismantling . . . no danger of wrench scars on the plated finish . . . a screwdriver is the only tool required.

So skilfully and durably are Tecks made that every valve is guaranteed against defect for five years.



*“Red Seal” Wiring*  
is what  
Women want!



For full information about “Red Seal” wiring ask the Electric Service League, 302 Excelsior Life Building, (ELgin 4937)

or

**T**ORONTO  
HYDRO-ELECTRIC  
SYSTEM

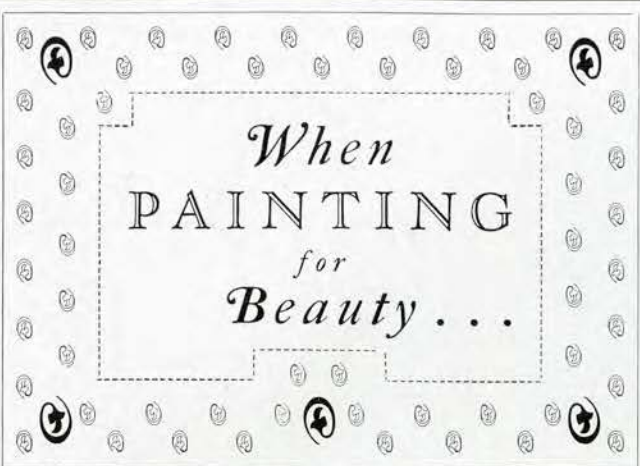
225 YONGE ST.

TORONTO

*KEEP CANADA PROSPEROUS*  
*Buy Goods Made in Canada*

JUST look at the countless new houses in all sections of Toronto with the famous “Red Seal.” Women want such houses . . . they want the great convenience and comfort of a modern standard of electric wiring. With “Red Seal” wiring they can use an electric range and electric ironer and electric water-heater . . . they can use many other electrical appliances, too.

Write for the “Red Seal” wiring specifications . . . they are yours for the asking. Your electrician will gladly wire the houses you build to that standard.



When  
PAINTING  
for  
Beauty...

WHEN painting for beauty you'll get pleasing results from Degraco-Tone. Degraco-Tone with its soothingly soft velvet finish gives a refined and pleasing appearance for interior decoration. It forms a harmonious background that effectively sets off furniture and decorations.

Degraco-Tone is a decorative interior oil paint in a flat finish. This product is far out of the class of general cheap flats—and yet it costs but little more.

When specifying or using Degraco-Tone you never consider it a case of experimenting because Degraco-Tone is a product of known and commendable performance. Its roster of pleased users becomes longer every day.



*Degraco-Tone was used in this hotel suite. Here the guest immediately forms a favorable impression and anticipates rest and comfort.*

**DEGRACO PAINTS**  
All Colors for All Purposes

**Dominion Paint Works, Limited**  
WALKERVILLE, CANADA

BRANCH OFFICES AND WAREHOUSE STOCKS IN ALL PRINCIPAL CENTERS  
THERE IS A DEGRACO PAINT FOR EVERY PAINTING REQUIREMENT



**TRUSCON**  
Made in Canada  
**WIRE MESH**

ELECTRICALLY WELDED

**In Rolls and Flat Sheets**

For reinforcing concrete floors, roads, pavements and driveways. Positive welding by improved process. Accurate workmanship. Furnished in various sizes of mesh and diameter of wire.

*Write for full information and quotations.*

**TRUSCON STEEL COMPANY**  
OF CANADA, LIMITED, WALKERVILLE, ONT.  
Branch Offices in Montreal, Toronto, Winnipeg, Regina, Calgary, Vancouver and Halifax

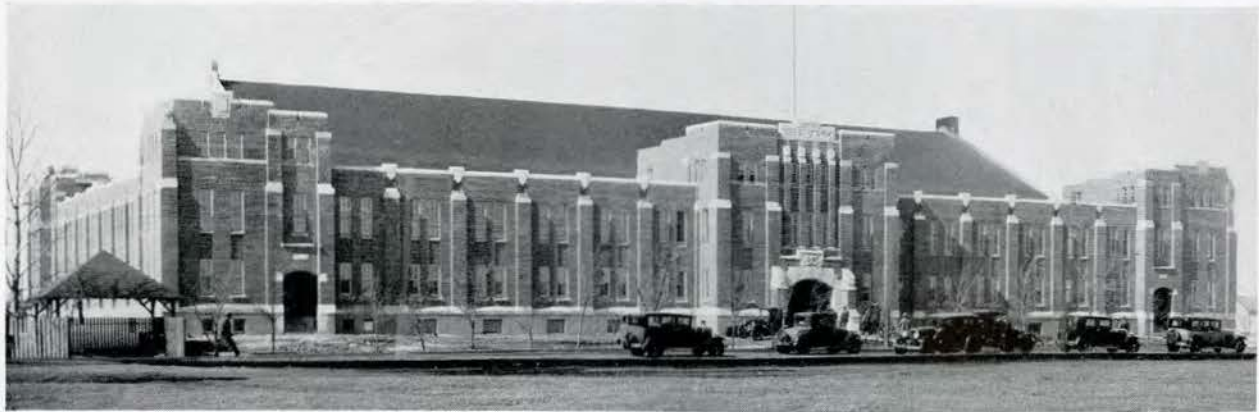
**TRUSCON**  
Made in Canada  
**I-PLATES**

Light-weight fire-proof roofs at economical cost, insulated to any degree, water-proofed with standard roofing, quickly erected without centering. Adapted to practically any building. Full information and literature will be sent on request.

**TRUSCON STEEL COMPANY**  
OF CANADA, LIMITED, WALKERVILLE, ONT.

Branch Offices in Montreal, Toronto, Winnipeg, Regina, Calgary, Vancouver and Halifax





*Architects:*  
STAN STOREY and W. G. VAN EGMOND

Floored with  
13/16"x2" First Grade Birch

*Contractors:*  
POOLE CONSTRUCTION CO.

Chosen to Floor the New

# REGINA ARMOURIES

where *Permanent* Beauty was Essential

**EX**TRAORDINARY care in kiln drying and perfection of manufacture make Red Deer Brand Birch Flooring ideally fitted for this job. The floor will be called on to stand severe treatment. Time puts a wear-resisting "skin" on Red Deer Brand Birch. After many years of use this floor will preserve its well groomed appearance.

Red Deer Brand Flooring is a quality article—like a good car, no matter how much abused, it always retains that respectability only found with superior products.

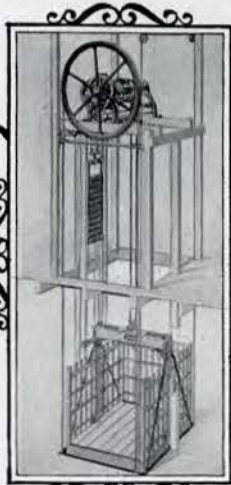
*There's a  
Grade for every  
Job*



THE  
**MUSKOKA  
WOOD**  
MFG. CO., LIMITED  
HUNTSVILLE ONT.

Eastern Offices:  
484 McGill St., Montreal

# SEDGWICK DUMB WAITERS and ELEVATORS



The Sedgwick Freight Elevator



*For all  
purposes*



The Sedgwick Fuel Lift

**T**WO of the many types of Sedgwick Hand Power Dumb Waiters and Elevators are illustrated above. Twenty-one standard types are available for immediate shipment, while special equipment is expertly and economically built to meet unusual requirements.

*Write for Catalog, or communicate with the following representatives:*

**MONTREAL**  
James Walker Hardware Co., 412 St. James Street  
**OTTAWA**  
Builders Sales Ltd., 531 Sussex Street  
**TORONTO**  
Aikenhead Hardware Ltd., 17 Temperance Street

SEDGWICK MACHINE WORKS  
166 West 15th Street, New York

**SEDGWICK SERVICE SATISFIES**

**ROTTED**



**IN 15 YEARS**

**T**HE roof bar illustrated is of wood which, until recently, was the most popular wood for greenhouse construction.

The greenhouse from which it was taken was erected fifteen years ago. The bars are so rotted by fungi as to easily snap in the fingers. The house has been razed and entirely rebuilt of California Redwood because, like other important growers throughout Canada, the owner has discovered that

## REDWOOD NEVER ROTS

There is no replacements when Redwood is used. It need never be painted unless you wish. Unless deliberately destroyed, a Redwood greenhouse, once built, is there forever. Prices and full information from

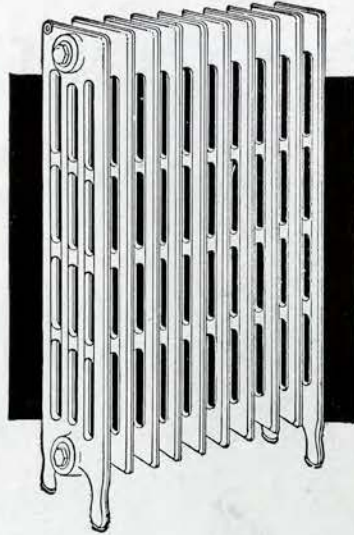
### L. S. ROLLAND

Canadian Representative

CASTLE BUILDING, MONTREAL, QUE.







# The Copley Radiator

## Will Harmonize

*with your ideas of interior design*

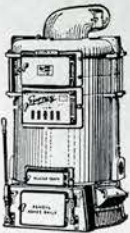
### ARTISTS GAVE THE COPLEY GRACEFUL LINES

FROM the architectural viewpoint the Copley Radiator is an outstanding achievement. The Copley co-related a necessary part of every room with distinctive interior decoration. Until the arrival of the Copley no person thought radiators could possibly add to the beauty of any room. But now the Copley plays its part in ornamentation just as a piece of the finest furniture.

The reason is that artists designed the Copley. They gave it slender tubes and graceful proportions to make it harmonize with the most artistic surroundings. Since the Copley comes in various sizes and heights, you can have no difficulty in getting rooms to look exactly as you plan.

Besides, the Copley is more efficient than old-fashioned radiators. The larger air space between the tubes allows for quicker air circulation, hence more heat.

In planning homes, business or public buildings, you should specify Copley Radiators. You can then rest assured that you will have the utmost in radiator appearance and heating qualities. Write us for further details.



### THE TROJAN BOILER

With Copley Radiators we recommend the Trojan Boiler for home heating. The best of Gurney engineering and experience has gone into the Trojan Boiler, so that we are sure we have the most economical and most efficient boiler on the market.

The Trojan has a deeper fire-pot, a bigger combustion space, larger flue spaces, all of which combine to get the most heat units out of any kind of fuel.

Two larger water passages, one on each side of the Trojan assure a freer flow of hot water.

You will be interested in learning other facts about this remarkable boiler.

# Gurney

## BOILERS & RADIATORS

MONTREAL TORONTO WINNIPEG VANCOUVER

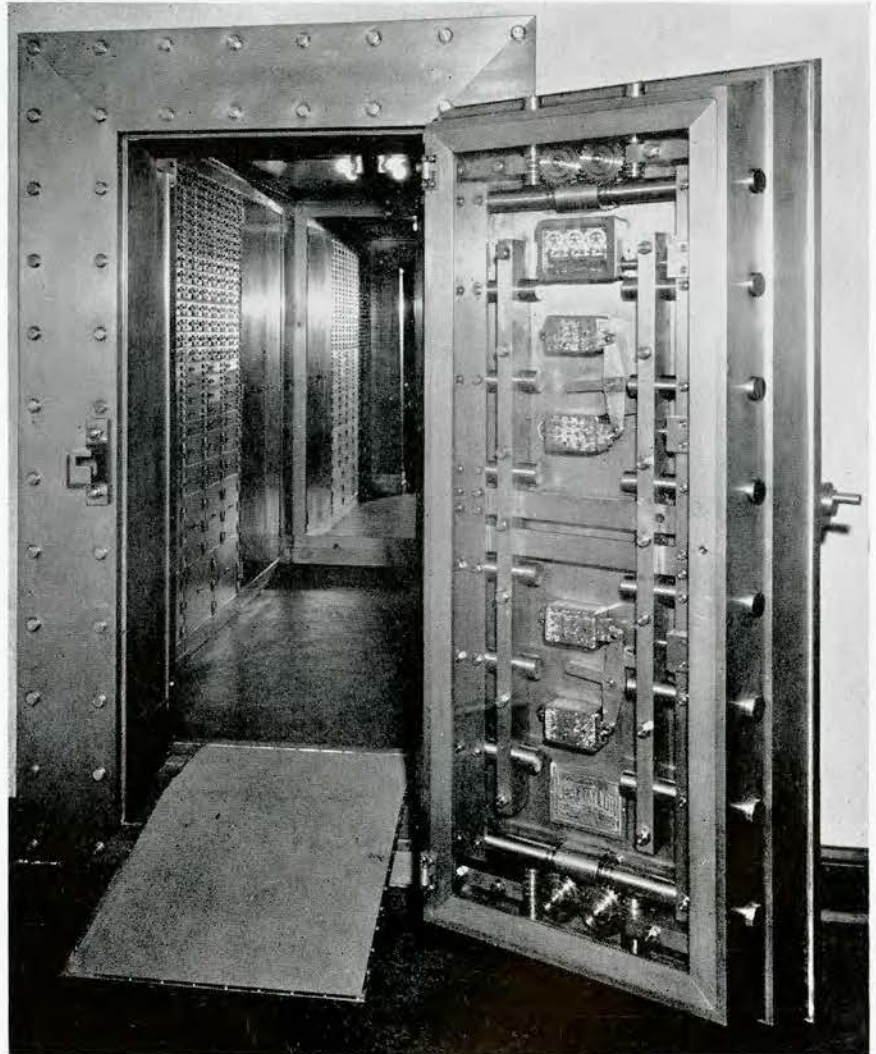
# They Do Not COMPROMISE With Safety

THE modern steel office building is a mighty substantial structure . . .

It is built for years of service — sturdy, fire-proof, solid.

And it is only fitting that the protective equipment in so costly and enduring a building should be the very finest obtainable.

In this connection it is interesting to note that Taylor equipment is the almost universal choice of the architects and builders of Canada's finest and most modern business and financial structures.



Vault door; 7" thick with laminated lining  $1\frac{1}{8}$ " thick—Taylor Fabricated, guarded by triple chronometer time lock. This the latest type steelcast door for Banks, Financial Houses, etc.

*There is no substitute  
for experience.*

**J. & J. TAYLOR LIMITED**  
**TORONTO SAFE WORKS**

Head Office: Toronto, Canada

BRANCHES: MONTREAL, WINNIPEG, VANCOUVER.

# ANOTHER BEAVERDUCT INSTALLATION



*Electrical Contractors,*  
CANADIAN COMSTOCK CO.  
Montreal

*Building Contractors*  
TAVERNER COMPANY  
Montreal

FROM Vancouver to Halifax, Beaverduct is the first choice of electrical and building contractors. A typical example from the Maritimes is the Nova Scotia Public Cold Storage Company whose new building is illustrated above. Here, as in hundreds of other modern structures, Beaverduct ensures lifetime satisfaction.

*Made in Canada by*

**CANADIAN**  
**GENERAL ELECTRIC Co.**  
Limited  
HEAD OFFICE TORONTO. SALES OFFICES IN ALL PRINCIPAL CITIES

WD-1129

**Foyer Entrance,  
Chateau Laurier  
Ottawa**

THE marble used in the new addition of the Chateau Laurier was supplied and erected by this firm. The above view shows the travertine floors with colored mosaic border, the end wall and fountain of Jeanne d'Arc stone with villeville trimmings and the base of black and gold.



**GEO. OAKLEY & SON**  
LIMITED  
Office: 278 Booth Ave.  
Marble Mill: 355 Logan Ave.  
TORONTO

*Cut Stone and Marble*

Architect—John S. Archibald      Associate—John Schofield  
General Contractors—Foundation Co. of Canada Limited

**STEEL  
WORK**

Illustration shows the Steelwork of the Canadian Pacific Railway's Royal York Hotel, the erection of which has been completed recently by us.



**STEEL INSURES STRENGTH AND SECURITY**

**DOMINION BRIDGE COMPANY LIMITED**

OTTAWA      TORONTO      MONTREAL      WINNIPEG      VANCOUVER

# NEW ARCHITECTURAL BOOKS

Any of the books mentioned in this announcement, as well as those which are reviewed in our columns, may be secured through the Journal of the R.A.I.C. at the published price, carriage and customs duties prepaid.

## WROUGHT IRON IN ARCHITECTURE

By Gerald K. Geerlings \$7.50

This volume is uniform in format with the "Metal Crafts in Architecture" by the same author. It contains a practical discussion on craftsmanship as it relates to wrought iron. The chapters in the book deal separately with iron work of Italy, Spain, France, The Lombards, England, Germany, American pre-twentieth century, and the Modern. The final chapter is given over to specifications.

## THE HISTORY OF ARCHITECTURE

By Banister Fletcher  
Eighth Revised Edition \$12.00

No architect or student should be without this standard work, which is itself a triumph of art. The illustrations alone are a treasure-house of noble form, and create to the observer a sense of delight and exultation as he passes in review all these magnificent monuments of man's effort and his aspiration.

## AMERICAN COMMERCIAL BUILDINGS OF TODAY

By R. W. Sexton Price \$18.00

Over 300 pages of illustrations of modern commercial buildings, divided into four groups including sky-scraper, office buildings, private business buildings, banks, stores and shops. A cross-section in the Architectural treatment of modern commercial buildings.

## AMERICAN APARTMENT HOUSES OF TODAY

By R. W. Sexton Price \$16.00

Illustrating plans, details, exteriors and interiors of modern city and suburban apartment houses throughout the United States. Contains 300 illustrated pages, including 135 full-page plans. In one volume 9½ x 12½.

## AMERICAN CHURCH BUILDING OF TO-DAY

By Ralph Adam Cram \$16.50

Mr. Cram has judiciously selected a splendid representation of the best and most recent churches, both large and small, of all denominations throughout the country. The eminence of Mr. Cram in this field is well known. His discussion of the development and future of ecclesiastical architecture in America is interesting and instructive.

AMERICAN CHURCH BUILDING OF TODAY contains 284 full-page plates, 9½ by 12½, with about 350 illustrations of exteriors, interiors, plans, and details. It is printed on heavy coated paper, in strong binding.

## COLLEGE ARCHITECTURE IN AMERICA

By Charles Z. Klauder and Herbert C. Wise \$5.00

This book is the outcome of a joint endeavor by the Association of American Colleges and the Carnegie Corporation to contribute something worth while in the field of college architecture and college planning. The illustrations, carefully selected, include interesting details as well as treatment of problems in grouping and planning. Valuable hints and tables, the result of many years' practical experience are given, and cover such important details as proper exposure, utilization of space, detailed requirements in special buildings and laboratories. The following are among the chapter headings: Administration and Academic Buildings, Libraries, Chapels and Auditoriums, Men's and Women's Dormitories, Dining-Halls and Cafeterias, Buildings for the Natural Sciences, Engineering Buildings and Central Heating Plants, Art Buildings and Museums, Structures for Athletics, Buildings for Student Welfare. 215 illustrations. 7½ x 10 inches.

## THE METAL CRAFTS IN ARCHITECTURE

By Gerald K. Geerlings \$7.50

Metal work, ancient and modern, in architecture and interior decoration has been reproduced in numerous photographs and drawings, and explained by an architect who has sought historic examples in Europe and America, and has obtained first-hand information by visiting the leading foundries and workshops. Each metal has been treated in a separate section, and among the headings are: Bronze, Brass, Cast Iron, Copper, Lead, Zinc, Tin, Lighting Fixtures, Preparation of Specifications, not to speak of current developments, such as enamelling and electrical aids in depositing metals. With about 300 photographs and drawings. 9 x 12 inches.

## THE JOURNAL, ROYAL ARCHITECTURAL INSTITUTE OF CANADA

160 Richmond Street West

Toronto, Ont.

Cheques payable to the Journal, Royal Architectural Institute of Canada

## List of Advertisers

### NOTE

Advertisers and Advertising Agencies are requested to note that the next issue of the Journal will be published early in September, 1929. Copy should be supplied not later than August 26th.

AMER. INSTITUTE OF STEEL CONSTRUCTION, INC. ....	Inside Front Cover
ANACONDA AMERICAN BRASS, LIMITED .....	xliv
ARMSTRONG CORK & INSULATION Co., LIMITED .....	iii
BARRETT COMPANY, LIMITED .....	xxi
BERRY BROS. ....	xxxix
BLOOMINGTON LIMESTONE .....	vi
THE BRUNSWICK-BALKE-COLLENDER Co. ....	vii
CALDWELL MANUFACTURING Co. ....	xxx
CANADIAN BENEDICT STONE, LIMITED .....	xxxii
CANADA CEMENT Co., LIMITED .....	ii
CANADA GYPSUM .....	xv
CANADIAN GENERAL ELECTRIC Co., LIMITED .....	liii
CANADIAN INDUSTRIES .....	xviii
CANADIAN I.T.S. RUBBER .....	—
CANADIAN JOHNS-MANVILLE Co., LIMITED .....	viii
CANADIAN TUBE AND STEEL .....	Outside Back Cover
CANADIAN WESTINGHOUSE .....	x
CHAMBERLIN METAL WEATHER STRIP Co. ....	—
CRANE LIMITED .....	xxvi
DARLING BROS. LIMITED .....	—
DOMINION BRIDGE Co., LIMITED .....	liv
DOMINION ELECTRIC PROTECTION .....	ix
DOMINION OILCLOTH & LINOLEUM Co., LIMITED .....	xxiv
DOMINION PAINT .....	xlvi
DOMINION RUBBER FLOORING .....	xxxv
C. A. DUNHAM Co., LIMITED .....	xxxiii
EBERHARD-FABER .....	xxxiv
FRIGIDAIRE CORPORATION .....	iv
GALT BRASS COMPANY, LIMITED .....	xlvi
GALT STOVE & FURNACE Co., LIMITED .....	—
GREENING WIRE COMPANY LIMITED .....	—
GURNEY FOUNDRY .....	li
INTERNATIONAL FIBRE BOARD .....	xxxvi, xxxvii, xli
JENKINS VALVES .....	v
JOHNSON TEMPERATURE REGULATING Co. OF CANADA .....	xi
LORD & BURNHAM Co., LIMITED .....	xxii
METAL STUDIOS, LIMITED .....	—
ROBERT MITCHELL Co., LIMITED .....	xxv
MUELLER LIMITED .....	—
ALEX MURRAY .....	xxxviii
MUSKOGA WOOD .....	xlx
NATIONAL CONDUIT Co., LIMITED .....	xxviii
NATIONAL FIRE-PROOFING Co. OF CANADA, LIMITED .....	xxvii
NORTHERN ELECTRIC Co., LIMITED .....	xxix
GEO. OAKLEY & SON, LIMITED .....	liv
OTIS-FENSOM ELEVATOR Co., LIMITED .....	i
PACIFIC LUMBER .....	l
PEDLAR PEOPLE LIMITED .....	—
RICHARDS-WILCOX CANADIAN Co., LIMITED .....	xxxii
SARNIA BRIDGE Co., LIMITED .....	xliv
SEAMAN-KENT .....	xlv
SEDGWICK MACHINE WORKS .....	l
E. D. SMITH & SONS, LIMITED .....	—
STANDARD SANITARY MFG. Co., LIMITED .....	ix
THE STEEL COMPANY OF CANADA LIMITED .....	xvi, xlv
B. F. STURTEVANT Co. ....	xiv
J. & J. TAYLOR .....	lii
TORONTO BRICK .....	xvii
TORONTO HYDRO .....	xlvi
TRUSCON STEEL Co. OF CANADA, LIMITED .....	xix, xlvi
TURNBULL ELEVATOR Co., LIMITED .....	xl
TUTTLE & BAILEY .....	xii
WALPAMUR Co., LIMITED .....	xiii

The Journal, Royal Architectural Institute of Canada

# Red Diamond

## SCALE FREE PIPE

The  
GOLD STANDARD  
of  
PIPE VALUE



**Red Diamond** Scale Free Pipe is made to meet the supreme tests to which pipe can be subjected. It is the best quality that can be attained both as to material and manufacture.

At every stage and process it is minutely inspected. Every length of **Red Diamond** pipe is tested to 700 lbs. per sq. in. hydraulic pressure. Every length bears the **Red Diamond** label. On sizes 1½ inch and smaller a metal tag in the same colors is attached to each bundle.

Insist on **Red Diamond** from your jobber.

*We also manufacture  
Nipples and Couplings,  
black and galvanized,  
in all sizes.*

**CANADIAN TUBE AND STEEL PRODUCTS,  
LIMITED**

Works at Lachine Canal, Montreal, Quebec