

JOURNAL

ROYAL ARCHITECTURAL
INSTITUTE OF CANADA

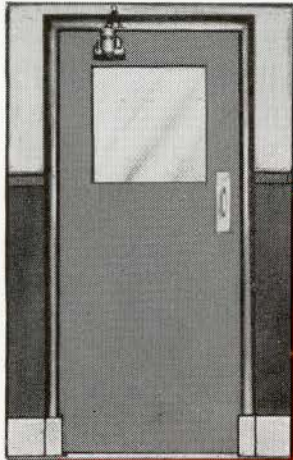


VOL. 18 TORONTO, NOVEMBER, 1941 NO. 11

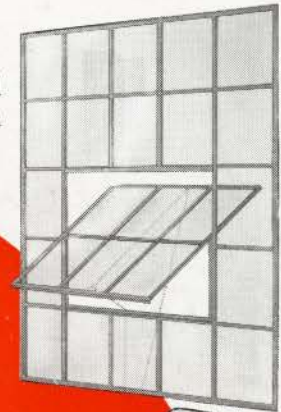
"REED'S"

"Metallic"

"WESTEEL"



Hollow Metal Doors



Steel Sash

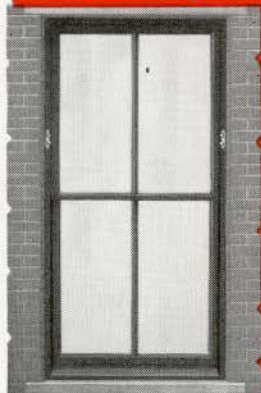
IT'S ALWAYS SAFE TO

Specify Steel

FOR BEAUTY, STRENGTH AND ECONOMY

● The reliable uniformity of Products of Steel is a valuable feature. They are also fire-resistant, and give long dependable service.

We are proud to be able to say that our Products of Steel are specified by Architects for the best of buildings from coast-to-coast. Catalogues on request.



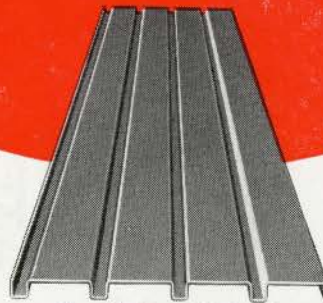
Hollow Metal Windows



Steel Toilet Partitions

Special Sheet Metal Work

Our long experience and skilled engineering service in sheet metal work of every description is at your service. Enquiries invited.



Steel Roof Deck

We Also Manufacture

Shower Stalls, Office Partitions, Fire Doors, Lockers, Shelving, Special Cabinets, Ventilators, Skylights, Steel Door Frames, etc.

"REED'S"
GEO. W. REED & CO. LTD.

MONTREAL

"Metallic"
METALLIC ROOFING CO. LTD.

TORONTO

"WESTEEL"
WESTERN STEEL PRODUCTS CORPORATION LTD.

REGINA
CALGARY

WINNIPEG
EDMONTON

SASKATOON
VANCOUVER

"WE GIVE YOU SERVICE FROM COAST TO COAST"



FRIENDLY NEIGHBOURS

● The town of Asbestos, P.Q., site of Johns-Manville's mine, mill and factory, is a notable example of what can be done by friendly co-operation between management and workers. Some of the practical, material advantages arising from this co-operation are shown in the three pictures below.



THE FULLY-EQUIPPED J-M HOSPITAL at Asbestos, contains the latest X-ray equipment, a modern operating room and large, comfortable patients' bedrooms. Above, an employee is receiving his periodical free check-up.



THESE BRIGHT, MODERN HOMES are typical of the houses built by J-M and rented to employees at exceptionally low rates. Company-erected houses are widely sought because of their fine construction—largely from J-M materials.



THIS SPACIOUS AUDITORIUM is part of the Recreation Centre, built by J-M employees with the help of the Company. The same building also provides a gymnasium, bowling alleys, and other sports facilities.

ROCK WOOL

Another J-M "FIRST"

AS recently as ten years ago the scientific insulation of homes was practically unknown. Canadian architects, even with all their skill and talents, were faced with the difficult task of building houses that would be warm and easy to heat in winter and still remain cool and comfortable on hottest summer days. With the discovery of Rock Wool the architect's problem was solved! Here was a material with almost "magic" qualities—a material that would help to keep homes warm in winter—cooler in summer! As pioneers in the development of Rock Wool, and long-established specialists in industrial insulations, Johns-Manville soon became the recognized leaders in the Home Insulation field. Today, J-M retains this leadership by jealously guarding the quality and insulating efficiency of its products . . . as a result, J-M Rock Wool Home Insulation is the standard of both the profession and the public for "all-weather" comfort.



CANADIAN JOHNS-MANVILLE CO., LIMITED

Mine and Factory — Asbestos, P.Q.

TORONTO - MONTREAL - WINNIPEG - VANCOUVER

JOHNS-MANVILLE BUILDING MATERIALS

J-M ASBESTOS BUILT-UP ROOFS • J-M FELT, PITCH AND GRAVEL ROOFS • J-M ROOF INSUL • J-M ASPHALT TILE FLOORING • J-M ASBESTOS AND ASPHALT SHINGLES
J-M CEDARGRAIN ASBESTOS SIDING SHINGLES • J-M ROCK WOOL INSULATION • J-M INSULATING BOARD • J-M FLEXBOARD • J-M ACOUSTICAL MATERIALS



The "BEST" In Flooring Need Not Be Costly!

★ *This Asphalt Tile is Low in Cost*
The first cost of Armstrong's Asphalt Tile is low. And that's not the only economy this flooring offers. Upkeep is inexpensive and easy, consisting of routine sweeping and occasional washing and waxing. Cigarette burns can be removed easily with steel wool. Expensive refinishing is unnecessary.

★ *Scuffproof Colourings*

The many attractive plain and marble colourings available in Armstrong's Asphalt Tile run right through the material. This means that they cannot wear off under constant traffic of scuffing feet, scraping chairs and desks. Since this material is so durable and its beauty so long-lasting, Armstrong's Asphalt Tile is a smart low-cost floor choice for new buildings or modernization.

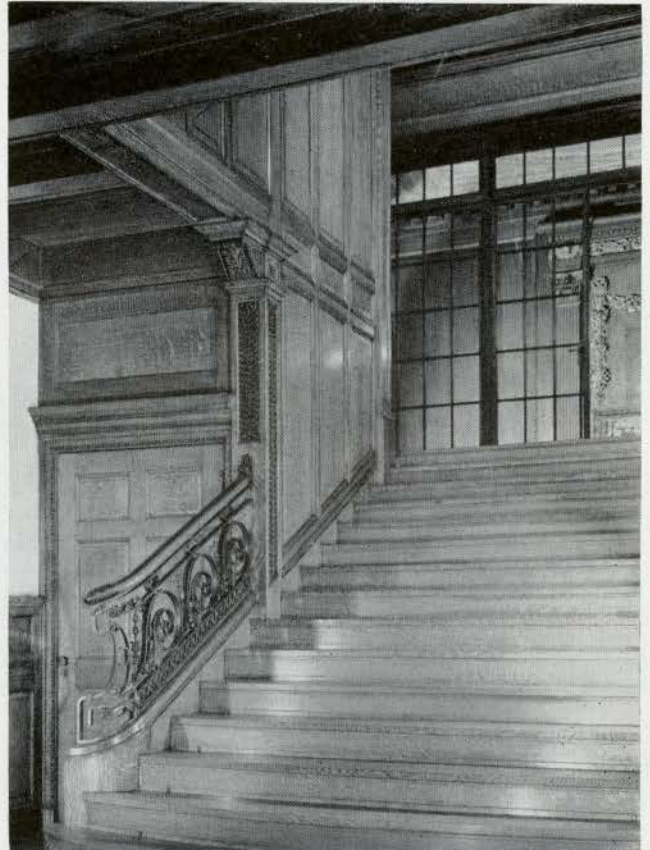


Let us send you further, complete details of this fine low-cost flooring.

ARMSTRONG CORK & INSULATION COMPANY LIMITED

MONTREAL • TORONTO • WINNIPEG • QUEBEC

You Can Take It With You



One of a series of photographs made for Dakin Engineering Limited.

A Photograph Makes This a Stairway to New Contracts

From any standpoint . . . proportion, detail or craftsmanship . . . an architectural masterpiece such as this stairway is worthy of the finest photography for your permanent records.

There are details of design for pleasant living other clients will want to see; there are details of construction for faithful service others will want to study . . . a GOOD photograph allows you to take this stairway anywhere with you to show to other prospective clients.

Leading architects, construction engineers and contractors know the value of ASN photographs for their records of work completed.

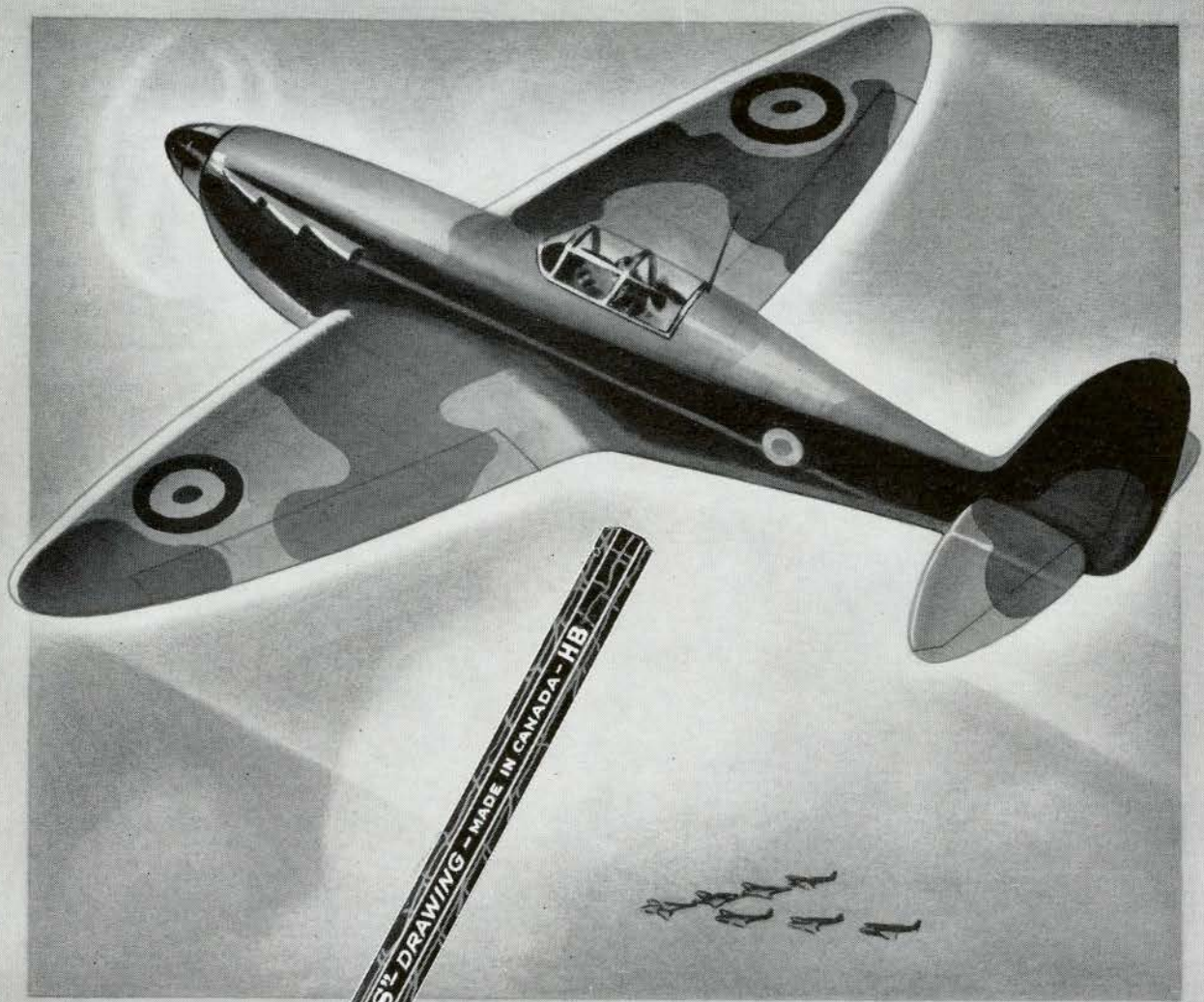
For estimates on a series of progress pictures, or photographs of completed projects, write or call:

ASSOCIATED SCREEN NEWS LIMITED

TORONTO
100 Adelaide St. W.

MONTREAL
5271 Western Ave.

VICTORIA
Empress Hotel



**LEADERS...
THE WORLD OVER**



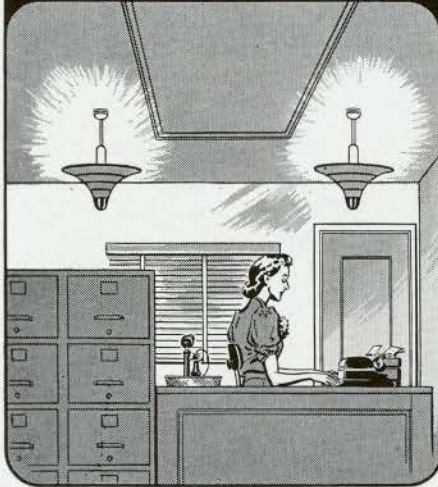
VENUS



DRAWING PENCILS 10¢

Canada's Largest-Selling Quality Pencils

The True Story of How an ELECTRIC BILL was CUT IN HALF



In the general offices of a prominent architect in Toronto two lights were needed all the time, no matter how brilliant the day—till the decision was made to bring daylight indoors with a new creation in glass called THERMOLUX.



The ceiling light in the office was glazed with eight lights of THERMOLUX—and at once it was found that natural light, diffused and softened by THERMOLUX, permeated the whole office and made artificial lighting unnecessary.



The first electric meter reading following the installation of THERMOLUX showed a consumption drop of 50%. A drop so spectacular brought inquiry from the Toronto Hydro-Electric System—and it was decided to run a week's test on the meter.

THOSE THERMOLUX LIGHTS HAVE CUT POWER CONSUMPTION IN HALF

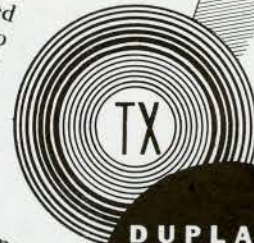


At the end of the week of testing, Hydro inspectors certified the meter and established the fact that THERMOLUX had achieved the remarkable economy of a 50% power saving.

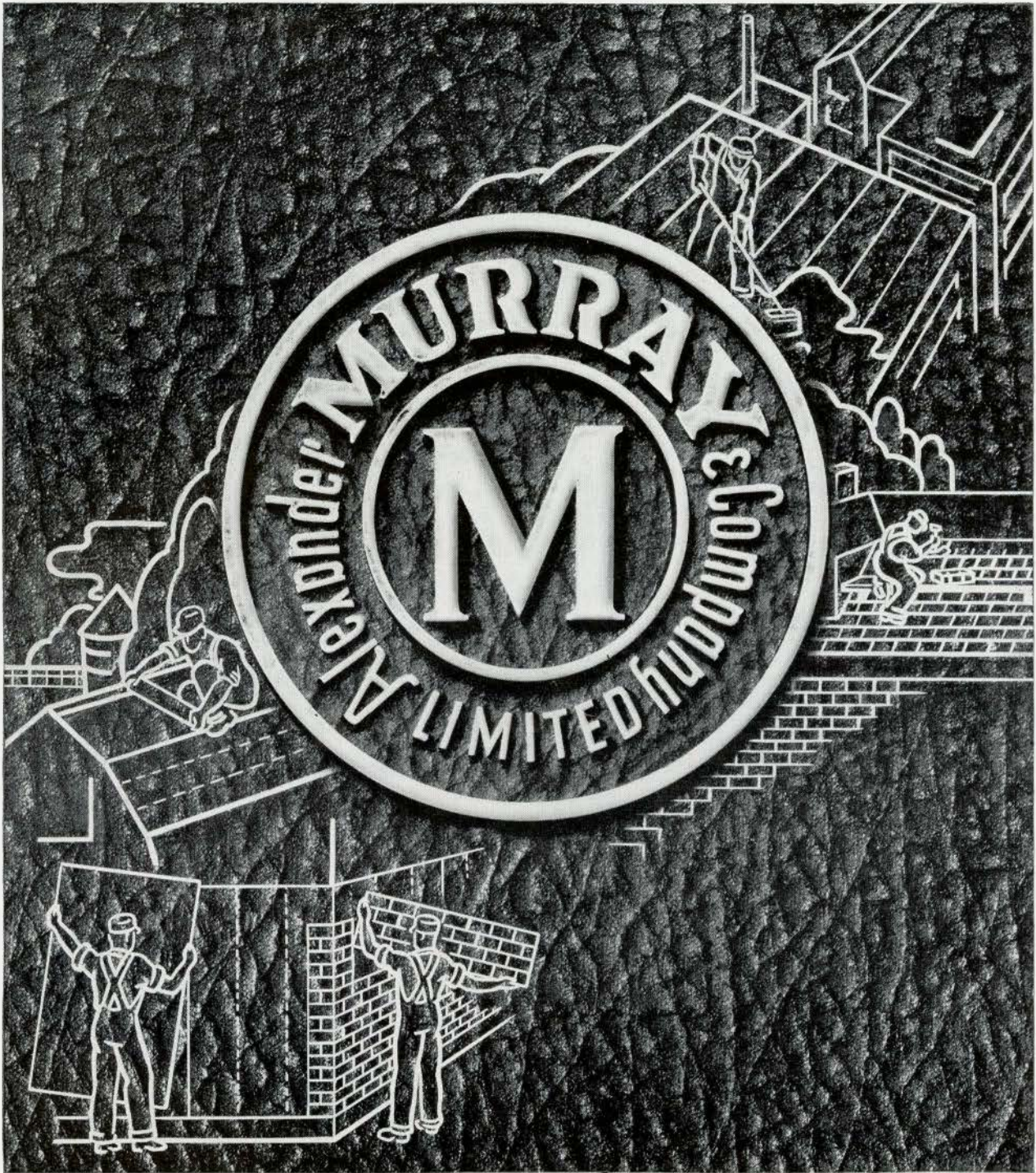
THERMOLUX *The New Creation in Glass* BRINGS DAYLIGHT INDOORS

With economy in the consumption of power having become a national necessity, the employment of THERMOLUX for the extension of natural lighting demands the serious consideration of every business. THERMOLUX brings daylight indoors by softening and diffusing intense local lighting. It consists of two layers of smooth glass within which are sealed spun-glass fibres directionally laid to diffuse and direct natural light where it is required.

THERMOLUX glazing will justify itself wherever natural light is not being used to its maximum possibilities. Architects, Engineers, Building and Plant Superintendents and Industrial and Commercial Executives are invited to write for details. Drop a line now to DUPLATE CANADA LIMITED, Oshawa, Ontario, for Technical Bulletin No. 3, Series B.



**DUPLATE
CANADA
LIMITED**
Oshawa, Ontario



Into every product bearing this trademark go the soundest materials yet developed by research—plus the skill of workmen to whom quality is a byword. Murray products, for roofing and insulation, are designed to improve the security, comfort and beauty of the community—a source of infinite satisfaction to purchaser and distributor alike.

Donnacona Insulating Board and Plaster Base—Donnacona Hardboard—Donnacousti (for noise quieting)—Murray Built-Up Pitch and Gravel Roofs—Murray Asphalt Shingles—Roll Roofing and Building Papers—Fibreen—Insulated Brick Siding—Waterproofing and Preserving Coatings, Paints and Stains—Rotar (for better roads).

Alexander **MURRAY** & Company
LIMITED

MONTREAL • TORONTO • HALIFAX • SAINT JOHN • WINNIPEG • VANCOUVER

AFFILIATED WITH DOMINION TAR & CHEMICAL COMPANY LIMITED and CANADA CREOSOTING COMPANY LIMITED



WE KEEP THESE BOYS HAPPY TOO

TODAY Canada's fighting men are happier and more comfortable in their barracks than were those of the last war. For, it was found that their health, vigor and morale depended to a surprising degree on the air they breathed while indoors.

Air that is too chilly or too hot, too damp or too dry can be depressing, devitalizing and dangerous. That is why heat and humidity are under constant, accurate, automatic control in 50 million dollar's worth of new Canadian war buildings.

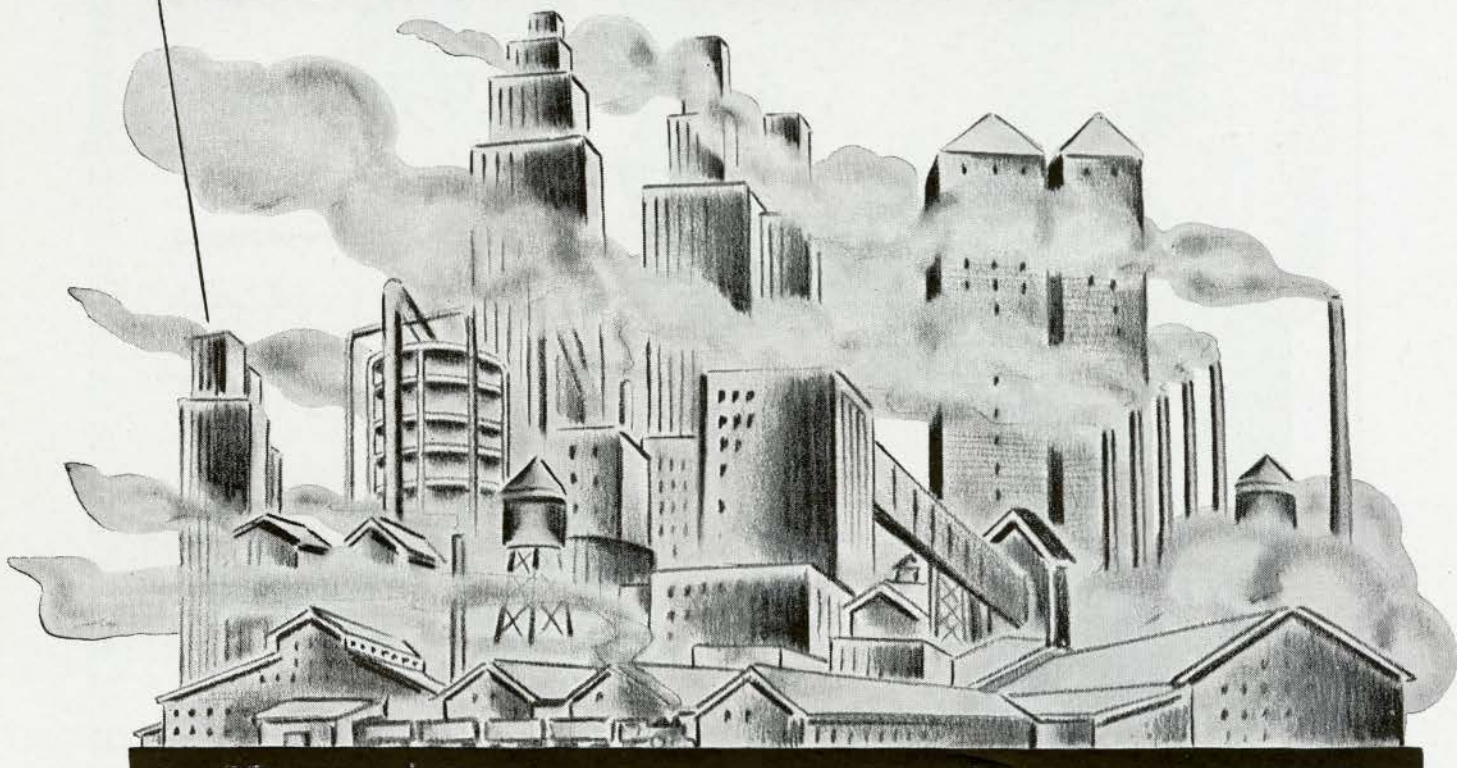
In barracks from Halifax to Prince Rupert, M-H Automatic Controls instantly detect any departure from the ideal of temperature or humidity. As the senses flash warnings to the human brain, so these dependable mechanical watchmen flash instructions to ingenious control devices in the

heating or air conditioning system, and immediately start compensating operations. These almost human controls are manufactured by Minneapolis-Honeywell Regulator Company Limited who are proud to be able to supply the equipment for such a vital job.

There is a Control System made by these leaders in the control field, that will solve even your most difficult problems of the regulation of heat, cold or humidity. And their engineers are always glad to show you how to best apply their equipment to your particular needs. Minneapolis-Honeywell Regulator Company Limited, 117 Peter Street, Toronto. Branches at Montreal, Calgary and Winnipeg.

**MINNEAPOLIS-HONEYWELL
AUTOMATIC CONTROL SYSTEMS**

CANADIAN INDUSTRY HAS DONE IT!



WELL EQUIPPED FOR VICTORY

Canadian business and Canadian workmen have shown themselves capable, not only of swinging over from peace-time production, but of tremendous expansion to provide the grim tools of war.

To protect them most effectively against rain, snow, hail and sun, many of these new plants are built with Currie-Process Roofs,

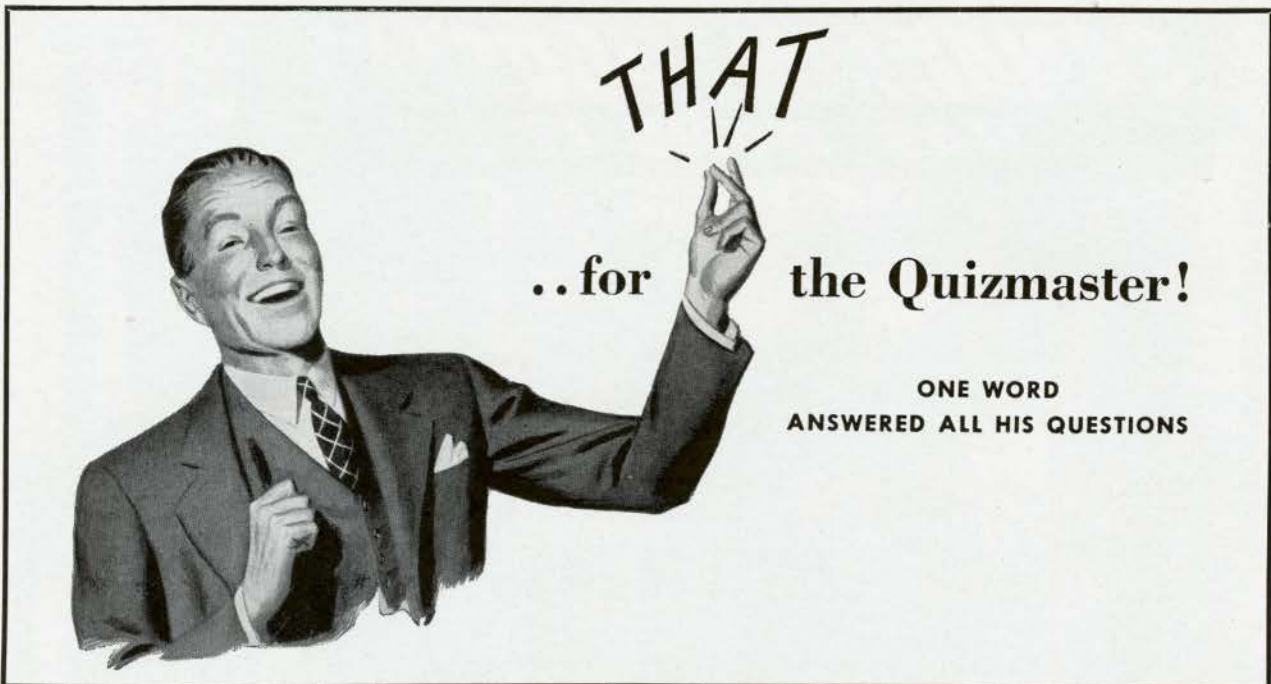
produced by Canadians from Canadian raw materials. Because of their proven quality, Currie-Process Felt, Pitch and Gravel Roofs can be had with a ten, fifteen or twenty year bond against maintenance expense. With this assurance of complete protection, you would be wise to specify Currie-Process Roofs.

"Industry looks up to Currie-Process Roofs"




CURRIE PRODUCTS LIMITED


HAMILTON - TORONTO - OTTAWA - MONTREAL



**ONE WORD
ANSWERED ALL HIS QUESTIONS**




1—It was my first time before a "mike" and was I nervous when the Quizmaster put the first question:
"What general purpose flooring is the most durable?"
 "Right — and there's two dollars," said the Quizmaster as I answered—
"LINOLEUM!"




2—Question No. 2 was also easy:
"What flooring is available in colours to harmonize with any decorative scheme?"
 "That's five dollars in the bag," I thought, as I again gave the correct answer—
"LINOLEUM!"



3—The next was a five dollar question:
"What flooring is used by over 90% of Canadian hospitals?"
 This was easy money. I could have added that it was because it was foot - easy, sound absorbing, sanitary and easy to clean — but again I just answered in one word —
"LINOLEUM!"



4—"One more for five dollars?" asked the Quizmaster. "Shoot," I said—I was doing all right:
"What flooring is being recommended by most architects for new homes or for remodelling?"
 Being an architect I couldn't miss on that—I knew what was keeping my clients satisfied—
"LINOLEUM!"

5—I expected a tough one for the last, which was worth ten dollars.
"What flooring is suitable as the permanent floor for every room in the house?"
 That would be tough for most people, but I knew the answer — and could tell him why, too—but why should I waste words, when one would do—
"LINOLEUM!"

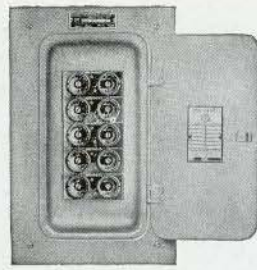
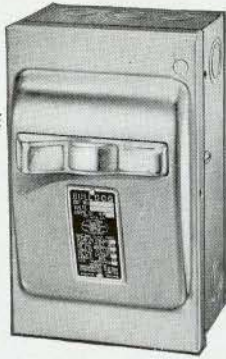



Twenty-five dollars for five one-word answers — that floored the Quizmaster! I couldn't mention the brand name over the air, but I'll give it to you now — **Dominion Battleship Linoleum** — that's the product with all those qualities — and the product specified by most architects, interior decorators and flooring contractors. Check up for yourself if you wish.

DOMINION
Battleship
LINOLEUM

DOMINION OILCLOTH & LINOLEUM COMPANY LIMITED, MONTREAL

Bulldog All-Purpose
Safety Switch.



"Util" Panelboard



"Util" combination
panel and entrance
switch.

Simplify your task with
**AMALGAMATED ELECTRIC
SERVICE EQUIPMENT!**

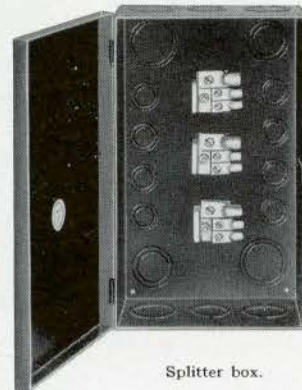
When the job calls for service switches, fuse panels, metering trough and associated equipment, leading Canadian contractors specify A-E equipment all the way. They have learned that Amalgamated Electric's high standard of quality is just as carefully preserved in these items as it is in the huge switchboards they build for Canada's great industries.

These illustrations show a 30-amp. All-Purpose safety switch in sturdy steel enclosure; a "UTIL" panelboard, with panel sections of brown Bakelite, and mounted in shallow steel cabinet to facilitate use in practically any type of building construction; a combination "UTIL" panel and entrance switch; and a Splitter Box with insulated terminal blocks and convenient knockouts in sides and back for main and branch feeder cables; type E cabinet also is shown. These are but representative of a complete line that includes standard and custom-built metering trough, splitter boxes, bus ways, wire ways, etc.

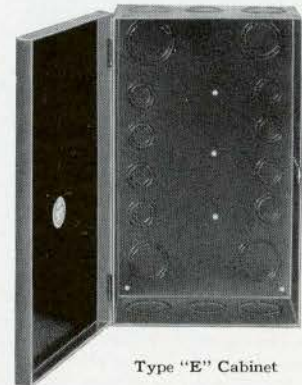
For complete information ask your electric supply jobber or write any Amalgamated Electric Branch.

AMALGAMATED ELECTRIC CORPORATION LIMITED, Toronto and Montreal. Western Divisions: Langley Electric Manufacturing Co. Limited, Winnipeg; Langley Electrical Co. Limited, Calgary; Langley Manufacturing Co. Limited, Vancouver.

Amalgamated Electric Corporation Limited is proud to be extensively occupied with its part in supplying Canada's war requirements.



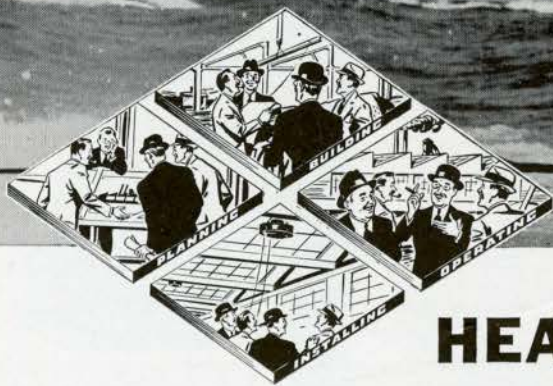
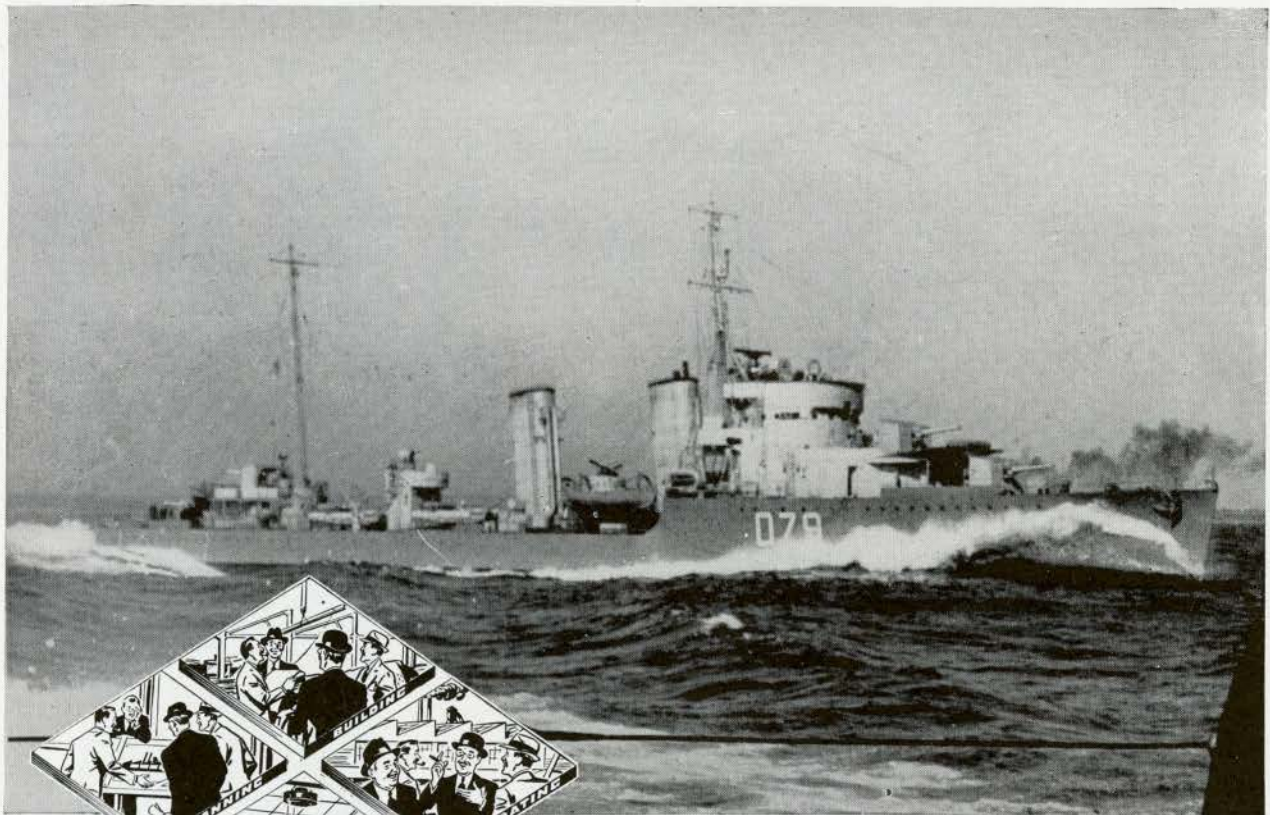
Splitter box.



Type "E" Cabinet



AMALGAMATED
ELECTRIC CORPORATION LIMITED



HEATING GOES TO SEA

Canada's Navy—destroyers, corvettes, minesweepers, merchant ships—demands heating planned to fit its *exact* needs. Light, space-saving equipment built to withstand severe vibration. Heat distributing units operating in cramped quarters to provide all-over even temperature. Provision for special and exacting conditions in almost every part of the ship.



Trane Convectors do not radiate an excessive amount of heat. They can be placed next to bunks aboard ship and beside desks in offices, assuring personal comfort at all times.

Trane FOUR SQUARE Service—the complete co-operation of the Trane engineering department—plus Trane *specialized* heating equipment have won for HEATING *by* TRANE a place in Canada's ships.

Trane Company of Canada is proud of this part they are able to play in helping the navy solve its heating problems. Trane engineers can help you get the most in heating too!

HEATING *by* TRANE — TOMORROW'S HEATING TODAY!



TRANE

COMPANY OF CANADA LIMITED

4 MOWAT AVE. TORONTO, ONT

Telephone ME. 1102

TRANE COMPANY OF CANADA LIMITED

24 MOWAT AVENUE, TORONTO, ONTARIO

Please send further information about:

HEATING *by* TRANE TRANE FOUR SQUARE SERVICE

Name.....

Address.....

JOURNAL

ROYAL ARCHITECTURAL INSTITUTE OF CANADA

Serial No. 195

TORONTO, NOVEMBER, 1941

Vol. 18, No. 11

CONTENTS

Editorial	178
More Houses of Earth, by A. B. Lee	179
Book Review—Architectural Graphic Standards, by J. A. Murray	181
Additions to Trinity College, Toronto, by George and Moorhouse	182
H. Claire Mott, F.R.A.I.C., President of Architects' Association of New Brunswick	189
Book Reviews by Milton S. Osborne	189
Mr. Martin Baldwin Criticizes the Schools of Architecture	190
The Schools of Architecture Reply	191
Obituary	192
Provincial Page	193

PLATES

The Coronet House of Earth	180
Strachan Hall, Trinity College, Toronto, Ontario	183
Lions' Gate Bridge, Vancouver, British Columbia	186
House of Mr. A. Leslie Perry, Montreal, Quebec	187
Old Ontario House	188

THE INSTITUTE DOES NOT HOLD ITSELF RESPONSIBLE FOR THE OPINIONS EXPRESSED BY CONTRIBUTORS

OFFICERS

President	BURWELL R. COON (F)	First Vice-President	WILLIAM FREDK. GARDINER
Second Vice-President	ANDREW R. COBB (F)	Honorary Secretary	ALCIDE CHAUSSE (F)
Honorary Treasurer	G. McLEOD PITTS (F)	Secretary	MARY ELMSLIE

COUNCIL

JOHN MARTLAND JOHN U. RULE Alberta Association of Architects	KENNETH CAMPBELL H. CLAIRE MOTT (F) Architects Association of New Brunswick	O. BEAULE ALCIDE CHAUSSE (F) ERNEST CORMIER (F) CHARLES DAVID (F) H. L. FETHERSTONHAUGH (F) R. H. MACDONALD (F) G. McLEOD PITTS (F) Province of Quebec Association of Architects
H. BLACKADDER WILLIAM FREDK. GARDINER GEORGE F. NAIRNE Architectural Institute of British Columbia	A. E. PRIEST C. ST. JOHN WILSON Nova Scotia Association of Architects	
C. W. U. CHIVERS (F) MILTON S. OSBORNE (F) J. N. SEMMENS Manitoba Association of Architects	W. J. ABRA (F) MURRAY BROWN (F) BURWELL R. COON (F) JAMES H. CRAIG (F) A. J. HAZELGROVE (F) W. H. HOLCOMBE A. S. MATHERS (F) FORSEY PAGE (F) Ontario Association of Architects	F. J. MARTIN J. H. PUNTIN Saskatchewan Association of Architects

EDITORIAL BOARD

FORSEY PAGE (F), Chairman		
CECIL S. BURGESS (F), Edmonton R. A. D. BERWICK, Vancouver DAVID COLVILLE, Vancouver MILTON S. OSBORNE (F), Winnipeg H. CLAIRE MOTT (F), St. John LESLIE R. FAIRN (F), Wolfville	GORDON S. ADAMSON, Toronto MURRAY BROWN (F), Toronto GLADSTONE EVANS, Toronto JOHN LAYNG, Toronto JOHN B. PARKIN, Toronto	W. C. BEATTIE, Ottawa OSCAR BEAULE, Quebec RICHARD E. BOLTON, Montreal HAROLD LAWSON (F), Montreal MARCEL PARIZEAU, Montreal ROBT. F. DUKE, Saskatoon
ERIC R. ARTHUR, EDITOR		
Editorial and Advertising Offices - - - - -		57 Queen Street West, Toronto
J. F. SULLIVAN, PUBLISHER		

SUBSCRIPTION RATES

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.

WE look forward with great interest to a special number of the *Journal* by the Provinces of Nova Scotia and New Brunswick. When that appears we shall have covered the whole Dominion and the students of Architecture of the future will have a neat little file of Architecture in Canada, 1930-1940, upon which to write a thesis. They will be puzzled at many things. For one thing they will know from learned books published abroad that during the same period a great movement known as the Modern Movement swept over Europe and new and exciting experiments were made in reinforced concrete and even with the plan of the ordinary dwelling. They will find that Canada was hardly touched by it. They will notice that in spite of climatic changes between East and West that the same kind of house was built in Quebec as in British Columbia to the evident satisfaction of the owner; French Canadian in one case and the legendary retired Indian Army Colonel in the other. If they are very bright, they will discover that the architect who has exerted the greatest single influence on British domestic architecture was a carpenter. John Abel did the half timbered Speke Hall in Lancashire (or he should, if he didn't) and his ghost lingers on in hamlet and suburb far from the place of its birth; forever reproducing itself in spite of 300 years of wars and rumours of wars, Annes, Georgians, Victorians and Corbusians. We have always imagined old Mr. Abel to be a very nice man, very trustworthy and a great favourite with the "county people" who must have liked him, or they would not have given him such big jobs, carpenter and all as he was. Today we feel terribly for him as his uneasy spirit hovers over English suburbs, Detroit residential districts, Long Island, Montreal, Toronto, Vancouver, Auckland, Melbourne, Walla Walla or Capetown, and he realizes the colossal size of his family. None is legitimate, none happy in its new surroundings—but all resemble old Mother Speke. Mr. Abel could not be a boastful man, but when the history books write of the influence of Wren, our John Abel may well say "Who was Wren?" Who indeed was Abraham? The seed of John Abel is without end.

To come back to these architectural students of the future, they will observe that at no time in history has the client exerted such an influence as he has in our age. It is true that Michel Angelo altered the plan of St. Peter's to suit a client, and Wren altered St. Paul's (both to the detriment of their respective cathedrals) and we were shocked to find that the ugly spire on St. James, Piccadilly was done by a carpenter who submitted a design that was cheaper than Wren's. But except for the case of St. James, these were not questions of taste but of ritual, which it is the right of the client to criticize. Why is it that in our day among a dozen clients only one will say, "I know exactly how much I have to spend and how many and what rooms I wish, but the manner in which you design the house I would naturally leave to your expert judgment". We have had only two. It is conceivable that the other eleven would demand different historic styles in each of which—such is the eclecticism of our age and the catholic taste of our magazines—the architect is able to furnish a design. The result, of course, is an annual crop of houses that invariably and necessarily produces streets without character or design. Is there a fine residential street in the whole of Canada? We doubt it, but we could mention a dozen in Bath or Edinburgh. A street of fine houses does not always make a fine street. People today can't be very different from the same kind of people in the 18th century. We suggest to the student of the future that the root cause of all our troubles are the magazines that cater to a highly susceptible middle class audience that has been made "home conscious". Starting innocently with fabrics and furniture, these papers have broadened their activities to include photographs and plans of every conceivable type of house. The examples shown may all be first class but the menu is too varied, the diet too rich and the result is a suburban stomach ache that only the architectural profession can cure—and they stand impotently by.

Mr. Martin Baldwin used to be an architect. Now he is the Curator of the Art Gallery of Toronto and from that lofty eminence the vast panorama of architecture in Canada is spread before him (see page 190). He pokes his Baldwinian nose into the curricula of the Schools and finds architects in embryo and in vacuo busily "reshuffling assorted knowledge" in "blissful ignorance" of the arena in which it will be their unhappy lot to practise their craft. Largely attributable to these futile goings on, he sees the whole profession in a parlous and precarious state. We know for a fact that architectural training in Canada is not as archaic as he suggests, but on the pitfalls of the future and the dangers that beset the unity and perhaps the existence of the profession, as a profession, Mr. Baldwin writes with feeling and more understanding.

MORE HOUSES OF EARTH

By A. B. LEE

SINCE human beings stopped living in caves they have built their castles in the air or their cabins in the sky and hoped they could some day make them come true. But too often these visions were a mirage.

When they were able to bring them down to earth on a bit of land their very own, they were happy and contented. But to millions that shelter is still a dream; a goal they cannot attain, a hope they cannot fulfill.

In our struggle toward a higher civilization we have standardized our way of life, and this new order to which we must conform has forced the many to become cliff-dwellers in huge piles of masonry that are shelters, but never homes. Some of us long for a way out.

And there is a way out.

Back in 1937 the writer submitted an article titled *Houses of Earth* to *Coronet*, and it appeared in the June issue of that year. It briefly told how castles in the air might be brought down to earth, and built of the earth itself. There was nothing new about this method, for it is as old as recorded history and is known in France as *pisé de terre* or "rammed earth."

The response to that article was immediate and amazing. Thousands of inquiries were received by the editors of *Coronet*, asking for additional information on rammed earth houses. Every State in the Union was represented, as also were such far places as China, South Africa, Australia, India and many European countries.

But when members of the building trades were approached for their views on this type of construction there was little enthusiasm evinced. Doubts were raised in the minds of a few as to whether all was well along the rammed earth front.

Earth Walls Will Bear the Load

The answer was forthcoming at the National Bureau of Standards, from a man who has demonstrated that he knows what can and what cannot be done. This man is Dr. Lyman J. Briggs, noted for his intensive knowledge of laboratory procedure. The problem laid before him was the ever recurring contention by building contractors and private individuals that rammed earth walls would crumble when subjected to strains and stresses. Dr. Briggs' answer was emphatic and gratifying.

"These walls will bear the load."

The following statement was made by Dr. Briggs:

"I feel that *Coronet's* articles on rammed earth houses serve effectively to bring this type of construction to the attention of the public and to stimulate the interest of home owners.

"Although walls of earth have been known and used successfully since prehistoric times, there is very little data on their strength, weather resistance and heat transfer; therefore we included five earth wall constructions in our program on the determination of the structural properties of low-cost house construction.

"We believe that the strength and other structural properties are adequate for one and two-storey houses if the work is done by persons who have had some training. There is reason to believe that anyone with a little instruction can build earth walls successfully.

"The fact that people having little money can build earth walls themselves with materials readily available appeals to me very strongly. Making information on earth constructions available through our reports is, I think, an effective way to help the people of this country to help themselves.

"Our study was planned by a group of experts who were experienced in earth construction. The group included Mr. Thomas Hibben, who has built rammed earth houses under the Farm Security Administration. The earth used was a mixture containing 50 per cent. of clay loam and 50 per cent. of sand-gravel with moisture content between 10 and 12 per cent. The rammed earth walls were 14 inches thick and carried compressive loads up to 100 pounds per square inch. All of the walls withstood transverse loads (such as are produced by the wind) of 59 pounds per square foot or more. The performance under impact was better than that of many types of masonry walls, and like masonry walls the earth walls resisted concentrated loads extremely well.

"Earth walls have high heat capacity which aids in reducing fluctuations of temperature. In summer the temperature inside an earth house does not rise to as high values as houses having walls of lower heat capacity. Earth walls are, of course, fireproof."

Durability Questioned

One of the chief stumbling blocks to the use of rammed earth as a building material has been the attitude of the Federal Housing Administration. When approached on the subject of accepting rammed earth houses as security for long term loans, the requests were refused.

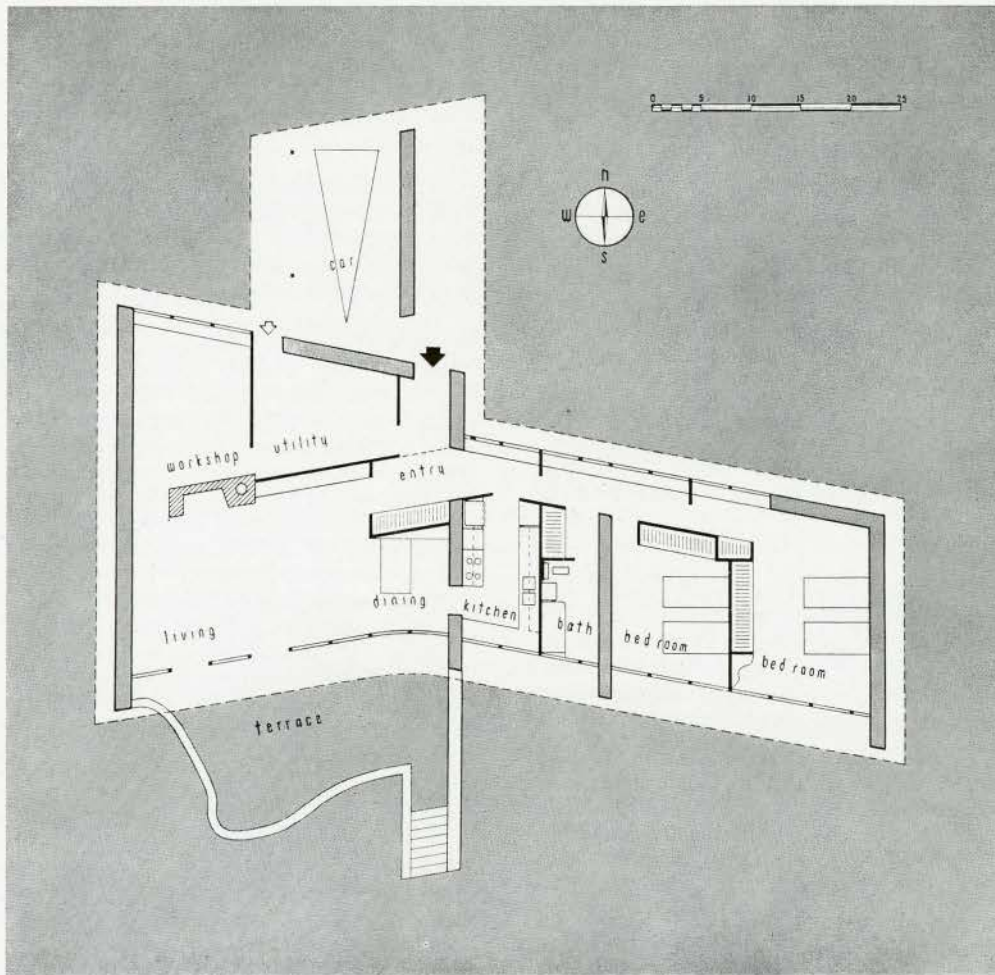
Such a loan was sought by Mr. Henry Hassey, of Irvington, New Jersey, from both the Federal Housing Administration and the Farm Security Administration. He was refused this aid on the grounds that "at the present time no adequate basis has been developed upon which the permanence and durability of rammed earth construction can be sufficiently predicted to justify its (FHA) acceptance as security for long term loans."

To Mr. Hassey it was a paradox that some government departments spent money on rammed earth projects while other departments of that same government refused to earn money through loans on them.

Being a persistent person he learned that several hundred rammed earth houses had been erected in Puerto Rico by the Puerto Rico Reconstruction Administration. He heard of the *pisé* houses built on the Indian reservations in South Dakota by the Bureau of Indian Affairs, and the work at Gardendale, Alabama, by the Resettlement Administration. It also developed that at least five bulletins and circulars dealing with the construction of rammed earth walls for homes and farm buildings were obtainable from government bureaux and state experimental stations.

Among the letters received in his search for information on rammed earth houses was one from Ralph L. Patty, Chairman of the Department of Agricultural Engineering, South Dakota State College, who wrote:

"It is not the cheapness of rammed earth walls that we are interested in. We are interested in the fact that they are most valuable, and that it would be practically impossible to equal a wall of this kind, which is almost a perfect insulator; at the same time being fireproof, soundproof, weatherproof and proof against termites or white ants. We know that a rammed earth wall made of satisfactory soil and stuccoed prop-



THE CORONET HOUSE OF EARTH
GEORGE FRED KECK, ARCHITECT

erly is absolutely permanent in its construction. If the stucco is maintained intact, it should last indefinitely."

One of the most enthusiastic boosters for pisé de terre construction is Col. Paul S. Bliss, of the Social Security Board, Kansas City, Missouri. Col. Bliss built a one-storey farmhouse and a large garage on his Scoria Lily ranch at Hettinger, North Dakota, and it has become the show place of that section. So many persons have visited his ranch to inspect and obtain information about rammed earth walls, that Col. Bliss has erected a large bulletin board on his premises, to which he has attached photographs of all the building processes together with instructions on the method pursued. He states that it is "the best house I ever lived in."

Other examples of pisé construction near the Nation's Capital are to be found at Monticello, home of Thomas Jefferson. Several of the farm buildings here are of this material, and Jefferson recommended this building method for its low cost and permanency.

In the suburbs of Washington there is a Dutch colonial house built twenty years ago by Dr. H. B. Humphrey, a scientist of the Department of Agriculture. The outer walls are of rammed earth taken from the cellar excavations, and are capable of supporting a weight of more than 2,000 tons. A tile roof weighing 18 tons surmounts the edifice.

At Lanham, Maryland, is an eight room, two-storey house of rammed earth built by the owner, Mr. Robert Cook, on

week ends. This building was erected by unskilled labor under the direction of the owner, who is not a builder by trade. He had the courage to prove this method could be successfully accomplished by self-builders twelve years ago, when building contractors shunned such innovations.

Pisé de terre construction has not been eagerly seized upon for commercial promotion because there is very little money to be made from it by contractors and the building trades, yet the low cost housing problem might well be solved if it were promoted with that thought in mind.

Such a plan, shaping a new industry, has been developed by H. Serkovich, Lieut. Commander of the Navy (Retired). His Equity Plan is admirably adapted to mass construction of houses of earth, by use of which individual developers can get more value from the citizen's home building dollar. So far, it is the first commercial project launched for mass construction. Units are reserved for the erection of pisé houses under the construction and supervision of expert private building authorities in close co-operation with Federal experts.

Cost of Rammed Earth Houses

The question most frequently asked about rammed earth buildings is what will they cost. The answer depends upon the cost of labor in the building area being considered. If the builder is fortunate enough to have men relatives who will lend a hand after the architect has completed his plans, the cost will be reduced to whatever carpenter work is required

on the roof and inside the dwelling, together with the plumbing and electric wiring needed to modernize it.

The cost of the house built by Col. Bliss at Scoria Lily ranch was \$1,700, of which the material cost \$700 and the labor \$1,000. Commander C. S. Stevenson, U.S. Navy, who directed the building of two hospitals with rammed earth walls in North China, believes that such walls can be built for from 12½ to 15 cents per cubic foot. The general estimate for the cost of rammed earth structures is placed at 70 per cent. for labor and 30 per cent. for materials.

Because of our knowledge of soil and mechanics, we have ceased to marvel at our skyscrapers whose stability depends upon the same elements that compose *pisé de terre*. We travel at breakneck speed over roads that have borne more intensive weathering than *pisé* walls, yet the factors that protect them both are identical. By using the dirt under our feet we can have walls as enduring as rock; walls that harden with exposure and protect our homes from fire and storm hazards. All this we can have simply by using Mother Earth.

In a previous article *Coronet* described the building method used to erect rammed earth walls. It consists in packing a mixture of sand, clay, and aggregate, dampened with water, into a hard mass through the use of tamping devices and movable wooden forms. The tools are neither elaborate or expensive. While there is a labor-saving method of ramming with machinery, hand tamping is the usual and less costly process.

For those planning to build a House of Earth the most important thing to know is whether the soil they intend to use is of the proper mixture. Advice on soil analysis can be received by sending a letter containing a self-addressed, stamped envelope to Mr. Thomas Hibben, Vienna, Virginia, who will either arrange to make the analysis or advise where such an analysis can be obtained. It usually requires two or three samples of earth taken from below the top soil—each should consist of earth taken from a different part of the lot and each sample should weigh approximately one pound. Analysis costs from one to two dollars for each sample.

—*Courtesy Coronet, March, 1941.*

BOOK REVIEW

ARCHITECTURAL GRAPHIC STANDARDS

By CHARLES GEORGE RAMSEY, A.I.A., and
HAROLD REEVE SLEEPER, A.I.A.

Published by John Wiley & Sons Inc., New York, Price, \$6.00.

ARCHITECTURAL GRAPHIC STANDARDS now appears in its third edition, unbelievably up to date with six dozen new sheets and with all but a few of the sheets of the second edition corrected and augmented.

Introducing this "draughting-room bible" to the architect or his draughtsman is as unnecessary as explaining to him the use of a T-square. However, the book's scope has so widened to include engineers, builders, landscape architects, building superintendents, industrial plant managers and students that a description of its format and coverage may not be amiss.

The authors stated in their preface to the first edition that "To translate the facts most quickly for those accustomed to making and using drawings we chose the graphic form of presentation, purposely devoid of all design in the decorative sense. Those trained to grasp a drawing at a glance can find their desired information immediately . . . Graphic presentation is the language of the draughting room."

In recognition of this fact, the book consists of a series of dimensioned drawings ranging from wine bottles and Windsor chairs to the silhouette of a weeping willow, from concrete foundations and wall flashing to electrical equipment.

The current revisions ably fulfil the necessity of bringing into line with modern products and practice this fund of information. Such revisions become necessary about every five years. No doubt by the time the fourth edition appears, another seventy-two pages will be necessary perhaps on air raid shelters, prefabrication techniques, new plastics and what to do with a soy bean, for as the authors observe, "the building industry is far from stagnant", but as it stands, the new *Graphic Standards* is an up to the minute coverage of present day materials and methods. New subjects which it covers include brick cavity walls, serpentine walls, glass blocks, architectural terra cotta (new type), termite control, skylights, safety treads and nosings, metal railing and post attachments, aluminum windows, new types of steel bucks

and stud anchorage, structural glass, screens and weather-strip, revolving doors and sound insulation (complete with piano keyboard and the loudness intensity of rustling leaves in a gentle breeze). Of special interest are the sheets of dimensions of the human figure, new games, fluorescent lights and new car sizes. The three sheets of tree and shrub silhouettes illustrating species, size and spacing of commonly used shrubs, besides being of interest to the landscape architect, should encourage thoughtful architects to pay some attention to a much neglected aspect of their design services to the client. The writer can recommend the book to students as a correct guide to indications and symbols used in architectural and mechanical drawing and for its pages on the drawing of perspectives. For the builder and those interested in the very practical aspects of architecture there are new sheets on nails and uses, mathematics, weights of material and hardware.

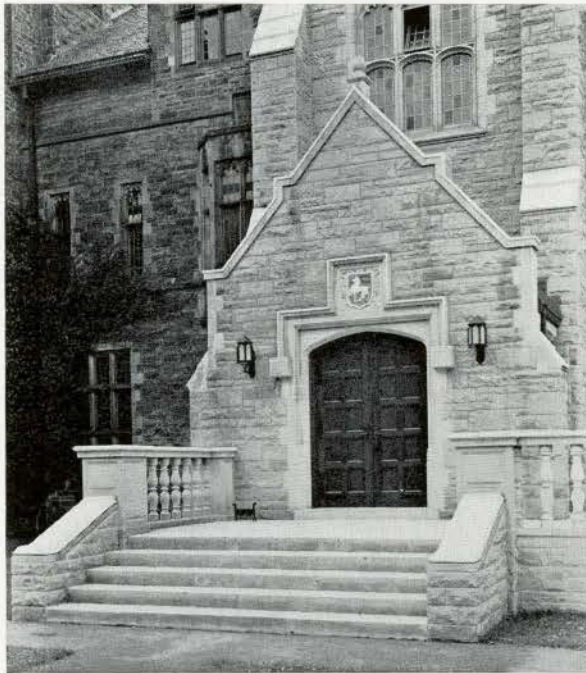
Speaking as a draughtsman the writer offers profound thanks to Messrs. Ramsey and Sleeper for a number of services. First, they have rescued and assembled important facts and figures from the confused depths of an ever-expanding catalogue file. Second, the illustrations so arrived at are drawn to a definite scale (a great boon). Thirdly, the scope of this work, as it cannot be all inclusive, has been chosen with good judgment, keeping the book within respectable limits. Lastly, subject matter has been thoroughly cross indexed, a real time saver.

New users will find the book a mine of readily available and complete information, providing a clear and concise answer to those everyday questions of indication and dimensioning which are constantly cropping up. Users of former editions will appreciate the changes and additions which enable them to produce drawings in conformity with current practice. The book is, as stated in its foreword, "a serious attempt to confine in a book of reasonable dimensions the essential factual references required by the architectural draughtsman and builder in the course of the day's work". They will be glad to have the old reliable "draughtsman's bible" up to date.

—*J. A. Murray.*

ADDITIONS TO TRINITY COLLEGE, TORONTO

GEORGE AND MOORHOUSE, ARCHITECTS



STRACHAN HALL ENTRANCE

FAMILIAR among old Toronto landmarks is the original building of Trinity College on Queen Street West, built in 1852 to the designs of Kivas Tully well-known as an early Toronto architect.

Founded by Bishop Strachan in 1851 and receiving its charter as a University in 1852, Trinity so continued to operate until 1902 when it entered into federation with the University of Toronto. It was not until 1926 that it moved to its present location, the block facing Hoskin Avenue being designed by Darling & Pearson and incorporating many features of the earlier building. A number of studies were made later by Darling & Pearson for the completion of the College buildings, but rising building costs prevented their being carried out at the time. Several of these beautiful drawings may be seen on the walls of the new buildings.

The additions just completed are extensions of the wings of the original block and form two sides of a quadrangle which will be closed by the erection of the future North Wing. The new work is treated in Jacobean style in a simpler manner than the original building. The stone walling and slates were chosen to match the existing work as nearly as possible, and in most cases came from the original quarries. The cut stone work on the new buildings is Indiana limestone, while that on the old was Briar Hall buff sandstone, a material no longer available.

To complete the College group, a chapel will in the future form a wing at the South-West of the main building running out towards Hoskin Avenue, being entered from the main corridor and having also an entrance from the street.

The West Wing is approached by a wide flight of stone steps from the main corridor of the old building. Axial with the corridor is the Dining Hall, known as Strachan Hall, with a seating capacity of two hundred, and having a Gallery accessible from the upper corridor of the old building.

Strachan Hall is forty feet wide and ninety-six feet long with a hammer-beamed trussed roof of B.C. cedar with cork-board panels between the rafters and purlins. Its walls are panelled in oak to a height of ten feet to the underside of the stone mullioned windows, the panelling at the North end behind the dais being twenty-one feet in height, and adorned by a fine tapestry. On the walls are hung portraits of the founder and past and present dignitaries of the College. In the great bay window facing the quadrangle is some fine heraldic glass, and over the Jacobean stone mantel are carved and blazoned coats of arms of Bishop Strachan, Provost Cosgrave and the Chairman of the Executive Committee. The clock in the Gallery is surmounted by the arms of the University of Toronto and flanked by those of old Trinity Medical School on the right and St. Hilda's College on the left.

The Foyer under the Gallery leads up by a short flight of stone steps to the Junior Common Room placed over the Garage to the South-West of the new additions. Stone steps also lead down from the Foyer to a large Recreation Room below Strachan Hall. On the West of the Hall is the Servery with Kitchen quarters below and on the North are the Senior Common Room and a small Dining Room. The upper floors comprise the Matron's Suite, Infirmary, and staff bedrooms, which for the present are being used as students' quarters.

The East Wing is planned as two separate units with a tower dividing them, and is given up to Dons' and students' quarters. The North unit, Provost Welch House, has a central staircase, on either side of which on each floor are three bed-studies with a common sitting room.

The North unit, Provost Welch House, has a central staircase, on either side of which on each floor are three bed-studies with a common sitting room.

The archway under Henderson Tower gives access to the Quadrangle from Queen's Park through a pair of the old gates brought from the original buildings on Queen Street West. The Tower accommodates students' bed-studies and a common room.

The Southern unit, Provost Whitaker House, has a central corridor with bed-studies on either side and has access to the main block.

The North Wing, when built, will consist of students' quarters with the Dean's House at the West end, and an archway on the axis of the quadrangle to the athletic field.

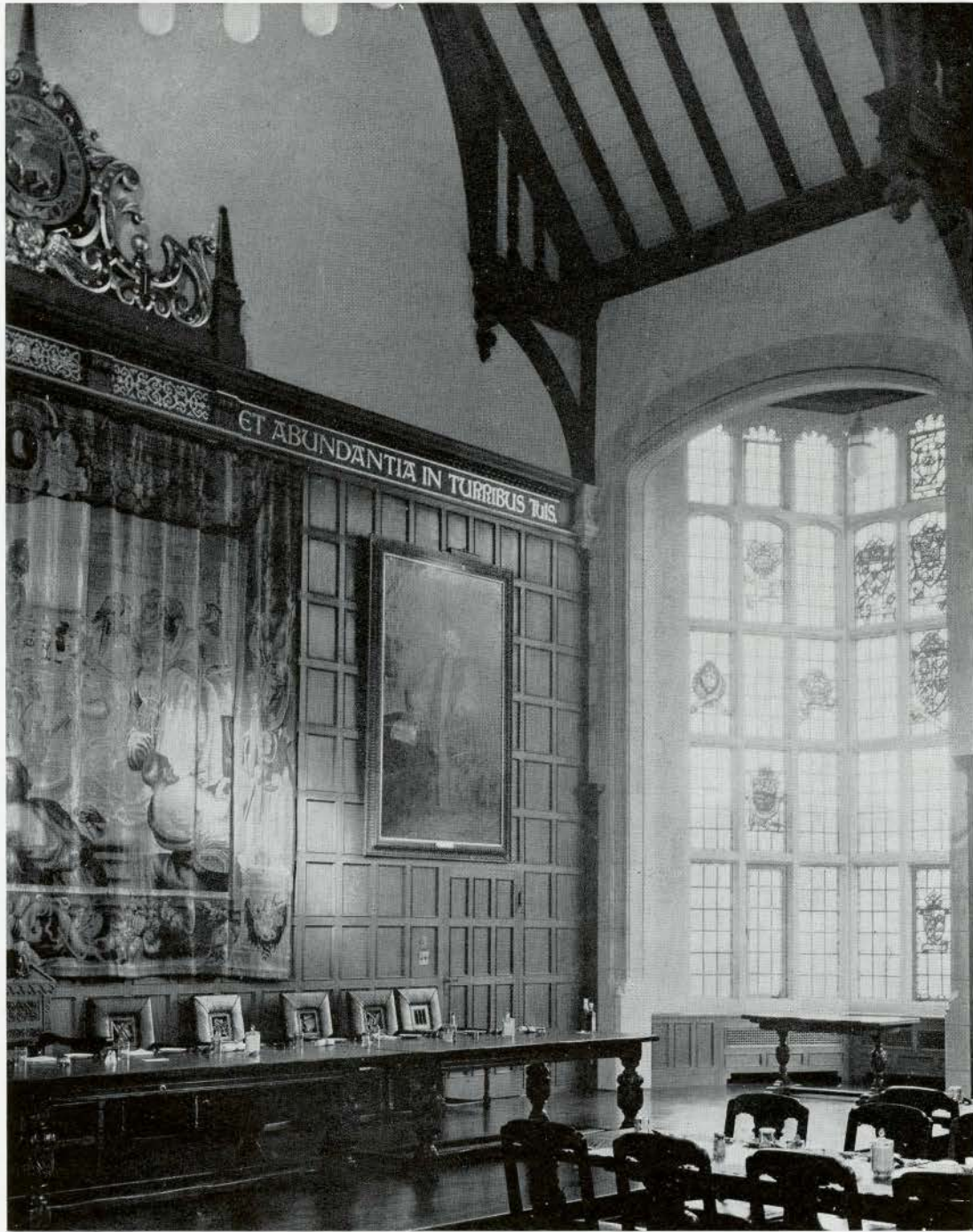
In the quadrangle, over entrances and important features, are carved in stone and blazoned the coats of arms of former chancellors and Provosts of the College, and in the centre is a sun-dial which formerly stood in the garden of the late Frank Darling, R.C.A.

The old heating plant at the junction of the East Wing and the Main Block has been re-conditioned and re-modelled and mechanical stokers installed. Tunnels for the distribution of mechanical services to the new buildings, and accommodating a fuel conveyor, give access to all parts of the new buildings.

Associated with the architects were Wilfred E. Anthony of New York, Consultant; A. Scott Carter, R.C.A., and Edmund Watson on the heraldry, carving and blazonry; and Miss Yvonne Williams and Miss Esther M. Johnson on the stained glass.

Consulting Engineers were Gordon L. Wallace, B.A., Sc., M.E.I.C., and Walter J. Armstrong, M.E., M.E.I.C.

The general contractors were the Pigott Construction Company of Hamilton.



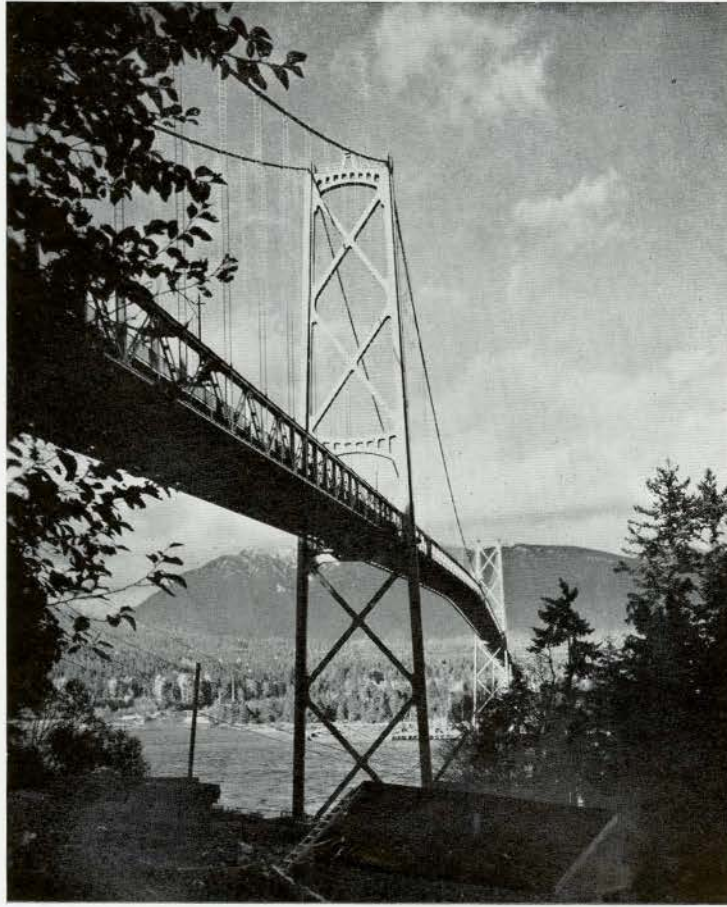
HIGH TABLE AND BAY WINDOW, STRACHAN HALL



STRACHAN HALL, FACING NORTH



SENIOR COMMON ROOM



LIONS' GATE BRIDGE, VANCOUVER, BRITISH COLUMBIA
PALMER AND BOW, ARCHITECTS
MONSARRAT AND PRATLEY, ENGINEERS





HOUSE OF MR. A. LESLIE PERRY, MONTREAL, QUEBEC
PERRY, LUKE AND LITTLE, ARCHITECTS

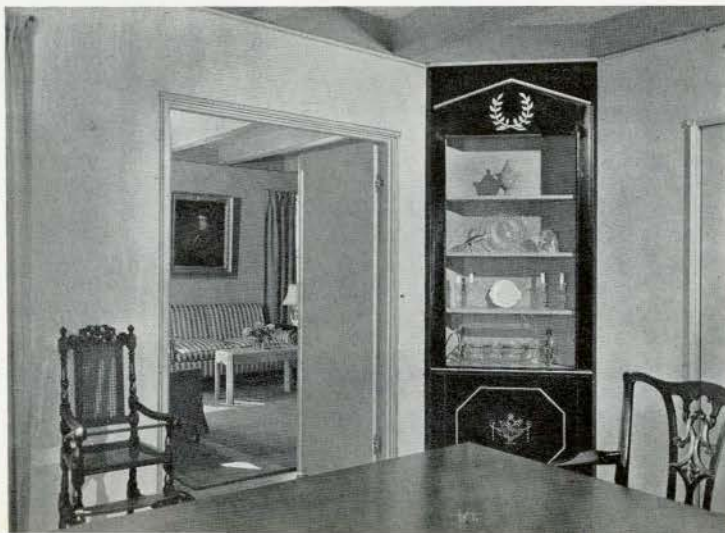


FIRST FLOOR PLAN

ABOVE: FRONT ELEVATION
BELOW: DINING AND
LIVING ROOM INTERIORS



SECOND FLOOR PLAN





"Full many a flower is born to blush unseen and waste its fragrance on the desert air." We have for several years been making a collection of old Ontario buildings of the classic period, but to round out the century we needed the home of a successful citizen of the so-called gay nineties. When we finally found the *crème-de-la-crème*, the pinnacle of decadence, it was an emotional experience like seeing the Parthenon for the first time or Toronto for the last time. We share the experience now with readers of the *Journal*. We make no excuse for so doing because we have long held the view that in the Victorian house there was more of creation, ghastly though the result might be, than in the humourless assemblage of pieces from recognizable sources that often go to make up a Georgian house. More than that we sometimes get awfully depressed with taste; with the refinements of moulding that go with pink walls and grey dados. The mishandling of these refinements in the slightest degree offends and shocks our sensibilities, but their entire absence acts on us like a tonic and we revel in it.

For those whose minds can not be stimulated by the Grand Guignol in architecture this house will have no appeal. To them we offer the information that the house is frame; T. & G.; yellow; trim, green.

H. CLAIRE MOTT, F.R.A.I.C.

HARRY CLAIRE MOTT is a son of the late Harry H. Mott, F.R.A.I.C., and Hattie N. (Hopper) Mott. He was born at Saint John, New Brunswick, on October 19, 1890. He married Anna Lillian MacDonald in 1916, and has two daughters.

Mr. Mott is of United Empire Loyalist stock, a descendant of Jonathan Mott who came from Long Island, N.Y., in 1783. He was educated in the public schools of Saint John, and at Dr. Dole's private school. He studied architecture with his father, H. H. Mott, and became associated with him in practice in 1910. It is interesting to note that to date, Mr. Mott and his father are the only father and son to have been honored as "Fellows" by the R.A.I.C.

Among the buildings erected from Mr. Mott's designs and under his supervision, are the New Brunswick Museum, and Dial Telephone Exchange Buildings in Saint John; the Telephone Exchange Buildings in Moncton, Campbellton, Edmundston, etc.; the Dominion Government Public Building, Saint George; the Library, Forestry, and Geology Buildings of the University of New Brunswick, and the Provincial Normal School, Fredericton, as well as all recent extensions to the Provincial Hospital at Lancaster, including female wing, male ward and stores building, assembly hall, chapel, and dining hall, power house, etc. He has supervised construction of several Federal Buildings and the Ford Motor Co. of Canada, Ltd., plant, located in Saint John, N.B.



Mr. Mott has consistently worked for a better understanding among the members of his profession in the Maritime Provinces, and was largely instrumental in the organization of the now dissolved Maritime Association of Architects, which body showed the first satisfactory result of efforts to promote a better understanding among the members of the Association here, and to improve their professional status, and adopt ethical standards, as well as to work for legal incorporation in each of the Maritime Provinces.

He is now President of the Architects' Association of New Brunswick, and Registrar of that body. Mr. Mott was a charter member of the A.A.N.B. and has been continuously a member of its council, serving as Secretary-Treasurer from its incorporation in 1933 until his election as President in 1941.

In 1935 he was elected a Fellow of the Royal Architectural Institute of Canada, and is a member of the Senate of the newly organized College of Fellows of the R.A.I.C.

Mr. Mott is a member of the Saint John Rotary Club, Canadian Club, Y.M.C.A., Board of Trade, St. John's Lodge, No. 2 F. & A.M., the Saint John Power Boat Club, and the American Concrete Institute. He is a member of the United Baptist Church. He is a boat enthusiast and during the entire open season for navigation, regardless of the weather, will be found as often as he can possibly arrange it on the Saint John River on board his boat, "The Mary Lou".

BOOK REVIEWS

"THIS BUSINESS OF ARCHITECTURE"

By Royal Barry Wills

Reinhold Publishing Corporation, New York City Price \$2.75

WE seldom find so practical, clever, and thoroughly readable a book on so praiseworthy a subject as professional practice as the new book by Royal Barry Wills, appropriately named "This Business of Architecture". In my own experience of teaching professional practice to young embryo-architects I have always been confronted with the lack of reference material that could be given as assigned reading. The only other book in this field that has come to my attention is "The Honeywood File" by H. B. Cresswell. "This Business of Architecture" is the result of years of successful practice and is really the case-histories of a number of practical professional problems. Such chapter headings as "The Stalking and Capture of Clients", "Design within the Owner's Budget", and "Avoidance of Business Troubles" may suggest the variety of topics covered as well as the welcome undertone of humor with which the author presents a serious subject. It is a book that the practising architect might well read with attention and might even be suggested as required reading matter for the layman who has had building troubles with his architect. The author's cartoons which are

interspersed throughout the book add greatly to its enjoyment.

—Milton S. Osborne.

"SOUND Transmission in Buildings" by R. Fitzmaurice, B. Sc., Assoc. M. Inst. C.E., and William Allen, B. Arch. (U. of Man.) A.R.I.B.A., and published by the Department of Scientific and Industrial Research, is the clearest statement of the problem and the most comprehensive solution that has come to my attention. Diagrams and detailed drawings clearly illustrate the problems arising from the different types of building construction and suggest the corrective methods of treatment. The book deals specifically with the nature and transmission of sound, insulating indoor and outdoor noises, noise transmission in hospital and office buildings, flats and semi-detached houses, and sound transmission through concrete floors. It discusses different forms of floor and wall construction, floor coverings, floating floors, suspended and independent ceilings, as well as the interaction of walls, floors and ceilings. It is a very valuable contribution to the problem of sound control in modern buildings and is the result of the joint efforts of leading authorities in that field in Great Britain.

—Milton S. Osborne.

MR. MARTIN BALDWIN IS STRUCK WITH TWO OMISSIONS

Dear Mr. Editor:

After reading the confessions of faith of the four schools of Architecture recently published in the *Journal* (Feb. '41) I was struck with two apparent omissions. The first, that but little consideration was given to the kind of place the embryo architect was to take later on in the practice of his craft and second, that architectural training was regarded as a sort of re-shuffling of assorted knowledge into a special pattern and not, as what it surely must be, a completely synthesized comprehensive study and craft standing on its own feet as a unique service to the community.

For many years and at a constantly increasing pace, the position of the architect in private practice has become more and more precarious until to-day there are scarcely a dozen firms in the whole of Canada whose offices can boast of a practice sufficiently constant to employ a permanent technical staff. As a general rule industrial work passes to the engineering contractors; municipal and government work to Departmental staffs; and builders of speculative houses and apartments, pre-empt the domestic field—leaving to the architect only commercial and office buildings and a restricted group of houses which generally have to be (in the client's mind) dressed up in a fashionable style to set their owners apart as a special class of people. This meagre residue of a great field is already so over-crowded that competition has reached a cut-throat stage, and professional mortality is correspondingly high. But this is precisely the arena for which our architectural schools are training their students and at that leaving them in blissful ignorance of its true character. If this is true, is it not time that not only the schools but the profession itself took a look over the lost ground and, among other things, began to train its new members to recapture it.

What is the real state of this field? Ordered housing and town planning are drifting into the control of municipalities who will inevitably carry out the basic architectural studies in their own departments even if they leave the work of actual house planning to the individual house builder—even then the architect, as we understand him, stands a poor chance.

The growing volume of public utility architecture, airports, roads, bridges, stations, hydro and canal development, is all controlled by the staffs of the engineering departments concerned, with the architects on the outside until the last possible moment.

Industrial architecture, without considering its relationship to town planning, is predominantly in the hands of engineering contractors, who may employ for their architectural work relatively inexperienced draftsmen.

The domestic field has been, through its tie-up with speculators in real estate, pre-empted by the builder who has but one motive—dress it up and sell it. Sometimes he employs an architect as his dressmaker.

The whole of this field is within the domain of architecture and it has been lost because the architect has not shown himself of more value to the community than his competitors, the engineers and, to a less extent, the builders who have supplanted him.

We are nearing, if we have not seen, the end of the commercial and materialistic predominance which produced this condition, but unless we train men who will naturally

gravitate into this field and, by their training and natural qualifications, be ready to take it over and guide its changing character from within, the engineers, who differ from architects in that their world is a physical and not a human world, and the builders, whose world is commercial, will beat us to it.

Instead of training men for the steadily contracting professional practice of to-day, should we not train and, above all, select men especially qualified to take their place, at first of course subordinate, in this domain and to perform in the course of time this much needed service.

To my mind architecture is the art of enclosing space for some useful purpose, and implies a sense of order and amenity. There is no real difference between the kind of mind required to plan a city or, for that matter, a whole region, for a comprehensive, useful and agreeable purpose and that required to lay out a kitchen—they differ only in capacity.

In the first place such men must have great ability and fortitude—so great as to put up with discouragement and frustration and to be prepared by their merit to establish a wider vision and better relationship than now obtains. Let lesser men seek lesser responsibilities.

Secondly, we must train them for these three basic qualifications:—

1st. To be able to select, study, analyze and evaluate the facts and requirements of the problem in hand, not as an isolated phenomenon, but as an integral part, having a useful and necessary place, in the prevailing social order. For example—the present-day apartment house differs only in detail and arrangement from that of 30 years ago but ignores the fact that obsolescence is not merely a matter of physical deterioration and fashion but has much larger factors—open ground space and facilities for recreation and social intercourse are two of them.

2nd. To have a comprehensive and detailed knowledge of the limits and special uses of the technique of construction and of materials. This does not imply the ability to design steel connections, or the re-inforcing of a concrete building, but the knowledge and ability to influence their design within the sphere of engineering as well as that of architecture. It means too a general knowledge of the essential factors which control mass production and the ability to grasp them when any new material with architectural possibilities appears on the market. It does not mean the pursuit of newness for its own sake.

3rd. To have a thoroughly awakened aesthetic sense, which will feel architecture, not as a rehash of dead style, nor as an opportunity to display the latest fashion, nor yet one's own cleverness and technical virtuosity, but as what it really is, the expression, in the shape of the buildings themselves, of man's natural persistent desire for order, through harmony in relationship, economy in means, and aptitude for use and, above all, an appreciation of the fact that to the architecture of enduring quality the people who live in and around it should find an enjoyment in it they can find in no other way.

Are the Schools doing this?

—Martin Baldwin.

THE SCHOOLS OF ARCHITECTURE REPLY

MANITOBA

Mr. Martin Baldwin's letter is well worth serious consideration, not only by the teachers of architecture but by the profession as well. It is true that the architect has not been able to assume his merited place in the life of the Canadian community, the place that is assured to other professions either through legislation or through the long and tedious process of education of public opinion. We are a young country with many towns and cities only a generation or two removed from the wilderness. Much of our growth has been sporadic. Homes have sprung up in the wake of a boom without planning or control. Powerful and wealthy groups have often countered any attempt to set a standard for either domestic or public building. Zoning laws designed to establish a standard of beauty and safety and protection for the public have been over-ridden repeatedly by powerful interests. The architect stands helpless in the face of an apathetic and unsympathetic public opinion.

But this is neither the fault of the architect or the school that produced him. It is the logical result of a debased public consciousness that condones unsightly billboards, paper and cigarette strewn streets, and overgrown and unkempt vacant lots. The answer to this is an educated public or controlled public. Public consciousness begins at home and the architect's value to his community will be recognized only if and when the public can be convinced that a well-planned home, an efficient factory and a beautiful city are as important as the latest type of motor car and the last word in radio reception.

I challenge Mr. Baldwin's statement that the architectural schools are neglecting to train their students to meet the requirements of the profession today. He speaks from a very limited knowledge of the schools in Canada and his work and interest in the specialized field of art may have made it impossible for him to keep abreast of the developments in the field of which he writes. At Manitoba the structural courses in civil engineering and architecture are closely co-ordinated, with the students collaborating on the design and construction of many of their building problems. The architectural students are required to take all the structural courses given in the civil engineering department with the exception of those definitely related to bridge design.

Mr. Baldwin refers to the rehashing of the old styles of architecture. I do not intend to defend the obsolete and outworn styles of the past that have nothing to contribute to an understanding of present-day architectural problems, but architectural styles are very different from phases in art. The development of a new style must of necessity be a slow process. Buildings cannot be taken down and put away in the closet if they offend the sensitive eye of the public. They usually stand as long as they are useful. The architectural development in Canada has a logical and orderly growth influenced it is true by all of the forces of tradition that usually control design in a new country, but nevertheless a sensible handling of the primary problems of the enclosing of space. New building materials and new ways of life mean a re-orientation of the same old problems of order and beauty and economy and functionalism. We still require shelter for our families and the space for the tools to carry on our work. The art of enclosing space for some useful purpose with a sense of order and amenity is no more a problem for us than it was for the Roman or Renaissance or Gothic builder. It is complicated only by the physical requirements of a heating plant, the ventilating system and the plumbing and wiring.

It is this ability to combine function and beauty and structural efficiency which differentiates the architect from the engineer. And this ability can be developed through an understanding of the solution of the problems of a similar character that faced the architects of the past.

The architectural school has always tried to anticipate the trends in design as well as to keep abreast of technical developments. The major problem has been the directing of these developments into logical channels of design and co-ordinating new materials with accepted standards of beauty and logic. The development of glass and plywood and pre-fabrication is in the process of revolutionizing many of our old concepts of mass and balance and scale, but these are chiefly concerned with the outside of our building. The essentials of our plan remain the same. The education of an architect is a complex process designed to give the young architect a survey of the vast field of planning and construction he is about to enter. Few architects in Canada can be specialists, they must be able to handle a great variety of work-houses, department stores, small shops, airports, post offices, schools, etc., and only the fundamental principles covering their design can possibly be covered in an average architectural course. No professional school can hope to cover more. The development of these fundamental principles depends upon the individual. If the architect has learned the fundamentals of planning he should be able to solve problems involving housing and town planning and airports, and bridges and anything else that requires order and aesthetic sense.

I am fully in accord with Mr. Baldwin's three basic qualifications for an architect, and it is a safe assumption that all of the schools of architecture in Canada are doing their utmost to prepare their students to take their place in the profession. But there is a responsibility on the profession to help these students to keep their high standards and to mould them into useful citizens. There is also the public responsibility to accept their ideals and not to break their hearts with indifference and political bickerings and opposition to change. Let the young architect have an opportunity to carry out the teaching in the schools and we will have a better architecture in Canada.

—Milton S. Osborne,

McGILL

Mr. Baldwin's letter might have been addressed to the whole profession because it urgently concerns the practice of architecture now.

The philosophy of the Schools is necessarily based upon a fixed conception of architectural practice; if that conception is no longer valid, then the profession should re-state it, as individual reforms on the part of the schools might not be in the best interests of the profession.

Architectural students are trained in the design of buildings. Strictly it does not matter whether the students are later employed in departmental offices or by engineering contractors or by master builders or whether they work for, or as, private architects. Principles of design and construction are the same.

The future development of the profession of architecture, whether it is to be socialized or whether architects as a group can function again as the leaders of the building industry are questions which the schools do not presume to be able to

solve. Knowledge of good building practice and the appreciation of decent healthy environments are our objectives. The medium for the attainment of these objectives must be the purpose of the profession.

The students are vitally interested in the broader practice of architecture in Town Planning, and in new building techniques. They are far ahead of popular understanding of planning and new architecture. The solution of our problems to-day depends upon the education of the people regarding their environment, the correction of shameful building practices and the short-sighted development of towns. This is work for the whole profession in conjunction with other professional or political groups whose interests are common.

Why should we neglect this, and idly hope that our students will be better able to do it? when by that time the organization that we have now may be gone.

—John Bland.

TORONTO

I have read Mr. Baldwin's letter regarding the "confessions of faith of the four Schools of Architecture" with a great deal of interest, and I am sure all will agree with him in the problem that is presented to the profession as a whole, due to changing conditions.

Did Mr. Baldwin read the "confessions" to find the answer to the professional situation or did he read them to ascertain if the courses in the schools are of such a broad nature that the graduates will be able to cope with situations in the future even under conditions differing from those of today?

Mr. Baldwin, having been a practising architect, knows the amount of time that members of the profession must give in the public interest and the present undergraduates will be no less tiring in their efforts when their opportunity comes. I understand, however, that the architects' social responsibilities will be dealt with elsewhere.

Had Mr. Baldwin read with understanding the confessions of the University of Toronto, he would know what is being done to prepare the student to recapture some of the lost ground he speaks of. The architect must be an "engineer plus" in order that he may be entrusted with many of the problems of modern building. Every effort is being made to make the graduate such an individual. The process of educating the public that this is so is still a problem of the profession, though the ideas and ideals developed at a University will doubtless play a part in permeating the profession later. Architectural Research Groups in Montreal and Toronto are examples of it.

—H. H. Madill.

OBITUARY

G. A. MONETTE

Montreal

Monsieur G. A. Monette est né le 13 mars 1870. A 17 ans il entra chez l'architecte Dunlop pour y faire sa cléricature. En 1891 il partit pour Boston. A l'emploi d'un cabinet à Montréal, il se présenta aux épreuves du diplôme qui se tenaient pour la première fois en 1893. Chef-dessinateur chez Perreault-mesnard jusqu'en 1895, il les quitta pour exercer désormais à son compte. Il fut professeur d'architecture durant une dizaine d'années au Conseil des Arts et Manufactures, et toute sa vie se consacra depuis à sa clientèle. Ses confrères lui accordèrent leur confiance en le nommant Président de l'A.A.P.Q. en 1918 et en 1925. Grand constructeur d'écoles parmi lesquelles il faut citer au premier plan l'Académie Bourget, il a été également l'architecte de nombreuses églises dont Saint-Léon de Westmount et St-Pascal Baylon; de maisons d'éducation comme le couvent de Saint-Laurent, le couvent Marie-Réparatrice, le séminaire des Missions Etrangères, l'agrandissement du Collège de l'Assomption; d'édifices à bureaux comme La Patrie; d'immeubles de rapport, conciergeries, etc. Quelques semaines avant sa mort il terminait le Buffet d'orgue de la Basilique de Montréal.

Il est mort le 16 juillet 1941 emportant les regrets de tous ceux qui purent apprécier l'amour qu'il avait de son art et sa conscience professionnelle.

KENNETH GUSCOTTE REA

Montreal

Kenneth G. Rea, F.R.I.B.A., commenced the study of Architecture in 1894 with A. F. Dunlop of Montreal. About 1900, he went to Boston where he first worked with the firm of Shepley, Ruttan and Coolidge, then a prominent concern, who did many of the Harvard University Buildings.

After a year or so, Mr. Rea transferred to the firm of Cram, Goodhue and Ferguson, who sent him to open their New

York office. He remained there for four or five years, during which time he was engaged in much of their ecclesiastical work and also the West Point Military Academy. His association with this firm influenced greatly the particular style he was to develop in later years.

On his return to Montreal, Mr. Rea became associated with the Montreal Light, Heat and Power Company and designed their building on Craig Street.

Thereafter, Mr. Rea commenced independent practice, and the following are examples of his work:

The Lewis, the Guarantee and the National Trust Buildings; the Royal Bank Buildings in Vancouver, Lethbridge, Edmonton, Saskatoon, Moose Jaw, St. John, N.B., Halifax and Montreal; The Bank of Montreal Buildings in Halifax, Grandmere, Vancouver, Victoria, Calgary, Hamilton and Québec; the Coca-Cola Bottling Plant in Montreal; the Canadian Legation in Tokyo, Japan; the Mount Bruno Golf Club; the Montreal Badminton and Squash Club on Atwater Avenue. He was also architect for many private residences including the homes of Ross McMaster, W. Brainerd, the late A. B. Purvis, St. Margaret's and of Thomas Arnold at Senneville.

JOHN WALKER SMART

Winnipeg.

Mr. John Walker Smart died on July 15th, at Alhambra, California. Mr. Smart was a member of the Manitoba Association of Architects from 1911 to 1922, when he took up practice in California. He was also President during the year when the Royal Architectural Institute of Canada, held its fifteenth Annual Meeting in Winnipeg.

Mr. Smart came to Winnipeg from Perth, Scotland, in 1910, and was associated with Mr. J. H. G. Russell, Architect, of 1110 McArthur Bldg. for twelve years.

PROVINCIAL PAGE

ALBERTA

Building work in the province continues a well sustained activity. This is due initially to government work on air force buildings which has brought money to the province and encouraged further work. A spell of Indian summer has also given encouragement to the farmers whose threshing was too long delayed by wet weather.

Edmonton appears to have benefited more than Calgary by this general activity. The Edmonton building permits for the year up to the end of September amounted to \$2,258,128 as against \$1,900,480 for 1940. In Calgary the figures given are \$2,202,339 for 1941 and \$2,403,117 for 1940. It must be observed that figures given on application for permits are often very different from the actual expenditure when work is completed. In Edmonton the figures are checked after completion of the work and a sworn statement of the actual cost must then be made to the city. The permits show only the first estimate.

The general work includes few buildings of large size or cost. Amongst others are: New building for the Edmonton Credit Co., \$18,000, MacDonald & MacDonald, architects; Morin, contractor. Rule, Wynn & Rule are architects for extension to the North West Garment factory, \$100,000, Poole Construction Co., contractors; extension to Canada Packers buildings, \$36,000, by the same contractors; Merrick Drug Store, 11528 Jasper Avenue. A South Edmonton Creamery building is being carried out under P. Campbell Hope, architect. The City is erecting a new branch Fire Hall at a cost of \$11,095 at the corner of 118th Avenue and 65th Street. At Red Deer an Auxiliary Service Hut for the Y.M.C.A. is being erected at a cost of \$12,000.

One of the largest undertakings going on in the province is the extension to the repair and assembly shops in charge of MacKenzie Airways. G. H. MacDonald is the architect in charge, H. G. MacDonald is the contractor. It is estimated that \$800,000 will be expended on this work.

An investigation has recently been made by the City of Edmonton to ascertain how many houses in the one-family residential districts are occupied by more than one family. This has been reported as one thousand and ten. This seems to point to extensive transgression of the city by-laws, though not to the extent that the figure indicates since the by-laws are not retroactive and many over-occupations no doubt existed before these were enacted. On the other hand it is more satisfactory to note that, up to the end of September permits have been issued for the building of 456 new houses as compared with 364 during the same period of 1940, and the value of these is estimated at \$1,012,650 as against \$703,245 in 1940. In addition to this there has been a number of apartments built giving, possibly, further accommodation for about fifty families.

The fall weather which gave the trees a more than usual beauty has aroused many of the citizens of Edmonton to re-assert the claim that theirs is the most beautiful city for situation in Canada. Doubtless Quebec and Vancouver will scoff at this proud claim. It is comforting to find out such a claim can be made, with some basis, in moments of enthusiasm.

—Cecil S. Burgess.

BRITISH COLUMBIA

The Architects in British Columbia have enjoyed a comparatively busy summer.

With few exceptions individual commissions have not been large but they have been quite numerous and fairly well distributed among the members of the Institute. Off hand it would be almost safe to say that during the summer months there has been scarcely a town or village, farming, fishing or mining centre along our coast, or up and down our valleys, which has not experienced an uplift in culture by having unrolled in its midst a set of blueprints bearing the seal of a registered Architect of the Province. This encourages us to feel that in the smaller undertakings, at any rate, recognition of the Architect's usefulness is growing.

Prince George is to have a new school, Prince Rupert a new arena, Powell River, Nanaimo and Vancouver, new hospital wings, New Westminster and Victoria, new nurses' homes and the University of British Columbia a new Armory building. Then, of course, there have been numberless commercial buildings and houses, houses, and more houses.

Wartime Housing Ltd., represented in British Columbia by a firm of local Architects, has completed the major part of a group of houses in North Vancouver; has a group under way in Esquimalt, and is about to begin work on another group in Prince Rupert. This commitment, as far as we know, is the only instance in which local Architects have so far been permitted to assist directly in the government defense programme.

In this connection we might say, that when confronted with the task of writing this letter, we ran through the files of a local paper devoted in part to the activities of the building industry in this Province. We found news, lots of news, but the big news in nearly every issue was the announcement of government war building contracts in which the practising Architects played no part. We were forced to the conclusion that the potential usefulness of Architects as a body is being wilfully, or otherwise, overlooked at a time when our observation tells us the services of trained planning and building experts are woefully needed.

At a recent meeting of the Vancouver Chapter, lively discussion centred around the attitude of the government war-time agencies toward the employment of Architects. Reports of Committees brought out the fact that our local and national organizations were making every effort to convince those in authority that the Architect, trained to co-ordinate every move from the drafting of the first line to the application of the last coat of paint, is the one man connected with the building industry who is best fitted to act as the "General" on the job—the man best fitted to map the campaign and then to call the moves of the engineers, contractors and supply men.

There was a good attendance at this important chapter meeting and everyone seemed interested and anxious to take an active part in trying to solve the problems confronting the profession as a whole. Some of the members were emphatically of the opinion that the Architects themselves are to blame for their lack of recognition by government bureaux and those in authority, and that the condition could only be remedied by getting out in front, taking the initiative, and doing something instead of talking and writing about it. Before the meeting closed the question of lending assistance

to the R.A.I.C. Committee, formed to co-operate with the National Construction Council, was brought up and all were of the opinion that, for the good of the profession as well as the good of the nation, we should be forehanded enough to take immediate steps to organize now for participation in this work, and that our efforts should not stop at the collection of data and the answering of questions but should go farther to the point of being bold enough and conscientious enough to formulate proposals and offer suggestions. Fired with this idea a large voluntary committee was hastily formed, practically under a vow, to undertake any assignment considered necessary to assist the cause and at the same time ensure that Architects occupy their rightful place in the reconstruction and improvement of social and community life after the war.

All this of course was the expression of opinion of the members of the Vancouver Chapter only, but we feel sure that we will enjoy the co-operation of the members of the Institute throughout the whole Province.

Our next annual meeting of the Provincial Institute is to convene at Victoria following the invitation of the members of the Institute there, and we look forward hopefully to a period of better co-operation and understanding between our local and national organization.

—E. D. King.
R. A. D. Berwick.

ONTARIO

The flood of industrial building activity does not yet show any signs of slackening, and quite a good proportion of it is being handled by architects—though it is by no means sufficient to offset the loss of those other types of work which keep the profession out of mischief in more normal times. Small houses still spring up in alarming profusion and amazing variety, but—around Toronto at least—one seldom sees an architect's sign on them. Yet many of the designs have quite evidently originated in an architect's office somewhere; and it begins to look as though public taste is being definitely improved—though somewhat slowly—without much benefit to those whose efforts have made the improvement possible.

Among "civilian" buildings recently completed in or near Toronto are the Ontario College of Pharmacy, the administration building of The Hydro-Electric Power Commission of Ontario and a Preparatory School for the Village of Forest Hill. The College of Pharmacy has been re-built on its old site on Gerrard Street, opposite the Model School. The new section includes the Library, Board Room and Assembly Hall, as well as offices for the Dean and Registrar. The Hydro-Electric Commission's building has been occupied for some time, as far as the staff floors are concerned; the work on the executive floors and entrance section having been deferred in order that much-needed office space could be provided at the earliest possible moment. The school in Forest Hill is the third of its type, forming part of a scheme to enable children of kindergarten age to reach their schools without crossing traffic arteries. Equipment and fittings in miniature, an art room and music room, (complete with band-shell!), remind us that school days are not what they used to be.

In Hamilton, a residence and recreational centre for men working in munitions plants has been opened by the Hon. C. D. Howe, Minister of Munitions and Supply. The building contains a lounge, billiard-rooms and writing rooms. Bowling-alleys are to be installed in the basement.

Both the Hamilton and Toronto Chapters have had the pleasure of hearing Ordinary Seaman E. R. Arthur, in remin-

iscences of his trip to England; the former at a dinner held at the Hamilton Golf and Country Club, and the latter at its first luncheon meeting in the Park Plaza roof restaurant. Those who heard him are probably still wondering how, after the excitements of such a "holiday" he can settle down to the prosaic business of teaching architecture and editing the *Journal*.

—Gladstone Evans.

QUEBEC

At the October Meeting of Council much routine business was attended to including the fixing of the date for the Annual Meeting. This will take place in Montreal on Saturday, January 24th, 1942.

Details of arrangements for business and social meetings and entertainment of out-of-town members will be worked out and when announcements are made later we trust members will take due note and resolve to attend and enter fully into discussion.

At the September meeting Mr. Bostrom was asked to prepare a memorandum concerning factors influencing the work and livelihood of architects, with particular reference to those trying to carry on private practice. The memorandum which contained much excellent material was read and discussed at the October meeting, and in view of the importance of the subject Mr. Bostrom was asked to head a special committee to study further grave problems affecting the profession and to arrive at a conclusion that would be helpful to all.

Friends of Major Norton Fellowes will be glad to learn that, while he is still in hospital, he is improving steadily if slowly from the serious accident that befell him several months ago. Lieutenant A. T. G. Durnford is now in England and Lieutenant R. E. Bolton is travelling west as far as Victoria. Both are on special work for the Royal Canadian Navy.

Dr. Eugenio Faludi will give a series of six lectures on Housing to the students of the Architectural Department of McGill University. One of these will be open to the public. As is well known, Dr. Faludi is an authority on this subject and has a gift for treating it in an interesting manner.

Honorable T. D. Bouchard, Minister of Roads of the Province of Quebec, came out with a statement that there would be rigid control of billboards on the new highways now being constructed in the Province. If Mr. Bouchard knew how many thousands of people were pleased by the announcement he would be much gratified but most of us just gave a grunt of appreciation and let it rest at that. But our energetic President, Mr. Smith, had a different idea. He wrote Mr. Bouchard, congratulating him on his stand and suggested further that the control should extend to type of building also, thereby preventing the defacement of the landscape by unsightly shacks and ribbon development, a condition altogether too common on the existing highways.

Mr. Bouchard evidently appreciated Mr. Smith's letter for he replied, thanking him and said that the matter would be given serious consideration. It may be a good idea at this time if some thought could be given to the best way of developing the bordering strips and to send suggestions to Mr. Bouchard. Not to imply any lack of confidence but to show that the architectural profession supports progressive action and is willing to help. We are, after all, just as interested in the creation of pleasant environment as in building units.

—Harold Lawson.

NOTICE

TO OUR ADVERTISERS:

Every ARCHITECT in Canada subscribes to the JOURNAL of the Royal Architectural Institute of Canada.

ARCHITECTS, through their selection and specification of materials, equipment and furnishings used in buildings, form one of the largest purchasing groups in the Dominion.

The presentation to the ARCHITECTS, of your product through the pages of their official publication, impresses them favourably and familiarizes them with it.

Thus, the JOURNAL is one of the best means of advertising for the building industry in Canada.

TO THE ARCHITECTS:

Study carefully the advertising pages of your JOURNAL.

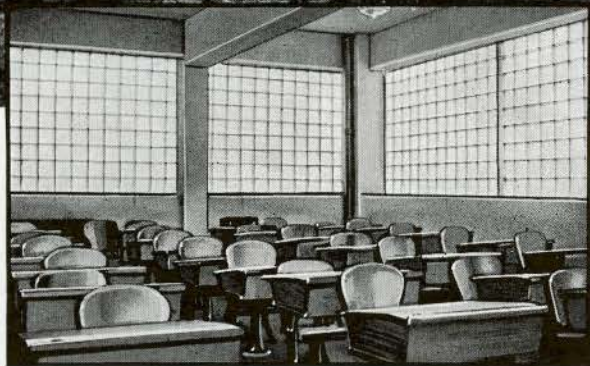
Make yourself familiar with the products offered by our advertisers by writing for their catalogues and literature, always referring to their advertisement in the JOURNAL.

In so far as practicable, without prejudice to the interests of your clients, specify and purchase the products of our advertisers.

If your supplier is not already an advertiser in the JOURNAL, invite him to "play ball".



Architect: Auguste Martineau, Rouyn;
 now of Martineau & LeBlanc, Ottawa.
 Contractors: La Cie des Entreprises
 Générales, Amos, Que.



New School at Rouyn, Quebec, sets Pace

Everything but the windows and the interior trim of this fine, modern school is built of concrete. The basement, of course; the structural frame; the floors; the roof; while the facing is cement stucco applied to concrete block.

Thus Rouyn achieves an outstanding degree of pleasing appearance, permanence, fire-safety and

freedom from costly upkeep at reasonable cost, setting a construction standard that will be noted with interest by school authorities everywhere.

Write us for full information on concrete and its application to school and other public building construction.

CANADA CEMENT COMPANY LIMITED

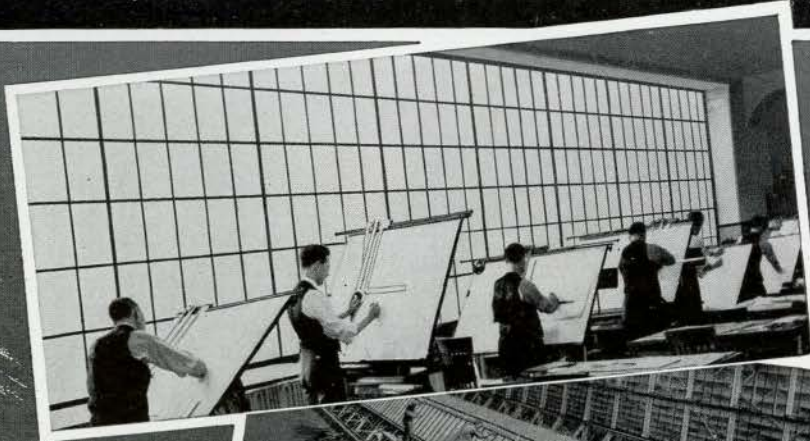
Canada Cement Company Building Phillips Square Montreal

Sales Offices at: QUEBEC MONTREAL TORONTO WINNIPEG CALGARY

THE 3 BIG MUNITION BATTLES...*

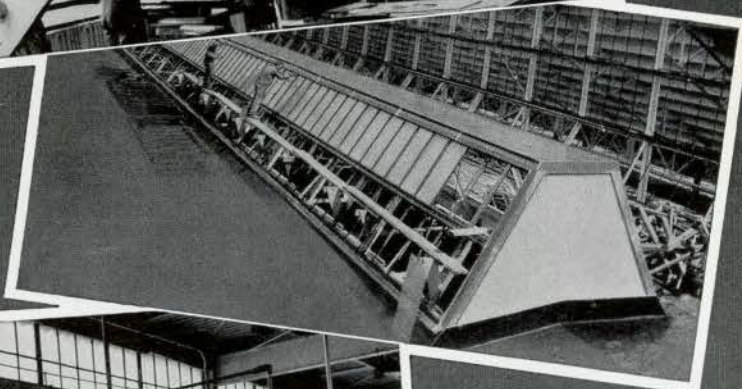
1. THE BATTLE OF

*Planning
and Designing!*



2. THE BATTLE OF

Construction!



3. THE BATTLE OF

Production!



HELP WIN THEM WITH *Fenestra's* STEEL WINDOW SYSTEMS

AIR
TRAINING
SCHOOLS
HANGARS
ARMOURIES
ARSENALS
GUN
FACTORIES
TANK
SHOPS
SHIPYARDS
EXPLOSIVE
PLANTS

To win the first of these big battles, Fenestra's Engineering Research helps the architect and engineer develop better and more economical planning and controlling of natural lighting and ventilating.

In winning the Battle of Construction, great walls of Fenestra's Prefabricated Steel Windows are erected much more quickly than other types of walls. Time is saved, so is labor, as well as materials and MONEY.

In modern plants when Fenestra's Steel Window Systems have provided correct daylighting and efficient ventilation . . . The Battle of Production is being successfully waged with greater operating efficiency, lower costs, minimum spoilage and freedom from accidents.

*Suggested by a recent article by WILLIAM LESCAZE, Architect, in the Architectural Forum magazine.

ALSO PLANTS
MANUFACTURING:

AIRPLANES, JEEPS, MOBILE CANTEENS,
ARMY LORRIES, GUNS, UNIFORMS,
BREN GUN CARRIERS, SHOES,
AMBULANCES, SHELLS, INSTRUMENTS,

AND ALL THE THOUSANDS OF ITEMS
USED IN CANADA'S WAR EFFORT

Fenestra

STEEL WINDOW SYSTEMS FOR INDUSTRY

PREFABRICATED WINDOWS • DOORS • ROOF DECK

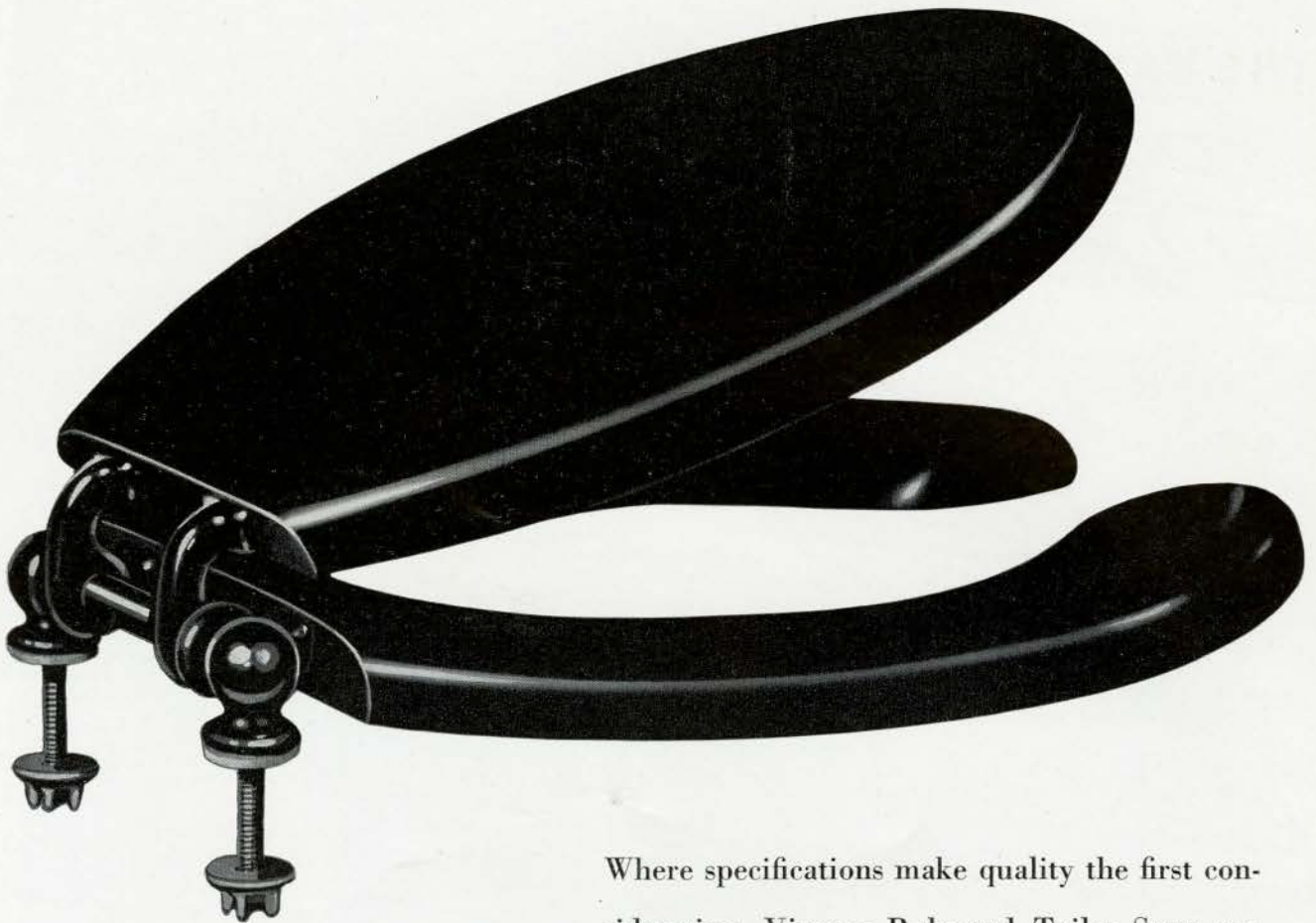
Canadian Metal Window and Steel Products Ltd.,
160 River St., Toronto; 185 Van Horne Ave., Montreal.

Please send me the latest Fenestra publications, as checked:

- Industrial Airation Industrial Daylighting
 Industrial Steel Windows Industrial Steel Doors
 Residence Steel Casements
 Heavy Casement-Type Steel Windows
 Holorib Steel Roof Deck.

Name _____

Address _____



VICEROY
WHALE-BONE-ITE
REG'D.
 TOILET SEATS
 WITH
RUBWOOD
REG'D.
 CORE
 MADE IN CANADA

Where specifications make quality the first consideration, Viceroy Rubwood Toilet Seats are your assurance of a satisfied client. They have those features which quality demands . . . Long Life . . . Low Maintenance . . . Good Appearance . . . Sanitation. Made to fit all types of bowls.

Write for Descriptive Literature.



CROSS SECTION VIEW

—showing alternate layers of plywood and rubber, bonded under heat and pressure, with heavy, highly-polished, hard rubber cover.

VICEROY MANUFACTURING COMPANY LIMITED

WEST TORONTO

No one
wants rusty
hot water
HERE...

HERE..

OR HERE



For Rust-Free Hot Water Recommend Everdur

Your client will expect a plentiful supply of clear, clean hot water in his new home . . . and freedom from rust repair bills for years to come. And you can be sure he will be satisfied when you specify a tank of Everdur Metal. For so far as rust is concerned, hot water tanks of Everdur Metal give satisfactory service indefinitely.

Everdur Tank Metal is Anaconda's copper-silicon alloy . . . 96% pure copper . . . yet it has tensile strength comparable to mild steel. It is rust-proof, highly resistant to corrosion, and readily fabricated.

Everdur hot water tanks are made by leading Canadian manufacturers. Everdur is a registered trade mark.

Copper and Brass Vital to Canada's War Program

Huge tonnages of copper and copper alloys are essential to Canada's production of munitions, airplanes, tanks, ships, guns. In an effort to meet this demand since war commenced, we have been working three shifts a day with a greatly increased army of Anaconda employees and much new plant capacity added solely for the armament program. Our production of essential metals today is many times greater than its pre-war level.



This rustless Everdur hot water storage tank is made by Toronto Hardware Manufacturing Co. It can be supplied from stock in 14 to 155 Imperial Gallon sizes, polished or unpolished.

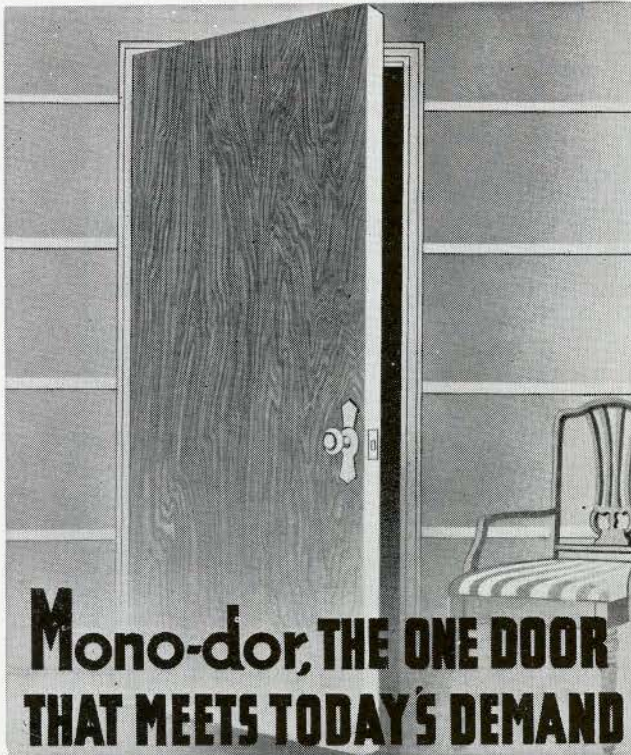
Everdur TANK METAL



ANACONDA AMERICAN BRASS LIMITED (Made-in-Canada Products)

Main Office and Mill: New Toronto, Ont.

Montreal Office: 939 Dominion Square Building



Mono-dor, THE ONE DOOR THAT MEETS TODAY'S DEMAND

for a scientifically constructed "slab" door at a practical price . . .

. . . PROMPT SHIPMENTS

Manufactured in conjunction with SYLVAFLY, steady and prompt shipments of MONO-DOR are assured.

. . . EXTRA SPEED IN APPLYING

Factory-trimmed to exact dimensions, MONO-DOR saves time and labor fitting and hanging on the job.

. . . EXTRA SPEED IN FINISHING

The flat, smooth, easy-to-paint surfaces of MONO-DOR save time and labor painting or staining on the job.

AND . . . note, there is no increase in MONO-DOR prices.

MONO-DOR is the popular door! Specify MONO-DOR!

Trade-mark Registered
Mono-dor

BRITISH COLUMBIA PLYWOODS LIMITED
 VANCOUVER, CANADA

Ontario Office and Warehouse: 26 Ernest Avenue, Toronto. Ken. 8545

Quebec Agents: H. R. MacMillan Export (Quebec) Limited
 398 Coristine Building, Montreal

Hist! Call in a Specialist
 if it's about finishes!



whether it be Church Spires
 or Pulp Digesters . . .

. . . tractors or typewriters there's a Thorp-Hambrock finish made specially for the purpose. This is an age of specialization and Thorp-Hambrock have specialized on industrial finishes for years. They know industrial requirements . . . speak the language . . . and have literally hundreds of different finishes developed to meet set conditions.

Call the Thorp-Hambrock man to help you with your finishing problems.

Call in the
THORP-HAMBROCK Man
 HE'S A *Specialist!*



THORP-HAMBROCK
 CO. LIMITED

MONTREAL TORONTO

THORP-HAMBROCK
 Industrial
LACQUERS · VARNISHES · ENAMELS
PAINTS and

"CELLON" Aeroplane Protective Finishes



Above: Battery of Crane wash-up sinks with sprayer and wrist-action blade handles.

**“THESE PUT THE SURENESS
INTO CLEANLINESS”**

Yes, hospital authorities are “sold” on Crane plumbing equipment, both as a health safeguard for patients and staff, and as an investment. Every item of Crane vitreous china—wash-up sinks, service sinks, lavatories, closets — reflects thorough understanding of hospital practice and requirements. Vitreous china is the natural choice where cleanliness is of prime importance. Its gleaming surface is not only easy to clean but

offers no lodging place for germs and dirt.

And Crane hospital equipment, built to give years of faithful service, saves many a maintenance dollar, too.

For all your hospital installations, plan with confidence from Crane’s hospital catalogue, or consult your Crane representative or the nearest Crane branch for advice based on years of specialized experience and research.



Crane vitreous china service sink with roll rim and integral back.



Crane T/N closet with bedpan lugs and cleansing fixture.

CRANE

CRANE LIMITED; HEAD OFFICE:
1170 BEAVER HALL SQ., MONTREAL
VALVES • FITTINGS • PIPE
PLUMBING • HEATING • PUMPS

NATION-WIDE SERVICE THROUGH BRANCHES, WHOLESALERS, PLUMBING AND HEATING CONTRACTORS

GYPROC WOOL
 Provides Efficient,
 Thick, Insulation
 at LOW COST . . .

PERMANENT—it will
 not settle or deteriorate

FIREPROOF—and an effective
 barrier to the spread of fire

MOISTURE-PROOF—and backed
 by an approved vapour barrier

EASE OF INSTAL-
 LATION keeps
 labour costs down



Handling alone will reveal the superior qualities of Gyproc Wool. Free samples and complete data on request.

**Gypsum, Lime and Alabastine,
 Canada, Limited**
 VANCOUVER CALGARY WINNIPEG TORONTO MONTREAL

Canadian WHITE PINE

First IN PEACE and
First IN WAR

. . . It is the patriotic duty of all Canadian citizens to use the products of our country's Forests. By so doing you release materials urgently needed for the manufacture of munitions of war and assist in keeping a favourable balance of trade between ourselves and other nations.

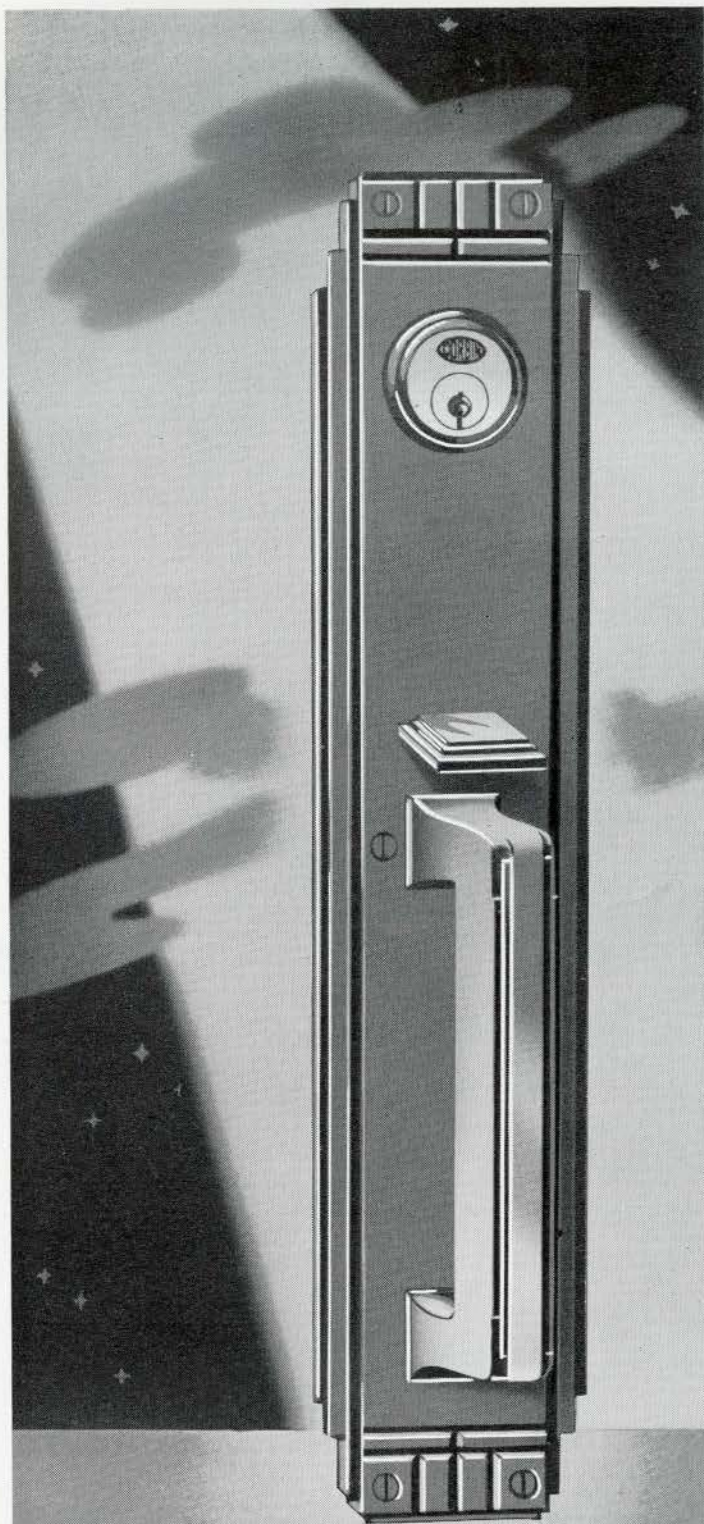
RECOMMEND THE WOOD
 WITH PROVEN QUALITIES

**ALWAYS Specify
 Canadian White Pine**



for further information
 communicate with

WHITE PINE BUREAU
 VICTORIA BUILDING - OTTAWA



CLASSIC
GRACE
AND
MODERN
DESIGN
IN
"GARGAN"

Beauty and utility are fused in this Corbin design of dignified simplicity . . . truly expressive of the skill and excellence of Corbin craftsmanship. "Gargan" is a design suitable for office buildings, apartment houses, stores and houses. It harmonizes with many styles of architecture and is available in wrought steel and wrought bronze.

Write for full information.

**CORBIN LOCK COMPANY
OF CANADA, LIMITED**
BELLEVILLE ONTARIO

Good Buildings DESERVE *Good Hardware*

**FOR REFRIGERATION PLANTS,
BOILER LAGGING,
Every Insulation Problem**

• Resilient, long-fibred, light and easily installed, the vermin-proof characteristics, in addition to its high relative efficiency, and fire-proof nature, make Spun Rock Wool an important item where cold storage of food products, furs, dairy products, etc., is concerned. Special brine pipe covering, made from Spun Rock Wool, is giving trouble-free service in some of the largest meat-packing plants in Canada.

Spun Rock Wool Blankets, used as lagging of boilers in industrial steam plants, increases the over-all efficiency of such boilers, and at a saving in fuel. Blankets can be made in any thickness and shape, and being flexible, can be fitted to any contour. Breaching; hot ducts; feed water tanks; in fact any part where the temperature is not in excess of about 1000° F., can be improved by such application.



Write for information to

SPUN ROCK WOOLS LTD.

THOROLD, ONTARIO

Distributors for Eastern Canada

F. S. Bridges, Limited, 8 Marlborough Ave., Toronto 5

Agents, Montreal District

Atlas Asbestos Co. Limited, 110 McGill St., Montreal

B.C. Representative

A. B. MacLachlan, P.O. Box 51, Vancouver, B.C.

TILE BY

Frontenac

ASSURES

- BEAUTY
- CLEANLINESS
- SANITATION
- ENDURANCE

FOR FLOOR AND WALL

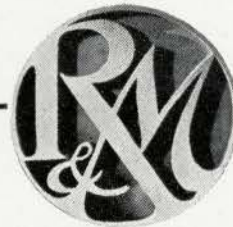
*Samples and full particulars available
through your Tiling Contractor*

**FRONTENAC FLOOR AND WALL TILE CO.
LIMITED**

KINGSTON - - ONTARIO

**AIR CONDITIONING
MOTORS**

*We offer our services
as consultants to
architects.*



The Robbins & Myers Co. of Canada

BRANTFORD *Limited* CANADA

Toronto Sales and Service: 197 Adelaide Street West
Montreal: Canada Cement Building
In Winnipeg: Munnford, Medland Limited
In Halifax: George G. Reid, General Trust Building

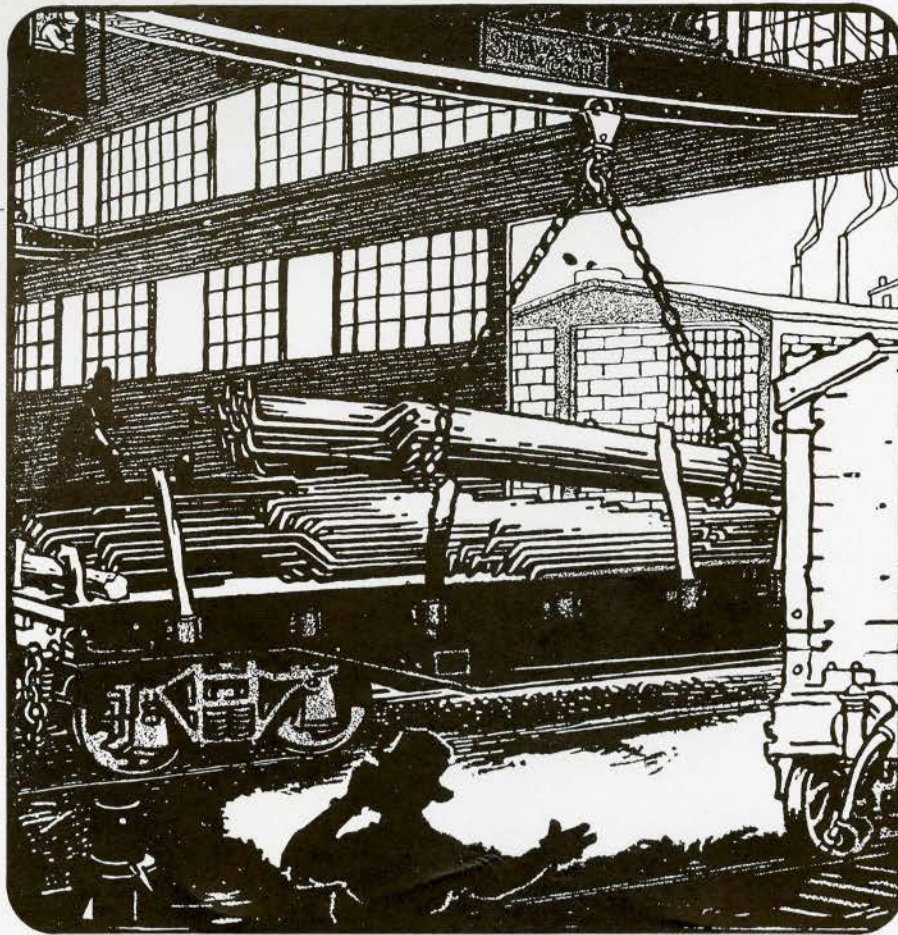
**You can tell the Cost
Ten Years ahead
with an AGA COOKER**

Fuel—two tons (maximum) of coal a year for the model illustrated. No repairs, because there are no moving parts to wear out. A hot stove and a cool kitchen 24 hours a day. Better-cooked food—heat is automatically controlled.

*Write for full
particulars*



**AGA HEAT (CANADA) LIMITED, 34 Bloor St. W., Toronto, Ont.
638 Dorchester St. W., Montreal — 1227 Howe St., Vancouver**



Burlington

RAIL



STEEL

REINFORCEMENT

The Backbone of Good Buildings

Burlington Steel Co., Limited

HAMILTON

ONTARIO

