

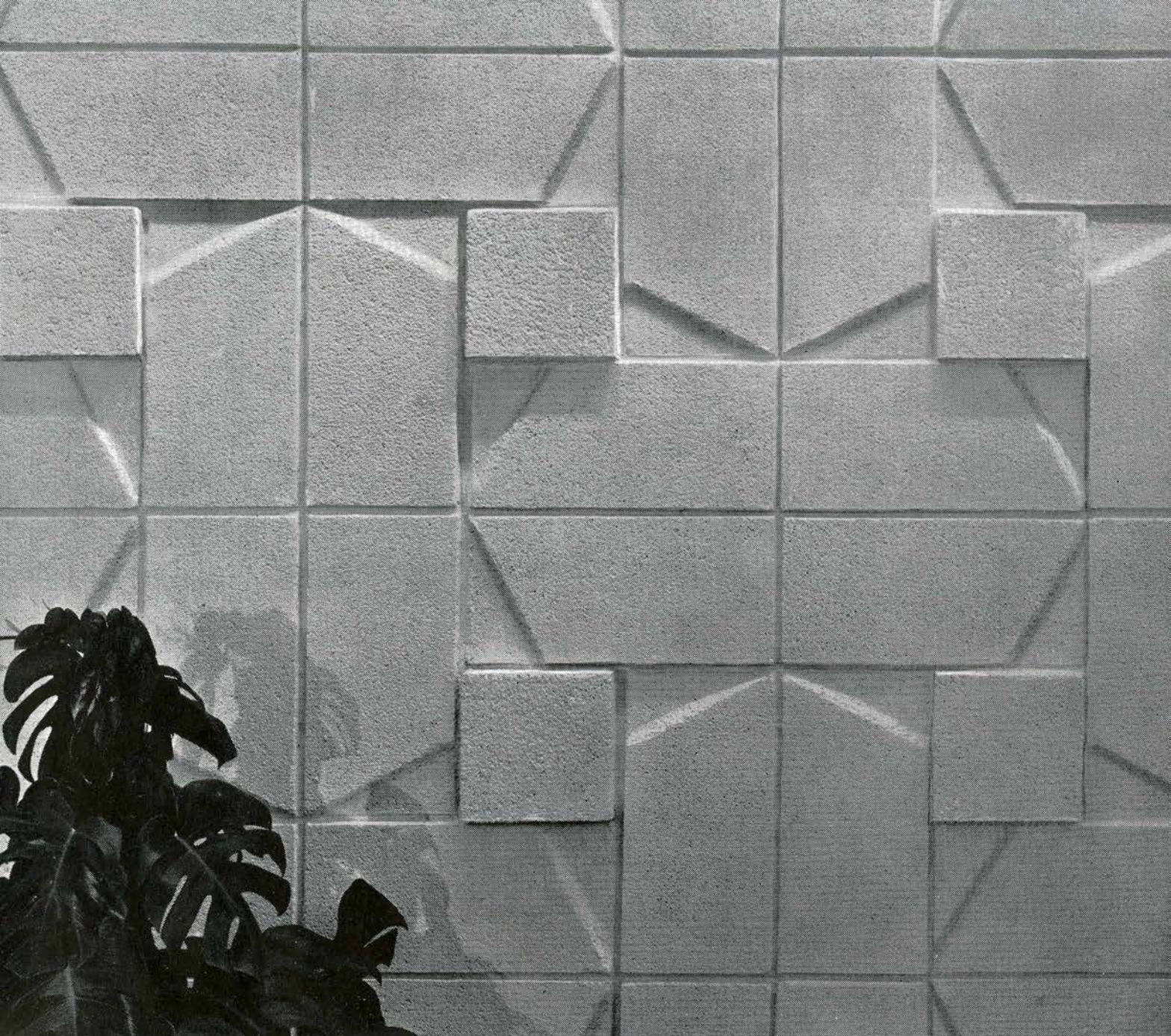
ROYAL
ARCHITECTURAL
INSTITUTE
OF CANADA
JOURNAL



APRIL 1962

ROYAL ARCHITECTURAL INSTITUTE OF CANADA
INSTITUT ROYAL D'ARCHITECTURE DU CANADA

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BUILD WITH BLOCK

and build for keeps

Modern concrete masonry gives full value for the building dollar with a superb combination of visual dynamics and functional stability. The beauty lasts—especially when reinforced with Dur-o-wal, the truss-designed steel rod assembly that can more than double flexural strength, outfunctions brick-header construction. For technical evidence, attach this ad to your letterhead, send to the Dur-o-wal address below.

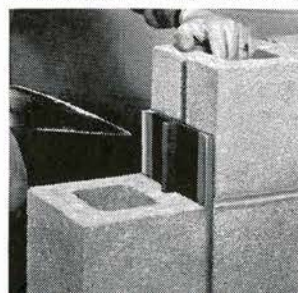
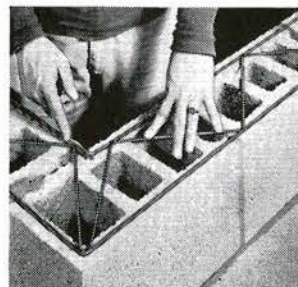
DUR-O-WAL® LTD.

Masonry Wall Reinforcement and Rapid Control Joint

789 Woodward Avenue, Hamilton, Ontario

U. S. DUR-O-WAL MANUFACTURING PLANTS

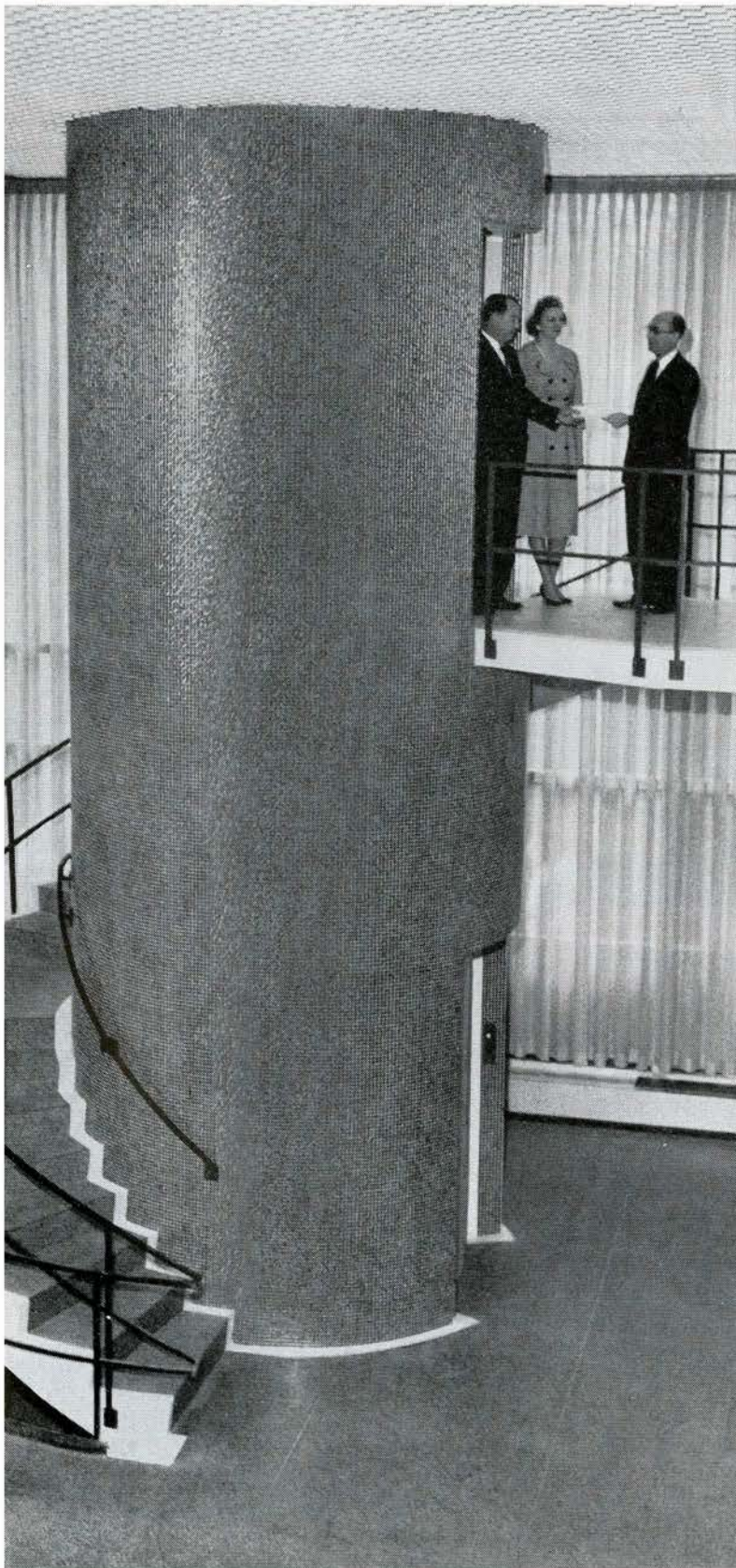
- Dur-O-wal Div., Cedar Rapids Block Co., CEDAR RAPIDS, IA
- Dur-O-wal Div., Frontier Mfg. Co., Box 49, PHOENIX, ARIZ.
- Dur-O-wal Prod., Inc., 4500 E. Lombard St., BALTIMORE, MD.
- Dur-O-wal Inc., 1678 Norwood Ave., TOLEDO, OHIO
- Dur-O-wal of Ill., 260 S. Highland Ave., AURORA, ILL.
- Dur-O-wal Prod. of Ala., Inc., Box 5446, BIRMINGHAM, ALA.
- Dur-O-wal of Colorado, 29th and Court St., PUEBLO, COLO.
- Dur-O-wal Northwest Co., 3310 Wallingford Ave., SEATTLE, WASH.
- Dur-O-wal of Minn., 2653-37th Ave., So., MINNEAPOLIS, MINN.



Strength with flexibility—the two basic factors for a repair-free masonry wall are assured by these engineered companion products. Dur-o-wal reinforcement, top left, increases flexural strength 71 to 261 per cent, depending on weight Dur-o-wal, number of courses, type of mortar. The ready-made Rapid Control Joint, beneath with its neoprene compound flange flexes with the wall, keeps itself sealed tight.

Custom-designed elevators

NEED NOT BE EXPENSIVE



Elevators can be an interesting design element. The circular elevator enclosure pictured, for instance, becomes the focal point of a savings and loan association lobby.

Custom treatment that enhances interior design is practical with Rotary Oilraulic Elevators because of their adaptability and economy. This modern elevator is pushed up from below by a powerful oil-hydraulic plunger, not pulled from above. Advantages of such operation include: up to 25% savings on initial cost; no machinery penthouse; lighter shaft sidewall construction; flexibility in power unit location; more economical operation; less maintenance cost.

For buildings to six stories, passenger or freight service in capacities to 100,000 lbs. or more, Rotary Oilraulic Elevators offer the most efficient, dependable vertical transportation available . . . plus design advantages.



Oildraulic® Elevators

PASSENGER AND FREIGHT



DOVER PRODUCTS CORPORATION
of Canada, Ltd.

140 Merton St., Toronto 7, Ontario

Please send elevator information to:

Name _____

Company _____

Address _____



The Architect's Automobile

69% of all Peugeot sales are made to the professional men of Canada — architects, engineers, doctors, dentists, pharmacists and lawyers — university-trained men of sense and judgment. The architect is still an architect when he sets out to buy a car. He wants first of all utility with function and beauty. His trained eye is quick to appreciate the graceful design of Peugeot, but what truly gladdens his heart is the planned performance under the hood. He admires the low centre of gravity, the helical suspension springs for added comfort, the telescopic shock absor-

bers. He knows that the scientific weight distribution just has to give structural strength and road-holding qualities. He goes in a big way for the sports-car agility and performance.

The architect enthuses over the body styling of the Peugeot — everything in balance and perfect harmony. Because Peugeot was made right in the first place, it has stayed right. Made to size, it has stayed to size. "Fundamentally sound," is the architect's verdict.



*Thousands of professional men
are proud to own and drive*

PEUGEOT

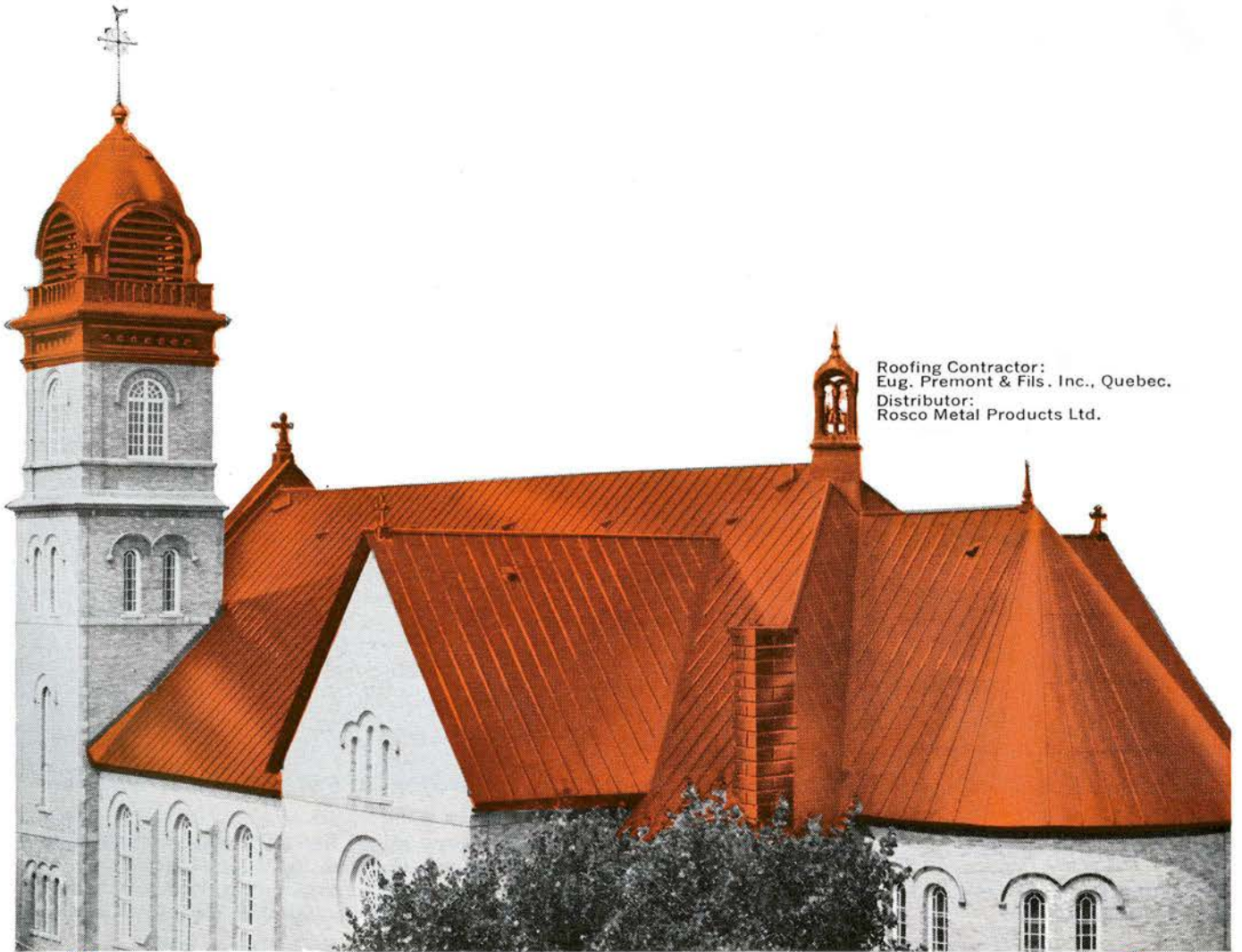


FOR ENQUIRY: PEUGEOT CANADA LTD., 1638 SHERBROOKE ST. W., MONTREAL

**roof
restoration
beautifully
expressed in
Anaconda copper**

The new roof of Eglise St. Malo, Quebec is another dramatic demonstration of Anaconda Copper in action. Thirty-six thousand pounds of Anaconda copper provides traditional beauty—beauty that enhances with age—plus exceptional durability. Anaconda Copper is rustproof, resists corrosion and fire and is easy to form. Write for Publication C-1, "Modern Sheet Copper Practices". It's Free! Anaconda American Brass Limited, New Toronto (Toronto 14), Ontario.
Sales Offices: Quebec City, Montreal, Calgary and Vancouver.

C-6142



Roofing Contractor:
Eug. Premont & Fils. Inc., Quebec.
Distributor:
Rosco Metal Products Ltd.

ANACONDA

ANACONDA PRODUCTS ARE AS CANADIAN AS THE MAPLE LEAF

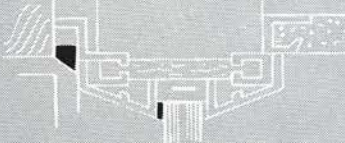


NORTH AMERICAN LIFE ASSURANCE CO.
Toronto



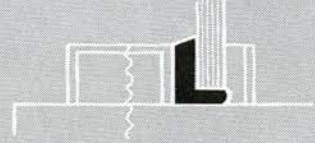
CAULKING SASH PERIMETERS

ST. JAMES CLUB and OFFICE BLDG.
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SEALING INSULATED GLASS

TORONTO DOMINION BANK, Edmonton



CHANNEL GLAZING

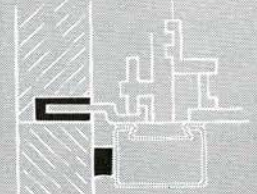
NIAGARA POWER PROJECT
Niagara Falls



SEALING JOINTS
IN STEEL PANELS

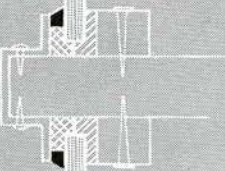
PROVEN MONO-LASTO-MERIC® 1-PART 100% LIQUID POLYMER SEALANT

LAVAL UNIVERSITY
Quebec City



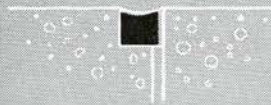
WEATHERPROOFING JOINTS
BETWEEN METAL AND STONE

EGLISE ET PRESBYTERE SAINT PIE X
St. Martin, P.Q.



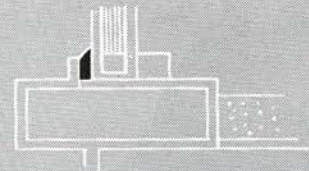
SEALING PANELS AND GLASS

SIDNEY SMITH HALL, UNIVERSITY OF TORONTO
Toronto



CAULKING JOINTS IN PRECAST PANELS

ONTARIO CREDIT UNION LEAGUE BLDG.
Toronto



GLAZING INSULATED WINDOW UNITS

ADAPTABLE TO MANY SEALING NEEDS IN MANY DIFFERENT TYPES OF STRUCTURES . . .

Where the optimum objective for your next caulking, sealing or bonding job is *adequate security at low cost*, consider Mono-Lasto-Meric . . . a 1-part 100% acrylic base sealant. Many specifying authorities and contractors do; a few recent applications are illustrated, above.

FEATURES

- A factory-mixed 100% liquid polymer sealant — ready for use
- Eliminates hazards and high cost of job site mixing
- Exceptional adhesive qualities and enduring elasticity
- Non-staining on all types of masonry
- Wide range of colors
- Caulking gun consistency supplied in cartridge or bulk

Mono-Lasto-Meric was introduced a few years ago as a new, modern method for assuring weathertightness in controlled joints, expansion joints, and conventional joints. Its acceptance has been rapid, its application successful and varied. A basic superiority has been recognized over conventional sealants which require the use of ingredients that will migrate or oxidize in time, thus lowering sealant life and efficiency. Formulated with Tremco-developed and Tremco-manufactured pure 100% liquid polymer, the desired Mono-Lasto-Meric requirements of exceptional adhesion and enduring elasticity are *inherent* and *permanent* parts of the basic polymer.

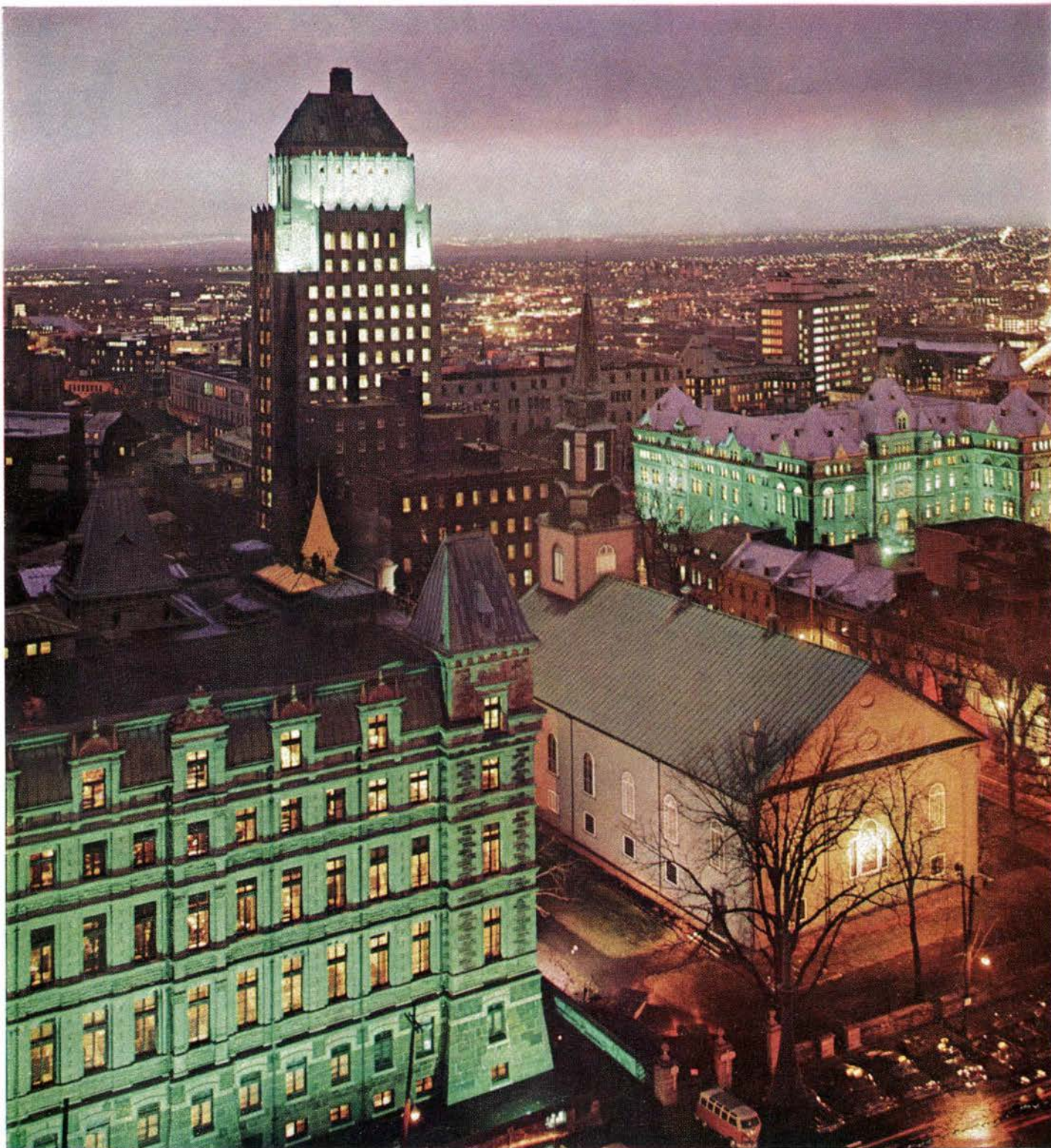
Mono-Lasto-Meric is factory mixed and available in cartridge or bulk in a wide range of colors. For additional information call your Tremco Representative or write the Architectural Department at: The Tremco Manufacturing Co. (Canada) Limited, Toronto 17, Ontario.

FOR INFORMATION
ON TREMCO PRODUCTS,
CHECK SWEET'S

TREMCO

PRODUCTS AND TECHNICAL SERVICES FOR
BUILDING MAINTENANCE & CONSTRUCTION

"When you specify a Tremco Product
. . . you specify a Tremco Service!"



GEORGE HUNTER

QUEBEC, capital of the vast Province of Quebec and the only walled city north of the Rio Grande, wears two faces and wears them well. Founded by Champlain in 1609, ancient times by North American standards, the Old City displays both the silver-gray charm of the grande dame and the esprit of the jeune fille. Tourism and trade, politics and pleasure, religion and recreation co-mingle in the Laurentian air of this sophisticated provincial town. But unique and historic Quebec has not escaped the expansive spirit of the twentieth century. Spreading suburban developments, new diversified industries and the ever-increasing influx of tourists keep La Cité de Québec in touch with the times. Some 400 of the world's finest elevators play a part in this happy conjunction of the old and the new—they're by OTIS!



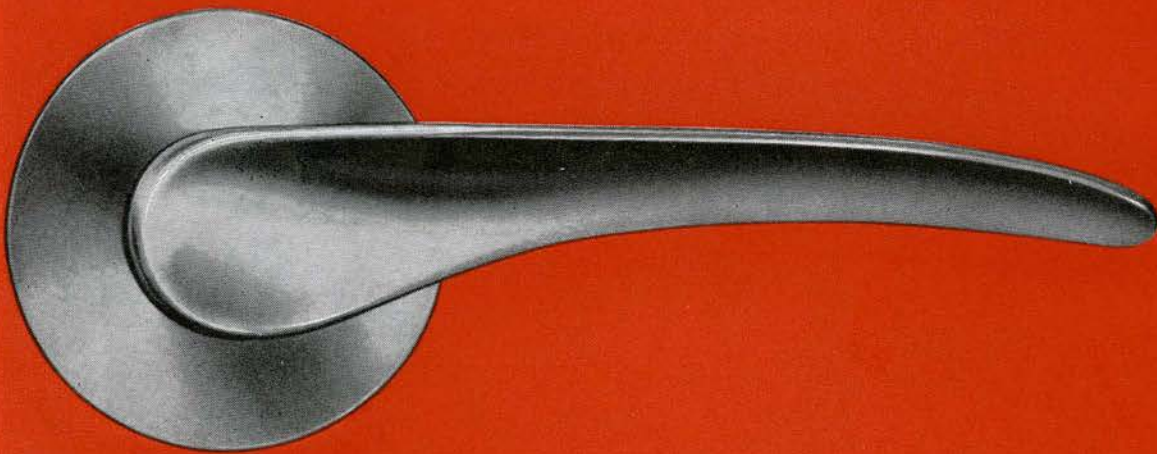
**OTIS
ELEVATOR
COMPANY LIMITED**

Head Offices and Works: Hamilton, Ontario
Offices in 28 Cities Across Canada



AUTOTRONIC® OR ATTENDANT-OPERATED PASSENGER ELEVATORS • ESCALATORS • TRAV-O-LATORS • FREIGHT ELEVATORS • DUMBWAITERS
ELEVATOR MODERNIZATION & MAINTENANCE • MILITARY ELECTRONIC SYSTEMS • GAS & ELECTRIC TRUCKS BY BAKER INDUSTRIAL TRUCK DIVISION

Always on the Level



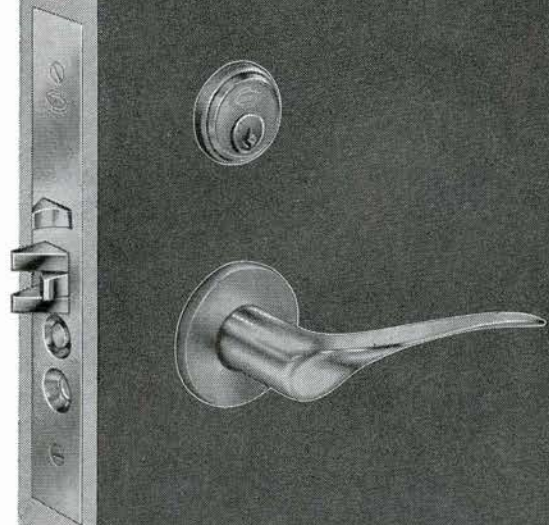
Here you have a fresh concept in lever lock performance and design. It's the new CORBIN MORTISE LEVER HANDLE LOCK!

This lever is unique in that it springs back to the level position after every use. An auxiliary spring and positive stop in the rose *keep* it level and smart-looking always.

And notice the graceful, curving sweep of the handle . . . shaped to fit the hand.

Now you can specify this stylish Lever Handle with any of the regular line of CORBIN Mortise Locks.

It pays to make it CORBIN—throughout!



CORBIN LOCK DIVISION
INTERNATIONAL HARDWARE COMPANY OF CANADA, LTD.
BELLEVILLE ONTARIO

In brass, bronze or aluminum.

Mortise Locks are available in all functions, and can be masterkeyed with other CORBIN Locks.



It's vinyl tile-traditionalized!

New Floors are smart business. "Catalogne" vinyl tile, an original Dominion pattern, adapted from an old habitant rug complements the modern home or office. It has just the right touch of homespun to underscore modern design. This *new*, hard working floor is easy on maintenance. It is low in cost and because it is a vinyl asbestos tile, it can be installed on any floor level, even the basement. For additional information, mail attached coupon.

NEW FLOORS BY DOMINION

MAKERS OF DOMINION LINOLEUM, DOMINION VINYL, ASPHALT TILE AND ASSOCIATED PRODUCTS

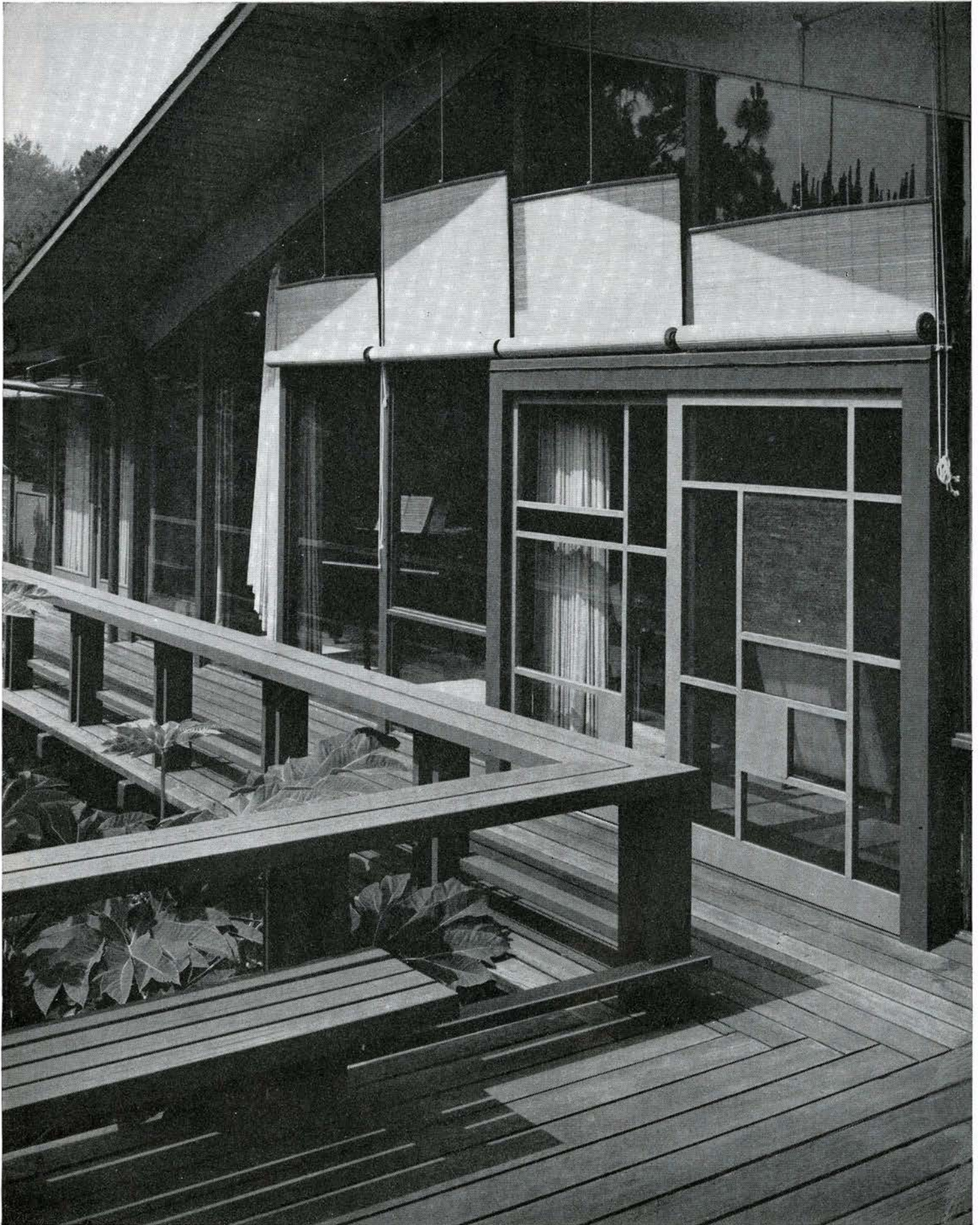
Commercial and Industrial Decor Dept.,
DOMINION OILCLOTH & LINOLEUM CO. LTD.,
2200 St. Catherine St., East, Montreal

Please forward further information
and illustrated literature.

Name: _____

Representing: _____

Address: _____



Economically and simply, wood works beautifully in large moderns, too. The planked decking and sturdy railing of the porch, the interesting geometric patterns of wood-framed windows and panels, the smooth plank-and-beam overhang of the roof . . . all complement one another perfectly, suit their site naturally.

For homes that endure structurally, decoratively

find the better way with **WOOD**



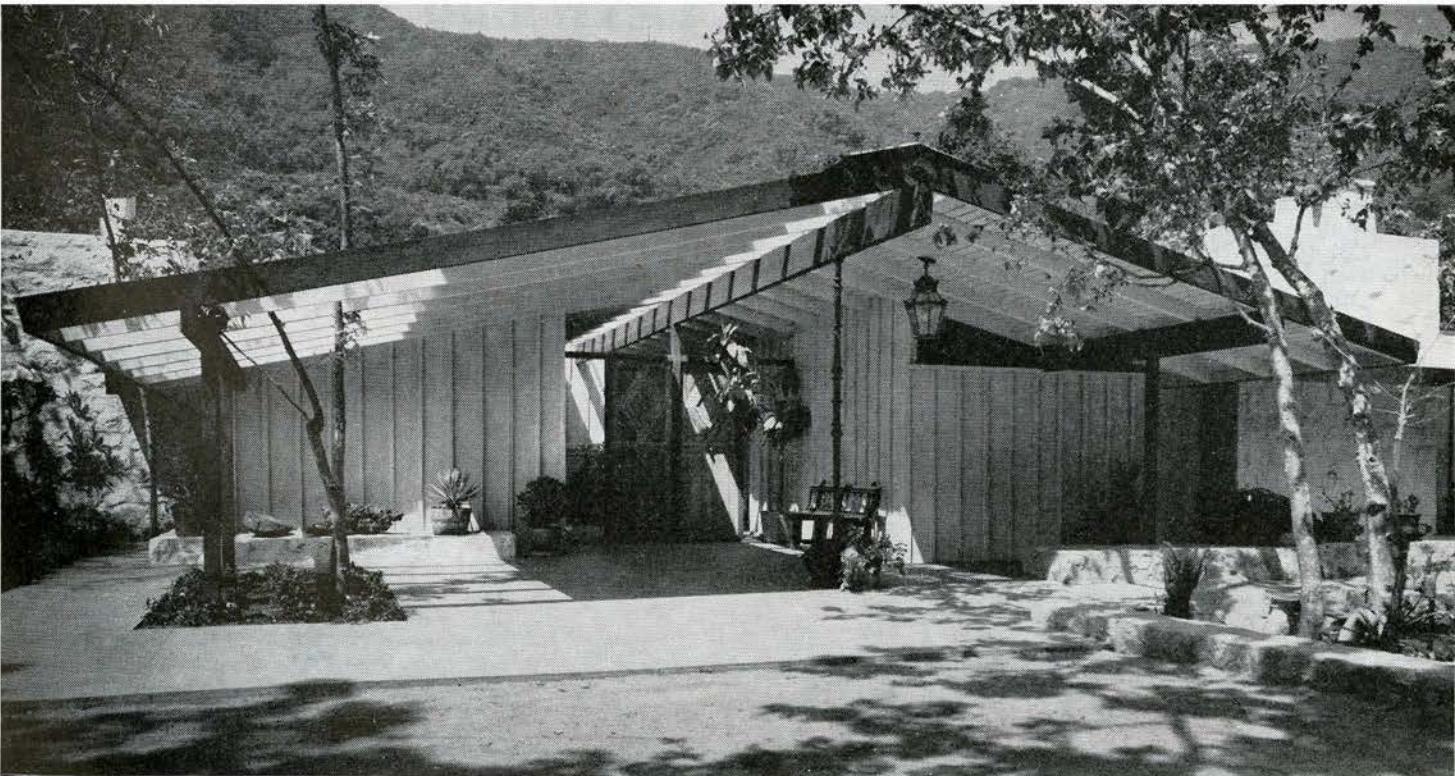
Beveled siding and louvered shutters create horizontal shadow lines that bring this familiar traditional design closer to the ground. The shingled roof, arched breezeway further champion wood's charm.

Whether conventional colonials or unusual contemporaries, homes made of wood are traditional favorites . . . for many reasons. For instance, wood's wonderful workability fulfills any dimensions in your design, any economies in your planning. Its beauty is apparent in a weathered shingled roof or a stained peg-planked floor. The inherent strength of wood is a hidden but known value in every supporting member throughout the house.

Wood's acoustical qualities help tone down sound from room to room. Its natural insulating characteristics help retain comfortable temperatures from season to season. Properly applied, wood's diverse grains and tones harmonize perfectly with materials of every kind. Correctly cared for . . . it has the ability to mellow with age, the durability to shelter generations. For more information on designing with wood, write:

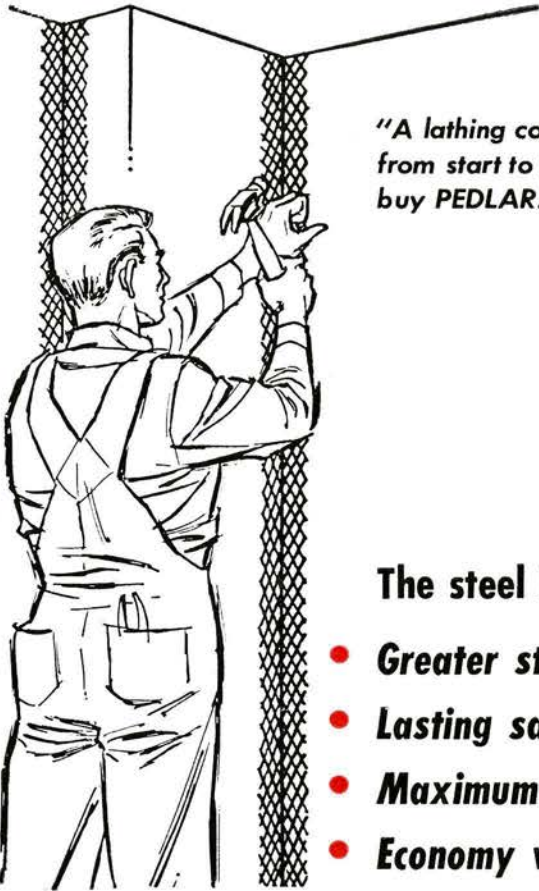
CANADIAN WOOD DEVELOPMENT COUNCIL
27 Goulbourn Ave., Ottawa 2, Ont.

*for freedom of design,
look to Wood*



At home in the hills, this contemporary extends its warm welcome with lengthy laminated members and solid crossbeams over an informal patio . . . open to the sun on one side, closed for shelter on the other. Note the strong vertical lines of board-and-batten siding.

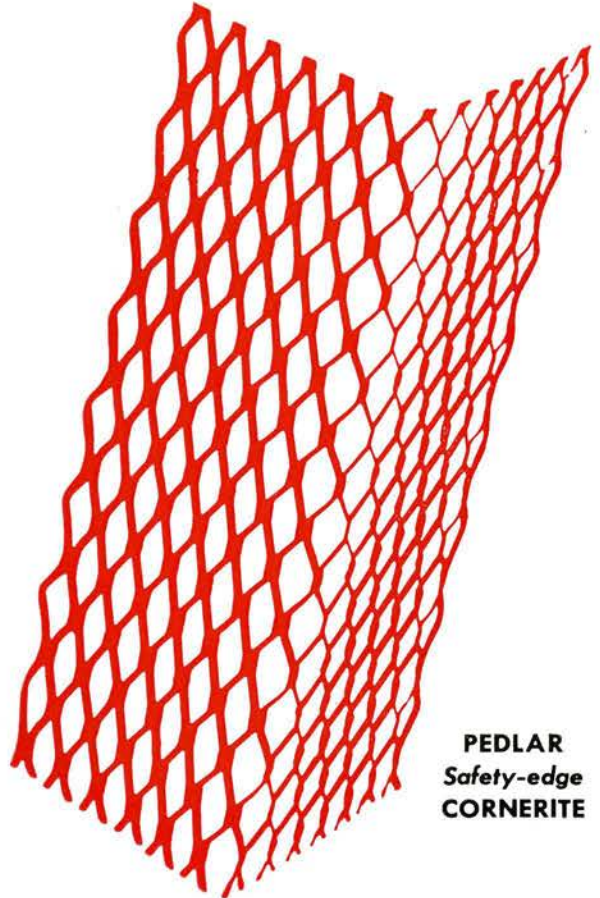
... TO MEN WHO BUY **LATH AND ACCESSORIES**



*"A lathing contract goes right,
from start to finish, when you
buy PEDLAR."*

The steel lath that gives:

- **Greater strength**
- **Lasting satisfaction**
- **Maximum fire resistance**
- **Economy with quality**



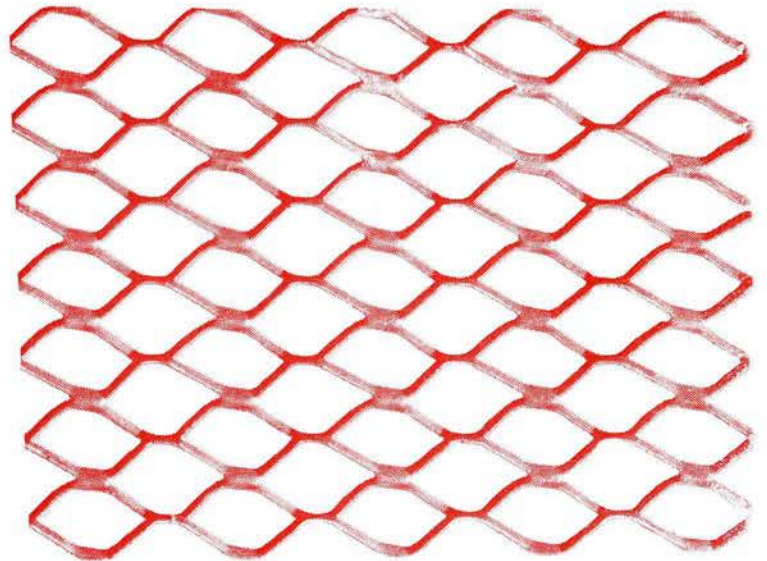
**PEDLAR
Safety-edge
CORNERITE**

PEDLAR METAL LATH and ACCESSORIES

Pedlar's complete metal plastering accessories — Red Diamond Lath, "Pedex", Corner Bead, Safety-Edge Cornerite are recommended by Architects everywhere . . . for strength, lasting satisfaction with economy and maximum fire resistance. Bevel-expanded from tough, prime quality steel, they're tops for every building job. The cost-cutting feature is the extra small mesh with the upward "twist" . . . ensuring a perfect key using a minimum of plaster. Faster installation is made possible by the smooth-edge design, the lath being easier and safer to handle.

The fact that metal laths and various plastering accessories are "covered up" when the job is complete is never an excuse at Pedlar to lower their traditional standards of quality. When you specify Pedlar products you are assured the finest in workmanship . . . quality . . . and realistic prices.

Recommend the best! . . . specify Pedlar Diamond Lath, flat, ribbed, painted or galvanized . . . a full line of quality accessories also available.



Write for free catalogue and prices to:

THE PEDLAR PEOPLE LTD.

519 Simcoe St. South, Oshawa, Ont.



MONTREAL • OTTAWA • TORONTO • WINNIPEG • EDMONTON • CALGARY • VANCOUVER

Resilient floors and indentation problems

Resiliency—the ability of a floor to provide underfoot comfort, quietness, and long wear—is a primary advantage of resilient floors. It is the reason why these floors do *not* indent, and also why they *do*! This seeming paradox is easily resolved. Under normal pressure from weight or impact, a resilient floor will “give” slightly and then, when the stress is relieved, will regain its normal surface. Under excessive pressure, the floor will give, but not return in full—and an indentation will result. Whether or not a floor is damaged depends on two factors: the nature of the pressure and the composition of the flooring material. When specific problems are anticipated in an interior from either static or dynamic loads, resilient floors that will not be damaged by the pressures involved can usually be chosen. The following offers suggestions on solving some of the more common indentation problems.

Preventing damage from static loads

Overcoming the effects of static loads is quite easy. The static load limits of all Armstrong floors are known. They vary from 25 psi for Asphalt Tile to 200 psi for Rubber Tile, Linotile, and for Custom Corlon and Castilian solid Vinyl Tiles. Since the probable weight of furniture or other heavy objects can usually be calculated, you have a guide to what type of floor would best meet the load requirements of an interior. You can also tell, by comparing the static load limits of the flooring material to be used with the weight of the furnishings, whether furniture rests—or other supports to distribute the loads—must be used. (As a double safety measure, furniture rests are recommended for use with all resilient floors.) Either by using a floor that has a load limit in excess of the weight to be placed on it, or by furniture rests, or by a combination of both methods, indentation damage from static loads will be prevented.

Preventing damage from dynamic loads

Dynamic loads include pressure from moving objects, such as furniture and heavy equipment being pushed across a floor, and from impact, such as heels striking the floor. Moving loads are not a real threat since a few common sense practices will prevent damage to resilient floors. The use of boards to cover the floor when moving heavy furniture, for instance, or the use of standard protective coverings on wheels and casters, will eliminate harm to the floor.

Floor damage from impact is frankly somewhat of a problem, since there are so many variables involved. One major problem is the current vogue for spike heels. Spike heels are the bane of all flooring materials. Whereas a 224-pound man wearing ordinary shoes exerts only 28 psi on a floor, a 105-pound woman wearing spike heels may exert a pressure of 2,000 psi when her heel strikes the floor! And if nailheads are protruding from her heel, the pressure can be as much as

60,000 psi! Such incredibly concentrated pressures are bound to affect resilient floors, just as they chew up wood, chip terrazzo, and snag and cut carpets.

Resilient floors do not act under these forces the same way they do under static loads. Oddly enough, research has indicated that the less resilient floors, such as asphalt tile or vinyl-asbestos tile, tend to resist heel impact better than many of the more resilient materials, such as rubber tile, linoleum, and Custom Corlon (homogeneous vinyl) Tile. This is because the high pressure is exerted for only a fraction of a second when the edge of a spike heel strikes the floor. A hard surface literally does not have time to indent. Some floors, however, have exceptionally high resistance to both static and dynamic loads. Armstrong Linotile, Tessera, Montana, and Patrician sheet Vinyl Corlon, and the recently developed Castilian solid Vinyl Tile stand up extremely well in regard to the two types of loads. And these floors are recommended for heavy traffic areas where spike heels are apt to be a problem.

Here are four methods of minimizing the apparent damage to resilient floors from impact:

- 1) Make use of light, multi-coloured, low-gloss floors. They reflect less light than dark, plain, shiny surfaces, and are less apt to show indentations.
- 2) Select patterns having swirl grainings, or terrazzo, mosaic, and spatter effects. The fine detail of such patterns visually obscures indentations.
- 3) Use floors with embossed textures, such as Armstrong Montana, Tessera and Patrician Corlon or Embossed Linoleum. The texture tends to camouflage indentations.
- 4) Recommend to building maintenance people that they not buff wax finishes, thus minimizing the shadows caused by indentations; suggest that at most the buffing be very light.

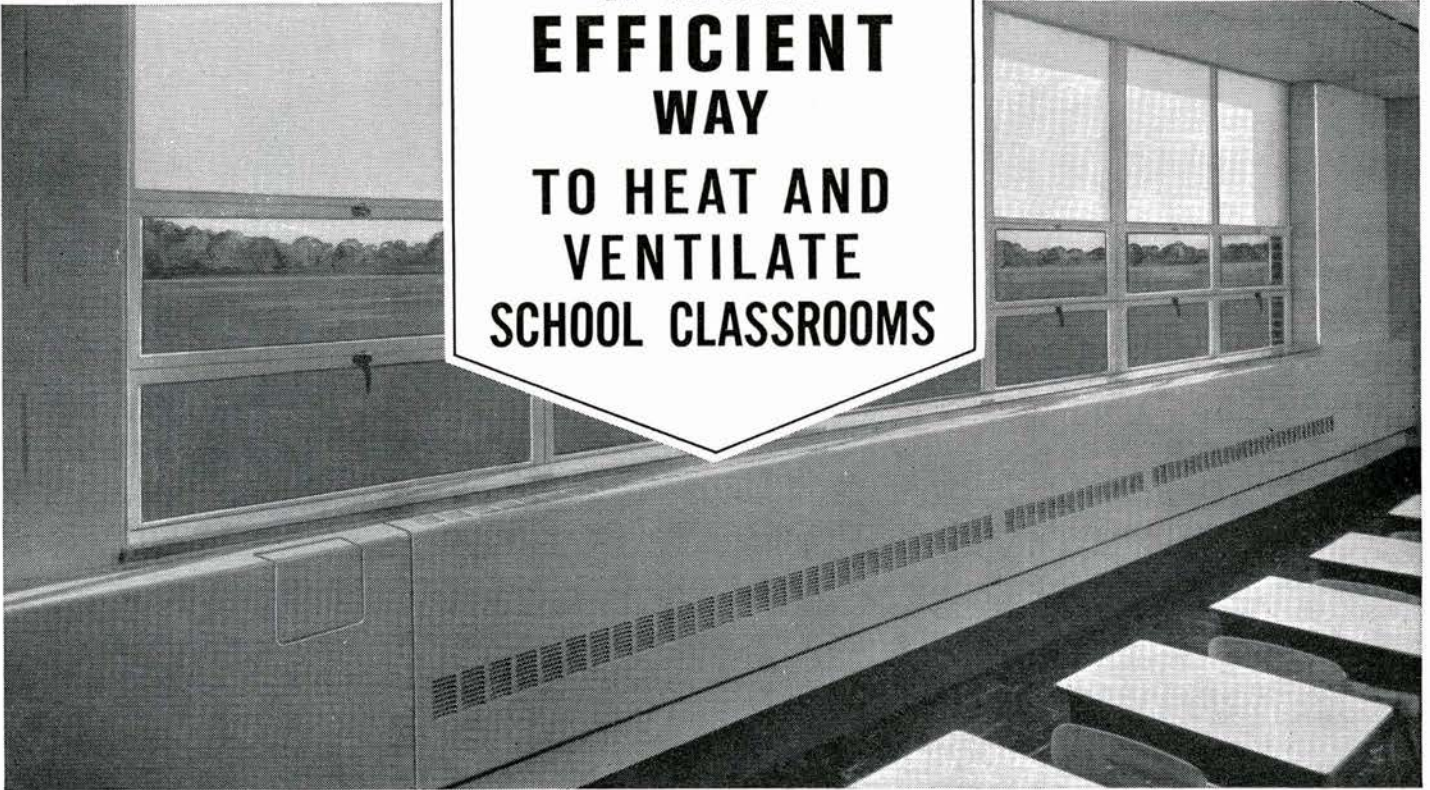
Special help for architects

Your Armstrong representative can offer suggestions on choosing floors that will help overcome indentation problems. He can also get you further assistance from Armstrong research, decorating, and installation specialists. Call him at your Armstrong District Office. Or write direct to Armstrong Cork Canada Limited, Dept. RAIC 3, P.O. Box 919, Montreal, P.Q.

VINYL CORLON • EXCELON TILE • RUBBER TILE
CLASSIC CORLON TILE • CORK TILE
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**A MORE
EFFICIENT
WAY
TO HEAT AND
VENTILATE
SCHOOL CLASSROOMS**

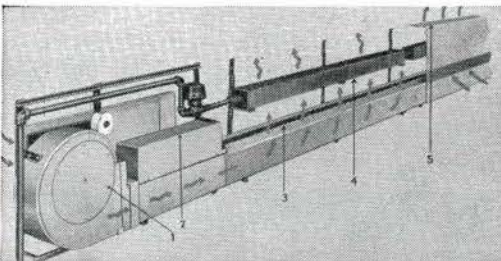


THE VAPOR LINOVENTILATOR* SYSTEM

WHY! This system is an adaptation of fin-tube radiation, long recognized as the most efficient method of heat distribution for *all* types of buildings.

HOW! Fresh air drawn through a fiberglass filter into a duct is discharged at high velocity from a slot running the entire length of the duct. This jet of fresh air draws out air from the classroom floor and passes it over a heating element. Heated air is then in turn discharged upward along the outside window-wall. With window down-drafts eliminated, the entire classroom maintains a uniform temperature.

QUIET OPERATION is ensured by a custom-designed "power centre" blower. IN THE DAYTIME the blower runs continuously to provide necessary outside air. A thermostat admits steam or hot water to the heating element as required, assuring a steady uniform temperature during classes. AT NIGHT the fan is shut off, and heat maintained at a reduced temperature. IN THE MORNING, the fans are turned on just before school opens, and because the Linoventilator* is a *forced flow* system, a comfortable daytime temperature is very quickly reached.



Fresh air is drawn through the **Outside Louvres and Filter — 1** by the **Blower, 2** directed through the **Sound Absorbing Unit, 3** discharged uniformly over the entire length of the **Air Duct** and mixed with recirculated air, **4** passed over the **Finned Tubing** and heated, **5** The **Outlet Grilles** discharge the heated air uniformly, providing draft free, comfortable temperatures throughout the entire room.



Write for Catalogue LV-617 to:

VAPOR HEATING LIMITED

3955 COURTRAI AVENUE

MONTREAL 26, QUE.

*Reg'd. T.M.

Refreshing individuality and a rich visual appearance are presented by Acme's new

Series 600 recessed face system

Color inserts may be placed in the 1/4" wide recess in the face of these 2 1/4" x 6" framing tubes, or the natural shadow change allowed to define the strong and beautiful character of these designs. Write for full size details and information on this exceptionally fine addition to the Acme line of aluminum entrance and storefront systems. Another quality product to build the face of a city... from

NORTHROP ARCHITECTURAL SYSTEMS, LTD.

1421 E. Pender St, Vancouver 6, British Columbia / AL 4-1858 / subsidiary of Northrop Corporation



WESTEEL "FYRLOCK" Hollow Metal **FIRE DOORS**

... LOOK LIKE regular doors

UNDERWRITERS'



LABELLED

up to class "A" 3 hour rating

Now, you can provide desirable uniformity in a building by specifying Westeel "FYRLOCK" Fire Doors along with matching Westeel Hollow Metal Doors. Gone are all vertical lines . . . all cumbersome looking hardware. The handsome, flush surface of the "FYRLOCK" can be prime coated or finished in baked enamel to complement the building's decor.

"FYRLOCK" Fire Doors are available
Single Swing, Swing in Pairs

For complete information ask
for Catalogue No. 82.



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PRODUCTS LIMITED

An all-Canadian, Canada-wide organization

MONTREAL, TORONTO, WINNIPEG, REGINA, SASKATOON,
CALGARY, EDMONTON, VANCOUVER. Sales Offices also at:
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THEY'RE IN TIME FOR THE FACE-OFF

...and **C-E-L** had a part in it

Many of the hundreds of thousands of spectators who ride the escalators at Maple Leaf Gardens every year probably take them for granted, because these moving stairways are there as part of the Gardens' service, performing their job efficiently and dependably—getting fans to the game on time. C-E-L has a very real interest and part in these

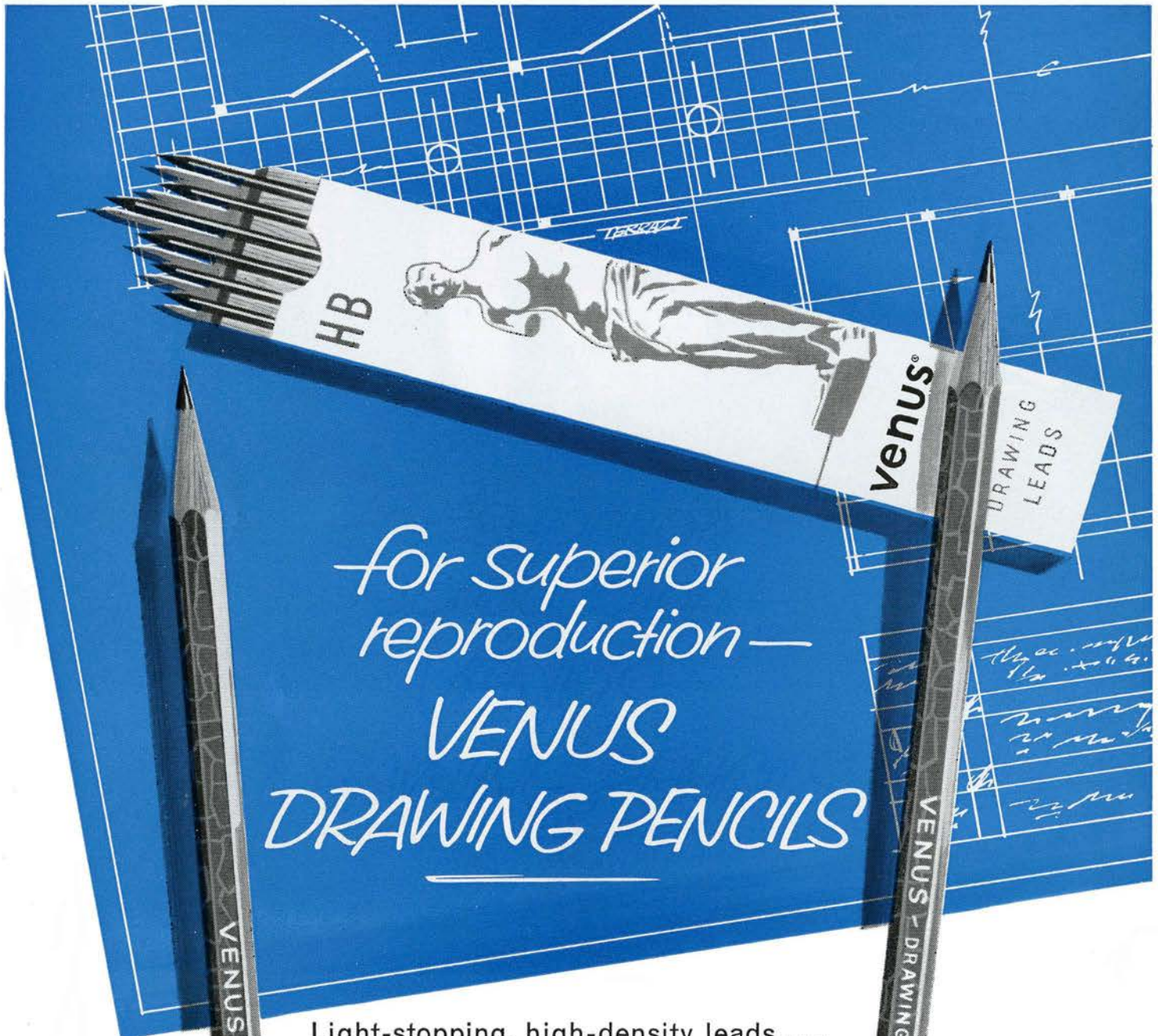
escalators because they were engineered and installed by a C-E-L company—Turnbull Elevator of Canada Limited. Turnbull have come a long way since they started building elevators in 1900. They are today recognized as leaders in design and the manufacture of elevators, escalators and a growing number of allied products.

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CEL **COMBINED ENTERPRISES LIMITED**

48 ST. CLAIR AVENUE WEST, TORONTO 7, CANADA

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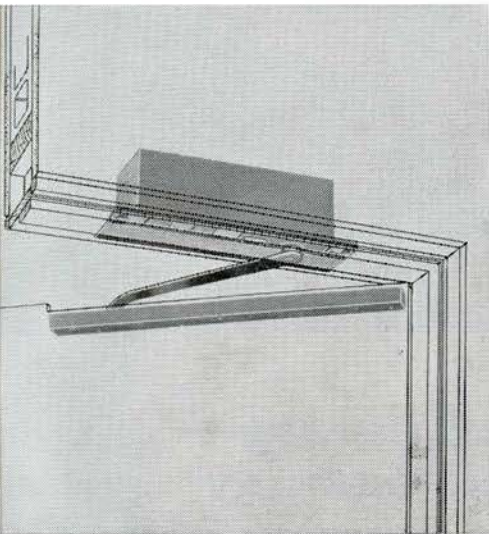


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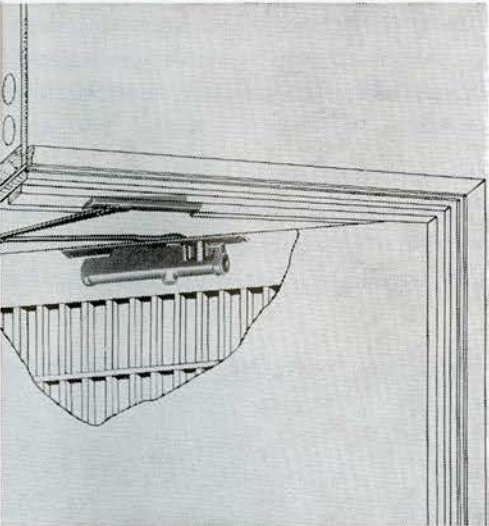
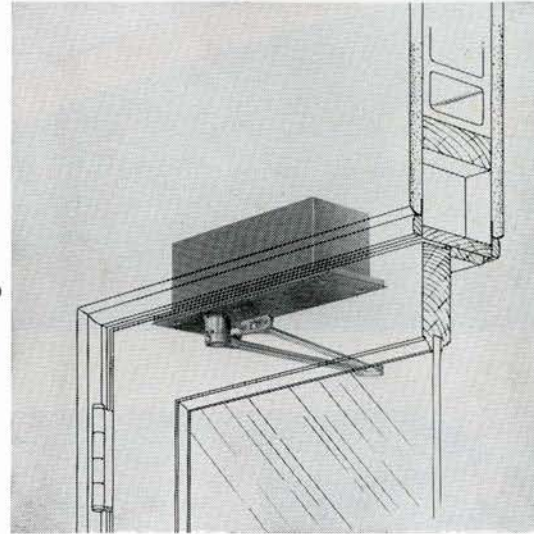
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62-4



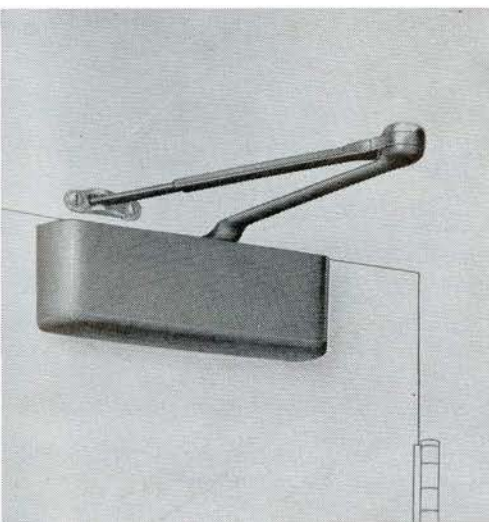
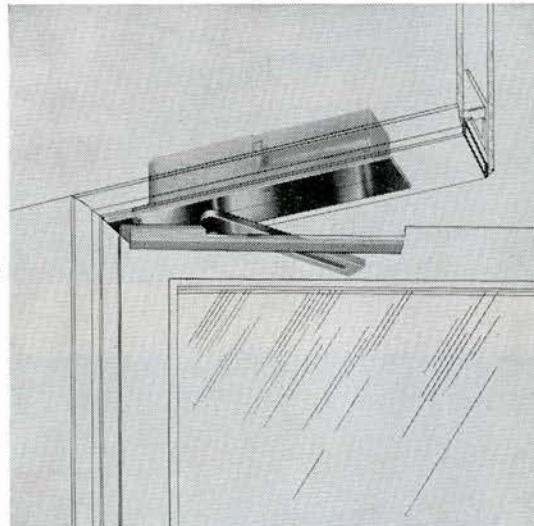
● **Overhead Concealed Closer.** Single Acting, for Butt Hung, Center or Offset Pivotted Doors. The basic overhead concealed closer. Mechanism installed in head frame and top of door. Lever arm disappears into recess in door stop upon closing. Used with exterior or interior doors of wood or metal, 1 $\frac{3}{4}$ " thick or more. Door opening of 180° possible. (Series 200)

● **Overhead Concealed Closer.** Single Acting, Surface Applied Arm, for Butt Hung, Centre, or Offset Pivotted Doors. Mechanism installed in head frame and top of door, but with exposed double lever arm for extra closing capacity. Door may open 180°, jamb permitting. Available with regular, hold-open or Underwriters approved fusible link arms. (Series 500)



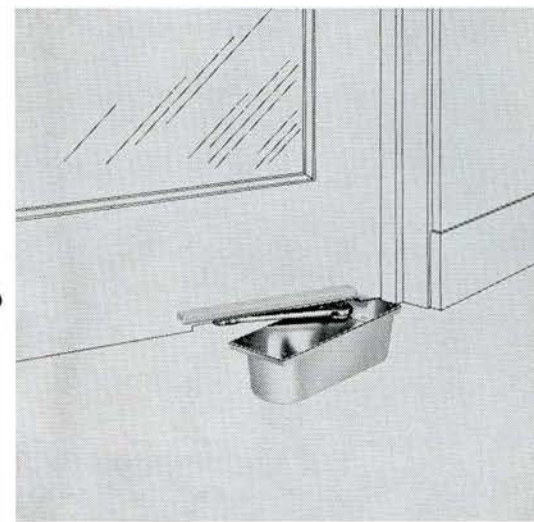
● **Closer Concealed in Door.** Single Acting, for Interior Doors Hung on Butts. This closer available in two basic sizes, for wood or metal doors. Provides largely concealed control at little more than the cost of an exposed closer. Widely used in offices, schools, hospitals, religious and industrial buildings. (Series 300)

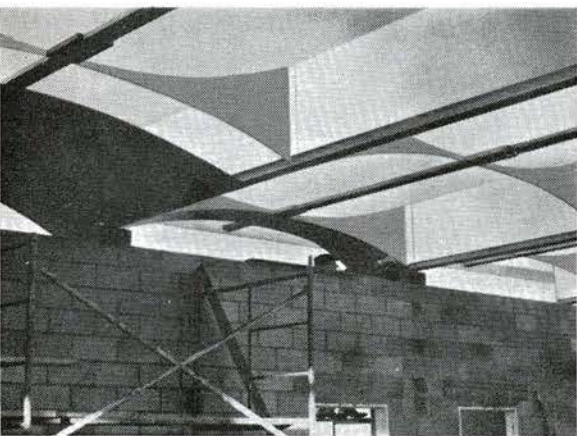
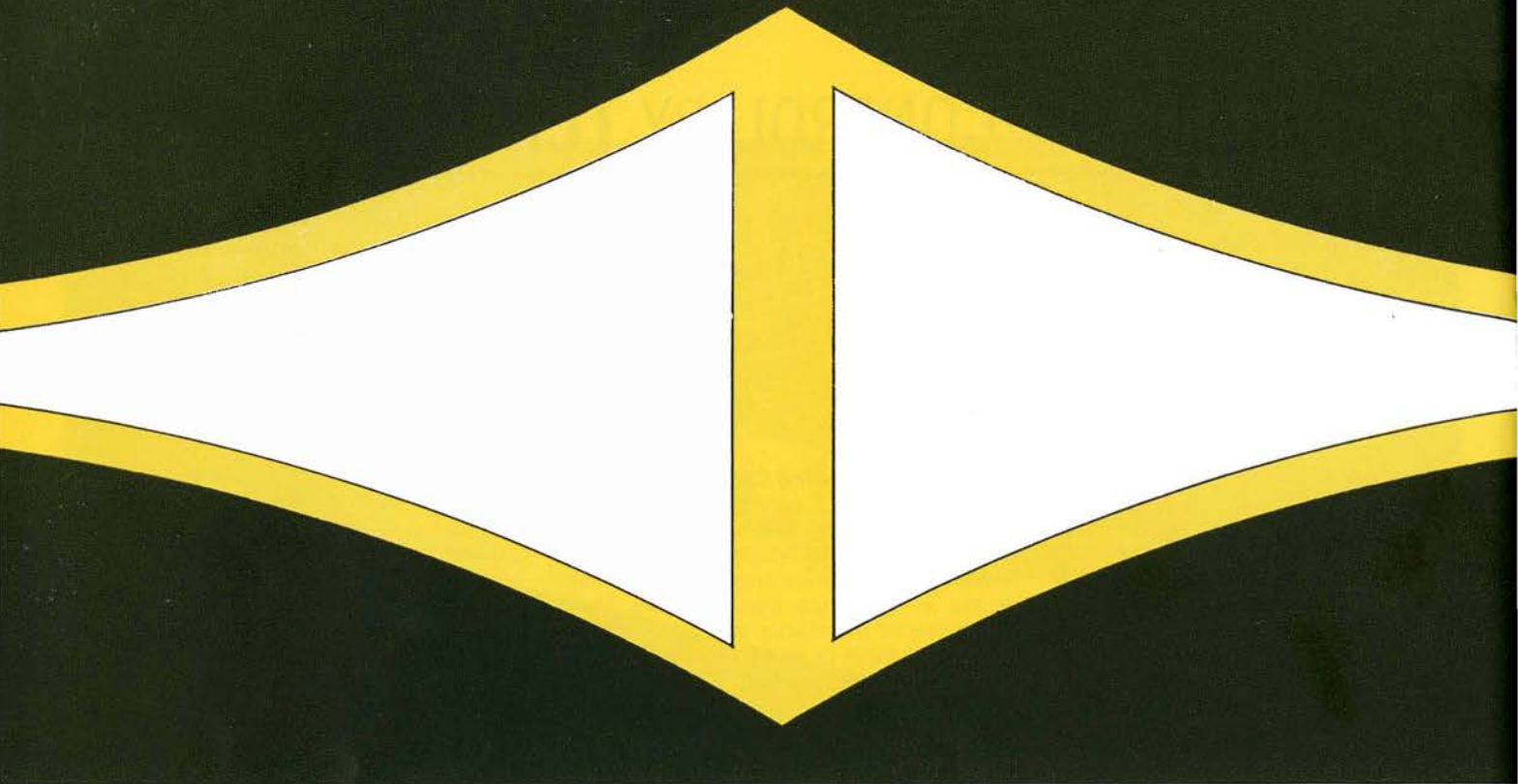
● **Overhead Concealed Closers.** Double Acting. Powerful closers, built to furnish complete rack-and-pinion control of any double-acting door, interior or exterior. Especially suitable for restaurants or hospitals, where frequent scrubbing subjects closers in floor to heavy abuse. (Series 600)



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● **Closers Concealed in Floor.** Single Acting. This LCN floor closer efficiently controls interior or exterior doors. Closer may be adjusted or repaired without putting door out of service. Weight of door not borne on closer shaft. Available for use with or without threshold, and for doors butt hung, center or offset pivotted. (Numbers 2, 4, 6.)



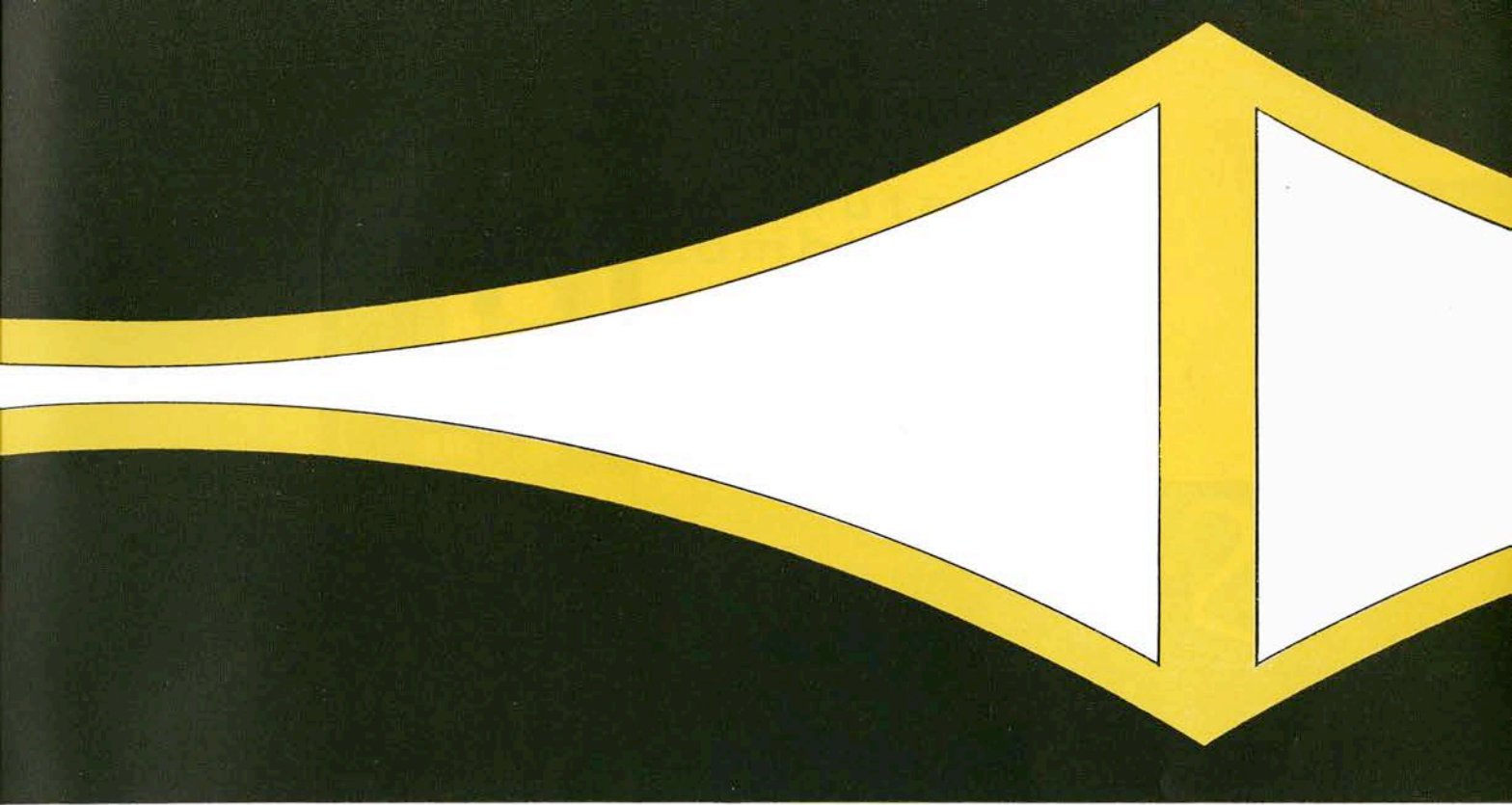


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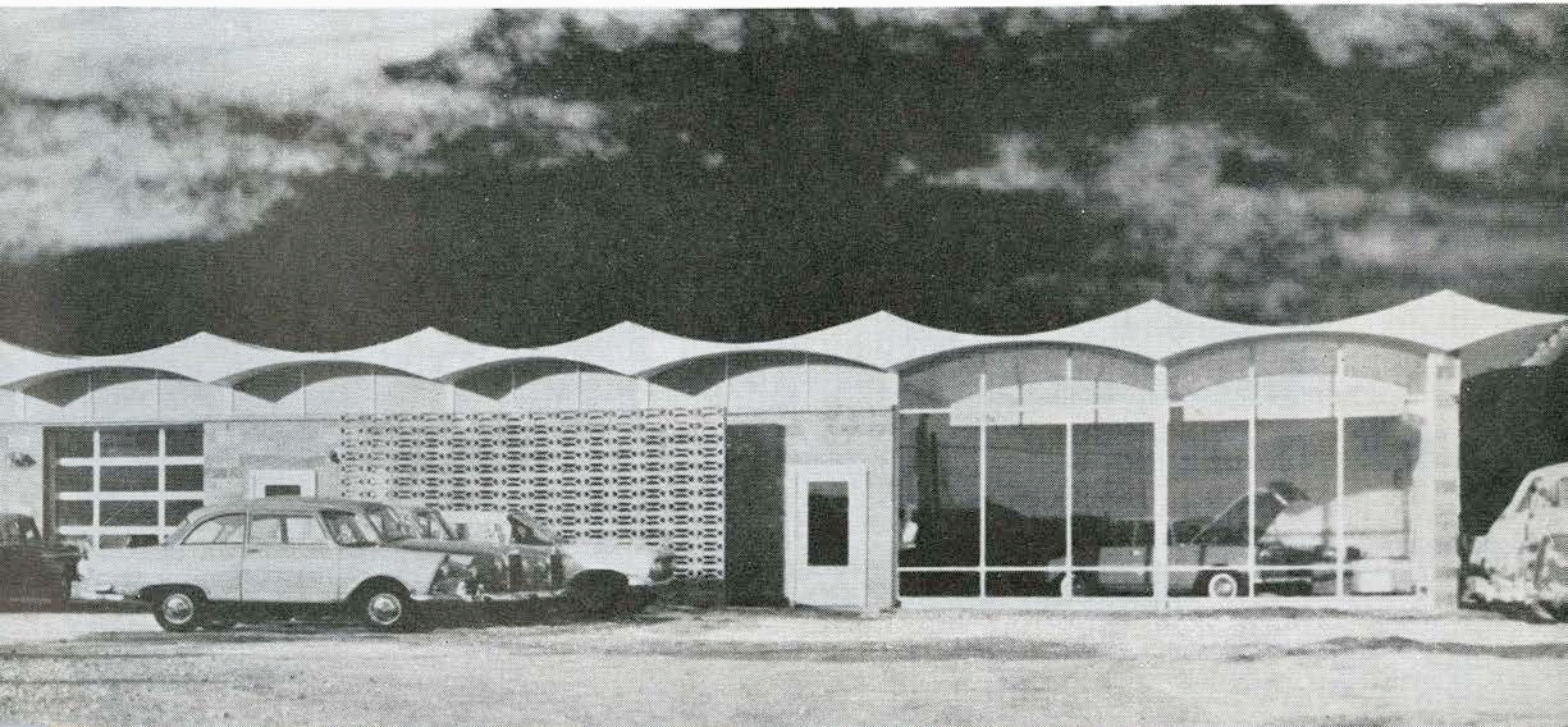
The originality of the roof design is in the idea of enclosing the Box Beams with curving, scarf-jointed Fir Plywood panels. They were glue-nailed to the beam flanges and to the 2" x 6" spacer members. The consulting engineers were Choukalos, Woodburn, Hooley & McKenzie, and the contractors were Maguire Construction Limited, Saskatoon, Saskatchewan.


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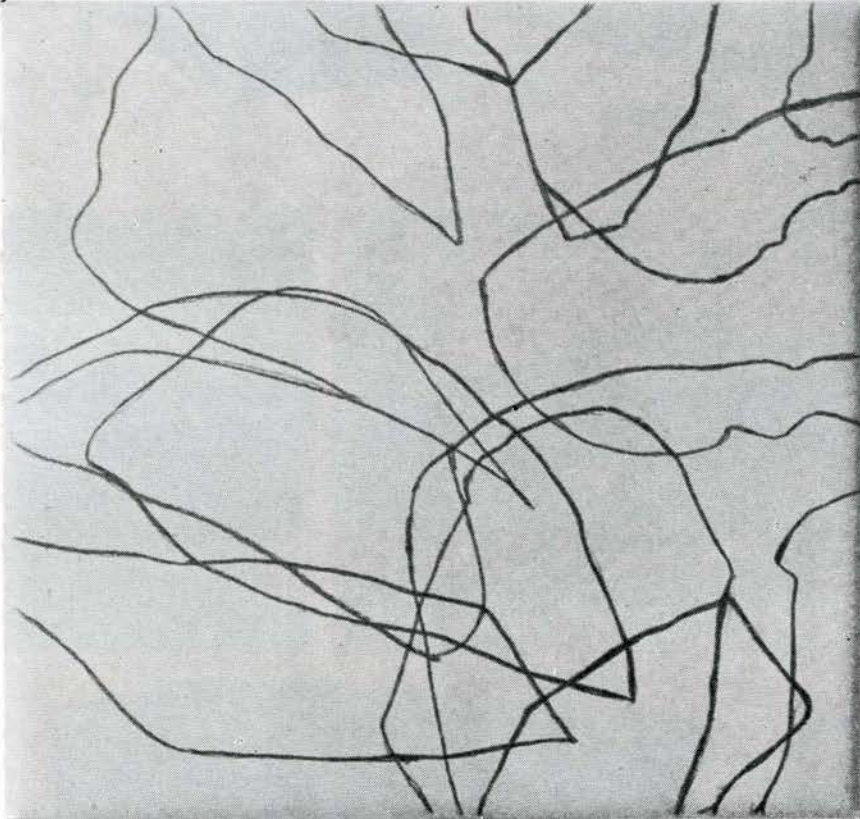
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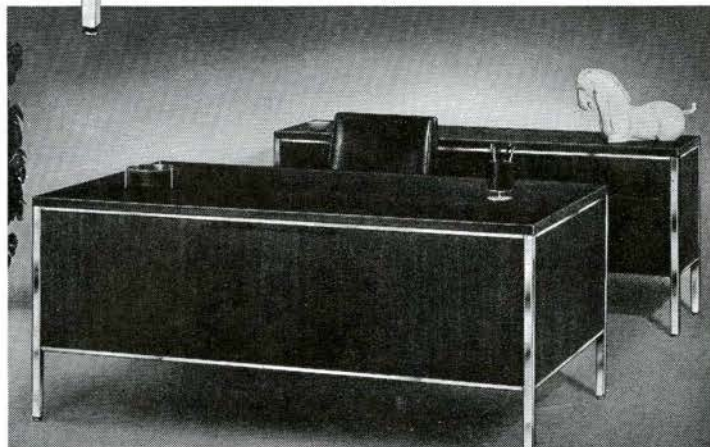
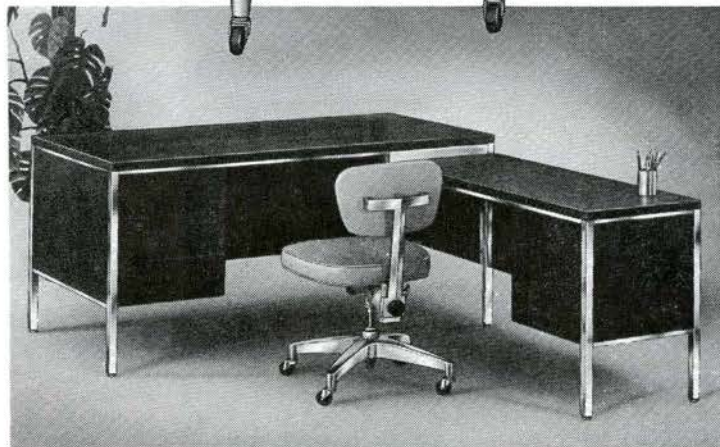
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PRE-ASSEMBLY ISSUE

- 27 EDITORIAL
by C. E. Pratt, President, Architectural Institute of British Columbia
- 29 GUIDE MAP
*Architecture in Vancouver
Assembly Programme
Profiles*
- 37 FEATURE ARTICLE
CLIMATE: FAIR OR UNSETTLED?
by Tony Emery
- 43 COMMENT ON CLIMATE
- 47 ALLIED ARTS AWARD
B. C. BINNING
by Ron Thom MRAIC
- 53 EDUCATION
1. *PROFESSIONALISM AND EDUCATION
A REVIEW OF ESSENTIAL BALANCES*
by R. Schofield Morris FRAIC
2. *ARCHITECTURAL EDUCATION FOR A
SCIENTIFIC AGE*
by P. N. Youtz FAIA
- 63 THE GRAND PALACE THEATRE
*by Michael Garrett
and Abraham Rogatrick*
- 67 WIND ON BUILDINGS
*by W. A. Dalglish and D. W. Boyd. The April Canadian Building
Digest Supplement from the Division of Building Research, NRC,
Ottawa.*
- 71 CLIMAT: TEMPERE OU INCERTAIN?
par Tony Emery

NOUVELLES DE QUÉBEC

DU SECRETARIAT DE L'AAPO

DEPARTMENTS

- 76 Book Reviews
77 Institute News
77 Letters to the Editor
82 Coming Events
83 Industry
104 Index to Advertisers

COVER: The 1962 RAIC Assembly Symbol.



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RAIC 55th Annual Assembly — Vancouver May 30 - June 2



WHEN BRITISH COLUMBIA ARCHITECTS realised they were to have the privilege of hosting the 55th Annual Assembly of the RAIC they responded to the challenge with pleasure and alacrity. Under the able leadership of Bill Leithead, a Host Committee was set up and 15 sub-committees went willingly to work. The enclosed programme is the result.

You will see right away that we had tremendous advantages, the pleasurable anticipation of 'swanking' about the natural beauties and climate which we enjoy on the coast, the happy coincidence that the CENTURY 21 WORLD EXPOSITION is being held in Seattle at the time of our meeting, and that the opening of the new FINE ARTS CENTRE (including new headquarters for our School of Architecture) allows us to hold our Seminars on "Architectural Education" at the University of British Columbia. If you are free to arrive in Vancouver on Tuesday, May 29, you are warmly invited to attend the opening ceremony. Add to this, the colourful delights of our Chinatown (second in size only to San Francisco) where our fun-night will be held. We have arranged for a 10-course meal at the "Marco Polo" during which you will witness the authentic Chinese Lion-Dance, and there is Victoria (more like Harrogate than Harrogate) for an enjoyable side-trip. There is our architecture and, if you can afford it, trips beyond to Hawaii and the Orient. What more can you desire — except to add that special arrangements are being made to entertain the ladies, during their stay in Vancouver.

As President of the Architectural Institute of British Columbia, I can assure you of a warm welcome from all my colleagues and give a pledge that in this atmosphere of holiday and high thinking the experience of the 55th Assembly will be unforgettable.

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Sketches by Barry Downs



LORSQUE LES ARCHITECTES DE LA COLOMBIE-BRITANNIQUE ont appris qu'ils auraient cette année l'honneur de recevoir l'IRAC à l'occasion de sa 55e assemblée annuelle, ils se sont mis à l'oeuvre avec plaisir et empressement. Sous l'habile direction de M. Bill Leithead, ils ont formé un comité de réception et 15 sous-comités qui ont abordé leur tâche avec enthousiasme. Le programme ci-joint est le fruit de leur travail.

Un concours exceptionnellement favorable de circonstances s'offrait à nous: au plaisir de goûter les beautés naturelles et le climat du littoral du Pacifique s'ajoutaient, par une heureuse coïncidence, la tenue de l'exposition mondiale "CENTURY 21" à Seattle et l'ouverture du nouveau CENTRE DES BEAUX-ARTS (y compris le nouveau siège de notre Ecole d'architecture) qui nous permet de tenir nos séminaires sur "l'enseignement de l'architecture" à l'Université de la Colombie-Britannique. Si vous pouvez arriver à Vancouver le mardi 29 mai, vous êtes cordialement invités à la cérémonie d'ouverture. Ajoutez à cela le charme du quartier chinois, le plus grand après celui de San Francisco, où aura lieu notre soirée récréative. Nous avons préparé un repas à dix services au "Marco Polo", au cours duquel vous assisterez à une véritable "Danse du Lion" chinoise. Puis il y a Victoria, où vous pourrez faire une agréable visite. Enfin, il y a notre architecture et, vous en avez les moyens, les excursions à Hawaï et en Orient. Que pouvez-vous désirer de plus. Pourtant, il y a plus; nous avons aussi un programme spécial pour les dames.

En ma qualité de président de l'Institut d'architecture de la Colombie-Britannique, je puis vous assurer d'un chaleureux accueil de la part de tous vos collègues et je vous garantis que, dans cette atmosphère de détente et de réflexion, la 55e assemblée annuelle vous laissera un souvenir inoubliable.

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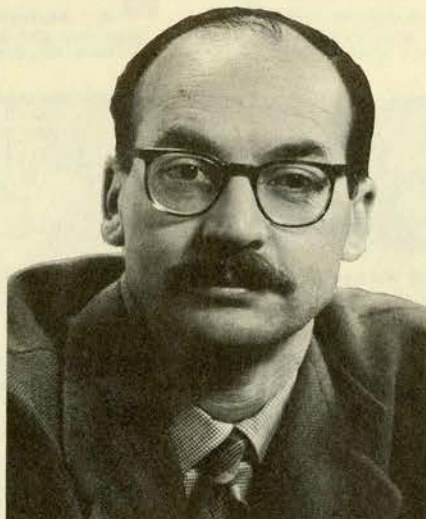
PROFILES

In England, "Urban Planning", "New Towns", and "Architectural Education", are synonyms for Sir William Holford, President of the Royal Institute of British Architects. He has been Professor of Town Planning at the University College of London for fifteen years, and, for an even longer period, Technical Adviser in the British Ministry of Town Planning. He has acted as teacher and consultant in the United States and elsewhere so often, he is probably the best known architect-planner in the world. Recently his name appeared in the news, not only in connection with his appearance as a prime "witness" in hearings regarding the development of Piccadilly Circus, but also in reference to his own imaginative scheme for this famous city landmark.



After a busy twenty years teaching at Harvard, during six of which (the Gropius period) he headed the Department of Urban and Regional Planning, Bostonian George Holmes Perkins became a Philadelphian and Dean of the School of Fine Arts at the University of Pennsylvania in 1951. His New England reserve, together with a personal humility, belie a dynamic zeal for accomplishment which has won him the admiration of hundreds of students' and the highest respect from his colleagues. Very shortly after his arrival, the University of Pennsylvania emerged as one of the most important schools of architecture and planning in North America. As an active member of planning boards and commissions, and in his role of both architect and planner in Massachusetts and Pennsylvania, his influence on the urban development in these areas has been enormous.

His encyclopedic knowledge of the cultural and scientific activity of his country, acquired not only as an observer, but as a full time participator, has led people to remark that, if you want to know anything about Japan, ask Torao Saito. As an architect he has designed and built a generous variety of projects. As a journalist he has had an unusually wide contact with subjects ranging through aviation, scientific developments and general world events. During the past ten years, in addition to making a study of Japanese folk architecture, he has founded and edited the English-language annual, "This Is Japan".



Tony Emery has perused and commented upon the British Columbia scene since arriving there from England nearly ten years ago. His perspicacity in diverse aspects of the visual arts, his spontaneous and rapid wit, together with a craftsman's facility with the English language, have placed him in demand as commentator and critic from coast to coast. His range of interest is so wide, and his areas of knowledge so varied, it is not surprising that, at Victoria College, where he is an assistant professor, he is equally well known and applauded as a lecturer in English, in History, and in the Fine Arts.

PROGRAMME

MERCREDI MAI 30 MAY WEDNESDAY

L'enseignement de l'architecture	9.00 — 11.00	Architectural Education
Comité Exécutif	11.00 — 1.00	Executive Committee
Conseil de l'IRAC 1961-2	2.30 — 4.30	RAIC Council 1961-2
Uniformité des honoraires	4.30 — 6.00	Fee Uniformity
Recherche en Bâtiment	4.30 — 6.00	Building Research
Relations Internationales	4.30 — 6.00	International Relations
Information Publique	7.00 — 9.00	Public Information
Conservation des édifices historiques	7.00 — 9.00	Preservation of Historic Buildings
Uniformité d'inscription	7.00 — 9.00	Uniform Registration
Réception et dance par l'IABC	9.00 — 11.00	AIBC Welcoming Reception and Dance

JEUDI MAI 31 MAY THURSDAY

Comité des Médailles Massey	8.00 — 9.00	Massey Medals Committee
Séance d'ouverture	9.30 — 10.00	Inaugural Session
<i>Discours de bienvenue du maire de Vancouver</i>		<i>Welcoming Address by the Mayor of Vancouver</i>
55e Assemblée Annuelle de l'IRAC	10.00 — 12.00	55th Annual Assembly of the RAIC
<i>Déjeuner-thème; Orateur:</i>	1.00 — 2.30	<i>Keynote luncheon speaker:</i>
<i>Sir Wm. Holford, président du RIBA</i>		<i>Sir Wm. Holford, President RIBA</i>
Séance d'affaires du Collège des agrégés	2.30 — 3.30	College of Fellows Business Meeting
Conseil de rédaction	4.00 — 6.00	Editorial Board
		Free Evening

VENDREDI JUIN 1 JUNE FRIDAY

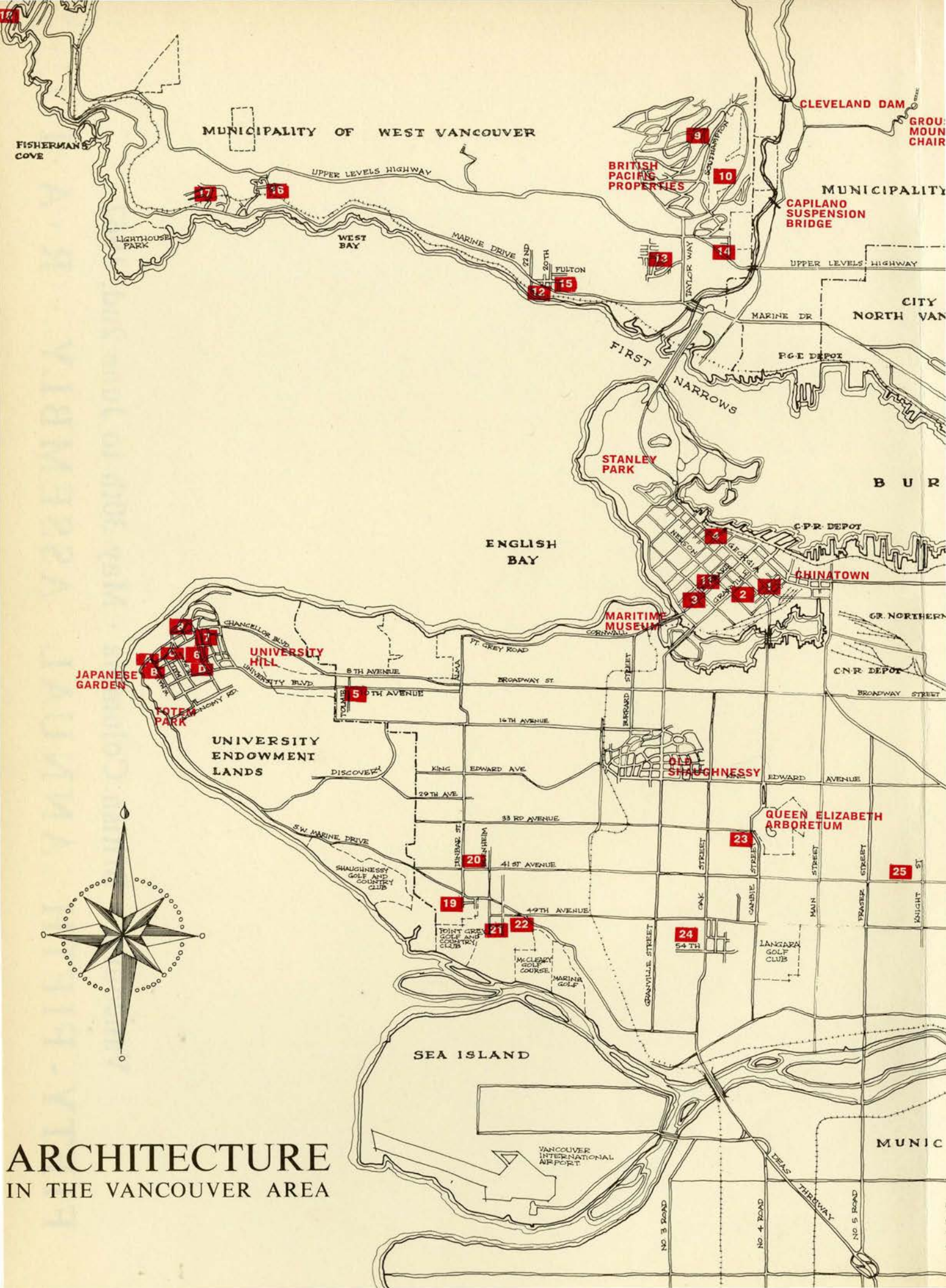
Séminaire sur l'enseignement de l'architecture à l'UB-C	9.30 —	Seminar on Architectural Education at UBC
<i>Co-présidents: MM R. S. Morris, PPIRAC, et Holmes Perkins, AAAA</i>		<i>Co-Chairmen: R. S. Morris, PPRAIC, and Holmes Perkins, FAIA</i>
Division en quatre groupes	10.15 —	Division into four Sections
Cocktails	11.30 —	Cocktails
Déjeuner	12.00 —	Luncheon
Groupes d'études	2.00 —	Afternoon Workshops
Présentation des rapports des groupes d'études	3.30 —	Presentation of Reports from the workshops
Soirée dans le quartier chinois	7.30 — 1.00	Entertainment in Chinatown

SAMEDI JUIN 2 JUNE SATURDAY

Plans en vue du Centenaire	8.00 — 9.00	Centenary Planning
Assemblée annuelle (<i>suite</i>)	9.30 — 11.00	Annual Meeting (<i>Continued</i>)
Conseil de l'IRAC 1962-3 (<i>Déjeuner</i>)	11.30 — 12.30	RAIC Council 1962-3 (<i>Luncheon</i>)
Assemblée du Collège des agrégés	3.00 — 4.00	College of Fellows Convocation
Comité exécutif	4.15 — 5.15	Executive Committee
Cocktails	6.45 — 7.30	Cocktails
Dîner annuel	7.30 —	Annual Dinner

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LYNN PARK

DEEP COVE

SEYMOUR GOLF CLUB

DOLLARTON

1000

BURRARD INLET

POT
DOWN

BARNET ROAD

BURNABY MOUNTAIN PARK

MUNICIPALITY OF

OF

COQUITLAM

GR. NORTHERN

N.R. DEPOT

BROADWAY STREET

HASTINGS STREET

P.N.E.

CASPIAR

BOUNDARY RD

WILLINGDON AVE

LOUGHEED HIGHWAY

GRANDVIEW HIGHWAY

SPERLING AVE

NORTH ROAD

ABETH

MUNICIPALITY OF BURNABY

26

30

25

FRASER STREET

KNIGHT ST

VICTORIA STREET

49TH AVENUE

CENTRAL PARK

IMPERIAL STREET

WILLINGDON

MARINE DRIVE

SPERLING

27

28

NEW WESTMINSTER

10TH AVENUE

8TH AVENUE

6TH AVENUE

MERRIE ST

MUNICIPALITY OF RICHMOND

SURREY

CAMBIE ROAD

EWEN AVENUE

FRASER RIVER

29

WESTMINSTER HIGHWAY

ANNACIS

NO 5 ROAD

NO 6 ROAD



1 Queen Elizabeth Theatre
249 West Georgia St. Architects:
Affleck, Desbarats, Dimakopoulos,
Lebensold, Michaud and Sise.



2 Vancouver Public Library
Burrard Street at Robson
Architects: Semmens and Simpson



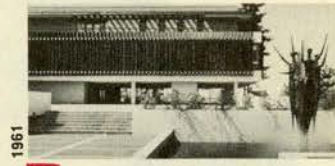
3 Radio Station CKWX*
1275 Burrard Street. Architects:
Thompson, Berwick and Pratt



4 Imperial Oil Building
1281 West Georgia St. Architects:
H. N. Semmens and Associates



5 BC Telephone Exchange
Tenth Ave. at Tolmie. Architects:
McCarter Nairn and Partners



6 University of BC Campus Group
(A) Thea Koerner House* (pic-
tured) (B) Common Block*; (C)
Buchanan Building* (D) War
Memorial Gymnasium*
Architects: Thompson, Berwick &
Pratt. Associate: Fred Lasserre.



7 St Mark Residential College
5960 Chancellor Blvd. Architects:
Gardener, Thornton, Gathe & Assoc.



8 J. G. Bennett Residence
6035 Newton Wynd. Architects:
Thompson, Berwick and Pratt



9 Taylor Residence
605 King George Way. Architects:
J. Blair MacDonald & Clyde Rowett



11 BC Electrical Building*
970 Burrard St. Architects:
Thompson, Berwick and Pratt



12 Crescent Apartments
2100 Argyle Street. Architects:
Ken Gardiner & Warnett Kennedy



13 Gerson Residence
1040 Aubeneau Crescent
Architect: Wolfgang Gerson



10 J. D. Craig Residence
425 Rabbit Lane
Architect: Andrew A. Chomick



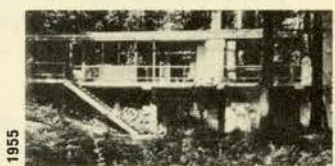
14 John Meyer Residence
1395 Third Avenue
Architects: Wensley and Rand



**15 W. Vancouver
Community Centre**
2158 Fulton St. Architects:
Thompson, Berwick and Pratt



16 R. A. Chillcott Residence
3990 Bayridge. Architects:
Duncan McNab and Associates



17 Gorden Smith Residence*
4590 Keith Road
Architects: Erickson and Massey



18 Massey Residence*
7290 Arbutus Place
Architects: Erickson and Massey



19 Barry Downs Residence
6275 Dunbar Street
Architect: Barry V. Downs



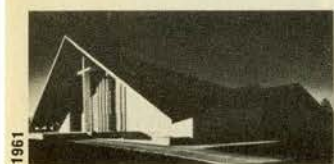
20 Point Grey Golf & Country Club
3350 S.W. Marine Drive. Architects:
Thompson, Berwick and Pratt



21 Kenneth Gardner Residence
3152 West 49th Avenue
Architect: Kenneth Gardner



22 P. T. Rogers Residence
3048 West 49th Avenue. Architects
Thompson, Berwick and Pratt



23 Holy Name Church
Cambie at 33rd
Architects: Toby and Russell



24 Dr M. Dodek Residence
6821 Laurel St. Architects:
Thompson, Berwick and Pratt



25 Stewart Murray H & W Building
Knight Rd at 49th Ave. Architects:
Duncan McNab and Associates



26 Esther Irwing Children's Home
Slocan St at 19th Ave. Architects:
Hale, Harrison, Buzzelle & Gerson



27 Parkwood Terrace*
8357-10th Ave. Architects:
Hale, Harrison and Buzzelle



28 Dr E. M. Wilder Residence
822 York Street
Architects: Carlberg and Jackson



29 Annacis Isl. Industrial Estate
Grosvenor-Laing (BC) Ltd.
Architect: F. Donaldson

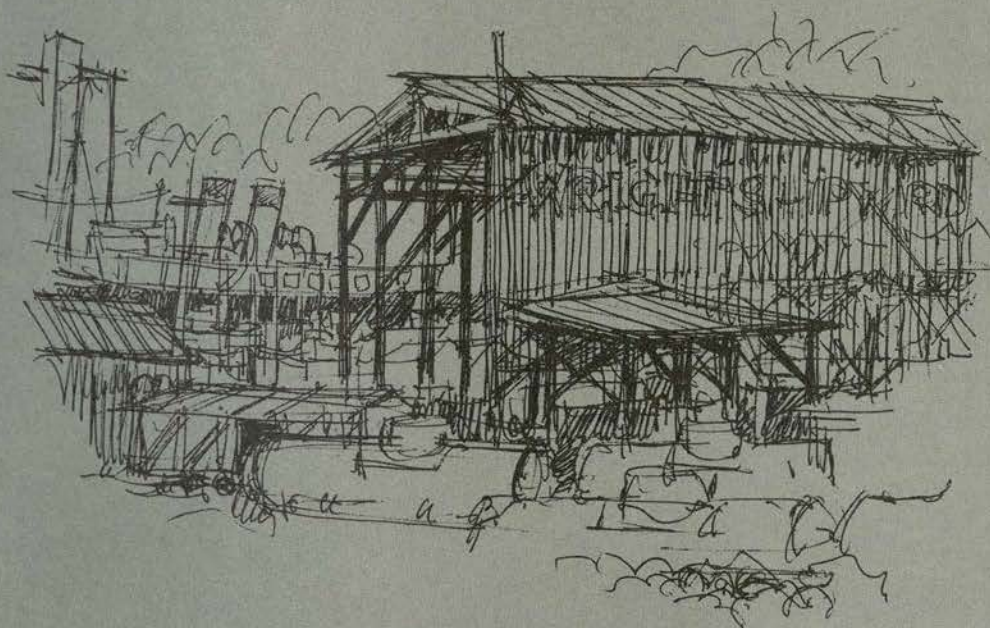


30 Vantel Broadcasting Co.
Lake City Ind. Park (Webb & Knapp)
Architects: Rhone & Iredale

*Winners of National Awards

Photo Credits: Selwyn Pullan John Fulker Harry Cantlon Graham Warrington Graphic Industries Ltd.

feature article



Climate: Fair or Unsettled?

by Tony Emery



S EVEN YEARS AGO, in an article in *Canadian Art*, R. H. Hubbard of the National Gallery described his impressions of the West Coast. The article, which he entitled *A Climate for the Arts*, makes interesting reading today, because it contains not only a summary of the activity then discernible in the fields of art and architecture but also a modicum of cautious prophecy. Today, as one surveys the province of British Columbia in an attempt to take stock of both achievement and aspiration, Hubbard's article provides an excellent base for the critical theodolite.

In January 1955 he detected a "creative upsurge which (was) making the West Coast a new centre for the arts." The cultural Grey Cup, disputed for so long between Toronto and Montreal, was awarded by Hubbard to Vancouver, where "the combination of urban-

ism, wilderness and salubrity apparently provides an exhilarating climate for the arts; it is this perhaps more than anything else which gives the new movement its youthful enthusiasm, vigour and its particular tang."

He was struck by the influence exerted on the community by the Vancouver Art Gallery; by the fact that "there had been virtually no resistance to contemporary modes of design" in the architecture of private houses; and by the painting of Shadbolt, Binning, Jarvis, the Bobaks, Lionel Thomas, Gordon Smith, Korner, Aspell and Macdonald.

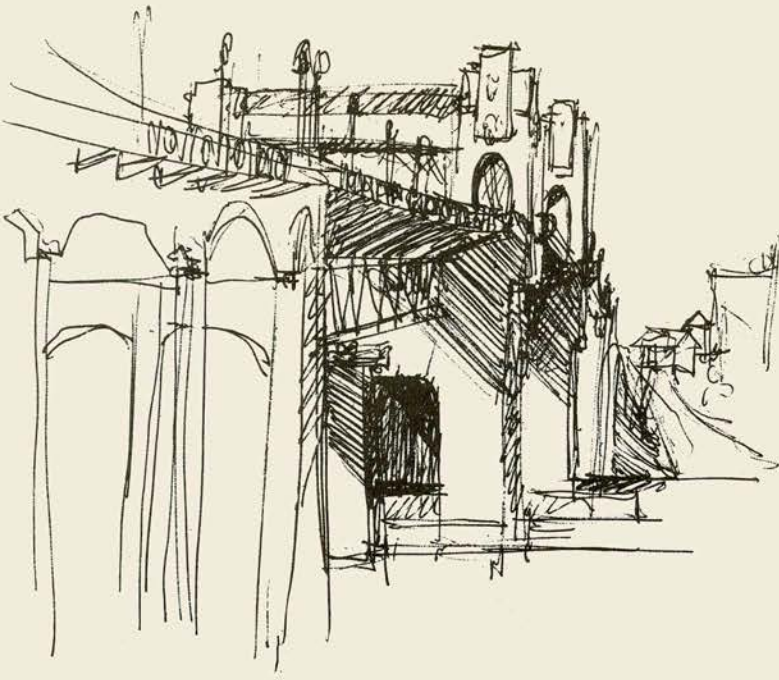
The cautious prophecy I referred to earlier is contained in the concluding passage of the piece. "What form," Hubbard asked, "will future development take?" And he went on to adumbrate an answer: "In architecture it may mean a greater number of large buildings and a needed filling-up of blank and desolate spaces in the centre of the city, and possibly also a halt to the present tendency towards sprawling sub-divisions; in short, a greater ordering of the whole environment of living. In the plastic arts there will be more mural commissions and, I hope, more sculpture. In both architecture and painting there will doubtless be a greater variety of personal styles and more influences from without." Let us examine this forecast, which has considerable value, coming as it does from a sensitive and knowledgeable observer seeing British Columbia for the first time.

In the plastic arts there *have* been more mural commissions, many of which have improved the walls they grace, though I can think of none that is worth a second look. Exterior walls have benefited more than those inside, by the tasteful use of mosaic; but this had led to the adoption of mosaic of all sorts by many people until it has become a cliché of a particularly irritating sort, since nothing looks cheaper and more tasteless than cheap mosaic tastelessly applied. What looks good when handled by a master like B. C. Binning working in close co-operation with a sympathetic architect, looks execrable when slapped on as an afterthought by some mediocre practitioner with a poor eye for colour.

Of sculpture, the less said the better: it is still too early in our artistic development to expect anything very notable from the small band of sculptors in our midst, but works like Jack Harman's bronze group for the Graduate Centre on the University campus augur well for the future. The sculptor is the most unfortunate of all artists in a young country: forced as he is by costs of material and by such public demand as exists to work on a small, domestic scale, he is even less prepared than the easel painter to tackle the large, the monumental.

All the easel painters named by Hubbard are still working, and all are painting better now than they were seven years ago; several of them, refreshed by Canada Council fellowships, have widened and deepened their range of expression; and there have been additions to their number—Herbert Siebner and Toni Onley to name only two. But in spite of this quiet growth and modest expansion, I doubt if even the most inveterate booster for our boostworthy province would claim that Vancouver





is the centre of Canadian painting today. In the arts it is the level of consumption that determines the cultural climate, not the number of works produced. The best place for a painter to live is where he can sell so many paintings that he can devote himself to painting exclusively. This is not true of Vancouver, where all our painters are, from necessity, Sunday painters. As for the Vancouver Art Gallery, the kindest thing one can say is that it "is not dead, but sleepeth".

It is the physical climate, not the cultural climate, that keeps writers like Ethel Wilson and Roderick Haig-Brown, musicians like Barbara Pentland, Jean Coulthard and Robert Turner, typographers like Robert Reid and Takao Tanabe, in our midst, I am convinced. Their reaction to temptations from outside are probably reflected in the remark I heard recently from a man who had been approached by a political party to run as a candidate in the last federal election. "It would be humiliating to be defeated," he said, as he turned it down flat, "but it would be catastrophic to be elected. Who in their senses would spend the greater part of the year in a place like Ottawa?"

What, now, of Hubbard's prophecies in the field of architecture? Some of the large buildings he foresaw have arrived to cover the "blank and desolate spaces" in downtown Vancouver, and among them is the brightest gem in our architectural crown: the B.C. Electric building. No right-minded citizen, as he gazes at this soaring edifice at night, can begrudge the cost of illuminating its every facet until it shines like a costly jewel: it adds a note of quality that is unfortunately unique in the cityscape of our largest centre of population. But one building, however good, cannot by itself sustain a city's architectural reputation in perpetuity. What else have we to offer?

There is the new Public Library, which exudes an atmosphere of welcome quite absent from the old bat-haunted necropolis that used to house the city's books; and there is the Queen Elizabeth Theatre, which represents remarkable value for money; but while we are congratulating ourselves on these, the eye falls on the new Post Office building, and a shadow darkens the discussion. Rightly or wrongly, I see in this massive ziggurat—six times as ponderous as anything Vanbrugh might have conceived in his wildest dreams after the most indigestible repast—I see in it the embodiment of the true taste of our community. There it stands: solid, squat, four-square, the incarnation of all the bourgeois virtues, imperishable symbol of unimaginative, heavy-handed complacency. Beside it even the Vancouver Hotel takes on an airy grace, an ethereal other-worldliness. And as for the sizeable representation of the mail-carrier, in which the sculptor has expressed his gratitude for the punctual delivery of his correspondence, one can only say that it is the work of Socialist Realism to delight the heart of the late Comrade Zhdanov.

Turning from the buildings to examine the extent to which Vancouver has achieved the "greater ordering of the whole environment of living" of which Dr. Hubbard showed himself to be so hopeful in 1955, it is difficult to



restrain the tears, or the hard sardonic laughter, whichever one's temperament may prompt. Not only is there no sign whatever that the city fathers are aware of the necessity for action in halting the gallop towards strangulation and squalor, but there is positive evidence of smug myopia, of an attitude reflected in the mentality that finds satisfaction in repeating the well-worn platitudes from the handouts of the Tourist Bureau.

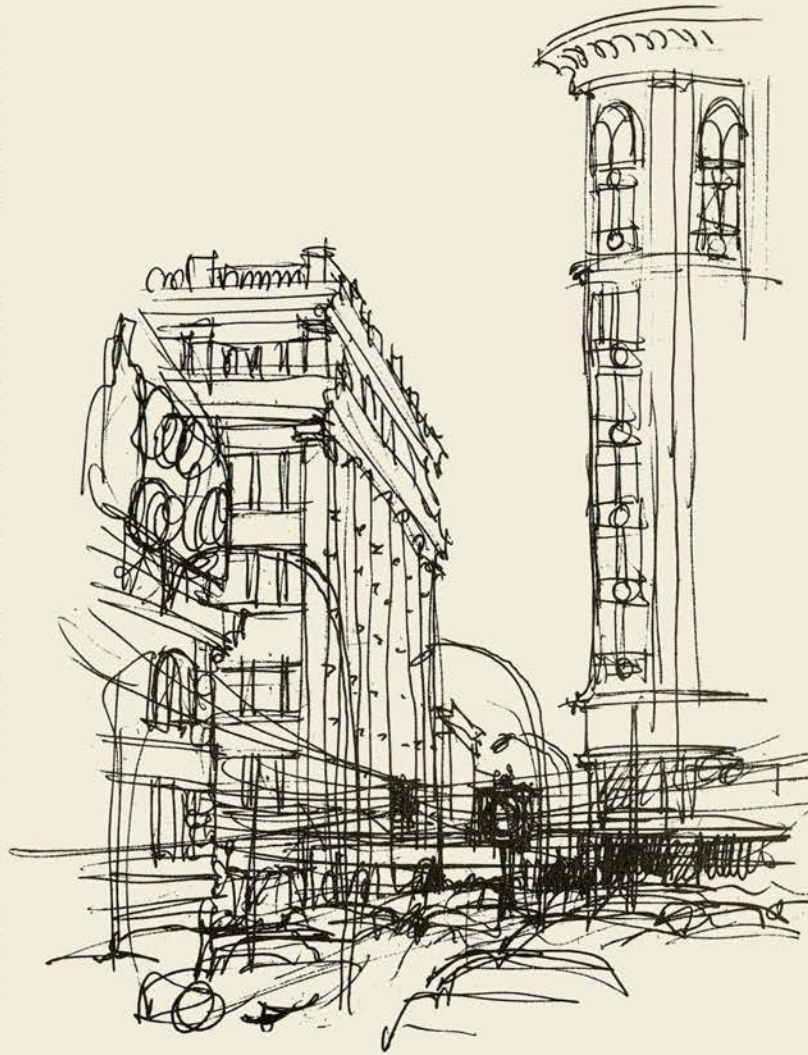
Of course it is impossible to travel far in British Columbia without being confronted by scenery of unparalleled grandeur; of course the settings of Vancouver and Victoria and some of our other cities are among the loveliest in the world. Nobody is going to argue about that. But there is a difference between a city in a beautiful setting, and a beautiful city: to enjoy the beauty of British Columbia it is becoming increasingly necessary to position oneself in such a way as to eliminate anything added to the scenery by the hand of man.

And Man has really no excuse to offer. It is useless to say that modern cities are bound to be ugly, because it is clear that they don't have to be. British Columbian Man has less excuse than most, because he enjoys a standard of living that indicates the availability of sufficient financial resources to support the creation of a cityscape which would match the landscape in charm and majesty.

If Ganges is not to be compared to Portofino, and Pender Harbour is less comely than Concarneau, it is only because the residents of Ganges and Pender Harbour have not been persuaded to plan their development in such a way that the resulting aggregation of buildings might bear some relation one to another, to the space between them, and to the surrounding environment.

Were New Westminster or Nanaimo or Nelson to set their minds to it, do you doubt that they could, over a period of a century, develop into cities that would rival Venice or Lucerne or Rotterdam as places to which North American beauty-lovers would aspire, at best, to live in and, at worst, to visit? But do you think they will? If you were making book on the outcome, what odds would you offer against every city in British Columbia eventually becoming a sprawling mass of characterless buildings, laid out in straight lines intersecting at 90 degrees, and festooned with wires draped casually on drunken poles, the whole mess garnished with a bewildering variety of signs and billboards (designed, it would appear, by junior high-school art students of modest ability) proclaiming the preternatural excellence of certain soft drinks, toothpastes, gasoline and bread?

I shall believe in the possibility of "a greater ordering of the whole environment of living" when I see city councils and municipalities tackling the problem — a comparatively simple one — of producing a sign by-law with some teeth in it. This negative action is the first step necessary in halting the drift towards visual decay in the town, and it must be followed up by ordinances directed towards adding something positively to the townscape in the way of disguise: trees, to name one daring suggestion. Then, perhaps, Vancouver and Victoria might compete in a friendly way to see which could make the most of their harbours, both of which could, with some care and fore-



though, add immeasurably to the pleasure of living in their vicinity.

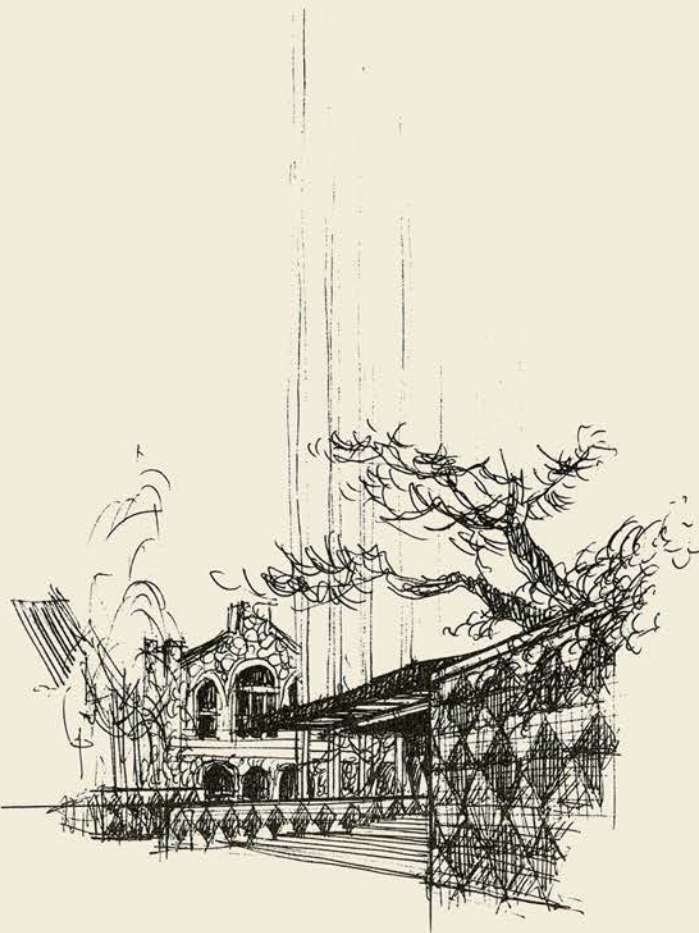
There is only one reason why these things should not be done, and that is the lack of vision on the part of the people who are in a position to provide the leadership necessary for them to be done. Our elected representatives, at any level you like to name, are outstanding in one respect at least: their total lack of what, in the eighteenth century, used to be called "sensibility", meaning the capacity to distinguish between subtle shades of difference in form or colour or style or meaning, depending upon whether one was looking at a building, a picture or a book.

When you are incapable of telling the difference between what is evidently and manifestly squalid and what is agreeable to the eye; what is suitable and what is totally unfitting; then it is not easy to accept the necessity for changing things in any way. Those who have had the experience of trying to rouse public opinion on any aesthetic question would agree, I think, that what chiefly depresses the crusader is not the hostility of the man with the vested interest in the continuation of the abuse, whatever it may be—although this is not to be underestimated; it is the widespread apathy of the general public that is the real discouragement.

If there were enough people possessed of the sensibility I have referred to, it would be a comparatively simple matter to divert Vancouver, to take one example, from its evident ambition to transform itself into a maritime version of some prairie metropolis. Our stalwart, granite-jawed leaders can usually be persuaded to listen to any delegation that represents a thousand votes or more. Unfortunately, as Paul Klee sadly remarked a generation ago: "Uns trägt kein Volk." The people are not with us.

Before we can boast that we possess "a climate for the arts" there is a man-sized job of popular education to be done, it seems to me. And I am by no means pessimistic about the practicability of carrying it through, for two reasons: one, that never before have there been so many channels of mass communication avid for anything that smacks of the "controversial"; and two, that in the second half of the twentieth century it is becoming increasingly difficult to obtain a position of responsibility (outside politics, be it understood) without achieving first some kind of university education. The university thus becomes the focal point of the struggle, and the quality of the general aesthetic education open to the ordinary student of commerce or engineering or law, as well as to those who are "majoring" in the Fine Arts, either in the Faculty of Arts and Science or in the College of Education, will largely determine the IF and WHEN of our arrival at the enviable situation fore-shadowed by Dr Hubbard.

The prognosis for a happy outcome here is encouraging. Under the influence of B. C. Binning the Fine Arts Department of the University of British Columbia is already exerting a considerable influence on the student-body as a whole, as the support for the annual Contemporary Arts Festival on the campus makes plain. The



presence of men like Gordon Smith among those who are teaching the art teachers of tomorrow; the activities of the Departments of Architecture and of University Extension; the possibility of similar developments, on a smaller scale, at the fledgling University in Victoria.

However, anything which depends on the education of a generation is bound to take time, and while the forces of light are slowly recruiting and training, the armies of darkness are already ravaging the land. It is the knowledge that this is a race against time that brings the sweat to the brow of anyone engaged in the struggle. The war-time birthrate of the 1940's is now beginning to marry and reproduce (not always, alas, in that order) and it does not need the occult powers of Nostradamus to prophesy a great increase in the size of our towns over the next decade. Regardless of numbers added by immigration, the really enormous leap in population will be when the children of the children who are beginning to be born now, start to hive off in their turn. The year, appropriately enough, will be close to 1984. If we have done nothing about our environmental problems by then, it will be a little late to start.

So far, all the changes in our pattern of existence in British Columbia have come about through individual efforts stimulated by the profit-motive, the most powerful drive in our society. This drive has been, in some noteworthy instances, channelled and directed by the taste and energy of designers and architects whose prestige was such that they were able to resist outside interference, but we have some striking monuments to the timidity and parsimony of company directors and of political Lorenzos with their own disastrous notions of the Magnificent. It is time, I think, that individual effort was replaced by communal effort: that planning to solve the related problems of inconvenience and squalor in our towns and cities was made a matter of urgent priority. Planning requires planners: the best planning requires the best planners: we must have them, and their plans must be "sold" to the public, using every medium there is, for what we do not at the moment have is the willingness of the ordinary man, and of his even more ordinary elected representatives, to accept the fact that a plan is useless if it isn't implemented.

When we see not merely beautiful buildings, but also beautiful streets, in our towns; when we can turn our backs on Nature to admire the handiwork of Man; when it is no longer a matter of awestruck remark that artists and architects should work together from the planning stage of a building for which a substantial percentage of the cost has been earmarked for decoration and embellishment; when the number of people in our province who genuinely care for the arts is greater than the number of those who regard themselves with some justification as artists (and at the moment the ratio is about 1:1); when our Public Works Department produces buildings—and fountains — that evoke a buzz of admiring comment from the cognoscenti across the continent; — then I shall indeed believe that the climate for the arts is a clement one. In the meantime, however, the best forecast I can offer is "Unsettled". You'll need your umbrella, raincoat — and blindfold.



Comments on Climate



IN THE SPIRIT of Tony Emery's outburst and in my own more flatulent moments, I often propound the thesis that Greater Vancouver is a planning mess. Our Provincial Government, with a timidity which is inversely proportionate to its brash confidence in the field of power development, has swept "metro" under the carpet. It has emasculated the Lower Mainland Regional Planning Board, whose excellent series of reports attract more lip-service than Jayne Mansfield.

There have been no conceptual proposals for the planning of our downtown core, no leadership in transforming Coal Harbour into a romantic gem and no sign of the formulation of an overall Port Authority to master-plan the Harbour. Above all, we have no plans for *planned* decentralization.

Frankly, I wonder how I contrive to be so happy working within this sprawling mish-mash!

Warnett Kennedy, Vancouver.

TONY EMERY'S manner of reasoned, articulate and humorous presentation gives such delight that it is easy to agree with his criticisms of our aesthetic climate. No doubt they are just, but a resident has only to review the last few years to come to a more optimistic conclusion.

Bob Siddall, Victoria.

IF THERE IS, as Tony Emery strongly suggests, a lull in the arts in Vancouver, I can only offer the consolation that is contained in a remark made in another context that cultural developments in English-speaking countries go by fits and starts rather than steadily and that from time to time they suffer temporary setbacks because of the accumulated hostility of people who have no instinctive response to the arts.

I am flattered that Tony Emery regards my remarks in 1955 as prophecies. I make no special claims to foretell the future, but if by any chance these remarks could qualify for the deeper meaning of prophecy, an insight into present happenings and future possibilities, I should like to think that their essential truth remains. I was in Victoria recently and I was impressed not only by the physical climate but also by the developments taking place at their Art Gallery.

R. H. Hubbard, Ottawa.

SINCE 1955, the population of British Columbia has increased rapidly and with it, the many problems of expanding towns and cities. The universality of these problems both in Canada and elsewhere I feel has been overlooked by Mr Emery in his rather harsh analysis of our environment of living. After all, we do have in Kitimat, a well planned town and the industrial estates at Annacis Island and at Lake City are certainly great assets to the urban scene. We are gradually doing something about signs and billboards—each year there are more towns and cities passing laws prohibiting billboards on highways and bridges and restricting the hideous spread of neon signs.

Generally Mr Emery's analysis is only too correct. However it could, with a change of names, apply to almost any part of Canada.

Ian Davidson, Vancouver.

THE WEST COAST unfortunately suffers from a geographical isolation which penetrates everything from the economy to the arts. That our architecture is notably lacking in taste, (the lesser virtue which could save us) is because taste is the product of an urbanity that we are not likely to experience this century. We might be redeemed by poetry, to which we are prone through our physical environment, or we may depend on brute vigour, under which guise strength of statement is often enhanced by crudeness of technique. We could make a virtue of sloppy building.

The combination of climate, isolation, population, and so on, results in a state of public, social and political apathy towards the environment which, one must agree with Mr Emery, is deplorable. But one questions seriously his conclusion that Planning could make it better. A state of barbarism can be lively and sometimes fun—but planned it would be unbearably dull.

Arthur C. Erickson, Vancouver.

I HOPE THAT visitors to Vancouver during the Assembly will not let Prof. Emery do their thinking for them but will have time for their own observations and thoughts and draw their own conclusions as to the artistic climate in Vancouver.

Peter Thornton, Vancouver.

IT IS HARD to comment on as far reaching and often intemperate sweep of evidence or ideas and actions or the lack of them as advanced by Prof. Emery; however, he raises a great number of valid and crucial issues which those working in the arts in British Columbia, and hence to some degree involved in creating the climate for the Arts, should be ready to face.

Two things suggest themselves for comment. For example it is not entirely correct to say that there are no sign bylaws "with some teeth in it" in B.C. The Municipality of Richmond has pioneered what is now becoming a fairly widely understood field of Municipal action when it passed its Municipal Sign Bylaw five years ago. It is having some results and the best example is the Oak Street Bridge connecting Richmond with the City of Vancouver.

The second thought which deserves comment is the "idea of the climate". I have just looked at the definition for climate, and I find "Climate is the effect of weather over a long time and four things make up weather: temperature, precipitation, humidity and air pressure." If this is a valid concept we must accept the idea of time as an essential ingredient in the development of climate and the great variety of ingredients which compose it. Since the original evaluation by Dr. Hubbard, only a few years have passed and the ingredients which make up the climate vary in many ways. What might be a good climate for one of the arts is not necessarily good for another; in fact one man's food may well be one man's poison. Weather is made up of a subtle combination of ingredients.

Whilst agreeing with many things Prof. Emery advances and deploring as he does the snail pace of progress, one should not dismiss the accomplishment of the Queen Elizabeth Theatre with its newly opened Playhouse and its small but quite urban plaza in front as an inconsequential event. The Queen Elizabeth theatre above all represents a good instance of the invaluable combination of devoted citizens concern for the arts with good technical guidance by a wide range of artists. The Community Arts Council played the leading role in the concept and execution of the Theatre and its place in the urban fabric down town. In addition the building was the result of a national competition which brought a new influence from the East to bear upon our micro-climate and despite its neighbors it represents a good beginning of urban site planning in the core of a City. It is beginning to focus, strengthen and stabilize urban values within the heart of the City.

I tend to agree that the climate might be "unsettled" but I would add "barometer rising".

H. Peter Oberlander, Vancouver.

I FEEL SURE that Tony Emery is being polite in spite of his Peter Sellers approach. My long range forecast is far worse than unsettled.

Too many (all?) artists and architects have cut themselves off from the public, hiding behind an aesthetic curtain of superiority.

Certainly the Universities can help, but alone they cannot carry the weight of enlightening mankind.

The time has come for some serious research into why things are so very wrong: why a lending institution can build a fine building for itself at the same time as it finances a future slum.

Lack of communication, an inadequate educational system, waste and greed; all these play their part in this mass destruction that is going on. Yet with sensible direction in the case of the first two items mentioned the last can be turned to advantage even if we cannot yet stop the ultimate privilege of waste.

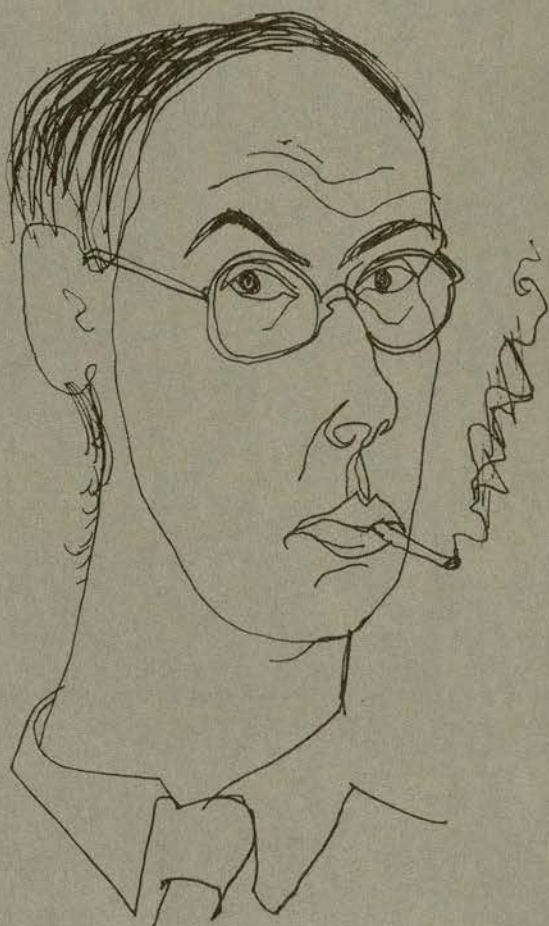
John Wade, Victoria.

TONY EMERY has touched on the crux of the situation (and a ticklish one it is) when he refers to "lack of vision on the part of the people who are in a position to provide the leadership necessary" for things to be done. Having just concluded a seven-year stint as a missionary in Governmentland I am disenchanted about the prospects of expecting anything as positive as leadership from our elected representatives. In order to be elected they must subject themselves to a process which is antipathetic to "sensitivity". The best one can hope for is an elected representative who, aware of his own limitations, puts his full confidence in a competent delegate. The opposite approach is illustrated by a story, perhaps apocryphal, told about the B.C. Minister of Highways who insisted that a certain river crossing go ahead in spite of all the engineering reports. He called it "a triumph of imagination over cold hard facts". The elected representative is, after all, sensitive only to those forces which move grass roots (i.e., seismic) and until the clamour for change comes from that level little is likely to be done except by exceptions to the rule. This makes the real problem one of Education (and it has a Minister; elected). Of course by the time the grass roots are asking for whatever it is that they will ask for Tony Emery and ourselves will be at least one generation ahead of them in our demands.

The remark of Tony's about Gordon Smith teaching the art teachers of tomorrow reminds me of Aldous Huxley's "A good tradition may be defined as the ghosts of good dead artists dictating to bad living artists".

P. Cotton, Victoria.

allied art award



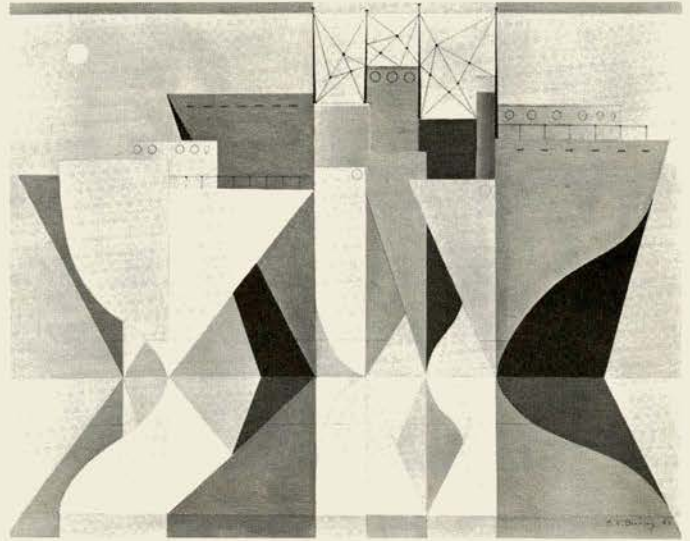
self portrait

Allied Arts Award, 1962: B.C. Binning, Vancouver

RAIC Journal Cover, September, 1950.

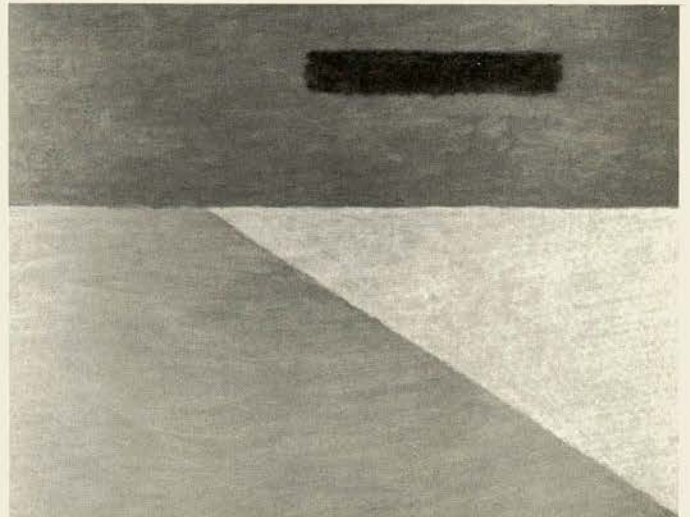


JOURNAL ROYAL ARCHITECTURAL INSTITUTE OF CANADA



"Ships in Classical Calm" (National Gallery of Canada).

"Dark Cloud" (National Gallery of Canada).

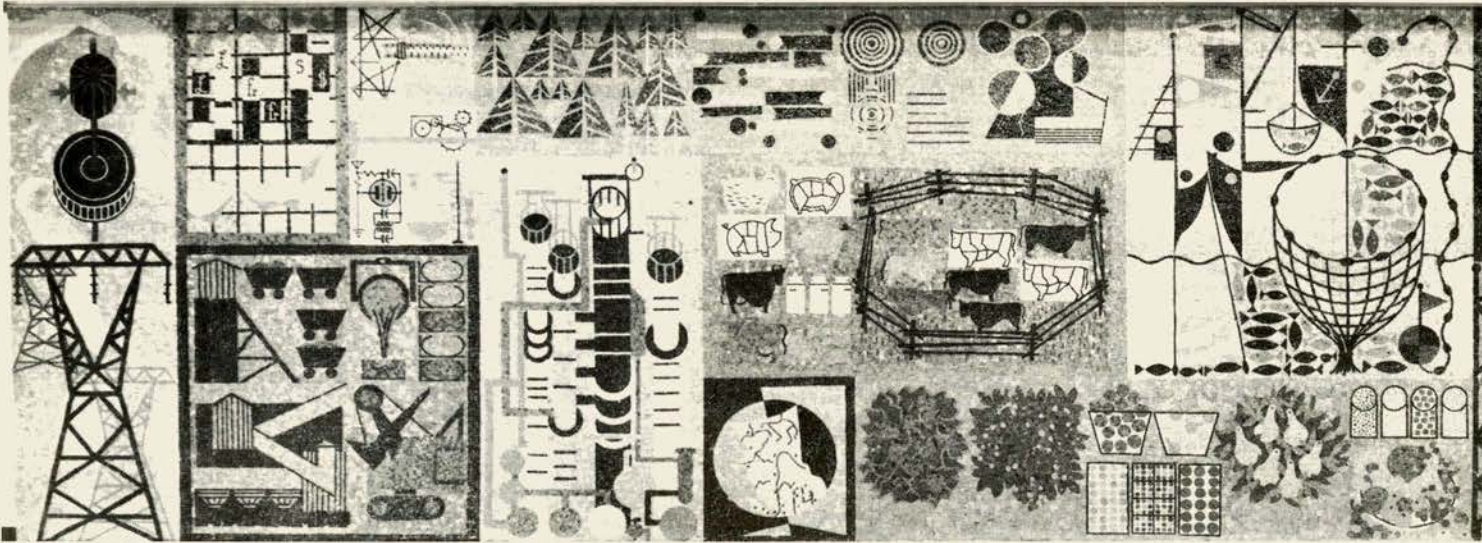


THE REAL BASIS for Art and Architecture has not changed through history. The problems they both have had to face have changed, and therefore so have the forms. But basically the roles they play and the functions they perform in society are unchanged.

Man is an image maker—the artist and the architect particularly have been man's basic image makers in most societies.

There was a time, true, when the artist had to perform a further function, that of illustrator, to an audience which was for the most part illiterate. But if anyone thinks for a minute this was only what the Icon, or Egyptian or Gothic artists were mainly concerned with, then they will have missed the whole point of what man has been doing for himself through the arts all through the centuries.

On the contrary, the largest gift of the artist has probably always lain within his function as an imagemaker, or one who can find forms that suitably express an idea or an occasion or a situation. It is obvious and self-evident that the manner in which they illustrated or coped with function conveyed far more meaning, and evoked a far greater emotional response than did the illustration itself, or the function directly. This is why we today can respond to art and architecture that has to do with situations, places and times far removed from ourselves, with which we are unfamiliar. Strangely enough it is usually those things which pride themselves predominantly on their "function" that are most likely to solicit the cutting brickbats, while those which offer more to the human spirit, even if it is sometimes at the expense of perfect functioning, are more likely to find a kinder response in those



*The Canadian Imperial Bank of Commerce Mural.
McCarter, Nairne & Partners, Architects and Engineers*

The architects planned this wall for a mural as the main focal point in the banking hall, and the mural was made complimentary to the nature of the building. The formal qualities and materials of one relate to the formal qualities and materials of the other.

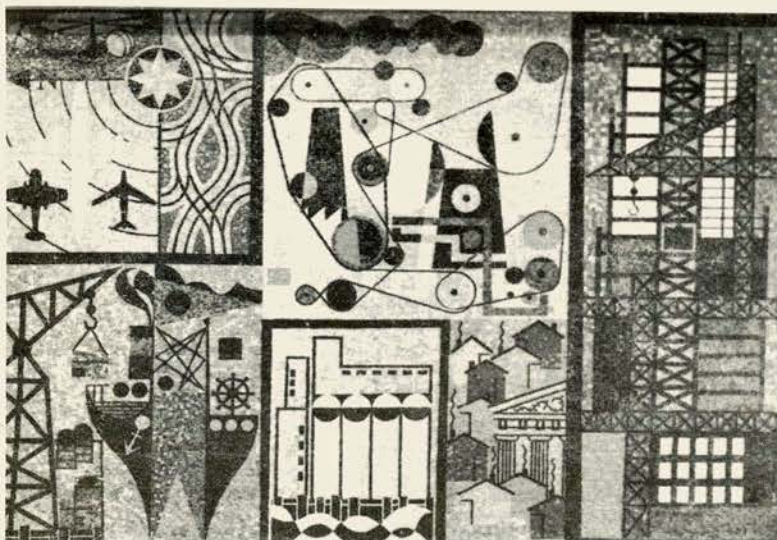
who use them. I think it would be safe to make the same assumption about art. What quantity of art throughout all time has since sunk to obscurity, interesting neither the layman nor the expert, and which can only boast a facility for performing its original function, perhaps a superficial verisimilitude, or something similar to that.

Binning's belief in this fact is evidenced in the dictum he teaches students, "while art is always changing it always stays the same". So it is in the light of these considerations that we must weigh his contribution.

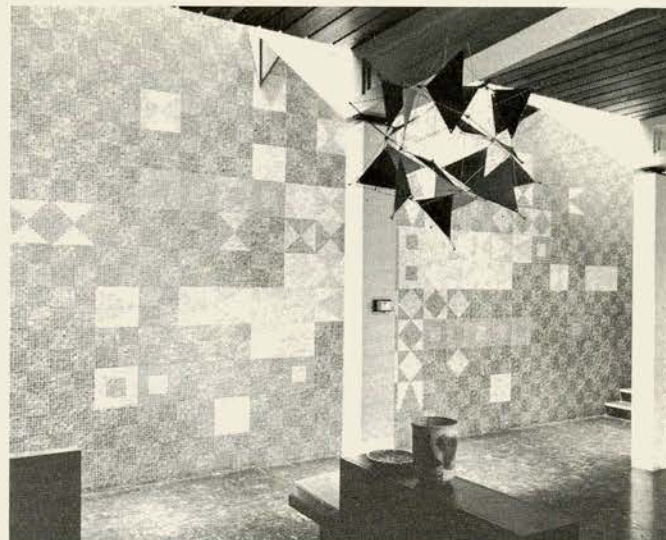
He is a peculiarly fitting artist to have received this Allied Arts honour, not because he has associated with architects more than most artists, but because he went through his own metamorphosis as an artist before making his major contributions to architecture.

Readers of the *Journal* will remember Binning's line drawings, published in 1950, which by themselves would have earned him a permanent place in Canadian art. However, at that time Binning was more concerned with reaching essentials by abstracting, and felt the drawings were dealing too much with the incidental, and the accidental and the anecdotal.

Whatever the reason, perhaps because of having a family background of architecture, Binning began to free his art from the effects of atmosphere and effect, and to discover for himself the force of pure line and colour. This did not degenerate into any kind of art for art's sake, but was used to express more intensely the same life and attitudes that the line drawings had done previously.



WILLIAMS BROS



GRAHAM WARRINGTON

CKWX Lobby. Thompson, Berwick & Pratt, Architects

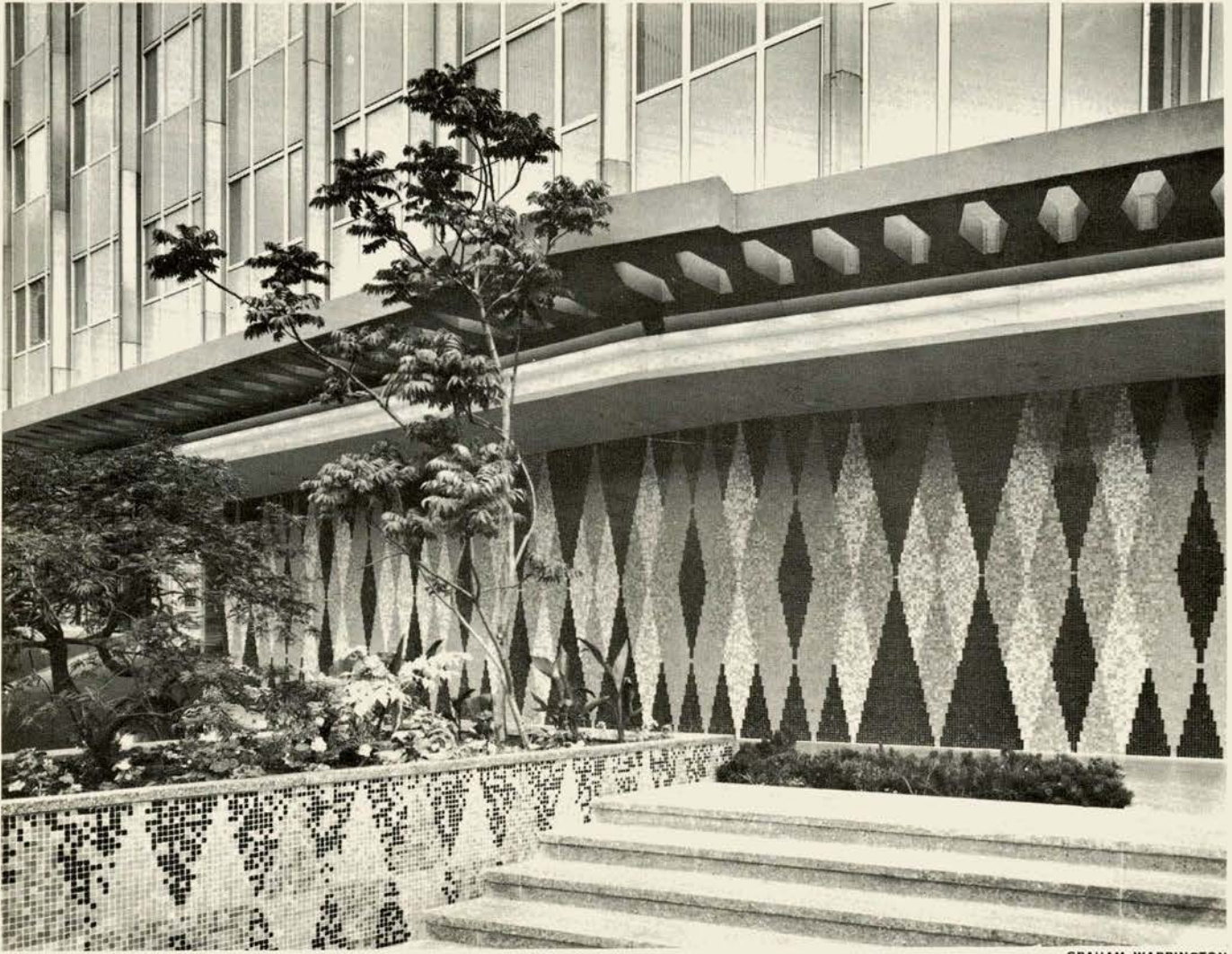
The main theme of the building is stated in the mosaic entrance mural.

In so doing he had made the step, on his own as a painter, to create a full and uninhibited art under this self-imposed discipline, and hence when the opportunity arose, which it shortly did, to collaborate with the architects and all the disciplines attendant with architecture, he was fully prepared to face this task without frustration or compromise. In fact, quite the opposite from frustration by architectural collaboration, Binning became interwoven with the architect's thinking to an extent that has seldom, if ever, been seen in this country.

After months spent between the architect's draughting room and the artist's studio during the design of the B.C. Electric Building he was able to say, "During this period a main theme was beaten out, a sort of basic tune or rhythm which we enriched with overtones of form, pattern

and colour. The result we intended to achieve was a visual statement similar to the structural arrangement of a symphony; the main theme stated in the mosaic mural at the entrance, the geometrical diamond pattern as a statement of the form and pattern of the building, the black, grey, blue, and green as a statement of the colour or mood of the building. Then as one walks around and through the building this theme is played over and over again in many variations. Consequently this mural cannot be viewed by itself, but only as a part of the larger and whole architectural scheme."

The architects were able to say the same thing since there was a perfect agreement in intent, and both architect and artist were using their own particular tools in the pursuit of it. This is only a different way of restating



GRAHAM WARRINGTON

*B.C. Electric Building.
Thompson, Berwick & Pratt, Architects*

A pattern in glass mosaic tiles interwoven in a blue background of the same tile, cladding the concrete core of the building.

Louis Sullivan's remark that decoration should be of the building, not on it.

Binning's major mosaic mural to date was designed for an area that was predestined for a mural and was to be the main focal point in the Banking Hall. This mural was to express the client's wish to illustrate the Bank's connections with all phases of the economy of the Province. The artist fulfilled this wish and created a mural that successfully reflected the architectural expression of the building in both its formal qualities and materials. He also created a warmth in the mural with his choice of colour and touch of humor and life in the line forms.

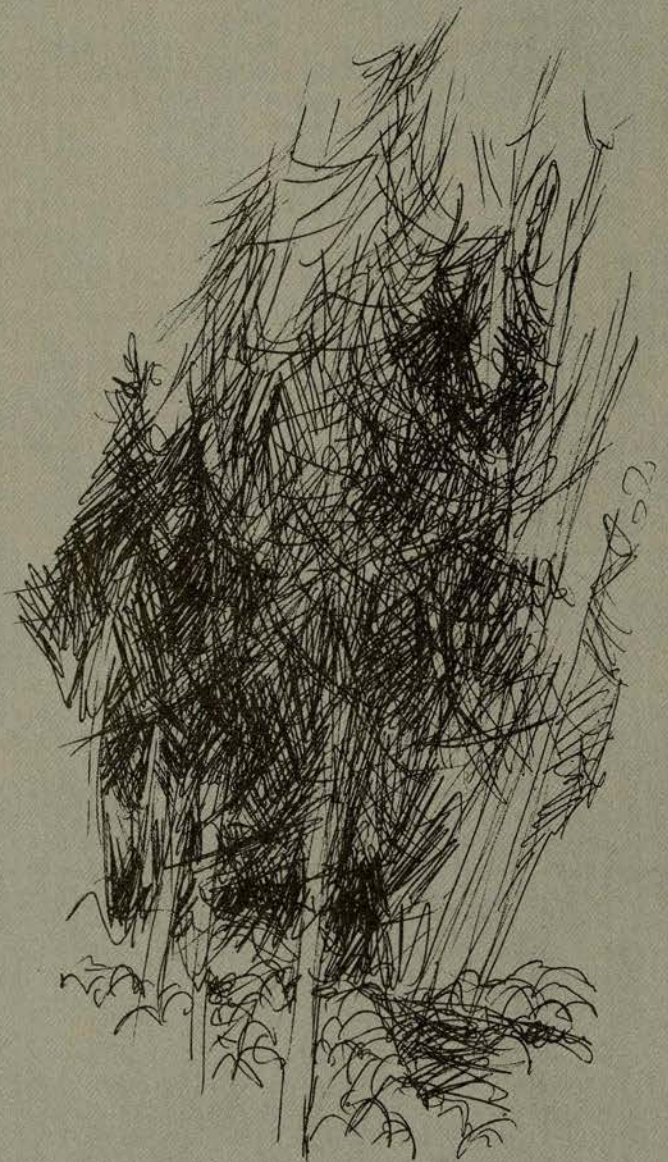
However, Binning's influence on architects extends further than his direct involvement in their buildings. His own house, designed by himself in 1940, was an early west coast classic in modern architecture that has

been a stiff measuring post for British Columbia architects ever since. And finally, either directly or indirectly, few UBC architectural students have remained unaffected by him since the school has existed. To quote Northrop Frye, "as an educator, the artist today has a revolutionary role to play of an importance of which no nineteenth century Bohemian in a Paris garret ever dreamed. He has powerful friends as well as enemies, for in his commitment to his art he has the fundamental goodwill of society on his side."

So Binning has lived the role of the all-around artist who has brought that much closer the possibility of an art, drawing on all kinds of artists, that will become one of real significance in Canada.

Ron Thom

education



Professionalism and Education

A Review of Essential Balances

BY R. S. MORRIS (F), RCA, FRIBA.

"An architect who fulfills all the conditions of his art seems to me a phoenix far more rare than a great painter, a great poet or a great musician . . . the reason . . . resides in that absolutely necessary accord between great good sense and great inspiration".

Eugene Delacroix Diary, June 14, 1800.

*"Providence sends meat, Parliament sends funds,
The Devil sends cooks, But who sends the Architects?"*

Caption to a cartoon by G. Humphrey, 1834

UNLESS WE CHOOSE to ignore the inescapable, we must not swallow whole the architecture of any country, nevertheless it would be foolish to pretend that we are not influenced by the thinking of our colleagues elsewhere, particularly in the United States. It would be ungracious of us not to acknowledge this and so, when with almost complete unanimity, writers and commentators of that country describe present day design philosophy as "chaos" we *should* be concerned. What has caused this, how did it happen, what is to be done?

These are questions which are of great importance to the profession and are the immediate concern of the educationalist, and of the practising architect.

In this paper, which I have described in the title as a "review", I have not attempted to produce an orderly argument; the subject is too broad for that. I have sought rather, to remind you of some essential fundamentals or "datum points", and to raise questions for your consideration, rather than to provide the answers.

If the object of our professional organizations—one of the datum points—could be stated in six words, it would be "To help to produce better architects". But first, what is an architect?

With the greatest respect for the teaching profession (who are dedicated, learned and conscientious to a degree), I have a strong conviction that they cannot decide for themselves what an architect is and what he should be taught. In this they need and are entitled to help and guidance from the profession and particularly from the practising architects.

An architect, amongst other things, is an artist, a businessman, a sociologist, a scientist, a technician, a philosopher, a planner and a citizen. The teacher, the brewmaster, has the job of trying to decide how much of each of these ingredients the average architect should possess. *This is particularly important in Canada, where for geographical reasons the student cannot choose between schools of different leanings.*

The Canadian teacher who faces his raw material for the first time must think of them as of the first category — future practising architects. They will sort themselves

Mr Morris will be co-chairman of the Seminar on Architectural Education at the 1962 RAIC Assembly—Vancouver.

into different categories as time goes on. Individually they may later become what Thomas Creighton calls "smock-wearing, easy-going, designer types . . . public relations counsel — hiring, important-statement-making, monument-producing, status-seeking moulders of environment", ¹ intellectuals, teachers, planners, master builders or technical leaders of the construction industry, or a little of each.

In addition to the general qualities mentioned above, by avocation, there are three groups of architects with differing points of view and habits of mind towards architecture and towards the profession. These differences are healthy and necessary to a balanced profession, but we should remember that they exist. There is the practising architect, the non-practising architect such as the teacher, the writer or the planner, and there is the architect — of which there are not a few — who practice under unusual circumstances of their own creation.

How can these sometimes conflicting attitudes be brought into a state of equilibrium? For instance, the architect, for all his powers of analysis, should be a person of unusual warmth and sympathetic understanding of human nature. How else could he design buildings for human comfort and pleasure? With our preoccupation with science and technology, amongst other things are we not forgetting human values? The architect must lead, but never lose touch with people, "*ça va sans dire*" — but, "*Instead of designing buildings for the people who are to use them*", William Lyman says, "*architects have been designing buildings for other architects and for the architectural magazines*"². We say often that the new architecture is democratic — for the people — and, as such, is intended to be understood and enjoyed by them. Forgetting this do we not, in fact, indulge at least verbally, in a good deal of intellectual and artistic arrogance.

Two quotations representing points of view which could hardly be further apart, might illustrate what I mean. One is a letter from a woman, which appeared in a local newspaper, describing her home. The other is a comment on some important buildings by an architect:

"I own a house here and I live in it and I love it, and so do my six children. It is close to one of the best schools in the city, close to a beautiful new swimming pool. All summer long the children put on their bathing suits at home and walk over for a free swim.

"To me the whole area is beautiful the way the world is beautiful. The back lanes have their share of debris, but they also have wild flowers growing in the corners. Some of the front yards are so carefully and lovingly tended that they are still bursting with flowers even now in November. All summer long, people of all nationalities sit outdoors and enjoy the ever-changing, crowded pushing, pulsing life of the street.

"If the 'experts' want to put up one of those cold, sterile, unromantic, low-rental housing projects — which I would hate to have even within sight of my door — let them go buy

1. "Progressive Architecture" Dec. 1960.

2. AIA Journal, Sept. 1959.

some cheap land on the outskirts of the city and put it there”.

In contrast, the architect has this to say of the High Court and Secretarial Buildings of the Punjab capital, Chandrigarh: “A public poll amongst literate Indians (still a minority) would probably produce a strong vote against them, but more important than approval or dislike is the fact that the buildings of Chandrigarh were the first examples of post-war architecture that aroused heated discussion throughout their country. Their high cost enhanced rather than diminished their importance as focal points of public interest, and of the day-dreams if not of the poor Indian masses at least of a new generation of Indian architects”.³

These two quotations illustrate on the one hand architecture’s impact on people, and, on the other, architecture’s impact on architects, the feelings of the people being of seemingly little importance.

The innumerable articles which have appeared in the architectural press on the subject of education and the philosophy of design are fascinating reading, (with the exception of those written in incomprehensible language invented by their authors), but I would have liked to have heard more about how these ideas fit in with the professional point of view. While aesthetics, philosophy and abstract science are exciting subjects and, as such, invite stimulating discussions, professional matters are usually dull and discussion suffers accordingly.

When we meet together at assemblies and conventions we do not like to think of ourselves as struggling, troubled little human beings, but as giants striding the earth, building cities, demolishing them and re-building them; as shaping man’s physical environment, changing his way of life and even his character by our works. We invite speakers to address us in this vein, because while few of us will ever have anything to do with redesigning cities, this is a function of our profession and one of great public importance. This concentration on high endeavour is commendable, but it is ironical that, as we concern ourselves more and more with such important public problems as housing, town planning and urban renewal, we move out of the buildings where we firmly belong, leaving a vacuum to be filled by others. We do sketch plans and elevations for apartment buildings, leaving the rest of our duties to someone else. We do the shells of office buildings, leaving the interiors for others. We give the impression that we are extravagant and cannot budget accurately, and so some clients go to package dealers who employ our partial services for their industrial buildings. A well-rounded education will include the specialized subjects mentioned above, but Canadian undergraduate studies should first of all equip the graduate for normal practice.

There has always been, at least in modern times, and always will be an educational tug-of-war between technology and the humanities — the liberal education.

There is a wide difference of opinion as to how much the graduating student should know . . . “the profession

3. “Architectural Review” July 1960.

4. Frank Jenkins, “Architect and Patron” Oxford University Press—1961.

5. “Architectural Review” — June, 1960.

*does not seem to have arrived at a clear picture of what the twentieth-century practitioner should be. A loud voice, for instance, favours an increase in the amount of purely technical training received by the student, and suggest that this, per se, will solve all problems . . . its noisiest advocates are established practitioners who have little regard for the future of the profession and are concerned primarily with ensuring a steady supply of assistants for their own and their colleagues’ offices”.*⁴

I find it hard to believe that there are many Canadian architects with this point of view, but I do believe that there is *some* tendency to assess the young graduate in terms of his immediate usefulness. If I may be permitted to express a personal opinion, I believe that this leads inevitably to a disappointment on the part of the employer and is unfair to the young graduate. He must have been given the *capacity* to learn. If he also has the *willingness* to do so, he will quickly justify himself. The only useless product of the university is the graduate with the closed mind.

In teaching I cannot help but be strongly in favour of methods, approaches, principles and attitudes rather than facts. For instance, while I recognize the difficulties involved, I question courses in building construction and materials which are based on facts rather than methods — facts which are more often opinions rather than facts and, even if correct, are subject to constant change.

The architect must be a technician with a highly developed sense of the human values of technology. The engineer is concerned with the production of a certain climate within a certain building in accordance with certain design data. The architect must have sufficient technical understanding to influence the engineer’s design in terms of the aspirations of the owner in toto, in terms of comfort, economy and efficiency. The architect may or may not understand but too often he *ignores*, which is the genesis of our pseudo-functional architecture.

An interesting speculation suggests that in the course of the present development of scientific thinking the more or less intuitive approach of the architect to his design problem might be replaced by a scientific process of pure reason, and that design itself might become a product of science. In which case, any group of totally qualified architects would all presumably arrive, individually, at the same solution—as an electronic computer would do. The reason I mention this is that such speculations may throw the spot-light on *the ever expanding outer limits of architectural philosophy*, which makes one wonder whether we, and the students with us, may be taking off, not in orbit but in free flight. Are we not trying too much? Are we not making simple things complicated and complicated things more complicated?

We are brought down to earth with the remark by that most quotable person Sir Hugh Casson:

“Clearly technology will increasingly impinge upon architecture but technological habits of thought need not be hostile to architectural habits of thought. They are valuable in that they needle him along out of the sidings and creeks in which he can become too cosily embedded. They are dangerous when they step out of their station and try to usurp the supremacy of personal observation. Nothing I fear (or do I hope) will ever destroy the occasional waywardness of the creative artist.”⁵

There have been changes in the non-design function of the architect, in how he puts buildings together, how he gets them built, in materials, and in the architect's relations with his client, but there has been nothing short of revolution in his design philosophy. What effect has this revolution had on the important balances within the profession—for it has in fact penetrated to the roots of professionalism.

Revolutionaries are extremists by definition. They are positive, forceful, opinionated and dedicated. Balance is compromise and compromise is the anathema of revolution. Having been through a design revolution it would be a contradiction in terms to suppose that we could emerge in a state of equilibrium. What can the practising architect and the teacher, working together, do to restore this necessary professional balance? How important is it to do so?

All nature is dependent on a complicated system of balances. Our troubles as human beings are the result of a maladjustment of these physical balances. One does not have to be very penetrating to know that architecture is a complicated human occupation and is, for this reason, composed of a large number of balances — more than is usual for other callings which are not so concerned with changing human feelings and objectives. Is it therefore susceptible to maladjustments and to-day almost every writer or speaker describes the condition as "chaotic".

Of all the balances of which architecture is composed, art and business are the most difficult to resolve. On the one hand we have the creative artist. Supremely confident of the power of his creative mind, he may be unmindful of any other architectural function, and contemptuous of conventional professionalism. I cannot believe that any architect is *indifferent* to design, otherwise he never would have chosen to be an architect, and could hardly have qualified if he had. For purposes of illustration, however—on the other hand—we have the man, (if he exists) who is interested only in making money and is prepared to sacrifice his profession and his integrity in order to do so. The professional architect stands somewhere between these extremes.

The establishment of this point of equilibrium is important to the teacher. If we incline too far towards art at the expense of practical matters, we must face the fact that nine out of ten clients are more interested in our practical ability than our artistic qualifications. We may be having difficulty in *defining* our art but we are in no danger of *forgetting* it.

Architecture is the one art which cannot exist without a patron. If we, as a profession, fail as master builders we will lose the confidence of the public and with it the opportunity to practise our art.

This was written in 1836 on the subject of client dictation:

"Our modern boards of management seldom treat their architects with that liberal confidence which is requisite in order to derive the proper advantage of their skill and talent. The benumbing effect of alterations forced upon them by ignorance and conceit, has been felt and complained of by many.

6. Barrington Kaye, *"The Development of the Architectural Profession in Britain"*, Allan & Unwin, 1960.

*"It has been said, that the architect who feels the dignity of his art would not, or ought not, to submit to such dictation; but, it may be recollected, that those who live to please, must please to live. A natural anxiety to get into business on the part of the young architects and the necessity of employment for the means of living in those more advanced, urges them to accept business on terms which their better judgment would condemn."*⁶. How much, after all, have we changed in one hundred and twenty-five years?

There is a fine line between artistic integrity and artistic arrogance, between vital and necessary self-confidence and obstinacy. With an eye on the above quotation we must never accept the client's statement of his wants without analysis, without making that statement part of our own thought and feeling—but, in each case, do we really know better than he does what the client needs, or do we only think we do? How does the teacher prepare the student to know *himself* when he is faced with this question? How much should we rely on our analytical powers and how much on intuition? Analysis can breed sterility—the other hand as Dean Burchard has said—*"Heaven help us from the uncontrolled intuition of lesser men."*

Architects with great creative ability and those who are interested in creative architecture such as writers, teachers and architectural philosophers, quite naturally believe that they themselves can carry the profession to the desired heights, regardless of failures in non-design functions. Their (perhaps unconscious) reasoning is that the extinction of professionalism—meaning by definition the extinction of the professional architect—would not mean their own demise or that of the architectural designer—the latter surviving by the demonstration of his genius. It is an anomaly that the great man may be acclaimed for his creativity while all architects receive the odium of his practical failures. In the interest of professional survival, we should be sure that too many students do not place individualism before professionalism.

"The public view of the architect as extravagant, incompetent and obstinate is generally justified." Whether or not we accept this statement from Dean Burchard it is true, I believe, that for every client won on the playing fields, ten are lost in the contract maze—lost in many cases not only to the architect involved but to the profession. This is of prime professional importance.

In this connection is there significance in the fact that lectures by great authorities on the philosophy of design draw capacity crowds as easily as band leaders, whereas equal authorities on such subjects as architectural lighting or acoustics draw only a corporal's guard. Is this because we have overindulged in hero worship and, if so, what do we do when, as inevitably we must, we run out of heroes? Is fashion taking the place of style, and if style was bad is not fashion worse? Have we become the followers of individuals rather than of proven philosophies?

Architecture at the moment is suffering from lack of equilibrium due to a recent revolution, both within and without the profession. In order to cure our illness we must identify those points of imbalance which seriously affect our disposition.

Judging by the opinions expressed in the architectural

press, teachers and writers on architectural philosophy and even students are more conscious of this lack of balance than is the practising architect, who is affected more directly by such things as professional ethics or by publicity. He is concerned with his exacting duties and usually does not have the time to think about the more abstract problems of the profession, nor has he more than ordinary ability to express himself. He falls naturally into the habit of accepting leadership from the non-practising segments of the profession, who cannot be blamed for a lack of understanding of practice. They have the time (although I will probably be scolded for saying so and, in truth, it is more a matter of habit than time) and it is their business as teachers and writers to express themselves. This produces a lack of balance, because practice is missing from the theory-practice team.

Young people are encouraged to think for themselves, which entails an obligation to provide them with the mental tools to do so. This is individualism. It is group attitudes, however, which enable people to live and work together and to co-operate.

These attitudes are developed partly by instinct but chiefly by experience; experience which is developed by successive generations. There has been a hiatus between the students and older practising members of the profession and, as a result, the young have been deprived of the help of this experience which is their heritage and their right.

Would it be impolite to recall that in 1949 it was reported that an unidentified "synod of architectural deans and professors avers that contacts with practising architects tend to lower the standards of the schools."⁷ while twelve years later an elected representative of the students said: "In school architectural theories are literally thrown at the students and, in many instances, professionalism is not heard of . . . I might ask 'How did you gain the vast knowledge (sic) of the profession while you were struggling to enter it? Did the practitioners divorce themselves from the students?'"⁸

Whatever the circumstances, there has been a gap which is now happily closing and we must do what we can to hasten this closing.

The move to help the young architect before and after graduation must come from the practising architect. The schools, on the other hand, should give more guidance to the graduating student as to how to take advantage of this help. Rushing into practice on their own is not the best way to get experience and is professionally harmful.

In 1852, in a pamphlet addressed to architectural students, J. B. Roberts stated:

"I am aware that the Young Architect is peculiarly situated at his first outset. Unlike the painter or sculptor who in the solitude of a garret (too often the abode of genius) can, with canvas and colours or his block of marble, work out a glorious conception and perchance find a purchaser for his productions, while the Young Architect must have hard cash staring him in the face, ere he can loose the Pegasus of his imagination . . . but he should bear in mind that if in the struggle for professional fame he is in equivocal circumstances successful, he gains it at

the expense of that which it should be his pride and boast to maintain and uphold, viz — the character of an honourable profession".⁹

The embryonic architect to-day seems to have a more than normal "muzzle velocity". When he should be worrying about how he can best qualify himself by obtaining the best experience, he is thinking—even before graduation—of how he can find a client. Nobody may have been hard-hearted enough to tell him that he probably never will get a client willing to trust him with the spending of hard-earned money, unless the profession to which the student hopes to belong commands the confidence of the public; or that this confidence cannot be acquired by any short cuts—by showmanship however temporarily impressive—or propaganda—but only as a result of sheer professional competence, to which the student cannot start too young to make his contribution.

A realisation of the basic principles of education, but more importantly, a need to point to them is evidenced by a summary of the remarks of "the first speaker" of the British Architectural Students Association conference January 4 - 6, 1962, as reported in the "Architect and Building News" of January 17, 1962:

"He admitted that he used to tilt wildly against conventions as such, but in reality these conventions can save time . . . In dealing with the aspect of the individual he felt that this contained four principal subdivisions. Firstly, there was the concept of 'character' which was related to moral values defined within the nature of our society—the antique virtues. Then there was 'intelligence', our dominant educational concept . . . Thirdly, there was the ideal concept of the 'whole' man to which we paid platitudinous lip service . . . Lastly there was the concept of health and normality . . . At present the selfcentred teacher sees the process of education as being something he performs."

In contrast to my remarks about the muzzle velocity of the Canadian student, the student in England reminds us of the importance of the "antique virtues"—the longer view. This makes one wonder if the almost irrepressible and immediate urge of the student here, to translate paper ideas into "bricks and mortar" is not, in some degree, a Canadian phenomenon due to the unprecedented opportunities which we have enjoyed here in the last fifteen years, which has made practice appear to the uninitiated to be simple. Never, in fact, has it been so complex.

A review of the opinions appearing lately in books and periodicals makes fascinating reading—we have had no lack of excellent articles written on the theory and philosophy of design, many of them calling for a new look at what has been done in the last quarter of a century or more. This makes me optimistic of the immediate future. The elimination of complacency, of the Little Jack Horner attitude, is the first step towards progress.

Much thought has been devoted to how this flood of ideas can be translated into educational standards and curricula. What is lacking, in the examination of these ideas, is their relationship with the basic principles of professional practice and of the profession itself. Today all professions are being challenged. We have heard from everyone else. I for one, would like to have professionalism take the floor.

7. *A.I.A. Journal*, June, 1949.

8. *A.I.A. Journal*, June, 1961.

9. *Ibid* p. 113 *Barrington Kaye*.

Architectural Education for a Scientific Age

By P. N. YOUTZ, FAIA

Reprinted from the December, 1961 issue of the Journal of the American Institute of Architects

ARCHITECTURAL EDUCATION has made remarkable progress since the turn of the century; but it must continue to forge ahead if the profession is not to become obsolete in the next few decades. Recognizing our accomplishments first, architects have liberated themselves from bondage to period styles and have embraced contemporary forms. The buildings of our day are fresh in design and betray no dependence on prototypes exhumed from library sources. Our more competent architects are skilled students of contemporary institutions and understand how to express their complex requirements in flexible floor plans and attractive exteriors. The architectural garments of our day are nearly always comfortable and practical. With increasing frequency we achieve costumes which have grace and flow.

Encouraging as is this contemporary orientation of architects, we should not overlook the weaknesses of the profession. Too many practitioners cling to the egocentric philosophy that design is an expression of personal preference or idiosyncrasy, not the reflection of social requirements, urban setting, cultural context, structural system, and mechanical needs—all unified and interpreted by art. In a democracy such as ours, an architect is not a subjective dreamer but a civic leader helping the institutions in his community to build wisely and imaginatively the schools, libraries, theatres, banks, stores, and homes which they need for healthy economic growth. The contemporary architect should be keenly alert to serve his public and merit its confidence. He should have a well-developed sense of social responsibility as well as a discriminating feeling for good design. He is not only an artist but a competent advisor on real estate improvement and urban development. When entrusted with a commission for a new building, he will consider not only esthetic factors, but also structure, mechanical equipment, costs, prospective income, financing, transportation and the relation of his building to a comprehensive community plan. The modern architect is not an individ-

Mr Youtz, Dean, College of Architecture and Design, The University of Michigan, contends that the architect of today and tomorrow must be competent in all the many complex phases of the building arts and sciences, and that the schools must re-tool and equip themselves to turn out such well-rounded men, even though it may result in an eight-year course.

ualist but a trained team worker. His designs may originate in his own visual imagination but they are conceived in terms of their social application, in light of their service to society. Like the other performing arts, successful architecture depends on leading and pleasing an exacting audience.

Another shortcoming of the profession is that too few architects have the education or the desire to design complete buildings. They depend on a group of consultants and specialists to do a large proportion of their work. Many architects think they have done their job when they have completed the visual design. A structural engineer lays out the foundations and the steel frame, a mechanical engineer prepares the drawings for plumbing, electrical work, heating and cooling, an acoustical man does the sound control, a specialist writes the specifications, and some expert makes the preliminary estimates. But if architecture is to continue as a profession, all of the work connected with the planning and design and supervision of a new building must be done under the direction of a man or firm expert in all phases of the building process. The architect cannot hope to stay in business unless he qualifies as a master builder capable of rendering a complete service.

One more criticism of the architectural profession that should be mentioned is its failure to assimilate and apply the new technologies and sciences of our age. Both practitioners and teachers have been so preoccupied with the art of building design that they have neglected the rapidly developing science of building construction. We give lip service to the statement that architecture is both an art and a science but these two elements have not been amalgamated. From the classic period down through the renaissance the architect was proud to be both an artist and a scientist. Vitruvius wrote that an architect should be a philosopher, by which he meant a lover of knowledge, technology as well as esthetics. Leonardo da Vinci demonstrated how fruitful it was to com-

bine the imagination of the artist with the observation of the scientist. In the best periods of architecture there has been a wedding of art and science and a recognition that building design depends on both insights.

The architectural profession today is in about the same situation as the medical one at the turn of the century. The doctor practiced a traditional art with few scientific tools to enable him to make accurate diagnoses or to apply effective treatments. The modernization of medicine was not easy because superstitions and folkways take on a patina of sanctity with long observance. But the advances in the biological sciences pointed out the direction that medical students should take. The gratifying result has been that medicine in our time has evolved from a profession that was largely a practical art to one that is becoming more and more an applied science. As used in a medical context, the word "art" means a traditional or empirical procedure that is unsupported by scientific theory and experimental evidence. The amazing lengthening of life expectancy where modern medical care is available, is convincing evidence of the value of the scientific revolution in this profession.

There is no doubt that the training of students for building design needs a similar modernization. However, the problem in architecture is not to eliminate art but to supplement it with a broader spectrum of science. As far as the term art applies to rule-of-thumb practices, the architect can very well emulate his medical colleague and discard this obsolete lore. But art in the sense of design is one of the most precious contributions of architecture to society. The architect is well aware that man does not live by bread alone. The space and frame of a building offer poor hospitality if they do not nourish perception and evoke wonder. The mute music of architecture in no way conflicts with the new technologies. Rather, science offers the architect the same power and control that it conferred on the doctor. The student of design has felt thwarted by mathematics, physics, statics, and mechanics because he has received a smattering, not a grasp, of these essential subjects. Once assimilated, technology enables the architect to design with daring and confidence.

The image of the architect as master builder has been preserved by the friendly services of structural and mechanical engineers. These well-trained, often anonymous men, have worked out most of the problems of modern steel or reinforced concrete construction as well as those of air conditioning, sanitation, lighting and acoustics. But now that the pioneer job is done, and each new building involves only the repetition of familiar calculations, the engineers are seeking more adventurous careers in industry, electronics, aviation, rocketry and research. In many communities it is difficult to find structural engineers and impossible to hire mechanical ones. The architect must either stand on his own two feet and do his own structural and mechanical design or depend on the help of commercial agents selling products of the construction industry: If he chooses the first alternative, he becomes the master builder in fact, not merely in name. If he selects the second one, he is denying his

client the disinterested professional service to which the latter is entitled and for which he has contracted.

The voluntary abandonment of the structural and mechanical fields by engineers tempted to greener pastures, offers the architects an opportunity to take over the control of structural and mechanical design, thus strengthening his competitive position in the building industry. If the architect is able to produce complete working plans in his own office, he can give his clients better service. At present the esthetic design, structural layout and mechanical work are frequently turned out by different firms with the unfortunate result that they do not fit together harmoniously. Working plans prepared in the architect's office under his competent supervision should attract lower bids because of fewer discrepancies and ambiguities in the drawings. If he is able to offer a total integrated service to his clients, the architect will be in a position to compete successfully with package dealers and contractors invading the architectural domain. If the plans are properly coordinated, the completed building will represent the architect's vision, not his frustration; his power, not his impotence. The architect can only compete in the modern scientific world by possession of superior knowledge and by applying this to his client's total building enterprise.

In proposing to give the architect a more thorough training in the science of construction, we must enrich rather than reduce his instruction in art. The prestige of the profession rests on its high ability in esthetic design. But we must consider design problems not merely as a chance for attractive sketches or models but as an invitation to think out a building as a whole—setting, character of the institution, plan, structure, mechanical equipment, exterior, furnishings, cost and earnings. In architecture we are not concerned with art for art's sake but with art as a polymer for bonding all the discrete elements of a structure into a total environment for man. This might be called a functional view of art. The concept is broader than the term "applied art". We see functional art or design in a Gothic cathedral. It is the esthetic organization that produces harmony among the various parts.

This integration of art with science will widen the architect's outlook. The public admires his ability to visualize possibilities in site and building development but the architect is criticized because he tries to solve all problems in terms of esthetic design alone. This sensitivity to form is commendable but many complex issues that are connected with buildings and their environment require a precise knowledge of real estate, structures, cost, and urban development. Though design potentials should be kept in mind at all times, in many situations the determining factors are quantitative not qualitative ones.

The appearance of a street and its use as an axis are design considerations, but we must also know its car capacity and whether at certain peaks it becomes a bottleneck. The latter data may or may not corroborate an esthetic judgment, but it cannot be ignored. An architect should be aware of all aspects of a building situation if he is going to counsel his client wisely.

What type of curriculum is needed to prepare the architectural student for a successful career in a scientific age? The responsibilities of the architect have so greatly increased that the first prescription is that he should receive longer and wider training. The prospective architect should have a pre-architectural, full four-year college program before entering a four-year graduate professional school. In some universities an undergraduate degree is already a prerequisite for architectural students. So the eight-year requirement providing for four years of liberal college education followed by four years of professional training is not an innovation. Most accredited institutions at present offer a five-year course for architectural students fresh from high school. The first year usually is devoted to academic not professional work. So the actual architectural program is of four years duration.

The purpose of requiring four years of pre-architectural college training is to develop in the student intellectual maturity and wide interests before he attempts to cope with technical professional problems. Liberal colleges give students an introduction to the humanities, physical sciences, biological sciences, social sciences and the arts. Such institutions offer a curriculum which is opposite in aim to that of the professional school. Their program is general not vocational. The liberal college should supply the future architect with a wide panorama of human thought which he now conspicuously lacks because of his early professional specialization. A man with a B.A. degree is not likely to become merely a skilled draftsman content to draw neat lines on paper all his life. Valuable as is this graphic virtuosity, it does not produce architects. What is important for the stature of the architect is the kind of college training that gives him an understanding of the society and culture which he plans to serve.

Content

What should be the content of a pre-architectural college training? Architecture is a science and an art so it is important that a student become acquainted with these two contrasted patterns of thought. The liberal college can help to prepare the prospective architect by offering him one course each year which will directly contribute to his profession. These courses are mathematics through calculus, freehand drawing, physics, and painting or sculpture. The order in which these subjects are studied needs careful consideration. Mathematics should come before physics because its use will be required in the latter course. But a year is interposed between mathematics and physics so that the introduction to physical science will serve incidentally as a refresher course to recall the mathematics taken earlier, thus insuring that the latter will still be useful in the future structural courses encountered in professional school. Similarly the art courses are spread out with a year's interval between them so that the creative experience will be as extended as possible. Of course ideally the pre-architectural student should study science and art simultaneously throughout his college course if this arrangement could be fitted into an all too crowded undergraduate curriculum.

Graduate Professional Program

After successfully completing his undergraduate college course the student is ready to cope with a four-year, graduate professional program in architecture. What should be the nature of this training? Briefly, it should reflect the total activities and services of the profession. It should enable the student to grasp the obligations and opportunities of the profession as a whole. In order to obtain this goal we must think not of separate conventional courses but of a curriculum that is unified and organic. The architectural profession needs students who have breadth of understanding and the capacity to undertake with success the solution of a wide variety of problems—artistic, structural, mechanical, economic and social. To cover such a large field with success, artistic ability alone is not enough. Even when this is supplemented with some skill in structural and mechanical design, a student is not yet prepared to practice architecture. Initiation into the economic requirements of building design will help him to protect his client's investment but this still does not make him a well-rounded architect. A sound background in the social sciences is essential in addition to all these other prerequisites for professional competence.

To prepare the future architect to carry out the broad duties of his profession, the new curriculum should be divided into five general fields of study which should have equal teaching emphasis and equal class time. The student should devote one day a week throughout his four years to the following subject areas, namely; *visual, structural, mechanical, economic, and social design*. These five divisions should not be treated as separate courses but be conducted simultaneously as a connected and interacting course of study. They provide a way of examining all the more important facets of architecture. In many instances the student should have the opportunity of analyzing his design problems from all five angles. Thus from the first day to graduation, the student will be encouraged to think of the practice of architecture as one connected pursuit, not an aggregate of unrelated activities.

The best way to approach these five fields of architectural study is to consider them as opportunities for design. Each of them imposes some limitations on the designer but each of them requires his analysis and decision. Problems in these five areas can only be solved by creative thinking. In the past we have been too prone to associate imagination with visual design and to regard structural, mechanical, economic and social design as routine activities, to be delegated to others. This attitude is characteristic of some gifted designers who think of themselves as sculptors, and of architecture as fine art free of all practical and technical requirements. But most offices are guided by men of balanced judgment who apply their imagination and knowledge to their client's total needs.

This five-fold graduate professional curriculum has three advantages. First, it promises to place the profession in control of the building enterprises. The architect will no longer be dependent on others to do his legitimate professional work. He will regain the knowledge to make him master builder in fact as well as in name.

Second, it will give the creative teacher a chance to breathe reality into the curriculum. Schools will come to grips with real social problems instead of playing with paper architecture. Third, it will improve the architect's service to his community. He will approach his design problems as an all-around man, not simply as an esthete.

This outline presents a balanced curriculum based on the actual demands placed on the practicing architect. Equal time is allotted to the study of the architect's various fields of competence. The aim is to make him aware of his total professional obligations. Our preoccupation with visual design to the detriment of other

types of design has been corrected. We have stressed the importance of the other areas of design. Our purpose is to present the student with a total picture of his profession.

Of course, in this age of specialization, few persons after graduation will undertake all the types of work which the curriculum describes. The profession is spacious enough to offer work for men of contrasted talents and abilities. No one can say which of the five divisions of design is most important. But if we neglect any one, the profession will suffer. Far from minimizing the role of visual design, the new curriculum will bring to it a new reality and depth.

Architectural Education for a Scientific Age

FOUR-YEAR UNDERGRADUATE PRE-ARCHITECTURAL COLLEGE CURRICULUM

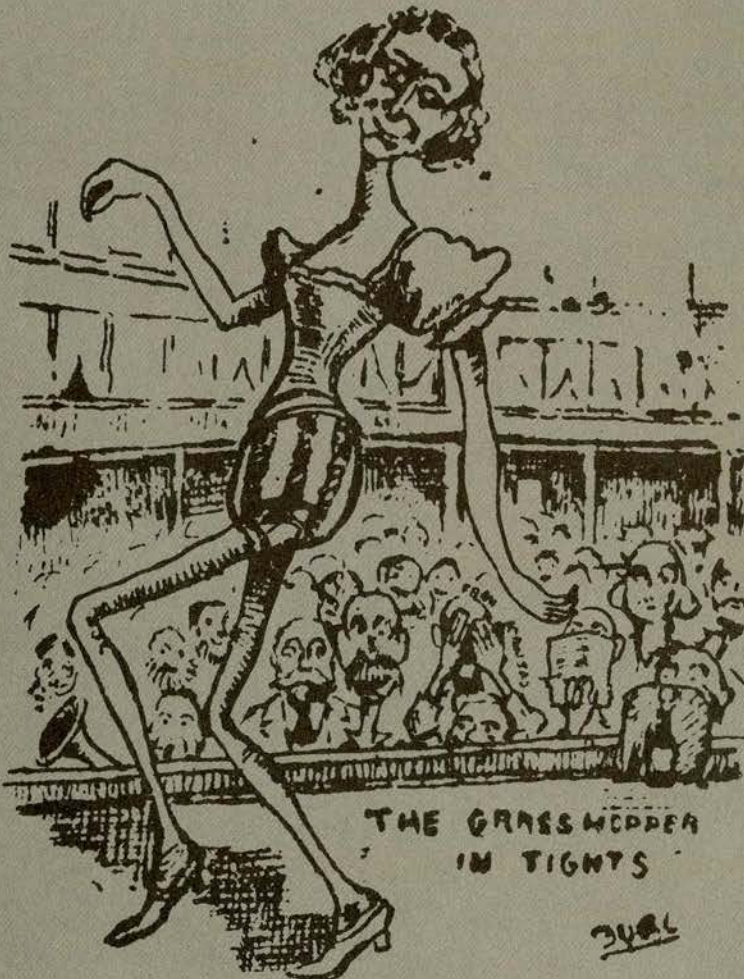
Divisions	Pre-Arch Requirements	Literature	Sciences	Arts	Physical Education
Subjects			Typical Liberal College Program		
1	Calculus				
2	Freehand Drawing				
3	Physics				
4	Painting or Sculpture				

FOUR-YEAR GRADUATE PROFESSIONAL ARCHITECTURAL CURRICULUM

Divisions	Visual Design	Structural Design	Mechanical Design	Economic Design	Social Design
Subjects	Building Design	Projections	Sanitation	Functional Plans	Economics
	Site Layout	Statics	Heating	Zoning	Sociology
	Allied Arts	Materials	Cooling	Cost Estimates	Politics
	Landscaping	Structural Theory	Lighting	Income Forecasts	Geography
	Painting	Concrete	Electrical Work	Mortgages	History
	Sculpture	Building Frames	Acoustics	Real Estate Management	Anthropology
	Interiors	Building Technology	Elevators	Taxes	Philosophy
	Perspective	Structural Problems	Mechanical Problems	Building Codes	Psychology
	Shadows			Specifications	Planning Problems
	Rendering			Insurance	
	Visual Problems			Contracts	
				Supervision	
				Real Estate Problems	

Note: Each of the above five divisions occupies an equal share of the student's time, so as to provide a balanced educational program. The five divisions run concurrently so that they can cross-fertilize each other. In all five divisions the emphasis is placed on design. Typical subjects are listed by way of illustration.

klondike opera house



THE GRASSHOPPER
IN TIGHTS



THE PALACE GRAND THEATRE

Reconstruction of a Gold Rush Era Opera House in the Yukon*

THE BACKGROUND for one of the most colourful episodes in Canadian-American history is being re-created in Dawson City, a process which has entailed problems of architectural archaeology involving the architects in charge of reconstruction in some intriguing adventures in detective work and deductive analysis often worthy of Sherlock Holmes.

The progressive loss of the historic buildings of Dawson City, the site of the fabulous gold rush of 1898, has been a source of consternation for some time among those interested in historical preservation. One of the more serious shocks came with the sudden demolition of the famous Royal Alexandra Hotel. Recently, however, the Federal Government stepped in to preserve another remarkable building which had somehow survived all the Dawson City fires, and which was undoubtedly one of its most evocative buildings. This was the town's "Opera House" built in 1899 and known as the Palace Grand Theatre. In 1960 the Federal Department of Northern Affairs and National Resources, with the blessing of its Minister, the Hon. Walter Dinsdale, embarked upon a restoration of the derelict Palace Grand Theatre as part of an overall program to revive interest in this remote but historically romantic town.

Mr Tom Patterson, founder of the Stratford Ontario Festival, conceived the idea of developing a Dawson Festival which, it is believed, will greatly increase the present flow of summer visitors. The Festival is to have its first season in July 1962, and the newly completed theatre will form the focal point of its many events.

**Reconstruction executed by Architects Gardiner, Thornton, Cathe and Associates, Vancouver.*



Above: The theatre at the time of its opening. The theatre's name was not painted on the false gable, but was dubbed in on this old photograph.

Opposite page above: A view towards the balconies. The delicate suspension rods supporting them are almost invisible. The wood remained unpainted during the theatre's heyday.

Opposite page below: A tableau on the stage representing "Great Britain and her Colonies". February 1900.

Below: A funeral procession passing the theatre. February 1900.



It is not within the range of this article to recall the details of the legend which commenced in 1897 when Skookum Jim and George Carmack made the discovery in Bonanza Creek, close to the confluence of the Yukon and Klondike rivers, which resulted in drawing thousands from all corners of the globe in a frenzied and largely fruitless search for gold. In any event, it is still within living memory, and there exist many photographs and written documents to conjure up startling pictures of the human chain on the frightful Chilkoot Pass, of the bizarre fleet which assembled one Spring on the rim of Lake Bennet, and of the City of Dawson which flourished briefly in a wilderness one hundred miles below the arctic circle.

The Grand Opera House, as the Palace Grand Theatre was first known, was not the only auditorium in Dawson; however, it was doubtless the most elaborate. It was built by Charley Meadows, an Indian fighter, gold seeker and impresario, better known as Arizona Charley, who planned the buildings for the use of his own company and for legitimate theatre, socials and balls. C. H. Albertson, who is believed to have been a leading architect in Portland, Oregon, was the Architect-Contractor. His use of a system of $\frac{7}{8}$ " diameter steel rods whereby the two horseshoe balconies are suspended from the roof structure attest to a resourceful mind.

The building, which originally measured 40 ft. by 100 ft., consisted at street level of a gambling saloon across the front of the building, through which access was gained to the theatre. Above this were two apartments, and on the top floor—which though described on June 28, 1899 in one of Dawson's two newspapers, the *Klondike Nugget*, as a large hall for use by the Fraternal orders—in fact consisted of a suite of eight small rooms which were undoubtedly used by certain ladies for professional purposes. The two tiers of horseshoe balconies were almost entirely divided into boxes. The stage which had the then fashionable built-in slope was equipped with a conventional system of hempline drops operated from two pinrail galleries. There was no fly space.

The building had a chequered career right from the start. The following is an excerpt from a news item in the *Klondike Nugget*, on July 18, 1899:

AMID A BLAZE OF GLORY,
THE NEW OPERA HOUSE IS DEDICATED

Charley Meadow's long heralded Grand Opera house opened on Tuesday night amid a blaze of glory, and calcium lights which, combined together, almost made the use of electricity unnecessary. The building was not entirely completed for the occasion, and some of the paint on the scenery was still a trifle damp, but all things considered the affair may be termed a signal success—in fact a howling success.

The town turned out pretty well in honour of the occasion. Representatives of the nobility were there, along with a fair sprinkling of the four hundred and a goodly proportion of sourdoughs, all of whom, having heard of Arizona Charley's prowess as an Indian tamer, were desirous of seeing whether he would be equally successful when it came to a question of chorus girls.

The drawing of the "Grasshopper in Tights" which appears on the insert introducing this article illustrates the above news item.



By October 14th the building had been turned over to a new management, renamed the Palace Grand, and a separation provided between bar and theatre. The *Nugget* for December 30, 1899, described a proposal, characteristic of the largesse of the time and place, to float the structure down the Yukon River to Nome, Alaska, where a new rush had started. Dawson City was already in decline. In March, 1900, the building again changed hands and was entirely remodelled. By November, 1901, it had changed hands once more, being named successively the Savoy, The Old Savoy, and The Auditorium, and again remodelled, when, in addition to other changes, the bar was removed.

Thereafter the building was intermittently altered, notably by the addition of a 20 ft. extension to the stage end, at which time a steam heating system was installed. The boiler was placed in an excavation beneath the stage, with consequent severe changes in the permafrost level at this end of the building. For the last thirty years or so it has been largely unused and by 1961 it had become a derelict shell. Though it was at first hoped that the original building could be sufficiently realigned and strengthened to avoid replacement of much more than the finishes, a careful examination showed that even with the greatest care it would be impossible to guarantee the discovery and correction of every structural weakness, a necessity if the building was again to be used by large numbers of people. In consequence, the decision was made to replace the existing building by a replica of what it was on the day of its opening.

Prior to dismantling, the existing building was completely measured and studies made of every detail, in an effort to establish the original features. Samples of wallpaper, hardware, mouldings and lighting fixtures were taken. Gradually it was learned which doors, stairways and walls had been added. An example of the complexities involved is illustrated by the fact that evidence of a grand stairway leading direct from the main entrance to the first balcony, at first taken to have been original, was later proven by the discovery of a completely enclosed section of wall to have been an intermediate feature.

Concurrently the National Historic Sites Division under Mr J. D. Herbert conducted an extensive search of archives in Ottawa, Whitehorse, Fairbanks, Seattle, Victoria and Vancouver. In addition, many persons who had been in Dawson at the turn of the century were interviewed. The discovery of a complete series of the *Klondike Nugget* between the years 1898-1901, together with many individual photographs, proved invaluable in confirming and elaborating the architect's research. Typical of the information thus provided was a detailed description of the additional stairways and exits which the local Fire Chief had ruled necessary after an early inspection of the new buildings. Generally the personal interviews relying on recall of sixty year-old events provided little firm evidence, and were often contradictory. But some of these old timers possessed photographs which added to the documentation.

The authorities under whose jurisdiction the new building came gave it sympathetic regard as a special case; nevertheless certain concessions to authenticity were only prudent in the interests of public safety. An

example of this is the addition of an enclosed staircase tower on each long side of the building, providing an escape route from every floor. In the original there was but one narrow stair between the main and upper floors, and even that was not in one continuous sequence; the two flights were on opposite sides of the Auditorium. Since a modern heating plant could not, without difficulty, be concealed within the main structure, a separate building has been provided which reduces the fire hazards. This structure also contains cloakroom facilities for audience and performers. These extraneous features have been expressed as such, no attempt having been made to blend them with the main structure, so that they will immediately be recognized for what they are.

A similar approach has dictated the treatment of details. For instance, though the duct work of the warm air heating-ventilating system has been carefully concealed, the exposed grilles, placed as inconspicuously as possible, are of a simple present-day design. Anything resembling a quaint Victorian motif might have suggested this system of heating as an original feature.

The structural system employed for the new building is basically similar to that of the original, apart from minor differences such as the use of modern stud spacing and batt type insulation. (The original had studs 2' 0" o.c. with sawdust fill.) Steel plate reinforcements of the roof truss connections, and gyproc interior wall and soffit linings for greater fire protection. The principal deviation has been the use of timber piles for the foundations rather than the indigenous system of mud sills which is subject to extreme heaving from Dawson's permafrost underlay. The original system using $\frac{7}{8}$ " diameter rods to suspend the balconies from the roof trusses has again been employed.

The lighting fixtures which remained with the building have been compared with the earliest photographs for establishment of those that are original; these have been refurbished and duplicated, while others have had to be reconstructed on the evidence of the photographs alone. As already mentioned, samples of wallpaper were taken from all walls and ceilings and these, when separated to the earliest layer (in some cases the fifth) revealed the original patterns which appeared less florid than might have been supposed. Reproductions of these have been printed.

By perusing old, faded photographs with a magnifying glass over and over again and by comparing the clues discovered in these with the merest markings in the paint or scorings in the woodwork, a process as intriguing and absorbing in its detail as that of the classical detective hunt, other reconstructions were accomplished such as that of the original hardware, the stoves and even the shape of the loose-cushioned opera chairs which comprised the original seating.

The new building will incorporate the later extension of the stage-end in order to permit more flexibility. In the interests of present day use, however, some liberties have been taken with the back stage area; but basically it will reproduce the original in appearance and methods of operation. The old dressing cubicles have been restored even to the inclusion of two small privies.

R. M. GARRET and A. ROGATNICK

CANADIAN BUILDING DIGEST

DIVISION OF BUILDING RESEARCH • NATIONAL RESEARCH COUNCIL



CANADA

WIND ON BUILDINGS

by W. A. Dalglish and D. W. Boyd*

UDC 624.042.41

In the past very simple concepts have frequently been used in estimating live loads for structural design. Now, however, live loads on buildings, such as wind, snow, earthquake and floor loads, are receiving increased attention to match the more accurate structural analyses that are possible.

Wind loads have become particularly significant because of the increasing number of high-rise buildings. Other factors have also contributed to the importance of wind in design: light-weight low-slope roofs, curtain wall construction and the appearance of special structures having "aerodynamic shapes."

Some tall buildings that extend into regions of high wind velocity have swayed excessively in strong winds. Improperly anchored light-weight roofs have been sucked off bodily by wind forces, and roofing materials have been lifted by high local suction and eventually peeled from large areas of roofs. These and many other problems have emphasized the importance of a clearer understanding of wind and its effects.

With the old simplified approach, the total effect of wind was often represented merely by a uniform lateral pressure on the windward side of a building and a suction on the leeward wall. Grossly simplified rules were also used to calculate pressures or suction on roofs. Only the horizontal shear and overturning moment were calculated. For low or medium height buildings, such simple methods

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may have been reasonably satisfactory, but for tall buildings the greater importance of wind loading calls for more accuracy.

Wind is not constant either with height or with time, is not uniform over the side of a building, and does not always cause positive pressure. In fact, wind is a very complicated phenomenon; it is air in turbulent flow, which means that the motion of individual air particles is so erratic that in studying wind one ought to be concerned with statistical distributions of speeds and directions rather than with simple averages or fixed physical quantities.

Architects and engineers are concerned with and responsible for not only structural design, but also the choice of exterior cladding materials and components, the operation of mechanical services such as heating and ventilating equipment, and with details of openings to limit infiltration. Wind has important effects on each of these aspects of design; one might even conclude that of all the manifestations of nature with which the architect has to contend, apart from gravity, the effects of wind are the most ubiquitous.

It is the intent of this Digest to describe briefly the cause and structure of wind, and to explain how its structure complicates the determination of a reasonable design wind speed. The detailed discussion of the interactions between wind and buildings, and the actual pressures and suction on parts of buildings are beyond the scope of this note.

Development of Wind

Wind usually refers to the movement of air parallel to the earth's surface. In this Digest we are concerned only with winds in the

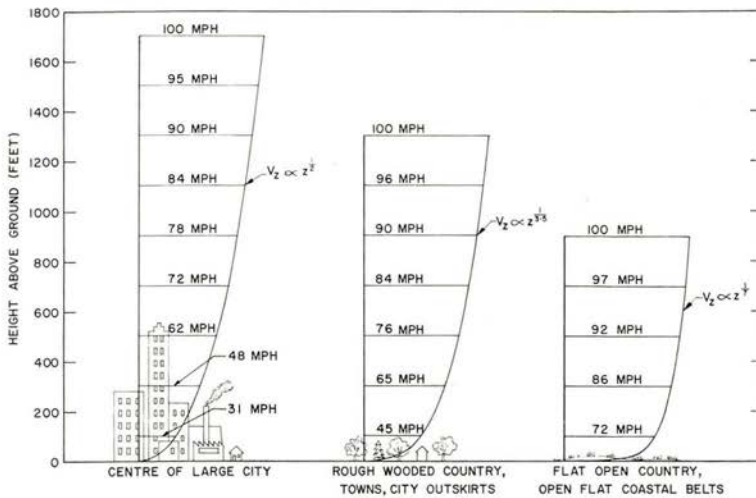


FIGURE 1
MEAN VELOCITY PROFILES OVER TERRAIN WITH THREE DIFFERENT ROUGHNESS CHARACTERISTICS FOR GRADIENT WIND OF 100 MPH

lowest few hundred feet of the atmosphere. The driving forces for such movements are pressure differences caused by unequal heating of the air. For a steady wind, however, the direction of flow does not follow the steepest pressure gradient from a "high" to a "low" as one might expect. In fact, the direction of flow is more nearly parallel to the isobars (lines connecting points of equal pressure) rather than perpendicular to them. This is because every object moving across the earth's surface is deflected to the right in the northern hemisphere (to the left in the southern) as a result of the rotation of the earth. This deviating effect, called the Coriolis force, is small and is usually disregarded except in the atmosphere and the ocean. The pressure gradient causing wind, however, is also small. Normally, wind requires several hours to develop, and although flow begins perpendicular to the isobars, it is gradually deflected to the right as time passes, so that when a steady state is finally attained the wind blows more nearly parallel to the isobars. The pressure gradient is then balanced by the Coriolis force and the frictional drag force, plus or minus centrifugal force if the path happens to be curved.

Velocity Profile

The roughness of the earth's surface, which causes drag on the wind, converts some of the wind's energy into mechanical turbulence. Since the turbulence is generated at the surface, the surface wind speed is much less than the wind speed at higher levels. Turbulence

includes vertical as well as horizontal air movement and hence the effect of the surface frictional drag is propagated upwards. The mechanical turbulence and the effect of frictional drag gradually decrease with height and at the "gradient" level (around 1000 to 2000 feet) the frictional effect is negligible. The pressure gradient at this level is balanced by the Coriolis force (and possibly the centrifugal force), and the wind blows almost parallel to the isobars.

For strong winds the shape of the vertical profile of the wind speed depends mainly on the degree of roughness of the surface, by which is meant the over-all drag effect of buildings, trees and any other projections that impede the flow of wind at the surface. Three typical velocity profiles are shown in Fig. 1, where the effect of variable surface roughness on the mean wind speeds is shown for an arbitrarily selected gradient wind of 100 mph.

Velocity profiles have been determined by fitting curves to observed wind speeds at several levels. It is convenient and sufficiently accurate to describe these profiles by a power law of the form

$$V_h = V_r \left(\frac{h}{h_r} \right)^k$$

where V_h is the mean wind speed at height h above the ground,

V_r is the mean speed at the reference height h_r above the ground,

k is the exponent for the best-fitting curve.

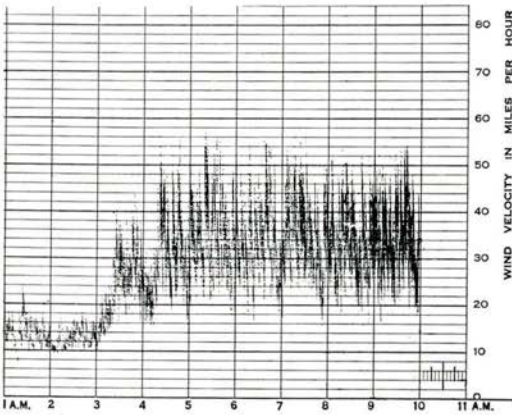


FIGURE 2
TYPICAL PRESSURE TUBE ANEMOMETER
RECORD

*Courtesy Meteorological Division, Department of
Transport*

A reference height of 10 metres or about 30 feet is internationally recommended as the standard, and anemometers are usually mounted as close to this height as is practical. Exponents for mean wind speeds vary from about 1/7 for flat open country to about 1/2 for the centres of large cities.

Turbulence in Surface Winds

The velocity profile describes only one aspect of the wind at the lower levels. Superimposed on the mean speed are gusts and lulls, which are deviations above and below the mean. These gusts have a random distribution over a wide range of frequencies and amplitudes, both in time and space. Figure 2 shows clearly the unsteady nature of wind speed measured by an anemometer. Gusts are frequently the result of the introduction of fast moving parcels of air from higher levels into slower moving strata of air. This mixing or turbulence is produced by surface roughness and thermal instability.

Turbulence caused by surface roughness is similar to the turbulent boundary layer flow at the walls of pipes. Flow near the surface encounters small obstacles that change the wind speed and introduce random vertical and horizontal velocity components at right angles to the main direction of flow. Turbulence generated by obstacles may persist downwind from projections as much as 100 times their height.

Large scale topographical features are not included in the above-mentioned surface roughness. They influence the flow, however,

and should be given special consideration in design. For instance, wind is usually much stronger over the brow of a hill or ridge because the flow lines converge over the obstructing feature and to pass the same quantity of air a higher speed is required. Large valleys often have a strong funnelling effect that increases the wind speed along the axis of the valley.

The thermal stability of air has a considerable effect on the intensity of turbulence. Cold surface air tends to damp out mechanical turbulence; heated surface air tends to rise and to increase turbulence. When the wind is strong, the air near the surface becomes thoroughly mixed and the thermal stability becomes neutral. Under these conditions temperature differences are such that they neither damp out nor increase the mechanical turbulence caused by surface roughness.

Design Wind Speeds

The basic design wind load in the National Building Code of Canada is the velocity pressure of a wind lasting for a few seconds that will be exceeded on the average once in 30 years. About twelve stations in Canada have pressure tube anemometers that record such gust speeds, but no records are available going back much more than 10 years. The only wind records covering many stations and many years are of the number of miles of wind passing the revolving cup anemometer each hour. The annual maxima of these hourly mileages or hourly mean wind speeds have been analysed to yield the hourly mileage that will be exceeded on the average once in 30 years. Peak gusts at the few stations where they are recorded have been compared with corresponding hourly mileages, and the resulting relationship has been used to estimate peak gusts at other stations.

Figure 1 indicates that average wind speeds at low levels in cities are much less than those in open country. The gustiness of city winds is greater, however, and peak gusts in a city may not be much less than peak gusts at a nearby airport. It is therefore somewhat conservative but reasonable to use measured or estimated peak gust speeds at an airport as the design wind speed for buildings up to about 40 feet high in a city or town.

Gust speeds at higher levels are stronger than those near the surface. Because gustiness decreases with height, however, increase in the speed of peak gusts with height will be

less than the increase in mean wind speeds. For flat open country the exponent for gust speeds is probably about 1/10. For average conditions in Canada the more conservative exponent of 1/7 is commonly used.

Dynamic Effects

Every structure has a natural frequency of vibration, and should dynamic loading occur at or near it, structural damage out of all proportion to the size of the load may result. For example, bridges capable of carrying far greater loads than the weight of a company of soldiers have been known to break down under the dynamic loading of men marching over them in step.

Similarly, certain periodic gusts within the wide spectrum of gustiness in the wind may find resonance with the natural vibration frequency of a building, and although the total force caused by that particular gust frequency will be much less than the static design load for the building, dangerous oscillations may be set up. This applies not only to the structure as a whole, but also to components such as curtain wall panels and sheets of glass.

A second dynamic effect is caused by the instability of flow around certain structures. Long narrow structures such as smoke stacks, light standards and suspension bridges are particularly susceptible to this sort of loading. In such cases dynamic instability of flow may result when eddies separate first from one side and then from the other side of the object, causing an alternating pattern of eddies to form in its wake. A side thrust is thus exerted on the object similar to the lift on an aerofoil, and since this thrust alternates in

direction a vibration may result. The side-to-side wobbling of a straight stick being pulled through water is an example of this phenomenon. Another example is the "galloping" transmission line extensively investigated by electric power companies.

Perhaps the most dramatic example of susceptibility to dynamic instability of flow was the failure of the Tacoma Narrows suspension bridge. Very moderate winds caused oscillations of up to 50 inches or more in amplitude, whereas very strong winds had little effect. When failure of the 2800-foot central span did occur in November 1940, the highest wind speed was only 42 mph, preceded by 2 hours of steady wind at 38 mph.

Conclusion

Some of the features of wind near the surface of the earth have been briefly described in this Digest. Particular attention has been given to gustiness and to the rates of increase of both mean wind speeds and peak gust speeds with increases in height. A method of computing design wind speeds from wind observations available in Canada has been outlined. These speeds form the necessary basis for the conversion of wind speeds into wind loads for various shapes of structures.

As research gradually provides a better understanding of the structure of wind and the complex interactions between wind and buildings, one can look forward to greater economy in the use of building materials through greater precision in estimating static load; and to greater safety as a result of the inclusion of the dynamic load in design.

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C'est la saison des pèlerinages annuels à Québec. Une fièvre collective a gagné le monde de la construction, cette année. Chacune des disciplines concernées s'est cru obligée d'y aller de son projet de loi. Entrepreneurs, urbanistes, ingénieurs et architectes se retrouveront bientôt devant le Comité des bills publics pour y solliciter des privilèges accrus, ou peut-être pour y perdre des plumes, mais à coup sûr pour y laisser des sommes considérables en honoraires à ces dévoués et indispensables porte-parole qui se font fort de recueillir les faveurs du parti au pouvoir. C'est la course de toutes les Associations au savant confrère qui se trouve le plus près placé du premier ministre, au procureur-intermédiaire qui a le plus de chance d'avoir l'oreille du chef: pratique simpliste et détestable qui aurait de quoi faire pouffer de rire tout un monde si elle n'était pas si risquée dans ses conséquences. En plus de causer aux Associations des déboursés exorbitants et injustifiés, elle peut signifier tout aussi bien la perte de droits acquis depuis des décades ou l'octroi de nouveaux privilèges qui exigeraient une étude beaucoup plus approfondie avant d'être accordés. A cause de ces dénouements fort possibles et d'autres sérieuses implications, les quatre groupements professionnels précités se lorgnent avec suspicion depuis deux ou trois mois en se demandant si l'un ne veut pas la mort de l'autre, si le premier ne cherche pas à s'emparer en bloc des droits du deuxième, et ainsi de suite. En somme, la défiance ne brille pas par son absence, et, comme la crainte est le commencement de la sagesse, il faut s'armer; on se prépare au moins gai.

Les entrepreneurs désirent émettre des licences; des urbanistes (qu'est-ce qu'un urbaniste?) demandent leur constitution en corporation; les ingénieurs veulent en exclusivité la fondation, la charpente, la mécanique, l'électricité et les édifices accessoires aux travaux de génie; les architectes enfin veulent endiguer l'exercice illégal de leur profession au moyen d'amendes plus élevées et de l'injonction dans le cas d'étrangers qui ignorent nos lois. Ce bref résumé des diverses revendications exige un peu plus de détails.

La nouvelle "Loi des licences d'entrepreneurs en construction" ne suscitera pas, il nous semble, beaucoup d'opposition de l'extérieur. L'article 41 stipule que: "Nul ne peut faire affaires comme entrepreneur en construction dans la province à moins qu'une licence à cet effet ne lui ait été octroyée par le Bureau et que cette licence ne soit en vigueur." Architectes et ingénieurs ne peuvent que voir d'un bon oeil l'exer-

cice d'une surveillance plus étroite sur ceux qui offrent d'exécuter les contrats de construction, à condition bien entendu que le contrôle se fasse d'une façon sérieuse et juste. Jusqu'ici point ou peu de problèmes.

Là où ça commence à tourner un peu moins rond, c'est lorsque huit citoyens de cette province qui détiennent des certificats forcément d'ailleurs en urbanisme ou qui se sont à un moment donné attribué le titre d'urbanistes de leur propre consentement se proposent de fermer la profession et d'en exclure architectes, paysagistes, arpenteurs, ingénieurs, etc., à moins que ces derniers ne soient membres en règle de la Société des urbanistes professionnels du Québec ou, dans la négative, ne fassent au moins quatre années de cléricature et subissent avec succès des examens établis par le Conseil, c'est-à-dire les pétitionnaires eux-mêmes probablement. Qu'est-ce à dire? S'agirait-il d'un petit groupe qui demande au Gouvernement de lui confier le contrôle d'un domaine jusqu'ici ouvert à qui voulait bien y tenter sa veine? Ça en a toutes les apparences, puisque dans leur pétition ils prennent la précaution à l'article 15 de déclarer sans vergogne: "Sont membres de la corporation: a) les requérants nommés dans le préambule de la présente loi." Comme désintéressément, on ne pouvait s'attendre à moins. Du seul fait qu'ils demandent eux de fermer les cadres, ils deviennent automatiquement membres de la nouvelle corporation. Qui oserait les blâmer de s'assurer dès le départ une bonne place à l'intérieur? Une telle disposition toutefois a de quoi nous ébranler; on serait tenté et il semblerait impératif de s'opposer au bill tout entier. Quand des gens de profession sont assez peu sérieux pour présenter une telle requête où ils se servent en premier lieu, ils méritent certes qu'on les surveille de près. D'autre part, tout architecte qui aura exercé la profession d'urbaniste jusqu'à ce jour sans faire partie de la Société des urbanistes professionnels de Québec se verra désormais interdire ce champ d'activités si le Comité des bills publics donne sa bénédiction au projet de loi.

Hélas! là n'est pas le pire. La Corporation des ingénieurs professionnels de Québec pour sa part refuse de se laisser damer le pion en fait d'audace. Ces messieurs croient presque pouvoir se dispenser de l'architecte dans la bâtisse. Leur nouvel article 3d) ne pêche pas par excès de modération. "L'exercice de la profession d'ingénieurs consiste, entre autres, à préparer des études et dessins, plans, cahiers de charges se rapportant à des ouvrages ou travaux de fondation, de charpente, de mécanique et d'électricité relatifs à la construc-

tion ou à la reconstruction d'édifices, nonobstant toute autre loi à ce contraire." Les représentants de l'A.A.P.Q. qui ont été mêlés de près aux discussions tenues à ce sujet depuis trois mois ne voient rien d'autre que l'élimination pure et simple de l'architecte des domaines mentionnés. Si l'on se reporte à seulement quatre ans en arrière, l'ingénieur de cette province n'avait même pas légalement la permission de faire ces travaux. Depuis ce temps, il a obtenu le droit de les exécuter, en collaboration toutefois avec l'architecte. Si le présent projet de loi des ingénieurs recevait la sanction des autorités provinciales, ils seraient les seuls maintenant à pouvoir faire de la fondation, de la charpente, de la mécanique, de l'électricité. De plus, "tous édifices accessoires à des ouvrages ou travaux de génie" seraient censés être des ouvrages ou travaux d'ingénieurs. En d'autres termes, du moment que l'outillage ou la machinerie dépasserait en valeur l'édifice qui l'abrite, l'architecte ne pourrait plus dessiner l'édifice.

Dans les circonstances, nous n'avions pas le choix. Soyez assurés, membres de l'A.A.P.Q., que votre Conseil, assisté de trois procureurs et de plusieurs anciens présidents, s'opposera avec véhémence à des demandes aussi peu modérées. Dans aucune autre province du Canada existe-t-il semblable situation. L'architecte a le droit partout ailleurs au Canada de dessiner l'édifice au complet. Pourquoi accepterait-il ici la négation de ses privilèges actuels, d'autant plus qu'après enquête il s'avère que la plupart des ingénieurs-conseils, membres de la C.I.P.Q., n'ont pas été mis au courant par leur Corporation de cette requête gourmande.

Quant à l'A.A.P.Q. elle se contente cette année de soumettre un bill pondéré, qui entre autres allonge la liste des infractions, prévoit des amendes plus fortes, permet l'injonction en certains cas, établit clairement qu'on ne peut réclamer d'argent pour services d'architecte, si on ne l'est pas, et prolonge d'un an le délai durant lequel l'action peut s'intenter; en somme toutes demandes raisonnables que l'Association s'attend de voir exaucer. Mais qui sait? Le terme "raisonnable" n'a pas toujours eu la même signification pour tout le monde. Aussi qu'il nous soit permis de faire appel à tous les membres de l'A.A.P.Q. Si vous disposez de quelque moyen de prêter main forte à votre profession pour faire triompher sa requête ou pour faire échouer certaines demandes inconsidérées de disciplines connexes, n'hésitez pas à vous lancer dans la mêlée et à fournir votre contribution. Il n'y a pas à se leurrer: l'avenir de l'architecture est toujours en jeu.

Jacques Tisseur

un arrêt de la tendance vers les grandes sub-divisions, en un mot à un peu plus d'ordre dans le milieu d'habitations. Dans les arts plastiques, il y aura plus de peintures murales et, il faut l'espérer, plus de sculptures. En architecture et en peinture, on trouvera sûrement une plus grande variété de styles personnels et une plus grande influence de l'extérieur." Examinons ces prédictions qui ont d'autant plus de valeur qu'elles viennent d'un observateur sensible et avisé voyant la Colombie-Britannique pour la première fois.

Dans les arts plastiques, il y a eu plus de peintures murales, dont plusieurs enjolivent les murs sur lesquels elles sont posées mais dont aucune, à ma connaissance, ne mérite de retenir l'attention. Les murs extérieurs ont bénéficié plus que les murs intérieurs d'un emploi judicieux de mosaïques, mais on a fini par exagérer au point que la mosaïque est devenue chose banale et particulièrement agaçante, car rien ne semble aussi commun et ne témoigne plus d'une absence de goût que de la mosaïque à bon marché mal disposée. Ce qui est beau lorsqu'on peut compter sur un B.C. Binning travaillant de concert avec un architecte bien disposé devient exécration qu'on a affaire à un médiocre artisan sans connaissance des couleurs.

Pour ce qui est de la sculpture, le mieux est d'en parler le moins possible. Nous sommes encore trop jeunes dans notre développement artistique pour attendre des chefs-d'oeuvre de notre petit cercle de sculpteurs, mais des oeuvres comme le groupe en bronze produit par Jack Harman pour le Centre des diplômés de l'Université présagent bien de l'avenir. Le sculpteur est le plus mal partagé de nos artistes; à cause du coût élevé de ses matériaux et du peu de demande pour ses oeuvres il est encore moins préparé que le peintre de chevalet à entreprendre le grand, le monumental.

Tous les peintres énumérés par M. Hubbard sont encore à l'oeuvre et tous ont fait des progrès au cours des sept dernières années. Grâce à des bourses du Conseil des arts, plusieurs d'entre eux ont élargi et approfondi leurs modes d'expression. D'autres peintres sont venus se joindre à eux, notamment Herbert Siebner et Toni Onley, pour n'en mentionner que deux. Cependant, malgré cet essor tranquille et cette modeste expansion, je doute que les plus grands publicistes de notre belle province oseraient proclamer Vancouver le centre de la peinture canadienne. Dans les arts, c'est la demande et non le nombre des oeuvres produites qui détermine le climat culturel. Le meilleur endroit où vivre, pour un peintre, est là où il trouvera à vendre assez d'oeuvres pour consacrer tout son temps à la peinture. Tel n'est pas le cas à Vancouver où tous nos peintres sont, par nécessité, des artistes de fin de semaine. Quant à la Galerie des arts de Vancouver, le mieux qu'on puisse en dire c'est "qu'elle n'est pas morte mais endormie".

Je suis convaincu que c'est le climat physique, et non le climat culturel, qui garde parmi nous des écrivains comme Ethel Wilson et Roderick Haig-Brown, des musiciens comme Barbara Pentland, Jean Coulthard et Robert Turner, et des typographes comme Robert Reid et Takao Tanabe. Leur résistance à la tentation de l'extérieur s'explique probablement par une remarque que j'ai entendue récemment. Un homme avait été invité par un parti politique à se présenter aux dernières élections fédérales; il a refusé carrément en disant: "Etre défait serait humiliant; être élu serait catastrophique. Quel homme sensé consentirait à passer la majeure partie de l'année dans un endroit comme Ottawa?"

Passons maintenant à la prophétie dans le domaine de l'architecture. Certains des immeubles prévus par Hubbard ont fini par couvrir la région "vide et désolée" du centre de la ville; on y trouve en particulier le plus beau joyau de

notre couronne architecturale, l'édifice de la B.C. Electric. Aucun citoyen qui se respecte et qui contemple cet édifice exceptionnel le soir n'oserait s'offusquer des sommes dépensées pour en illuminer tous les coins jusqu'à ce qu'il brille comme un bijou de grand prix. Il présente une note unique de qualité dans le ciel de notre plus grand centre de population. Cependant, un seul édifice, quelle que soit sa beauté, ne saurait assurer à perpétuité la réputation architecturale d'une ville. Qu'avons-nous d'autre à offrir?

Il y a bien la nouvelle Bibliothèque publique. Elle offre une atmosphère d'accueil qui ne se trouvait pas dans l'ancienne nécropole hantée par les chauves-souris qui abritait auparavant les livres de la ville. Il y a aussi le théâtre Reine Elizabeth qui représente un excellent placement. Mais pendant que nous nous félicitons de ces oeuvres, l'oeil tombe sur le nouveau Bureau de poste et bien vite l'enthousiasme se refroidit. A tort ou à raison, je vois dans ce massif, six fois plus lourd que tout ce que Vanbrugh aurait pu imaginer après le plus indigeste de ses repas, la mesure véritable du goût de notre population. Cet édifice solide, fort, bien implanté est l'incarnation de toutes les vertus bourgeoises, le symbole impérissable d'un manque d'imagination et d'un gauche contentement de soi, à côté duquel même l'Hôtel Vancouver trouve une grâce éthérée et une beauté d'outre-monde. Pour ce qui est de la représentation du facteur, où le sculpteur a voulu exprimer sa reconnaissance pour la livraison ponctuelle de son courrier, il faut dire qu'elle est d'un réalisme socialiste qui aurait fait la joie du camarade Zhdanov.

Passons maintenant des édifices à cet "ordre dans le milieu d'habitations" que M. Hubbard espérait en 1955. Ici, il est difficile de retenir des larmes, ou un rire sardonique, selon son tempérament. Non seulement nos édiles municipaux ne semblent aucunement saisir le besoin d'arrêter la course à l'encombrement et à laideur mais on trouve chez eux des signes manifestes d'une confortable myopie, d'un état d'esprit toujours prêt à s'emparer des lieux communs servis par le Bureau du tourisme.

Il est bien entendu qu'on ne saurait voyager bien loin en Colombie-Britannique sans être frappé par des paysages d'une grandeur inégalée. Il est vrai aussi qu'il y a à Vancouver et à Victoria, ainsi que dans d'autres villes, des scènes qui sont parmi les plus belles au monde. Cela, personne n'oserait le contester. Mais il y a une différence entre une ville qui a des beautés et une belle ville. Pour jouir de la beauté en Colombie-Britannique il devient de plus en plus nécessaire de chercher les paysages qui n'ont pas été modifiés par la main de l'homme.

Or l'homme n'a aucune excuse. Il ne saurait dire que les villes modernes sont nécessairement laides, car tel n'est pas le cas. L'excuse est encore moins valide en Colombie-Britannique parce que dans cette province le niveau de vie prouve qu'il y a suffisamment de ressources financières pour créer dans les villes des beautés et des charmes dignes des paysages naturels.

Si le Ganges ne peut se comparer au Portofino et si le port de Pender est moins beau que Concarneau, c'est simplement que dans les régions du Ganges et du port de Pender on n'a jamais compris la nécessité de dresser des plans d'ensemble pour les édifices, les espaces qui les séparent et le milieu environnement.

Si New Westminster, Nanaïmo et Nelson voulaient s'en donner la peine, elles pourraient sans aucun doute, en un siècle, devenir les rivales de Venise, de Lucerne et de Rotterdam, des villes où tous les amateurs de beauté du con-

continent nord-américain aspireraient à vivre ou, tout au moins, à aller en visite. Mais peut-on penser qu'elles le feront? Si j'avais un livre à écrire sur le sujet, je me demande ce que je pourrais trouver pour croire que chacune des villes de la Colombie-Britannique ne deviendra pas éventuellement une agglomération d'édifices sans cachet disposés en lignes droites s'entrecroisant à des angles de 90° et ornée de fils posés tant bien que mal sur des poteaux plus ou moins droits et d'une étrange variété d'enseignes et de panneaux-réclame (dignes de débutants peu doués des beaux-arts) proclamant les vertus de certaines marques d'eaux gazeuses, de dentifrices, d'essence ou de pain?

Je croirai à la possibilité d'un aménagement mieux ordonné de nos localités quand je verrai nos villes et nos conseils municipaux aborder le problème, assez simple en soi, de rédiger un règlement véritablement efficace au sujet des enseignes. C'est par cette mesure d'ordre négatif qu'il faudra commencer pour mettre fin à l'enlaidissement de nos villes; il faudra ensuite recourir à des ordonnances visant à ajouter quelque chose de positif de nature à masquer certains lieux, des arbres par exemple, si on me permet cette recommandation audacieuse! Alors peut-être verra-t-on Vancouver et Victoria rivaliser amicalement afin de tirer le meilleur parti de leurs ports qui, avec un peu de soin et de prévision, pourraient ajouter considérablement au plaisir d'habiter dans leur voisinage.

Quel obstacle y aurait-il à cela? Un seul, le manque de perspective des personnes qui pourraient donner le véritable coup de barre. Nos représentants élus, à tous les paliers, brillent surtout par une absence totale de ce qu'au 18e siècle on appelait la "sensibilité", c'est-à-dire cette capacité de saisir les nuances subtiles de forme et de couleur, de style ou de sens, selon qu'il s'agit d'un bâtiment, d'une peinture ou d'un livre.

Quand on est incapable de distinguer entre ce qui est manifestement laid et ce qui est agréable à voir, entre ce qui est convenable et ce qui ne l'est pas, il n'est pas facile de sentir le besoin de changer la situation existante. Tous ceux qui ont tenté de rallier l'opinion publique en faveur du beau conviendront, je crois, que le plus démoralisant est, non pas l'opposition, même s'il ne faut pas la sous-estimer, des personnes qui ont des intérêts engagés, mais bien l'apathie du public en général.

Si nous avons parmi nous assez de personnes douées de cette sensibilité dont je viens de parler, il nous serait assez simple, par exemple, de détourner Vancouver de son ambition manifeste de devenir, au bord de l'océan, la réplique d'une métropole des Prairies. En général, il est assez facile pour une délégation représentant mille électeurs ou plus de se faire entendre de ces chefs vaillants et imperturbables. Malheureusement, comme le déclarait tristement Paul Klee il y a une génération, "Uns trägt kein Volk", nous n'avons pas la population avec nous.

Avant de pouvoir nous féliciter de posséder un climat favorable à l'épanouissement des arts, nous avons à faire, je crois, beaucoup d'éducation populaire. Je ne suis pas pessimiste, cependant, quant aux possibilités de succès et, cela, pour deux raisons: d'abord nos moyens de communiquer avec les masses n'ont jamais été aussi nombreux et ceux-ci sont toujours avides de sujets portant à la "controverse", puis, en cette seconde moitié du 20e siècle, il devient de plus en plus difficile (hors de la politique, s'entend) d'accéder à quelque poste d'autorité sans une certaine formation universitaire. Ainsi, l'université devient la grande ligne de combat, et du genre de formation esthétique donnée à l'étudiant en commerce, en génie ou en droit, ou à la faculté des arts et des sciences ou à l'école normale qui se spécialise en beaux-arts, dépendra le moment où nous arriverons, si ja-

mais, à cette situation enviable prévue par M. Hubbard.

Ici, les perspectives sont encourageantes. Grâce à M. B. C. Binning, la Faculté des Beaux-Arts de l'Université de la Colombie-Britannique exerce déjà une influence considérable sur l'ensemble des étudiants, comme le prouve la participation de ces derniers au Festival annuel des arts contemporains. Je trouve d'autres motifs d'espoir dans la présence d'hommes comme Gordon Smith parmi ceux qui forment nos professeurs d'art de demain, dans l'activité des départements de l'architecture et des cours extra-universitaires et dans la possibilité de progrès du même genre, sinon de même envergure, à la jeune université de Victoria.

Cependant, une oeuvre qui exige l'éducation de toute une génération prend du temps et, pendant que lentement les forces de lumière se recrutent et se forment, l'armée des ténèbres continue ses ravages. C'est surtout le fait de savoir qu'ils sont engagés dans une course contre le temps qui fait perler les sueurs aux fronts des combattants. Les nombreux bébés des années quarante commencent aujourd'hui à se marier et à avoir des enfants (pas toujours dans cet ordre, hélas!) et il n'est pas nécessaire de posséder les pouvoirs occultes d'un Nostradamus pour prédire une forte augmentation de nos villes au cours des dix prochaines années. Abstraction faite de l'immigration, l'augmentation véritable de notre population se produira quand les enfants des enfants qui naissent aujourd'hui commenceront à leur tour à essayer. Ce moment-là arrivera vers 1984. Si nous alors rien fait pour améliorer nos collectivités, il sera un peu tard pour commencer.

Jusqu'ici, en Colombie-Britannique, tous les changements dans notre mode d'existence ont été le fruit d'efforts personnels stimulés par l'appât du gain, qui est toujours la grande force dans notre société. Dans certains cas dignes de mention, cette force a été canalisée et orientée par des esthéticiens et des architectes de goût et d'énergie, jouissant d'assez de prestige pour être à l'abri des influences du dehors. Par contre, nous avons aussi des monuments à la timidité et à la parcimonie de certains directeurs de sociétés et de certains petits politiciens, et à leur notion désastreuse du beau. Il est temps, je crois, que l'effort commun remplace les efforts individuels, que l'on accorde la priorité et l'établissement de plans destinés à faire disparaître les inconvénients et la laideur de nos villes et villages. Mais les plans exigent des spécialistes et les meilleurs plans les meilleurs spécialistes. Il nous faut ces hommes mais il nous faut aussi faire accepter leurs plans par la population, en employant à cette fin tous les moyens à notre disposition, car ce qui nous manque actuellement c'est, chez le citoyen ordinaire et même chez son représentant élu plus ordinaire encore, la volonté d'admettre qu'un plan ne vaut rien s'il n'est pas mis à exécution.

Lorsque nous aurons non seulement de beaux édifices, mais de belles rues, quand nous pourrons nous détourner des beautés de la nature pour admirer les beautés faites de main d'homme, quand ce ne sera plus une surprise de voir des artistes et des architectes travailler ensemble depuis le premier stage des plans d'un édifice dont une bonne partie du coût est destinée à la décoration et à l'embellissement, quand dans notre province le nombre de ceux qui s'intéressent véritablement aux arts sera plus grand que celui de ceux qui, avec une certaine raison, se considèrent des artistes (à l'heure actuelle il est à peu près le même), lorsque notre ministère des Travaux publics produira des édifices, et des fontaines, qui provoqueront l'admiration de connaisseurs de tout le continent, alors je croirai vraiment que le climat est favorable à l'épanouissement des arts. En attendant, le mieux que je puisse dire c'est que le temps est "incertain". N'oubliez pas de prendre votre parapluie, votre imperméable et un bandeau pour les yeux.

C'est la saison des pèlerinages annuels à Québec. Une fièvre collective a gagné le monde de la construction, cette année. Chacune des disciplines concernées s'est cru obligée d'y aller de son projet de loi. Entrepreneurs, urbanistes, ingénieurs et architectes se retrouveront bientôt devant le Comité des bills publics pour y solliciter des privilèges accrus, ou peut-être pour y perdre des plumes, mais à coup sûr pour y laisser des sommes considérables en honoraires à ces dévoués et indispensables porte-parole qui se font fort de recueillir les faveurs du parti au pouvoir. C'est la course de toutes les Associations au savant confrère qui se trouve le plus près placé du premier ministre, au procureur-intermédiaire qui a le plus de chance d'avoir l'oreille du chef: pratique simpliste et détestable qui aurait de quoi faire pouffer de rire tout un monde si elle n'était pas si risquée dans ses conséquences. En plus de causer aux Associations des déboursés exorbitants et injustifiés, elle peut signifier tout aussi bien la perte de droits acquis depuis des décades ou l'octroi de nouveaux privilèges qui exigeraient une étude beaucoup plus approfondie avant d'être accordés. A cause de ces dénouements fort possibles et d'autres sérieuses implications, les quatre groupements professionnels précités se lorgnent avec suspicion depuis deux ou trois mois en se demandant si l'un ne veut pas la mort de l'autre, si le premier ne cherche pas à s'emparer en bloc des droits du deuxième, et ainsi de suite. En somme, la défiance ne brille pas par son absence, et, comme la crainte est le commencement de la sagesse, il faut s'armer; on se prépare au moins gai.

Les entrepreneurs désirent émettre des licences; des urbanistes (qu'est-ce qu'un urbaniste?) demandent leur constitution en corporation; les ingénieurs veulent en exclusivité la fondation, la charpente, la mécanique, l'électricité et les édifices accessoires aux travaux de génie; les architectes enfin veulent endiguer l'exercice illégal de leur profession au moyen d'amendes plus élevées et de l'injonction dans le cas d'étrangers qui ignorent nos lois. Ce bref résumé des diverses revendications exige un peu plus de détails.

La nouvelle "Loi des licences d'entrepreneurs en construction" ne suscitera pas, il nous semble, beaucoup d'opposition de l'extérieur. L'article 41 stipule que: "Nul ne peut faire affaires comme entrepreneur en construction dans la province à moins qu'une licence à cet effet ne lui ait été octroyée par le Bureau et que cette licence ne soit ne vigueur." Architectes et ingénieurs ne peuvent que voir d'un bon oeil l'exer-

cice d'une surveillance plus étroite sur ceux qui offrent d'exécuter les contrats de construction, à condition bien entendu que le contrôle se fasse d'une façon sérieuse et juste. Jusqu'ici point ou peu de problèmes.

Là où ça commence à tourner un peu moins rond, c'est lorsque huit citoyens de cette province qui détiennent des certificats forcément d'ailleurs en urbanisme ou qui se sont à un moment donné attribué le titre d'urbanistes de leur propre consentement se proposent de fermer la profession et d'en exclure architectes, paysagistes, arpenteurs, ingénieurs, etc., à moins que ces derniers ne soient membres en règle de la Société des urbanistes professionnels du Québec ou, dans la négative, ne fassent au moins quatre années de cléricature et subissent avec succès des examens établis par le Conseil, c'est-à-dire les pétitionnaires eux-mêmes probablement. Qu'est-ce à dire? S'agirait-il d'un petit groupe qui demande au Gouvernement de lui confier le contrôle d'un domaine jusqu'ici ouvert à qui voulait bien y tenter sa veine? Ça en a toutes les apparences, puisque dans leur pétition ils prennent la précaution à l'article 15 de déclarer sans vergogne: "Sont membres de la corporation: a) les requérants nommés dans le préambule de la présente loi." Comme désintéressément, on ne pouvait s'attendre à moins. Du seul fait qu'ils demandent eux de fermer les cadres, ils deviennent automatiquement membres de la nouvelle corporation. Qui oserait les blâmer de s'assurer dès le départ une bonne place à l'intérieur? Une telle disposition toutefois a de quoi nous ébranler; on serait tenté et il semblerait impératif de s'opposer au bill tout entier. Quand des gens de profession sont assez peu sérieux pour présenter une telle requête où ils se servent en premier lieu, ils méritent certes qu'on les surveille de près. D'autre part, tout architecte qui aura exercé la profession d'urbaniste jusqu'à ce jour sans faire partie de la Société des urbanistes professionnels de Québec se verra désormais interdire ce champ d'activités si le Comité des bills publics donne sa bénédiction au projet de loi.

Hélas! là n'est pas le pire. La Corporation des ingénieurs professionnels de Québec pour sa part refuse de se laisser damer le pion en fait d'audace. Ces messieurs croient presque pouvoir se dispenser de l'architecte dans la bâtisse. Leur nouvel article 3d) ne pêche pas par excès de modération. "L'exercice de la profession d'ingénieurs consiste, entre autres, à préparer des études et dessins, plans, cahiers de charges se rapportant à des ouvrages ou travaux de fondation, de charpente, de mécanique et d'électricité relatifs à la construc-

tion ou à la reconstruction d'édifices, nonobstant toute autre loi à ce contraire." Les représentants de l'A.A.P.Q. qui ont été mêlés de près aux discussions tenues à ce sujet depuis trois mois ne voient rien d'autre que l'élimination pure et simple de l'architecte des domaines mentionnés. Si l'on se reporte à seulement quatre ans en arrière, l'ingénieur de cette province n'avait même pas légalement la permission de faire ces travaux. Depuis ce temps, il a obtenu le droit de les exécuter, en collaboration toutefois avec l'architecte. Si le présent projet de loi des ingénieurs recevait la sanction des autorités provinciales, ils seraient les seuls maintenant à pouvoir faire de la fondation, de la charpente, de la mécanique, de l'électricité. De plus, "tous édifices accessoires à des ouvrages ou travaux de génie" seraient censés être des ouvrages ou travaux d'ingénieurs. En d'autres termes, du moment que l'outillage ou la machinerie dépasserait en valeur l'édifice qui l'abrite, l'architecte ne pourrait plus dessiner l'édifice.

Dans les circonstances, nous n'avions pas le choix. Soyez assurés, membres de l'A.A.P.Q., que votre Conseil, assisté de trois procureurs et de plusieurs anciens présidents, s'opposera avec véhémence à des demandes aussi peu modérées. Dans aucune autre province du Canada existe-t-il semblable situation. L'architecte a le droit partout ailleurs au Canada de dessiner l'édifice au complet. Pourquoi accepterait-il ici la négation de ses privilèges actuels, d'autant plus qu'après enquête il s'avère que la plupart des ingénieurs-conseils, membres de la C.I.P.Q., n'ont pas été mis au courant par leur Corporation de cette requête gourmande.

Quant à l'A.A.P.Q. elle se contente cette année de soumettre un bill pondéré, qui entre autres allonge la liste des infractions, prévoit des amendes plus fortes, permet l'injonction en certains cas, établit clairement qu'on ne peut réclamer d'argent pour services d'architecte, si on ne l'est pas, et prolonge d'un an le délai durant lequel l'action peut s'intenter; en somme toutes demandes raisonnables que l'Association s'attend de voir exaucer. Mais qui sait? Le terme "raisonnable" n'a pas toujours eu la même signification pour tout le monde. Aussi qu'il nous soit permis de faire appel à tous les membres de l'A.A.P.Q. Si vous disposez de quelque moyen de prêter main forte à votre profession pour faire triompher sa requête ou pour faire échouer certaines demandes inconsidérées de disciplines connexes, n'hésitez pas à vous lancer dans la mêlée et à fournir votre contribution. Il n'y a pas à se leurrer: l'avenir de l'architecture est toujours en jeu.

Jacques Tisseur

BOOK REVIEWS

THE DESIGN OF STRUCTURAL MEMBERS (PART I) by H. T. Jackson, FRIBA, AMI, Struct/E. Published by The Architectural Press, London. 176 pages. Price: \$6.00

THE AUTHOR has compiled a number of typical questions that have from time to time appeared on the RIBA Intermediate Examination together with appropriate answers. These questions and answers, together with explanatory text added by the author, cover the design of some of the simpler structural members such as timber joists, steel beams, columns and roof trusses, concrete slabs, beams and columns, and small gravity retaining walls. This volume could hardly be called a text or hand-book. However, beginning students might find it useful as a guide to the review of the elements of structural design and as a source of review questions and answers. Since it is based on British code and practice, some adjustments would be required to allow for any differences between those and their American counterparts.

C. Hershfield, MEIC, Toronto

THE DEATH AND LIFE OF GREAT AMERICAN CITIES, by Jane Jacobs. Published by Random House of Canada Limited, 1961. 448 pp, plus index. Price \$7.50.

Whenever a planning theory becomes misapplied, defective, or too-long established, it is imperative to have a counter viewpoint developed in the environment concerned by experienced, patient and intelligent observation. This book is important because it does present serious counter proposals to such currently acceptable planning formulae as the Garden City idea.

Mrs Jacobs is not a professional planner but she has long been affiliated with architecture and planning as the wife of an architect, and as an associate editor of the *Architectural Forum*. Living an urban family life in Greenwich Village of New York City, she has gathered significant evidence about the forces which determine the growth or decay of large American cities.

The city must be lively, noisy and prolific in its creation and solution of

urban social problems to generate the internal energy and the effective directness of communication which is the reason — for — being of a city. A street crowded with pedestrians at all hours is not only more vital and interesting, a stage for players, but also it is safer than a quiet street because all the pedestrians keep an overseeing eye towards an acceptable norm of behaviour. The functional necessity of high density land use and the evils of high density occupation of dwelling units should not be confused to the extent of reducing city densities below an efficient minimum. The failure of many slum clearance projects (and the rehousing by public subsidy and by discriminating public control of the families involved) to accomplish the expected objectives of human betterment now suggests a less violent, but more sensible, more effective and more economic “unslumming” through publicly assisted renovation of older, worthwhile areas. Diversity of land use, and of building types and styles, rather than a dull, pre-planned zoning conformity as an official planning policy, could help to restore the vitality of older residential areas and to preserve their proper space-time character. If the lives of people and effective commerce rather than statistical abstracts, engineering and traffic were the prime criteria, we could have been rebuilding rather than destroying our cities.

Although most of this book is concentrated upon residential uses and possibilities, a considerable part is given to an argument of what the motor car has done to the city, and to what the city could do to the motor car in justifiable retaliation. This debate is timely as we reach the saturation point of motor traffic forever directed to the heart of a city. It is a most important symptom in the death of a city; the continual increase in the number of major traffic arteries, created to improve traffic movement, but which fail at every stage, and only create vast asphalt desserts at the terminii after depleting many of the necessary elements of a city. The various secondary areas of a city must be protected from becoming mere interstices in the division of the primary functional islands of the city by expressways.

This is a most persuasive book, and one to be studied by all architects, engineers, planners, sociologists and municipal politicians who will be intellectually honest enough to consider another viewpoint with objectivity. This viewpoint may achieve more proper results, and stop the compulsive drive towards the extinction of the city.

John Layng, Toronto

PRACTICAL DESIGN OF STRUCTURAL MEMBERS by Thomas A. Lucy, MASCE. Published by F. W. Dodge Corporation, New York. Price: \$12.00

WRITTEN by an eminent consulting engineer and based on the author's 30 years' experience in active practice, this volume is essentially a manual or handbook for structural design in reinforced concrete, structural steel and timber. The material contained was originally developed and collected to constitute a manual for design in the author's consulting office. Included are many time-saving short cuts and methods of design, as well as numerous capacity tables, charts and diagrams, by means of which the design of the more common structural members may be expedited. An unusual feature is the inclusion of discussion and explanatory notes and comments that bridge the gap between classroom and text book procedures on the one hand and practical office methods on the other. The emphasis is on common sense and good judgment in the development of practical methods based on sound theory. Many examples are worked and forms for design sheets are suggested. As far as possible the procedures are designed to eliminate involved formulae and tedious calculations. On the other hand, the author takes pains to point out that — “There are no easy methods for design without a background of knowledge and long experience. Theory, investigation and research are necessary for progress. Theory, however, must be resolved into simple procedures for practical application to design. Correct theory and good practice are of equal importance. If a theory cannot be simply applied with good practice, it is the wrong theory. Concrete, stone, steel and wood often act contrary to the mathematical indications. Common sense must often supplant the theoretical assumptions.”

Practicing architects and structural engineers may well find much useful material and many valuable ideas in this book. It is intended primarily for ordinary structures. Complicated frames, arches, etc. are considered by the author to be special problems requiring other than the usual routine procedures. While the tables and charts are based on American codes and practice, it should be possible to modify them to comply with other codes if necessary.

C. Hershfield, MEIC, Toronto

Editor, *Journal RAIC*

In your editorial in the *Journal* of Feb. 1962 you invite comment. Herewith please find my contribution.

I do not believe the model vs perspective argument has anything to do with the problem. I am one of the 133 entrants who didn't compete. My reason for not putting in a scheme was the obvious high cost of executing a scheme which would have a hope of being in the money. I have since spoken to several people who did put in entries and in each case their office spent several thousands of dollars on their entries. I have a small office and just cannot afford either the time or investment required to enter competitions formulated in this manner.

Some day I hope in exchange for my five dollars to receive conditions for a competition which require sketch drawings and maybe a block model of the briefest nature and possibly a second stage (paid for although no more than costs) where the entrant is asked to go all out.

Surely what the jury is looking for at first is a parti, a concept. Does it matter whether there is a janitor's room on the third floor or if the mayor has a private washroom or not. More important is location on the site, an under-

standing of the environment and, most important, a concept. The intricacies of sight lines, acoustics, parking layout, etc. can wait for the second stage.

I understand in Sweden, competition entries are very sketchy. Their competitions are usually by invitation and one stage, I understand, which probably overcomes a lot of problems.

I can see one flaw in my suggestion and that is that if the conditions ask for sketch drawings, what does the jury do with a worthy entry that goes way beyond rough preliminaries. Disqualify it?

Surely there is some solution to competitions which do not require such a vast expenditure of time and money.

Geoffrey Massey, Vancouver

Editor, *RAIC Journal*

I wish to extend my sincere thanks for the fine coverage you gave our St. Basil's R. C. Church in your recent issue on churches.

We should be glad to co-operate with you in any way in the future should our material be of some interest to you.

T. V. Murray, Ottawa

OBITUARY

THE LATE A. I. MORRISON, affectionately known to his host of friends as "A.I." was born in Grange, Scotland, where he received his early education. After graduation from Victoria School of Architecture and completing his term of apprenticeship, he came to Canada, establishing a creditable practice in Medicine Hat, Alberta, where he pursued his profession until the time of the First World War.

He enlisted with the Canadian Expeditionary Force, proceeded overseas and saw early action. Being severely wounded in 1915 his honorable active military service was shortened. He was forced to spend the next five years in military hospitals, where his recovery was slow but eventually permitted his return to Canada. He settled in the East, choosing Campbellton, NB for following his practice in architecture, associated with the firm of J. & D. A. Harquail Co, Ltd. He remained with this firm for several years before returning to private practice, in which he was respected not only for his professional ability but as a fine citizen and good friend of both young and old.

The quality of his home life was an example to many. The happy memories cherished by his children and grandchildren, like his love that they reflect, are shared by a great circle of friends of all ages. To the "wee ones" and to the older he was the popular good and understanding friend, teller of tales from his own vast store of personal experiences as well as the appropriate story for any occasion. A man with a fine memory of his native and adopted country, both West and East, together with a vivid imagination, coupled with a pleasing and picturesque speech, could not help but be a popular friend.

Mr Morrison was a Charter Member of the Architects' Association of New Brunswick and a Member of the Royal Architectural Institute of Canada, contributing to the good of each. Besides his church affiliations he was a member of the Campbellton Curling Club and the Restigouche Country Club. As a tribute to him, children of his home neighborhood have donated books in his memory to the Campbellton, NB, Library.

During his active practice in northern New Brunswick Mr Morrison designed many fine buildings and until his

LETTERS TO THE EDITOR

The president, Mr. Harland Steele, has received the following letter:

It has long been in my mind to offer you and those you represent my sincere compliments on the following:

1. The remarkable advancement in the quality of architecture in Canada since the war; the increase in activity is also good to see.

2. The evidence of these facts through superior presentation by your *Journal*.

Perhaps this expression is finally activated by the scholarly address to the Society of Architectural Historians (USA) by John C. Parkin (F), "Architecture in Canada since 1945", which appeared in your *Journal* for January '62.

At any rate it is a pleasure to note these things and a privilege to know many who are responsible for the attainments.

Please extend my felicitations to those responsible for the format and content of the *Journal*.

With every good wish.

*Glenn Stanton, FAIA, FRAIC,
Portland, Oregon, March 2, 1962*

INSTITUTE NEWS

untimely passing he also served as Supervising Architect for the New Brunswick Department of Public Works in connection with the erection of the new Provincial Hospital at Campbellton.

The profession is poorer for his passing.

H. Claire Mott (F), Saint John

1962 Housing Design Council Awards

The Canadian Housing Design Council is instituting two series of awards in 1962, the first for single family houses; and the second, a new series, for multiple family housing projects. Closing date for entries is Sept 15th. Entry forms may be obtained from the Council at Ottawa.

New Bursary in Architecture at U of M

An entrance bursary of \$500, renewable annually for five years if the recipient maintains a good record, has

been offered to the School of Architecture, University of Manitoba, by Western Gypsum Products Ltd. Application forms, with a portfolio of work, must be received by the School by August 15, 1962.

Canadian Council on Urban and Regional Research Established at Founding conference at Ottawa

When the Committee of Inquiry Report into the Design of the Residential Environment was formally released at the RAIC Assembly in 1960, one of thirty-two recommendations which received comparatively little attention at the time was a proposal that Central Mortgage and Housing Corporation call a meeting to explore the feasibility of establishing an institute of urban studies in Canada.

Less than two years later a Canadian Council on Urban and Regional Research was created at a two-day founding conference held at Ottawa March 15-17. Sponsored through the direct initiative of Central Mortgage and Housing Corporation, the Federation of Mayors and Municipalities and the RAIC, the Council drew from all parts of Canada educators, government officials, administrators, economists, private and public planners, officers representing major utilities or communications facilities, architects and engineers.

The Royal Institute was paid the honor of having Peter Dobush (F) of Montreal named to head the first Board of Directors of the Council. A Council secretariat will be established shortly with headquarters at Ottawa. Action



Five members of the seven-man Board of Directors of the Canadian Council on Urban and Regional Research, front row, left to right: chairman, Peter Dobush (F), Montreal, and Humphrey Carver, Ottawa, chairman of the Advisory Group of CMHC; back row, left to right: Eric W. Thrift, Ottawa, general manager, National Capital Commission; George S. Mooney, Montreal, executive director, Canadian Federation of Mayors and Municipalities; and vice-chairman, Eric Beecroft, Ottawa, director, Ottawa Bureau, Canadian Federation of Mayors and Municipalities.

will be taken at once to explore ways and means of obtaining financing, from both private and public sources to enable the launching of a program of badly-needed urban research with a minimum of delay.

In the meantime machinery is being established within the Council's Board of Directors to provide for an equitable method of securing research proposals which may be submitted by supporting organizations or individuals.

Among RAIC members attending the founding conference were: Peter Oberlander and Wolfgang Gerson, Vancouver; Cecil Blankstein, Winnipeg; James Murray, John C. Parkin, Toronto; Ian MacLennan, James Strutt, Andrew Hazeland, Eric Thrift, S. A. Gitterman, R. S. Ferguson, Ottawa; Peter Dobush, Harry Mayerovitch, Hazen Sise, Lemco Van Ginkel, Montreal; Douglas Shadbolt, Halifax.

CMHC Suggests RAIC Organize Research Committee on Costs of Overhead vs Underground Wiring

Plans to implement another of the recommendations in the report of the RAIC Committee of Inquiry into the Design of the Residential Environment—that concerning overhead wiring—are now being made at RAIC Headquarters.

As a result of recent correspondence between the President, Mr Harland Steele and Mr Stewart Bates, President of the CMHC, the Institute has decided to adopt a proposal made by Mr Bates, that the Institute sponsor and organize a committee to undertake a thorough examination into the matter of costs of underground versus overhead wiring, such a study to be carried out in relation to new residential areas. The two main areas to be explored are first, the initial capital expenditure by the public utility or the housebuilding contractor and secondly, the subsequent maintenance costs. Interested groups to be represented on the committee include the Canadian Federation of Mayors and Municipalities, the Engineering Institute of Canada, the National Housebuilders Association, the Canadian Electrical Association, the Canadian Electrical Manufacturers Association, and the Town Planning Institute of Canada. The RAIC representatives will be James Strutt of Ottawa and Robbins Elliott, RAIC Executive Director.

The new committee had its origin in a proposal from the President of the RAIC to Mr Bates in December 1961, that the Federal Government establish a national underground wiring fund, which would be available to those municipalities who conduct a thorough



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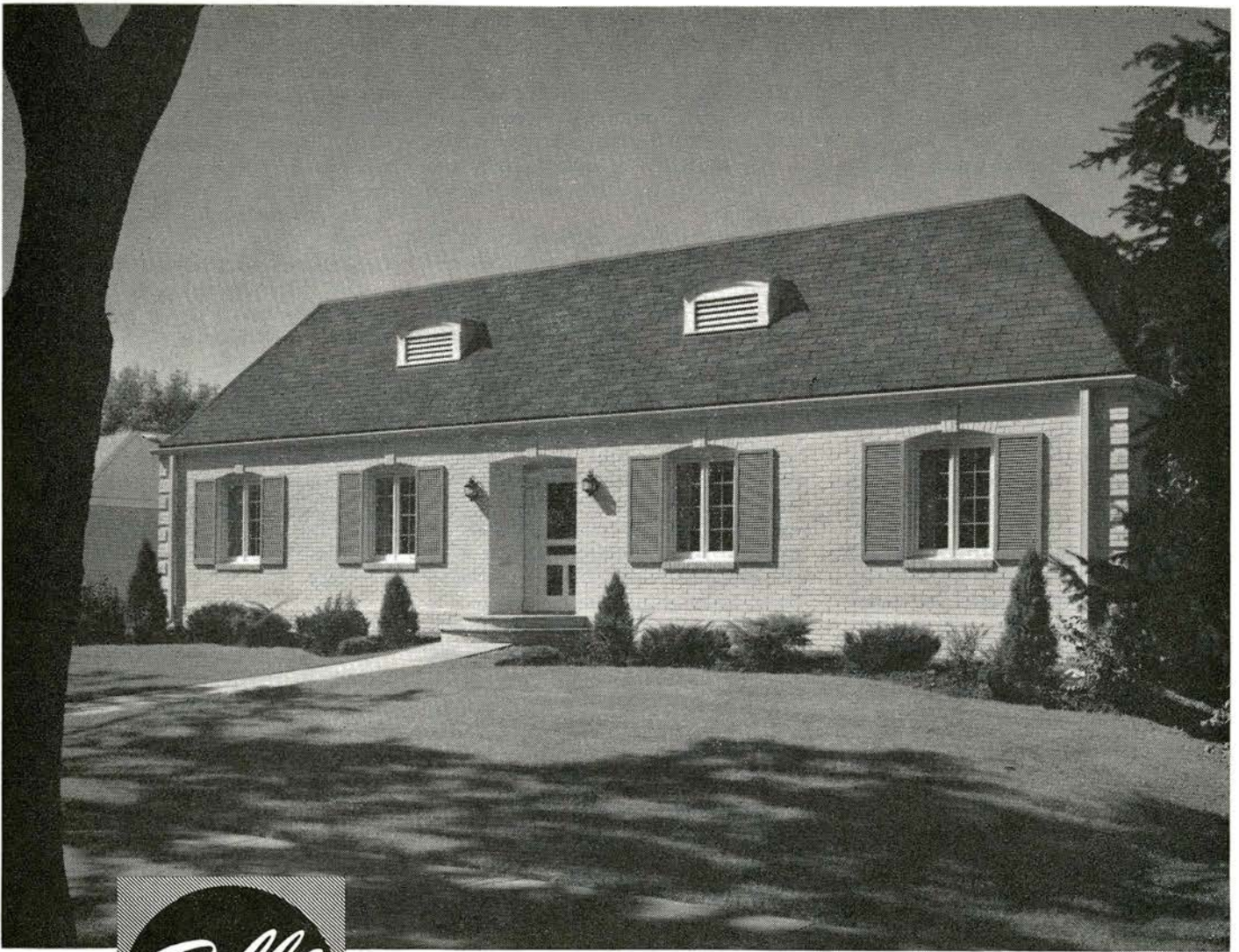
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study of present and future hydro requirements and submit a formal proposal for funds to finance the cost of removing overhead wiring. In many respects the fund would be similar to the Sewerage Fund established by the Federal Government last year. The proposal was preceded by an outline of the Institute's activities in leading a national campaign for the removal of overhead wiring during the past 15 months, emphasizing that the response from the nine Provincial Association and from other interested organizations, had been most encouraging. The President noted that substantial headway was being made in the placing of new wiring underground in new residential subdivisions, but noted that while some progress had been made in the removal of overhead wiring in the central areas of municipalities, this problem was the most serious, and required very long range planning and some form of Federal financial assistance. The President noted that many Canadian municipalities will be looking for projects they can develop as a means of celebrating the Canadian Centennial in 1967, and he expressed the view that, given the stimulus of planning for 1967, a joint program for

progressive removal of the wiring over 10 to 20 years could be developed at all levels of Government.

The President concluded by asking if there was any possibility of funds in Part V of the National Housing Act being made available to Municipalities to pay the costs of investigation into carrying out overhead wiring removal programs.

In reply Mr Bates expressed his gratification at the results of the Institute's national campaign against overhead wiring, and expressed the opinion that the first step to be taken was to concentrate effort in promoting underground wiring in newly developing areas. He felt that while assisting individual municipalities in assessing costs of long-term programs for removing overhead wiring had considerable merit, in his view a necessary preliminary step was to conduct a study to clarify the longstanding question as to the comparative costs of overhead versus underground utility systems. If such a study, he felt, was carried out, it might satisfy to a large extent the recommendation in the RAIC's Residential Environment report which urged that this kind of a study be undertaken. He therefore asked the Insti-

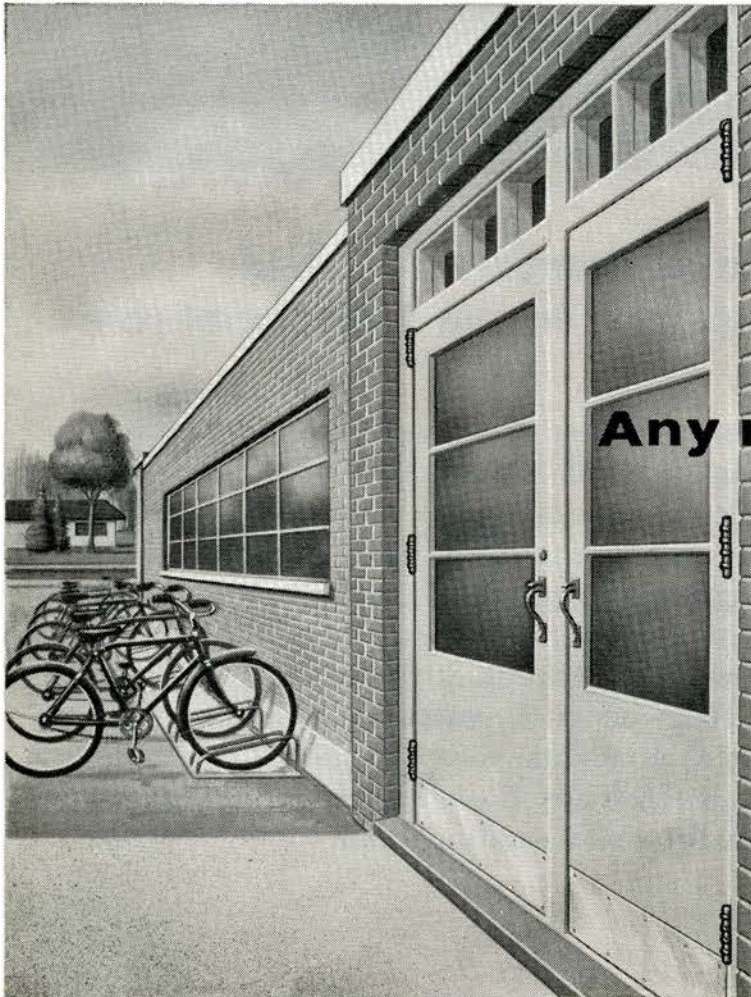
tute to consider sponsoring and organizing a committee for this purpose, and also to examine costs involved in placing underground the existing overhead wiring in downtown urban areas. If the Institute would undertake this task, CMHC might consider the question of whether Part V of the National Housing Act funds could be made available to finance the studies.

Conference on Shell Structures

The 1962 World Conference on Shell Structures will be held in San Francisco October 1-4. The conference will bring together architects, engineers, researchers and builders to discuss architectural and structural design of thin shell structures. Members interested may obtain further information from the secretary of the general arrangements committee, Prof. A. C. Scordelis, 201 Engineering Materials Laboratory, University of California, Berkeley.

Canada Council Grants

Canada Council grants of \$2,000 each, chiefly to commission sculpture or murals for new buildings, have been accepted by the University of New Brunswick, Fredericton; the University



Any minute now from out of those doors will gush four hundred excited youngsters—bumping, thumping, tumbling, against the door, in and out, in the morning, at recess, at noon, another recess, and finally off to home. Four hundred bumps, eight times a day, five days a week, forty weeks a year . . . several thousand reasons for specifying sturdy door hardware—shockproof STANLEY pivot reinforced hinges.

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University, Edmunston, N.B.; the Kitchener Public Library and the Convent of the Sacred Heart, Halifax.

Register of Designers

The National Design Council at Ottawa is establishing a Register of Designers with a view to assisting manufacturers to locate design service best suited to their needs and, at the same time, assist industrial designers through the Council's programs and activities. Industrial designers wishing to place their names on the Register should write the Office of the Director, National Design Branch, Department of Trade and Commerce, Ottawa.

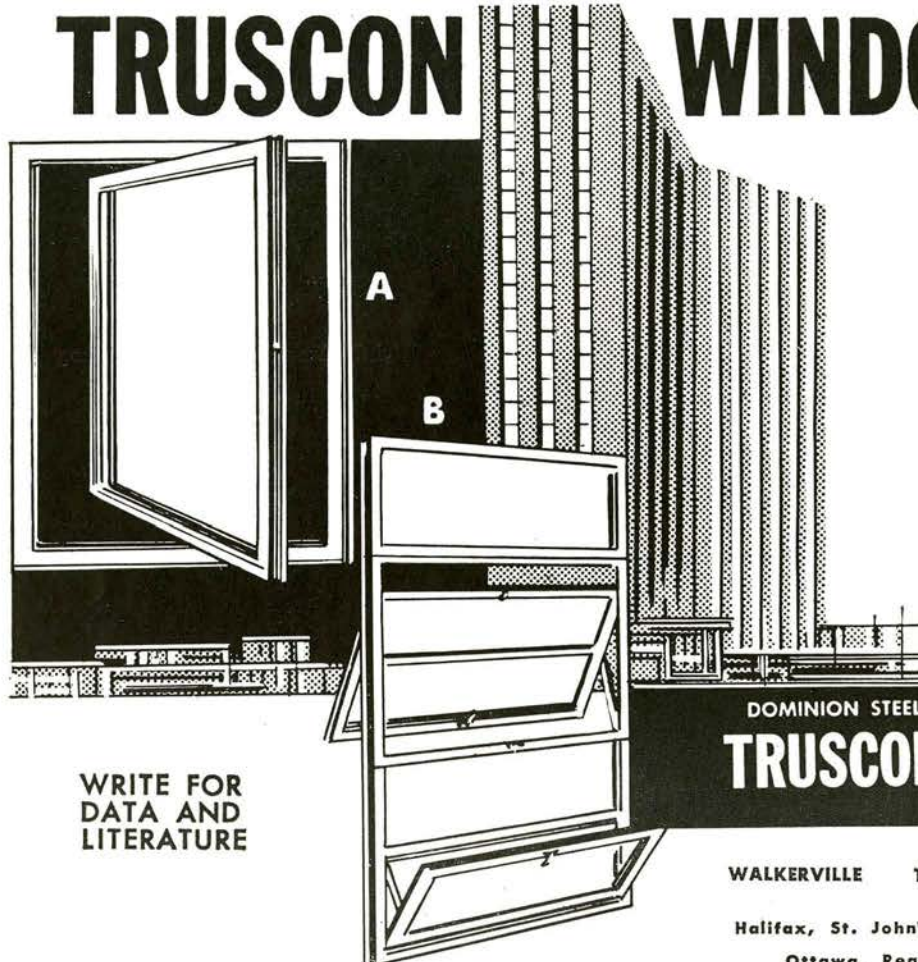
Index of Specifications

Copies of the new CGSB Index of Specifications, NRC No. 6703, dated 3 January 1962, and the 1961 Annual Report NRC No. 6694, are now available upon request to the Secretary, Canadian Government Specifications Board, National Research Council, Ottawa 2. The CGSB Index of Specifications lists all specifications issued by the Board up to 29 December 1961, and supersedes NRC 6158 and its quarterly supplements. The 1961 Annual Report contains a review of activities of the twenty-eighth year of operation of the Board.

Halifax Plans Aesthetics Control

The City of Halifax has requested three members of the Nova Scotia Association of Architects to aid in forming an Advisory Appeal Committee of Aesthetic Control. Charles Fowler, President of the NSAA, John L. Darby, Past-president, and Lester J. Page met with civic authorities, headed by Mayor John E. Lloyd and City Aldermen O'Brien, Wyman and Trainor, to form the terms of reference of this new Committee, and to discuss whatever legislation is needed.

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REGISTRATIONS

The Alberta Association of Architects
March 21, 1962

Rose, James Stirling, B.Arch. (Man), 326
Seventeenth Avenue N.W., Calgary, Alta.
(*J. A. Cavston & Associates*).

Erb, Donald Ralph, B.Arch. (Man), 178
Springwood Drive, Calgary, Alta. (*J. A.
Cavston & Associates*).

Proppe, Eric, B.Arch. (Man), 3505-17th
Avenue N.W., Calgary, Alta. (*Gerhard
Blum, Architect*).

NOTICES

Lorne E. Marshall (F) and J. Camp-
bell Merrett of Barott, Marshall and
Merrett, announced that from March 1
the firm will be known as Marshall and
Merrett, with offices at 1425 Mountain
St, Montreal 25.

Mr D. V. Grayson, MRAIC, newly
appointed Architect and Properties
Manager for the Board of Education,
St Catharines, Ont, would appreciate
receiving manufacturers' literature to
aid him in establishing new trade files.

Shore & Moffat, Toronto, have taken
into full partnership the seven previous
associates, and will now practise under
the name of Shore & Moffat and Part-
ners. The seven new partners are: Don-
ald M. Blenkhorne, William N. Greer,
Arthur W. Henschel, Jules R. Petrinc,
Paul M. W. Stafford, James E. Stan-
ners and Alfred P. Tilbe.

Positions Wanted

Building Inspector and Clerk of
Works, 25 years experience in public
works, National Defence and housing,
seeks position with architectural firm.
Any location. J. Lee, 18 Wellington
Avenue, Victoria, B.C.

Second year student, London Poly-
technic School of Architecture, would
like three months employment in
architect's office in major Canadian
city, beginning July. John S. Field,
322A Oakleigh Rd, Whetstone, London
W.20.

COMING EVENTS

May 11-12

Regional Planning Conference
Community Planning Association
of Canada

Park Plaza Hotel, Toronto

May 17-18

Eighth Annual Canadian Muskeg
Research Conference
University of Saskatchewan

May 20-23

1962 International Symposium
on Humidity and Moisture
Sheraton Park Hotel, Washington

May 30-June 2

55th Annual Assembly
Royal Architectural Institute of Canada
Bayshore Inn, Vancouver, B.C.

July 15-18

Second Seminar on Civic Design
Festival Theatre, Stratford, Ont.



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A completely sealed version of "Nylo-Slide" sashless window available in more than 100 shapes and sizes. For details write to **H. G. Designs Ltd., Pickering, Ontario.**

The EMPRESS bathroom cabinet featuring a marble cabinet top that is the result of a new marble process retaining the beauty of marble without its practical disadvantages. The new marble is highly resistant to all types of stains, easy to clean, and remarkably break-resistant. For details, write **Dura Steel Products Co., 1774 East 21st Street, Los Angeles 58, California.**

A new design in lockers as shown by the Company at their exhibit at the Ontario Architect's Association Convention. For details, write **Sunshine Office Equipment Ltd., Waterloo, Ontario.**

A sculptured tile known as the "Diamond Pattern", 4¼" x 4¼" in size, available in all Vikon Tile lines: stainless steel, copper, enameled aluminum, porcelain-on-aluminum, and others. Information may be obtained by writing to **Vikon Tile Corporation, Washington, New Jersey.**

An adjustable metal carrier test plug with a thick rubber collar that is expanded by the turn of an ordinary nut. **Josam Products Ltd., 130 Bermondsey Road, Toronto 16, Ontario.**

Two new wood grain "Planks" — "Imperial Walnut" and "Samoan Teak." A new six-page colour catalog of Barclay's "Forest of Wood Grains" is available by writing to **Barclay Manufacturing Company, Dept. IW-62, Barclay Building, New York 52, New York.**

Two new "J" Series Electric Plants, a 10,000-watt Model 10JC and 15,000-watt Model 15JC, provide a versatile source of power, sized and designed to meet emergency standby power, mobile applications and portable applications. For detailed specifications write **Onan Division of Studebaker-Packard Corporation, 2515 University Avenue S. E., Minneapolis 14, Minnesota.**

NEW LITERATURE

Notice: Vapor Heating (Canada) Limited have changed their name to Vapor Heating Limited. Their address remains as 3955 Courtrais Avenue, Montreal 26, P.Q.

A folder entitled "Kurtzon Luminous Wall and Ceilings". Address inquiries to: **Morris Kurtzon, Inc., 1420 South Talman, Chicago 8, Illinois.**

"Copper Water Tube", a new 8-page publication by the Canadian Copper and Brass Development Association, is available in the English and French languages. The booklet deals with Types K and L copper water tube, and covers identification of tube, sizes and lengths available, choice of fittings, selection of tube sizes to obtain required flow in supply lines, and resistance to corrosion. Available without charge, from the **Canadian Copper and Brass Development Association, 55 Yonge St., Toronto, Ontario.**

INDUSTRY

Radiant Quartz Heaters utilizing quartz lamps with heat sources that operate at nearly 4000-degrees F, or quartz tubes with heat sources that heat to 1700-degrees F., both with an average life of over 5,000 hours are described in General Electric's new bulletin 49-536. Available from the **Electric Comfort Heating Section, General Electric Company, Appliance Park, Louisville, Ky.**

Room Thermostats, Controls and Humidistat for use with electric heating and cooling applications are described in General Electric's new bulletin 49-537. Available from the **Electric Comfort Heating Section, General Electric Company, Appliance Park, Louisville, Ky.**

A four-page folder illustrating the Uni-Pac deaerating boiler feed systems. Besides a photo evaluation of fabricated units, the folder also shows schematic diagrams of systems, with and without integral surge tanks. Additional detail can be obtained by writing for Bulletin 1.107 from **Cochrane Division, Crane Co., 17th Street and Allegheny Avenue, Philadelphia 32, PA.**

4 page brochure on Lift Lite balances for vertical sliding chalkboards, tackboards, wardrobe doors and pass windows. **The Unique Sash Balance Co. Ltd., 7590-19th Avenue, Ville St. Michel (Montreal) P.Q.**

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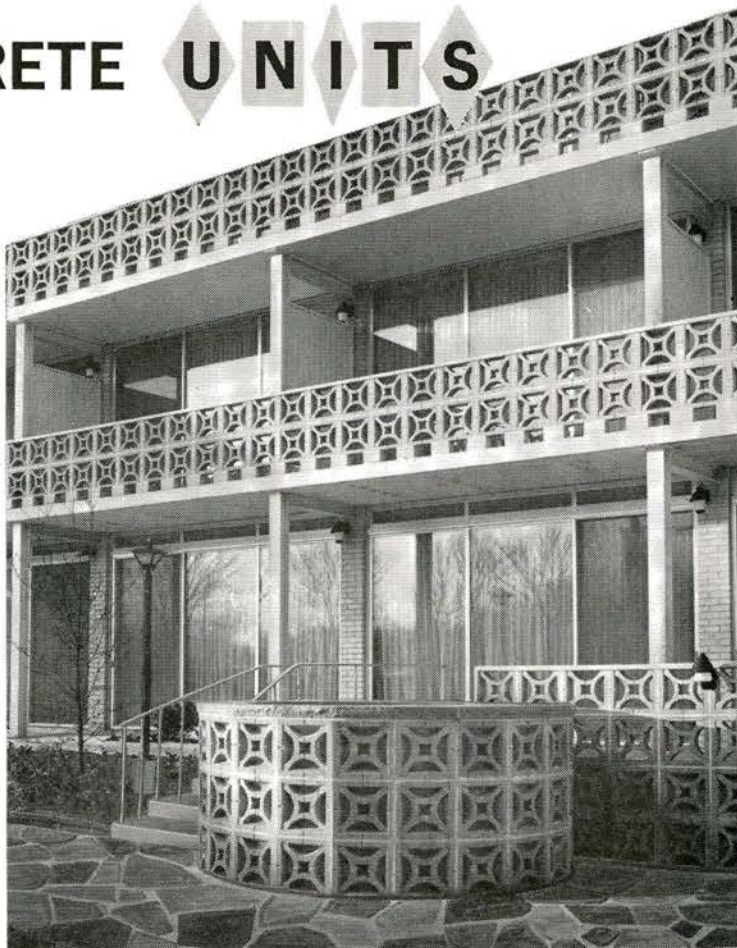
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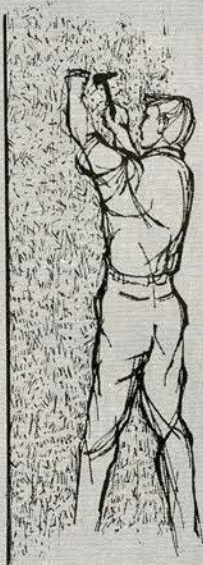
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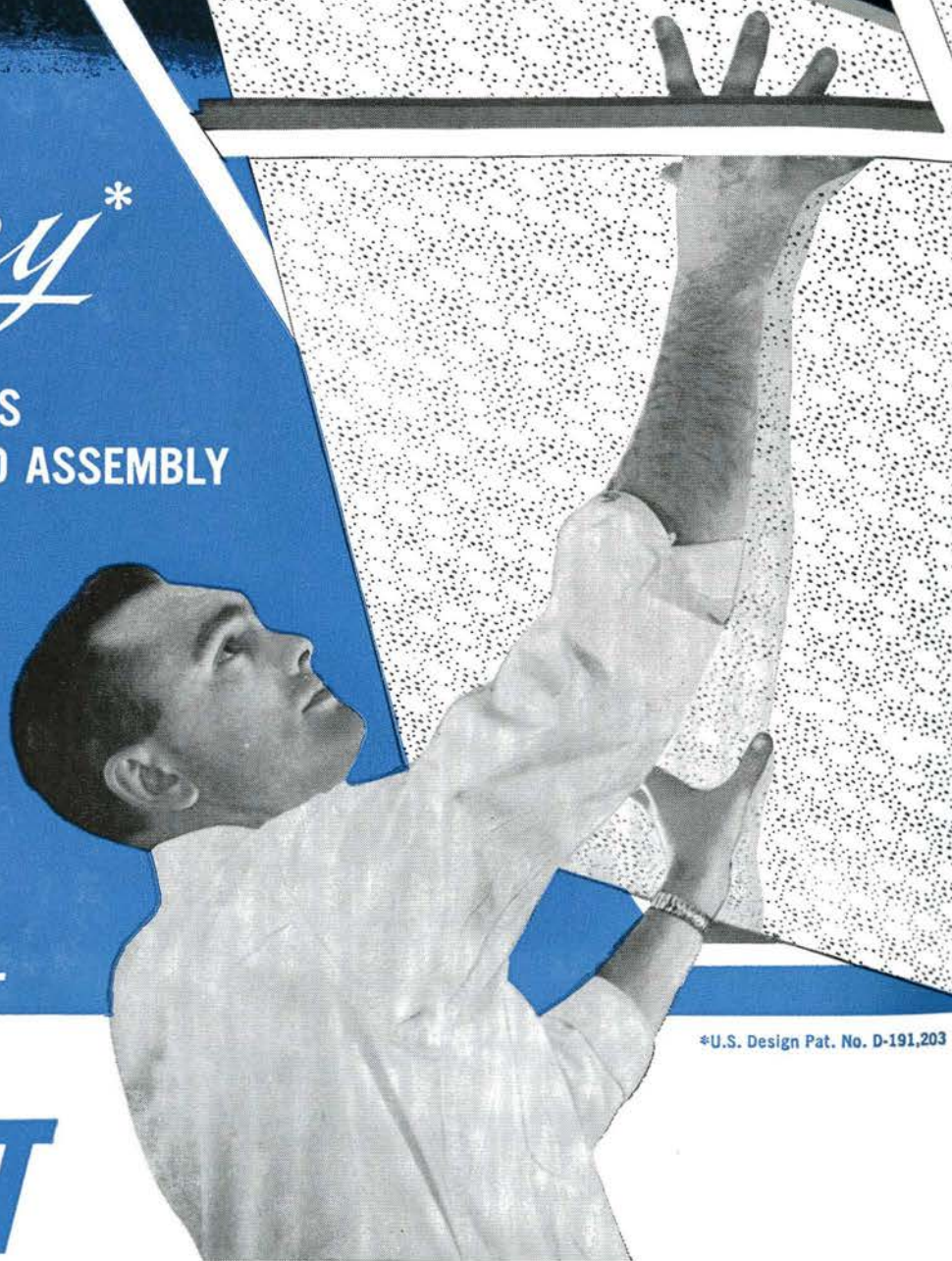
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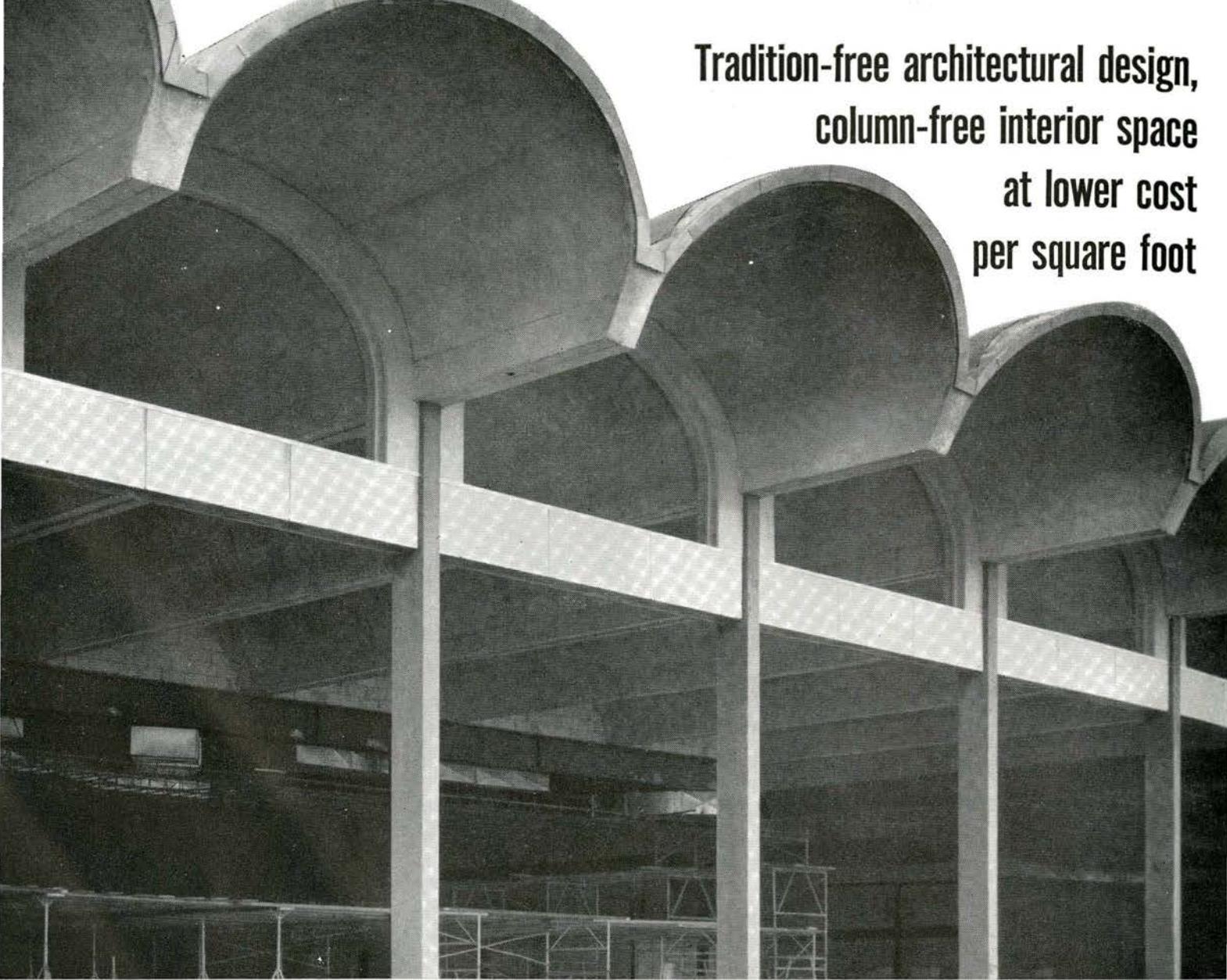
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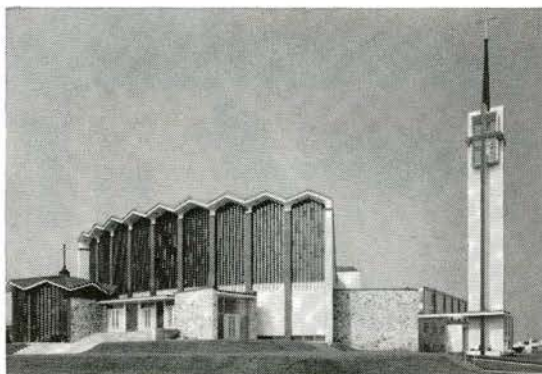
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Construction view of precast concrete thin shell roof sections for Steinberg's store at Riverside Shopping Centre, Eastview, Ont. Architects: Dawson & Baker, Montreal. Consulting Engineer: Dr. Felix M. Kraus, Montreal. Manufacture of precast concrete shells: Hochelaga Precast Structures, Ltd., Montreal. General Contractors: Beta Construction Ltd., Montreal, and Geo. A. Crain & Sons Ltd., Ottawa.



Interior of the gymnasium of Samuel de Champlain School, Ville Jacques-Cartier, Que. Architects: René Richard, Hull, Que. Associate Architect: Maurice Gauthier, Montreal. Structural Engineers: Bourgeois & Martineau, Montreal. General Contractor: Conrad Forget Inc., St. Jovite, Que.



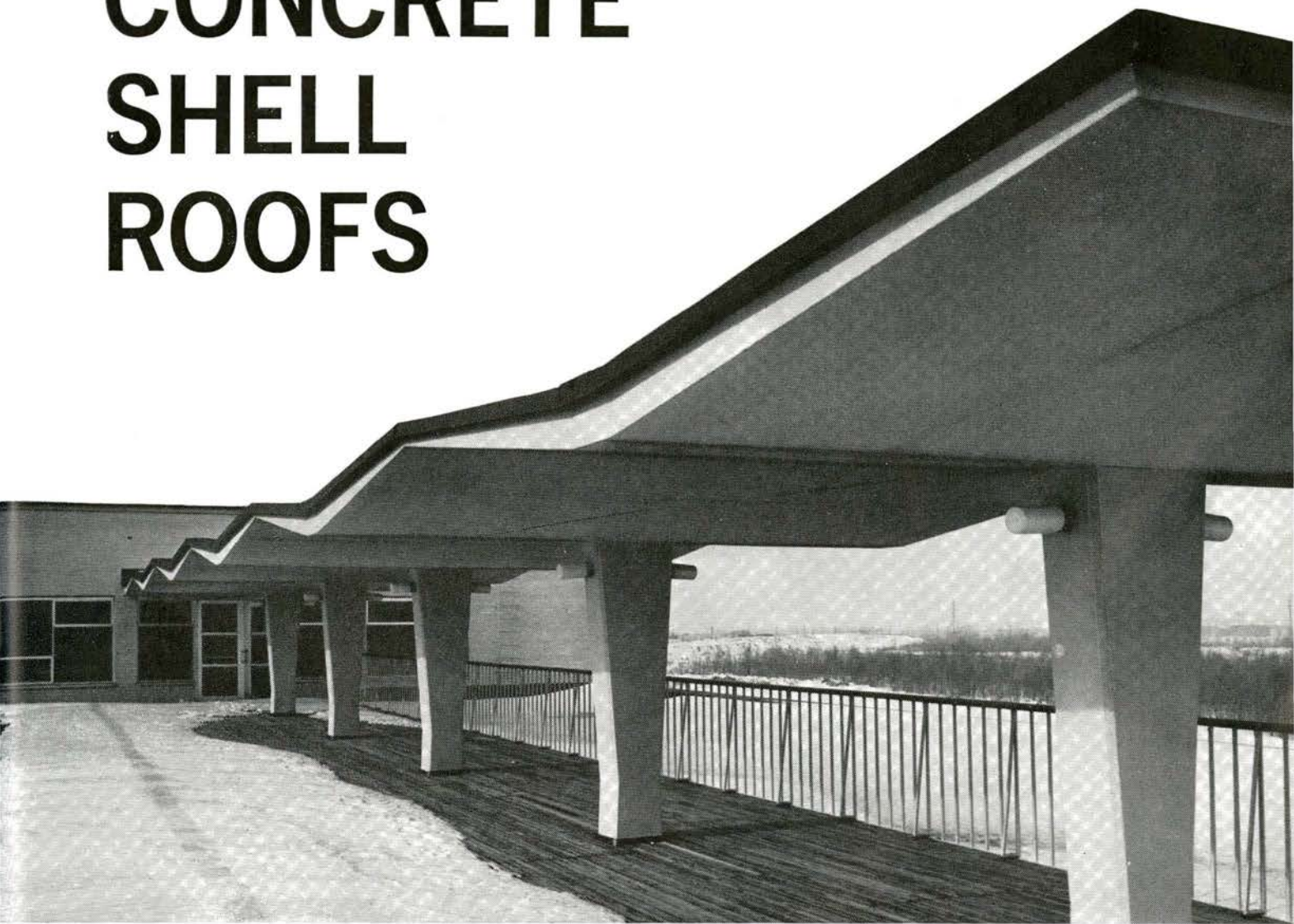
Centre Martial Montfortain, Montreal. Architects: Roux, Morin & Langlois. Structural Engineers: Jean F. Gagnon & Associés, Inc. General Contractor: Desourdy Construction Ltée.



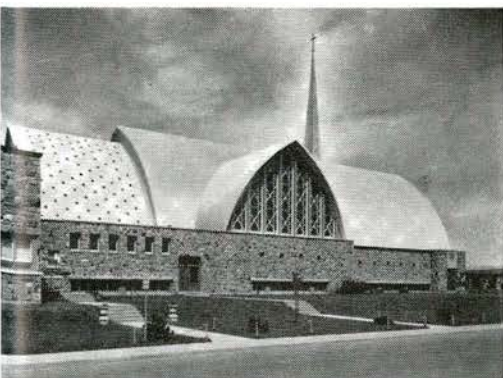
Queen Elizabeth Building, Canadian National Exhibition, Toronto. Architects: Page & Steele. Consulting Engineers: Hooper & Yolles. General Contractor: Hughes Construction Company Ltd.

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Laval Institute of Technology, Montreal. Architects: **Dufresne & Boulva**. General Contractor: **Collet Frères Ltée**, Montreal. Structural Engineers: **Beaulieu, Trudeau & Associates**.



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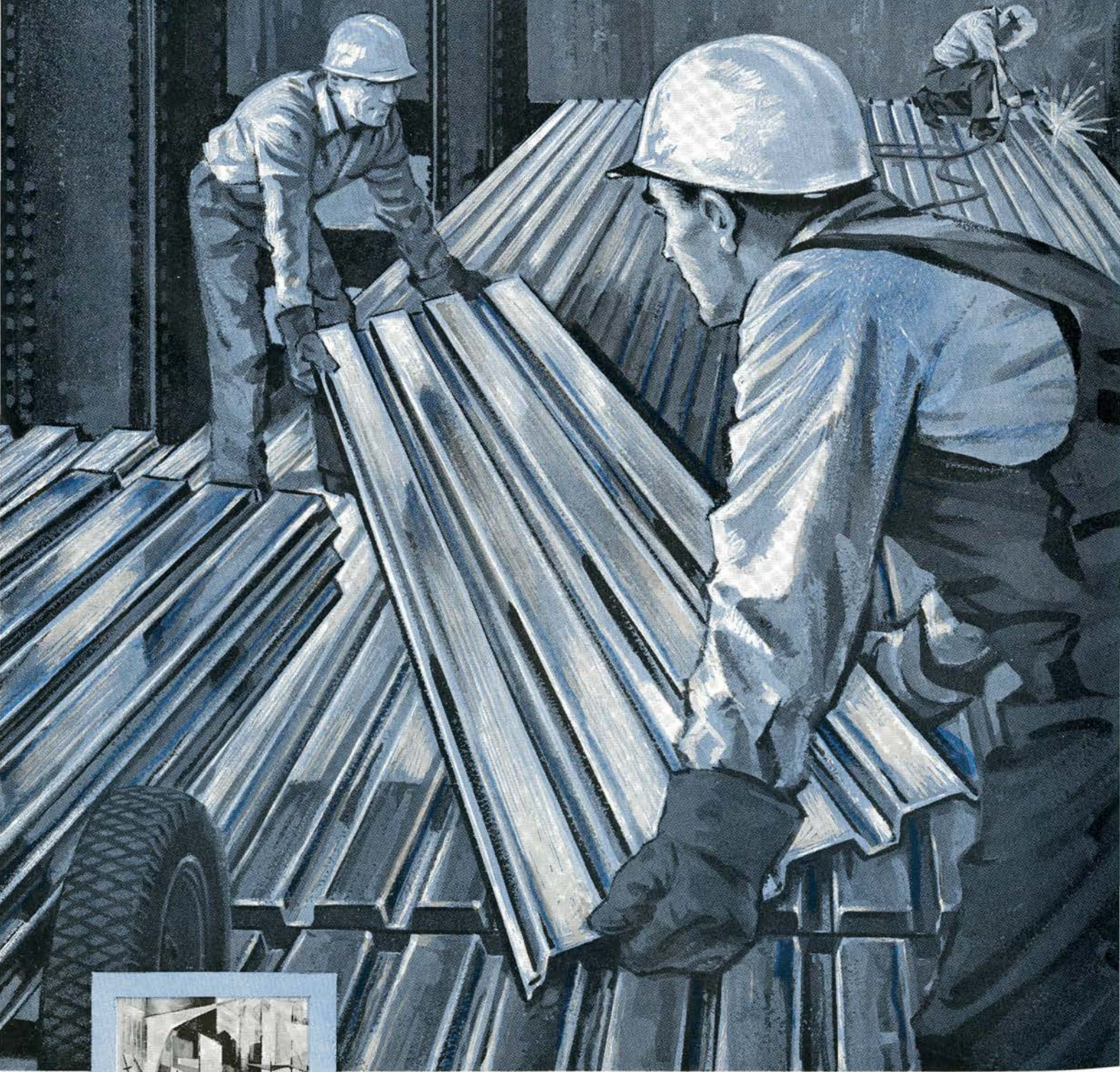


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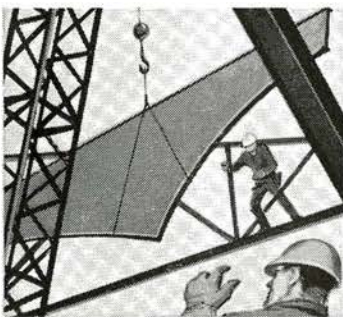
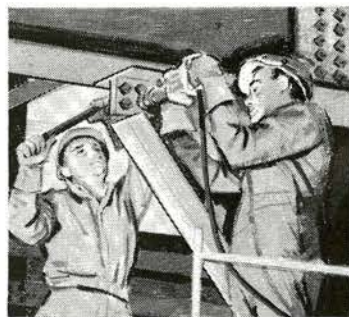
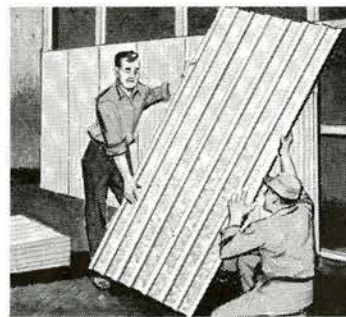


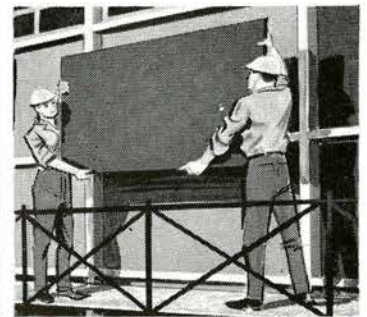
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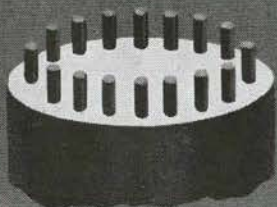
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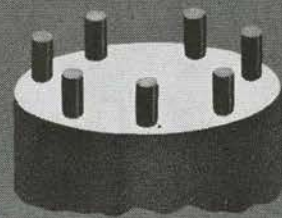
ROUND COLUMN DESIGN for a load of 1000 kips— $f^1c = 3750$ psi
spirals omitted in diagrams.



Conventional Design, with CSA
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28" column—4.28 sq. ft.
.158 cu. yd. concrete per ft.
16 No. 11 bars—85.01 lbs. steel
per lineal ft.



Conventional Design with fewer
A431 bars for smaller column
diameter
26" column—3.69 sq. ft.
.136 cu. yd. concrete per ft.
12 No. 11 bars—63.76 lbs. steel
per lineal ft.
Savings: Concrete 14%; Steel
26%, Floor Area 0.58 sq. ft.

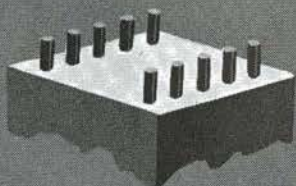


Conventional Design with larger
A431 bars for smallest column
diameter
24" column—3.14 sq. ft.
.115 cu. yd. concrete per ft.
4 No. 14S bars, 3 No. 18S bars—
71.4 lbs. steel per lineal ft.
Savings: Concrete 27%; Steel
16%; Floor Area 1.14 sq ft.

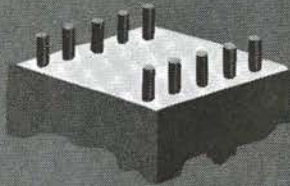
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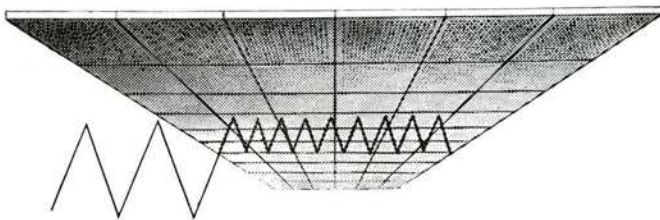
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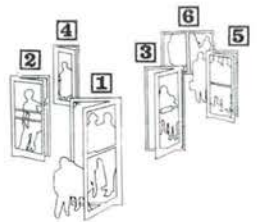
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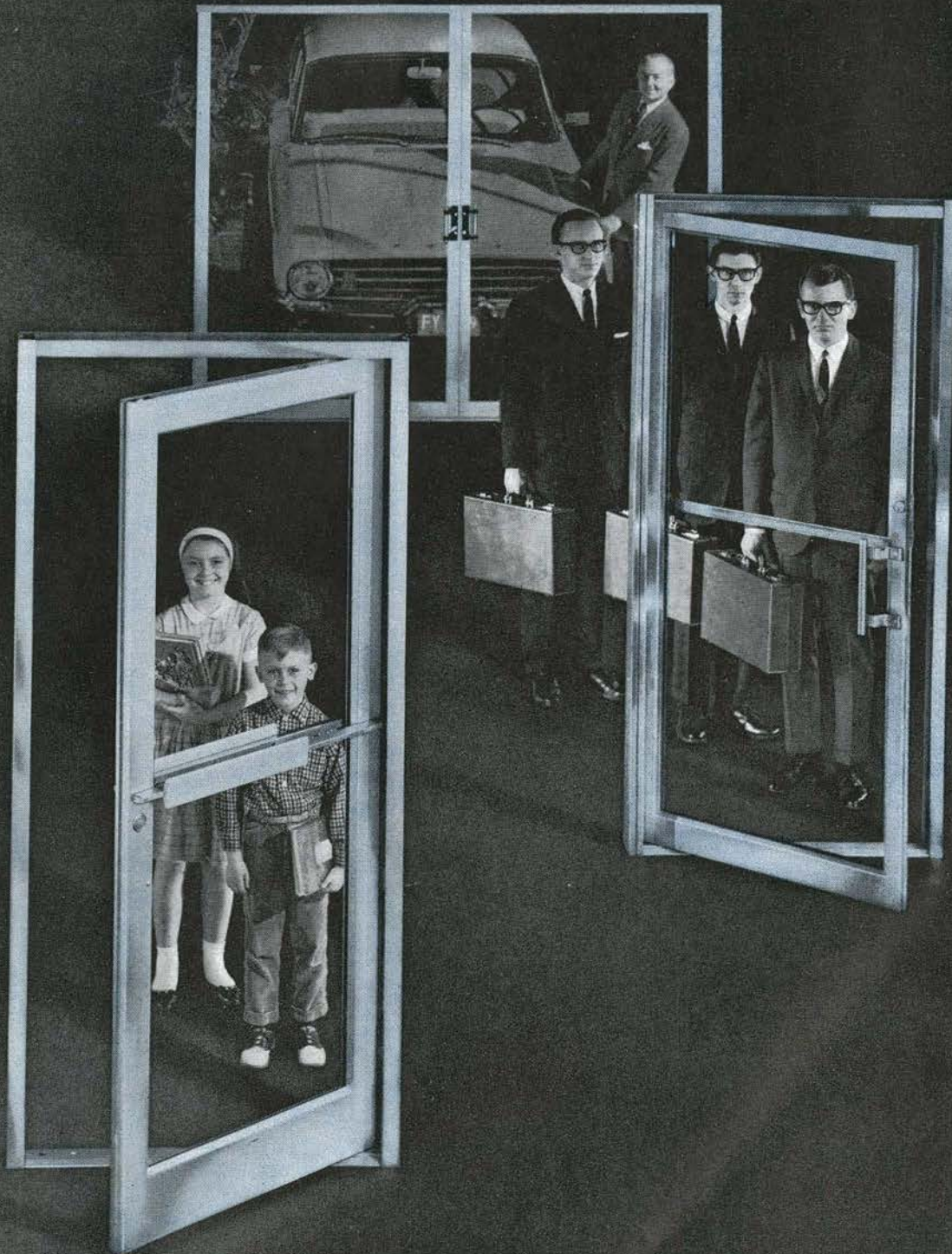
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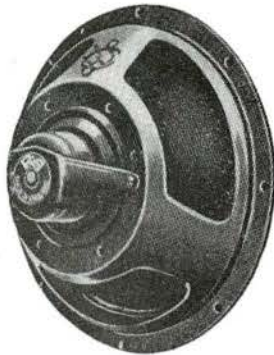
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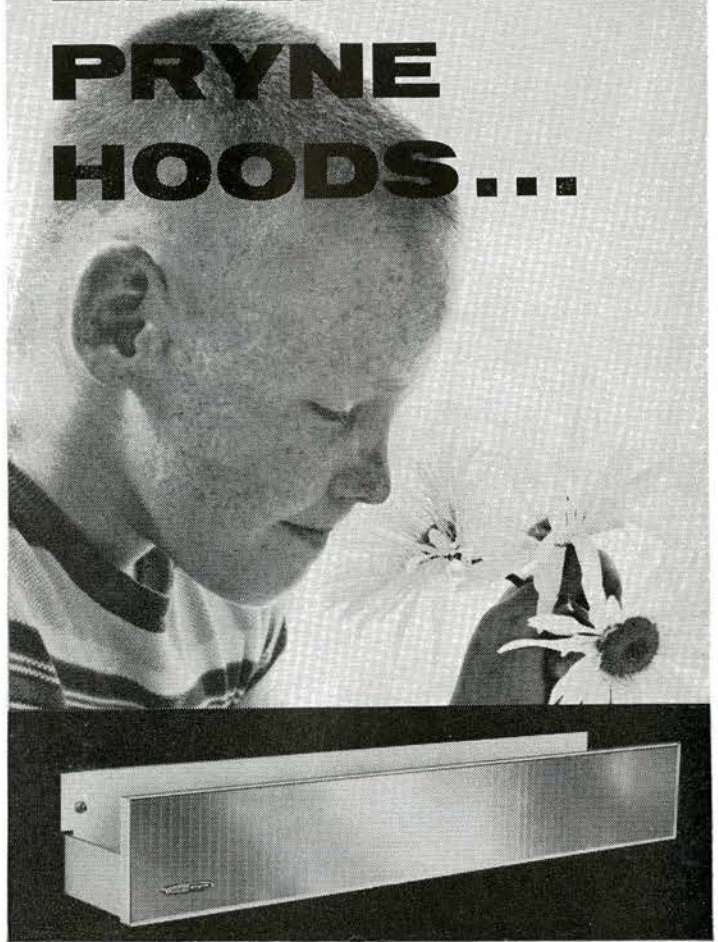
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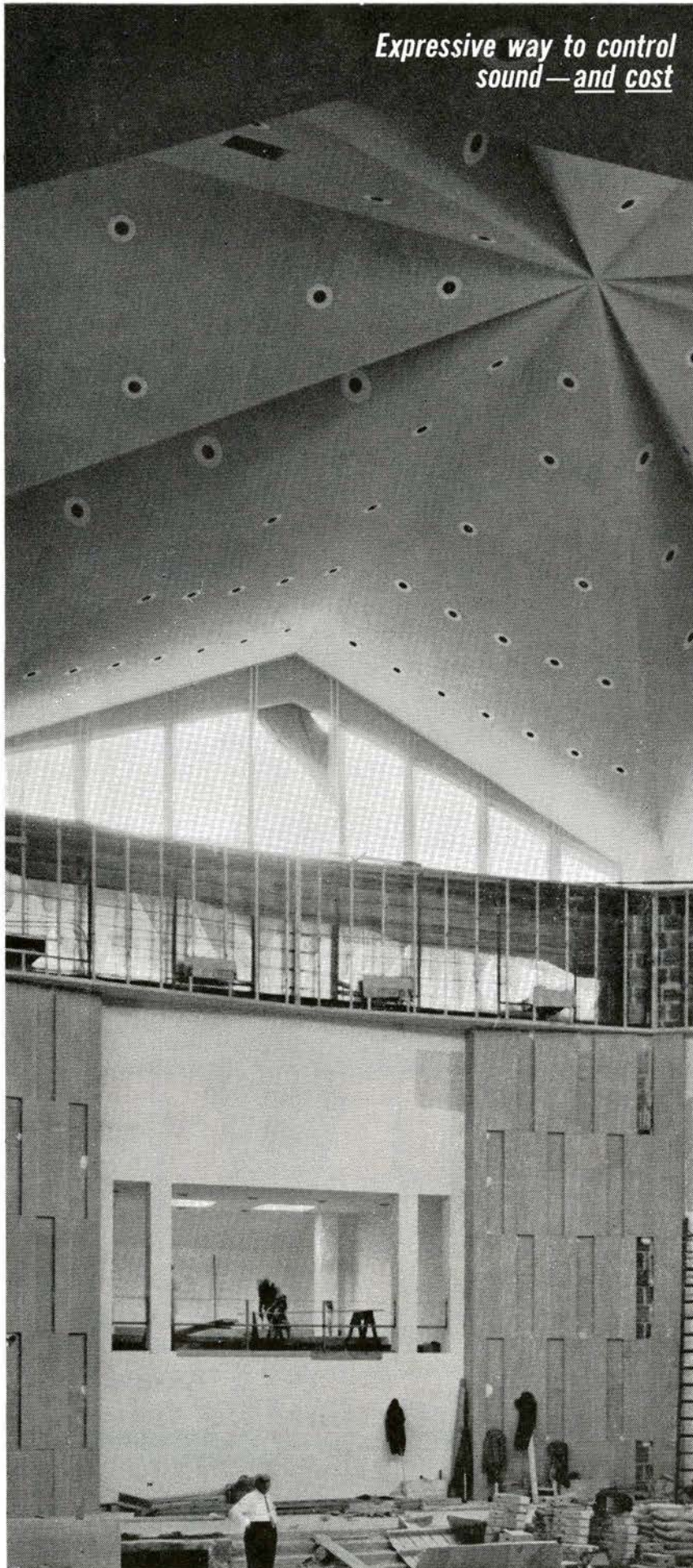
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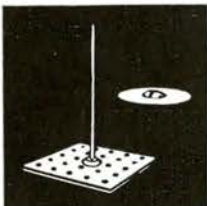
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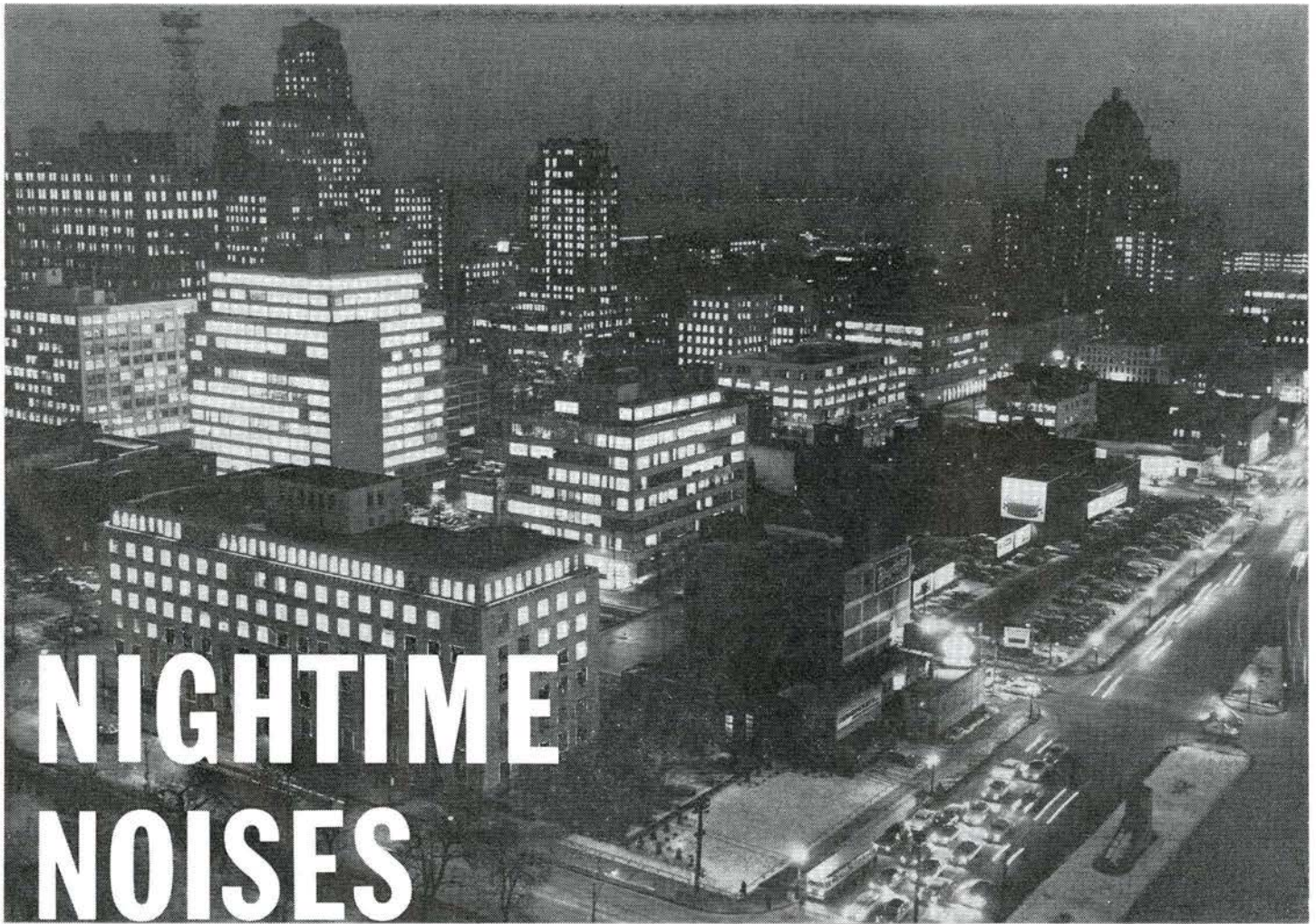
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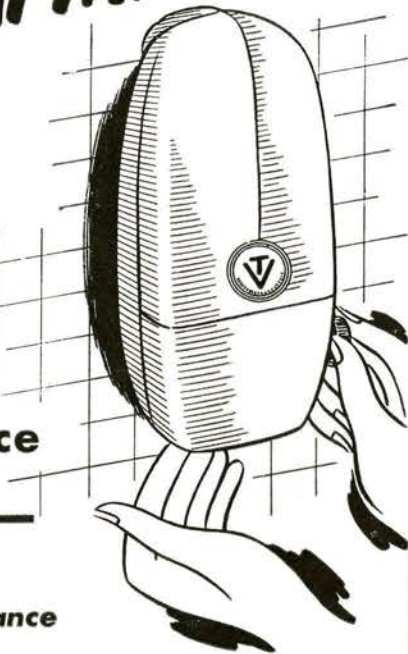
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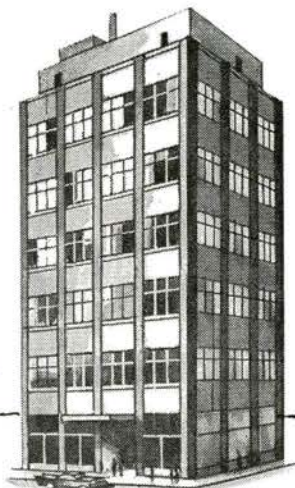
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INDEX TO JOURNAL ADVERTISERS

	Page
Anaconda American Brass Limited - - - - -	5
Aristocrat Manufacturing Company Ltd. - - - - -	103
Armstrong Cork Canada Limited - - - - -	13
Atlas Steels Limited - - - - -	Third Cover
Canada Cement Company, Limited - - - - -	88-89
Canadian Armature Works Inc. - - - - -	105
Canadian Crittall Metal Window Ltd. - - - - -	104
Canadian Gypsum Company Ltd. - - - - -	99
Canadian Johns-Manville Co. Ltd. - - - - -	94-95
Canadian Wood Development Council - - - - -	10-11
Combined Enterprises Limited - - - - -	17
Connor Lumber & Land Co. - - - - -	84
Corbin Lock Division, International Hardware Company of Canada Limited - - - - -	8
Coucell, Walter J. - - - - -	82
Cweco Industries Limited - - - - -	102
Delta Faucet of Canada Ltd. - - - - -	100
Dominion Aluminum Fabricating Limited - - - - -	22
Dominion Oilcloth & Linoleum Co. Limited - - - - -	9
Dominion Sound Equipments Limited - - - - -	86-87
Dover Corporation of Canada, Ltd. - - - - -	3
Dur-O-wal Ltd. - - - - -	Second Cover
Eldon Industries of Canada Limited - - - - -	98
Emerson-Pryne of Canada Ltd - - - - -	98
Fitness, Ray G., & Co. Limited - - - - -	100
Flake Board Co. Ltd. - - - - -	85
Hubert Industries - - - - -	100
Kawneer Company Canada Limited - - - - -	96-97
LCN Closers of Canada, Ltd. - - - - -	19
Lloyd Register & Grille Co. Limited - - - - -	83
Medicine Hat Brick & Tile Company Limited - - - - -	101
Medusa Products Company of Canada Ltd. - - - - -	84
Moyer Vico Ltd. - - - - -	103
Natco Clay Products Limited - - - - -	106
Northrop Architectural Systems Ltd. - - - - -	15
Otis Elevator Company Limited - - - - -	7
Pedlar People Ltd., The - - - - -	12
Peugeot Canada Ltd. - - - - -	4
Plywood Manufacturers Association of B.C. - - - - -	20-21
Ramset Fasteners Limited - - - - -	103
Residential Lighting Studio Co. Ltd. - - - - -	81
Riley's of Vancouver - - - - -	84
Rolscreen Company - - - - -	78-79
Rusco of Canada Limited - - - - -	Back Cover
Smith Manufacturing Limited - - - - -	82
Standard Desk Limited - - - - -	24
St. Lawrence Ceramics Ltd. - - - - -	23
Stanley Works of Canada Limited, The - - - - -	80
Steel Company of Canada, Limited, The - - - - -	90-91-92-93
Tremco Manufacturing Company (Canada) Limited, The - - - - -	6
Truscon Steel Works - - - - -	81
Vapor Heating Limited - - - - -	14
Venus Pencil Company Limited - - - - -	18
Westeel Products Limited - - - - -	16



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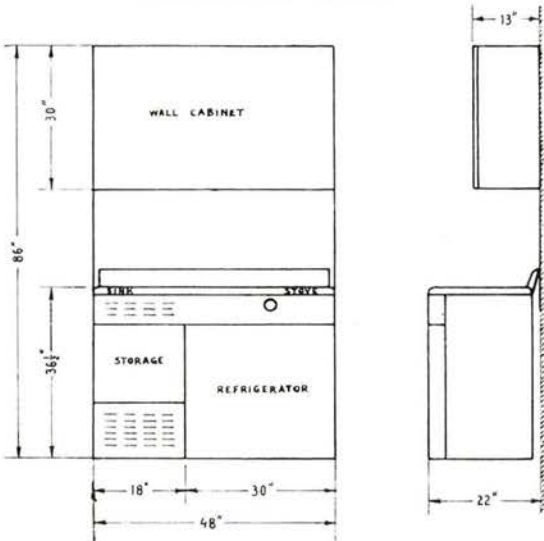
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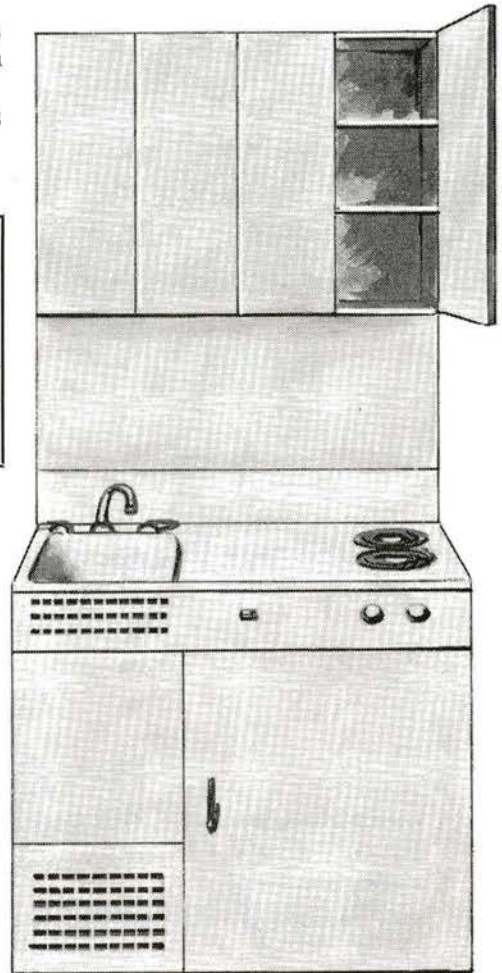
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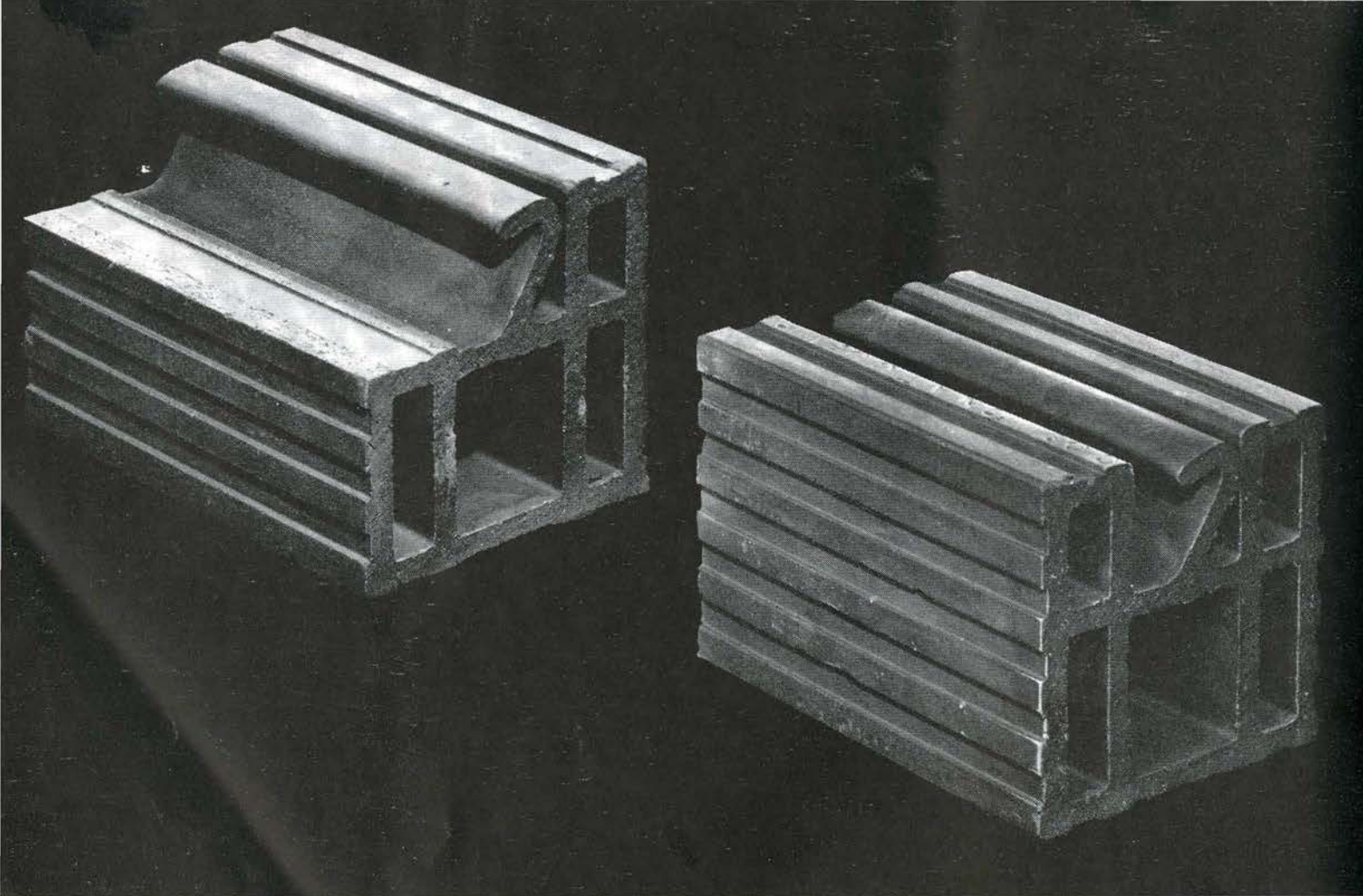
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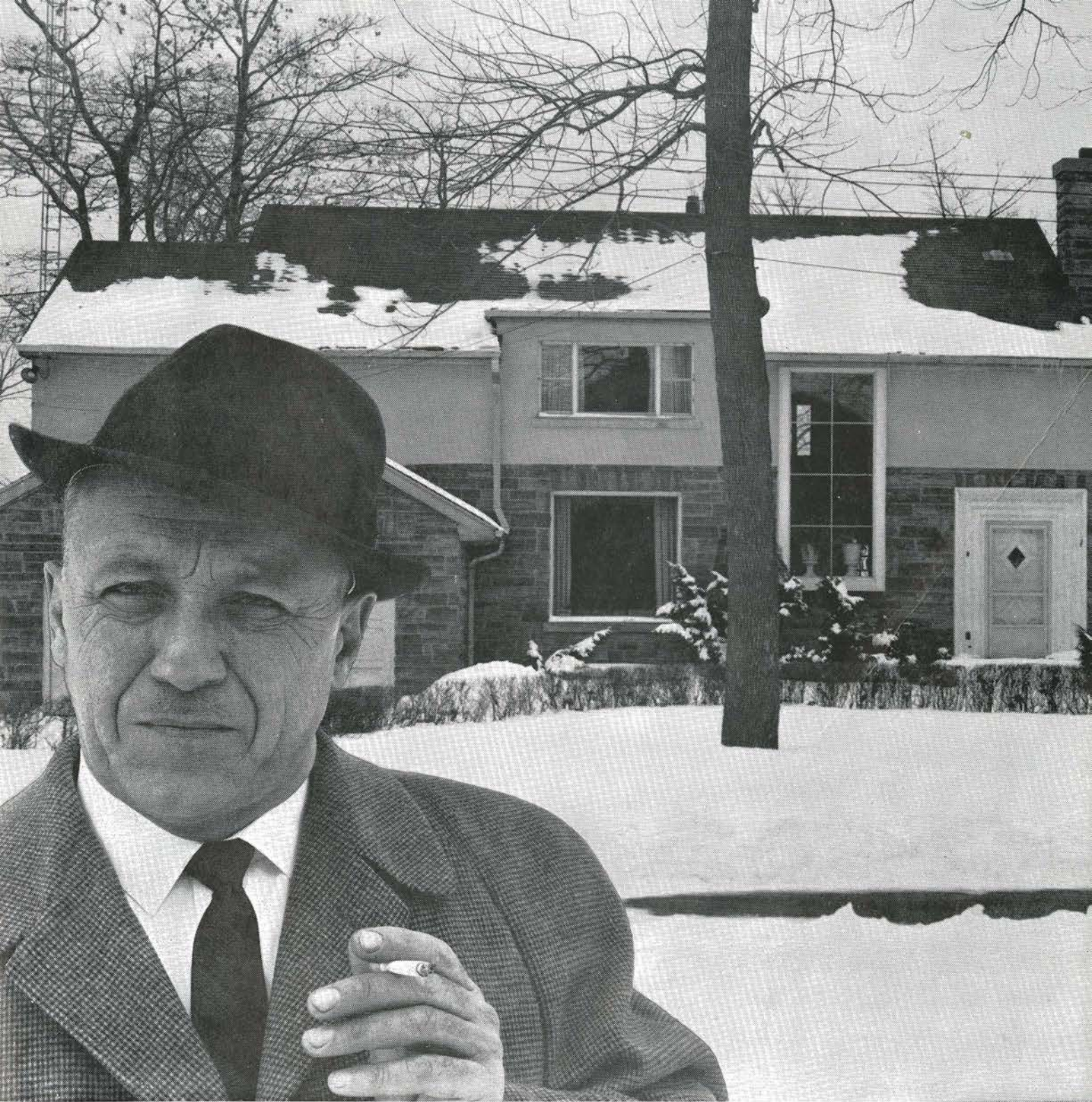
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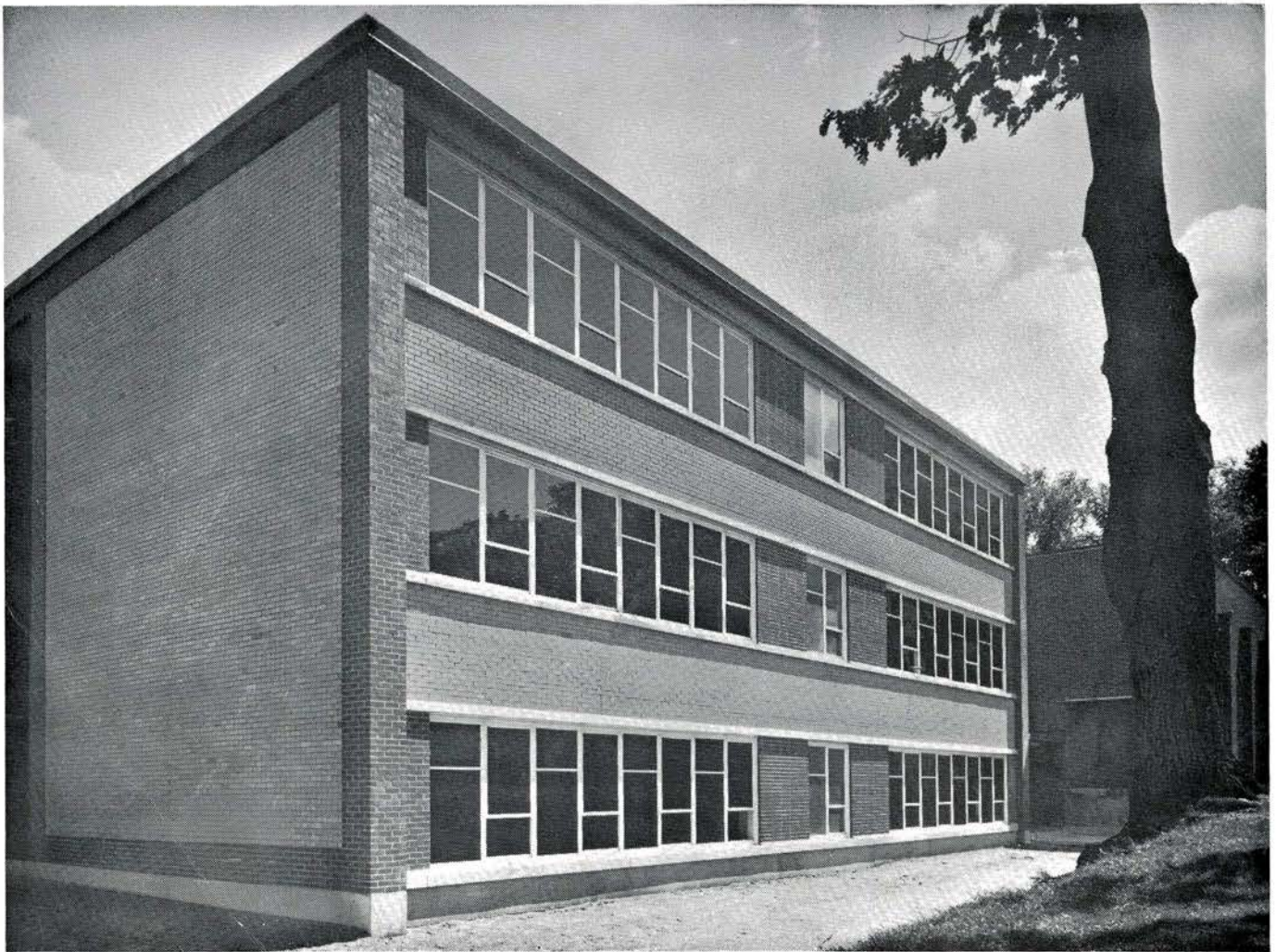
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