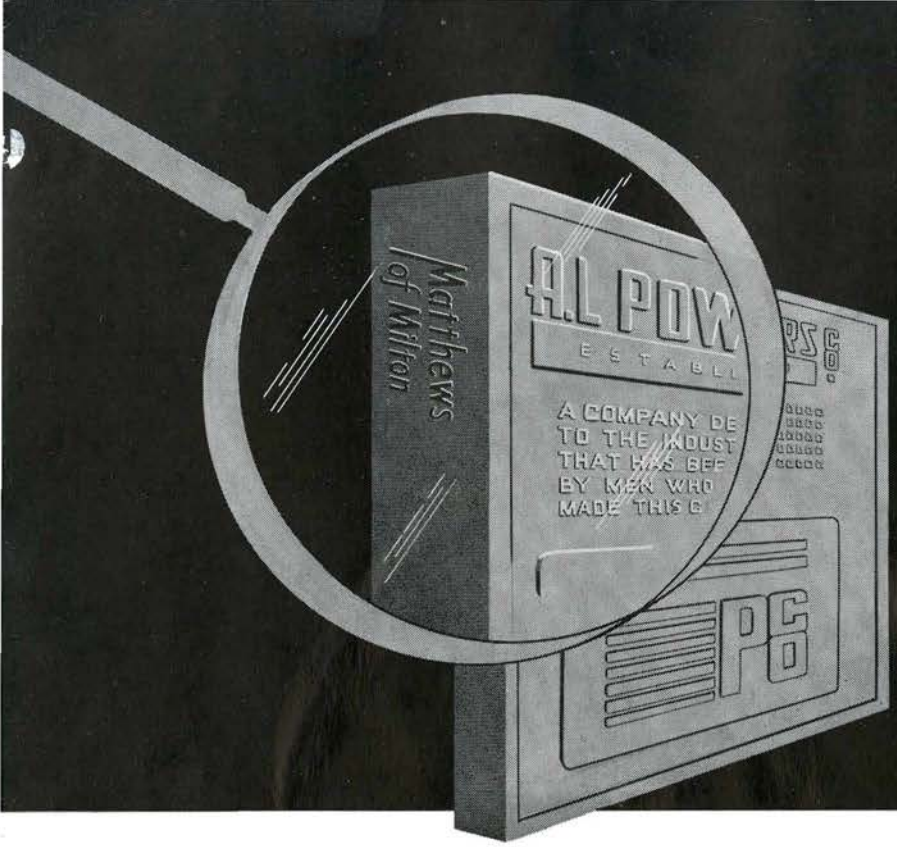
ROYAL ARCHITECTURAL INSTITUTE OF CANADA JOURNAL

JUNE 1962

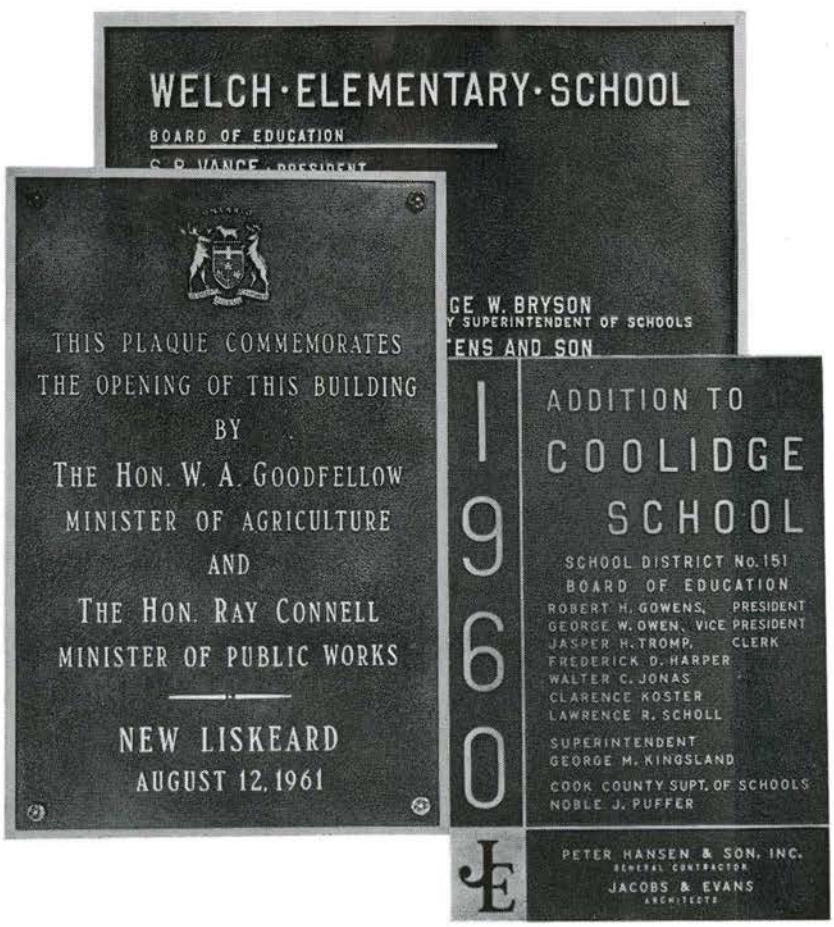
ROYAL ARCHITECTURAL INSTITUTE OF CANADA

INSTITUT ROYAL D'ARCHITECTURE DU CANADA



The Distinctive Edge

Whenever your tablet is identified by this stamp, you can be sure you have specified the finest in bronze or aluminum.



Standard or special in design . . . simple or difficult in execution . . . a small order or your biggest contract . . . whatev your problem, send it to us. You'll receive detailed sketches or drawings, quick and understandable quotations, and practical personal attention.

Our artists and engineers will be pleased to work closely with you on any project. From your blueprints, or just an idea, they will suggest the proper size, border and letter style for your tablet. Then with your approval, will prepare completely detailed drawings. Feel entirely free to call on us for this consulting service . . . at no charge or obligation.

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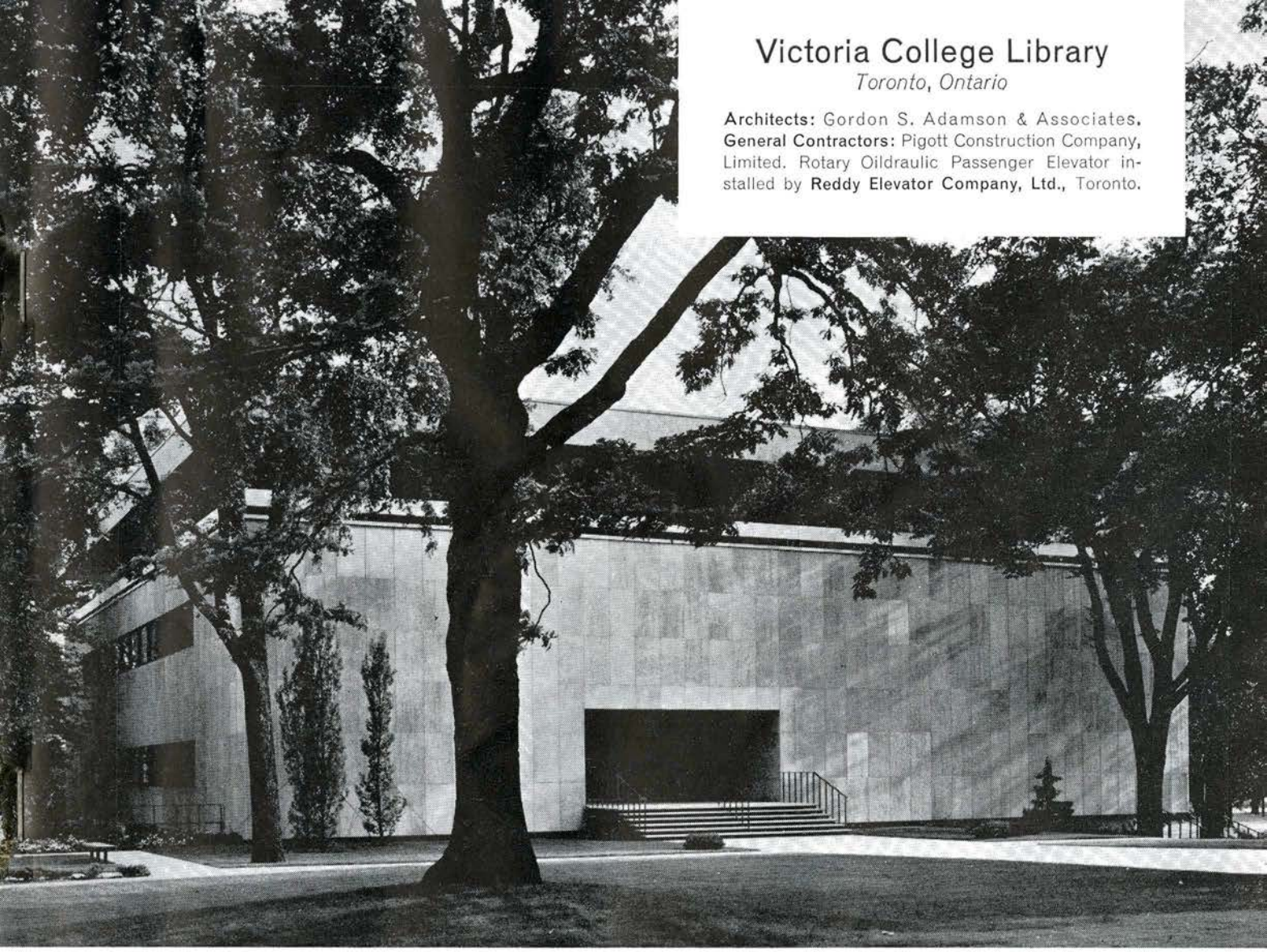
BOX 5, NIPISSING ROAD MILTON, ONTARIO



Victoria College Library

Toronto, Ontario

Architects: Gordon S. Adamson & Associates. **General Contractors:** Pigott Construction Company, Limited. Rotary Oildraulic Passenger Elevator installed by **Reddy Elevator Company, Ltd.**, Toronto.

A modern library uses the modern elevator...

Rotary® Oildraulic®

The architect of the Victoria College Library wisely specified a Rotary Oildraulic Passenger Elevator for that handsome building. In doing so he gained several advantages both for himself and for his client.

Rotary's Oildraulic operation offers the architect an advantageous freedom of design by eliminating the need for an elevator penthouse. Since it is pushed up from below by an oil-hydraulic plunger, and is self-supporting on the plunger, lighter, less costly shaft sidewalls are possible. The latitude permitted in location of the power unit makes possible better utilization of space.

To the owner, Rotary Elevators offer advantages in efficient, economical operation and lower maintenance requirements.

Controls and speeds are available for all traffic patterns. Modern cabs and entrances will complement any interior design.

Mail the coupon below for more detailed information on Rotary Oildraulic Elevators.

Rotary Oildraulic Passenger and Freight Elevators are manufactured in Canada by

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DOVER PRODUCTS CORPORATION
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Dover Products Corporation of Canada, Ltd., Elevator Division
140 Merton Street, Toronto 7, Ontario

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Company_____

Address_____

A unique dental clinic attests best to wood's natural adaptability and warmth. The simplicity of exposed beams and supports bolted together, the mixture of spaced and solid siding complementing one another—all present a friendly outside, promise a comfortable inside.

For economy with quality in a commercial structure

find the better way with WOOD

A good place to do business is in a place you plan with wood. The adaptability of wood weds structure and surroundings to create a friendly exterior, modern or traditional, for any establishment. Its unique integrity can enhance the interior of any building . . . whether in laminated beams overhead, planked flooring underfoot, or paneled walls all around. Wood's compatibility with other materials . . . with stone, glass, brick or metal . . . is wonderfully apparent in every application on any site.

Wood offers a favorable strength-weight ratio, an inherent resilience and a capacity for lasting wear. No matter how you shape it, or which of its diverse grains and tones you choose . . . wood maintains a natural beauty that is incomparable, a warmth that is genuine. For more information on designing with wood, write:

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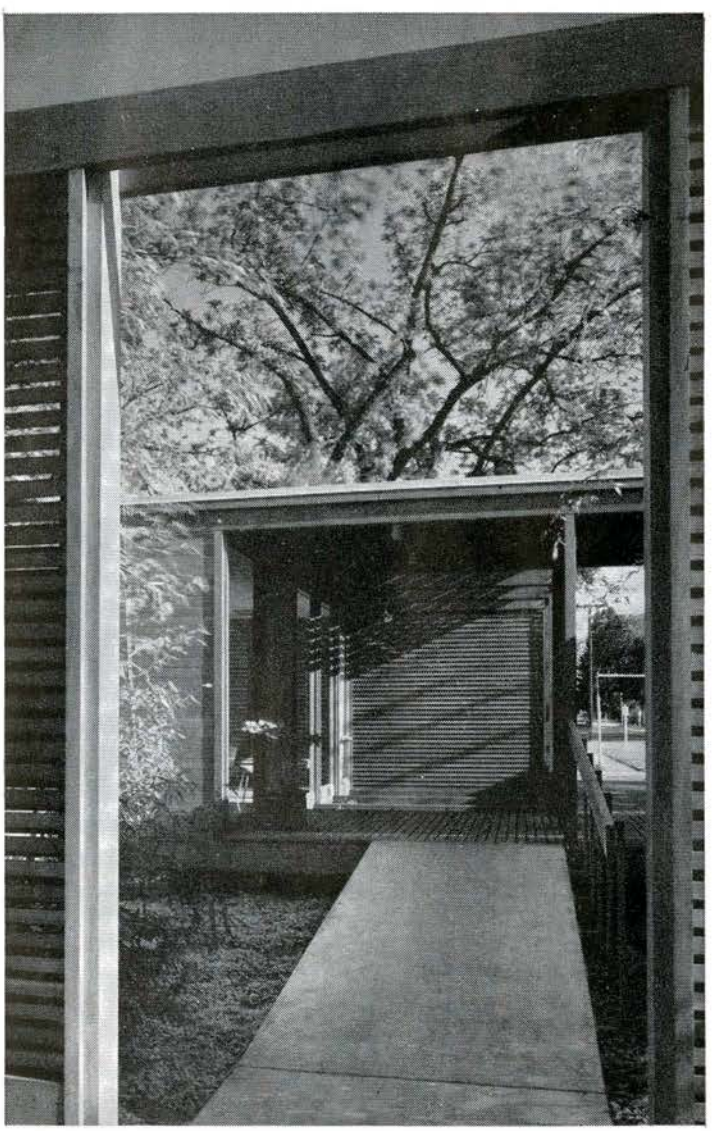
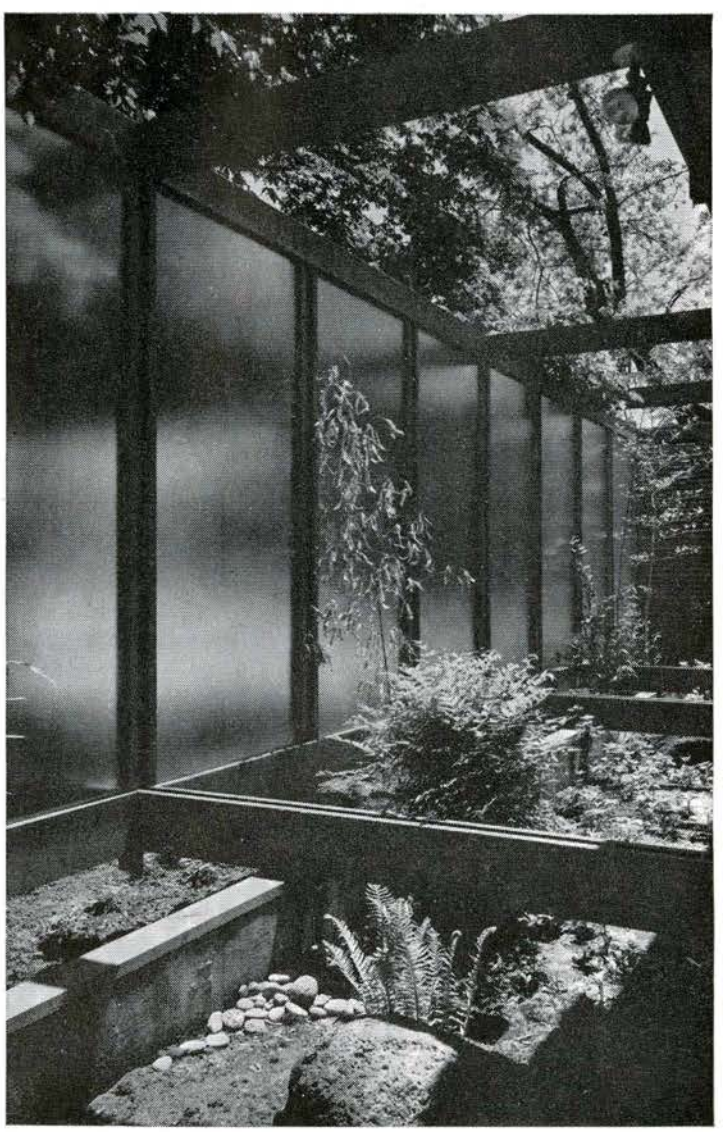
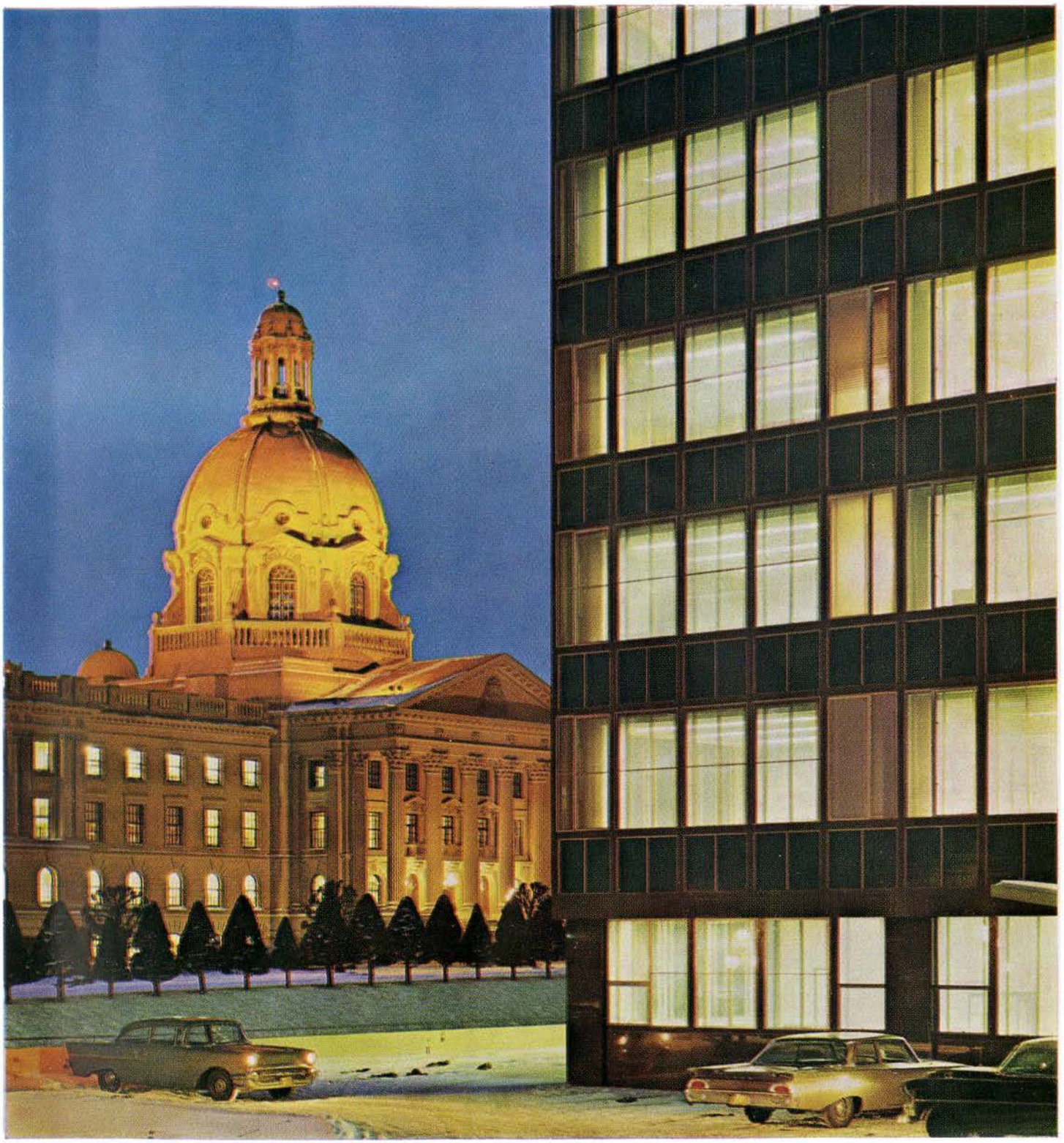


Wood bares still more of its friendliness in the dental clinic's intimate courtyard. The wall of spaced siding offers ample privacy with open-air freedom, clearly demonstrates one of wood's many economies.



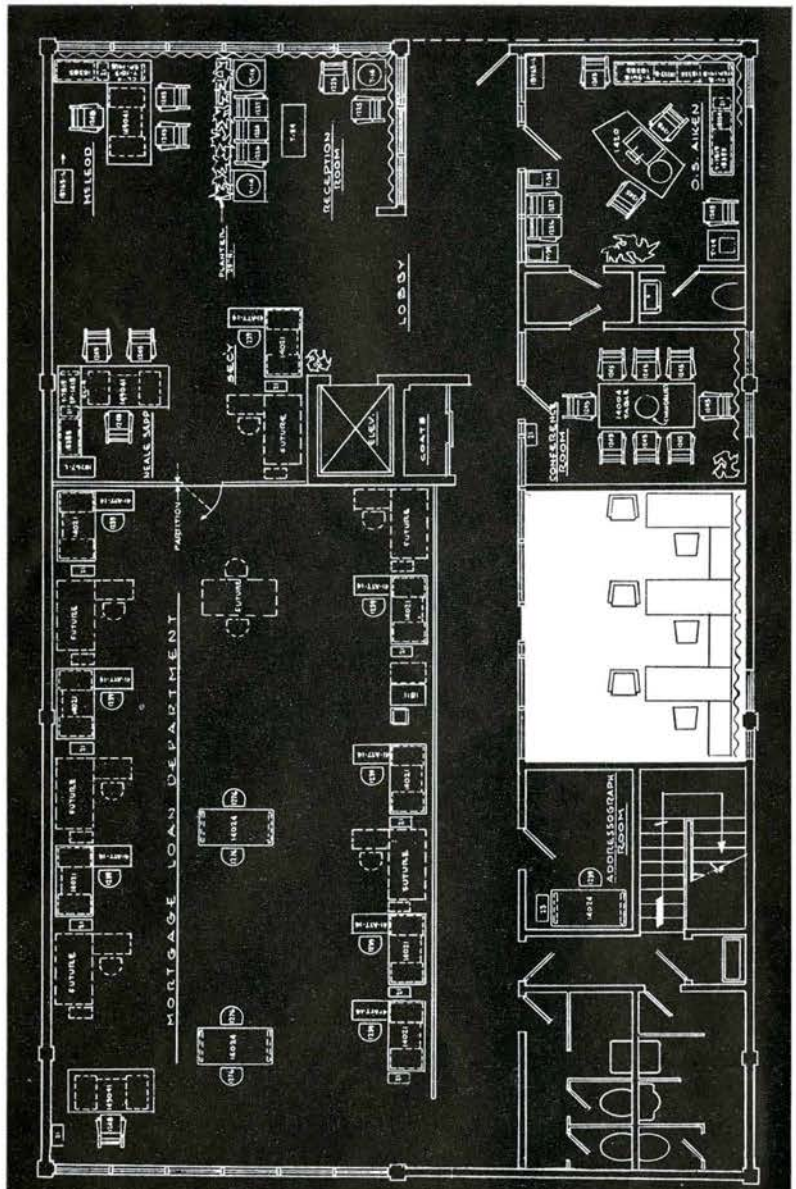
Far-reaching double-plank beams and supports of wood frame the translucent glass panels around an informal garden, let the outdoors in naturally for a relaxed atmosphere throughout the clinic.

Authorized as second class mail by the Post Office Dept., Ottawa, and for payment of postage in cash.



GEORGE HUNTER

EDMONTON, *capital of Alberta, symbolized here by the classical Capitol Building and a contrasting modern office building, is uniquely "north of the South and south of the North." That is to say, it is fortunately situated between the untapped resources of the North and the hungry markets of the South. But this is primarily assurance for the future. For the present Edmonton marches forward on a balanced economy embracing agriculture, manufacturing, petrochemicals, tourism and administration. The remarkable growth of this community is exemplified by a metropolitan population of 97,842 in 1941 and an estimated 330,000 people twenty years later. A Civic Center to cost $40 million, a $7 million convention hotel, a $9 million expansion of University of Alberta are some of the future amenities of Edmonton. Present amenities include 350 of the world's finest elevators — by OTIS.*



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You're invited to use our new service to help ease deadline pressure and staff load.

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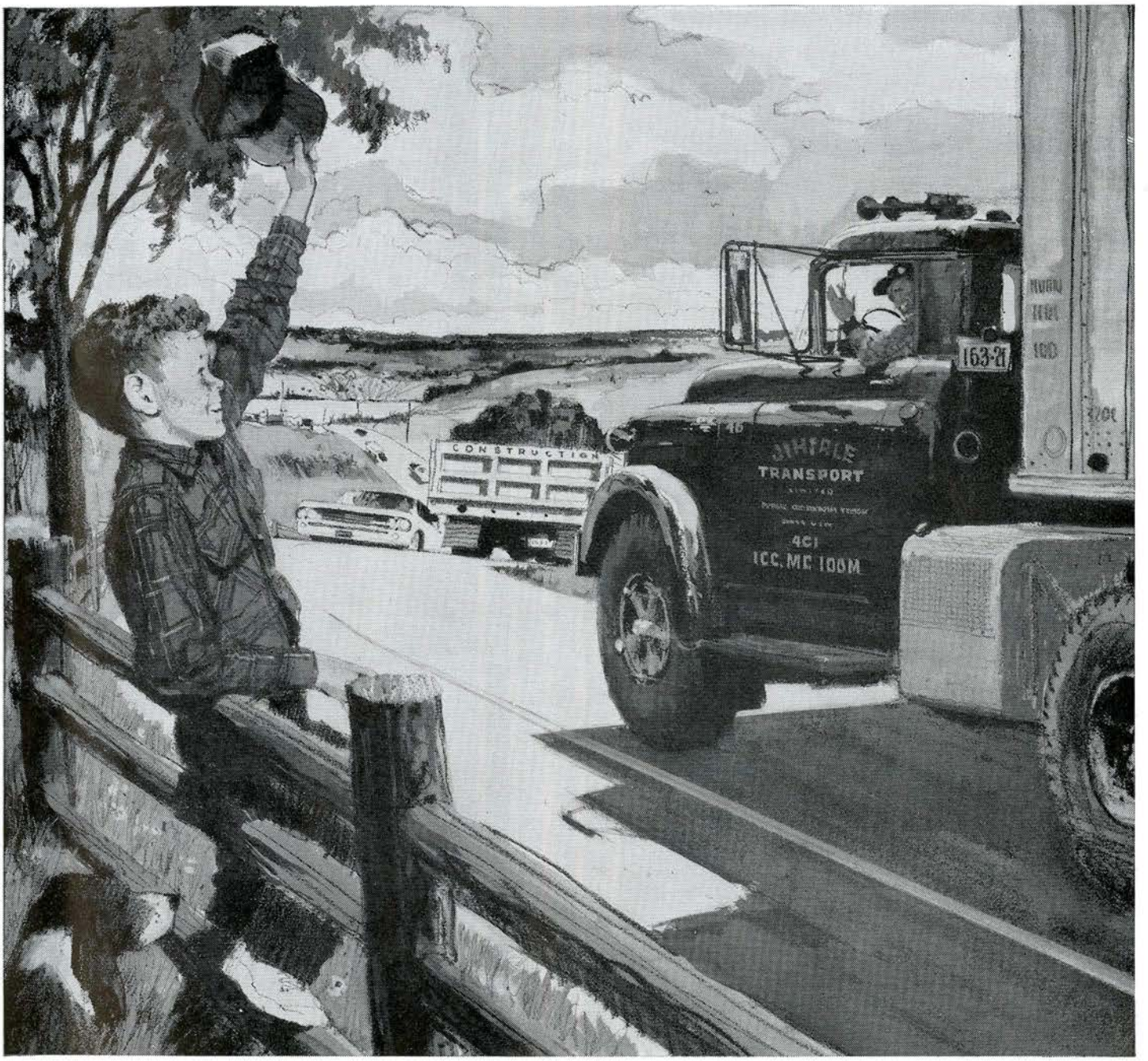

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and **C-E-L** *had a part in it*

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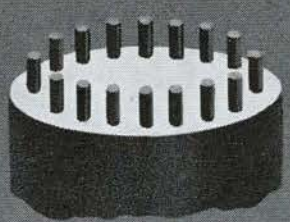
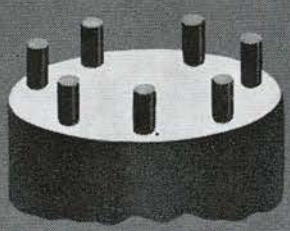
Slimmer columns... less steel with NEW

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



Conventional Design, with CSA G 30-1 Hard
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.

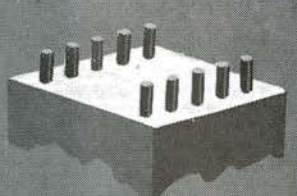


Conventional Design with larger A431 bars for smallest column diameter
24″ column—3.14 sq. ft.
.115 cu. yd. concrete per ft.
4 No. 14S bars, 3 No. 18S bars—71.4 lbs. steel per lineal ft.
Savings: Concrete 27%; Steel 16%; Floor Area 1.14 sq ft.

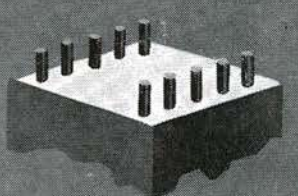
Stelco high-strength REINFORCING BARS!

New Stelco High-Strength Reinforcing Bars (A431 and A432) allow higher design stresses, to bring savings in steel, concrete and labour while providing full design strength with less dead load. Made to meet ASTM Specifications A431 and A432, the bars have minimum yield points of 75,000 and 60,000 psi respectively. Stelco will provide further information on their application to columns, girders, beams and slabs. Apply to Construction Material Sales, Hamilton or Montreal.

SQUARE COLUMN DESIGN using $f'_c = 3000$ psi with eccentricity $e = 0.1t.$ – ties omitted in diagrams.



Conventional Design with CSA 30-1 Hard
20″ sq. column .103 cu. yd. concrete per ft.
10 No. 11 bars—53.13 lbs. steel per lineal ft.



Conventional Design with A432 Bars
20″ sq. column .103 cu. yd. concrete per ft.
2 No. 11 bars, 8 No. 10 bars—45.05 lbs. steel per lineal ft.
Savings: Steel 15%

A431 and A432 bars can also be used for the ultimate method of design

Stelco leads in Canadian marking of grade and size on reinforcing bars!

Permanent rolled-in markings now distinguish every grade and size of Stelco Reinforcing Bars, for instant positive identification on the site. The initials SCC identify the Stelco product. Above, in the case of High-Strength bars, the figures 75 or 60 indicate the minimum yield point in thousands of psi for A431 and A432 respectively. Size is clearly shown below the initials on every bar, by numbers.

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an open and shut case for fashion

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From 130° above to 30° below in four hours

This Twindow* accelerated weathering test shoots the temperature to a sizzling 130° above, then drops it to a frigid 30° below—in a repeating four-hour cycle. As well, water is sprayed on the units for a 10-minute period during the cycle. A double-glazed window unit built to take this kind of punishment without fogging, frosting or breaking its seal will stand up in any weather! In addition, repeated quality control tests make certain Twindow will live up to its reputation for trouble-free performance.

Twindow is built stronger, with corrosion-proof stainless steel channeling that holds sealant under constant pressure for lasting, trouble-free performance. And Twindow is guaranteed for 5 full years by Canadian Pittsburgh Industries Limited, a well-established, responsible company with thousands of successful Canadian Twindow installations to its credit.

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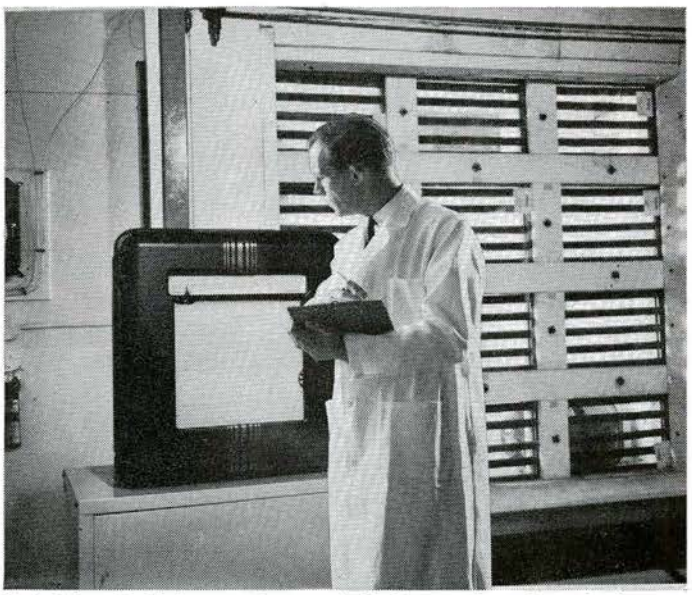
Why not investigate the many advantages and cost-cutting economies of including Twindow in your building plans? Mail the prepaid post card for further information, including our illustrated booklet, "Two types of Twindow." *T. M. Reg'd.*

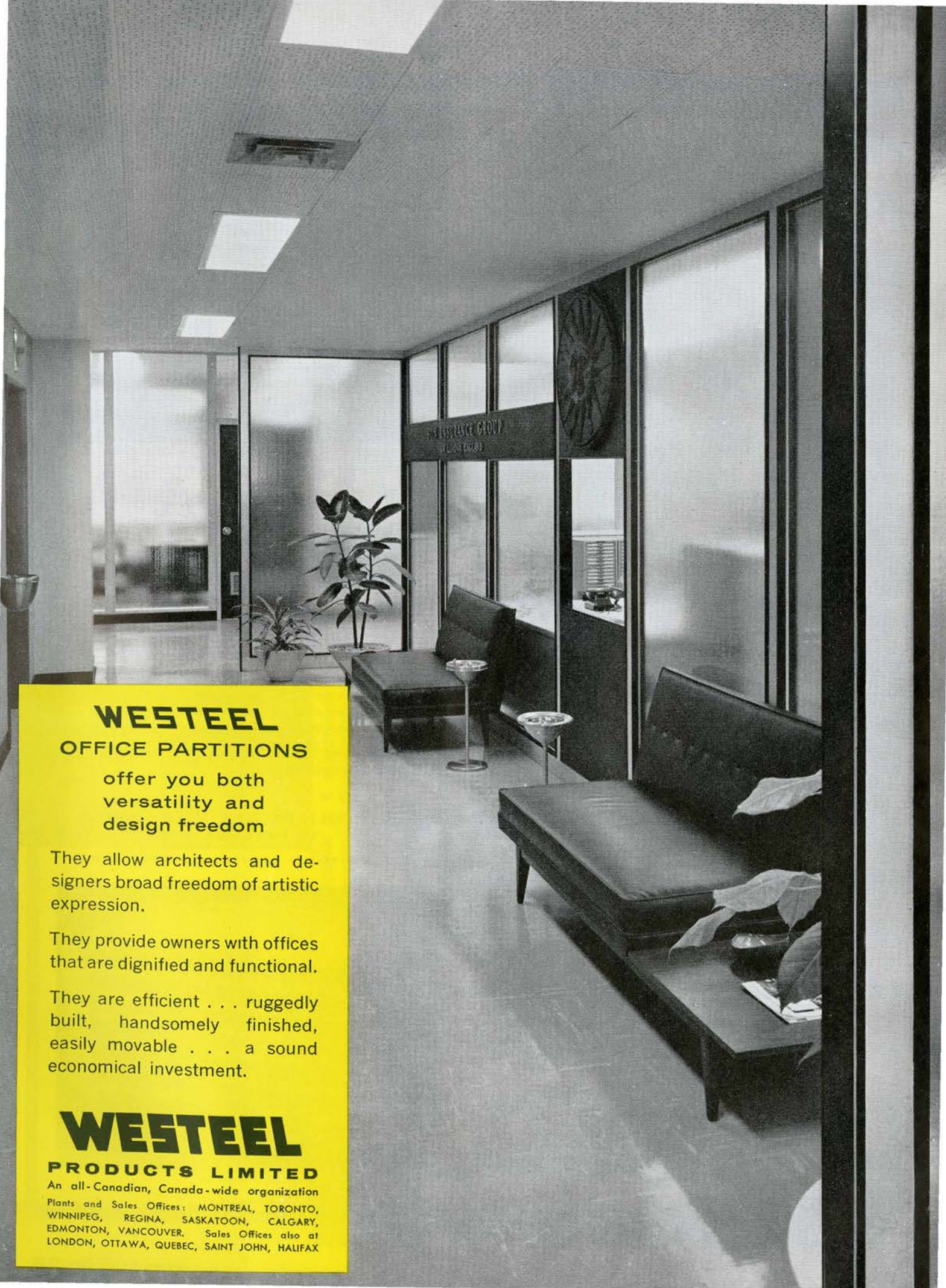


Technician checks temperature graph during accelerated weathering test.

Twindow installation at Montreal International Airport, Dorval, P.Q.
ARCHITECTS: *Illsley, Templeton & Archibald, Larose & Larose, Associated Architects*
GENERAL CONTRACTOR: *The Foundation Company of Canada Limited*
GLAZING CONTRACTOR: *Canadian Pittsburgh Industries Limited*

genuine TWINDOW*

MADE IN CANADA BY DUPLATE CANADA LIMITED
distributed exclusively by Canadian Pittsburgh Industries Limited



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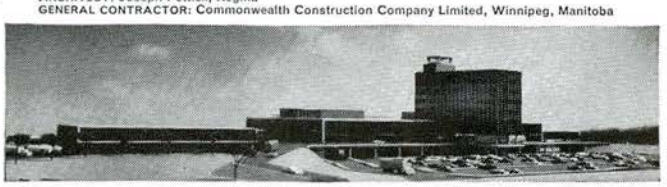
BUILDING: Monarch Life Assurance Company, Winnipeg, Manitoba
ARCHITECT: Smith Carter Searle Associates, Winnipeg
GENERAL CONTRACTOR: Bird Construction Company Limited, Winnipeg

BUILDING: Saskatchewan Power Corporation, Head Office Administration Building, Regina
OWNER: Province of Saskatchewan
ARCHITECT: Joseph Pettick, Regina
GENERAL CONTRACTOR: Commonwealth Construction Company Limited, Winnipeg, Manitoba



BUILDING: Air Terminal Building, Edmonton International Airport
OWNER: Government of Canada
ARCHITECT: Rensaa & Minsos, Edmonton
GENERAL CONTRACTOR: Burns and Dutton Concrete and Construction Company Limited, Edmontor.

BUILDING: Union Carbide Canada Limited, Toronto, Ontario
ARCHITECT: Shore and Moffatt, Toronto
GENERAL CONTRACTOR: Anglin-Norcross Ontario Limited

BUILDING: Canadian National Railway, Headquarters Office and Garage Building, Montreal, Quebec
ARCHITECT: C.N.R. Architectural Staff
GENERAL CONTRACTOR: E.G.M. Cape and Company (1956) Limited, Montreal

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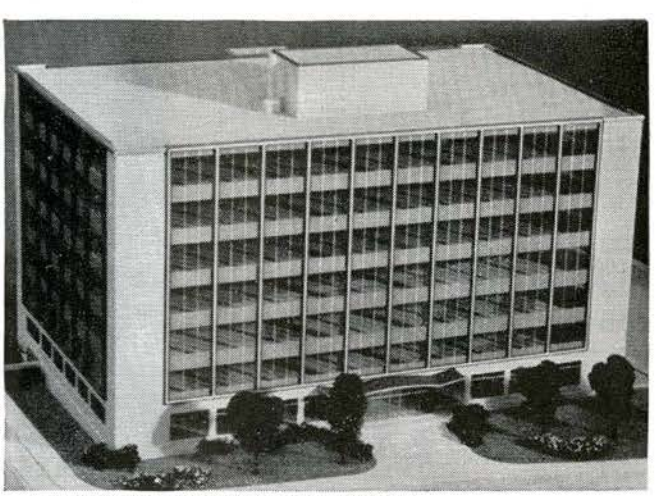
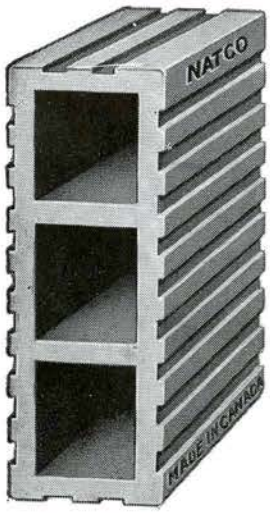
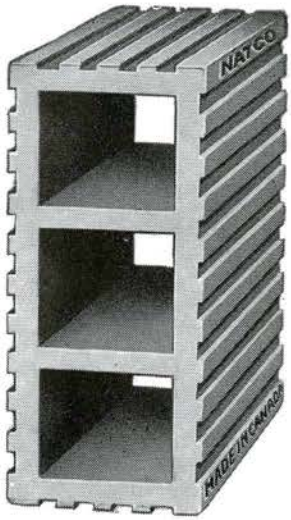


BUILDING: Office Building, 912 Chemin Ste. Foy, Quebec City
OWNER: Bois Fontaine Incorporated
ARCHITECT: Walker & Tessier, Quebec City
GENERAL CONTRACTOR: Francois Tobin Inc., Quebec City

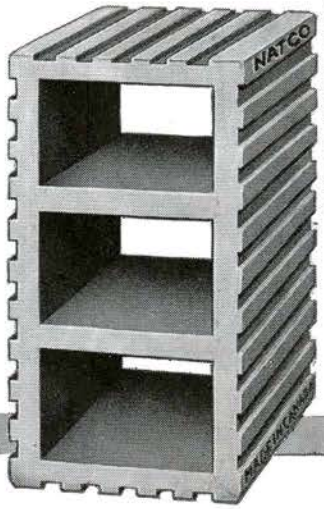


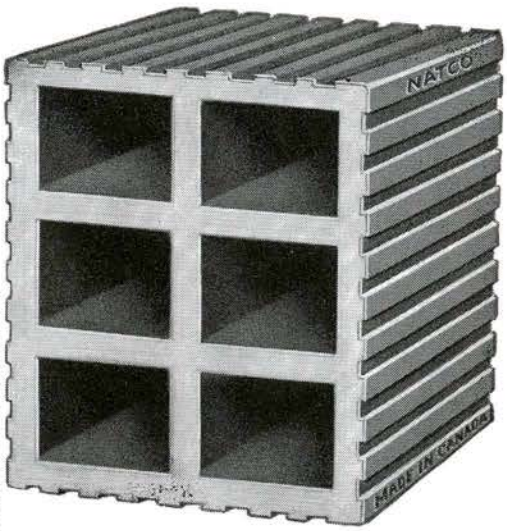
4″ x 12 ″x 12″
Partition Tile
Code No.
DD4212
WT 16#



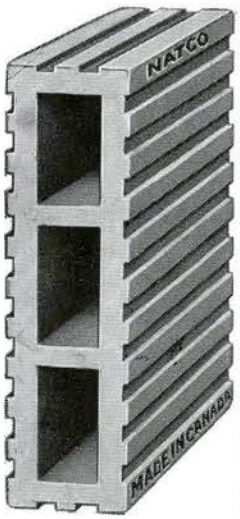
5″ x 12″ x 12″
Partition Tile
Code No. DD5212
WT 20#

6″ x 12″ x 12″
Partition Tile
Code No. 6212
WT 22#





10″ x 12″ x 12″
Partition Tile
Code No. DD10212 WT 36#



3″ x 12″ x 12″
Partition Tile
Code No. DD3212
WT 14#

2″ x 12″ x 12″
Partition Tile
Code No.
DD2212
WT 14#

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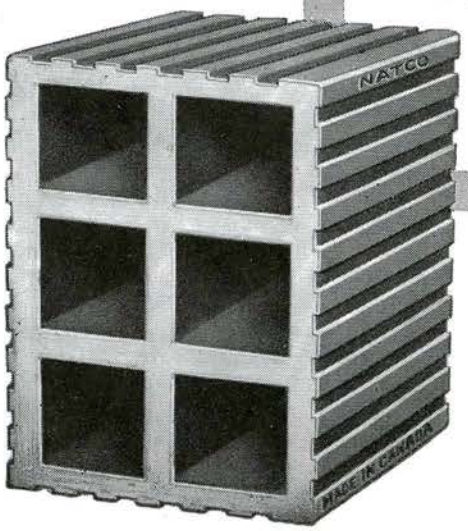

8″ x 12″ x 12″
Partition Tile
Code No.
DD8212 WT 30#

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OF STRUCTURAL TILE

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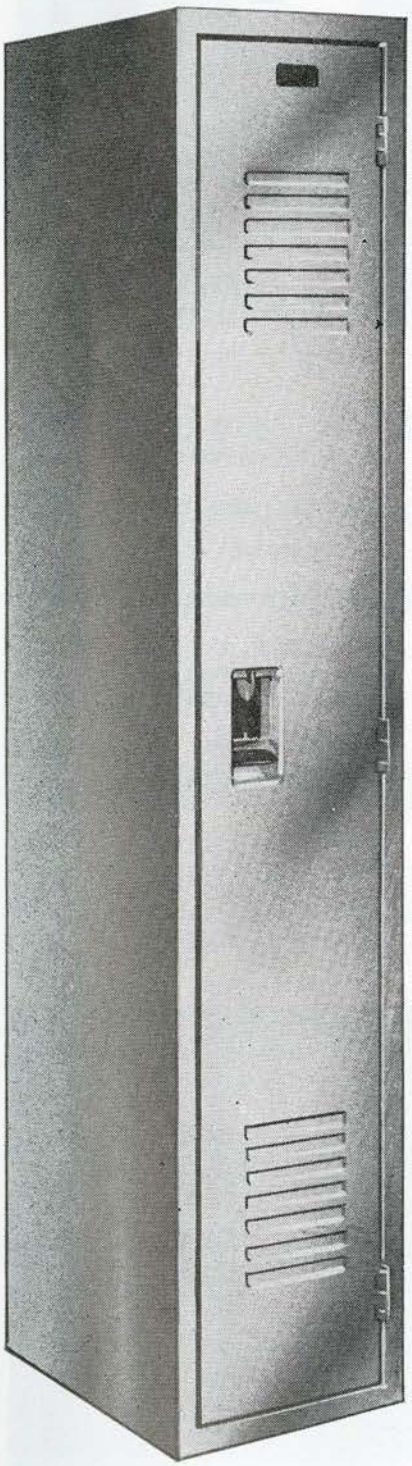

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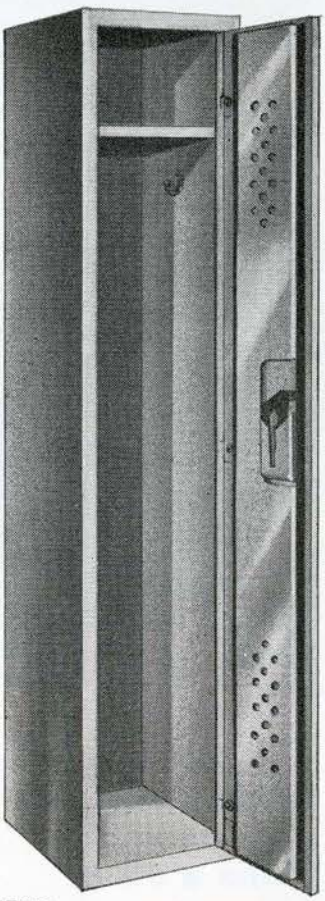

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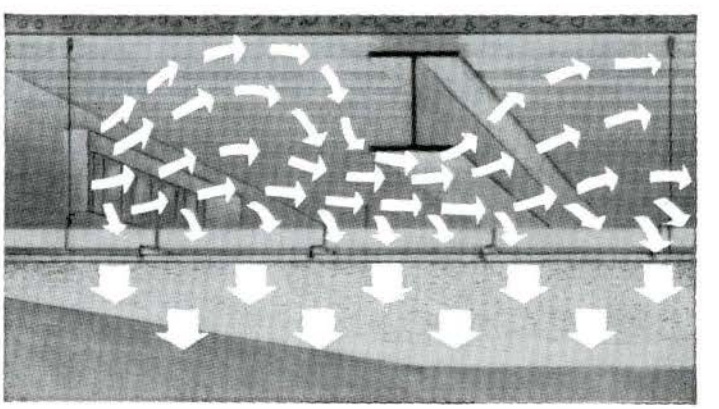

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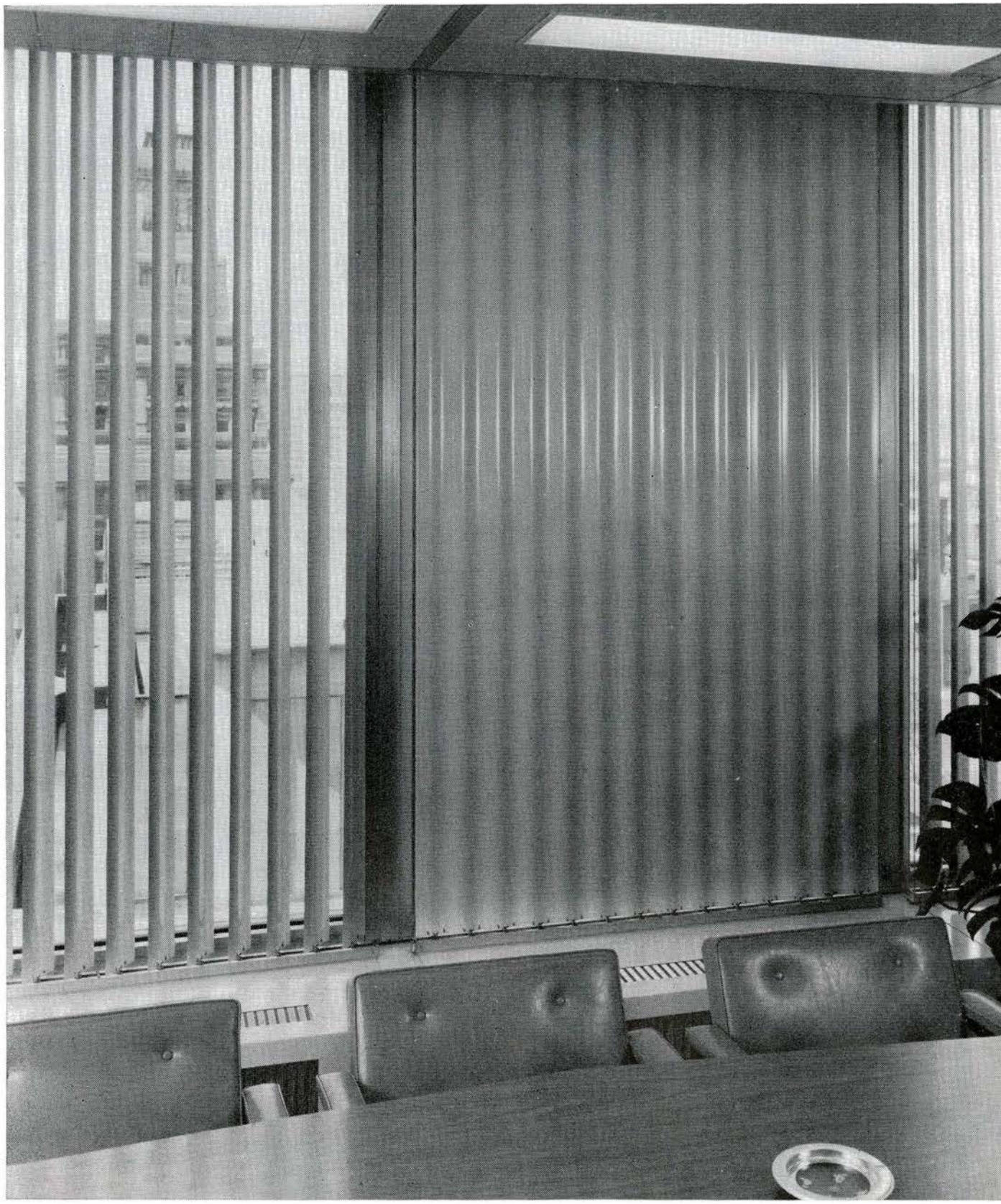

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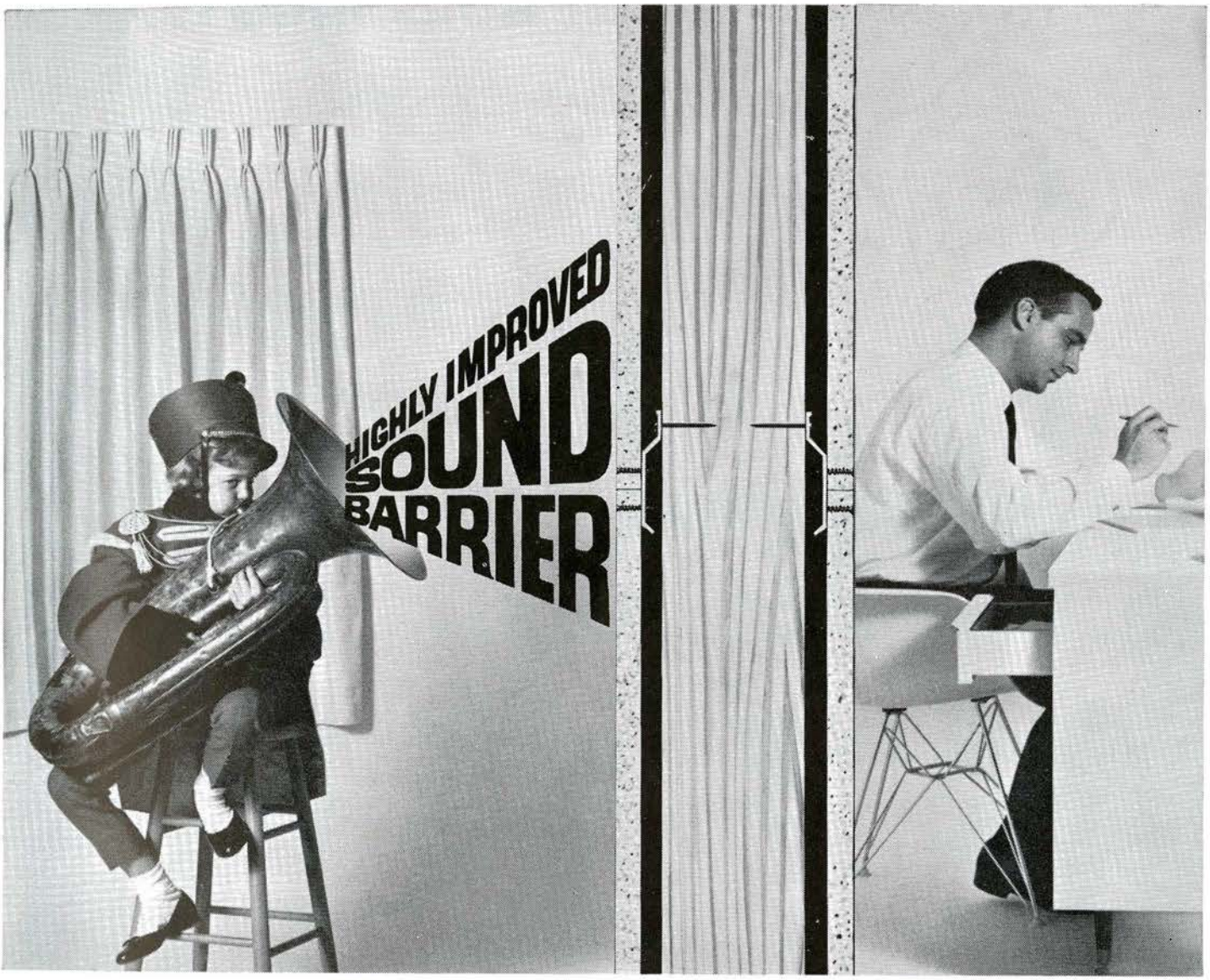

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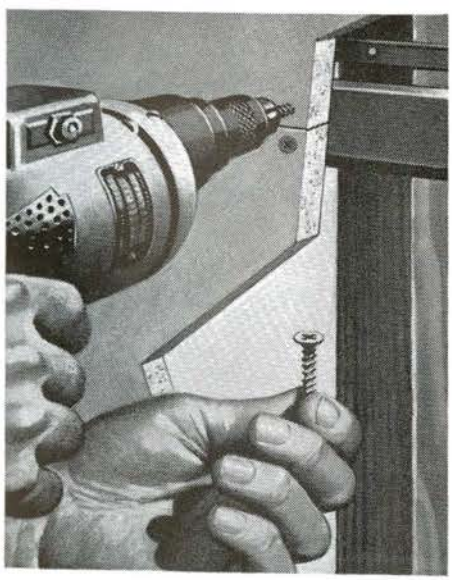

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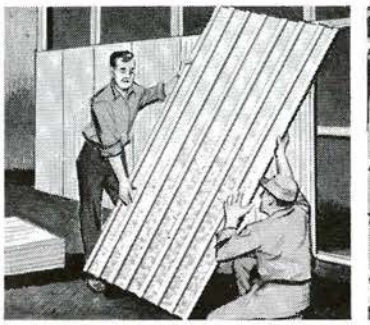

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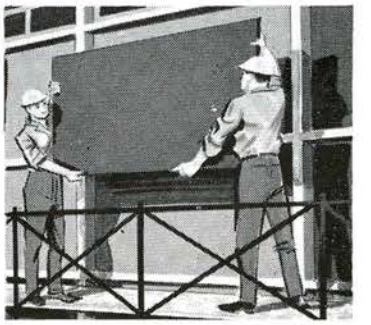

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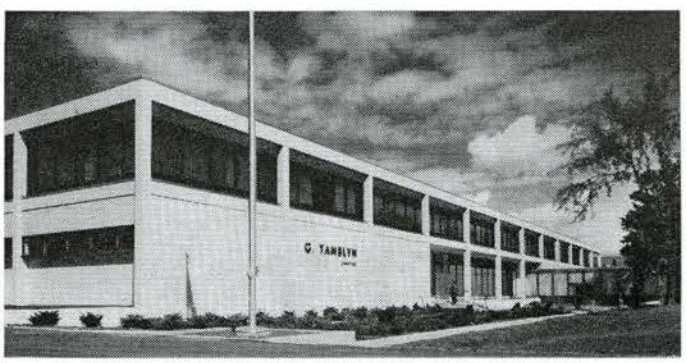

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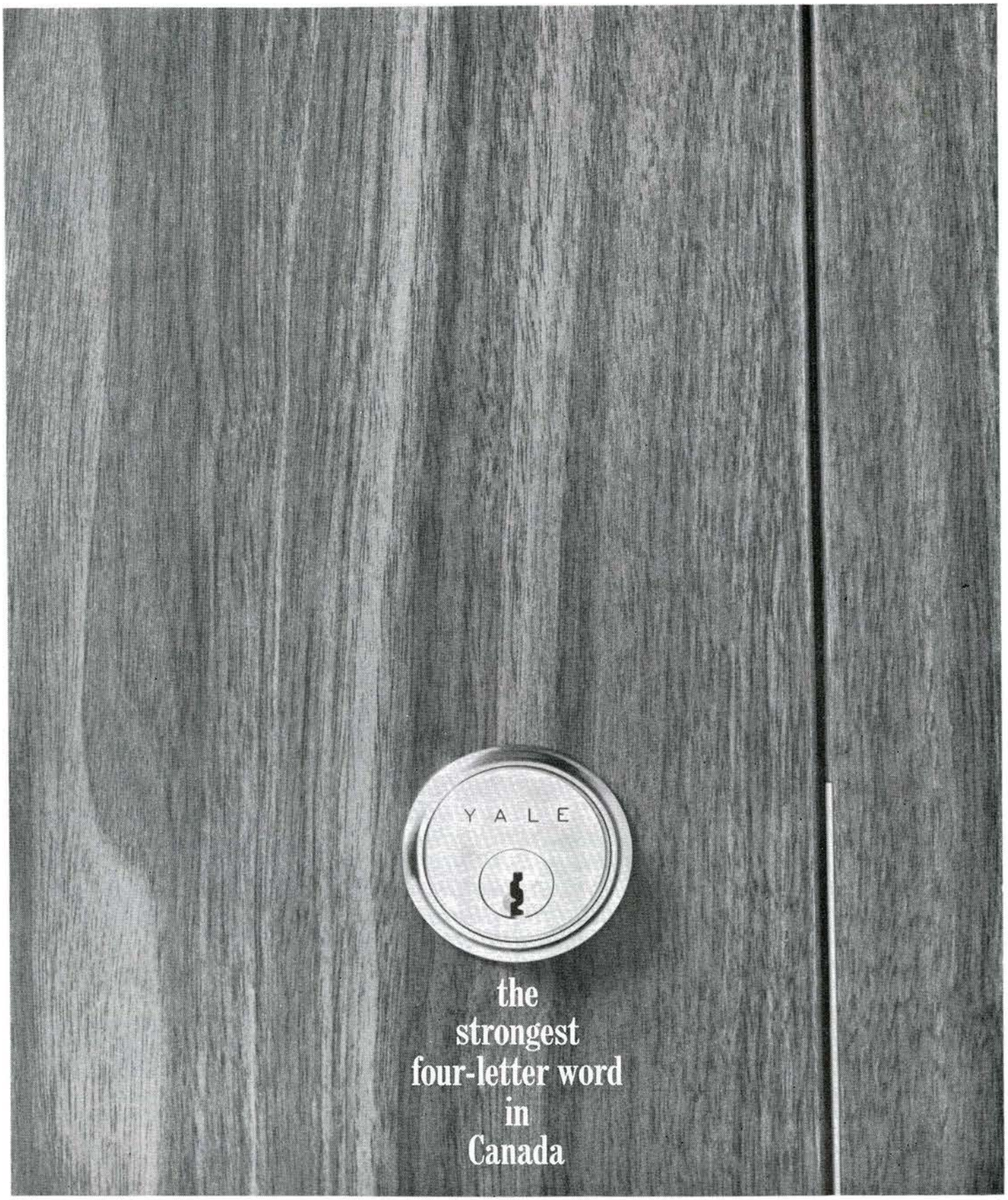

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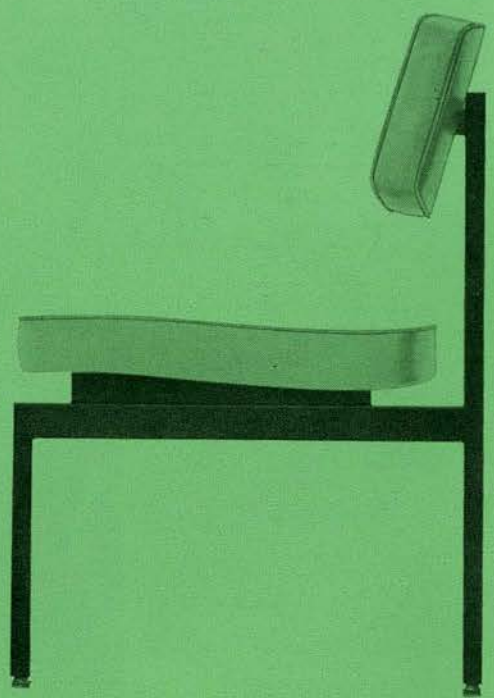

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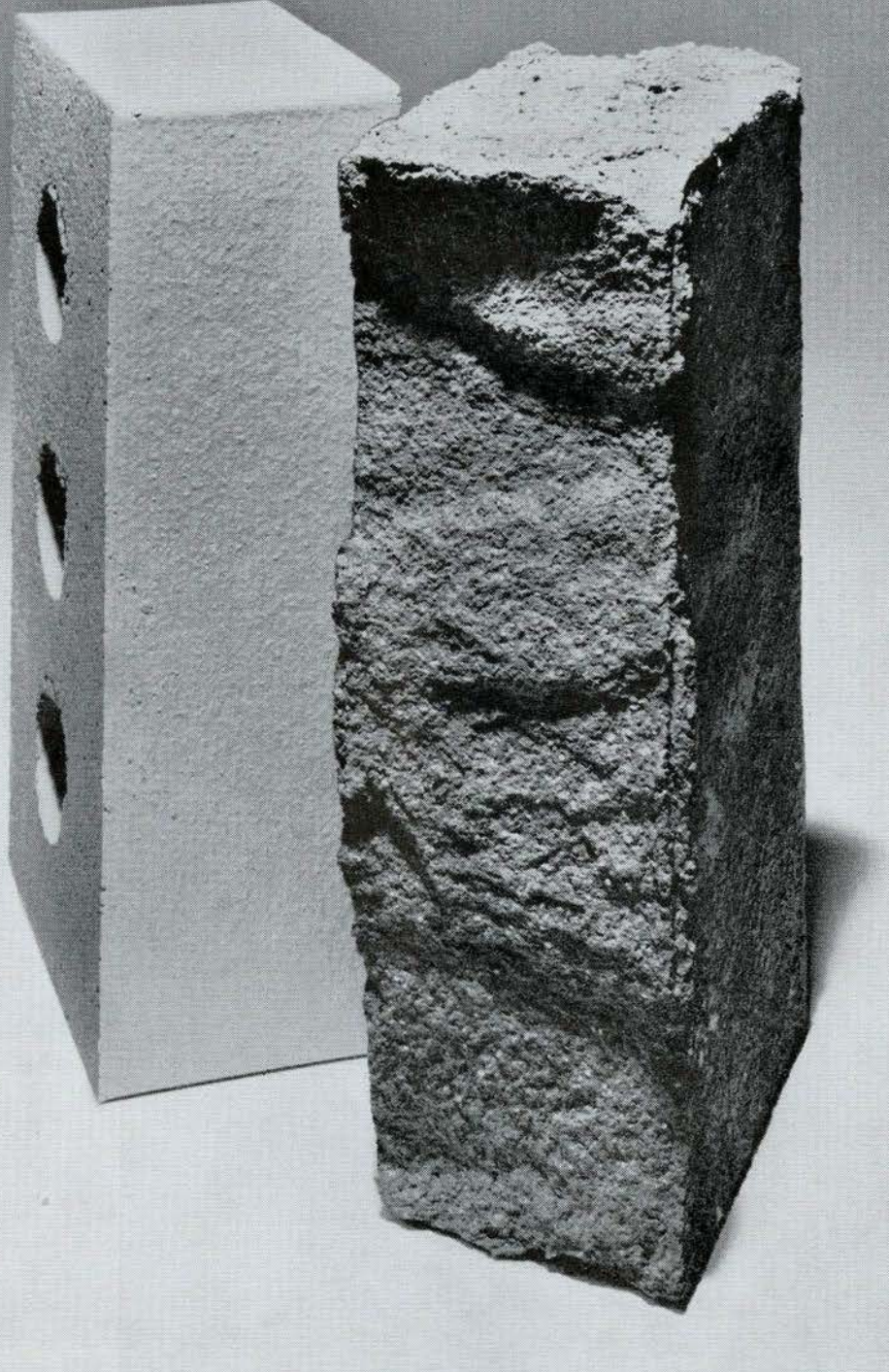

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Serial 442 Volume 39
Number 6

RAIC Journal

JUNE 1962

55TH RAIC ANNUAL ASSEMBLY

NOUVELLES DE QUEBEC

DEPARTMENTS

COVER: The Bayshore Inn, Vancouver, B.C. Site of the 55th RAIC Annual Assembly. Sketch by David Horne.

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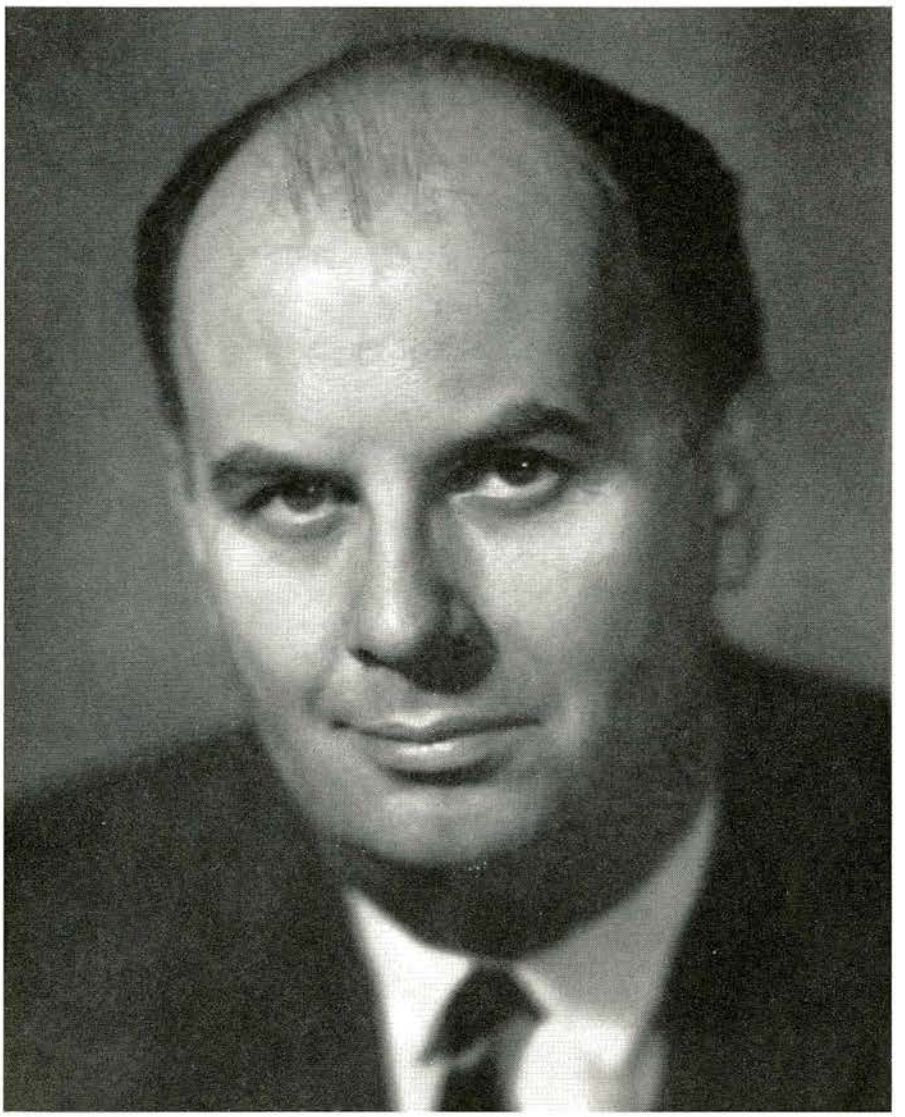
New President of the Royal Architectural Institute of Canada



JOHN LOVATT DAVIES, FRAIC, was born in Shropshire, England, in 1914 and educated at Oswestry School and the Liverpool School of Architecture. He obtained his degree of Batchelor of Architecture (Honors) in 1937, became an associate of the Royal Institute of British Architects, and worked in architectural offices in London, Johannesburg, S.A. and Salisbury, Rhodesia. He returned to England in 1940 where he joined the Royal Air Force, gained his Pilot's wings and was commissioned. After the war, he resumed his architectural career, becoming a junior partner to G. Grey Womum in London.

He came to Canada late in 1947 and opened his own practice in Vancouver in 1950. Mr. Davies was elected Vice-President of the Architectural Institute of British Columbia in 1954 and was President from 1954 to 1956. He has worked on the Advisory Fire Group of the National Building Code since 1955 and is now Chairman of the group, as well as a member of the Associate Committee on the National Building Code of the National Research Council. Mr Davies has been a member of the RAIC Council since 1952 and a member of the Executive Committee since 1957. He was elected a Fellow of the RAIC in 1959. He was elected Vice-President in 1960.

Mr. Davies lives in West Vancouver with his wife and three children.

Institute's Financial Problems Outlined by Retiring President

Report by Mr Harland Steele stresses need for larger budget to carry out Institute programs

IT IS DIFFICULT for me to understand why the Institute should have allowed a full decade to intervene between 1952 – the year of our last RAIC Convention in British Columbia—and the present. The memories of former visits to Vancouver and Victoria and the promise of an excellent assembly program in late May of this year, added to the attraction of a world's fair in Seattle, has attracted many RAIC members to Vancouver this week.

It is my solemn duty to announce the names of members of the Royal Institute who have passed from our midst during the past twelve months. When I have read their names I would ask that you rise and observe a moment's silence in their memory: *William Carl Stanford Brown; Maurice Champagne; W. D. Chown; G. Fraser Cole; Sydney Comber; Peter Dickinson; Allan George; Charles Davis Goodman; Pierre Legare; F. J. MacNab; Arthur N. Martin; William A. Martin; W. D. McCarter; Harold R. Morin; A. I. Morrison; Thomas E. Muirhead; David Saxton; Lindsay A. Wardell; Harold E. P. Warren; Gordon M. West; Ashley Woodburn; Wilburn Workman; Edward W. W. Wright.*

I am sure you would wish me to convey, on your behalf, to Arthur L. Fleming, the RAIC Solicitor and Mrs Fleming, our regrets at their absence from this Annual Assembly. Illness prevented the Flemings from travelling west this year. I hope that when we meet in Hamilton next May they will be in our midst again.

Months ago it was established that the 1962 convention theme will be "Architectural Education", and the seminar program devised for Friday of this week at the new Fine Arts Centre on the UBC campus, assures a comprehensive examination of our system of producing qualified, competent architects. This potentially provoking theme is introduced at a time when the nation as a whole is swept by a sense of urgency in coping with inadequate curricula, instruction and facilities at all educational levels.

As members of a learned profession in a private enterprise economy, we have the privilege and the responsibility to be personally concerned with:

1. The formulation of curricula within our schools of architecture;
2. The design of educational buildings running the full range from elementary school to graduate studies.

The emphasis on architectural education at the 55th Annual Assembly, following on the Montreal sessions of the Canadian Conference on Education in March, provide for the fullest ever review by Canadian architects of precisely how the profession ensures the provision of a constant supply of future practitioners.

I am grateful that our 1962 deliberations are being aided by the presence in Vancouver of two distinguished Commonwealth teachers of architecture: Sir William Holford, President of the Royal Institute of British Architects, who will deliver the keynote address at luncheon today, and Prof Ingham Ashworth, President of the Royal Australian Institute of Architects.

Over the 12 months since I wrote my 1961 Presidential report, the problems facing the national society in its task of serving 2,350 members have not lessened. The RAIC Council and Executive Committee at mid-1962 is attempting to continue an active national program on fewer dollars than were available in 1961. I should like to repeat that statement so the implications will be clearly understood. The spectre of budgetary curtailment, looming large a year ago, continues to bedevil our forward planning.

My concern for the financial future of the RAIC a year ago led me to suggest in my first Presidential report that "the Institute should review during the months ahead the course it will follow in providing appointment of a committee on the profession with two basic objectives:

(1) To study and submit reports to the Institute on those areas of activity within the building community where the architecture should be, and is not now, effective;

(2) To recommend adjustments within the profession to give the profession maximum effectiveness."

Following a meeting of RAIC Council at Montreal in January, the Committee on the Profession under the Chairmanship of H. H. G. Moody, Winnipeg, was asked to study the budgetary position of the Institute as a matter of first importance and submit a proposal, calculated to provide a long-term solution to the problem, to the 55th Annual Assembly in Vancouver. The Committee on the Profession, following consultation with the Councils of Provincial Associations, is prepared to report to the membership today.

If I may be allowed, so that my views as President may be clearly understood, I would like to repeat a statement I issued a year ago: "The permanent problem of a restricted annual budget continues to exert a brake on the RAIC in limiting the funds available to recruit competent staff members and develop an expanding service to the membership, especially in the public relations field . . . Notwithstanding the very welcome 1960 increase in per capita contributions to the Institute, and a sharp rise in 1960 earnings from the *Journal,* the Institute is not yet in a position to develop a full program of activities.

For this reason, I believe RAIC members will wish to decide if their national society should maintain for the next few years the present plateau of operations, or whether ways and means should be explored to make possible a strengthening of the RAIC organization through an expanded budget. It is clear that, failing the provision of additional funds from a source yet to be determined, the Institute will play a relatively static role during coming years".

The situation in the spring of 1962 is that the current budget has been reduced to a point more than 10% below the level of 1961 spending, owing to a sizeable drop in earnings from the RAIC *Journal* last year. However, a further almost inevitable decline of *Journal* profits in 1962 will produce added cause for emergency action, if such cause did not already abundantly exist, and I must say that the *Journal* management and the *Journal* Committee have been doing their utmost to arrest the decline. I am personally convinced that the RAIC membership, when presented with all the facts, will recognize this challenge to the profession and take the necessary steps to meet it.

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The Roving Reporter at the Assembly

HAVING ATTENDED a good many assemblies in our day, we can safely say that none compared with the recent one in Vancouver. Under the direction of Wm. Leithead and his committee of arrangements, the machinery, so necessary for the intellectual and gastronomic welfare of well over two hundred registrants, moved in well-oiled precision and in high gear from the opening day to departure on Sunday. Sufficient praise cannot be given to the many who made life pleasant for members and their ladies and we know that preparatory arrangements covered many of the preceding weeks. The same amount of trouble and care on our behalf will doubtless go into the Assembly next year in Hamilton, but nature played so tremendous a part as a complementary to the committee of arrangements in Vancouver. Our hotel overlooked the harbour, and its gardens, bright with azaleas and rhododendrons, was formed by a land based ship and restaurant on one side and a hundred ships on the other. In the not too far distance, we saw great ocean going vessels heading for sea and in the foreground architects' daughters and the more hardy fathers cavorting in the hotel pool.

At a period in our history as a profession, when architects and their wives are daily going on, or returning from world tours, (when Len Shore sat down to breakfast in Vancouver, he had no idea that he would be heading for Japan in an hour's time), I have to confess, myself, to a complete unfamiliarity with the luxury of the modern Hotel Babylon. The Bayshore Inn was such a place, and quite took one's breath away. Servants wore silk Chinese trousers and coats, and were themselves Chinese with a marked Canadian accent; public space, so rare in the hotels of Canada, was generous and delightful. Several bathrooms had an extra telephone (a charming feature if one has a slight heart attack or forgets one's tooth brush) and glasses and toilet were lovingly wrapped in cellophane in keeping with an old Chinese custom.

If one has any complaint to make, it is one that will likely never be taken seriously by the RAIC. One had literally not an hour off during four days, but one remembers very vividly the uproar caused by an old editorial of mine which commented on the fact that at a meeting in Montreal, we had literally nothing to do. Since that time, meetings (other than the executive of the council) are often too full and the Convocation of Fellows, once awfully hush-hush, has gained dignity by the presence of friends and relatives. If one may criticize that august body, it would be to say with regret that the catalogue of buildings designed by the new Fellow was again intoned by the Chancellor. This custom was dropped some years ago partly, because it made dull reading, and partly, because a high Anglican Church and a lipstick factory seemed so incompatible in the same recipient's list. The staff work was casual this year and could be improved by a rule that the Fellows follow the heirarchy in leaving the room. Mr Paul Trepanier made a motion in the business meeting that came as a surprise (he has a habit of making the most devastating motions with a most infectious happy laugh), and that was to the effect that half the Fellows elected each year be young and chosen for the excellence of their architecture. I have no accurate note of what he said about the remainder, but one was left with the impression that they might be elected by whatever devious and mysterious methods were employed in the past. What surprised us about the motion was its contrast to our own impression of outstanding youthfulness among the new Fellows. There was certainly a time in the history of the College of Fellows when architects as young as Leithead, John C. Parkin, and our own students like Pratt, Strutt, Maclennon and Murray would not have survived the ballot, but that day is passed. Is Mr Trepanier's perhaps a provincial problem.

This last paragraph was begun with the pious hope that future assemblies might be so planned that one whole afternoon be given up to relief from meetings. For instance, the Hamilton Chapter might arrange that we all spend one afternoon at Niagara Falls. Somewhere away from the roar of the falls, someone (perhaps Mr Trepanier) could read us a paper on that barefooted follower of St Francis, Father Hennepin who discovered the Falls. He was an odd character who should be the patron of the Orangemen of Toronto because in 1698, he dedicated his book "New Discovery of a large Country in America" to "His most Excellent Majesty William III". This may seem to have little to do with Vancouver, but a word to the wise in Hamilton for a free afternoon may not be amiss.

As this is written, no tape has arrived of the business meetings and one's notes are scanty in the extreme. However, a good place to start was the excellent impression left by His Worship the Mayor, Mr A. T. Alsbury. Readers of the *Journal* will remember that the very beloved Mayor of Toronto remarked last year that he thought Corbusier was a brandy, and it came rather as a shock to hear Mayor Alsbury quoting Keats and Ruskin. He had, too, a happy gift for a phrase (though the connexion has faded from my *Journal* notes) when he referred to Doukhobor ladies "baring their wares". It is very difficult on such official occasions to give a note of sincerity to a welcome to a city, but Mayor Alsbury succeeded.

One of the first reports read was one on duty on plans, a painful subject for Canadians because Americans pay duty coming here on the weight of the parcel, while we pay to the US a duty based on the cost of the building! Quite fifteen years ago such

a report was read at an RAIC meeting in Toronto. The committee had laboured for a year to find all their work shot to pieces by a question from Mr Mathers. "Had the Committee been dealing with blue prints?" When the answer from the chairman was in the affirmative, Mr Mathers informed the house that, as the act referred only to blue prints, he evaded the duty by the simple device of sending white prints. It seemed likely that in fifteen years, this loop hole in the act had been plugged by the Americans and the reporter remained silent. On the other hand, they pay us a measley $5.00 a lb of drawings and someone suggested that even that was reduced to pennies by the sending of plans on micro-film.

Nothing very inspiring came out of the business meeting and duty on plans and coping with the package deal, along with other perennials, took up most of the time, but two items had special significance. One gathered that the *Journal* was now freed from the strain of being the main support of the Institute, and that additional fees rather than profit from advertisements, was a preferred and a more dignified support for a Royal Society. The other significant item was the wholehearted approval of the meeting for an RAIC headquarters in Ottawa. Mr Everett Wilson's committee has done considerable work in this regard and a site is being sought on the "diplomatic mile" of Sussex Street. Hard cash and the approval of the National Capital Commission are all that are needed and it was satisfactory to hear that the attitude of the latter was most friendly and co-operative.

We might add that the Institute now moves into the international field as the result of a motion by Mr Pettick of Regina, chairman of the International Relations Committee, that the RAIC apply for and accept membership in the International Union of Architects. The VII Congress of the IUA is to be held in Mexico City in October, 1963, and Canada's entry will be sponsored by the Sociedad de Arquitectos Mexicanos.

The lateness of the Fellow's business meeting made it impossible for several to attend the Editorial Board but two committees may be worth reporting. The Committee on the Preservation of Historic Buildings could have been better attended but the members showed interest in the work organized by the "rump" of the committee in Toronto and Hamilton and especially of the touring exhibition of Canadian architecture. It is hoped that this exhibition will eventually be sent on tour through the National Gallery and the Department of External Affairs. A resolution urging that an early start be made on the exhibition by the Historic Sites and Monuments Board of the Department of Northern Affairs was passed unanimously by the Committee and later by the Assembly.

Perhaps the most important committee meeting of the Assembly was that of the RAIC Centenary Planning Committee under the chairmanship of Mr Peter Thornton. Matters discussed were proposals for the restoration of the heart of Quebec City, a major item thought to be a national rather than a provincial objective, a Centenary symbol and the development of a community centre concept on a national basis. It is quite puzzling to this reporter how so excellent a piece of legislation as the National Centennial Act should have received so little publicity. Even as late as the meeting in Vancouver, many questions went unanswered, but certain it is that the civic centre idea alone offers a tremendous challenge to the architects of Canada and the community groups that will be associated with them. So far as one can learn, the financing of each project is based on one third contribution by the municipality, one third by the Province and one third by the Federal Government. Each province has its centenary committee and architects can do much to help the whole program by forming local centenary groups.

As the summaries of the seminars on education will appear later in the *Journal,* one will have to wait till then to ascertain whether anything of value emerged, or whether as a method of member participation, they should continue to be a fixture in the Annual Assembly. Exceedingly worthwhile were the papers of Sir Wm Holford and Professor Holmes Perkins. They are published in full in the *Journal,* but one paragraph of Dean Perkin's address is worth repeating in these notes. It comes with special force in view of the UBC experiment with the liberal arts in the School of Architecture and of the far reaching scheme of post-graduate education now being organized by the OAA. Speaking of the widening and deepening responsibilities of the architect in our modern society, he emphasized the advantages of a "sounder liberal education". He went on:

> "The need for such a major change was recognized by the schools of medicine early in this century. In 1904 only four of the 160 schools required college work before admission: yet by 1918 such preparation was mandatory in 85 out of 95 schools. By 1954 three-quarters of all medical students had completed four years of liberal arts before starting their professional courses. In fact, the admission tests had by then become so effective that the first year drop-out rate had been reduced to less than 5%. This is in shocking contrast to the human and financial waste which characterizes undergraduate architectural education in the United States. Of the entering students from 12 schools tested by the ETS over five years ago only a small minority graduated with their class; in one school with a freshman class of 115 only one man remained on schedule. This record is nothing less than tragic."

In the opinion of this reporter full discussion of both papers would have been worth a thousand seminars.

We all left Vancouver with the happiest memories; of enjoying the hospitality of so many old friends; of beautiful gardens and fine houses and a superb university campus. It was given to this reporter to see a magic country beyond Vancouver, under the guidance of John Y. McCarter and Bill Leithead, a country of snow covered mountains and lush green valleys; a country where, if the mail comes in only once a week, it is still possible to catch ten fat Kamloops trout before breakfast. What more could one ask of an assembly?

E.R.A.

The AIBC Welcoming Reception

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[1] The guests were received by W. G. Leithead (F), chairman of the Host Committee, and Mrs. Leithead; C. E. Pratt (F), President of the AIBC and Mrs Pratt; and Harland Steele (F), President of the RAIC, and Mrs Steele. Being given a cordial welcome are Mr and Mrs John Dayton of Vancouver.

[2] Left to right: John Edwards, CBC Radio, Warnett Kennedy, AIBC Executive Director; Dr Thomas Howarth (F), Director, School of Architecture, University of Toronto and Sir William Holford, President of the Royal Institute of British Architects.

[3] Left to right, seated, John Wade (F), Victoria; Mrs. Bruce Brown; Prof. W. G. Raymore (F), Toronto; Mrs Moody and H. H. Moody (F), Winnipeg; standing, Dr F. Bruce Brown (F), Toronto; Mrs Gerson and Prof. Wolfgang Gerson (F) Acting Director, School of Architecture, University of British Columbia.

4

[4] Seated, left to right, Mrs Barott, Mrs Downs and Mrs Tiers; standing, Peter Dobush (F), Montreal; Peter T. M. Barott (F), Montreal; Charles A. Tiers, Vancouver, the Journal's Regional Editor; and Barry Downs, Vancouver.

[5] Seated, left to right, Robbins Elliott, RAIC Executive Director; Gordon Arnott, Regina; Mrs Elliott; Neil M. Stewart (F) Fredericton, President of the New Brunswick Association of Architects; standing, Maurice Holdham, RAIC Secretary; Bruce Riddle (F), Hamilton; E. A. Gardner (F), Chief Architect, Federal Department of Public Works; J. A. Langford, Regina; C. MacIver, Hamilton; Mrs. Garrett and R. M. Garrett, Vancouver.

5

"Architectural Education" Seminar: the syndicate discussing the Role of the Practising Architect in Education was under the chairmanship of John C. Parkin (F), Toronto.

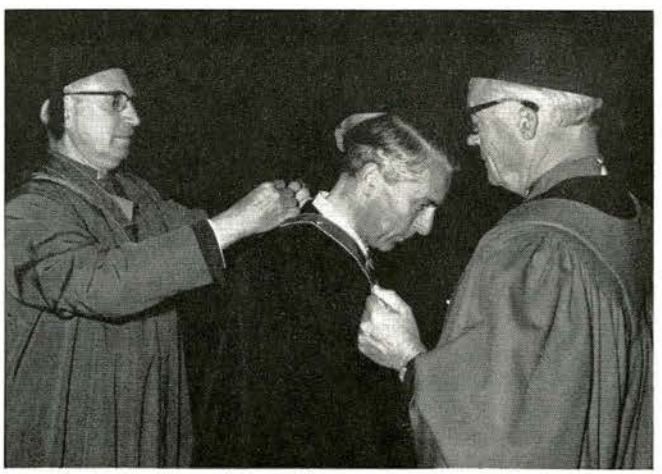
Sir William Holford (top) gave the Assembly Keynote address, and Torao Saito (below) also spoke at the Thursday luncheon, sponsored by the BC Plywood Manufacturers' Association, the BC Lumber Manufacturers' Association and the Red Cedar Shingle Manufacturers.

At the Architectural Centre reception on Thursday, Director Warnett Kennedy (left) explains exhibition model to John Catchpole of Weldwood-Westply Ltd., and W. Bergen of Crown-Zellerbach, while Vancouver architect Gerald Hamilton looks on.

The "night out" in Vancouver's Chinatown arranged for Assembly visitors by the Host Committee. A group from Quebec photographed before the Marco Polo's special 10-course dinner and the authentic Chinese lion dance, left to right around the table, Prof. Pierre Morency (F), Guy Roberge, Guy Bonneau, Adrien Dufresne, Georges de Varennes, Mrs Jean-Paul Audet, Mr Audet, Mrs Paul-O. Trepanier, Mr Trepanier, Mrs Louis Carrier, Mr Carrier.

1962 Convocation, College of Fellows

Seven members of the Royal Institute were elected to the College of Fellows in 1962 and invested at the Annual Convocation of the College, held on June 2nd, the last day of the Assembly. Honorary Fellowships were conferred upon Sir William Holford, President of the Royal Institute of British Architects; and Prof. H. Ingham Ashworth, President of the Royal Australian Institute of Architects.



The Investiture of Sir William Holford, President RIBA

Seated, left to right, Officers of the College with the new Honorary Fellows:

Sir William Holford, PRIBA, London,
J. Y. McCarter, Vancouver, Dean,
H. H. G. Moody, Winnipeg, Chancellor,
Dr F. Bruce Brown, Toronto, Registrar,
Harland Steele, Toronto, President RAIC,
Prof. H. Ingham Ashworth, President RAIA.

Standing, left to right:

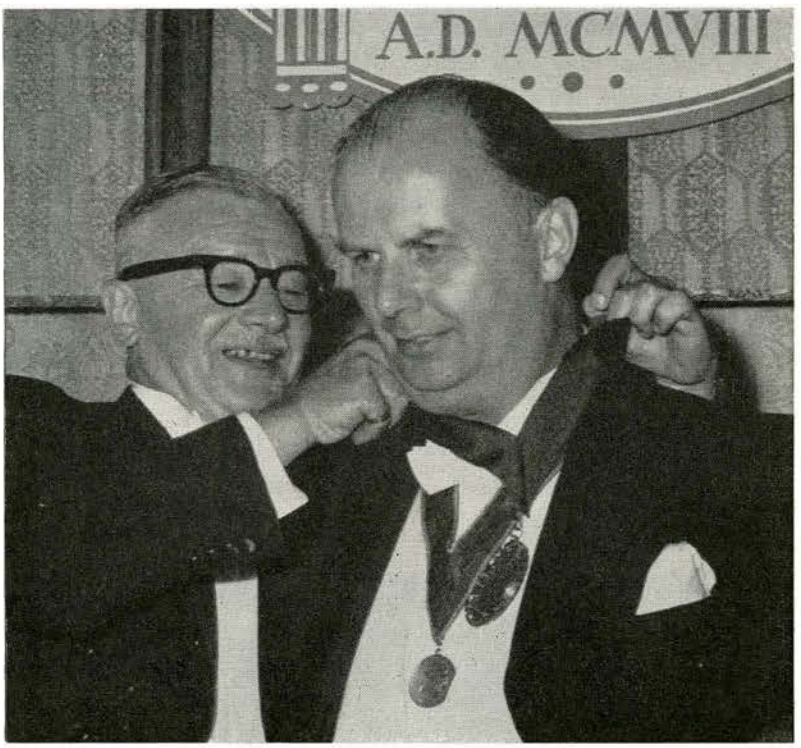
Marvin Francis Allan, Toronto,
Peter T. M. Barott, Montreal
Clyde Dickens Campbell, Victoria,
Logan Volume Gallaher, Kingston,
Prof Wolfgang Gerson, Vancouver,
Franklin Murray Polson, Vancouver,
James William Strutt, Ottawa

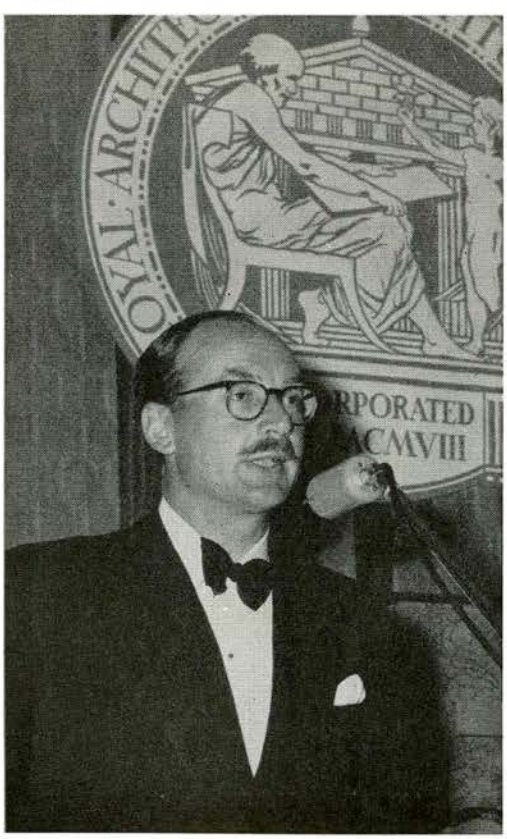
The 55th Annual Assembly Dinner

Top: The Annual Dinner and Dance, held in the Ball Room of the Bayshore Inn, was the closing event of the 55th Assembly.

Right: The new President installed in office. Mr Harland Steele (F), left, invests Mr John Lovatt Davies (F) with the medallion of the President of the Royal Architectural Institute of Canada.

Below: Guest speaker at the Annual Dinner was Prof. Anthony Emery of Victoria College, Victoria.



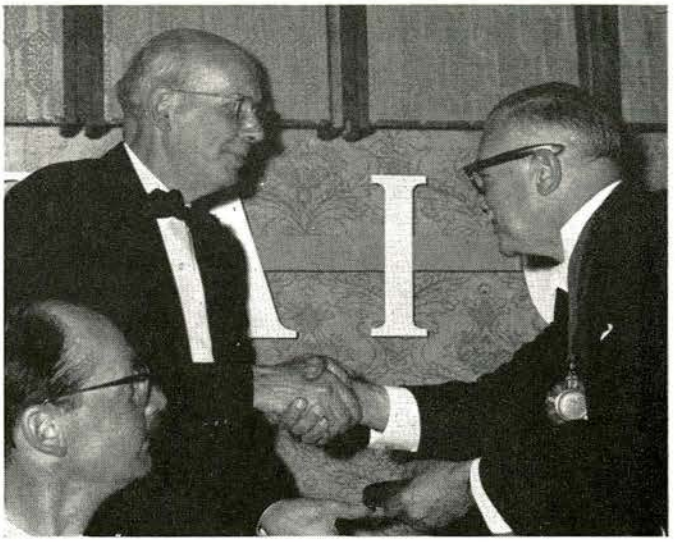


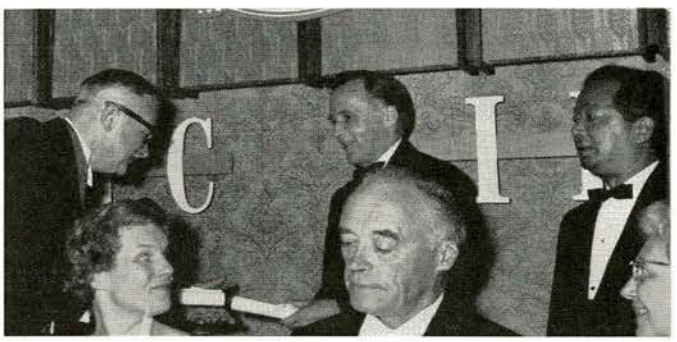
Presentations—
Right: The 1962 RAIC Allied Arts Medal to Prof. B. C. Binning, painter, Vancouver.

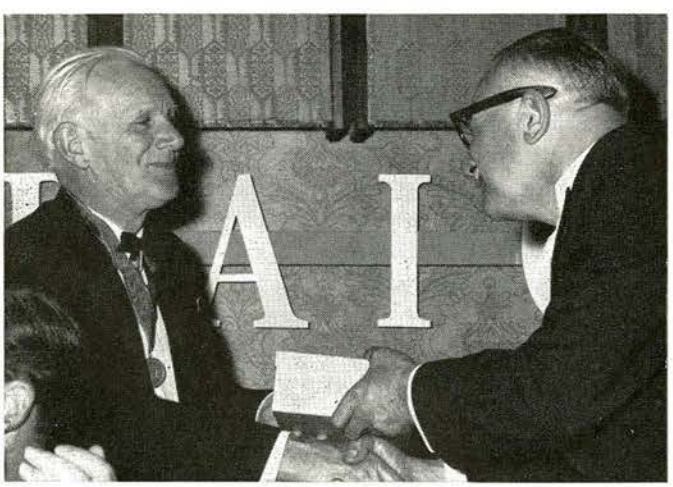
Centre: Honorary Corresponding Memberships to Dean G. Holmes Perkins, FAIA, School of Fine Arts, University of Pennsylvania; and to Torao Saito, architect and editor of "This is Japan", Tokyo.

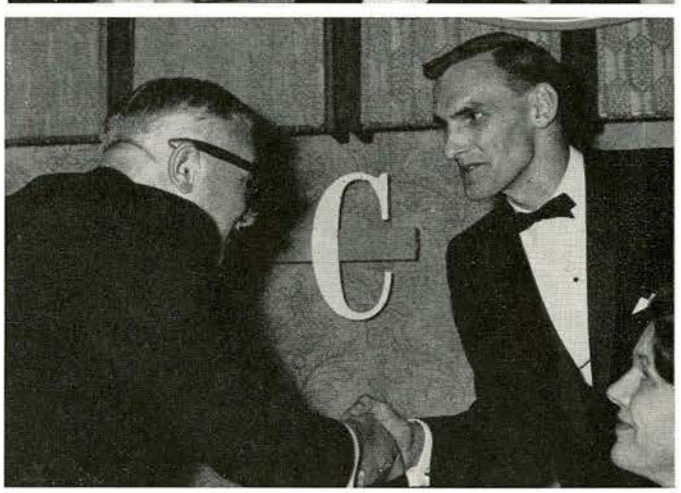
Bottom: The College of Fellows 1962 Scholarship to John Davenall Turner, of Winnipeg, a 1960 graduate of the School of Architecture, University of Manitoba, at present on the design staff of Smith Carter Searle Associates, Winnipeg. (Mr Turner will use the $2,500 Scholarship to study public housing projects in Europe).

Below: To Dr Eric R. Arthur (F) of Toronto (E.R.A.) in recognition of his outstanding contribution to the RAIC Journal over the past 23 years, the first 20 years as Editor, and the past three as Editorial Adviser.









"To the Guests", James Searle

"To the Ladies", Peter T. M. Barott (F)

"To the Profession", E. A. Gardiner (F)

The Assembly Theme was

R. S. Morris (F), who was chairman of the Seminar, introduced the subject and asked a number of pertinent questions about it in his article "Professionalism and Education: A Review of the Essential Balances", in the April (Pre-Assembly) issue of the *Journal.*

In this issue we present in full the two papers given at the Assembly. The first, by Sir William Holford, was the Keynote Address. The second, by Dean Perkins, was the luncheon address at the all-day seminar.

In the next issue we will present the reports on the seminar discussions, given by the rapporteurs of the five discussion groups.

MILLIONS OF WORDS have been spoken and written about architectural education, most of them by architects. Like love, it is a subject of endless fascination to those who are touched by it; and in one way or another we all are. Every generation tries to grasp the essential nature of education and believes for a time that it has succeeded. Then society changes and with it educational opportunities and methods.

The architect's response changes too, and so should his anticipation of the job and the social responsibilities for which the new generation is being prepared. It is sad to reflect that students have so often been trained for the kind of work that was current when their teachers were going into practice—in other words by teaching with an eye to the past, which is quite right, but also without an eye to the future, which is quite wrong.

Education is a process of endless re-appraisal; and all I can do in adding more words to the subject in this Keynote Address, is to report upon a critical stage in architectural practice which has been reached. This I can only do with reference to those parts of the world with which I am familiar.

THE ARCHITECT'S ROLE IN SOCIETY

As I see it, the stage which has been reached is the stage of full professional responsibility—and all that implies for architects in an age dominated by economics on the one hand and technology on the other. Right up to the Second World War we clung to some relics of our amateur status. For some architects at least, architecture was a gentlemanly pursuit, subject to inspiration and the mysteries of design, a little cut off from commerce and politics, a craft in which anyone who was qualified could take a hand at teaching if he had to.

It is now very generally recognized that the humanity and the imagination and the emotional response which an architect can bring to his work *has to emerge from and through the efficient execution of his office;* it is not something that can be pursued independently.

While it is not unusual to be efficient without being good, it is becoming more and more difficult to be good without being efficient.

It follows that the profession of architecture is highly vulnerable. Efficiency cheapness and speed can be procured by other means; if you are not too fussy about the quality of the brief, the design and the details. The contractor/developer with his package deal, the services engineer, the process man, the large manufacturer, the administrator, even the do-it-yourself house-holder—all these incline to the idea that architecture can virtually be dispensed with. Virtually; but not quite. It comes back in another guise. But the profession, as such, could meanwhile suffer an eclipse.

In the end the profession stands or falls by the quality of the service it gives to the community. And this attitude towards professionalism, this acceptance of public res-

"ARCHITECTURAL EDUCATION"

The subject was discussed by two principal speakers, Sir William Holford, President of the RIBA, and Dean G. Holmes Perkins, FAIA, of the University of Pennsylvania school of Fine Arts.

ponsibility, which marks—as it seems to me—a significant stage in our development, also means a more professional attitude to architectural education. It can no longer be an amateur affair, and Britain is not the only place to feel the wind of change. Here and in the United States, the same re-appraisal is going on.

THE PECULIARITIES OF ARCHITECTURAL EDUCATION

Now let us accept at once that there are ways in which the education, as well as the training, of architects, differs from that of other professions—even from those which are nearest related. Architectural education cannot be a solitary, a formal or simply a tutorial process. It cannot really be achieved by correspondence. It evolves in groups and classes and schools, and in the 'years' of a university. And the student body takes a more critical attitude towards its teachers and the subjects taught, than almost any other profession.

As far as Britain was concerned, the new look on architectural education had to wait until after the war, with the calling of the Oxford Conference, chaired by Sir Leslie Martin: this was our actual turning point.

THE OXFORD CONFERENCE.

The Oxford Conference of 1958, like most conferences on architectural education, arose out of dissatisfaction with the existing state of affairs. It began by defining as its aim the improvement of professional standards of competence at all levels; and the first conclusion it reached was that *the standard of entry was too low*. It was agreed on all sides that a uniformly higher standard and more mature students, could result in a reduction in the length of formal and theoretical courses; as a more fully trained intelligence would absorb this kind of knowledge more quickly. As the Chairman of the Conference put it in his report: ". . . the universities have a right to expect that knowledge will be guided and developed by principles: that is by theory. Theory . . . is the body of principles that explains and interrelates all the facts of a subject. Research is the tool by which theory is advanced. Without it, teaching can have no direction and thought no cutting edge."

So the conference proposed that in the long run all schools capable of providing the higher standard of training thus envisaged, should be 'in universities or institutions where courses of comparable standard could be conducted'. The profession was asked to consider whether this higher standard of training, either in its diversity or in depth, could possibly be achieved by part-time and evening tuition, or could suitably be examined by the present system of RIBA Intermediate and Final Examinations. If not, the profession should not be deterred from saying so, despite all the allowances and provisions and individual hardships that might result.

Now it would be difficult for any architect, considering the conclusions of the Oxford Conference in broad prin-

ciple, to reject them. They were obviously necessary and in general they were obviously right. But they also involved some painful re-adjustments; and they demanded a great deal more re-thinking and a great deal of extension in detail. Like the charter of the United Nations, the heads of agreement were not nearly as difficult to accept as the policies they implied and the alignments they produced. The architectural profession, throughout modern history, has often been an instrument of policy, but has itself been notably non-political. Certainly in Britain today the architects are aware of the advantages of organization, of the growing importance of the building industry in the national economy, and in the more recent challenge of the European Common Market. But face to face with this huge program, there has been no bid for power, economic or political; not even in trade union terms. The strength of the profession has depended, as usual, on its recognition of what it would have to do to achieve all-round competence and increased prestige; its weakness lay in finding the economic and political means to do so.

And in fact, all the implications of the Oxford Conference had not been taken in by the main body of architects. The Conference had described the 'un-recognized school' as an anachronism; had agreed 'that courses based on Testimonies of Study and the RIBA External Examinations . . . should be progressively abolished and that the part-time courses should go.' It had called for urgent consideration by the RIBA of the training of technicians entering the building industry (but not the profession) at the age of 16. It had also called for new thinking on the subject of the architect's contribution to town planning, on training (as opposed to pupilage) in architects' offices, on the staffing of recognised schools, on management and refresher courses, and on post-graduate studies.

Nevertheless, in spite of the doubts and misgivings, the Council of the RIBA moved some way towards the implementation of the conference resolutions. The Board at once appointed a committee to put forward proposals for an approved form of training for technical assistants and for professional technologists. It was found that of some 10,000 unqualified assistants in the United Kingdom, half were not bona fide students. The Board also commented that: "the break at the technician level (e.g. after the four-year sandwich course) would provide an opportunity for the transfer of an *exceptional* student to a course of training as an architect. Such a student would be expected, in addition to his normal studies, to satisfy the standard of the new RIBA entrance level." (i.e. he must give proof of a broad general education). At any rate, in October 1959, the RIBA Council formally confirmed the appointment of the committee on technicians (which has since been meeting under the Chairmanship of Professor Sir Robert Matthew), and decided that the standard of entry should be raised, that the 'possible effect of this on existing centres of training should be made known', that a conference on post-graduate training should be organized, and that the constitution of the Board of Architectural Education should be changed.

THE SURVEY OF ARCHITECTS OFFICES: 1960-62.

The other and perhaps more important move by the RIBA was to strengthen its staff and set up departments, working groups or joint committees of staff and members to discover the facts of professional enrolment, training organisation and practice. A new departure was to seek funds, additional to subscription income and prize endowments—the Institute has no real investment income whatsoever at the moment—to finance these essential enquiries.

Already an Economic Research Department had been set up in the RIBA secretariat. It was now decided to launch a pilot and then a more extended survey of architects' offices in order to see what the nature of the professional animal really was. The importance of this for the debate on architectural education was twofold; in the first place it would reveal the facts of architectural assistants, technicians and trainees in private and public offices; secondly, by defining more clearly what the architectural tasks and standards of service and of remuneration are now, and how they are changing, it would show what architects are being trained for, what kinds of jobs they would be doing in ten or twenty years' time, and therefore what direction their education should take. (Now at the end of their two years work, I can hardly exaggerate the value of our having facts and statistics to work on, in place of personal opinions and hearsay).

A Survey Team of five was set up. A generous grant of $34,000 for the making of the survey, over a period of about 18 months, was given by the Leverhulme Trustees, and the terms of reference were agreed.

This Report has now been published and is being widely discussed, both inside and outside the profession. I shall be telling you in a moment about its conclusions in so far as they affect architectural education.

But while the Survey Team was making its visits and enquiries, and computing the results of its questionnaires, there was something of a standstill in the new RIBA Board of Architectural Education, at least as far as changes of policy were concerned. At the same time there was a great deal of agitation in the recognised and un-recognized schools and among the Allied Societies of the RIBA. (A further year was lost before probationership of the RIBA was closed to those without the higher standard of entry into the profession. This standard was, in fact, applied only at the beginning of the present session (1961-62) and will not become fully effective—or perhaps I should say exclusive—until the beginning of the session 1962-63.)

COMPARISONS WITHIN THE COMMONWEALTH

In September 1960 the RIBA held a preliminary meeting of Commonwealth representatives to explore

the possibility of constituting and financing a regular Commonwealth Conference. Architectural education was among the many subjects discussed in a rather general way; and within the almost traditional framework devised in 1924 and adopted in many Commonwealth countries, it was quite clear that startling differences of standard and achievement existed, as well as of relative numbers.

(Whereas the proportion of architects to population in the U.K. is roughly 1 to 2½ thousand, in Pakistan it is more like 1 to 2½ million). In South Africa, which has now left the Commonwealth, but will be sending representatives to the Conference in April 1963 as one of the Allied Societies overseas, the schools are all in Universities and have for some years required the higher standard of entry demanded at the Oxford Conference. The Institute of South African Architects includes Quantity Surveyors, as a Chapter, among its members, and the profession is extremely well organised. Moreover practising architects take a keen interest in the work of the schools both as teachers and examiners. This is also happening, it seems, in Canada.

But in parts of the Commonwealth, and even in the United Kingdom itself, the variations of standard between schools have been considerable. Until quite recently members of the profession in practice have been unwilling to give much time to training except when starting out; and at that period not only have they had little practical experience but they have tended to use the teaching salary as a basic income.

LEADERSHIP IN EDUCATION IN BRITAIN

Recently in Britain, there has been a move in the opposite direction. It happened that two successive architects to the London County Council retired from outstanding service in this senior administrative post to become professors. Robert Matthew left to take the Chair of Architecture at Edinburgh University and a few years later Leslie Martin was appointed to the Chair at Cambridge, where he was able to persuade that ancient University, which had always set its face againt vocational courses, to grant an Honours Degree in Architecture and to follow the 3-year Bachelor course with a 2-year full-time postgraduate course. Both professors brought other practising architects of high calibre to join their staffs and both introduced 'live projects' as a school subject into the senior years of their courses.

NEW SOURCES OF TEACHING

I think there is a realization that much has to be borrowed from other fields of learning and specially processed for the use of architects in training. Scholars and experts cannot simply be invited to make a straight contribution from their own subject and in their own terms—although this is better than nothing. *They have to be people who themselves understand enough of the process of design to be able to explain the relevance of the part to the whole.*

It is pretty clear to us now that one of the biggest advances in architectural education everywhere in the next few years has to be in the selection and training of teachers.

A second problem which is, in my view, more serious in Britain than in Canada, where the primacy of university education is more generally accepted, is the prejudice against formal training in principle. To study this the RIBA appointed—before the Office Survey was presented to Council—a research officer to consider and report on practical training. The objective is to systematize methods of practical training, co-ordinate them with the various forms of academic education, and fuse the two into an integrated process.

CONCLUSIONS OF THE RIBA OFFICE SURVEY

The intermediate and final reports of the Office Survey Team were presented to the RIBA Council in December 1961 and February 1962 respectively. The Council agreed that the report had asked the right questions, provided the evidence for policy decisions of importance to the profession, and made recommendations which should be actively followed up. The Council would not —and indeed could not—come to immediate decisions.

The Survey Report was accordingly published early in April. At a Press Conference I said: "We undertook this survey, not because we believed that architects were less efficient than the other professions or other sections of the industry, but because we accept the responsibility—imposed on us by our central position—to give a lead that we hope others will follow. Nothing is easier than for all those concerned in the highly complex building process to blame others when things go wrong. We believe the best contribution will be made if we each begin by studying our weaknesses." From a wealth of detailed evidence produced by the Survey Team there were seven main conclusions drawn on the subject of architectural Education. These were summarized – of necessity in *extremely* brief form, as follows:

DIVERSIFICATION OF ARCHITECTURAL EDUCATION

1. Architectural education should be diversified in order to bring technical design skills back into the profession. Architects who choose to specialize in the application of these skills ('architechnologists') should not be debarred from membership of the RIBA.

RELATIONS WITH ENGINEERS

2. At the same time, closer relations should be established between architects and engineers in order to reach a better understanding of
   (i) What the architect requires and
   (ii) How the best use can be made of the consultant's services.

INTEGRATION OF EDUCATION AND TRAINING OF ARCHITECTS

3. The education and training of the architect should

be planned as an integrated whole, a seven-year period in which the stage or stages of practical training are coordinated with the School syllabus to ensure that both aspects are complementary and together cover the necessary ground.

4. The profession should recognize that practical training of students in the office is an essential investment for the continuity of practice. There should be close cooperation between the office and the School, to ensure that the necessary standards are maintained throughout the training period and that the experience gained in each are integrated.

TRAINING OF TECHNICIANS

5. Technicians are needed in architects' offices in order to raise productivity and standards of service. They should be given some form of organized training for work concerned mainly with technical administration and the preparation of product information. The technician should not be concerned with design, and his training should exclude this aspect.
6. The existing National Certificate courses in Building, with modifications, would provide a suitable medium for training technicians, as their work will have much in common with that being done by technicians in other parts of the building industry. It would be beneficial to the whole industry if they were to some extent interchangeable.
7. Technicians, as non-professionals, should not be admitted into a class of membership of the RIBA, but there should be an institute for technicians sponsored by the RIBA to ensure the maintenance of standards of education and training.

REMAINING AREAS OF DOUBT

The recommendation that has caused most discussion is that on the training of technicians. And on my return to England next week there is to be a further series of talks, and a General Meeting of the Institute, before Council addresses itself to laying down the first lines of policy.

To me—speaking personally and not as President of the RIBA—the evidence is clear and inescapable. We are looking forward to professional standards of a rather higher average, maintained by men of intelligence with trained organising ability—both as individuals and as members of teams or firms. On the one hand this means more specialisation *within* the profession; and on the other a greater awareness of how technical skill can be used in a greater variety of human, social and environmental situations.

Therefore, *no dilution of the profession is wanted.* It would confuse our own aims, prevent the raising of standards, and damage our public image.

At the same time architectural practice is much more complex and demanding than it was fifty years ago. If we are to give a better standard of service to the community we have a reasonable division of functions between the programme and its design solutions on the one hand, and the production process on the other. The production process includes a lot of clerical, administrative and technical work which can be better done—and certainly more conveniently done—by others involved in the building industry but not trained over a 7-year period as architects.

This is, to my mind, the role of the technician. I would not, personally, close the door to him at any stage if he qualifies for re-entry into the architectural profession. I also recognise that there are thousands who have been trained as architects in the past, have not qualified, and are now valued assistants in offices, helping on both design and production.

But surely education has to provide for a *changing* situation, and not simply perpetuate an existing one, which has proved to be very much in need of overhaul? That is how I see it.

But there is no doubt that the profession as a whole, in Britain at least, is not yet clear in its mind about the distinction between the general term 'architectural assistant' and what is referred to by the Survey Team as a 'technician'.

And many feel strongly about an important point of principle: namely that desgin is *indivisible;* and that every drawing, every schedule, every detail of equipment and furniture is just as much a matter for the trained architect as the main design decisions.

Others, again, are worried about the effect of future changes on the nature and the running of their own practices; and they are opposed to these changes for economic reasons.

So in spite of a great deal of argument over the last five years, culminating in the Office Survey recommendations, there are still areas of doubt, which remain to be cleared up, as regards the proposed technician class.

EXPANDED SERVICES

A conclusion has not been reached, but will soon have to be attempted, on another important aspect of architectural training; and that is its relation to town or city planning, to landscape design, to land-use planning and regional resources: i.e. to the total physical environment. This is the subject of much discussion by the Committee on the Profession reporting to the AIA and in particular by the 3-man Commission, and it calls for additional or extended services from the architect, both by training and practice. On our side we are inclining more and more to the view that we should make two parallel moves in the same direction.

The first is to *expose* all the design professions, during their training, to the techniques and aims and disciplines of work of the associated arts and social sciences: not so much as specialisms but as methods of thought and approach. This means institutions, of course, where such exposure can help to ripen and mature the student in particular branches of training, rather than put him under psychological strain and leave him with confused

and vague ideas of his own and other peoples role in society.

The second is to shape a form of training for the general architectural student at post-graduate or 'masters' level, which will equip him to work collaboratively in the field of town design, but will leave his major training discipline as architectural design. Our need for this kind of architect in Britain is very great particularly on the staffs of local and central authorities and for all kinds of public and private projects under the heading of urban redevelopment.

This does not mean that a few architects—perhaps as a result of the exposure to the economic disciplines of the social and economic sciences, or the scholarship of the art historians, may not go on to become city and regional planners in the true sense of the term. But there would be a qualification, both academic and professional, to identify the urban designer—the man or woman whose skill has been especially trained on a broader front than the form and structure of individual buildings.

We all tend to envisage *ideal* systems, and I think we should recognise that this is so. In Renaissance times architects designed "ideal towns". These exercises were essential to the progress of thought at that time, even though the plans were usually impracticable. In the same way we now have to create ideal systems of education: they may not fully materialise, but almost everything that is done will be influenced by them.

The comments I have made today are, of course, very general. A Keynote Address can only hope to strike a few chords and tune the piano. I should like to end it by saying that I most keenly appreciate the opportunity you are giving me to hear so many first-class executants perform on the instrument itself during this Annual Assembly. I hope all of us will get a lot out of it and I know that I shall.

Architectural Education: The American Point of View

The Seminar Luncheon Address by Dean G. Holmes Perkins

AMID RECURRING POLITICAL AND SOCIAL CRISES, our modest problem of educating a new generation of architects gets scant attention. Nor does this appear surprising or unjust. Yet, on second thought, will not the vision, the dedication, and the skill of architects play perhaps the decisive role in the creation of tomorrow's world which will be dominated by the city. The quality of the urban environment will mold our lives and thoughts. Nor do I see any inherent conflict with nature for man himself and all his works are but a manifestation of nature. At present, however, man's skills in the creation of new systems that promote and maintain an ecologic balance are sadly rudimentary. The science of urban ecology is in a most primitive state, and our understanding of social behaviour only slightly more advanced. Under such circumstances it is hardly surprising that our architectural visions have been so limited, that we have had to depend so heavily upon intuition, that we have failed to reflect in our designs the potential richness of modern social life and have relied too much upon norms and averages for guidance rather than upon an understanding of the individual whose ambitions and activities are legion. We have been blinded by our own technical virtuosity to the point where nature's laws have been flouted rather than used as guides to greater things.

We have become so conditioned to the dramatic concept of revolutions (industrial, social, technical) that the constancy of the evolutionary process is lost sight of in building and its reflection in architectural education. To be sure, a myriad of academies and schools have each had its hour in the sun. The longer view, however, would reveal a steady and accelerating widening of the architect's social responsibility and the expansion of his technical competence. The ideas of William Morris, Wright, and the Bauhaus are already as much a part of our rich architectural heritage as the earlier theories of Alberti, Palladio and Gaudet. The explosion of knowledge plagues the architect to only a slightly less degree than it does the scientist. You may remember at the AIA Convention in San Francisco two years ago that Oppenheimer in speaking of the difficulty of communication among scientists pointed out that of the major discoveries and advances in science 93% were made by men living today. The changes in our own profession have been somewhat more slow, but the pace is quickening.

Medical education felt and met this challenge some

sixty years ago. Architectural education in the 1930's began a similar self-examination. Though it would be misleading to suggest a close analogy between medical and architectural education, there are several basic lessons to be learned from those who have already travelled the path upon which architecture is now embarked. In the first quarter of this century, sparked by Sir William Osler and aid from Carnegie and Rockefeller grants, scientific medicine became the objective; specialization the dominant pattern; and the university medical center its preferred instrument. Yet as late as 1925 Flexner was to say, "From the earliest times medicine has been a curious blend of superstition, empiricism and that kind of sagacious observation which is the stuff out of which science is made. Of these three strands medicine was constituted in the days of the priest-physicians of Egypt and Babylonia; of the same three strands it is still composed." The same is true of architecture. Shortly thereafter, the concept of comprehensive medicine with its interest in the whole man, his emotional well-being, his home and community environment, began to modify the definition of scientific medicine.

ARCHITECT'S RESPONSIBILITY IS NOW MAN'S TOTAL PHYSICAL ENVIRONMENT

Are we not entering such a phase in architecture where we are equally deeply committed to a concern with man's total physical environment? As chief architect of cities and of regions we must accept the full implications of this responsibility and educate our successors in such a way that they can create a humane and delightful environment in harmony with nature. Such widened and deepened responsibilities will force a lengthening of our present architectural curricula and reemphasize the advantages of a sounder liberal education.

The need for such a major change was recognized by the schools of medicine early in this century. In 1904 only four of the 160 schools required college work before admission: yet by 1918 such preparation was mandatory in 85 out of 95 schools. By 1954 three-quarters of all medical students had completed four years of liberal arts before starting their professional courses. In fact, the admission tests had by then become so effective that the first year drop-out rate had been reduced to less than 5%. This is in shocking contrast to the human and financial waste which characterizes undergraduate architectural education in the United States. Of the entering students from 12 schools tested by the ETS over five years ago only a small minority graduated with their class; in one school with a freshman class of 115 only one man remained on schedule. This record is nothing less than tragic.

A liberal education, including an introduction to basic design, would not only give a better basis for selection but would, in the words of former President Lowell of Harvard, be the best of all preparations for meeting those countless situations where sound decisions based upon inadequate evidence are required. The student, even more than the admissions officer, would have a firmer basis to judge his own motivation, his interest in architecture and his capacity. The premature decision to choose a profession forced upon the high-school student by the present system is the root of much tragic waste and mounting frustration. For many there is no honorable escape. In contrast, a liberal arts course of not less than two years (four would be better) would develop maturity and judgment, provide a built-in escape hatch for those who have found other interests, and would improve the public image of the architect. It is well to remember that his fellow professionals in law and medicine are characteristically products of graduate schools. The same trend is clear in business education. These are the men with whom he will deal in his professional career; the architect deserves and needs no less rigorous and broad an education.

The expanded services of the architect involve him in all aspects of urban design. His interest and his acts impinge upon the landscape, on art, on city planning, on engineering—in fact upon the whole urban environment. Yet by training he is most inadequately prepared for his vast responsibility.

The essence of his professional contribution to society is and should remain his unique dedication to creative design. His ability to invest each structure and space with qualities which stimulate new and unforeseen responses places upon him a double burden. He must in a single act serve the present while opening the door to tomorrow.

SINGLE DESIGN-ORIENTED FACULTY SHOULD EMBRACE ALL NEEDED SKILLS

The change in architectural education which we anticipate lies not in any change in the basic creative orientation of the profession but in the expanded areas of service where he will be expected to exercise design leadership. Several professions quite properly claim a special competence in portions of the field. A school for architects can no longer confine itself to those traditional skills required for professional registration which reflects only too devastatingly the state of the profession of ten years ago. We must prepare the student for his role tomorrow. The first essential is the maintenance of leadership in design. The corollary to this proposition is that all those contributing to the design of the urban environment should be educated by a single faculty embracing all the needed skills. Under such a design oriented faculty the planner, architect, the landscape architect, the artist and those structural and mechanical engineers who are concerned with buildings can receive a sounder and more mutually rewarding education. They will learn from one another by working together in preparation for professional collaboration in practice. The current jurisdictional disputes which plague the professions have grown out of a parting of the ways. The healing of the wound must start at its deepest point—the education of the new

leaders. An atmosphere of mutual respect among partners can most clearly illuminate the intricate problems which face all designers. What more effective way can be devised than through the example of an harmonious faculty whose thoughts and actions reveal their common goals.

The teaching of historic and contemporary theories, of technical processes, of ideals or of methodology is simply not enough. The search for fresh answers must continue. Two paths are open. The path of experience in practice will offer rich opportunities to test ideas and for some limited experimentation. The second path is that of organized research within the school under the leadership of experimentally minded teachers. An active program of research is indispensable to the promotion of an atmosphere of learning whose prime purposes are the discovery of natural laws, of human reactions to space, color and form, technical invention, and the creation of a more humane environment. A secondary, though never negligible, advantage to the integration of teaching and research is the budgetary saving, which if properly used can give richness and depth to faculties formerly limited by inadequate teaching budgets.

UNITY OF DESIGN PROFESSIONS MUST BE PRESERVED

The essence of the school is in the attitude and quality of its faculty. In an age when specialization has become imperative, positive steps are needed to preserve the unity of the design professions. A creative attitude must prevail in all the parts—from the design of a city to that of a structural system. Under the umbrella of a single faculty dedicated to the design of the total urban environment, programs in landscape, in structural and mechanical engineering, in art, in planning, and in achitecture will each contribute its share to the common cause. The fragmentation prevailing today fails to attract good candidates in several areas—notably in engineering where the more talented are seduced by the glamor and high rewards in rocketry and electronics. The new faculty with its emphasis on creativity can bring a heightened prestige to all the design professions.

In the design of new curricula deeper attention must be given the forces which mold our cities and our architecture. Systems of pedestrian and vehicular movement evoke new forms, the decisions of government design our buildings for us, and investment policies and even myths affect our work. If we would be masters in our own house, we must learn to manipulate those forces as well as we now integrate our spaces and our structural systems.

Though such curricula roughly correspond to those basic medical and clinical studies of the doctor, there is no comparable internship available in architecture. The hospital offers the doctor firm assurance of a continuation of his education with increasing responsibilities; industry offers similar openings to the engineer. The present structure of the architectural profession offers no comparable continuation of his education nor even any real assurance of an organized sequence of practical experience. Action to fill this void becomes the joint responsibility of the Institute and the schools. Regional seminars coordinated with office experience are surely within the resources of the profession today though certainly only a partial answer to the problem.

GRADUATE STUDY MUST BE AVAILABLE IN ALL AREAS

There still remains the specialist. He will be constantly more in demand. In part he will come out of the various branches offered by the design faculty but he will also develop out of the experience and accidents of professional life. In any case graduate study must be available in all areas though not necessarily in all schools. It is an historic imperative that Specialty Boards will develop as in medicine in spite of the delaying action of the past two Conventions of the AIA.

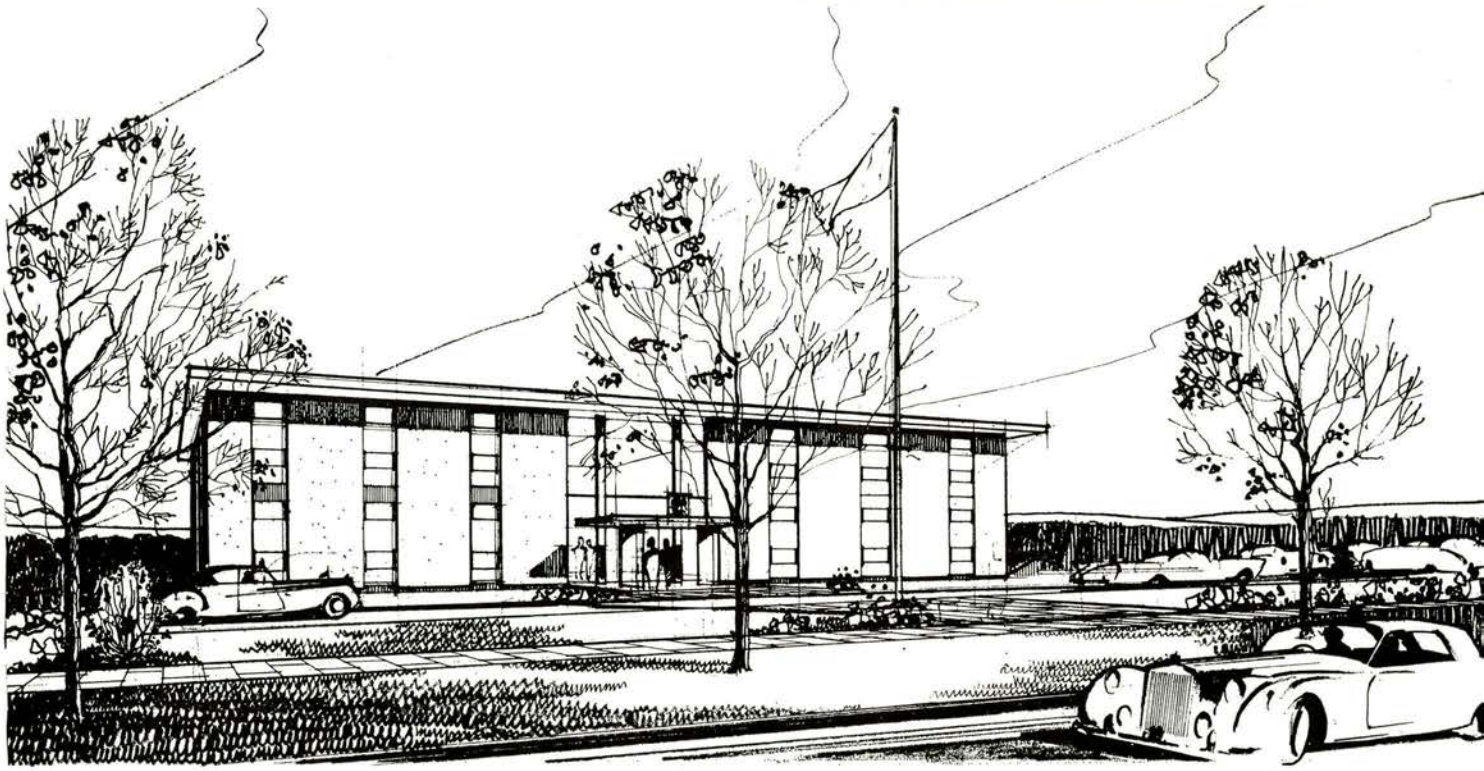
I would repeat that the range of services of the architect will continue to expand. Nor is this increased responsibility limited to technical matters. Huxley warns us that, "At present our approach is concerned almost entirely with economics, social security and physical health. This material approach is frankly not enough; however adequately it deals with the foundations of life, it leaves out all its upper stories. Our new view of human destiny insists that emotional and intellectual and spiritual satisfactions must also be taken into account."

The architect in response to this continued challenge must reach those heights so eloquently described by LeCorbusier: "The architect by his arrangement of forms, realizes an order which is the pure creation of his spirit; by forms he affects our senses to an acute degree and provokes emotions; by the relationships which he creates he awakens profound echoes in us; he gives the measure of an order which he feels to be in accord with our world; he determines the various movements of our heart and of our understanding; it is then that we experience the sense of beauty."

Canadian Chancery Building

Canberra, Australia

THE MAIN ENTRANCE FROM COMMONWEALTH DRIVE



A CONTRACT WILL SHORTLY BE SIGNED for the construction of a new Chancery in Canberra, Australia. The new offices for the Canadian High Commissioner and his staff are to be erected on Commonwealth Avenue, one of the main streets in Canberra set aside in the original city plan for important Government buildings.

The Chancery is set back from the road with a curved driveway leading up to the main entrance. Parking space for visitors is provided at the side of the building, with staff parking at a lower level further back on the site. A wide stone-paved terrace for visitors leads directly from the sidewalk to the entrance, with a flag-staff for the Canadian Ensign in the centre.

The exterior of the building is finished with a white stucco rendering, with windows and entrance door frames in gold anodised tubular aluminum sections. The spandrel panels at the second floor level are black granite. The soffit of the overhanging roof is of stained and varnished wood. The eaves and roofing are of copper. Over the entrance canopy formed in cast aluminum is the Canadian Coat of Arms.

The land slopes to the rear of the site and the offices are planned on three floors, the basement floor being level with the grade at the rear of the building. The front entrance opens into a two-storey reception hall with a centre staircase rising to a balcony that joins the two sides of the second floor. The staircase also leads down from the ground floor to a lower film display area, staff rest room, etc.

The floor of the reception hall is of white marble with brass dividing strips. The side walls are panelled to the full height of the hall with raised Canadian pine panels and birch dividing strips. The High Commissioner's office has wood parquet floor and special lighting. The bulk of the offices have vinyl flooring and standard fluorescent fixtures.

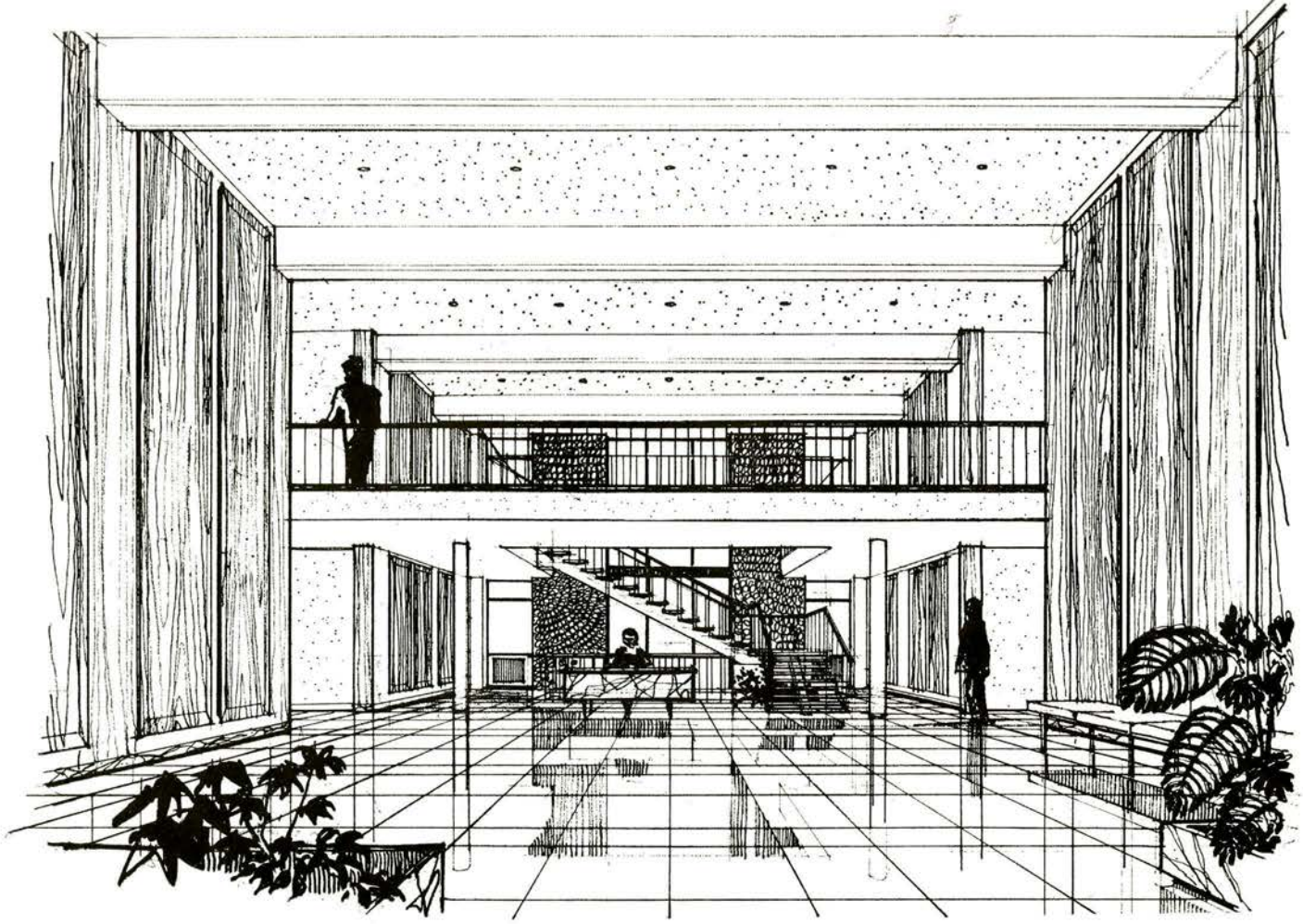
The plan of the building has been arranged so that it may be extended to the rear, with access directly off the entrance hall at all three levels. The main feature of the plan being that even after extension, the front reception desk has complete control of all parts of the building.

Architect:
Department of Public Works of Canada,
Chief Architect, A. E. Gardner

Consulting Architects:
Mathers & Haldenby, Toronto

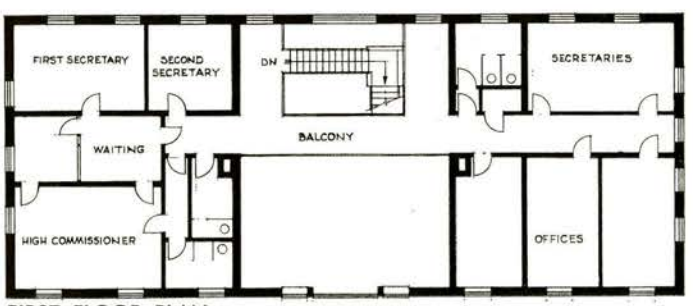
Structural Engineers:
C. D. Carruthers & Wallace & Associates Ltd

Mechanical Engineering:
Mathers & Haldenby Staff
W. H. J. Kitchen, Chief Engineer

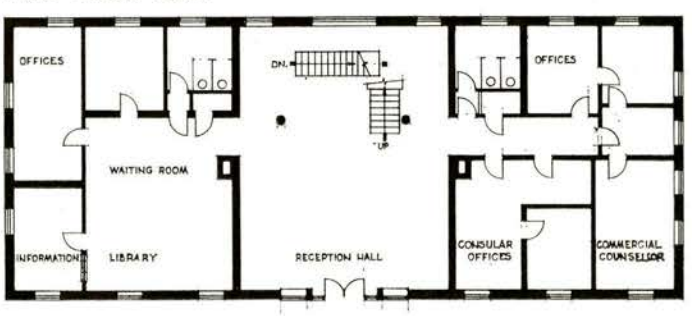


RECEPTION HALL

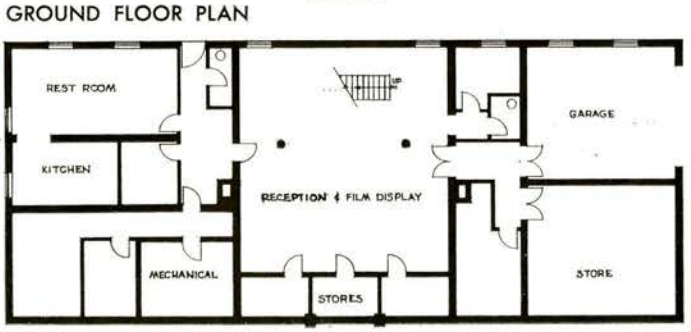
WAITING ROOM & LIBRARY



FIRST FLOOR PLAN



GROUND FLOOR PLAN



BASEMENT PLAN

A Journal of Istanbul

by Mel Charney

ARCHITECTURE is now at a beginning, a beginning which realizes the terms and scale of multiple-man. It reacts to his will with crude forms. Everything else has become history, everything a curiosity to be looked at and tasted, to be experienced, accepted, or discarded. Buildings and cities, ancient architectures, pleasing hand-crafted work, sheds and cathedrals are all part of another world—a huge anonymous collection which one can still visit to find origins and motives of architecture, and delight in its forms.

There are no more far off places. There is no more exotic; New York is as exotic as Baghdad. It is exotic desires that find exoticism in strange situations and histories. The unfamiliarity of an environment can sharpen reactions; the people, the way of life, the way of the buildings occupy thoughts. These thoughts are examined, image by image, as pages in a journal. The environment and the buildings evoke questions. Questions by their very nature have in them the seeds of an answer. And the journal is of any city.

Look at that building, but you are pushed aside in the hurry of people. Buildings and streets are dense with people, who spoil the moment, and you wish that they would all go away. Movements, faces, odors, which distract. These people are active in the voids, the space left over; they force their way in and assert themselves. Imaginary figures of people are adjusted by the mind's eye to illusive and sudden images, and a sequence of chimneys, and the pattern of dark openings in the wall of a street become buildings. People are always the measure. Ancient work sits empty, alone and cool, as the sculptured image of an architecture.

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TRAVELS are underlined by the sea, the Mediterranean is never far away. A blue, blue strip vertically out to the horizon.

Thousand years of activity reads in the residue of buildings, and history is the continuum where cities are dust and villages have become the metropolis. The travel is east to Turkey, to Istanbul and the Cappadocian plateau of Asia Minor.

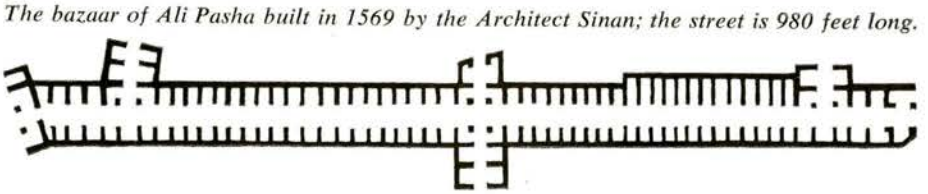
The landscape of Thrace eases you into Turkey. At a river the line is crossed to the rattling accompaniment of a bridge. Lined with trees, and it moves off to a Roman city — Hadrian's city. Now it is the town of Edirne.

Edirne has the history of a battlefield. The Turks made it their capital for the hundred years before the fall of Constantinople; the twisted and scaled minarets date from then.

A profile of minarets. Shafts tapering to the sky, the round of domes below and an edge of houses. The forms of 15th and 16th century mosques dominate the town. Their presence, their architectural sophistication, is unfamiliar; as yet there are no terms of approach. A reality of people is more immediate, as is an environment of languge and streets. At evening the people mill about in an open street of shops. The street is filled with dark figures, dark figures in a long hall where the walls of the hall are shops, and the ceiling is a sky. A recess, shadowed in the wall, is a cafe of men at tables. The sinuous shape of a tea glass catches the eye, and the shape fits comfortably into the hand. From the line of shops stand out large entrances. The entrances lead inside, to an inner street, which has a vaulted roof and shops that fit into a repetition of masonry bays. The length of this interior street is a building which includes both shops and a street.

Shops set the mood and scale of this inside street. Long, empty exterior walls, and projecting entrances invited other shops to occur about the building. It is a building which allows other similar buildings to become part of it, and it evokes a density in the town pattern and a special environment. Which buildings contrive to receive

The bazaar of Ali Pasha built in 1569 by the Architect Sinan; the street is 980 feet long.



other buildings in an urban grouping? If there are no densities in a town, what is to be an open space?

To Istanbul the road follows the contour of a wide plain, with the landscape it dips abruptly into each scooped valley. The road abuts a large airport, and in the manner of the new it becomes a wide throughway rushing you at the scale of its own landscape to the walls of the city. These walls remain formidable in spite of the road, but the new, effortlessly cleaves the masonry and a wide street enters. An edge of the city is still defined by walls, walls powerfully constructed and inevitably taken.

Drab wood and stone buildings crowd the streets of Istanbul. There is a victorian air about the city, like a musty old house cluttered with exotic curiosities and things hidden in dark corners. The rush of a rattling tram forces you against a building. Through a gate between buildings is an alley of pedestrians, glaring bulbs illuminate the shops which stagger downhill in vertical strokes. The pavement widens for a kiosk. At the bottom of the hill a bridge leads traffic out over water, over a wide street of large ships and flecks of boats. The bridge crosses to Stanboul, to that part of Istanbul which was the center of Byzantium and the Ottoman empire. People and vehicles move into the spaces about the Yeni Valide mosque, the spice bazaar, and the narrow streets. Streets of trade with pedlars hawking. The beasts of burden are porters who transport a world on their bent backs padded with straw. The crowds of people are indifferent, an indifference where the unfortunate have a definite place in the scheme of things. Life is on more crude terms. At one time super-sensual indulgence existed for the few. Now for the many there is sticky sweet pastry, the delicate lace of rose petals in syrup, music which, like old Kufric script, hovers and vibrates—a throaty thigh and belly music, and dark-eyed bosomy women. But it is not as yet the world of the many. Men pass their days sitting in cafés, crowded cafés where they click backgammon, stare out to the street as if bored for the last hundred years, and finger nervous bead chains bead by bead, one by one, over and over, as a Sisyphus easing his life with raki and tea.

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Stanboul extends over a large area of hills to an edge of sea and Byzantine walls. Its pattern is both dense, tight, and open. The tight areas grow in on themselves, and the city is open where buildings have disintegrated to dusty fields.

Several streets converge on a square inhabited by taxis. About the square are the university gates and Beyazit mosque. At the side of the mosque the ground rises, the mosque stills the noise of the street, and walls and trees shade an area in which a disarray of tables is a café for students. Behind the mosque is a yard, where worn books aligned in stalls and on the pavement make it a quiet and curious realm. The yard narrows, turns between two stalls down a stair into the tumult of the bazaar. Here everything is a shop or a conduit of movement; a man's arms, the niche in a wall, a narrow between two buildings, vaulted and dark interiors, all become shops; and movement is from light to dark through tunnels of shops, to alleys, to little streets, to wide openings, a peopled and cluttered labyrinth. Between houses, a low wall of regulated openings encloses a disarrangement of thin stones and tufts of grass, and children playing. What a perfect place to play, stones which can hide, and some earth to dig in. A graveyard has become a fascinating playground where noisy delight is heard among the turban headed stones. Each space in a crowded city evokes a use, and fills with people in its pattern.

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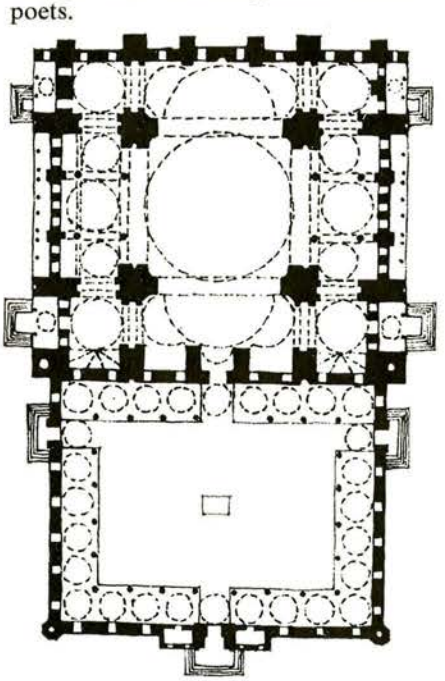
Lines of slender minarets catch the eye. The narrow street moves off to an open square, and there is the adjacent mosque. The mosque of Sultan Suleyman dominates this square defined by its outbuildings, and absorbs the space of the square in a sequence of courtyards, the square itself is as a courtyard. Banal life of the street is shut out. The main precinct of the mosque is delineated by a low screen wall, within are figures resting in the shadows, and diagonal paths to an entrance standing separate and dominant in the façade of a forecourt. The porticoed forecourt is an atrium, a delicate ablutions fountain sits small and commands the space. Views of the sky, and of the main hall, are framed by lines of minaret. Minarets, forecourt, and main hall are in sequence the parts of a mosque. There is a conscious putting together of these parts, the minarets still seem tacked on, and with the forecourt are as from another tradition the addendum on a building similar to Haghia Sophia. The parts are unrelated by the rhythms of the architecture, each is articulate in itself and as a separate building. The tall minarets are at the corners of the forecourt, and the void framed between these easy shafts stands airily against the hard working weight of the main hall.

The plan and constructive system of the main hall relate directly to Aya Sofia, but something else is evoked, a different spirit is at work. The large dome is dominant, it rises high, and radial ribs move

Glata bridge over the Golden Horn; the bridge into an ancient city, into Constantinople which after 1453 became the capital of an Ottoman empire. The city is as in this photograph of 1890, at the left edge the mosque of Aya Sofia and next to it that of Sultan Ahmet, only now the clutter is more cluttered when viewed against aspect of change.

out to fasten the dome to a lower structure of arches. About the arches small domes dance as cupolas. These main arches are shallow and thin lines attenuate their mass. Four columns, at the springing of the arches, stand with stepped buttresses as structural walls into the building. But the columns are all capped with cupolas, they become part of the play of cupolas, and their weight reads as a hollow. Thin lines edge and separate the cupolas sitting them like cardboard hats on a space. The scale of the daring construction is played-off with a preference for lighthanded effects and picayune elements. At the lower edge of the building, where there are people, small tightly contained rhythms proliferate. The small is always consciously performing before the big, and the building shifts uncomfortably from one scale to another. "A taste for tittilating little pleasures put into the architecture", wrote Henri Michaux of the Alhambra at Grenada. And Sultan Suleyman's mosque was the delight of Turkish poets.



Sultan Suleyman mosque was completed in 1557 to the plans of the architect Sinan. Prolific Sinan was at the head of an empire of architects. The dome has a diameter of 86 feet, and a height of 156 feet.

The interior is a great sweep of space, the curve of the dome slides into that of half-domes and to the columns. The dome rises from a square of masonry arches. This square of arches on four columns is a structural frame, a clear and simple skeleton from which the dome, half-domes, and walls recede. Cupolas belong to the small and secondary spaces at two sides of the hall. There is only one dominant scale – that of the large space. The small, often repeated, is contained in the patterns which play on all surfaces. A profusion of glass lamps hanging just above on a metal thread from high up are part of these patterns. Many openings light the interior.

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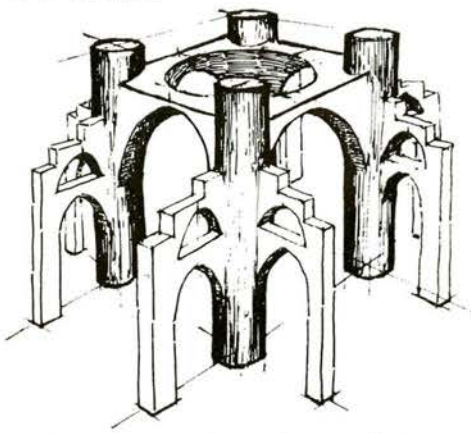
A repetition of minarets aligns Sultan Ahmet mosque, the main mosque of the city. It was completed in 1616 with a plan based on an earlier mosque by Sinan.

In a small café the nervousness of the streets subsides. Trees shade the café. High above branches the delicate minarets of Sultan Ahmet mosque thin out. A light forecourt can be seen in the depth of an overlay of screen walls. From a wall projects an entrance frontpiece, within is the porticoed forecourt and a fountain and second frontpiece door on axis. The dome of the main hall caps a build-up of half-domes. Against the base of the dome stand out four columns. Cupolas are somewhere below and withdrawn behind a thin line of verticals. The effect of the exterior is still so lighthanded. Out from the side of the forecourt, in the mosque precinct, are few wide limbed trees and the inevitable figures of people cast into the shadows. The ground is uneven, there is a sense of other buildings underneath this site where once stood the hippodrome and the imperial palaces of Byzantium. Haghia Sophia is just beyond.

Lines of repeated openings tighten the exterior planes of the Mosque. Walls of regulated openings build up planes of depth and planes of darkness. You see through, you see in, void is part of the building. The openings in sequence are rhythms. Rhythms play on your eyes – AAA/BB/C/BB/C/BB/minaret– the minarets are part of it and the dark openings are part of it. Minarets and buttresses are the solid strokes in the sequence of openings, these solids then step up

from the hollows to do their work above. The scale of each opening relates the lower building to people, the repetition of openings balances the large which can breath freely. Each element of the building occurs in some degree of repetition. Rhythms skilfully move you from part to part of the building, the collection of parts—minaret, forecourt, main hall—work together as a mosque.



The openings draw the eye into the building. Through openings can be seen figures of people in an inner courtyard, people become part of the building. There is a sense that you can participate in the spaces even though you have not come upon them as yet. The architecture directly implies voids to be used. Hollow and depth are archetypes in the expression of an architecture; how well Le Corbusier knows how to use this.

The inside of the dark voids are light, light openings which illuminate and float an interior. Exterior planes of screen protect, in their depth, a transparency of wall. The interior space is centered on itself by the structural frame which now stands sure on four massive rotund columns. From this structural frame the building expands in all directions, pulling tight into rounded and domed spaces. The buttress walls are as flying buttresses which move out from the columns with the skin of the building.

Lines and patterns play on the surface and relieve the white light. A play on the lines of structure divides the surface into thin attenuated panels. Repeated openings are part of the patterns; where the buttresses interfere, the windows are carefully painted in as a stage set. The discs of Koranic script are now part of the surface.

A building for religion is dominated by its own world, its image of a desired heaven on earth to be evoked by an architecture. For Haghia Sophia it is an interior world, an expansive world where space moves away into dome and half-dome tightening the surfaces. This taut interior is the façade of the building, the structure does its job elsewhere. It is an interior of light and dark, at the center of it all the main dome floats in light, and it is dark behind a screen of columns which shadow side aisles and galleries. Figures and hieratic symbols inhabit the mosaic surfaces of the interior. The architecture of Haghia Sophia is employed in Sultan Suleyman mosque, the mosque uses it with clarity to its own intent, and the building becomes something else. Bones have moved out from the walls, they delineate the interior space and are a structural frame from which the walls expand. Vestiges of Haghia Sophia remain part of this building: the plan is directional with secondary side aisles, infill walls stiffen the structural frame, in spirit the massive of the columns is still part of the walls. The screen of columns has moved outside, there are no darkened spaces. There is no room in the mosque for figurative imagery, geometric patterns texture the walls, many openings are part of the patterns and an even strong light illuminates the interior.

Sultan Ahmet mosque is the great singular space. The plan has become central on itself, a square with radiating domes. The bones stand out sharp on four drums of massive column. All darkened and shadowed space is outside, screen walls are the exterior elements carefully manipulated to relate the parts and the scale of the mosque. It is an interior of light, the frame, the weight of the columns dissolve in light. Through large openings you can see out beyond the Bosphorous to a horizon.

The interior of an Ottoman mosque has no more walls but surfaces, thinned by lines of pattern, which pull out away from a structural frame left standing. It is as in a tent with the fabric billowing out from masts of support. The main columns, the four masts, extend from the top with buttresses as guy wires. In this manner of a tent, the structural frame articulates the architecture of the building within and without. And as in the encampment the floors are covered with carpets. The strong light dissolves all interior substance, the building is no more, and space recedes far into distance. You are back outside, back in an atavistic space where steppe and desert are in the light of an open sky with the horizon at a far edge. It is the loved open space of the early Muslim, the nomad, to whom city enclosure was illness and death.

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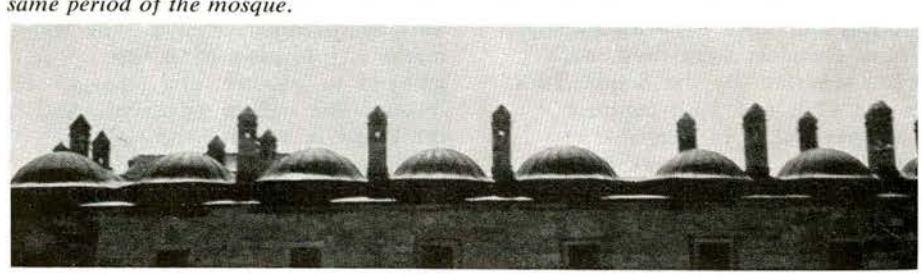
In the environs of the 16th century mosques are groups of outbuildings. Religion was one with the state, and these were buildings for the public – for the faithful. And as buildings, they withdraw behind low and simple façades, behind continuous walls which are the background for a dominant mosque or an open space. The formal aspect of the façade sets the ambient mood.

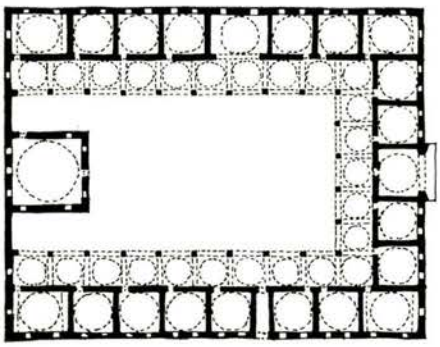
It is the vigorous profile of the roof that vibrates in relation to the animated insides of the building. Shapes alternate and repeat in sequence to spaces below. The

The interior of Sultan Ahmet mosque from high, the columns are 16 feet in diameter, and the floor is far below. An interior of the "Blue Mosque", blue from tiles of enamelled faience.

An upper edge of walls, walls of the outbuildings of Sultan Suleyman mosque from the same period of the mosque.



domes sit lightly, a large dome on a large space, and chimneys punctuate the rhythm. A tight exterior wall restrains an exuberance which shows itself at an upper edge, and the wall is as the tight rules and regulations which, at that time, circumscribed the emotions and violent energies of the Turk; spirited geometric decoration is always contained in an arrangement of tight panels.



The plan of a medrese, an outbuilding for students of the Koran and other aspects of scholarship. The medrese of Beyazit mosque from 1504.

Masonry walls and stone columns describe square bays and rectangles, and each is topped by a dome. The spaces repeat, collect about a courtyard, and evoke a building of use. The open and closed spaces change in sequence and become a convent, a home for the poor, a lodge for travellers, and these buildings are grouped together.

To articulate each building, to identify a door, a wall, an opening, a repetition of similar parts is used. The after image, the montage of visual impressions compounded from visits to these buildings and to the mosques, is of a hierarchy of architectural elements manipulated to achieve various buildings and effects, where everything is restrained, repeated, and contained to allow the mosque to inflate its singular billowing forms. On visiting another building a spatial arrangement might be new, but familiar pieces are at work and you recognize a door and use it without thinking of what that aperture is, and by the emphasize of the entrance you know the status of the ensuing space. With parts familiar to people, the presence of a building recedes and does its work quietly. These elements were used, each more separate, by the Seljuk Turks in the 12th and 13th centuries, and they occur in Persian architecture. In the work of 16th century Ottomans these elements retain vitality as a vocabulary, but time and their formal definition quickly harden the idiom and it loses meaning, and in later buildings these parts are the bored appliqué necessary for the proper mise-en-scène.

Elements are units which can be put together in an architectural game to make anything you like. By observing the rules of the game, i.e. a door as a door, a building may be accomplished, adjusted to change, or distorted to suit a whim. How did the Turks play their game in these 16th century buildings? The rules, by that time, had an established history according to which stone blocks and masonry were put together in terms of a build-up of elements. On a square of walls sits a dome, thin lines edge and separate the dome from the walls, yet the dome of masonry is just these walls arching out to enclose the space. This deliberate separateness is an aspect of the Turk's desire to have his architecture as a build-up of small and familiar parts. A repetition of similar parts is the very essence of the building, each part occurs over and over like the clicking of a bead chain. Each space, with repetition, is as one of the elements. The repeated dome is a topping element, concluding and centering the space below; it can be a truncated pyramid, a cone, vault, or flat roof all according to the demands of the lower space. The wall is most skilfully used as an element. It is a continuous wall defining a within and without, and within is a courtyard, a special precinct, or the constructed volumes of a building. As the function of a building the wall is structurally load bearing, but it reads as standing separate, it is the façade – what a good façade – presenting a well mannered exterior to the street. And to the street the wall is the wall is always the formal background for other activities. The surface of the wall is tight, openings are carefully proportioned and regulated to re-occur in exact size and rhythm. Transparency of the wall varies, openings become larger until the wall is a light frame; the wall as a screen stands in front of the mosque of Sultan Ahmet. The wall marks a transition from one ambient to another, and passage through the wall is an event. And the event is set into the wall as a prominent door element which projects out, and projects above the façade. It is an entrance standing on its own two feet. In Seljuk work this can be seen in a building which is a magnificent entrance with something behind – the Ince Minare mosque at Konya dating from 1251. The door element grows to make an entrance important, much energy is often expended on the décor of this frontpiece as the pièce-de-résistance of the façade which tells of splendors inside. The buildings retain a sense of the process of this game.

And for contemporary work the idea of elements in the process of a building has much meaning, it is the very nature of industrial techniques to produce multi-repeated parts. The parts used in buildings are still too small.

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On the hill dominating the waters of the Bosphorous and Golden Horn now stands Topkapi palace, an empty Sultan's palace. The affinity of the Turk to open landscape is part of the building, large courtyards, gardens, and a hunting ground are contained within the surrounding walls. There is nothing of an acropolis about this place which was the site of the Byzantine stronghold. The palace is a curiosity. It is hard to discern an architectural order in the collection of buildings other than buildings delineating courtyards, or standing small in a courtyard. State ceremonies took place in the large courts, but the only part of the building which relates in scale to the space is a strong rhythm of conical domes on top of the pasty-cooks kitchens. The hareem was closed. The Cinili kiosk, a pavilion set in the gardens, was one of the first buildings erected by the Turks on their arrival, and the beams and columns of stone are cut and joined in the manner of wood members. There is a transient quality about the building; "The Turk carried something of his nomadic ways about him, and fashioned his life accordingly", wrote Nehru. The kiosks of the inner palace are as too sweet pastry in their little delights between tight pools and planting. Their interiors are carpeted cushioned, and temporary as those of a tent. But the view is out beyond the Bosphorous to Asia Minor, beyond the Balkan haze of Istanbul to where the air is light and clear.

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Seminar on Hospital Design and Construction at Edmonton

WHILE THE RAIC Assembly was talking about Education in Vancouver, some members of the Alberta Association of Architects were putting the finishing touches to a practical program of architectural education for the Canadian Hospital Association Convention which was held at Edmonton from June 4th to 8th.

Early in May, Jack Causton (F), President of the AAA, had been invited by the Alberta Hospital Association to participate in the CHA convention. He seized the opportunity and set up a committee, chaired by Gerry Diamond with Gordon Forbes, Tom Groves, Don Bittorf and Bernie Wood as members, to arrange with the Alberta Hospital Association a two-day seminar on "Hospital Design and Construction" as an important feature of the CHA convention. Although the seminar was held concurrent with the general meetings of the CHA, over 200 attended the sessions, of whom about 65 were architects including 38 from outside Alberta, coming from all the provinces from Nova Scotia to British Columbia. The out-of-Province architects were very grateful for the excellent arrangements made by the AAA for their accommodation, transportation and entertainment.

Without any hint of previous connivance, the five distinguished speakers seemed to centre their remarks around four main topics—the importance of much more basic research, the importance of written programs before planning is begun, the adaptation of industrial design concepts of *"flow"* to hospital problems, and the constant reminder that patients are still human individuals in the midst of increasing organization, automation, and specialization.

Among the resolutions passed at the seminar were the following:

1. That the Canadian Hospital Association, the provincial hospital Associations and the provincial associations of architects implement an extensive program of research into the planning and designing phases of hospital construction, utilizing the research facilities provided by federal and provincial governments.

2. That similar seminars be held yearly.

3. That the Canadian Hospital Association recommend to its allied organizations that the federal and provincial departments of health maintain minimum regulations covering hospital design and construction.

4. That the Canadian Hospital Association investigate ways and means of establishing in each of the provinces a committee composed of representatives of government, architects, engineers and other professional organizations involved in hospital design and operation, with a view to furthering communications between these bodies.

H. Gordon Hughes, Chief Architect, Hospital Design Division, Ottawa, outlined the forthcoming "General Standards of Hospital Construction" with special emphasis on the requirements for proper planning procedures and the need for a systematic approach to hospital research to ensure that standards do not limit or prohibit advances of the future.

Dr Jack C. Haldeman, Assistant Surgeon General, in his address on the role of the Hospital Board, Administrator, Architect and Government, filled in details of the general pattern which had been sketched by Mr Hughes, and gave the American breakdown of responsibilities, which is similar in all essentials to Canadian experience. Mr Gordon Friesen, Hospital Consultant of Washington, D.C., who spoke on trends in hospital design and construction. Mr Friesen is well known for his dynamic presentation of the principles of hospital design and did not disappoint his audience.

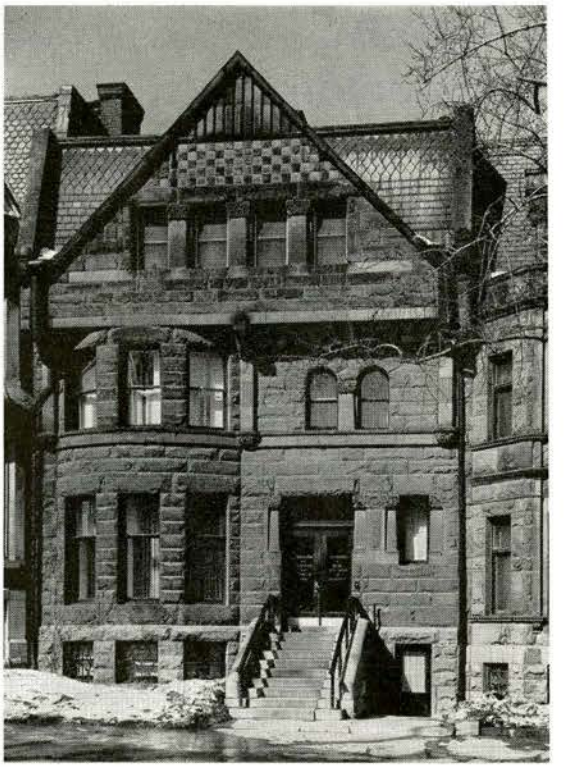
At Thursday's session, a rising tide of Western effervescence was kept under suave control by Dr Irial Gogan, Medical Director of Holy Cross Hospital, and after a few minor explosions, Mr Peter Thornton (F), Vancouver, was able to proceed with a scholarly address on "Planning to prevent obsolescence in the hospital".

Mr Thornton was able to compress a very wide subject into a series of headings which would repay careful study in somewhat less exciting surroundings. He was followed by Ron Hoffman, Consulting Industrial Engineer, whose theme was "Engineering Aspects in Hospital Planning". Mr Hoffman has been able to apply the principles of 'flow' used by the industrial engineer to the problems of hospital design with rewarding results.

The final sessions were devoted to short talks on the Role of the Federal Government and Provincial Government; The Hospital Association and the Architects Association, ably summed up by Dr J. D. Wallace, Administrator of University Hospital, Edmonton. (This was followed by a series of resolutions interesting to architects and hospital board administrators alike). *Loren Oxley*

At the Edmonton seminar on Hospital Design and Construction Left to right: D. S. Stevens, Calgary, B. T. Arling, Saskatoon, J. A. Cawston, Calgary, Jack M. Ross, Winnipeg, T. W. Bauld, Halifax, David W. Lichtensteiger, Victoria, Loren Arthur Oxley, Toronto, P. M. Keenleyside, Toronto.

Siège Social De l'AAPQ



Head-Quarters PQAA

UN TRAIT SAILLANT *du congrès de 1962 a été l'inauguration officielle, le 8 février, des nouveaux bureaux de l'AAPQ., au 1825 ouest du boulevard Dorchester à Montréal.*

A la suite de la réunion d'affaires de l'après-midi, il y eut grande réception au nouveau siège social; les architectes et leurs amis ont eu l'occasion de se rassembler dans une atmosphère de fête et de prendre connaissance des commodités grandement améliorées pour les travaux de l'Exécutif, de l'administration, des recherches et des comités, et pour les rencontres fraternelles que permet maintenant leur propre bâtisse.

Le besoin de facilités améliorées pour répondre aux activités de l'Association se faisait de plus en plus apparent à chaque nouveau Conseil: les membres du Conseil qui se sont succédés ces dernières années n'ont cessé de travailler vers cette réalisation qui est maintenant un fait accompli.

A la recommandation du Conseil, l'Association a décidé en 1956 d'établir et d'opérer ses propres locaux à Montréal. Au cours des trois années qui ont suivi, le Comité des locaux a dépensé beaucoup de temps et d'effort en recherches, inspections et estimations. Finalement en 1959, on a choisi et acheté une résidence de trois étages à la façade en grès rouge, avec jardin à l'arrière et une autre bâtisse abritant un studio et un logement, le tout situé à un endroit qui prendra éventuellement de la valeur, du côté nord du boulevard Dorchester, une rue à l'ouest de Guy. Financer l'entreprise fût chose facile grâce à la réponse généreuse des membres à une demande d'emprunts et à la vente de quelques obligations détenues par l'Association. En attendant d'obtenir un titre parfait de propriété, l'Association a consenti des ajustements de baux de façon à prendre possession de la propriété en mai 1961. On a alors créé un comité de la propriété, sous la présidence de M. Michael Ellwood, avec mandat de transformer les locaux selon les exigences de l'Association.

Au stade des études préliminaires, les plans de la bâtisse existante fournis par M. Francis Nobbs ont été d'un grand

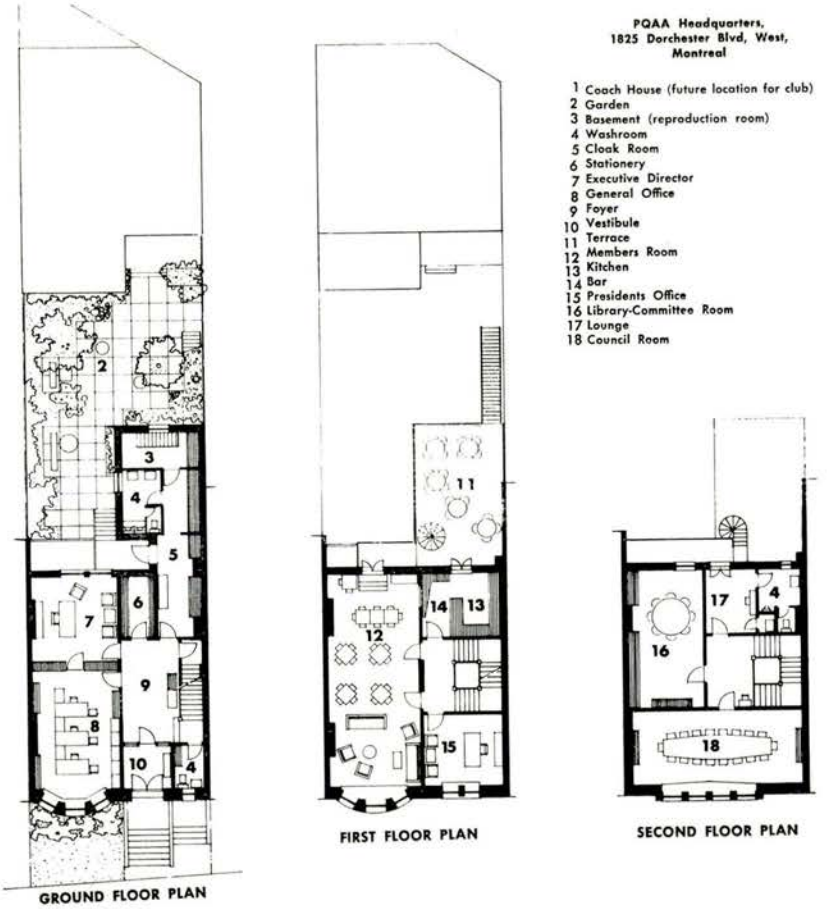
A HIGHLIGHT of the 1962 Convention of the PQAA was the official opening on February 8th of the new headquarters building at 1825 Dorchester Street West.

The open house reception held following completion of the business of the day, gave all members, their friends and associates an opportunity to foregather in a convivial atmosphere to acquaint themselves with the greatly improved accommodation for executive, administration, research, committee work and fraternal association now provided in their own building.

The need for improved accommodation for the expanding activities of the Association had become increasingly apparent to successive Councils who planned persistently and well over the years towards this now realized fulfillment.

In 1956 at the recommendation of Council, the Association decided to establish and operate their own headquarters premises in Montreal. The ensuing search, inspection and appraisals involved a great deal of time and effort on the part of the new premises Committee over a period of three years. Finally in 1959 a red sandstone faced three-storey mansion, with garden and rear studio and living quarters building, located on a potentially valuable site on the Northside of Dorchester Blvd., just West of Guy Street, was selected and purchase approved. Financing was successfully arranged through a generous response of members to a loan fund for the purpose, and a minor amount of Association securities. In the interim of establishing clear title to the property, lease adjustments were made which would give the Association possession of the premises in May 1961. A House Committee under the chairmanship of Mr M. Ellwood was formed to undertake the work of converting the premises to the requirements of the Association.

In the initial program studies by this Committee, plans of the existing premises supplied by Mr F. Nobbs were of great assistance together with the recommendations of council, administration staff, and pertinent reports from other committees. To expedite crystallization of plan studies



secours, de même que les recommandations du Conseil, du personnel administratif et les rapports d'autres comités. Nommé architecte des travaux, M. Jean-Louis Lalonde a reçu instruction de préparer les plans et de faire des estimations.

Considérant que l'addition d'un club pribé s'avèrerait un actif précieux pour les membres, le comité a fait une étude poussée de cette question. On a discuté les avantages et la façon d'opérer de clubs similaires; Monsieur Lalonde s'est rendu à Toronto visiter les quartiers généraux l'OAA où on lui a fourni des renseignements et données fort utiles. Divers plans et estimations ont été soumis et l'on a finalement décidé que pour le moment toutes les commodités, y inclus les facilités de club, seraient logées dans l'édifice principal et ceci dans le but de s'en tenir au budget tout en tenant compte des besoins immédiats; la bâtisse arrière présentement louée à bon prix pourra éventuellement servir aux fins du club et dans des buts éducatifs.

Les plans définitifs ont donc été préparés sur cette base, dans le but de fournir les commodités suivantes avec un minimum d'altérations:

SOUS-SOL:
Logement du concierge — ***Entreposage***
Chambre des fournaises — ***Travaux d'impression***
REZ-DE-CHAUSSEE:
Vestibule — ***Toilettes des dames***
Hall d'entrée — ***Fournitures de bureau et papeterie***
Bureau général
Bureau du directeur administratif — ***Vestiaire et toilettes des hommes***
PREMIER ETAGE:
Hall — ***Salle des membres et Terrasse***
Bureau du président — ***Cuisine et Bar***
DEUXIEME ETAGE:
Hall — ***Bibliothèque***
Salle du Conseil — ***Toilettes***

Les soumissions ont été reçues à la fin d'avril et le contrat a été accordé à Wilfrid Bédard Inc. Les travaux ont débuté en mai et étaient terminés en octobre. Sous l'habile direction de Monsieur Lalonde, l'Association a pu en novembre

and costs Mr J. L. Lalonde was appointed Architect of the work.

As it was considered that the addition of club facilities should prove a valuable asset to the membership at large this feature was given considerable study. Facilities and operation of similar clubs were discussed and Mr Lalonde visited the OAA where he was given much helpful information and data. Alternate plans and costs were developed and it was finally decided that, to meet the immediate requirements within the budget, all accommodation including club facilities, would be provided in the main building; the rear building, now under satisfactory tenant lease, to remain for possible future expansion of club facilities and educational requirements.

Final plans were prepared on this basis to provide the following accommodation with a minimum of structural alterations:

BASEMENT:
Janitor's Apartment — **Stock Room**
Furnace Room — **Printing**

GROUND FLOOR:
Vestibule — **General Office**
Entrance Hall — **Executive Secretary's Office**
Ladies' Lavatory — **Records Room**
Men's Cloak Room & Lavatory

FIRST FLOOR:
Members' Room and Gallery — **Serving Kitchen and Bar**
President's Office — **Stair Hall**

SECOND FLOOR:
Hall — **Council Room**
Members' Lavatory — **Library**

Tenders were received at the end of April and the contract was awarded to Wilfrid, Bédard Inc. Work on the premises started in May and under Mr Lalonde's able direction was nearing completion in October. In November the Association was able to transfer its activities to the new quarters.

Left: Entrance lobby with secretariat in background.

Gauche: Entrée du couloir avec arrière-plan du secrétariat.

Left below: Existing trim and balustrade were kept to preserve the character of this old mansion.

Dissous au gauche: Le décor existant et la balustrade n'ont pas été remaniés en vue de préserver le charactère de cette propriété.

Below: The library, the table and chairs are from the previous PQAA premises.

Ici-bas: La bibliothèque, la table et chaises sont de l'ancien établissement de l'AAPQ.

transporter ses pénates dans ses nouveaux quartiers.

Grâce aux procédés ingénieux de notre architecte, y inclus la sélection et le dessin du nouveau mobilier et des accessoires, la bâtisse dans son entier présente un intérieur simple et rafraîchissant dû à l'utilisation discrète et digne de couleurs et de matériaux aux détails bien nets. A l'étage supérieur, à l'avant de la bâtisse, la Salle du Conseil fournit un décor approprié aux délibérations du Conseil et des différents comités.

Avec l'espace privé maintenant mis à sa disposition, l'on espère que la bibliothèque se développera en une salle de références fort utile aux membres.

On les invite à faire des contributions individuelles à ce développement souhaitable.

La salle des membres qui comprend le lounge, la salle à manger et le bar et qui s'étend de l'avant à l'arrière de la bâtisse, devrait créer chez plusieurs membres et leurs collègues l'habitude de venir rencontrer leurs confrères et y discuter des sujets brûlants d'actualité et des nombreux problèmes auxquels fait face l'Association.

Un tableau d'affichage en liège servira dans la salle des membres aux annonces et à la présentation des nouvelles courantes qui peuvent être d'intérêt. Cette même salle sera le site permanent d'expositions de peintures et d'oeuvres d'art qu'on projette de renouveler mensuellement.

Les photos des anciens présidents ont été disposées le long des escaliers dans un montage plus moderne.

Le président en charge dispose maintenant de son propre bureau où il peut dans la tranquillité vaguer aux affaires de l'Association.

Avec toutes les commodités et les facilités maintenant à la disposition des membres, nous avons confiance de voir le siège social de l'Association devenir un rendez-vous populaire pour tous les membres et leurs collègues, en plus de servir de milieu exécutif et administratif efficace pour les nombreuses activités de l'Association. *L. A. WATT*

Through the astute architectural manoeuvres of the Architect, including the selection and design of new furniture, fixtures and furnishings throughout the building presented refreshingly simple interiors with a quiet dignified use of materials and colors with clean cut details. The Council Room across the front of the building on the top floor provides a suitable setting for the considered deliberations of this learned profession.

It is hoped that with the private space now allotted to it, the Library will be developed into a very useful reference room for the members, who are invited to make their individual contributions to this desirable development.

The lounge, lunch, and bar-Members' room extending from the front to the rear of the building should attract the habitual use of numerous members and associates to meet their confreres in well rounded discussions on all timely topics and the many problems in which the Association is involved.

A cork display board is provided in the Members' Room for notices and presentation of interesting current developments. The selection and mounting of pictures throughout the building is to be studied and the space now available utilized for exhibitions from time to time.

A permanent setting of former Presidents' photographs has been completed on the main stair walls in finely designed new mountings.

The active President is now provided with an appropriately appointed office in which to immerse himself in all Association affairs.

With the accommodations and facilities now at the Members' disposal it is confidently expected that the headquarters of the Association will become a popular *rendez-vous* for all members and associates in addition to being an effective executive and administrative milieu for the many activities of the Association. *LESLIE A. WATT*

DU SECRETARIAT DE L'AAPQ

QUE DE PRIVILÈGES on ose quémander en ton nom! Veinard d'intérêt public, toutes les professions à peu d'exception près te veulent le plus grand bien du monde. Chaque fois qu'un organisme civil, commercial, professionnel, technique ou autre se met en frais d'aller tenter de convaincre nos gouvernants qu'il serait souhaitable de déplacer une virgule, d'adoucir ou de resserrer certaines dispositions de la loi qui le régit, invariablement on te convoque à la présentation de la requête.

Toi, le bien commun, l'intérêt public, puisqu'il fallait t'appeler par un nom vague et pompeux, tu présides et assistes impuissant aux demandes les plus diverses et les moins innocentes. Tu pourrais même parfois, hélas!, servir à déguiser ou masquer des désirs, on serait tenter de l'écrire, de monopole.

Ceux qui se qualifient à tort ou à raison d'urbanistes n'ont pas voulu eux non plus rester sur leur hantise de se dépenser à ta noble cause. Aussi devions-nous retrouver dans les "Attendus" du Bill Privé 215 (Loi constituant la Corporation des urbanistes de la Province de Québec) l'éternelle expression "Qu'il est de l'intérêt public de les (MM. La Haye, Latte, Bégin, Campeau, etc.) constituer avec d'autres (?) en corporation. Il va sans dire tout de suite que si les huit grands se donnent la peine de soumettre un tel bill et y consacrent probablement quelques dollars, c'est qu'ils entretiennent la ferme conviction qu'une Corporation d'urbanistes est d'une nécessité vitale pour notre Province et qu'au départ l'urbanisme pourrait difficilement se passer d'eux, les requérants.

Quant aux autres (?), apparemment il s'agit des membres de la Société des urbanistes professionnels du Québec. De quoi cette Société est-elle faite? Elle n'existerait que depuis 1956, nous a-t-on appris dernièrement. A-t-elle agi? A-t-elle produit en une période d'un peu plus de cinq ans quoi que ce soit qui puisse mériter à ses membres les faveurs toutes particulières que le bill leur réserve? Au fait, combien compte-t-elle de membres? Quelles en sont les qualités et qualifications? Et, pour revenir un moment aux huit, on ne peut nous contester le droit de nous interroger sur ce qui a bien pu les grouper sous la même tente. L'intérêt public, vous me répondrez. Je m'excuse, j'allais oublier mon entrée en matière.

Avant d'aller plus loin avec toute une série de questions qu'il est on ne peut plus normal de se poser en semblables circonstances, le Conseil a voulu savoir ce qu'en pensaient les membres de l'A.A.P.Q. De là, la circulaire du 16 avril et le texte du projet de loi qui l'accompagnait. Cette consultation a eu l'heur de ne pas déplaire à plusieurs, car ils se sont permis de répondre et de faire parvenir des commentaires fort à point en maints cas et qui guideront certes le Conseil dans l'attitude à prendre lors de la deuxième lecture du bill à Québec.

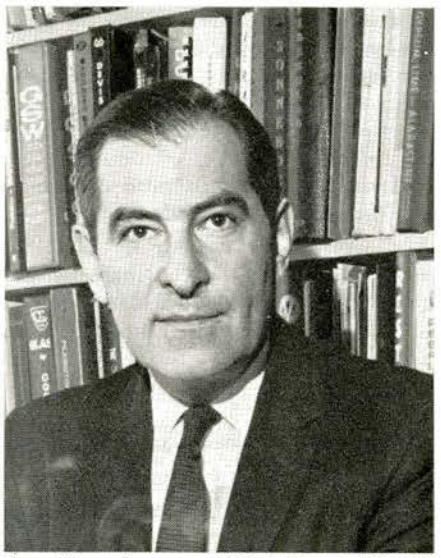
En passant, qu'on me permettre de souligner que le Conseil a posé là un geste heureux, en consultant tous les membres. Quand il s'agit de questions d'envergure et aux répercussions risquées, il est tout-à-fait dans l'ordre que les autorités de l'Association ne ce contentent pas de leurs façons de voir mais qu'elles fassent appel à tous les "contribuables". La teneur générale des réponses reçues sanctionne la sagesse des membres du Conseil et constitue pour eux une ligne de conduite pour l'avenir.

Contrairement à ce qu'on pourrait imaginer, toutes les remarques n'étaient pas défavorables. Loin de là; et le Conseil lui-même n'est pas irrémédiablement ni irrévocablement opposé au projet de loi. Mais quand un bill ne souffle mot de la juridiction qu'il embrasse, ne définit nulle part le champ d'action des membres de la Corporation projetée, et quand, de plus, on s'arrête à comparer le vaste domaine concerné et le peu de candidats éligibles à l'occuper, on peut sérieusement froncer les sourcils.

Il faudra peut-être en venir un jour à fermer les cadres et restreindre l'exercice de l'urbanisme à un groupe bien défini, mais sommes-nous mûrs aujourd'hui pour une telle législation? Y a-t-il le nombre? Y a-t-il la qualité? Un architecte entre autres s'est demandé si les membres de la S.U.P.Q. sont mieux qualifiés comme urbanistes que plusieurs membres de la Corporation des ingénieurs professionnels de Québec ou de l'A.A.P.Q. qui agissent présentement comme urbanistes sans faire partie de l'Institut national, ni de la Société provinciale.

A la lecture de l'article 16 du projet de loi, on note immédiatement que les pétitionnaires, dont trois membres de l'A.A.P.Q., ne prêtent même pas le bénéfice du doute à l'achitecte en domaine urbanistique. Ses études architecturales qui seraient sensées lui avoir donné l'habitude de la composition, de l'analyse et de la distribution de l'espace, de la préparation de plans, ne lui valent tout simplement qu'un crédit au niveau du paysagiste, de l'arpenteur, de l'avocat, du diplomé en sciences sociales ou en géographie. Sans posséder tous les secrets et les exigences de l'urbanisme, il nous semble de prime abord puéril, sinon fantaisiste, de placer avocats, geographes, architectes, sur le même pied vis-à-vis l'admission à l'étude et à la pratique de l'urbanisme. En partant de prémisses aussi douteuses, on risque à coup sûr d'aboutir à l'absurde.

"Toute personne physique (!) majeure qui a suivi dans une université un cours régulier en architecture doit faire au moins quatre années de cléricature et subir avec succès un examen d'ordre théorique et pratique s'il veut devenir membre de la Corporation." Or, qu'adviendra-t-il des diplômés de l'Ecole d'architecture de Mon-



Jean Damphousse, ADBA, Montréal a été élu Premier Vice Président du PQAA. A succéder C. Davis Goodman (F) décédé récemment.

Gilles Marchand, ADBA, Montréal, récemment élu Secrétaire d'Honneur du PQAA.

tréal? Se trouvent-ils du fait même exclus? L'Ecole est-elle rattachée à une université? Si elle ne faisait pas partie de l'Université de Montréal, au sens du bill, les quatre heures de cours par semaine dispensées par l'Ecole dans le domaine de l'urbanisme pendant un semestre en 3e et en 4e années n'équivaudraient à rien? Ce qui nous paraît encore plus étrange, c'est que les diplômés en urbanisme eux-même sont soumis au même traitement. Comme le faisait remarquer un autre architecte en réponse à notre circulaire, autant vaudrait ne suivre aucun cours du tout et se prévaloir du paragraphe d) du même article en se faisant admettre après avoir fait huit années de cléricature et avoir passé l'examen.

Nous voudrions couvrir les auteurs du texte en question de félicitations chaleureuses pour avoir réussi un chef d'oeuvre d'incongruités, mais ce serait leur faire trop d'honneur. Aux dernières nouvelles, la C.I.P.Q., l'A.A.P.Q., les arpenteurs-géomètres, et d'autres encore, il n'y a pas à en douter, présenteront un front commun d'opposition le matin de la grande lecture.

Le Conseil de l'A.A.P.Q. pour sa part, a résolu de faire remarquer au Gouvernement provincial, par l'entremise de ses procureurs, que la présentation, dans sa forme actuelle, du Bill 215 lui paraît prématurée, attendu que le texte en question ne délimite pas de façon précise les pouvoirs des urbanistes ni leur champ d'action, et qu'il ne tient pas suffisamment compte des qualifications des architectes.

On s'en voudrait d'autre part de donner carte blanche à un groupe aussi restreint et de les laisser seuls consacrer toutes leurs énergies à l'intérêt public! *Jacques Tisseur.*

COMING EVENTS

Sept 6-7
Design Conference on Housing
Sponsored by RAIC-CMHC
Joint Committee on Housing
Carleton University, Ottawa

Sept 28-29
15th Fall Convention
American Concrete Institute
Olympic Hotel, Seattle, Wash.

Oct 1-4
1962 World Conference
on Shell Structures
Sheraton-Palace Hotel
San Francisco, Cal.

PROVINCIAL NEWS

REGISTRATIONS

Ontario Association of Architects
8 May 1962

Briestensky, Karl John Frank, 47 Callander Drive, Guelph, Ont. B.Arch. University of Toronto *(Richard D. Pagani).*

Cooke, Paul Davis, 177 Stephen Drive, Toronto 18, Ontario. B.Arch. University of Toronto *(H. Gardiner Cowan).*

Gustavs, Erland Uldis, 856 Carlaw Avenue, Toronto 6, Ontario. B.Arch. University of Toronto *(Page & Steele).*

McRoberts, Andrew Norman, 479 Palmerston Blvd., Toronto 4, Ont. B.Arch. University of Toronto *(H. A. Swanson).*

Millar, Charles Blakeway, 11 Friars Lane, Islington, Ontario. B.Arch. University of Toronto, OAA Prize 1956 *(D. G. Hallford).*

Moffat, Robert Leslie, 507 S Syndicate Avenue, Fort William, Ont. B.Arch. University of Manitoba *(McIntosh & Associates).*

Ogus, Michael Charles, 11 Shallmar Blvd., Apt. 406, Toronto 10, Ontario. B.Arch. University of Toronto *(P. Caspari, Michael Ch. Ogus, Associate Architect).*

Lobban, William, 14 Solva Drive, S.S. #4, Ottawa, Ontario. Dip.Arch. (Glas.) Glasgow School of Architecture *(Department of National Defence, Navy).*

NOTICES

The firm of Herbert Agnew have relocated their offices at 37 Maitland St., Toronto, where they will practise under the name and style of Herbert Agnew and Associates, Architects.

Outdoor Sculpture Exhibit in Ottawa

The National Gallery of Canada announces that an outdoor exhibition of 24 works by 22 Canadian sculptors will be on view in the court around the Gallery building in Ottawa from June 29 until September 2.

Specifications Index Supplement

Copies of the Canadian Government Specifications Board's *cumulative supplement to the index of specifications, NRC No 6703a,* dated 30 March 1962, are now available from the Secretary of the Board at Ottawa. This supplement lists 32 new and revised specifications, 30 amendments, two cancellations and one supplement issued by the Board, since the release of its Annual Index on 3 January 1962.

CANADIAN
BUILDING DIGEST

DIVISION OF BUILDING RESEARCH • NATIONAL RESEARCH COUNCIL CANADA

WATER AND BUILDING MATERIALS

by J. K. Latta

UDC 699.82

It has sometimes been stated that there would be no need for building research were it not for the effect of water in the wrong places. This statement, like all such sweeping generalizations, is an over-simplification and cannot be entirely supported. Nevertheless, the harmful effects of water on building materials can hardly be over-emphasized. If they did not exist, the construction of durable buildings would be greatly simplified and the task of the designer made much easier. This Digest is intended to draw attention to these destructive mechanisms and to give a brief account of some of the phenomena involved.

Dimensional Change

With a change in moisture content many building materials show considerable change in dimension, the magnitude of which may be greater than that caused by normal temperature variations. Thus, if a material takes on water at one period and releases it later, there will be a continuing expansion and contraction that may lead to the destruction of the material; or alternatively that may break it loose from surrounding materials. Table I lists the percentage change in length of various materials on immersing a dry specimen in water, together with the thermal expansion for a 100 F deg temperature rise for comparison.

Differences in wetting expansion between lime and cement mortars and between cement mortar and clay and shale bricks should be noted in relation to the "compatibility" of bricks and mortar. Volume changes in brick masonry materials were the subject of study by Palmer of the National Bureau of Standards in 1931. He concluded that "differential volume changes between brick and mortar caused by variations in moisture content are apt to be greater than those produced by normal temperature variations."

Similar differential dimensional changes, with change in moisture content, can take place in two materials bonded together. A warping effect may be produced similar to that produced on a bimetallic strip by changes in temperature. Precast concrete panels, for example, which have a facing material of a composition different from the backing, may be subject to such warping. A differential moisture content through the thickness of a homogeneous material will also have a warping effect, since the side of higher moisture content will expand more than that of the lower. Such a differential moisture content can be produced by vapour migration or by having the opposite sides exposed to different atmospheric conditions. Rain absorbed on the outer face of a material will have a similar effect.

Corrosion

Corrosion in buildings was discussed in CBD 20, where it was explained that it is largely an electrolytic action in which an electrical potential causes a current to flow, provided that there is an electrolyte to complete the circuit. This electrolyte is provided by any water that may be present in the building assembly from various sources. The electrical potential can be provided by two dissimilar metals or by one metal if there are salts in the water. Even with pure water corrosion can take place if oxygen is present to combine with the hydrogen generated and thus remove it, permitting the action to proceed. As with many other destructive agents other phenomena must be present with the water before corrosion takes place, but without water the material will not corrode.

TABLE I
THERMAL AND MOISTURE EXPANSIONS OF VARIOUS MATERIALS

	Thermal expansion per cent length change for 100F deg	Expansion on wetting per cent length change	Modulus elasticity $x10^{-6}$
Limestones	0.01 to 0.05	0.002 to 0.01	3 to 10.4
Clay and shale bricks	0.02 to 0.05	0.002 to 0.01*	1.4 to 5
Concrete	0.05 to 0.08	0.01 to 0.2**	2.5
Steel	0.067		30
Portland cement mortar	0.04 to 0.06	0.005 to 0.03	3.5
Lime mortar	0.04 to 0.05	0.001 to 0.02	0.5

**Highest expansions with soft burned bricks.*

***Depends greatly on aggregate. Lightweight aggregates give higher expansions.*

Decay

The rotting of wood is another destructive phenomenon that requires water to enable it to proceed. Rotting is caused by the growth of fungi in the wood tissue and for this to take place several conditions must be satisfied. There must be food for the fungus to feed on, and this is provided by the wood itself. There must be air; and if the wood is completely submerged the air supply is cut off and the decay will be stopped. The temperature must lie within a certain range. Near freezing point the fungus will become dormant, although it will not be killed even by very low temperatures; above 100°F it may also become dormant but will not be killed until a temperature of over 140°F has been reached. The optimum range within which decay will take place is between about 70 and 90°F. Finally, moisture must be available in excess of the fibre saturation point of the wood. With many woods this point is reached at about 27 to 30 per cent of the oven-dry weight, but because of variations in the moisture distribution in the wood it is usually accepted that less than 20 per cent moisture content is needed to stop rotting. Indeed, once they are established some fungi will produce their own source of water; others can spread tendrils for quite long distances over steel and other materials in order to reach a source of water. The only completely effective means of preventing wood from decaying is to keep it either dry or completely saturated. The food source can be poisoned by the use of wood preservatives, but in most cases these will only be effective in a comparatively thin layer on the surface, which may be subject to damage that can let the spores of the fungus into the untreated inner core of wood. This should not be taken to mean that a preservative is not a useful additional protection in cases where it cannot be guaranteed that the wood will remain dry.

Blistering

When laying a built-up roof every precaution must be taken to prevent water from being trapped either between the plies or underneath the membrane. Should water become trapped and vaporized with the heat of the sun, there is danger of the formation of a blister in the roof; although passages can be provided through the insulation to relieve the pressure if the water is below the entire membrane. Such pressure relief passages cannot be provided between plies of roofing felt, however, and water trapped in the thickness of the membrane will almost inevitably raise a blister and may also cause the roofing felts to rot. In any case, the presence of water will weaken the bond provided by the bitumen and so reduce the waterproofing properties of the roof. Blisters in paint applied over damp wood, or wood which absorbs moisture because of vapour flow, are formed in a similar manner.

Efflorescence

Water that moves through a material in a liquid state can also produce many harmful effects. The most obvious is the efflorescence that often disfigures the face of a building. Migrating water dissolves salts from some position inside the material and then deposits them on the surface as the water evaporates. Usually this effect is not destructive but merely disfiguring. If a vapour-permeable but water-repellent membrane is applied to the outer face of the wall, however, the water may be caused to evaporate from behind it, so that the salts are deposited behind the surface layer and the resulting force of crystallization can cause the skin to spall. The subject of efflorescence has already been dealt with at considerable length in CBD 2 and need not be examined further here. It should be noted, however, that the spalling produced by the crystallization of salts behind the surface of the material is very similar in appearance to that produced by frost action, and in many cases it is difficult to determine which mechanism has caused it. Surface treatment of masonry may promote further complications if it restricts the escape of vapour that is migrating from inside the building. This vapour may be forced to condense behind the surface and lead to trouble under freezing conditions.

Leaching

Liquid water moving through concrete and mortar can cause a steady deterioration of these materials by leaching out the calcium from the calcium silicate bonding materials. This action is most pronounced with soft or mildly acidic waters such as are found in reservoirs fed from swampy areas. Very often this water percolates through the dam at the level of the concrete lifts and runs down the downstream face where it evaporates, leaving a white deposit. A similar deteriorating effect has been seen in buildings such as paper mills where the high humidities cause water vapour, which passes into hollow concrete roof beams and condenses in the colder upper parts. The pure condensate may have absorbed carbon dioxide from the air and become slightly acidic. As the water migrates within the beam the calcium compounds are dissolved from the cement and in many locations have been left, after the drop of water has re-evaporated, as stalactites of calcium carbonate. The undersides of such beams were seen to have no cementing material left and were covered with loose sand that could be brushed off by hand. Similar effects may be seen where rainwater percolates through concrete bridges and abutments and on the faces of buildings where it has entered behind facing stones and reappeared lower down, carrying with it calcium compounds from the mortar or backing concrete.

Freezing

The most striking feature of the Canadian climate is the long period of very cold weather that affects many parts of the country during the winter. It is often considered that cold temperatures are responsible for much of the destruction that takes place in a building envelope. In actual fact, however, cold temperatures do not of themselves have any very serious effect on the materials. Naturally, the large temperature range between summer and winter will cause large expansions and contractions, but usually these can be allowed for by means of suitable expansion joints. On the other hand, the effect of freezing conditions in conjunction with water can lead to a very rapid deterioration, and under extreme circumstances one freezing may be enough to shatter the material. The way in which destruction takes place is complex, but it is known to depend upon a number of factors that include the degree of saturation with water, the rate and number of times of freezing, the strength and elastic properties of the material, and the nature of the pore structure in the material.

One of the mechanisms producing frost damage is an ice lensing action in which ice crystals tend to draw water from warmer regions in a manner similar to that causing frost heaving in soils, as described in CBD 26. As evidence of this mechanism, planes of weakness have been observed in both the field and the laboratory in concrete subjected to freezing and thawing, and ice lenses have been found in pavement concrete destroyed by frost action. Similar destruction has been produced by organic liquids that contract on freezing. It has also been found that ice lenses can be built up in mortars and backing materials to building stones and that they can force the stones away from the face of a building in a very short time.

It is also possible for the expansion of water, on turning to ice, to cause destruction. This situation occurs when the water in a completely saturated macropore freezes rapidly and the excess water must flow away through the capillaries. If these capillaries are too fine to permit sufficient flow quickly enough, relative to the speed of freezing, a pressure will be built up which may fracture the material. This mechanism may give rise to the situation whereby dense concrete, for example, may be destroyed by a complete disintegration throughout its depth; whereas with a weaker and more porous concrete destruction may result from a steady spalling from the outside. Regardless of which mechanism is acting, the force produced will set up stresses in the material that may lead to its destruction if they are not relieved. In some instances, the elastic properties of the material will provide the necessary outlet, but in most cases it must be provided by spaces within the material into which the ice or water may expand.

Most building materials have a number of voids and pore spaces in them. If these are completely filled with water, there is no space left to accommodate the expanding ice and the material may be ruptured at the first freezing. As the quantity of water in the material is reduced, more and more space is provided to absorb the expansion, and it is found that below a certain degree of saturation no damage occurs. With stones, this limiting saturating covered a range of 71 to 90 per cent of complete saturation. It follows, therefore, that if a material can be fully saturated only with considerable difficulty, then there is a much greater chance that the critical degree of saturation will not be reached. The ease with which the pore and void space can be filled with water will vary with the material and the

conditions to which it is exposed, but in practice materials are seldom, if ever, completely saturated. The ratio between the amount of water absorbed by a material after being totally immersed in cold water for 24 hours and in boiling water for five is known as the "saturation coefficient," and is of great use in estimating the resistance of materials such as brick to damage under freezing conditions. A low saturation coefficient indicates a large number of unfilled voids and a high resistance to damage on freezing; a high coefficient, few unfilled voids and a low resistance. The absorption properties of three different types of brick are given in Table II.

TABLE II
BRICK ABSORPTION PROPERTIES

	Initial rate of absorption or suction (gram/30 sq. in.)	Absorption on total immersion 24 hours (per cent dry weight)	Absorption on total immersion in boiling water 5 hours (per cent dry weight)	Saturation coefficient
Brick A (dry press shale)	(1) 54.5	6.2	8.5	0.73
	(2) 104.7	8.7	11.5	0.75
Brick B (extruded shale)	(1) 2.2	0.9	2.4	0.41
	(2) 6.0	3.6	5.2	0.71
Brick C (extruded clay and shale)	(1) 35.2	12.5	15.1	0.83
	(2) 41.9	13.4	15.8	0.85

Samples (1) and (2) of same lot of bricks show range within the lot.

The distribution of water and the nature and distribution of the voids will both, however, have an important bearing on the resistance of a material to damage by freezing. Since concrete made with a high water/cement ratio is relatively porous it might be thought that such concrete would have good frost resistance because of the voids left as the water dries out. Unfortunately the capillary system developed holds water strongly and does not provide suitable relief spaces. Entrained air, on the other hand, leaves pores of such a size that they are not readily filled with water, thereby providing spaces within which the ice lenses can grow. Thus the pressures that might be developed are reduced and air-entrained concrete has higher resistance to destruction under freezing conditions than has non-air-entrained concrete.

Aesthetics

The destruction of building materials and assemblies is a most serious consequence of water in the wrong places, but no account such as this can be considered complete without some comments about its disfiguring effects. Efflorescence has already been referred to and is one such effect, but the accumulation of dirt on damp surfaces, which can very quickly mar the appearance of a building, is another. A uniform accumulation over the whole surface is not so noticeable as concentrations of dirt in localized spots, so that it is most important that all water running down a face and intercepted by a flashing or a window sill, for example, be thrown clear of the face of the building. All too often streaks may be seen from the ends of projections that have not been given an adequate weathering and a drip on their lower edge. Stains can also be caused by water running over metals and then onto masonry walls. Rust stains are among the more common ones, and may be caused by reinforcement which has not been given adequate cover, or by projecting bolts and other anchorages. Iron and steel are not the only metals, however, that can cause disfiguring marks, for aluminum and copper also give trouble in this respect, and aluminum window frames in particular are often the cause of streaks below them.

The list of the harmful effects of water in building materials and assemblies is indeed a long one. In many instances the water by itself is not harmful, and only when combined with other phenomena does it cause rapid deterioration. On the other hand, the other phenomena involved will not cause deterioration in the absence of water. It follows then that if water can be controlled a building can be made more durable and the maintenance and repair costs reduced. If this could be achieved only by the use of very expensive materials and construction it could be argued that it is better to let the building deteriorate and to replace the damaged portion from time to time. In fact, however, durable construction can be achieved with relatively inexpensive materials and designs, provided that the designer understands the behaviour of water in its various forms and applies the necessary controls to prevent it from accumulating in harmful quantities.

INSTITUTE NEWS

Olympic Games Centre Competition

A two stage competition for the design of an Olympic games centre for Banff, the second stage to be held if Canada's bid for the 1968 Winter Olympic Games at Banff is successful, has been announced by the Calgary Olympic Development Association.

At the time of going to press, the competition had not received RAIC approval, as the conditions had not been received at RAIC headquarters in Ottawa.

The purpose of the first stage is to select five designs, some of which may be used to support Canada's application for the 1968 games to be held at Banff.

In the judgement of the first stage, each of the five finalists selected will receive a prize of $2,000.

The Professional Adviser for the competition is Prof. John A. Russell (F), Director, School of Architecture, University of Manitoba; and the members of the jury are Dr Eric R. Arthur (F), Toronto; P. Martin Kernahan, P.Eng., Calgary; David W. Murray, P.Eng., Edmonton; Dr H. Peter Oberlander, Vancouver and Charles E. Trudeau, Montreal.

Registration closes July 16 and the first stage closes October 22. Conditions may be obtained from the Professional Adviser, Prof. Russell. Registration fee of $5.00, made out to the Calgary Olympic Development Association, should accompany entry applications.

BOOK REVIEWS

PRINCIPLES OF STRUCTURAL DESIGN by Niels Lisborg, M Sc, M Ing F, AMICE. Published by B. T. Batsford Ltd, London. 447 pages. Price: $10.50

THE AUTHOR takes a modern approach to structures and structural design that will undoubtedly find ready and enthusiastic acceptance. His presentation is based primarily on the premise that — "While certain limitations remain on some materials, like wood, it is characteristic of our time that we have almost unlimited capacity for producing constructional materials in varied natural and original units and for shaping and connecting them to form large wholes." He suggests that the time has come to replace the old negative principle of "design based on limitations of materials" with the more positive principle of "design based on appreciation of the structural quality of form." With the capacity to shape and design form almost at will, only the quality of form remains invariant. Efficiency and economy have always been and still remain the leading principles in design. Now, with virtually no practical restriction on materials and with freedom of choice of form, the contemporary expression of efficiency and economy becomes a matter of almost pure principle. Pointing out the significance of the cell structure in trees and plants and of the interaction of tendons and membrances with cellular bones and shells in organisms, the author postulates that modern structures should be conceived in terms of cells and tendons and membranes. He warns, however, that while this approach will develop the idea of structural quality, this can not, by itself, be expected to result in a working appreciation. "To emerge from the level of idea to the realm of practical action, the appreciation must be purified and extended by quantitative knowledge and a certain analytical skill which can only be acquired through quite hard work."

Against the background of this concept of structure, he then proceeds to cover the various structural forms, their qualities and potential arrangements; the principles of stress and strain; and the proportioning of members in various materials. Throughout the text the emphasis is first on appreciation of structural quality and behaviour, then on numerical evaluation.

C. Hershfield, MEIC, Toronto

NEW BOOKS

BUILDING RESEARCH 1960
National Research Council of Canada, Ottawa. Division of Building Research. NRC 6463. 89 pages. Prices $1.00

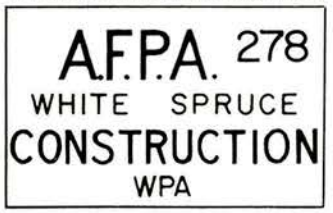
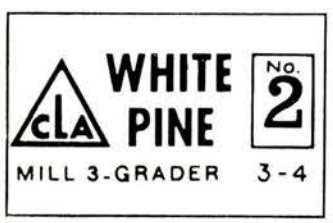
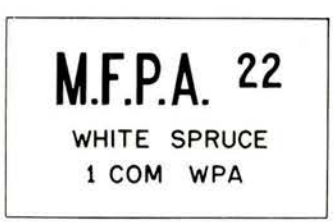
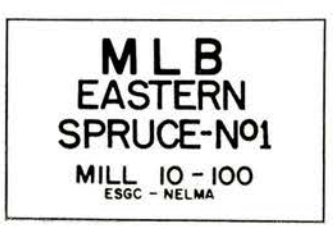
MODULAR DRAFTING MANUAL
S. R. Kent. Technical Paper No. 123 of the Division of Building Research, National Research Council, Ottawa. NRC No. 6344. 40 pages. Price $1.00

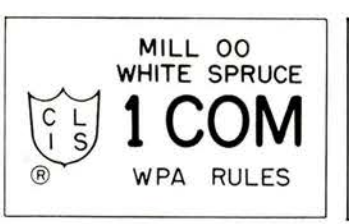
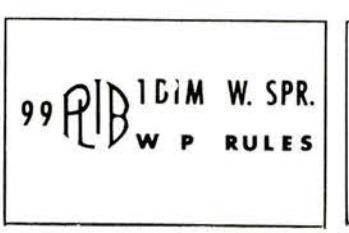
ARCHITECTURE
Derek I. Orbach. 8 page fold-out unit Price 2s. 6d.

IES LIGHTING FUNDAMENTALS COURSE BOOK
Illuminating Engineering Society, New York. 108 pages, 125 charts, drawings and diagrams. Price $3.00

FACSIMILES OF GRADE MARKS USED BY CANADIAN LUMBER MANUFACTUR ING ASSOCIATIONS AND AUTHORIZED TO GRADE MARK LUMBER IN CANADA.

Note: There may be minor modifications to these basic grade marks but the same kind of information must be included.

FACSIMILE OF GRADE MARK I. LUMBER MANUFACTURING ASSOCIATIONS	ASSOCIATION	GRADING RULES(1)
	Alberta Forest Products Association, 10546-109th Street, Edmonton, Alberta.	W.P.A.
	British Columbia Lumber Manufacturers Association, 550 Burrard Street, Vancouver 1, B.C.	B.C.L.M.A. W.C.L.I.B. or W.P.A.
	Cariboo-PGE Lumber Manufacturers Association, 608 Marine Bldg., Vancouver 1, B.C.	B.C.L.M.A. W.C.L.I.B. or W.P.A.
	Canadian Lumbermen's Association, 27 Goulbourn Ave., Ottawa, Ont.	C.L.A.
	Interior Lumber Manufacturers Association, 304 Martin Street, Penticton, B.C.	B.C.L.M.A. W.C.L.I.B. or W.P.A.
	Manitoba Forest Products Association, Winnipeg, Man.	W.P.A.
	Maritime Lumber Bureau, P.O. Box 459, Amherst, N.S.	E.S.G.C. or N.E.L.M.A.

FACSIMILE OF GRADE MARK	ASSOCIATION	GRADING RULES(1)
	Northern Interior Lumbermen's Association, 263 Dominion Street, Prince George, B.C.	B.C.L.M.A. W.C.L.I.B. or W.P.A.
	Quebec Lumber Manufacturers Association, P.O. Box 657, 5 du Parloir Street, Quebec 4, P.Q.	E.S.G.C. or N.E.L.M.A.
	Saskatchewan Timber Board, Prince Albert, Sask.	W.P.A.
II. INDEPENDENT GRADING AGENCIES		
	A. E. Green Lumber Inspection Service, Eugene, Ore.	B.C.L.M.A. W.C.L.I.B. or W.P.A.
	California Lumber Inspection Service, San Jose, 25, California. (Branch Office: Kamloops, B.C.)	B.C.L.M.A. W.C.L.I.B. or W.P.A.
	Macdonald and Macdonald Limited, 395 West Broadway, Vancouver 10, B.C.	B.C.L.M.A. W.C.L.I.B. or W.P.A.
	Pacific Lumber Inspection Bureau, White-Henry-Stuart Building, Seattle 1, Wash. (Branch Office: Vancouver, B.C.)	B.C.L.M.A. W.C.L.I.B. or W.P.A.

LETTERS TO THE EDITOR

Our attention has been drawn to the fact that the article entitled "Lumber Grade Marking", published in the February 1962, issue, page 51, is incomplete in that it showed grade marks pertaining to one lumber manufacturer's association only.

In actual fact, there are ten such lumber manufacturers' associations in Canada, plus a number of independent agencies who are qualified to grade mark lumber. The whole function of grade marking is controlled by the Canadian Lumber Standards Committee of the CSA, comprising representatives of the various associations together with a chairman and secretary, both officers of the Forest Products Research Branch, Department of Forestry of Canada.

All of the lumber manufacturers' associations and the CLS Committee have devoted much time to the overall problem of grade marking. The various grade mark facsimiles of all associations and agencies certified to grade mark lumber to meet CMHC requirements in Canada as well as FHA requirements in the USA are presented on the opposite page.

Complete details on grade marking are given in the FPRB Report No 187, available on request, entitled "Grade Marking of Lumber in Canada", by J. H. Jenkins. *The Editor*

Editor, RAIC *Journal*

Congratulations are certainly in order for the excellent April Issue of the *Journal*.

The BC Committee is to be especially commended for the development of content and format.

J. W. Strutt, Otawa

Editor, *Journal* RAIC.

May I congratulate the *Journal* on publishing Bob Oldrich's letter to the Editor in the March issue of the *Journal*.

I have recently felt that it would perhaps be most helpful, in the promotion of the allied arts with architecture, if short articles appeared in each issue of the *Journal* enlarging on the various aspects of this collaboration. Architecture without art is like a horse's feed-manger without hay because of the size of the dog occupying the manger. It now behoves all architects to correct this situation, beginning on a federal level by requesting the government to set aside at least 1½ to 2% of building costs to be devoted to the use of art in architecture, as has already been arranged in the Province of Quebec.

Art Price, Ottawa

Editor, RAIC *Journal*

I most heartily concur with your editorial of February 1962 regarding the Fathers of Confederation Memorial Competition. The winning solution and the high standards of the other prize winners justify this competition. To the best of my memory the results of competitions held over the last ten years have produced buildings of the highest calibre, the OAA building, the Ottawa City Hall, the Vancouver Auditorium and the Toronto City Hall buildings come to mind.

The question raised in the editorial however, asks why only 47 out of 180 architects who indicated a direct interest in the competition finally competed.

I agree with Geoffrey Massey that the amount of expenditure in time and finances has been enormous in recent competitions and that this has been the major deterrent. The other factor is the amount of time given to competitors. The four months for the Fathers of Confederation Competition turned out to be considerably less when the actual starting point of the competition, the receipt of answers to all questions, is taken into account. Four months is a relatively short time for such a project under normal circumstances.

Pressure due to dead lines on other projects can prevent a small or medium size office from entering a competition unless the time allotted is enough to allow time to be devoted to the competition when other pressures have ebbed.

Two possibilities come to mind which might reduce the cost and time involved in competitions:

(1) *Two stage competitions requiring very limited work in the first stage.*

Most two stage competitions to date have been one stage competitions with a second stage added; the first stage requiring the same amount of work and standard of presentation that a normal one-stage competition requires.

It occurs to me that the basic approach to site planning, the basic functional disposition of elements and the general massing characteristics would give jurors sufficient information to decide who might compete in a second stage. Elaborate presentation would be discouraged if a competitor realized

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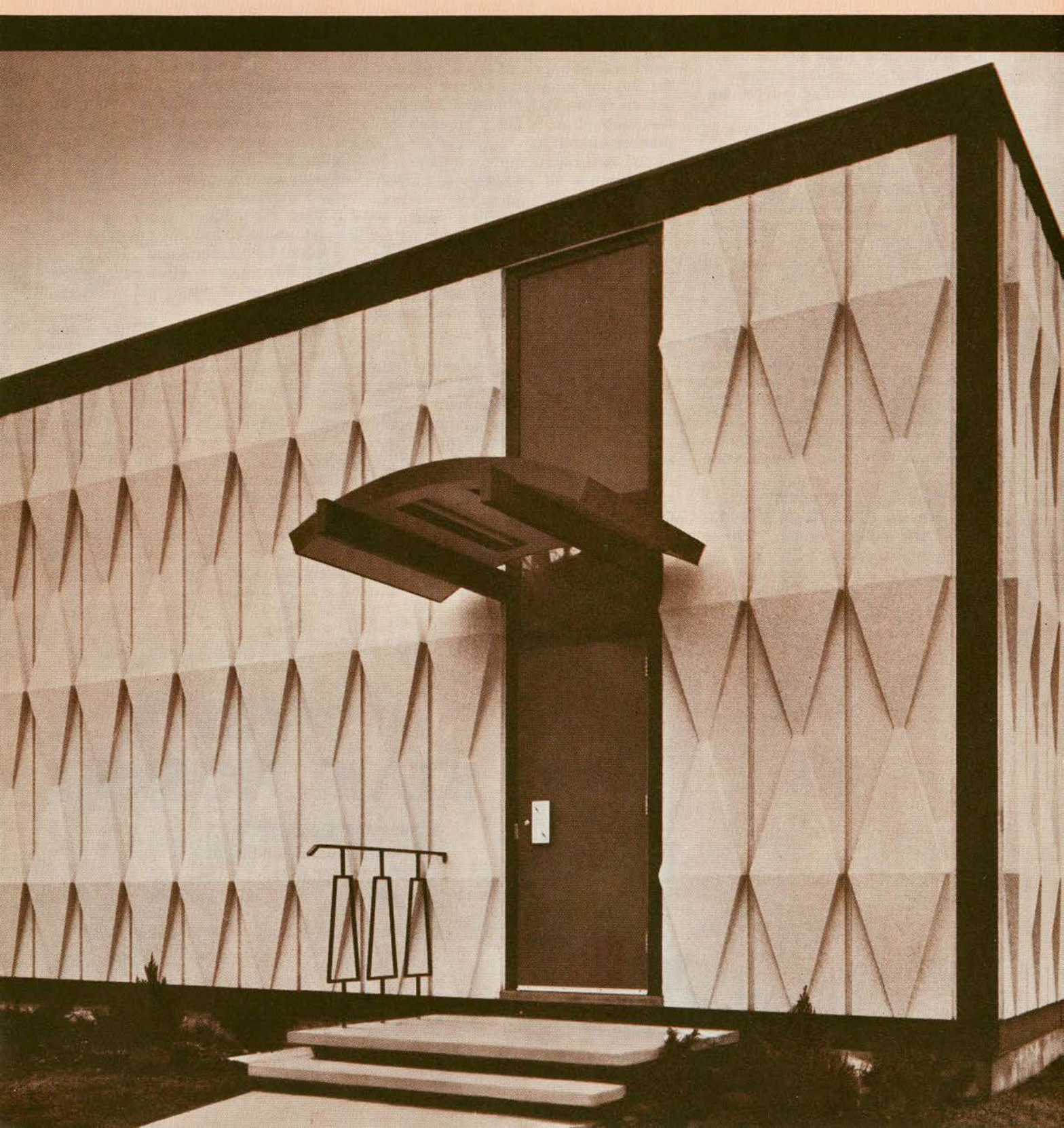

that any scheme which in the first stage shows promise as a basic idea would be advanced to the second stage, and not just a specific number (I can visualise as many as 25 solutions).

The first stage might involve only a site plan, a small scale plan showing basic disposition of elements only (say 1/32″ scale), and any other drawing showing massing, intended character, etc, provided that no more information must be given than can be shown on a 30″ x 40″ print. The competitor could be given the freedom to use any drawings which might be vital in presenting his concept to the jury in addition to the basic plans required. From these drawings any scheme considered of interest for further development by any one or two jurors would be allowed to compete in the second stage.

This could be accomplished by a meeting of the jury of award, or, in the case of jurors from distant lands, by mailing prints of the first stage drawings to the jurors. This would assure a competitor entering the second stage that his basic approach was considered of some merit and was liable to receive the sympathy of at least one juror. Competitors whose basic proposals were not accepted need not waste further time and effort.

Elaborate presentation would be discouraged because ideas only are the criterion of judgement, and there need be no fear that the same idea better presented would be the only one selected.

The second stage would involve a full presentation, including perspectives and model.

(2) *A one stage competition in which additional presentation and information may be required from two or more competitors.*

The second possible approach would be to require a full presentation on a more limited basis, ie, plans, sections and elevations, at 1/16″ (never at 1/8″) and one interior view only; possibly a small exterior perspective to indicate massing. Models, further interior perspectives, or details might be requested by the jury and paid for, in order to give the jury further information or confirm their judgement.

If the winning design should have obvious merit above others submitted, the jury would ask the winning designer (as yet unannounced) and for insurance the second prize winner, to provide additional drawings and models as they feel necessary to assure themselves of the competence of the work.

Where two or more schemes seem to be of relatively equal merit, or it is felt a particular scheme which might be considered for first prize, would require, a model or interior sketches for proper evaluation, the jury would ask for the particular additional work they would require, and the owner would pay for such additional work. Basically this means that only competitors considered for the first prize would have to provide elaborate models and/or perspectives. Further, the waste of effort of a full two stage competition, requiring two complete sets of drawings and models (and usually resulting in a financial loss to those selected for the second stage) would be avoided. This method might further permit a jury to ask for preliminary details or structural sections, when the practical and not the aesthetic merits of the competitor are in doubt.

While on the subject of competitions I would like to make one other point. The awarding of prizes for 1st, 2nd and 3rd prize solutions is quite often unequitable. The 1st prize award in one recent competition was $15,000, while 2nd and 3rd prize awards were $3,000 and $2,000 respectively. It is quite conceivable in many competitions that the 1st and 2nd awards respectively are made after many hours of difficult and often heated discussion, and some flexibility might be given to the jury by setting a 1st prize and fixing a further amount to be available to the jury for distribution for 2nd and 3rd prize or mention. In any case I feel that the third prize should at least cover expenses. This has not been the case in most recent competitions. The competition for the Saskatoon Arts Centre is typical in this regard, the $500 award involving the third prize winner in a substantial loss.

While making these comments, I would like to express the opinion that most recent Canadian competitions have been exceedingly well run with the best possible juries that could have been selected. The results have certainly proved them worthwhile.

Henry Fliess, Toronto

Re the *Journal's* February, 1962, Editorial: Fathers of Confederation Memorial Building Competition.

These thoughts may be written too late to prove of any use, but I hope one more opinion on the subject will not be too unwelcome.

There were, you say, 188 filling registration forms. And only 47 submissions. And the question is: why?

Admittedly, the final date could have been better timed. But, you say, and I agree with you, turkey dinners and Christmas parties should not

dampen creative enthusiasm. It cannot be assumed they did, for then indeed we would have to despair of architecture in this country.

I say that if only 25 per cent. of those registered sent in their design, it was the time allotted rather than the timing of the final date that is to be blamed. For, certainly, those 188 suspected beforehand the importance of the competition, and also knew the festive season would have interfered with their work. Those well intentioned architects who failed to send in their design, sooner or later, came to the conclusion time would be running out on them.

In retrospect, it does seem that this time element was all important for those competitors whose organizations did not have an extensive experience in theatre design, particularly so, since this aspect of the composition was carefully stressed in the conditions. The organizations whose design time was cut substantially by research work are probably those which make up the greater part of the 75 per cent not submitting.

It is quite possible that, given more time, those three out of every four competitors may not have conceived a scheme of as high a standard as the winners, but that is not the point of your query.

This does not answer the question: Why only 188? There are around 2300 architects in Canada, I believe. Surely it cannot be exaggerated to have expected a 25 per cent response. And yet, close to 2100 ignored a once-in-a-lifetime competition, one of unquestionable prestige and national importance. Again I think the reason was primarily a question of time. It does not appear fair to the magnitude of the project, to its patriotic significance, to its impact on future generations, to the influence it was supposed to have on the historical education and the pride of Canadians long after we are gone—it does not indeed appear fair to all this to have allotted so short a time to this competition. After all, what was involved was much more than a theatre, a housing project, or even a city-hall.

The question of model versus perspective: There is no *palliatif* to a three-dimensional view. But in this case, maybe some limitation to the degree of finish of the model should have been set clearly. As you have implied, not all competitors could afford either the cost or the time for an elaborate model. In other words, a study model of the *massing* of the elements comprising the composition may have been sufficient. The most promising of the submissions—the prize-winners and mentions—could then be asked to submit a more elaborate model.

Allow me, Sir, to point out that all this is in answer to the question raised in your editorial. It is by no means meant as a criticism of the genial solution presented by the winners, nor of the work of the organizers, the professional adviser, and the Jury. I cannot recall any competition, here or abroad, better handled than this one was. The documents were a master piece of thought and organization, albeit greater care to synchronize the French and English versions could have been taken. I feel proud to have been, in a sense, part of this competition, for I was one of the 188, but miserably sorry to have been one of those three out of every four who chose to shelve their clay model, their sketches, and their research work for some future opportunity!

Raymond J. Anagan, Montreal.

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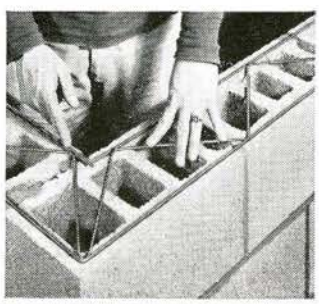

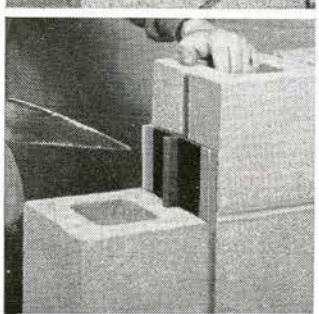

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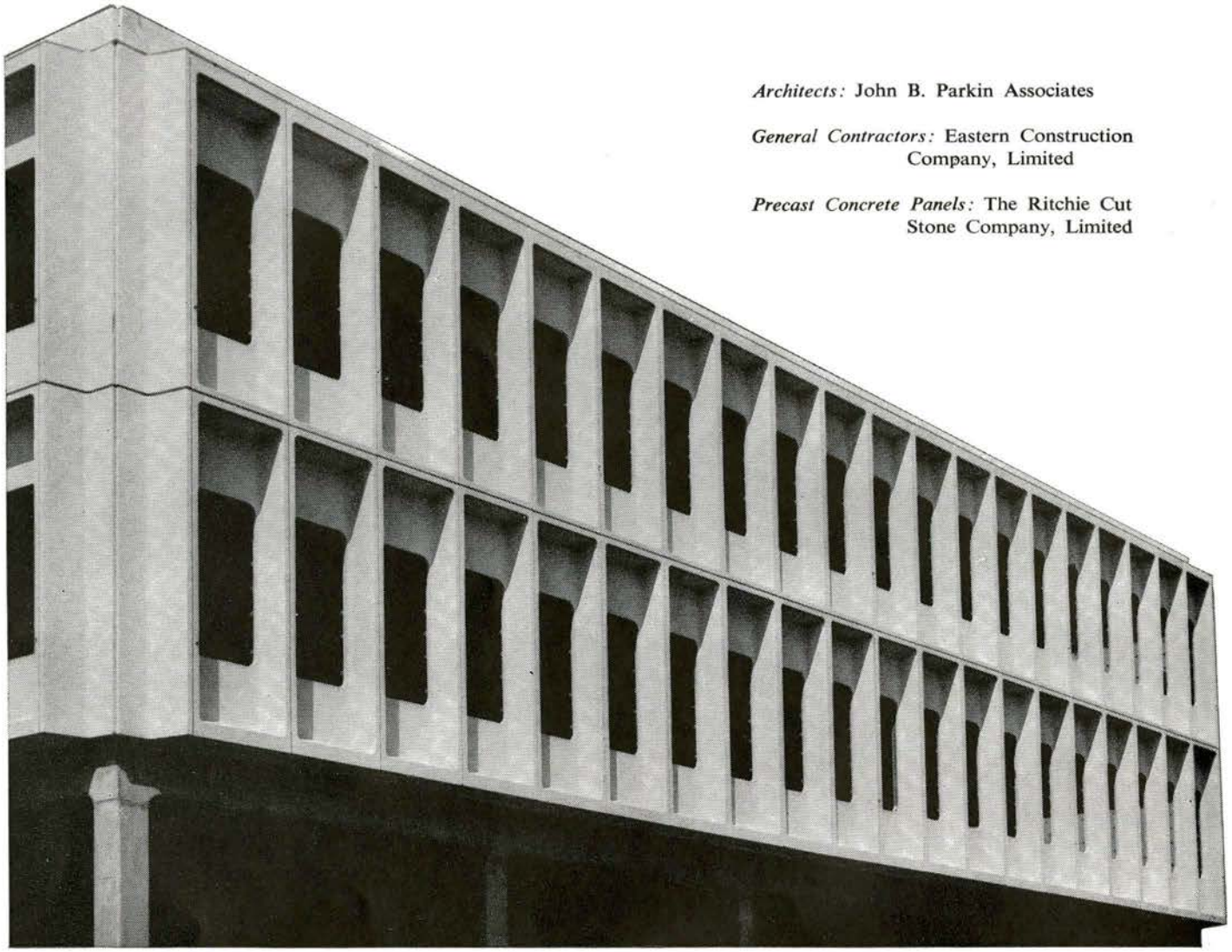

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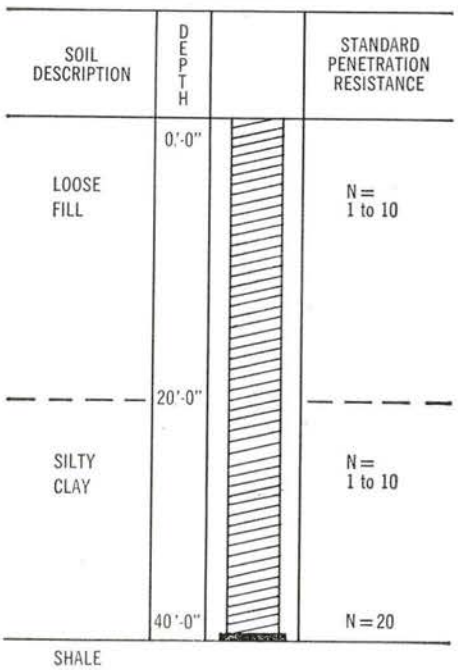

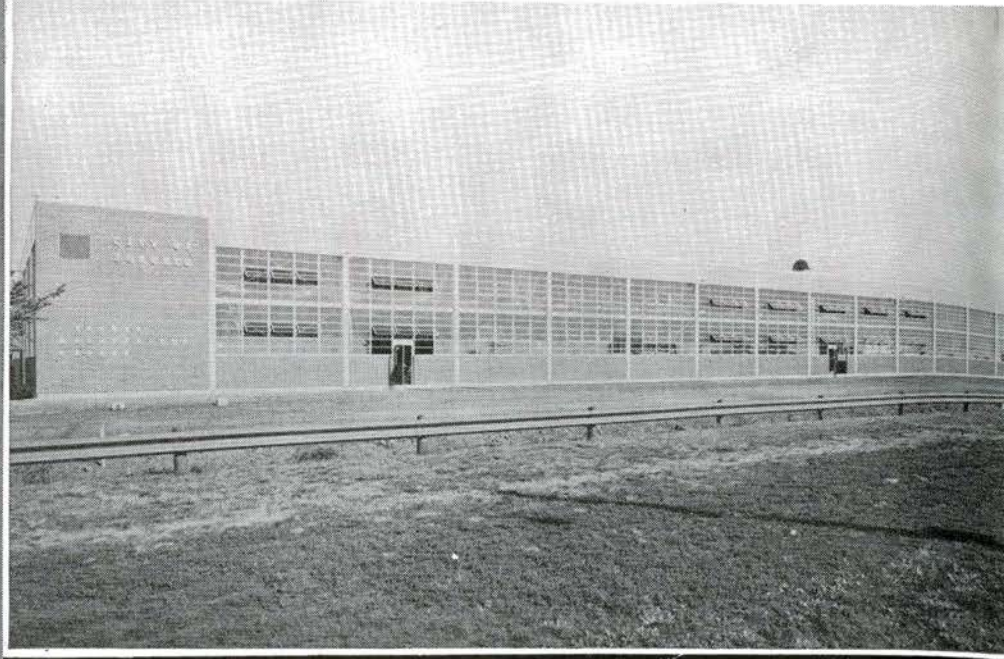

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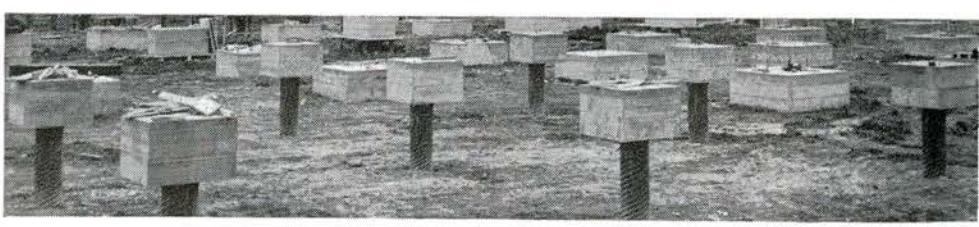

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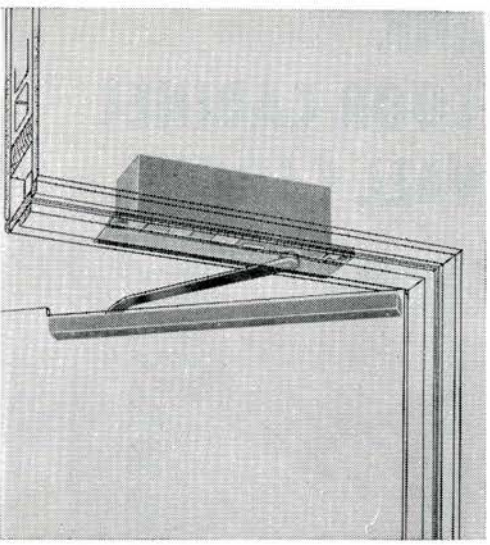

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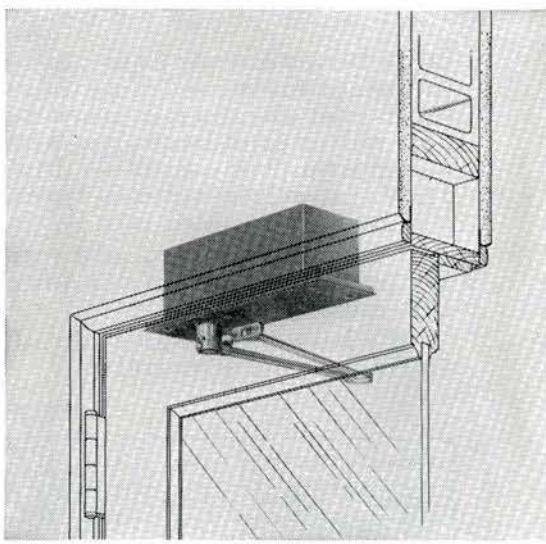

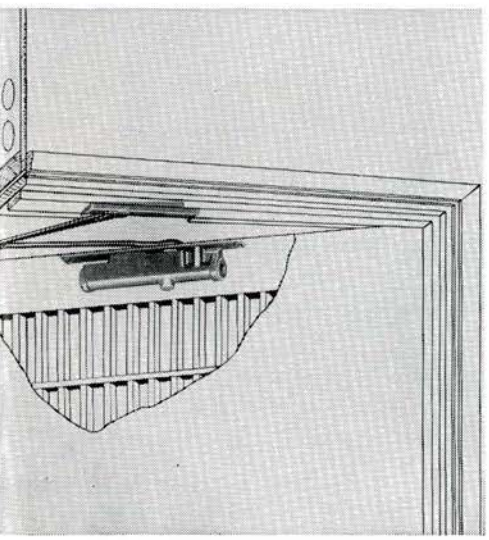

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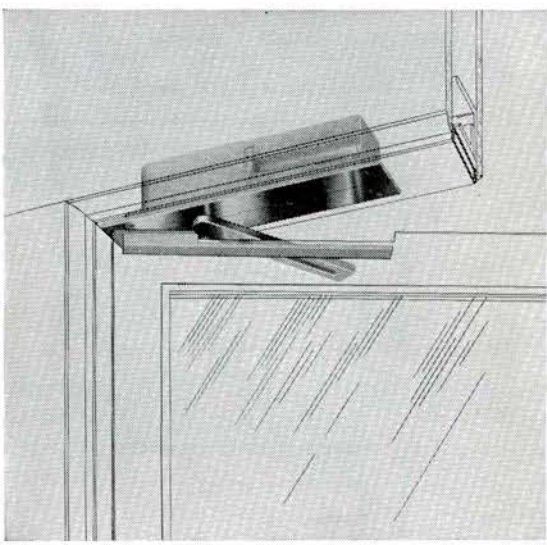

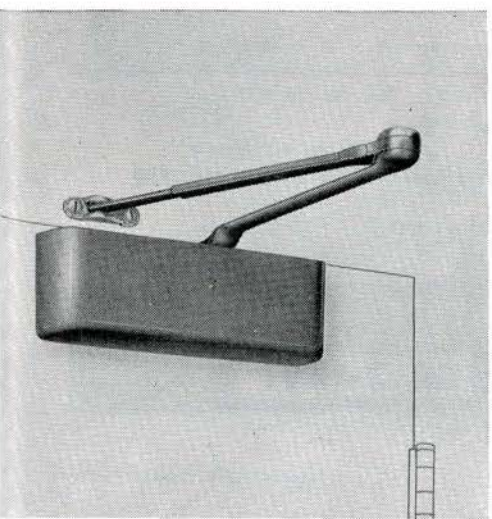

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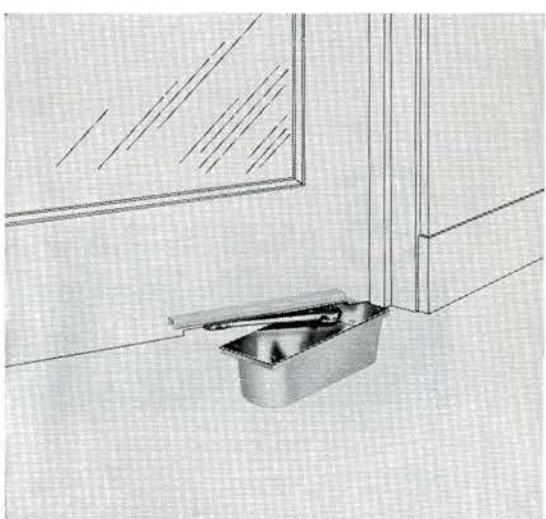

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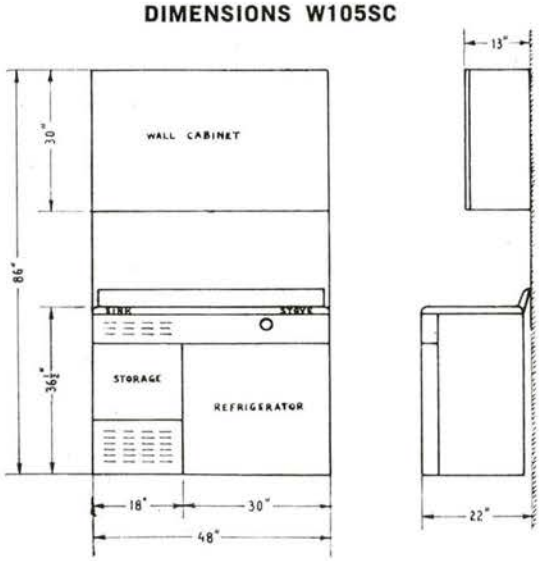
CAT. No.	BURNERS	STOVE	SINK	FLOOR CABINET	WALL CABINET	UTILITY OUTLET	MAX AMPS.	VOLTS	SHIP. WT.
105SC	1250 W	2-Burner	Yes	Yes	No	No	15.0	115	400
105SCX	1250 W	2-Burner	Yes	Yes	No	Yes	23.2	115/230	400
105SCY							25.0	120/208	
W105SC	1250 W	2-Burner	Yes	Yes	Yes	No	15.0	115	450
W105SCX	1250 W	2-Burner	Yes	Yes	Yes	Yes	23.2	115/230	450
W105SCY							25.0	120/208	

DIMENSIONS W105SC



REFRIGERATION SPACE

Capacity: 5 Cubic Feet
Inside Measurements:
Width — 25"
Height — 23"
Depth — 15"

SURFACE ELEMENTS

2 Burners — 1250 Watts

SINK

Stainless Steel: 10" x 14" x 5" Deep

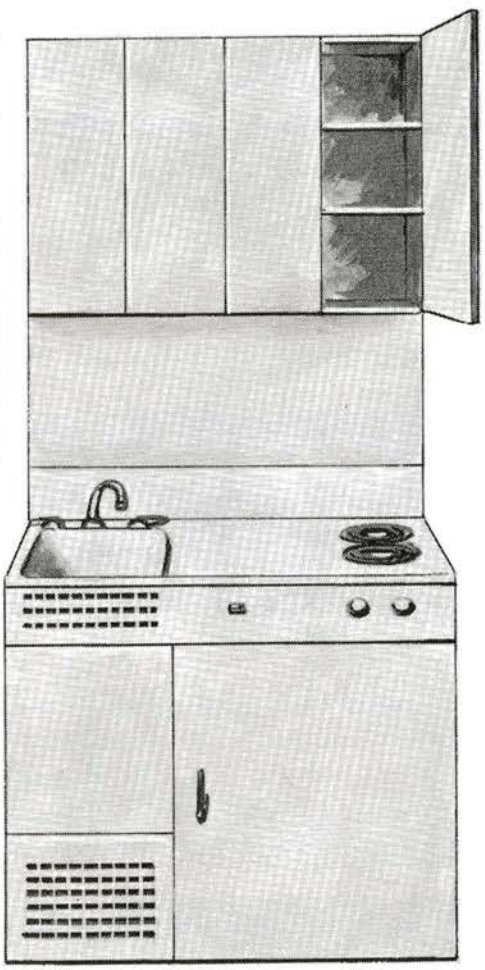
FLOOR CABINET

Inside Measurements:
Width — 16"
Height — 12"
Depth — 12"

WALL CABINET

Width — 48", Height — 30", Depth — 13"

REFRIGERATOR
STOVE
SINK
FLOOR CABINET
WALL CABINET



Cat. No. W105SCX

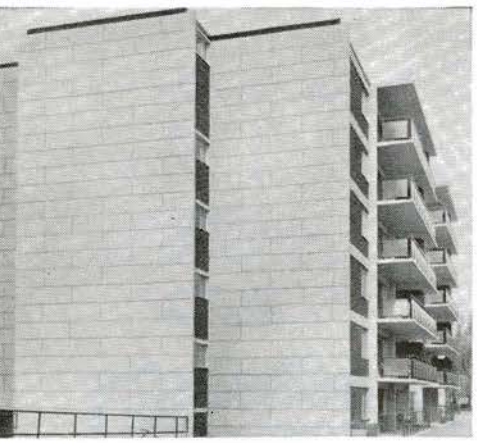
Ask for our complete Refrigerator Catalogue No. 87B

COOPERATION ON PROJECTS WITH ARCHITECTS AND THEIR CONSULTANTS IS OUR SPECIALTY

CANADIAN ARMATURE WORKS INC. (ELECTROMAID DIVISION)
6595 ST. URBAIN ST., MONTREAL • CR. 3-1591

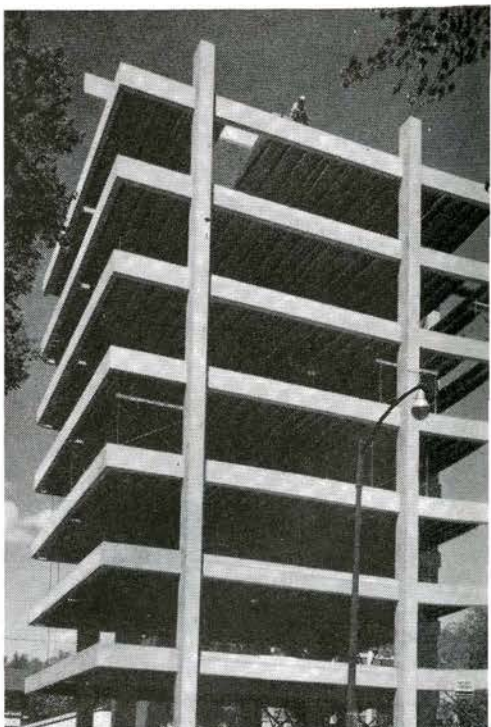
A Precast concrete panels with exposed aggregate add interest to this modern exterior.

B An all-concrete apartment building featuring concrete wall panels.



C Lightweight concrete wall panels like these reduce construction time and cost.

E Frame, floors, stairs, balconies, wall panels – all are of precast concrete.



D Concrete sandwich panels, with insulation between, feature this modern plant.

For a clean, fast, efficient job...

COLUMNS, BEAMS, WALL PANELS, FLOOR AND ROOF SLABS OF

PRECAST CONCRETE

MADE WITH

CANADA CEMENT

F These precast concrete members were made with Canada XXX High Early Strength Portland cement to speed erection.

Precast concrete members or units multiply your opportunities to cut down on erection time, and on the size of crews as well. On sites across Canada they are proving their value as aids to orderly, on-schedule construction, with minimum clean-up afterwards. And precast techniques also assure high, uniform concrete quality throughout the structure...factory or school, church or apartment block or sports stadium. For details on the advantages of precast concrete, use the tear-off corner below.

A **ELLENDALE MEDICAL BUILDING, COTE DES NEIGES ROAD, MONTREAL**
Architects: **Louis & Aspler,** Montreal
General Contractor: **Leon M. Adler**
Concrete panels supplied by: **Creaghan and Archibald Ltd.**

B **APARTMENT PROJECT, KITCHENER, ONT.**
Owner & Contractor: **Ennis Construction Company Limited,** Toronto

C **CANADIAN REFRACTORIES LIMITED RESEARCH LABORATORIES**
Architects: **Betts & Cash,** Montreal.
General Contractor: **Andex Ltd.,** Montreal.
Concrete panels supplied by: **Siporex Ltd.,** Montreal.

D **CROWN-ZELLERBACK'S NEW BUILDING IN LACHINE, QUE.**
General Contractor: **Pentagon Construction Co. Ltd.**
Concrete panels supplied by: **Hochelaga Pre-Cast Structures Ltd.**

E **GROSVENOR HOUSE, WINNIPEG**
Architects: **Libling, Michener & Associates,** Winnipeg.
Consulting Engineers: **Laurence S. Cazaly,** Toronto.
General Contractor: **G. Mida,** Winnipeg.
Precast concrete units supplied by: **Building Products & Coal Co. Ltd.,** Winnipeg.

F **OTTAWA LANSDOWNE PARK PRECAST CONCRETE STADIUM**
Owners: **Central Canada Exhibition Association**
Architects: **Balharrie, Helmer & Morin,** Ottawa.
Contractor: **W. D. Laflamme, General Contractors Ltd.,** Ottawa-Hull.

CANADA CEMENT COMPANY, LIMITED
CANADA CEMENT BUILDING, PHILLIPS SQUARE, MONTREAL

SALES OFFICES: Moncton • Quebec • Montreal • Ottawa • Toronto
Winnipeg • Regina • Saskatoon • Calgary • Edmonton

Please send me the following:

☐ PRECAST CONCRETE WALL PANELS
☐ PRECAST CONCRETE BRIDGE DECKS
☐ PRECAST CONCRETE JOISTS IN FLOOR AND ROOF CONSTRUCTION
☐ TILT-UP CONSTRUCTION
☐ ROOFS WITH NEW DIMENSIONS

Simply tear off this corner, attach to your letterhead and mail.

5

SERIES 1500

System Type: UNIT (Optional Thermal Break)
Application: HIGH or LOW-RISE Construction
This is the preferred system wherever lowest cost is essential. You can create monumental wall features with a minimum budget. Specify factory-assembled Kawneer Series 1500 Units.

CHARACTERISTICS

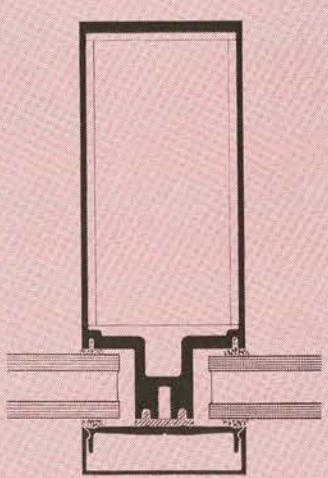
Appearance	• emphasized vertical mullions
Construction	• screw-and-spline joinery
Design	• three depths of mullions for strength and design aesthetics
Panel Thickness	• unflanged:—1⅝″ maximum flanged:—2″ maximum
Glass Thickness	• 3/16″ to 1″ maximum
Glazing	• Neoprene tube and Polysulphide sealant
Vent Types	• projected, casement, as well as top-hinged are available
Finish	• thirty-minute etch and anodize (CE/AN/.0004)

SERIES 1600

System Type: STICK (with Thermal Break)
Application: HIGH or LOW-RISE Construction
Here is true flexibility for the designer of building facades. Glass is located forward in each section. Snap-on caps come in many forms and materials. Three mullion sizes available to satisfy almost every structural requirement.

CHARACTERISTICS

Appearance	• emphasized mullion or full grid
Construction	• screw-and-spigot joinery
Panel Thickness	• ¼″ to 3″ maximum
Glass Thickness	• ¼″ to 1″ maximum
Glazing	• flush-glazed utilizing a dry-pressure glazed system
Vent Types	• accommodates a full range of projected series windows
Finish	• thirty-minute etch and anodize CE/AN/.0004 as a standard. (Optional finishes available)

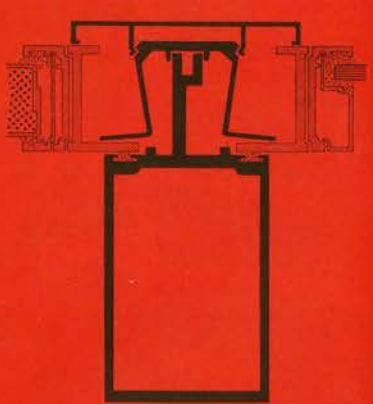


SERIES 2100

System Type: WINDOW WALL
Application: LOW-RISE Construction
Where all-'round flexibility of design, on the drafting table or at the site of construction, is a prime requisite . . . Series 2100 Window Wall is the creative architect's choice. Different mullion styles spark creativity constantly!

CHARACTERISTICS

Appearance	• emphasized batten-type verticals
Construction	• conforms to all Sealair Window specifications
Panel Thickness	• unflanged:—1⅛″ maximum
Glass Thickness	• ½″ maximum
Glazing	• mastic glazing compound with optional aluminum beads
Vent Type	• projected, casement, as well as top-hinged are available
Finish	• thirty-minute etch and anodize (CE/AN/.0004)



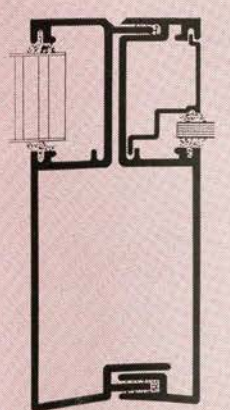
PROVEN WALL SYSTEMS BY Kawneer

SERIES 3000

System Type: UNIT
Application: LOW-RISE Construction
Throughout the architectural profession, the leading wall system for low-rise application is acknowledged to be this famous Series 3000, by Kawneer. For excellent performance, time-tested weatherability, precise detailing and dependable construction, specify Series 3000.

CHARACTERISTICS

Appearance	• emphasized vertical mullions
Construction	• screw-and-spline joinery
Panel Thickness	• unflanged:—1⅜″ maximum
Glass Thickness	• ¼″ to 1″ maximum
Glazing	• Dry. Internal drainage design ensures weather-tightness
Vent Types	• choice of projected, casement, top-hinged, vertically pivoted
Finish	• thirty-minute etch and anodize (CE/AN/.0004)



EXPERIENCE HAS TAUGHT US . . . .

Today's architect, by using advanced techniques, develops structures that save building and maintenance costs! His creations rise faster and last longer than his architectural predecessors dreamed possible, probable or even postulateable! But then, they didn't know about Curtain Walls.

Fortunately, you can use the Curtain Wall technique in almost any part of your design concept. Now you can PREDICT CURTAIN WALL PERFORMANCE, by accurate material selection! Specify only components that do the best job! (Inadequate systems or poor products cause "leakers." Clients, reputations and bank accounts suffer). Solution? Call a dependable manufacturer. Call on KAWNEER! We're supplied with such commodities as years of experience, quality products, plus reams of data collected on-the-job and in-the-lab.

As stated (so boldly) above, Kawneer has five proven Curtain Wall Systems. All three Basic Systems are used:

- STICK. Highly adaptable. All the assembly is done on structure.
- UNIT. Factory-assembled. Fastest to install. Best weatherseal.
- WINDOW WALL. Stick combined with Unit System. Fabricated Window Units. Loads carried by mullions.

Our five proven Kawneer Wall Systems adapt to any building and budget.

We'd be pleased to help you. Phone us.

Might prove profitable for us both!

Kawneer

COMPANY, CANADA LIMITED • SCARBOROUGH

ZIPPERWALL

(Series 2500)
System Type: STICK
Application: LOW-RISE Construction
Totally unique in concept and application is **Kawneer's New Zipperwall!** Combining aluminum mullions with the weather-resistant qualities of neoprene structural glazing, Zipperwall is designed and priced for quality and economy!

CHARACTERISTICS

Appearance	• emphasized vertical mullions • flush interior surfaces and sharp, black accent lines
Construction	• bolted and gasket-sealed type
Panel Thickness	• uses special 1″ flanged panel
Glass Thickness	• 3/16″ and ¼″ only
Glazing	• unique neoprene "zipper" type
Vent Types	• hopper or projected. Utilizes special 1″ Zipperwall Window
Finish	• thirty-minute etch and anodize (CE/AN/.0004)

INDEX TO JOURNAL ADVERTISERS

Coming up . . . one of the world's finest city halls

Mayor Nathan Phillips, Q.C., mounts the stairs of Toronto's old City Hall carrying a model of the new.* When completed, over a quarter of a million pounds of Atlas stainless steel will be used to give it permanent beauty.

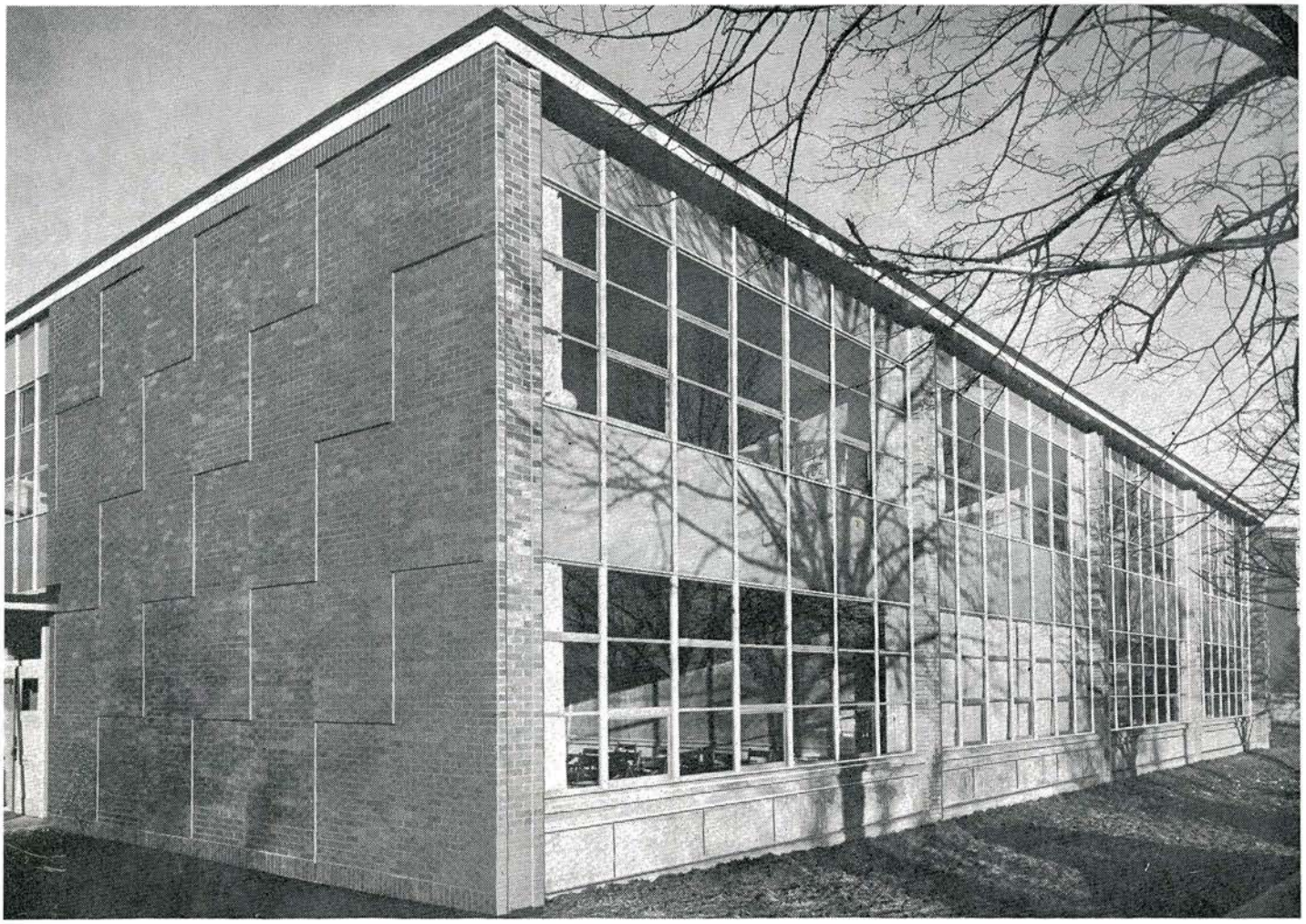
Stainless steel will be used for the curtain walls of the towers, snap-on trim on the outside walls of the podium floor, and for exterior doors. Indications are that Texdur 10, a new fine-grain polished stainless will be employed. Inside, stainless will grace many items of utility . . . fountains, hardware, firehose cabinets, vault doors, public telephone booths, elevator cabs and entrances.

When you design with stainless, you get much more than lifetime beauty. You get compatibility with all other building materials and a high strength-to-weight ratio permitting use in thinner sections. Wear and corrosion resistance are basic qualities.

Since 1957, we have had an Architectural Development Department to help architects, fabricators and building owners. Get in touch by contacting your nearest Atlas office. Atlas Steels Limited, Welland, Ontario, Canada's largest manufacturer of stainless steels.

ATLAS STEELS

*Architects: Viljo Revell and John B. Parkin Associates • Stainless Fabricator: Canadian Rogers Eastern Limited



Architect: J. Philip Dumaresq and Associates, Halifax

Contractor: Pryor Construction Company Limited, Halifax

Richmond School

Halifax, N.S.

Rusco steel fixed-lites with hoppers, steel exterior casings and steel snap-on mullion covers were used in this addition to Richmond School, Halifax.

It is an excellent example of attractive efficient, modern school fenestration with imaginative use of colour. The spandrels are "sea green" porcelain enamel. The windows are finished in "aqua" and the snap-on mullion covers in "white" enamel baked-on in the Rusco ovens.