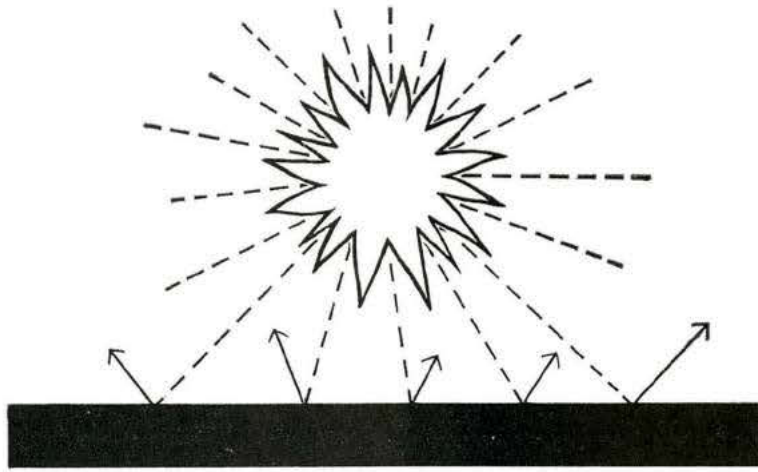


# ROYAL ARCHITECTURAL INSTITUTE OF CANADA JOURNAL



JULY 1960

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



UNITED KINGDOM BUILDING, VANCOUVER  
*Architect: Douglas C. Simpson, Vancouver*  
*Engineer: D.W. Thomson & Co. Ltd., Vancouver*  
*Heating & Air Conditioning Contractor:*  
*Canadian Comstock Co. Ltd., North Vancouver*

**HOW TO OUTWIT THE SUN ... AND COOL A BUILDING** A Trane *zoned* heating and cooling system is used in this handsome new Vancouver building. It automatically supplies just the right proportion of tempered air, to maintain an ideal climate—heated air in winter, cooled air in summer. Sun deflecting louvres are used to obtain greater economy of operation—and to “outwit” the sun! Result? The staff enjoys a year-round perfect working climate. Discover the advantages of TRANE heating and air conditioning in your new or present building. For perfect climate every hour of the day, contact your local TRANE office. ■

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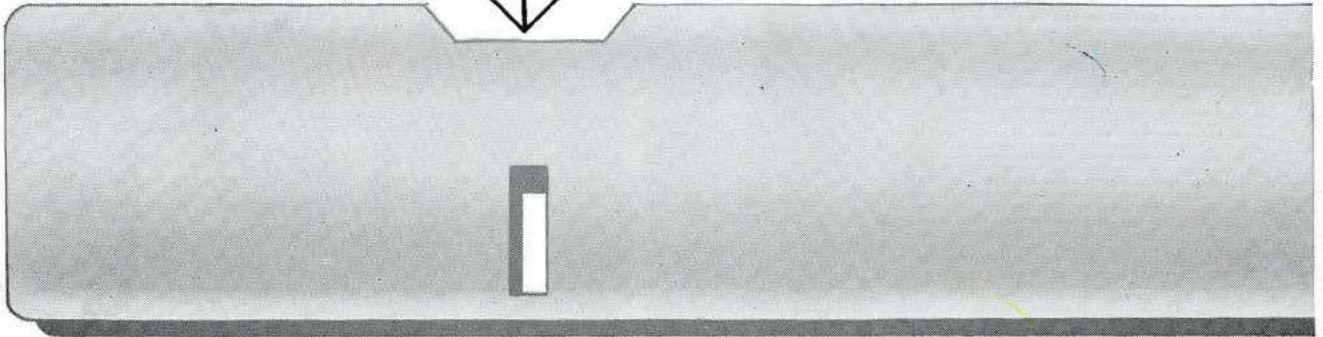
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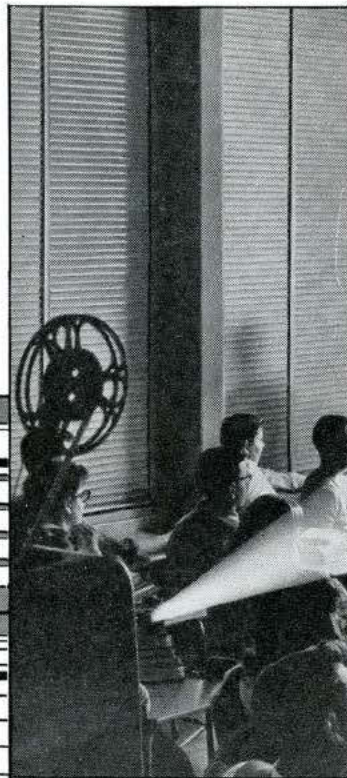


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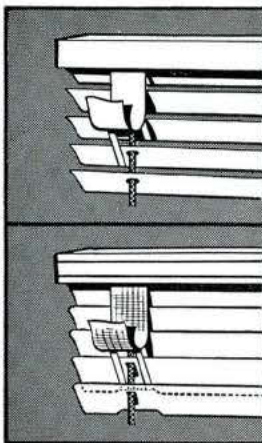


*the notch nobody sees lets*  
**Flexalum twi-nighter**  
*keep out six times more light  
than ordinary blinds.*

Few people are aware that the small notch stamped from the slats of Flexalum Twi-Nighter venetian blinds plays such an important role. When a Twi-Nighter is closed, the notch accommodates the vinyl plastic tape cross ladders, permitting a snug overlap. The notchless design of ordinary blinds *prevents* complete closure. Light meter tests prove that Twi-Nighters keep out six times as much light as some other blinds. A few more examples of the great differences in quality, function and styling which make Flexalum Twi-Nighter



the industry leader: crash-proof cord lock prevents blind from falling even when suddenly released . . . non-slip tilter prevents cords from sliding out of reach or adjustment . . . exclusive, spring-tempered slat alloy (slats snap back from 180° bend without deformation or paint damage!) . . . 5-year *written* guarantee. You pay a little more for Twi-Nighter quality at the start, but you save *much* more in upkeep, utility and long life.



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FLEXALUM TWI-NIGHTER Cord holes and notches permit complete closure.

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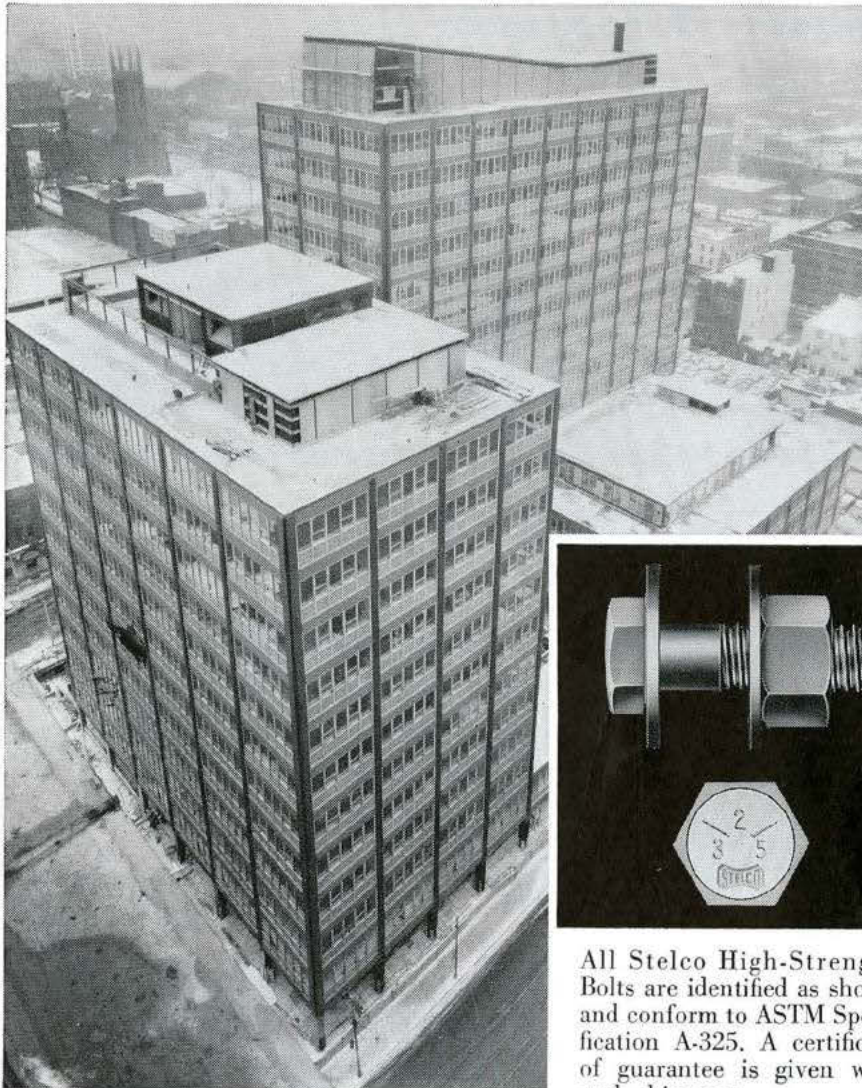
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ARCHITECTS: Shore & Moffat, Toronto.

GENERAL CONTRACTORS: Redfern Construction Company, Limited, Toronto.

STEEL FABRICATORS and ERECTORS: Frankel Steel Construction Limited, Toronto.

All Stelco High-Strength Bolts are identified as shown and conform to ASTM Specification A-325. A certificate of guarantee is given with each shipment.

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- **Versatility:**

The Modulux fixture is a modular line of 1'x4', 2'x4', 2'x2' shallow fixtures for individual mounting, continuous rows and other modular arrangements. The fixtures go lengthwise in exact foot dimensions namely: 4' and 2'; and also widthwise, 1' and 2'. The Modulux is also available in the 2'x4' model with a bar across the centre, giving a double 2'x2' appearance. Fixtures can be butted together so that two 2'x4' fixtures make a 4'x4' unit or two 1'x4' fixtures make a 2'x4' unit.

Modulux fixtures fit end to end or side to side and fit most types of suspended ceilings.

- **Shallow Depth:**

Modulux surface-mounted fixtures are only  $3\frac{3}{4}$ " deep; the recessed fixtures are only  $4\frac{1}{2}$ " deep; providing more space between floor and ceiling.

- **Wide range of closures:**

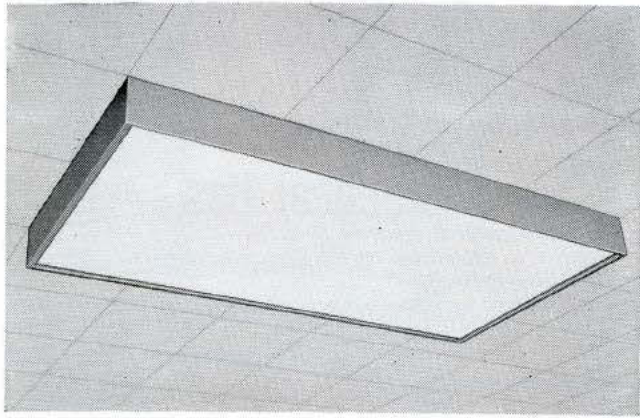
Here again are abundant scope and variety for interesting ceiling effects. Corning Albalite, Acrylic Drop Pan, Methyl Methacrylate, Polarized Fiberglass — these are only a few of the many closures available for the Wilson Modulux.



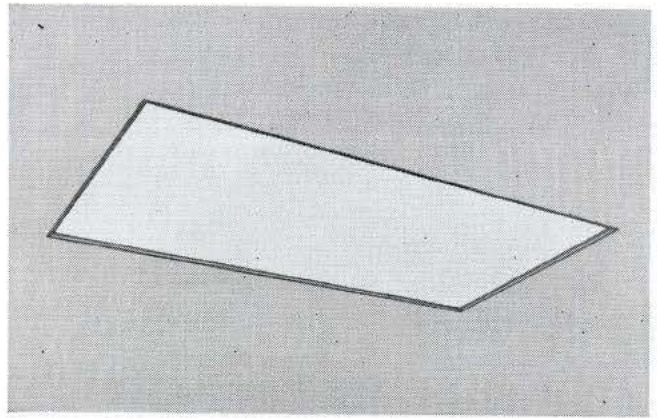
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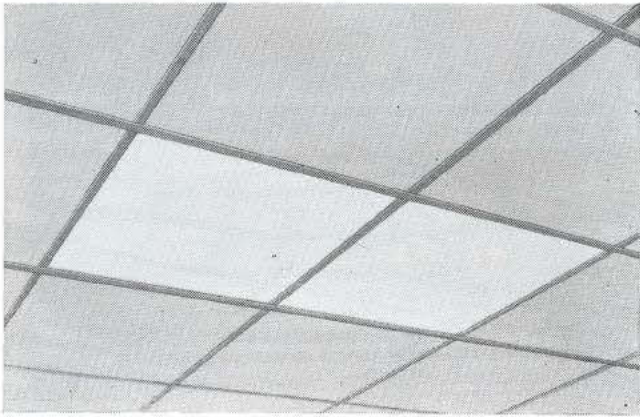




Modulux S, Surface Mounted



Modulux R, Recessed Plaster Ceiling



Modulux R, Inverted Tee Ceiling

## AVAILABLE IN THREE VERSIONS!

### MODULUX S, Surface Mounted, 3<sup>3</sup>/<sub>4</sub>" deep

- (1' x 4') 2-lamp rapid-start - - - - F902
- (2' x 4') 4-lamp rapid-start - - - - F912
- (2' x 4') 4-lamp rapid-start - - - - F922  
with divider hinge frame
- (2' x 2') 4-lamp trigger-start - - - - F923

### MODULUX R, Inverted Tee Ceiling

- (1' x 4') 2-lamp rapid-start - - - - F962
- (2' x 4') 4-lamp rapid-start - - - - F972
- (2' x 4') 4-lamp rapid-start - - - - F982  
with divider hinge frame
- (2' x 2') 4-lamp trigger-start - - - - F983

### MODULUX R, Recessed Plaster Ceiling

- (1' x 4') 2-lamp rapid-start - - - - F932
- (2' x 2') 4-lamp rapid-start - - - - F942
- (2' x 4') 4-lamp rapid-start - - - - F952
- (2' x 2') 4-lamp trigger-start - - - - F953

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"Engineered Seeing" is identified by the Wilson "W" and symbolizes a company of illumination engineers and experts serving Canadian industry for fifty years.



#### New Wilson Modulux Catalogue

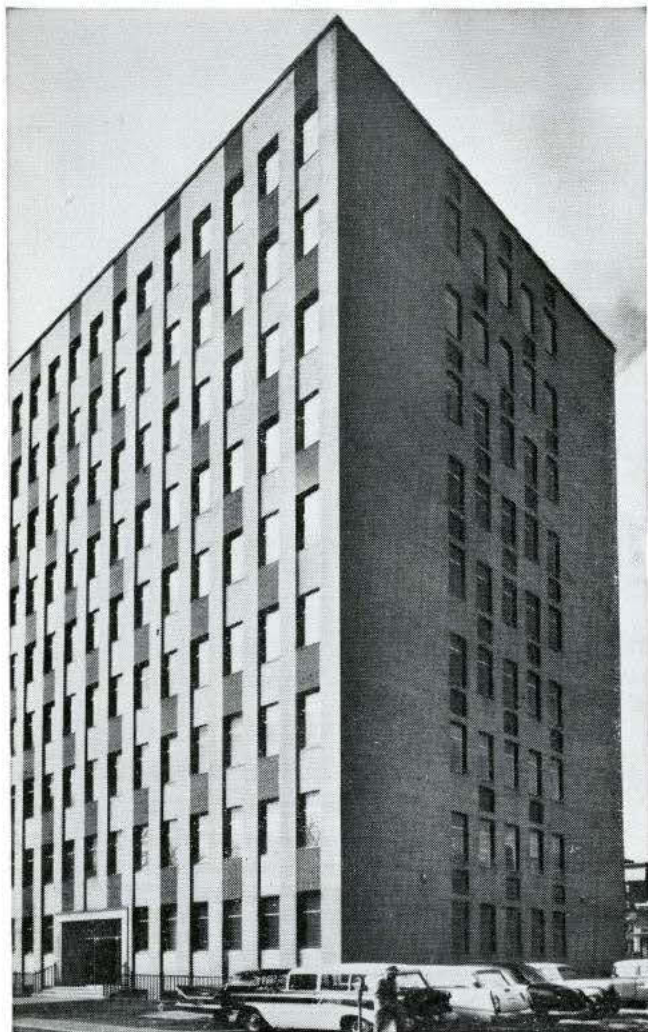
For complete details on the Modulux F900 Series, including photometric data, write for your copy of our new illustrated Catalogue.



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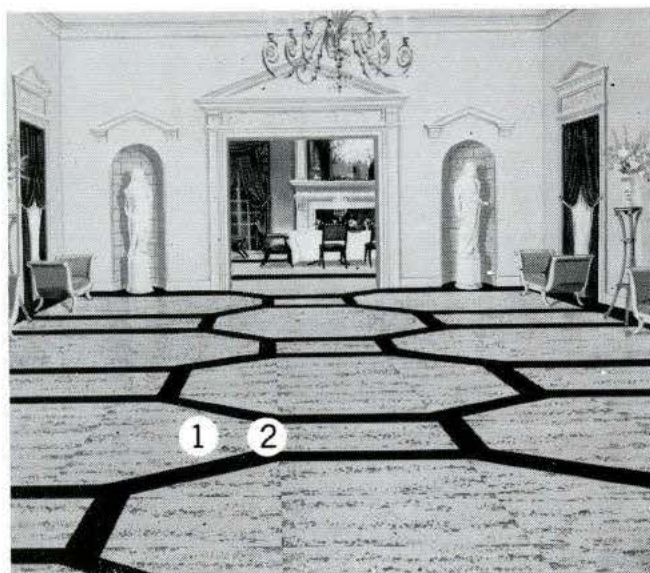


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*as illustrated on the facing page*



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2. VP-22 Black

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Amtico Travertine Vinyl 1/8" . . . all-vinyl, color throughout thickness • Standard tile sizes . . . 9" x 9", 12" x 12" • Special tile sizes . . . 36" x 36", 36" x 24", 36" x 18", 36" x 12", 36" x 9", 24" x 24", 24" x 18", 24" x 12", 24" x 9", 18" x 18", 18" x 12", 18" x 9", 12" x 6". Other sizes available by special order.

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\*Produced by an exclusive process. Pat. Pend.





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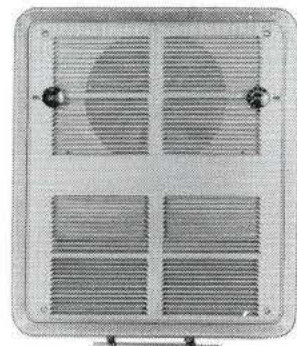
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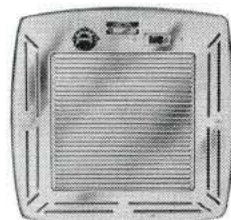
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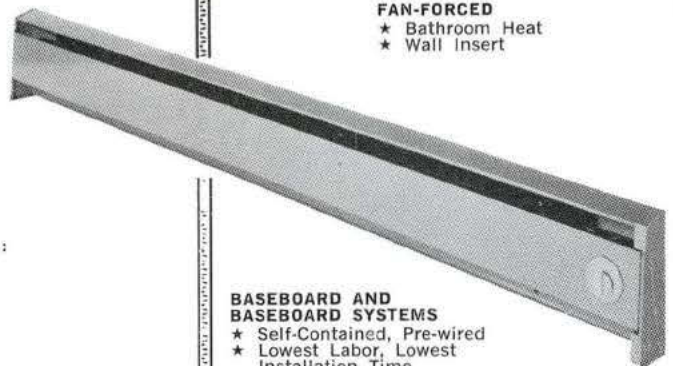
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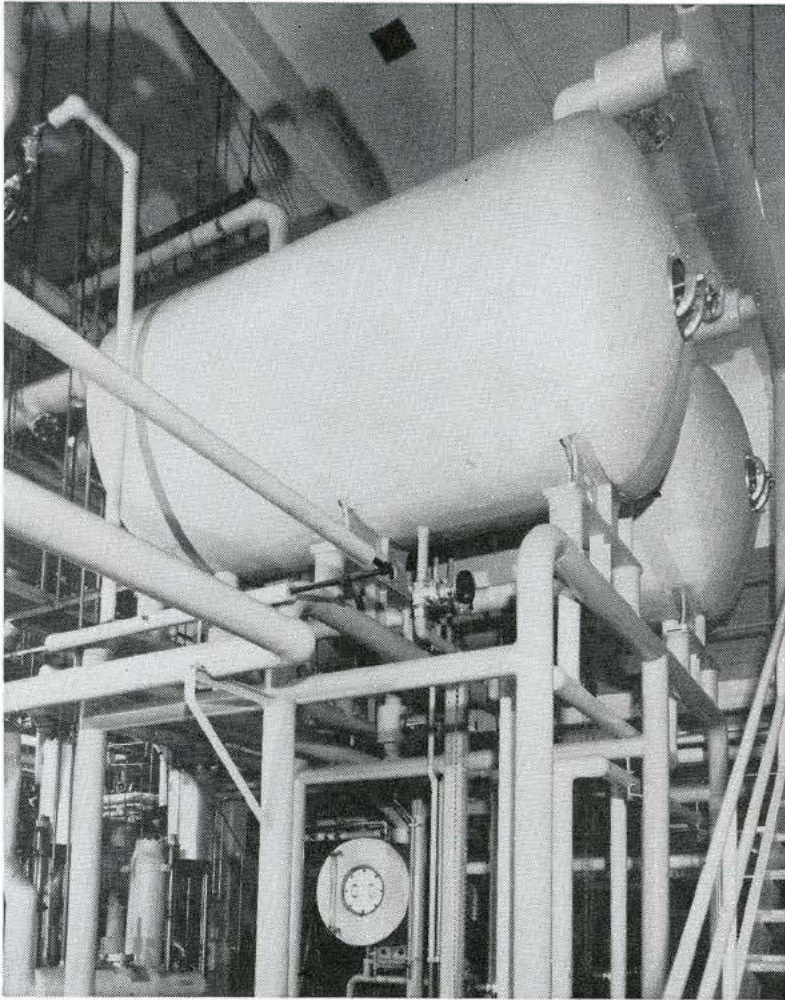


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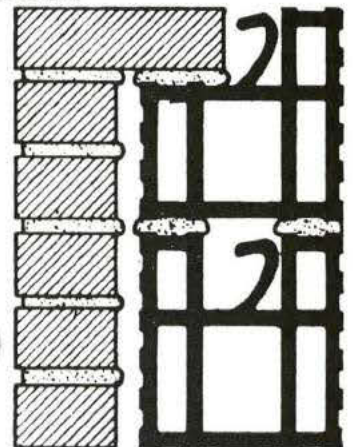






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Aluminum Fabricator: Williams & Williams (Eastern) Limited



**IN ONTARIO** LORNE PARK SECONDARY SCHOOL, PORT CREDIT, ONT.  
Architect: Hanks Irwin & Pearson, Toronto, Ontario.  
Aluminum Fabricator: AlSCO Products of Canada, Limited

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Architect: William R. Souter & Associates, Hamilton, Ont.  
Architectural Metal Contractor: Aluminum Window Manufacturers Ltd.



**IN B.C.** SIR JAMES DOUGLAS ELEMENTARY SCHOOL, VANCOUVER, B.C.  
Architect: Davies & McNab Architects, Vancouver, B.C.  
Aluminum Fabricator: Northwest Manufacturing Company Ltd.

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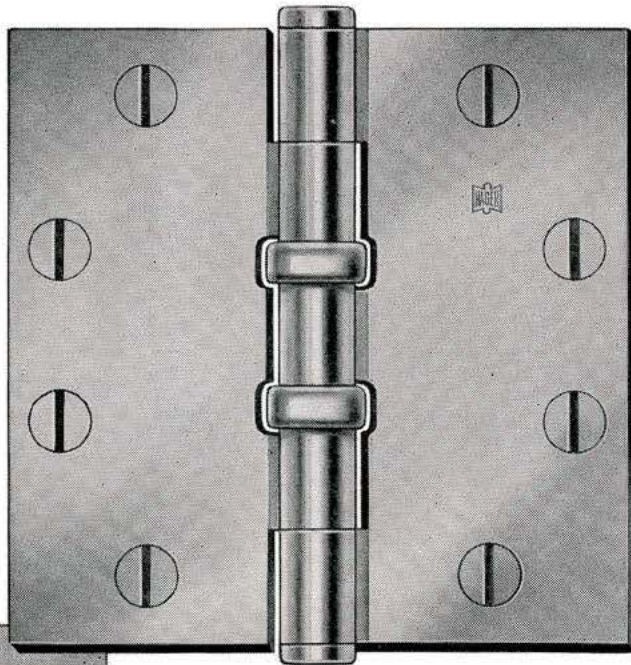
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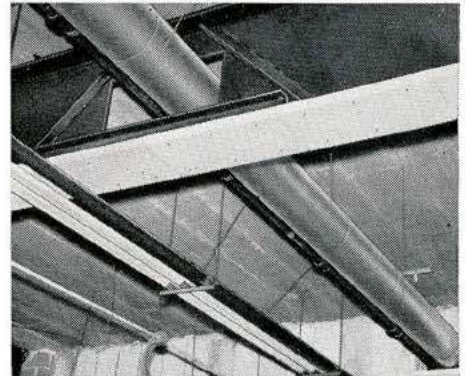
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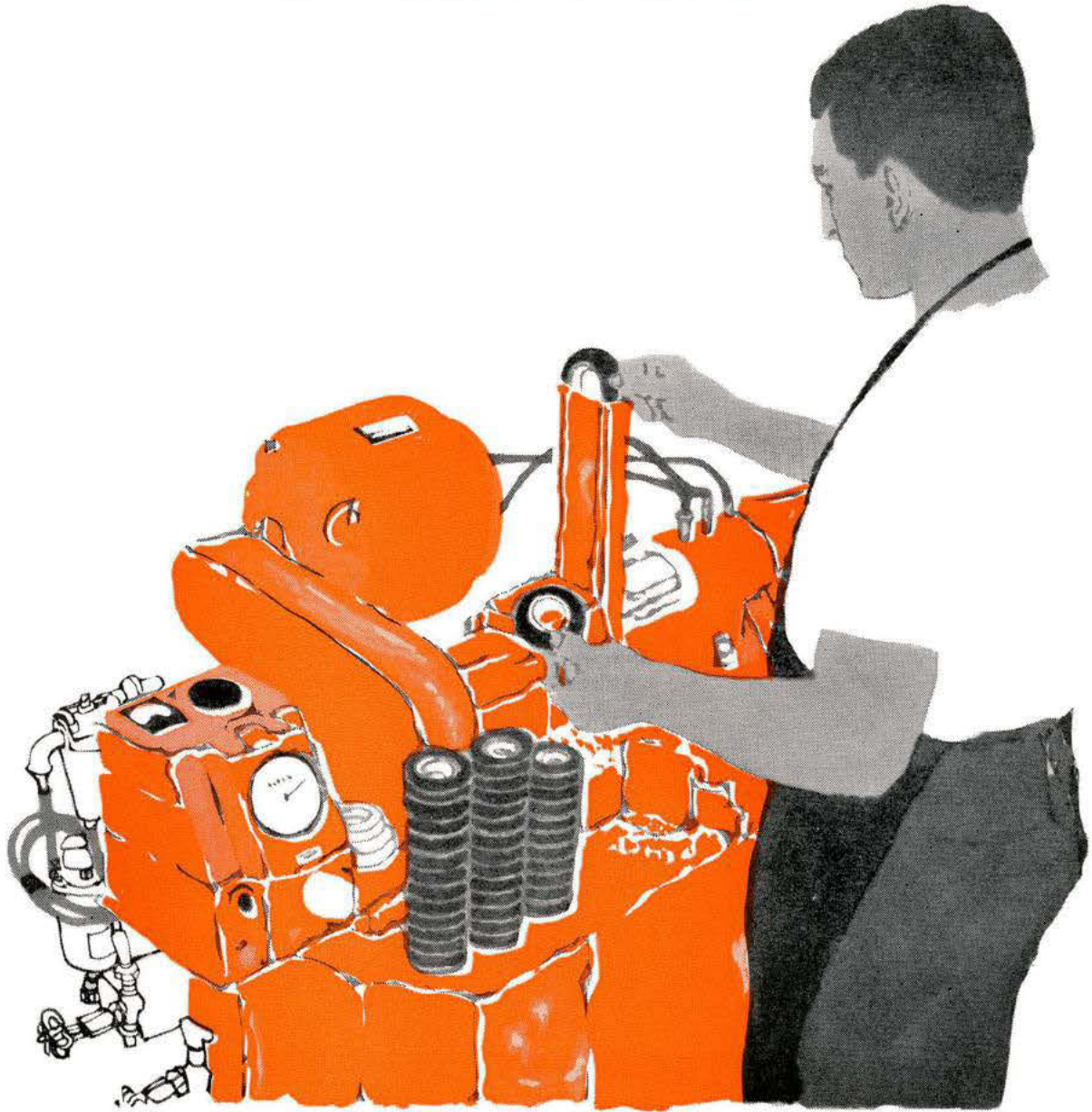
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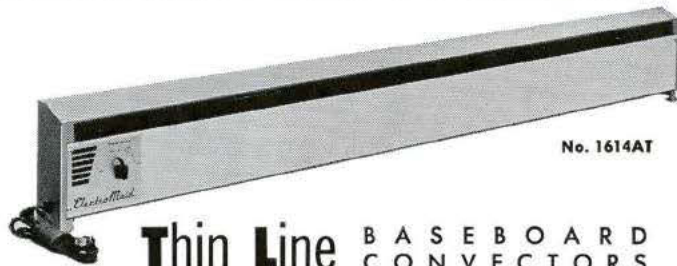
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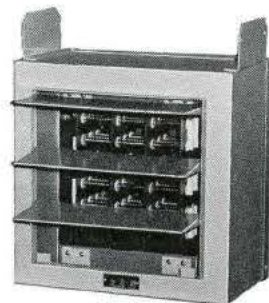
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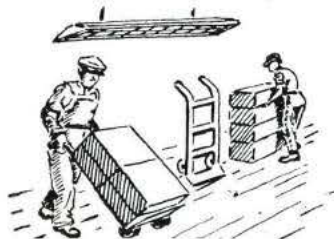


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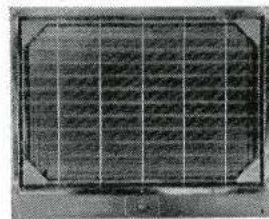
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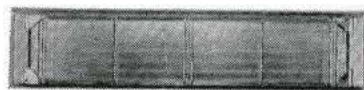
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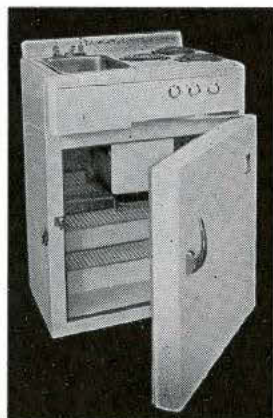
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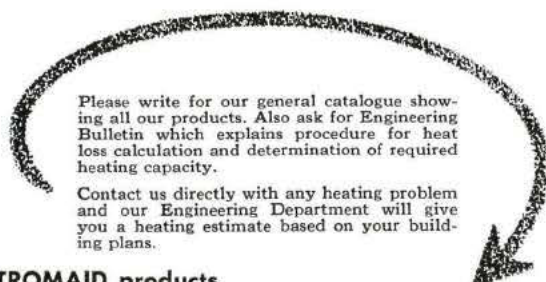
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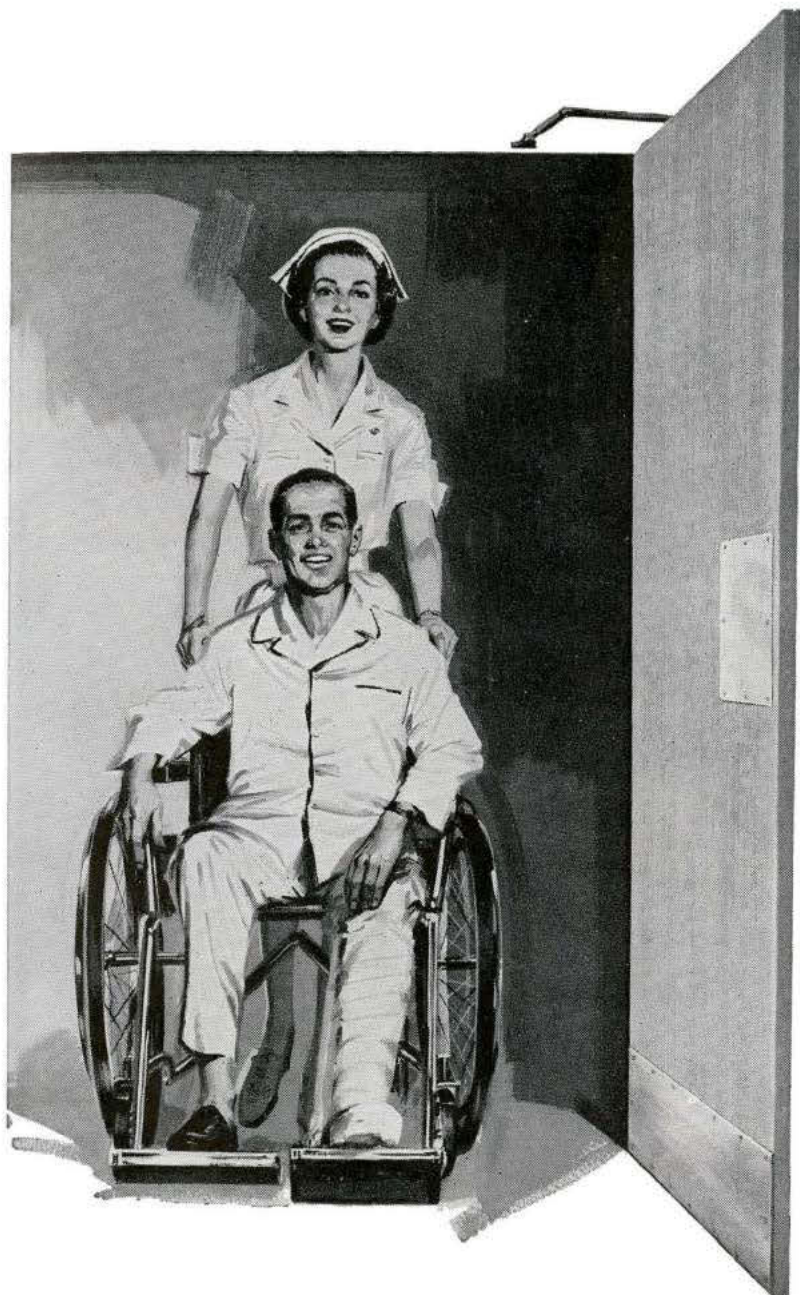


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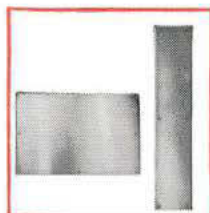
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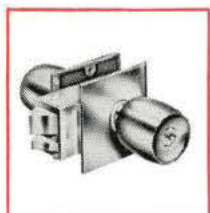
The 400 is only one of many Russwin Hospital Doorware products that bring you a bonus in efficiency and convenience. Have your Russwin hardware consultant tell you more about the products shown here, and others in this all-inclusive line. Or write Russwin Belleville Division, International Hardware Co. of Can. Ltd., Belleville, Ont.

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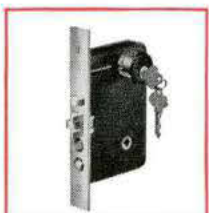
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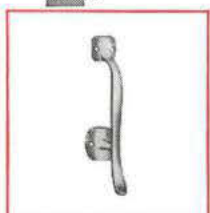
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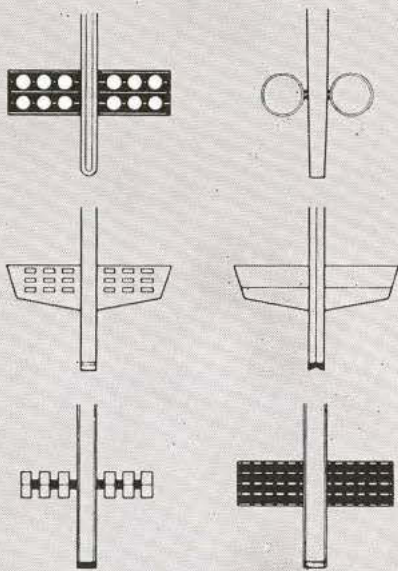
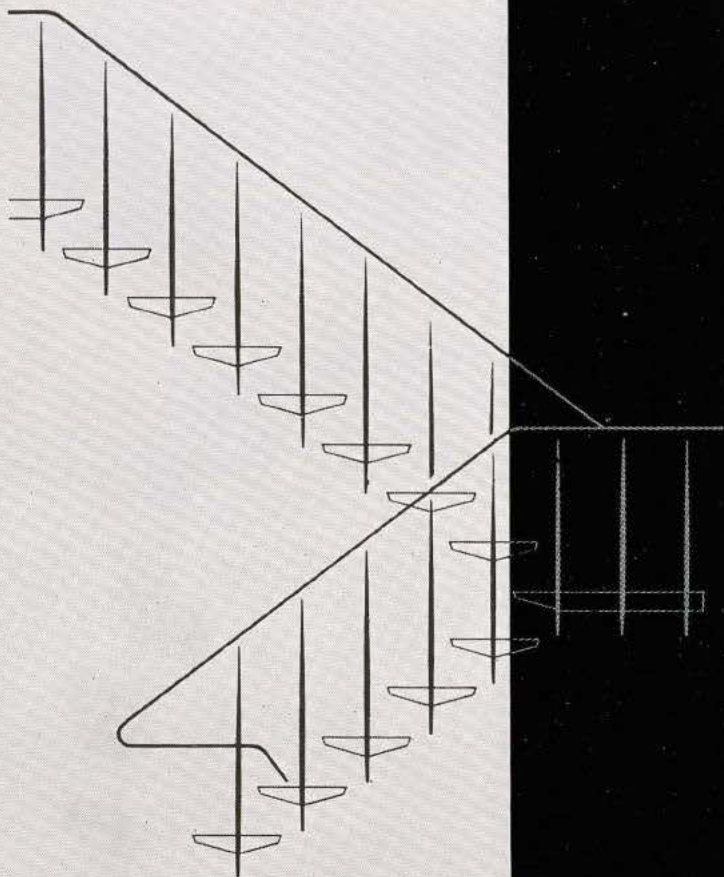
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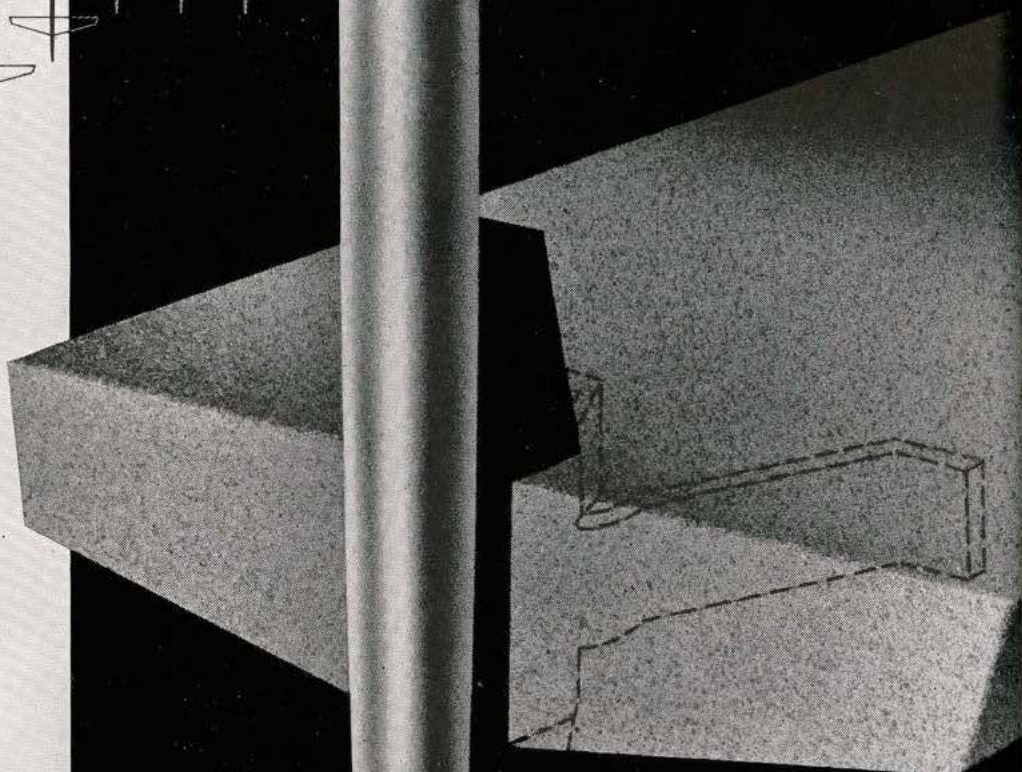


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SERIAL 419, VOLUME 37, NUMBER 7, JULY, 1960

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## NINETEEN HUNDRED AND SIXTY ANNUAL ASSEMBLY

THE NINETEEN HUNDRED AND SIXTY Annual Assembly in Winnipeg had all the ingredients of a successful meeting — presentation of Honorary Fellowships to three outstanding men, the report of the Committee of Inquiry on Residential Environment, the Alumni reunion of the School of Architecture and hard working committees who had planned an excellent program.

The Assembly certainly came up to expectations. It was the greatest yet in length and variety of program, achievement and the involvement of the membership as a whole. A great number of members took an active part in the work of the various committee meetings and seminars, reflecting the broadening scope of the RAIC affairs. Undoubtedly, much was accomplished but there appeared to be a need for still more meeting time. The adoption by the membership present of the recommendations of Committee of Inquiry will require the creation of yet more committees and as a result still longer annual assemblies seem to be inevitable.

For myself, I applauded the absence of a manufacturers' exhibition this year, although the Treasurer may deplore it.

The all-day Seminar at the new School of Architecture at the University of Manitoba was a complete success. This followed the pattern set at Windsor last year and I hope has become a permanent part of the Assembly. This year's seminar gave us not only good talks and discussions but also a chance to see and appreciate several of the new buildings in the University area. The morning panel members were stimulating and entertaining under the expert chairmanship of Sir Basil Spence, President of the RIBA, who brought to the Assembly not only the prestige of his high office but also his own "Schwepper-vescent" charm and wit. The report of the Committee of Inquiry, the resultant discussions and the proposals for action by the Assembly have been and will be reported elsewhere and I can only add that I feel that this Inquiry is of the most vital importance to the whole profession.

The RAIC gained in prestige by the admission to Honorary Fellowship of Mr John Diefenbaker, Prime Minister of Canada, Sir Basil Spence, President of the RIBA, and Mr John Noble Richards, Immediate Past-President of the AIA, and Mr Diefenbaker's address to the Annual Dinner. It is important that all members consider seriously the Prime Minister's challenge to the profession regarding the preservation of historic buildings, and the contributions to the planning of the Canadian Centennial in 1967.

While this Assembly worked hard, it certainly knew how to relax too and the Beaux Arts Ball was such a rollicking night out that we can hardly wait for 1970 — (including a return engagement of Maisie). The Winnipeg wives group, who throughout the Assembly contributed so much, made sure that no one was left out of the fun.

There was a spark to this Assembly, made up of many things, but perhaps the most important thing of all was the wonderful hospitality of the Manitoba Architects.

TOUT CONCOURAIT À FAIRE un succès de la 19<sup>e</sup> Assemblée annuelle de l'Institut à Winnipeg: le titre d'agrégé honoraire a été conféré à trois hommes éminents, le Comité d'enquête sur les conditions de l'habitation a présenté son rapport, les anciens de l'École d'architecture ont tenu leur conventum; ceci couronnait les efforts des comités d'organisation responsables d'un excellent programme.

Tous les espoirs ont été comblés. L'Assemblée a été la plus considérable par sa durée et la variété de son programme, par le travail accompli et le nombre des participants. Plusieurs ont pris une part active aux travaux des divers comités, réunions et groupes d'étude, soulignant la portée croissante des affaires de l'Institut. Malgré tout, on a semblé à court de temps. L'adoption des recommandations du Comité d'enquête entraînera la création d'autres comités qui, à leur tour, exigeront de plus longues assemblées annuelles.

Je me réjouis, pour ma part, de ce qu'il n'y ait pas eu d'exposition des manufacturiers cette année, même si le trésorier devait déplorer cette lacune.

La journée d'étude tenue à la nouvelle école d'architecture de l'Université de Manitoba a connu un franc succès. Elle s'inspirait de celle de l'an dernier à Windsor et j'espère que dorénavant il y en aura une à chaque assemblée. Cette année, non seulement nous y avons entendu de bonnes causeries et des discussions profitables, mais nous avons pu en même temps admirer les nouveaux immeubles du quartier universitaire.

La discussion collective du matin a été intéressante et divertissante; Sir Basil Spence, président du RIBA, qui la dirigeait, y apportait non seulement le prestige de ses hautes fonctions mais aussi son propre charme et son esprit pétillant. On trouvera ailleurs le compte-rendu du rapport du Comité d'enquête, de la discussion qu'il a suscitée et des propositions concrètes que l'Assemblée a formulées. J'ai nettement l'impression que cette enquête aura une importance primordiale pour tous les architectes.

Le prestige de l'Institut s'est accru par l'accession au rang d'agrégés honoraires, du premier ministre du Canada, M. John Diefenbaker, du président du RIBA, Sir Basil Spence, et du président sortant de l'AIA, M. John Noble Richards. Tous les membres devraient examiner attentivement les remarques du premier ministre sur la préservation des édifices historiques et la participation au centenaire de la Confédération en 1967.

Bien qu'on ait travaillé ferme à cette Assemblée, on a su aussi s'y amuser, en particulier au Bal des beaux arts, et nous en sommes redevables surtout aux épouses des membres de Winnipeg que nous remercions tout spécialement.

Bien des éléments ont contribué au succès de cette Assemblée, mais le plus important a été sans conteste l'hospitalité si chaleureuse des architectes du Manitoba.

*J. L. Davies*

## FROM THE EXECUTIVE DIRECTOR'S DESK

"... WE LIVED IN A STATE OF PRIMITIVE IGNORANCE"

ONE OF THE MOST ARRESTING PORTIONS of the down-to-earth address by Sir Basil Spence of the RAIC Winnipeg Assembly last month came when he admitted "until a few years ago we lived in a state of primitive ignorance. We did not know what our architects were doing, where they were employed, how busy or idle they were, or how much money they made. We suffered dreadfully because the Government controlled the economy by turning on the tap of credit at the banks where there was a slump, and then, when the boom seemed to be going too far, turning it off again . . . We give the Government every quarter a return showing the amount of new work coming into architects' offices, and this enables the Government to judge whether the building industry is going to be fully occupied or not in 18 months or two years' time. It also enables us to spot the danger signals, and to press for more work if we think we are going to need it, or to warn the Government not to turn the tap on or off too far. The Government appreciate this service, and it has given us a position of leadership in industry, for the entire industry can only look into the crystal ball and discern the future if it studies the figures our economist produces."

Many architects in Canada claim, or would admit if they were pressed, that they are handicapped in professional practice by the inability to compile and/or maintain building costs for various building types, and by various areas of the province or region where they maintain offices. One can appreciate the fact that the self-employed architect is constantly facing the problem of keeping his overhead within reasonable bounds and at the same time conducting an efficient practice.

The magazine *Canadian Architect* conducted two surveys, in 1955 and again in 1958, which succeeded in bringing to light some unknown or little known facts about private practice in architecture. It is this type of information which the Institute should be feeding to the profession through the columns of the *Journal* each month. Frank Helyar wrote in September, 1958 "It seems essential that the architect should be equipped with cost information which he can use to ensure that the buildings he designs make the best use of his client's money." Helyar pointed out that, particularly for the benefit of the young UK architect, the RIBA and the Royal Institution of Chartered Surveyors had both set up cost research panels to give assistance to their members. This information is supplied by the Building Research Station which collects cost information for publication in the technical journals of the United Kingdom.

It is expected that the RAIC Standing Committee on Building Research, under Chairman S. A. Gitterman of Ottawa, will, in cooperation with the *Journal* Editorial Board, develop a cost research service for RAIC needs during the next year or two.

In the meantime, two other important developments in the statistical field affecting the profession should receive considerable publicity during the next few weeks. The first development, a salary and employment survey of the profession, is presently being conducted; the second project, a proposed current work survey (based on AIA and RIBA experience) may be presented to RAIC members in October after further study.

Since it has a direct bearing on the future livelihood of architects practising in Canada, members of the Institute are urged to complete, and return to Ottawa, the 1960 questionnaire currently being conducted jointly by the Federal Department of Labor and the RAIC in connection with employment and earnings in Canadian architecture.

"... NOUS VIVIONS IGNORANTS COMME DES PRIMITIFS"

L'UN DES PASSAGES les plus frappants de la causerie prononcée par Sir Basil Spence le mois dernier à Winnipeg a été celui où il a déclaré "qu'à venir jusqu'à il y a quelques années, nous vivions ignorants comme des primitifs. Nous ne savions pas ce que faisaient nos architectes, où ils étaient employés, s'ils étaient occupés ou non, ni combien ils gagnaient. Nous souffrions de ce que le gouvernement maîtrisait l'économie en ouvrant les vannes du crédit auprès des banques en temps de régression économique et les reformait au moment où la reprise menaçait d'aller trop loin . . . Nous remettons au gouvernement, tous les trois mois, une déclaration indiquant les nouveaux travaux qui parviennent aux bureaux des architectes; grâce à ces chiffres, le gouvernement peut juger si l'industrie de la construction sera occupée à plein rendement dans 18 mois à deux ans. Nous pouvons aussi prévoir les périodes creuses et exiger plus de travaux si nous croyons que nous en aurons besoin, ou nous pouvons encore dire au gouvernement de ne pas trop ouvrir ou fermer les vannes du crédit. Le gouvernement apprécie beaucoup ce service qui nous confère un rôle dominant dans l'industrie; car cette dernière ne peut prédire l'avenir que grâce aux cartes statistiques que lui fournit notre économiste."

Plusieurs architectes au Canada prétendent, ou concéderaient volontiers, que leur incapacité à calculer et tenir à date le coût de construction de diverses structures dans diverses régions de la province où ils exercent, leur nuit énormément dans leur activité professionnelle. On comprend que l'architecte qui travaille à son propre compte ait constamment à résoudre ce problème de limiter ses frais d'exploitation tout en maintenant son efficacité.

La revue *Canadian Architect* a fait deux relevés, l'un en 1955 et l'autre en 1958, qui ont révélé des faits peu connus ou ignorés de la pratique privée en architecture. Ce sont des renseignements de cette nature que l'Institut devrait fournir chaque mois aux architectes dans son *Journal*. M. Frank Helyar a écrit en septembre 1958: "Il semble indispensable que l'architecte dispose de renseignements qui lui permettent de donner à son client le meilleur édifice qu'il puisse se procurer pour le prix." M. Helyar a signalé que, en particulier pour les jeunes architectes du Royaume-Uni, le RIBA et le Royal Institution of Chartered Surveyors avaient tous deux créé des organismes de recherche sur le coût, pour venir en aide à leurs membres. Ces renseignements sont fournis par le Building Research Station qui les recueille et les diffuse dans les publications techniques du Royaume-Uni.

On s'attend à ce que le Comité permanent de l'Institut royal sur la recherche en bâtiment, sous la présidence de M. S. A. Gitterman d'Ottawa, mette sur pied, avec la collaboration du conseil de rédaction du *Journal* d'ici un an ou deux, un service de recherche sur le coût qui répondra aux besoins des membres de l'Institut.

Pour l'instant, deux événements dans le domaine de la statistique touchant l'architecture devraient recevoir beaucoup de publicité d'ici quelques semaines. Il s'agit d'abord d'un relevé des salaires et de l'emploi dans l'architecture et, en second lieu, d'un projet de relevé des travaux en cours (d'après les expériences de l'AIA et du RIBA) qui serait soumis aux membres de l'Institut en octobre, après plus ample examen.

Les membres de l'Institut sont priés de remplir et de retourner à Ottawa le questionnaire de 1960 que publient conjointement le ministère fédéral du Travail et l'Institut royal, au sujet de l'emploi et des gains en architecture au Canada. Ce questionnaire aura un effet direct sur les futurs moyens d'existence des architectes au Canada.



# Institute News

## Joint RAIC-CMHC Committee on Residential Environment Report

The 32 recommendations in the Report of the Dobush Committee of Inquiry into the Design of the Residential Environment came under careful review by the Joint RAIC-CMHC Housing Committee when it met at Ottawa on July 12. In 1959 this Committee, acting under the chairmanship of James Murray, of Toronto, was responsible for putting forward the recommendations which led to the RAIC calling for an investigation of the urban environment by the profession. The Joint Committee, which was first established by the Institute in 1957, consists of the following members: representing the RAIC, James Murray, James Strutt, Ottawa and John Bland, Montreal; representing CMHC, Ian MacLennan and Humphrey Carver.

Others attending the Ottawa meeting on July 12 were John C. Parkin, Toronto member of the Inquiry; Alan Armstrong, Ottawa, secretary to the Committee of Inquiry; and Robbins Elliott, Executive Director of the RAIC.

Joint Committee members were assigned tasks of assessing the significance of individual recommendations and reporting back to a further session in Ottawa on September 8. It is expected that the Housing Committee will be in a position to recommend a plan of action, involving implementation of the Report's proposals, before the late September meeting of the RAIC Executive Committee of Council. It was understood that a determined campaign to enlist strong support, both financial and otherwise, from members of the profession, would be launched by the RAIC early in September.

## 1960 Pilkington Scholarship

This year's \$2,500 Pilkington Traveling Scholarship has been awarded to Enn Kayari, a graduating student of the University of Toronto School of Architecture. The second prize of \$200 was won by Miss Sarina Altman of McGill University School of Architecture, and the third prize of \$100 by Julius Izen of the University of Manitoba School of Architecture.

Mr Kayari's winning design was for a proposed opera house on a location opposite the new City Hall in Toronto. Miss Altman's award was for her design of a music centre for Montreal and Mr Izen's for an orthodox synagogue.

The winning designs will be published in the August *Journal*.

## Committee Chairmen Appointed

President Harland Steele of Toronto has announced the appointment of chairmen to head two new Institute committees established at the recent RAIC Assembly in Winnipeg.

Peter M. Thornton, Vancouver, of Gardiner, Thornton, Gathe & Associates, has assumed the post of Chairman of the RAIC Committee on Planning for the 1967 Centenary; and Ernest J. Smith of Winnipeg, of Smith Carter Searle Associates, has been appointed Chairman of the RAIC-CCA Committee on Building Materials. Mr Smith will relinquish his membership on the Standing Committee on Building Research to assume the chairmanship of the RAIC section of the Joint Building Materials Committee.

## New Partnership

Messrs Ball, Craig, Short and Strong have announced the formation of a partnership under that firm name for the practice of engineering and architecture, with new offices at 5385 Yonge St, Willowdale. The principals will complete their present projects under the existing firm names of Wm. A. Strong, Architect; and Ball, Craig, Short & Co Ltd, Consulting Engineers.

## FUTURE ISSUES

August

School of Architecture  
University of Manitoba

Urban Renewal, Vancouver

In Preparation

Motels

Schools

O'Keefe Theatre, Toronto

Houses

Airport Buildings

## Positions Vacant

Applications are invited for the position of *Head of the Division of Town and Regional Planning* to succeed Professor Gordon Stephenson, B.Arch. (Liv.), MCP (MIT), FRIBA, MRAIC, MTPI, AILA. Suitably qualified candidates should write in the first instance to Dr T. Howarth, Director of the School, from whom detailed information is available, enclosing a curriculum vitae and giving the names of three referees. Special mention should be made of any qualifications and experience in Landscape Architecture. Applications should be submitted *no later than 30th August 1960*: duties to commence in January 1961.

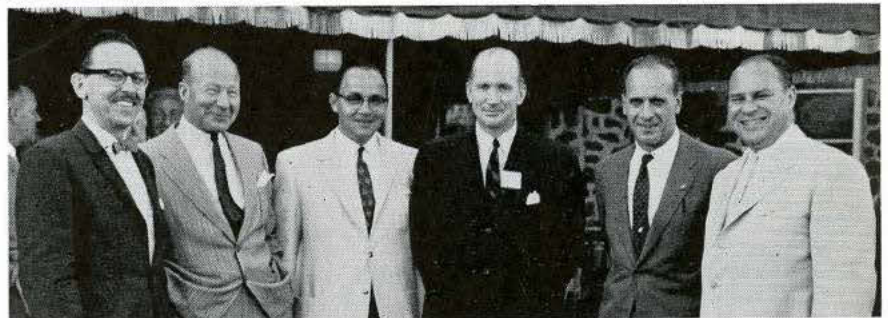
The Town Planning Division of the Prince Edward Island Department of Industry and Natural Resources requires a provincial planning officer. Salary is \$6,500 for an initial contract period of three years. Applications should be sent to the Division at Box 2000, Charlottetown.

## Employment Wanted

Employment in Canada wanted for a period by engineer-architect, graduate in 1958 of Technical University of Istanbul with MSc; member Turkish Institute of Architects. Mehmet Altan, Ataturk Bulvari Blok, Ap. A/7, Ak-saray, Istanbul.

## DBR Publications List

The Division of Building Research, NRC, Ottawa, has issued a new list of publications available on building research, covering the period 1947-1959 inclusive. Papers, etc., are listed separately by code and title, by author and by subject, and there is a list of publications available in French. Copies are available upon request to the Division.



The Regional Meeting of the Canadian Construction Association, held at Ste Adele, P.Q., on June 7, 1960, approved the establishment of a joint RAIC-CCA committee on building material and information. Some of the principals concerned in the new joint committee were photographed at the meeting; left to right, C. O. P. Klotz, Chairman, CCA Public Relations Committee, Montreal; J. R. O. Counsell, Vice-Chairman, CCA Manufacturers' and Suppliers' Section, Toronto; A. W. Purdy, Chairman, CCA Manufacturers' and Suppliers' Section, Calgary; Robbins Elliott, Executive Director, Royal Architectural Institute of Canada, Ottawa; R. A. Hall, CCA Past Provincial Vice-President for British Columbia, Vancouver, B.C.; Jack M. Soules, President, CAA, Port Credit, Ont.



### Canada Council Scholarship

Melvin Charney, Montreal, who has been awarded a Canada Council Scholarship for a year's study in Europe



of architecture, from the Early Greek to the Medieval period. Mr Charney graduated from McGill School of Architecture in 1959. He won the Canadian Pittsburgh Industries Design Award in 1957, and in 1958 the A. F. Dunlop Travelling Scholarship and the William McCay fellowship to study at Yale. He received his M.Arch. degree from Yale School of Art and Architecture in 1959.

### B C Scholarships & Prizes

The following Scholarships and Prizes have been awarded students of the School of Architecture of the University of British Columbia.

#### Fifth Year

RAIC Gold Medal, Peter Batchelor.  
AIBC Prize and Award of Merit, Orest Holubitsky.  
Northwest Plaster Bureau, Daryl Jorgenson.  
Powell River Co. Ltd, Peter Batchelor.

#### Fourth Year

AIBC Prize and Award of Merit, Ray Griffin.  
British American Paint Co. Ltd, Bruno Freschi.  
Canadian Pittsburgh Industries, Ray Griffin.  
CMHC Travelling Scholarship, Laurence Doyle.

#### Third Year

AIBC Prize and Award of Merit, James Strasman.  
Canadian Institute of Steel Construction, Don Snow.  
McCarter, Nairne & Partners, James Strasman.  
Pan-Abode Scholarship in Architecture, James Strasman.  
Charles J. Thompson Prize in History of Architecture, Henry Hawthorn.  
British Columbia Lumber Manufacturers' Association, Donald Eriksson.  
Atlas Asbestos Co. Ltd, Donald Fairbrother.

#### Second Year

British Columbia Cement Co. Ltd, Paul Merrick; Steven Zibin.  
British Columbia Lumber Manufacturers' Association, Denis Jesson; Joe Yamauchi.  
Charles J. Thompson Prize in Architectural History, Steven Zibin.  
Schlage Lock Company, Paul Merrick.

#### First Year

AIBC Scholarship for student entering First Year with best standing, Anthony Green.

### McGill Scholarships & Prizes

The following Scholarships and Prizes have been awarded students of the School of Architecture of the McGill University of Montreal.

#### Sixth Year

Lieutenant-Governor's Gold Medal, Philip David Dobrow.  
Lieutenant-Governor's Silver Medal, Avrum Regenstreif.  
RAIC Medal, Philip David Bobrow.  
Dunlop Travelling Scholarship, Avrum Regenstreif.  
McLennan Travelling Scholarship, Philip David Bobrow.  
Louis Robertson Prize, Philip David Bobrow.

#### Fifth Year

Canadian Pittsburgh Industries Scholarship, Moshe Safdie.  
Interior Decorators Society of Quebec, Moshe Safdie (5th yr); Derek Drummond (4th yr); Arnold Gelbart (3rd yr); R. F. Williams (2nd yr).

#### Fourth Year

Atlas Asbestos Prize, Arthur Lau; Morris Charney; John Peng; M. Werleman (all 4th yr).  
Anglin-Norcross Prize, Arthur Lau (4th yr); R. F. Williams (2nd yr).

#### Third Year

Philip J. Turner Prize, Earl Murphy.  
Turnbull Elevator Prize, Eric Dluhosch (6th yr); Akos Frick (5th yr); R. V. Javosky (4th yr); G. E. Soiferman (3rd yr).

### Ecole Des Beaux-Arts de Montreal Scholarships & Prizes

The following Scholarships and Prizes have been awarded students of the School of Architecture of the Ecole Des Beaux-Arts De Montreal.

#### Fifth Year

RAIC Medal, André Mercure.  
Minister Prize, Paul Gauthier.  
American Standard (Canada) Product Co. Ltd, Travelling Scholarship, André Mercure.

#### Fourth Year

CMHC Travelling Scholarship, Michel Barcelo.

#### Second Year

Fernand Prefontaine Foundation, Germain Casavant.

#### First Year

Beaux-Arts Club Prize, Gilles Lavigne.  
Victor Dore Foundation, Jacques Trudel.  
Director's Prize, Jacques Trudel.

### U of M Scholarships & Prizes

The following Scholarships and Prizes have been awarded students of the School of Architecture of the University of Manitoba.

#### Fifth Year

University Gold Medal, A. J. Tiefenbeck.  
RAIC Medal, J. D. Turner.  
Bachelor of Architecture Thesis Prize, Samson Cheng.  
Gerald Hechter Prizes, R. J. C. Browne, H. S. Briggs, S. Cheng, J. Y. C. Song.

#### Fourth Year

Canadian Pittsburgh Industries Ltd, Scholarships, D. Folstad, E. G. Clemens.  
MAA Scholarships, E. G. Clemens.  
W. Allan McKay Memorial Scholarship, E. G. Clemens.  
Sidney Alexander Adams Memorial Bursary, G. E. D. Filyk.  
Super-Lite Bursary, B. L. Padolsky.  
Illuminating Engineering Society Prize, D. G. Folstad.  
Lighting Materials Ltd, Prizes, G. R. LaValley, E. G. Clemens, G. E. D. Filyk, N. D. Hancock.  
Summer Construction Report Prize, G. E. D. Filyk.

#### Third Year

Atlas Asbestos Co. Ltd, Scholarship, C. H. Maurice.  
MAA Scholarships, A. A. Kennedy.  
Neil K. Brown Memorial Bursary, D. Li.  
David Lacey Cowan Memorial Bursary, G. W. Rogers.  
J. M. Gilchrist Bursary, J. A. Bogdan.  
Summer Essay Prize, A. A. Kennedy.

#### Second Year

Green, Blankstein, Russell Scholarship, L. R. Taylor (by reversion to J. Hodges).  
Isbister Scholarships, L. R. Taylor, J. Hodges (by reversion to E. G. Clemens, fourth year).  
W. G. McMahon Ltd, Scholarship, L. R. Taylor.  
Saskatchewan Association of Architects Scholarship, N. Hamy.  
Supercrete Ltd, Scholarship, L. R. Taylor.  
Victor Boyd Memorial Bursary, L. R. P. Johnson.  
W. J. Dick & Co. Bursary, W. D. Pries.  
Donald Spurgeon MacLean Memorial Bursary, J. C. Glock.  
Lackawanna Leather Co. Prize, N. Hamy.  
Manitoba Urban School Trustees Prize, E. Wallner.

#### First Year

Alsip Brick Tile & Lumber Co. Scholarship, P. D. Allison (by reversion to R. G. Henriquez).  
The T. Eaton Co. Ltd, Scholarship, P. D. Allison.  
Isbister Scholarships, P. D. Allison (by reversion to A. A. Kennedy, third year).  
J. M. Gilchrist Bursary, G. W. J. Maki.

# Viewpoint

**“Do you consider that the client is better served by the large office providing all services within its own organization?”**

If I am to assume that the two words in the topic question, “better served”, imply quality in design, care in detailing, and long term satisfaction, as well as rapidity in production, I must give it a negative answer.

Both the large office providing all services and the small one with its engineering consultants can serve the client equally well. The quality of service depends essentially on the principal of the firm; and it is also a matter of balance.

There are many pros and cons on the large and the small offices with which most of us are familiar; and we inevitably defend our own size of operation. However, we invariably agree that both the large and the small can be either good or bad and that the quality of service hinges basically on the strength and weaknesses of the principal. Most of us, especially at the time we first hung our shingles, did some severe soul searching, analyzing our capabilities and failures, our inner desires, setting up abstract architectural goals with hope and enthusiasm, and proceeded to fulfil these goals. Some of us have the capability of running a large office successfully; others should know when to stop growing. This point of stopping the growth differs with all of us, but, I think, the criteria may be: when the design is still fresh and vital, suited to the time and the place; when the staff is still enthused, interested and loyal; when coordination between principal, architectural staff and engineering staff or consultants is clear and effective; when the production of working drawings and specifications is efficient without overlap; when supervision upholds the integrity of design, protects the interest of the client and is fair to the contractor; and when the client is still happy. If more architects knew when to stop the growth, there would be less ulcer in the profession and more fulfilling of dreams. Too often the firm grows without immediate adjustment on the part of the principal and his organization — a large firm operating with small office organization. This is the worst situation any architect can fall into. An architectural firm is a team; and once the principal starts by himself to swing the tiger by its tail he cannot slow down for fear that the tiger will chew off, not only his arms, but him totally. He loses direction. His office cannot hope to give the best service to the client.

The best service comes from an office, large or small, which has a sense of balance in its operation.

*Raymond Moriyama, Toronto*

There would seem to be no justification for assuming that the large firm per se will give better service to the client than the smaller office. Obviously, a multi-million dollar project may be beyond the physical capacity of a smaller business to produce, but, notwithstanding this, there would probably be a tendency for the client to receive a more personal service from the smaller firm — particularly the smaller client.

If a limited practice is operated by a group of well qualified and experienced architects, there is a greater possibility that architecture may result than in a large office where it so often happens that a mass-production attitude can result from over emphasis upon administration and each job being analyzed to assess the profit to the firm.

It would appear to be a characteristic of the large organization, whether architectural or otherwise, that the more elephantine it becomes the less efficient become the individual members of the organization. Without doubt, this is reflected in the service which the organization has to offer. This is not to say that the large firm is of necessity inefficient or that the service given need be inferior; certainly much of the best architecture being produced on the North American continent today is being done by some large firms. The internal organization of the big office, however, must be such that the individual members are not stifled by the organization.

The large firm can probably best serve the interests of architecture by giving freedom from administration problems and financial worries to the designers who may thus be given the opportunity to concentrate upon purely design problems, but it is not every large firm which can take such a liberal view of its function. The larger practice may have certain advantages in supplying all consultant services within its own organization, yet the fact that the consultant engineer is sitting at the next desk to the architect does not necessarily imply that he will coordinate his work with the architectural any better than if he is on the other side of town. The important thing would seem to be that he has a clear appreciation of the intention of the architect and, although consultations are obviously essential, a continuous contact is not imperative.

Apart from producing architecture — although this is the way in which the client is ultimately best served — the financial conditions set by the client are likely to receive more sympathetic consideration from the smaller practice where each job is essential for the survival of the firm, than in a very large practice where the smaller job is likely to be regarded as a “fill-in” of little importance and not requiring the attention of the more qualified staff.

Let's face it — the large organization has not become a large organization for the benefit of the client, but rather for the profit to the firm.

*George H. Kerr, Saskatoon*

No, unless speed in getting the job out for tenders is the client's prime concern.

In my opinion, the following facts point against the desirability of such an organization:

1. Consultants working in an architectural organization tend to think like the organization (which may be convenient for it), and present standard solutions to similar problems.
2. With independent consultants, the architectural organization can, and often does, change consultants from job to job, choosing those they feel best suited to the job, and also exposing themselves to different approaches to problems.
3. The independent consultant, because he works for many different architectural firms, is better qualified because of his wider experience.
4. There is a tendency for the more progressive consultant to prefer to be "on his own" than tied to one architectural organization.

*Mary L. Imrie, Edmonton*

The question appears to indicate to me that the client referred to is one who requires the design of a large and complex project, for it is only in this situation where the large organization providing all services would be able to better serve him. The project for example could be a complex scientific or industrial building which requires complete integration of all their components in order to be successful. Apart from these categories or similar types I can see no particular advantage to the majority of clients in engaging a firm which embraces all consultant services. If the architect is skilled in co-ordinating all the requisite consultants to reach the desired conclusion, they can be independent firms. Indeed, it can be argued that a consultant who is engaged variously by a number of architectural firms gains a greater knowledge of architectural requirements and thereby maintains more flexibility and versatility.

With regard to size of organization there is room in our profession for all sizes from the one man practitioner to the larger offices with one hundred or more on staff. Excellence of architectural service bears no relation to size of office but is rather created by those guiding the design regardless of the method they choose. Both types can produce an excellent performance similar to the instrumental soloist or the conductor of a large orchestra.

Looking at the question from a different angle, and not being contradictory, I do believe there is a necessity for some large architectural organizations in this country. These organizations, in addition to the usual consultant services associated with building would have on their staffs various experts in economics, real estate and con-

struction methods. These firms should be able to provide clients with those services which they now unfortunately believe can only be obtained from the so called "package dealers". With the means at their disposal they could provide the client with answers to many questions additional to design, such as market survey information, the relation of capital cost to financial return from the project, etc. They would combine all the facilities of the "package dealer" with sound and good design of architectural excellence. These firms then would also be able to fully train personnel in their organizations who would later form their own firms and thus bring into the profession more practitioners with a knowledge of business methods so essential to the healthy continuance of our profession in the present day and future economic climate of our continent.

*W. G. Leithead, Vancouver*

Our answer to this question must be a qualified "yes" since the guiding principle in the growth of our firm has been to gather a team of specialists who can handle all the work from the one office. At the moment this team consists of four architects and four professional engineers and, with the exception of structural work, we are able to handle all work from our own office.

The reason for the "qualified yes" answer to the question is that we also believe that the client is better served by a small to medium sized firm where it is possible for each principal to take a real interest in each and every job and to perform his share of the work on each job. We sincerely feel that the best interests of the client are not served when an organization grows so large that jobs can be processed without some of the principals even being aware of their existence.

There is no doubt that the quality of the work is improved when all the drafting and design is done in the one office. Especially in the working drawing stage, where the draftsmen are working side by side, the fitting in of mechanical equipment is a typical example where great advantages are readily seen. The fact that the supervision problems can be discussed readily by all parties after visits to the site is another advantage too obvious to merit much discussion.

The great problem then is to develop a small but highly trained group of specialists capable of handling all problems and then attempt to bring in enough work to keep the group busy, but not so much work that the firm must expand to a point where personal contacts with the clients, at least for the smaller jobs, are completely lost. This is akin to walking a tight rope and if anyone can solve this problem, the ideal situation will be reached!

*D. T. Dunlop, Toronto*

## THE ROVING REPORTER AT THE ASSEMBLY

THIS REPORTER HAS NOTHING BUT PRAISE, both for the arrangements for the comfort of delegates at Winnipeg and for the choice of speakers—in fact he does not remember a previous assembly where there was not at least one speaker who was best seen and not heard. This was no easy accomplishment as the bright star in the constellation of architect speakers was Sir Basil Spence, on whose elevation (a very appropriate word for a very parfit architectural knight) we rejoice along with all his friends in Canada. For me, he has long been a knight tilting with his bright lance against the dragons of smugness, hypocrisy and insincerity. We have become used to the unexaggerated accent and the fluent speech of certain educated Englishmen, but I, for one, am always completely seduced by the urbanity and the wit of Basil Spence. It is only a partial explanation that he is a Scot.

In another orbit, were the lay speakers representing the arts, political science and planning. If one person could be said to combine in his profession all of these disciplines it would be the Rt Hon John G. Diefenbaker (Hon) FRAIC, Prime Minister of Canada, whose excellent address was the climax of the Assembly, and is published in full in this *Journal*.

Overshadowing all other topics at the Assembly was the report of the RAIC Committee of Inquiry into the Design of the Residential Environment. Unfortunately, the report was seen by many members but a few minutes before meetings held for its discussion, and its treatment was largely superficial. However, we did have the advantage of hearing from the authors and from their very able secretary, Mr Alan Armstrong, without whom this important document would not have the clarity, the force and the readability that puts it in the front rank with major reports of the last few years. Writing in the *Ottawa Journal*, Mr Alan Jarvis compares it with the Gordon Report as a "concise, intelligible and literate document". In the same discussion, we had the pleasure of hearing from Ian MacLennan who, with Bill Leithead and Ned Pratt, is always able to command attention in an otherwise noisy atmosphere. Part of MacLennan's secret is his extraordinarily effective vocabulary, which is partly good undergraduate debating and partly house of commons. At one stage, he was recommending an entire revision of the fees for housing for which he quite expected to be "drummed out of the Brownies"; at another, where he deplored what we would call an ostrich-like attitude toward housing in the past, he likened us to a "gaggle" or was it "an ooze" of dinosaurs? We shivered as we heard that not all bad housing was in the lower income fields — there were also "those broadloomed, air conditioned slums with their balconies cheek by jowl at \$250 per month". The committee members, as well as Mr Trepanier, Mr James Murray, Mr Harry Kohl and other speakers left me with the very distinct impression that we have something like Magna Carta in our hands, and that, if professional responsibility meant anything at all, we had a tremendous job to do — that urban and suburban beauty and human happiness were ours to make or ignore to the lasting credit or the disgrace of the profession in Canada. Having said that, I wonder how many have even read the report on which their four colleagues devoted so many months of their time. Has the RAIC any more solemn duty than to keep the report and its implications constantly before us?

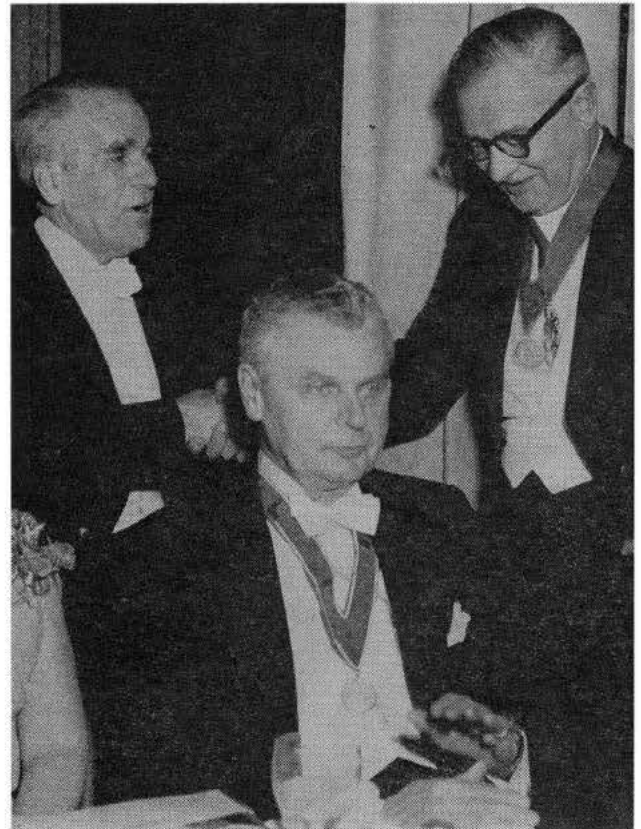
The *Journal* is doing such a thorough job of reporting speeches and seminars that there is little left for this reporter to say. However, the gentle reader may perhaps bear with me while I comment on a few. I have said in another issue how much I admire the new School of Architecture in Winnipeg. When I saw it first in winter it

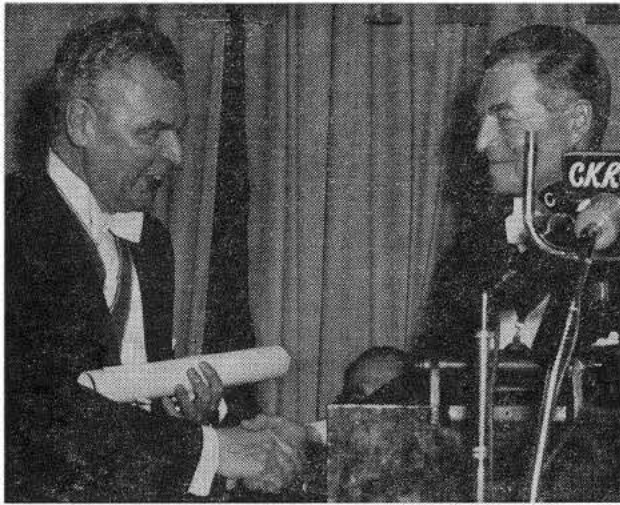
was just "on show" for the public and the Canada Council, but it stood up well to that quite critical audience. In June, we saw it in full use for seminars and what not to the ruthless gaze of several hundred architects from coast to coast. I did not hear one word of criticism, but many words of praise for the architects and Professor Russell and his staff who wrote the program and provided the inspiration.

It may be of interest to next year's committee to know that, while there was no criticism of the panel discussions, there was rather severe comment on the afternoon seminars. In brief, there was opportunity in the morning for discussion and summing up, and in the afternoon nothing but the hastily prepared statement of the rapporteurs which left the group in my vicinity seething with impotent rage.

Mr Pratt led the first discussion on the challenge of the large office against Mr W. T. Pentland on the small office. Mr Pratt, as on other occasions, impressed the audience with his frankness and sincerity at the same time that, under a table that had only a top, he scratched one leg and then the other in a manner that would have been distracting in a less interesting speaker. We have all known the large office that dies with the death or the failing powers of the partner "in charge of design". For Mr Pratt, such dictatorship is nothing less than suicidal, if not criminal. "I am", he said, "the chief designer in my office, and I know that I have designers that are better than I am." He felt it his job to nurture these young designers and to give them increasing responsibility and the confidence that goes with trust. The burden of his prepared paper was the difference between "the big office existing for profits, and the big office existing for architecture". Unlike many large offices, his

*The new President, Mr Harland Steele, Toronto, right, receives the medallion of office from the retiring President, Mr Maurice Payette, Montreal.*





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did not spurn the client who came to have a house designed — in fact he welcomed him, and the lower the price the more attractive was the commission. "The architect that can solve the problem of the \$10,000 house will, overnight, be better known than the one who designs a BC Electric or an Imperial Oil building." On this same topic of the large office, Mr Cerny should be read on management, as he had much of value to say.

Mr Binning, an artist for whom I have always had the highest personal regard spoke as that *rara avis* who likes architects, and would welcome the opportunity of working with the right one on the right building. Readers may remember an article in the *Journal* a few years ago which reported a discussion at the RIBA in which three famous artists took part. The first wouldn't be found dead working for an architect; the second would work only for a dead one and while the remarks of the third did not deal with death, he was equally despondent in regard to any co-operation between his art and ours. Mr Binning has a saving sense of humour, but, as you will read in his paper, he puts us into five categories — the Denialists, the Conformists, the Alarmists, the Stylists and the Traditionalists, of which only the last named represents that attitude of mutual respect which has "traditionally" existed between the two professions.

Professor Bland's paper should be read with equal care by the architect in practice and the teacher in our schools of architecture. In the shifting modern scene, he mentions the new 70 per cent McGill requirement for entrance in the school leaving papers; the Ecole d'Architecture de Montreal entrance requirement of a BA degree and the new British Columbia curriculum where the first three years are spent in the humanities. He pointed out that, while always searching for a curriculum that produced the "ideal architect", the school of even a quarter of a century ago felt its duty somewhat accomplished where its graduates knew their responsibility in their independent position between the client and the builder. Today, that training may not be enough as the graduate enters public service, the large corporation or "that well known bogey, the package deal." The discussion that followed this and other morning papers was often provocative and, generally, admirable.

The afternoon seminars were less valuable — (a) because the title of the topic was often misleading and the seminee was frequently trapped in a discussion in which he hadn't the slightest interest. I enjoyed the "fee structure" because I wanted to hear Mr John B. Parkin hold forth (which he did to the alternating delight and bewilderment of the chairman) on a subject on which I was not likely to have any personal views. We never had a dull moment, but we were exceptional. The rapporteurs were each called upon to report on the discussions which they had just heard. It must be certain that the syndics (I was wrong in calling them seminees) were not in every case unanimous, yet the findings were often given as the considered opinions of a group that had been working for some months. The actual time was twenty-five minutes, and there was no discussion on the findings which were often highly inflammatory. On the other hand, all power to the rapporteurs who were able in fewer minutes to put in order the scattered thoughts of their syndics. I wonder whether this is a form of investigation that is

*The three new Honorary Fellows received their certificates from Mr A. T. Galt Durnford, Chancellor of the College of Fellows (1) the Prime Minister, (2) Sir Basil Spence, (3) Mr John Noble Richards. The retiring President, Mr Payette, presented a certificate of Honorary Membership in the RAIC to Mr Stewart Bates, President of CMHC (4) and the Institute's 1960 Allied Arts Medal to sculptor Leo Mol of Winnipeg (5).*

worth pursuing at other assemblies. By its very nature it must be superficial, and capable of serious error, unchallenged and uncorrected.

We had only one other criticism of the Assembly. We have grown enormously in fifty-three years, but we tend at meetings to emphasize it unnecessarily. Why, for instance, does the head table increase in length year by year. Perhaps it is so noticeable because of the modern habit (considered frightfully non U some years ago) of introducing the head table guests. I am sure ladies dislike standing up on such occasions, especially when the chairman gets out of step, which is inevitable, and they are described as engineers or local aldermen. Why, too, do all the seminar speakers have to sit at a fifty foot table when we should be concentrating on one person.

My next point has to be approached with care and delicacy. I found it distinctly embarrassing having to face the executive officers, all at a table with a white cloth that could not help but bring to mind pictures of the Last Supper. This was even more poignantly brought home when that officer of blameless life and irreproachable integrity got up to tell us how our pieces of silver had been spent in the past year. The real embarrassment here is that our officers, with the exception of the president, are not actors, and it is difficult indeed, for them, with a bright light in their faces and a white cloth below, not to look self conscious. Mr Payette was in complete command of the situation, and seemed to enjoy himself immensely — moved not a little perhaps by the fact of his imminent retirement from his high office. I offer the suggestion that in future general meetings only the president, the executive director and the stenographer face the congregation, and that the illumination be less like that "fierce white light that beats about a throne."

In conclusion, this reporter would like again to congratulate the committee of arrangements in Winnipeg for something that is difficult to achieve in an assembly such as ours; that is the creation of an atmosphere of work and things to accomplish rather than an outing. Social events were many and varied, the apex being the Beaux Arts Ball which, though it seemed to go so smoothly, actually represented an immense amount of preparation by Mr James Searle and his colleagues of the Manitoba Association. The obvious enjoyment of the members should be some recompense for their pains. Throughout the Assembly, however, the business of the RAIC was ever foremost.

I am sorry to observe at all meetings that people gather in cliques from their home town. It is quite incomprehensible to me that they meet as though they have been separated for years. The professors, of course, accustomed to the rarefied atmosphere of the seats of learning from which they come move about as a corporal's guard, delighting in each other's company.

I should also like to thank the staff in Ottawa for their contribution to the success of the meeting with a particular word of thanks to Mrs. Johnson whose helping hand and cheery smile will be missed at future assemblies.

E.R.A.

*At the Manitoba Association reception, left to right (1) Sir Basil Spence and new Vice President John L. Davies of Vancouver; (2) Messrs Neil M. Stewart, Fredericton; E. A. Gardner, Chief Architect, Federal Department of Public Works, Ottawa; James Searle, MAA President and G. Venne, Quebec; (3) Messrs W. B. Riddell, Hamilton; J. W. Strutt, Ottawa and John Miller, OAA Secretary, Toronto; (4) Examining the Pilkington Scholarship winners, left to right, Messrs Howard Bouey, Edmonton; Hugh McMillan, Winnipeg; Joseph F. Watson, Cloverdale, B.C.; (5) W. D. Baldwin, Winnipeg; James Donahue, Winnipeg; Keith Graham, Halifax; Louie Plotkin, Winnipeg.*





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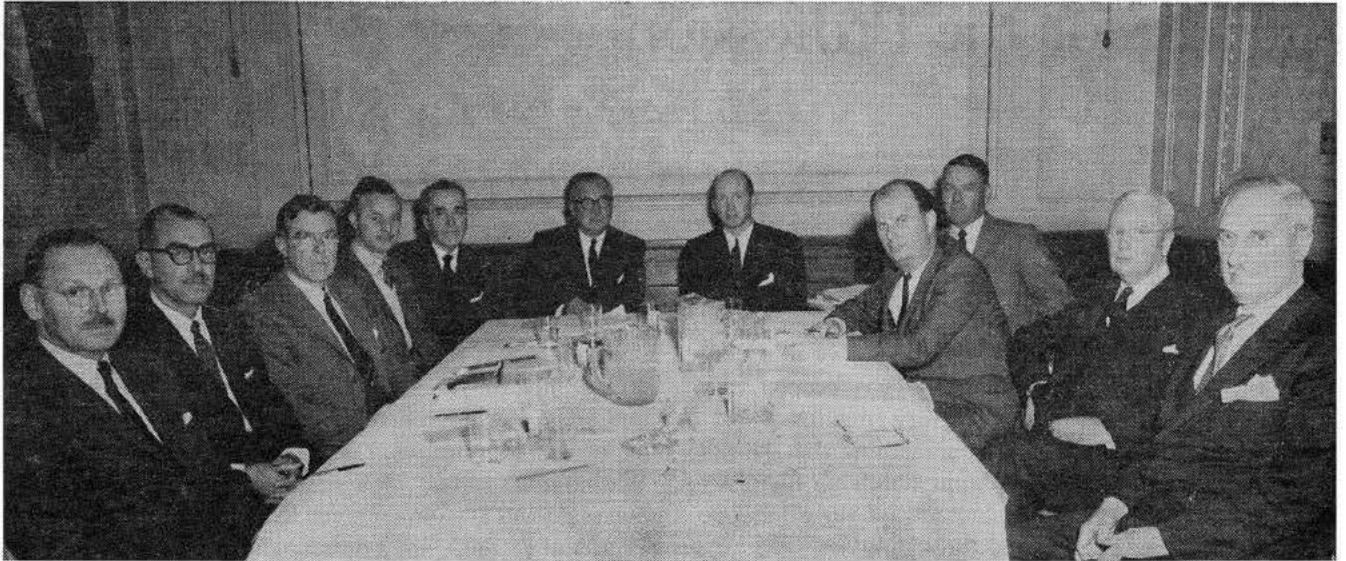


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*Among the ladies, (1) Mrs N. C. H. Russell and Mrs. James Searle, Winnipeg; (2) Mrs Leslie Russell, Mrs H. F. McMillan and Mrs E. J. Smith, Winnipeg.*

*Also seen at the MAA reception (3) Thomas Howarth, Toronto; Gordon Forbes, Edmonton; S. G. Eley, Winnipeg; (4) Three pairs of Russells, Mr and Mrs N. C. H., Mr and Mrs G. Leslie and Mr and Mrs John of Winnipeg.*

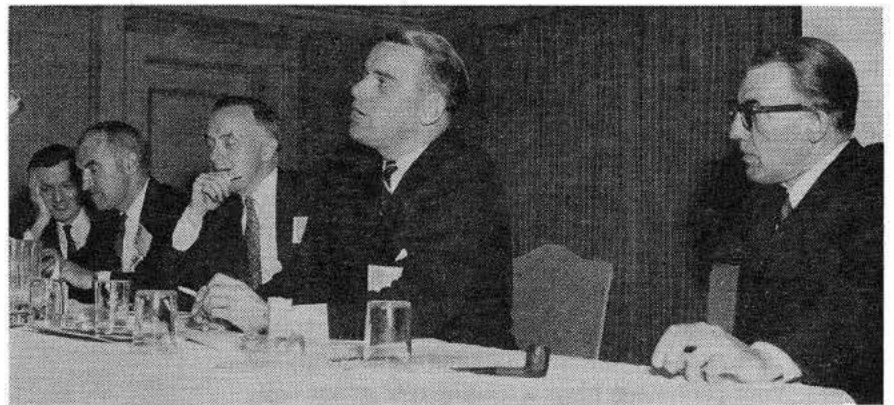
*The Beaux Arts Ball (5) the Grand March; (6) the judges, President-Elect and Mrs Harland Steele, Toronto, and Warnett Kennedy, Vancouver; (7) left to right, Mr and Mrs Al Waisman and Mr and Mrs Dick Baxter, Winnipeg.*



*Above, the 1960-61 Executive Committee. Left to right: G. Y. Masson (F), Windsor; A. R. Prack (F), Hamilton; N. M. Stewart (F), Fredericton; F. J. Nobbs (F), Montreal; Maurice Payette (F), Montreal, Past President; Harland Steele (F), Toronto, President; Robbins Elliott, Executive*

*Director; H. L. Bouey, Edmonton; John L. Davies (F), Vancouver, Vice President; A. L. Fleming, Toronto, Honorary Solicitor; F. Bruce Brown (F), Toronto, Honorary Secretary. Not shown: R. C. Betts (F), Montreal, Honorary Treasurer, and G. E. Wilson (F), Toronto.*

*The discussion on the report of the RAIC Committee of Inquiry into the Design of the Residential Environment was held under the chairmanship of James A. Murray (centre). Members of the Committee, left to right, Alan Armstrong, Secretary; Peter Dobush, Chairman; John C. Parkin, C. E. Pratt.*



*Newly elected Fellows received their certificates at the annual dinner. Left to right William A. Branton, Calgary; Roy Sellors, Winnipeg; John A. Cawston, Calgary; Gabriel Desmeules, Quebec; Neil M. Stewart, Fredericton; John C.*

*Parkin, Toronto; C. E. Pratt, Vancouver; F. J. Nobbs, Montreal; Charles B. K. Van Norman, Vancouver; Thomas Howarth, Toronto; Peter Dobush, Montreal; F. Bruce Brown, Toronto, Registrar of The College of Fellows.*





# A Task for the Profession

*"ARCHITECTS CAN PLAY AN IMPORTANT PART  
IN THE PLANNING OF CANADA'S CENTENNIAL"*

The address by the Rt Hon John Diefenbaker, Prime Minister of Canada

THANK YOU VERY MUCH for those words of introduction Mr President. I must say it has been a very favourable day. You have all been very friendly.

The honor done me today is something that I shall always treasure. To receive at your hands an honorary fellowship is an honor that I shall always regard as one of those things to be treasured throughout life.

I do want to say this. I want to join in a word of welcome to all representatives, but particularly, to the representatives of the United Kingdom and of the United States of America; to Mr Spence from the United Kingdom, Mr Richards from the United States and their wives. Our three countries and the Commonwealth together embody a unity of purpose, a similarity of objectives and the determination that freedom shall be preserved. By having these representatives from the professional institutes from the United Kingdom and the United States, you epitomize the unity that exists between our countries.

I presume that this honor qualifies me to speak with some authority of your great art of architecture, which becomes mine now by adoption. There are points of similarity between the art of architecture and the art of politics. Each deals with building. We in our field endeavor to build a nation in an international community of nations. Your profession plays a leading role in our daily lives. Some may be indifferent to the arts; they may not care for music, painting or sculpture, or the masterpieces of literature; they can isolate themselves and insulate themselves, as the case may be, from these types of art, but the works of the architect are everywhere to be seen.

Man lives in and about buildings, he looks on them each day as he uses them. In your field what is required is something that must be emphasized internationally today, and it is this: an immaculate conception to be able to see and understand what can be done in the future and then to lay those plans which make possible the realities of tomorrow. That's the essence of public life—the ability to dream dreams, to see something of the greatness of a concept, to realize that dedication and that concept is of the essence if success is to be obtained, and to build on those ideas that first have their birth in the soul and heart of the individual handyman. This process has its embodiment in the great concept of either building the great nation or the building of an edifice.

I want to say one word to this Institute. As Prime Minister of this country, I want to pay my tribute to this organization for what it has done in preserving the fine

old buildings of the past. No nation can be great without a reverence for the past. We have been destroying these buildings. We have been wasteful of their historic and irreplaceable treasures. Last evening I was in the city of Washington, capital of a nation alongside of us. Last evening I was at a dinner given in honor of Canada by the President of the United States, and what I said on that occasion applies as well this evening as it did last night. Their shrines, our shrines, their great historic places, our historic places — Westminster Hall, Independence Hall — these are not the properties of the nations in which they are located, they belong to all mankind.

The work being done by your Committee on the Preservation of Historic Buildings deserves the commendation, support, and encouragement of Canadians everywhere. You have given a wonderful lead if you have done nothing else than to have set up this Committee presently in operation. You have been making a contribution, not only to the present, but to Canadians in future generations. Indeed I might point out this fact: that in the city of Ottawa within the last four years, the old Supreme Court Building, which began as a barn in the days of



Macdonald, was torn down to make way for a parking lot. In that old building, of the thirteen Prime Ministers of Canada, nine have been members of the legal profession, eight of those Prime Ministers argued cases in that little room in that building. It's gone. One of those irreplaceable treasures that in the light of the greatness of the historic past would have become a shrine for Canadians to look back on in the days ahead.

I am going to make one request of you this evening and it is this. In a few short years this nation will be celebrating its Centennial. National and local committees have been set up to make the best allocation they can of available means for the effective marking of this anniversary in a manner in keeping with Canada's history, her tradition and the greatness of her destiny. I ask that you, the members of this great profession, should play a most important part, and I ask you to do that and to present to the Centennial Committee as soon as possible your views and suggestions for this celebration; something to touch the hearts of Canadians, something to represent the unity of our country, something to embody that paradox of two great national stocks which joined together to make Confederation possible, something that will well represent the tremendous contributions of persons from all races and creeds who have come to Canada from all parts of the world. Give us your ideas. Catch something of the views expressed by Daniel Burnham, who, in the City of Washington, gave them that plan that embodies the greatness of the concept of that city. His words were these:

*"Make no little plans, they have no magic to stir man's blood and probably themselves will not be realized. Make big plans. Aim high in hope and work remembering that a noble logical diagram once recorded will be a living thing asserting itself with ever-growing insistence."*

I thought of that last evening in that capital city of the United States. I bring to you tonight the message of Daniel Burnham — catch something of the opportunities and the pride that will be ours when in 1967 we commence our second hundred years. In doing that we will be making our contribution to the building of the true Canadian spirit which is of the essence of this organization.

You would expect me on occasions such as this to say something of the international situation.

We in the free world can sit down together and discuss our differences. Yesterday I met with the President. I came away once more reassured of the fact that I really knew that we and the people of the United States are deeply anxious for the preservation of those things, the dearest things in life, the mighty results of the thinker, of the artist, of civilization itself. Over and over again yesterday he underlined his anxiety for peace in the world.

How many of you have read what Khrushchov said yesterday. The disappointment and shock occasioned by the way he conducted himself in Paris is not readily erased. Whatever else Paris taught us, it surely must con-

firm that this is an age of struggle. But time can play its part in relieving the major tensions and feelings that are created. We live in an age when men with imagination are needed as never before.

We know the kind of world we want. We know the kind of world you want. That world in which your creative genius will leave something tangible for posterity. We must have faith. As the architect creates a building, so must we succeed in making peace today if mankind is to survive. We are going to build for peace. We are going to do our part. You know that in planning one must assess accurately the facts of the present and the experience of the past and on that basis create a building that will serve the desired purpose. That's true in structural design; it is equally true in the international design of today. Everywhere in all the nations of today, we build a structure not for 1960 but for 1970, 1980 and 1990.

Two weeks ago I was in London meeting together in that family of nations that knows no description, that organization made up of various races and creeds, having our disagreements, but above all having that realization that only in unity of purpose to achieve the things we desire can we in peace obtain that destiny to which we aspire.

In the last few years things have shown some improvement but the Summit Conference, after so many months of careful preparation, ended before it began — a great disappointment to all who placed their hopes in negotiation. That Summit Conference that Khrushchov called for for so long — he destroyed before it was born. That's past. Yesterday again he spoke words threatening in their import. What must our reaction be?

It must be something along the line typified by the presence among us today of the representative of the United States, and the representative of the United Kingdom; each tolerant of the other, each realizing that we have common objectives.

What of the days ahead? East and West met at the Summit, now we are back on the plain.

In the next few days, on June 7 to be exact, the Geneva Conference of Ten Nations on Disarmament will meet again. The Conference of the United Kingdom, the United States and the USSR on Nuclear Tests is still meeting, also in Geneva. We in Canada have taken the stand that nuclear tests should end; that there is no justification for their continuance any longer. What is going to come about? I can't tell you. My hope is that a treaty will be signed between those three great powers, the United Kingdom, the United States and the USSR, to provide for the ending of tests that can be detected, and that in relation thereto it will prove possible to reach agreement on a co-ordinated research program to determine whether or not explosions below a certain seismic intensity underground can be detected. We haven't much time to build the kind of international world that we want, if we do not in the next two or three years bring about these agreements.

What will the future bring? We will have builded for

the potential of international destruction, for within five years eight countries outside the Iron Curtain will be able to build and produce atomic weapons as well as the three Communist countries, Communist China, East Germany and Czechoslovakia. These facts emphasize the necessity now of an agreement on nuclear testing, the building of an international agreement by the architects of statesmanship before it is too late.

No one knows why Mr Khrushchov says one thing today and something different tomorrow; why the policies of the Kremlin are alternately smiles and threats. Every one has his idea. I like to explain it as an international application to the Pavlovian theory of psychology as practised on dogs. Its theory is that the way to break down a dog is to apply positive and negative stimuli, alternately be nice, be kind, be cool, feed it, refuse to feed it, ring bells and flash lights and the final result is the dog goes to pieces trying to make head or tail of the situation in which he finds himself. That's my simple way of explaining the psychological changes of viewpoint designed to divide us. He has not succeeded in doing so. Now, before it is too late, whatever his motives may be, Canada and the Western nations must build in unity and in vigilance, to the end that we shall settle international problems by discussion and negotiation, thereby bringing about the building of that Canada and that world wherein mankind will be able to enjoy the vast possibilities that modern technology makes possible.

You have been attracted to the profession of architecture because it gives you satisfaction; it gives you an opportunity for creativeness, the creative instinct, and behind it is your feeling that in doing it you have enriched and helped to fashion the world around you.

That's the lesson today as I see it for the Western world. Too often in our international dealings we of the

West are content to be in the position of responding or reacting to the doings or the sayings of the Communist leaders. We would be better served if we did otherwise, if we didn't build to meet their specifications but to do those things, to construct those concepts, to create those ideas which we believe will build that world which all of us hope to attain.

I can't tell you, Mr President, how much I appreciate the honor done me today. I have to tell the Chancellor, and I know I speak for my two colleagues who became honorary fellows, that I have not — and I have seen many of these functions — seen anything to excell the dignity and devoted purpose with which that function was conducted today. I was touched by it. I thought of the words in the booklet that is handed to one as one leaves Canterbury Cathedral. It describes the crowning glory of the architecture of that great cathedral, to me the most magnificent in the history of the western world. It ends with these words:

*"May we who now leave build the spiritual fabric of the nation in truth, in beauty and in greatness . . . May we draw nearer one to another in perfect brotherhood."*

That's the message that I bring you tonight. To this great profession, that in its own way does build a brotherhood among all the nations of the world, uncircumscribed in any way by territories or by disagreements in political philosophy.

My hope is that the leaders of the world in the days ahead will be able to fashion that new world on a plan with the foundation of justice, and equality and the recognition of the dignity of the human being, that we who have a responsibility to give leadership will be able to discharge that leadership as you in this Institute, and those of your profession, do in your several walks of life.



# The Responsibility and the Challenge

*"THE CREATION OF AN ENVIRONMENT FOR THE PUBLIC AT LARGE AND FOR FUTURE GENERATIONS"*

The keynote address by Sir Basil Spence, President of the RIBA, at the 53rd Annual Assembly

IT IS NOT ONLY AN HONOR and a privilege, but it is above all a great pleasure for me, as President of the Royal Institute of British Architects, to come to Canada again, this time as the guest of your Royal Institute. Mrs Spence and I are overwhelmed by your kindness and hospitality, and I must convey to you not only our personal thanks, but the warmest greetings from your sister Institute in London.

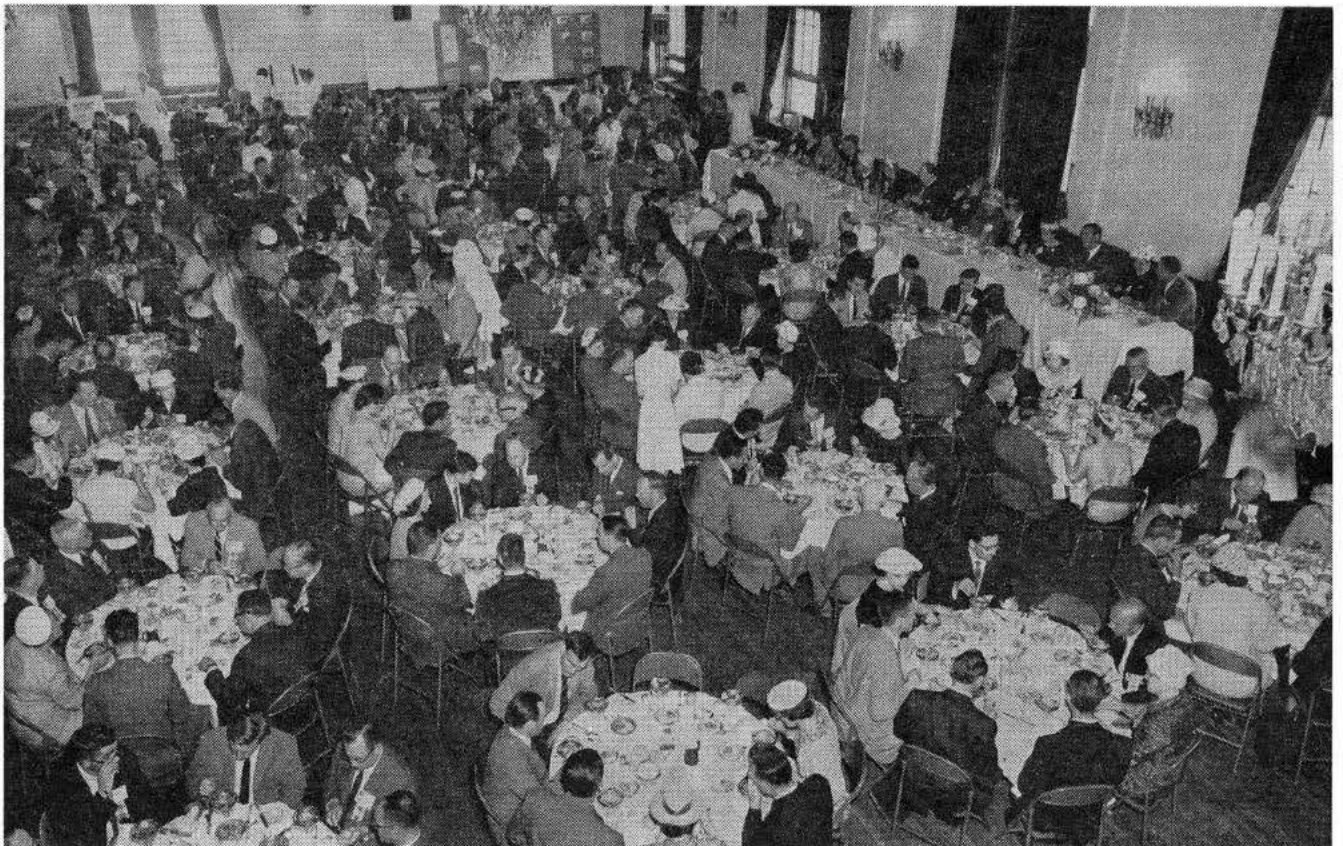
The last time I was here, I travelled on an ecclesiastical ticket, collecting funds for our cathedral in Coventry. Canada was very generous, we raised a lot of money, and in Coventry we are using it, I hope, to good purpose. But I must confess that, although my ecclesiastical hosts were very charming, it did restrict my field rather; I was not able to meet all the people or see all the buildings that I wanted to see. It is a great experience, and all the more pleasurable, to be able to meet you now.

I come to Winnipeg today at the end of two of the most arduous and exciting years of my life as President of the RIBA. These have been years of tremendous change and activity. We are moving so fast nowadays at the RIBA that one needs a moon rocket to keep up! When I came in as President there was a demand for ac-

tion and reform by a large section of the profession, particularly the younger people, and they got it. In our efforts to adapt ourselves to a changing world, to meet the new challenges as well as the old ones, we have turned out every skeleton in our cupboard. We have looked at every one of our sacred cows in turn, and asked "Well, what's so sacred about *that*?" Of course, some of the cows have turned out to be sacred after all, and we are keeping them, but we are having to put some of the others quietly away.

Mind you, as soon as one takes the action that is demanded, and works oneself silly getting things in order, another lot of people get up and accuse you of being a dictator. But on the whole, I think the profound re-examination of the problems of the profession that has been taking place in London is going to prove of lasting value, not only to us at home, but also to our colleagues in the Commonwealth. We hear amazing stories of your efficiency in Canada, of factories and houses being built far quicker than anything we can do. I hope to learn how you do it, and you in turn may find that you can learn from our experiences.

When I got the program for your Assembly, and looked at the subjects you are going to discuss, I might



have been looking at an agenda paper for the RIBA Council. The package deal, education, fees, our relations with the allied professions, the Institute's responsibility to lead the profession, research, the code of conduct — these are the very subjects which we are discussing in London, and on some of which we have been able to reach conclusions and to take some action. Your worries are our worries.

Few professions have a greater responsibility than ours. But to whom do we owe this responsibility? First of all, of course, to our clients, to the man who pays the pound or dollar. When I started up in Scotland in 1932 the only responsibility the architect owed was to the chap who was paying you. But we have a far wider view of our responsibilities today.

Probably the greatest achievement in British architecture since the war has been the school-building program. We have built, I believe, the best schools in the world. I do not mean that you cannot find better individual schools elsewhere. But I do say that the general level of our new schools to be found all over the country is higher than anywhere else. At a time of rapidly rising prices, our schools' architects were able to improve design, raise standards, and keep down prices. They saved the government £200 million in ten years, or if you look at it another way, they were able by skilful planning and design to give the people hundreds of new schools which would otherwise have been swallowed up in waste and inefficiency.

This is one aspect of what I mean by the architects' wider responsibilities. But there is more to it than that. The architect contributes, in his building, one stone to the mosaic that makes the town. Without the stone, there is no mosaic. But unless the stones are fitted together skilfully, by a good designer, there is no mosaic, no pattern, no meaning. As architects we have to see not only our own little pieces of stone, but the larger mosaic, for we, far more than anybody else, are responsible for the future form of towns and cities. If we find that the inadequacies of town planning laws, the grasping demands of real estate speculators, or other causes are preventing us from fitting the mosaic together into a meaningful pattern, do we remain silent? I say we should not, for we owe a duty not only to our clients, but to the community at large.

I don't know whether echoes reached Canada of the Piccadilly Circus controversy last year, our greatest architectural *cause celebre* of the century? But when, last November, architects and planners saw the published perspective of an office building to be erected by speculators at Piccadilly Circus — which we like to think of as the heart of the Commonwealth — they were so outraged by its vulgarity and architectural inadequacy, and by its evident failure to fit into any discernible pattern for the redevelopment of the whole area that a storm burst over the heads of the promoters. The President of the RIBA

indulged in a calculated indiscretion — it would be indiscreet even to recall the words the press attributed to me — and the Government was forced to hold a public inquiry which lasted for fourteen days. I am glad to say that we succeeded in forcing a reconsideration of this project, and in forcing on the attention of the Government and the public our determination that our cities must be rebuilt to some comprehensive design, within which it will become possible to liberate the pedestrian from the tyranny of the motor car. We cannot allow our city centres to be rebuilt as a meaningless jumble of unrelated buildings on a street pattern that is as out-of-date as the horse-buggy.

The architect, after all, is creating an environment not for himself or for his client only or even for his own generation, but for the public at large and for future generations. A building can be enjoyed by the whole community — or it can inflict itself upon the whole community. This is a great opportunity, a stimulating challenge and a heavy responsibility. Architecture, in the last analysis, is a mirror of conditions that exist. The mirror may be clean, or dirty, but the architect must build within those conditions, whatever his talent, and if conditions are dirtying the mirror, he must try, as an architect and a citizen, to clean them up.

Here in Canada, I believe, the private architect is suffering from cut-throat competition from the package deals. In Britain this is a problem too, though not nearly such a big one. Our answer may not be right in your conditions, but I must tell you what it is. If an organization employs an architect and pays him on the RIBA scale, or a reasonable salary, we have no grounds for objection. In my opinion the package deal has a limited usefulness: it is a sort of off-the-peg service, and its suits are never made-to-measure. We should not try to kill it, for we would only fail, but should compete with it by raising the standard of our own efficiency. This has become today the major task of the profession, the biggest responsibility of the Institute. It is for this purpose that, next year, we are raising the educational qualification for entry into the architectural schools. We are examining our education system, because we are far from satisfied that our present system turns out the all-round man the profession needs today. We are publishing a manual on office management, and inaugurating our own technical information service — far too late in the day, I must say — and are trying to bring about some co-ordination of the mass of undigested technical information which pours out from the manufacturers and others. We are anxious to see more research undertaken both by manufacturers and by the Building Research Station. But we are *not* inclined to relax our code of professional conduct, except perhaps in one important respect. We are considering whether, in order to associate the architect still more closely with the building industry, he should be allowed to become a director of building firms. If we allow this we may, of course, be strengthening the package deal, but

we would also be allowing the architect to control the package, and making it easier for design and construction to interact upon each other. A reputation for professional integrity is, we firmly believe, one of the architect's principal assets, and we do not think he should compromise it by advertising or undercutting. I am not saying that undercutting or job-hunting never happens. When I was a student it used to be said that whenever there was a fire in Edinburgh, our best-known and most successful architect was on the first fire engine, and our second best-known and second most successful architect was on the second. The winner, if I may so describe him, was a holy terror for chasing jobs, and (so it was said) he always got the rebuilding job when the fire was out. He was a fine architect, but, really, we don't like the job-chaser who undercuts or breaks the code.

But while the individual architect should not go seeking publicity, the RIBA wants publicity for architecture. We have put an architectural journalist in charge of our public relations, on which we employ a staff of four people. We want the word "architect" to appear wherever it can, and this policy seems to be paying dividends. The advertising script writers now tell their readers that architects use their tranquillisers or their energisers, and the heroes in the women's magazines are no longer handsome young doctors, but handsome young architects. The only snag seems to be that the hero rarely has enough money to marry the heroine!

I think that in many of these matters we have one advantage over you in Canada, and that is the existence of the large public office. Over forty per cent of all architects in Britain work in public offices, mostly for the local authorities, and some of these offices have played a pioneering role. The London County Council has, I believe, the largest architect's office in the world, with something like 500 architects, and it has done some remarkably fine work. It has set a new standard in its housing estates at Roehampton, for example. The Ministry of Education's architects have played a pioneering role in developing the school program.

It is often thought the public office is a menace to the private office, but that is not how we see it. The public offices give out enormous jobs to private offices as well as to their own staff, and the architect in the city or county council is often our client – and a very understanding one too. The biggest and most imaginative scheme for central area development in London, in the ruined area of the Barbican by St Paul's Cathedral, where, on over 50 acres, pedestrians and cars will be completely separated on two levels, has been entrusted by the City Council and the London County Council to one of our best younger firms, Chamberlin, Powell and Bon. The new chief architect in the Ministry of Health, William Tatton Brown, is co-ordinating the entire hospital program and giving private architects better opportunities than they would have had if he had not been there.

Because we have shown a sense of responsibility, and have a valuable contribution to make, the prestige of the Institute has risen. Until a few years ago we lived in a state of primitive ignorance. We did not know what our architects were doing, where they were employed, how busy or idle they were, or how much money they made. We suffered dreadfully because the Government controlled the economy by turning on the tap of credit at the banks where there was a slump, and then, when the boom seemed to be going too far, turning it off again. At the moment things are booming. We have never, as our Prime Minister says, had it so good. The demand for architectural assistants far outruns the supply, and their salaries are rising in consequence. But how long will it last? Can we persuade the Government that it is bad business to have us all overworked one year and out of work the next? We insist upon the need to give the building industry a steadily expanding program of work if it is to invest in new plant, attract skilled labor, and make itself more efficient.

So, for the last two years, we have employed a brilliant young economist, Miss Joan Milne, who finds out the facts, and gives us the answers. We give the Government every quarter a return showing the amount of new work coming into architects' offices, and this enables the Government to judge whether the building industry is going to be fully occupied or not in 18 months or two years' time. It also enables us to spot the danger signals, and to press for more work if we think we are going to need it, or to warn the Government not to turn the tap on or off too far. The Government appreciates this service, and it has given us a position of leadership in industry, for the entire industry can only look into the crystal ball and discern the future if it studies the figures our economist produces.

It is useless for the architect to claim leadership unless he accepts responsibility and is fit to discharge it and the same is true of our Institute. We know that we, like you, have many big problems to solve, many difficulties to overcome. We are very, very far from satisfied about the standard of architecture, and even more dissatisfied with the standard of town planning and the limited part that architect-planners still play in it.

But we firmly believe that if we accept the responsibility for giving leadership in every field, in the industry, among the professions, among ourselves, if we speak such sense that governments and business have to listen to us, if we back up promise with performance, then I am sure we have nothing to fear. The entire world is demanding a higher standard of living, and that means new buildings and new towns, a whole new environment which only we, the architects, in consultation with our technicians and professional colleagues, can design and build. There could be no more exciting an adventure, no more stimulating a challenge. I am sure that we are all eager to accept it. ♣

# Architecture: Business or Profession?

## *THE ORGANIZATION OF AN OFFICE TO PROVIDE A BLEND OF THE CREATIVE ART, SCIENCE AND THE EFFICIENCY OF BUSINESS*

The address by Robert C. Cerny, AIA, of Minneapolis

THE SUBJECT ASSIGNED for this luncheon session, "Architecture, Business or Profession", calls attention to the wide range of emphasis in current architectural practice.

Some architects are endowed with extraordinary creative powers, which they exercise with zeal and devotion and provide invention and direction to evolving architectural form. At the other end of the spectrum is the architect operating the plan factory, selling repetitious designs, copying, seldom creating, and probably operating at a high level of profit. Both architects are registered and may be members of professional societies. Both may be highly regarded by their communities, but not by each other. Their philosophies are worlds apart. The one is a professional architect, the other a businessman merchandising building plans. They see each other as irresponsible dreamers intolerant of a water-tight roof, or as charlatans reducing a noble profession to the level of merchandising. There is no basis for communication between these two extremes. In between these two extremes, however, lies the bulk of the professional architects, many of them enjoying large practices producing creditable architecture.

Assuming that architects will continue to be limited to human nature (they often presume a higher nature), there will continue to be creative, scholarly professionals and the more practical professional, gifted in the areas of technology, production and business techniques. I see no reason to deprecate either type provided that each is competent and that each fulfills his professional obligation to the very best of his ability, regardless of the residual profit. Their attitude toward profit is the critical issue. The architect has a right to a reasonable profit for his effort, but at that moment when a choice must be made between more profit and adequate professional service, the choice must be made in favor of service. If the choice is between a loss and adequate professional service, the architect must choose service. The client may be vague, equivocal, wasteful of the architect's time and effort, but that client has a right to expect the best professional effort possible under the circumstances, even at a loss to the architect. The conscience of the professional

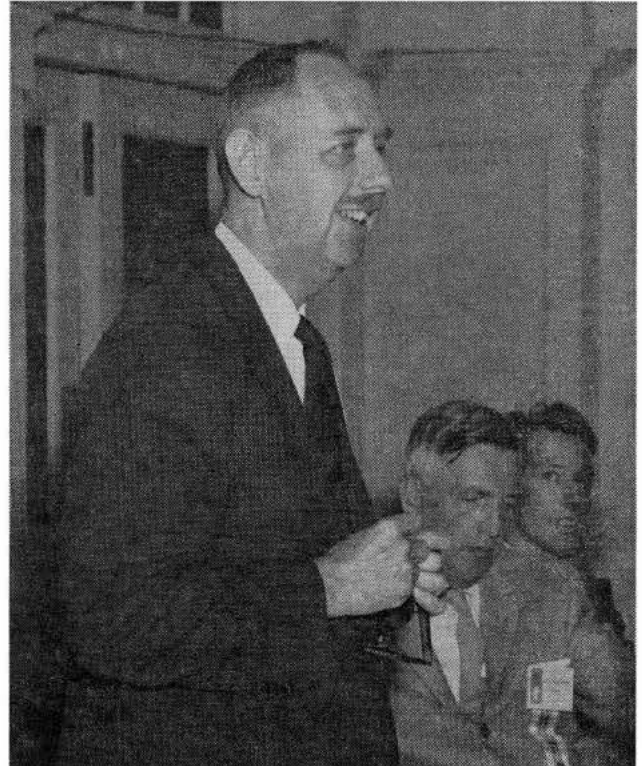
architect must weigh responsibility against profit as a moral issue and choose accordingly.

Service motivation, rather than profit motivation, distinguishes a profession from a business. A medical doctor is expected to give to his patients adequate care whether they can afford it or not. To treat a destitute patient stricken with appendicitis with aspirin compound because the patient cannot afford an operation is unconscionable, if not murder.

This then is the nature of a profession, and I have developed this point in detail because unless we agree on the full moral responsibility of the professional architect, there is little basis for discussion.

Assuming then, competent and devoted professional

*Mr Cerny addressing the Assembly luncheon given by the MAA at the University of Manitoba. Seated at his left are Mr John Noble Richards, Ohio, immediate past president of the AIA, and James W. Strutt, Ottawa, president of the OAA.*



architects, to what extent should their practice adopt business techniques? What should be their attitude toward large corporate practice, toward affiliations with contractors, promoters, financiers, etc.?

The customary forms of business relationships are changing in the modern world. There are new combinations, joint ventures, which call for re-evaluation of some of the professional patterns common in the past.

The most challenging competitor is the corporation, offering a package deal including construction, planning, economic analysis, financing, etc. with alleged savings in each phase because of the integrated operation. This is often referred to as a turn-key operation. There are several successful corporations offering these complete services and enjoying a solid reputation, generally with special emphasis in the field of industrial engineering. This practice has been rejected by our professional societies for many reasons. In such a company the architect loses his identity and freedom of choice, and as a member of a building corporation, presumably participates in the profit, and therefore has a vested interest in the construction company. The architect generally suffers from freedom of choice under these circumstances. Other departments within the corporation are liable often for business reasons to over-rule his decision. The corporation suffers also because, by absorbing the creative activity, it often smothers it.

Where we have been able to observe the turn-key operation, we have found the savings largely illusory and often absorbed in profit or lost in the red tape and internal politics of the large corporation. This is a business activity, not a professional activity, and is beyond the scope of the professional architect. The fact that the turn-key operation has not enjoyed dramatic expansion would indicate that the profession can successfully compete with it.

Progress in architecture and planning, as measured by editorial coverage in such a magazine as *Fortune*, indicates that the professional architect and engineer are maintaining overwhelmingly progressive leadership.

*The package deal, in which architecture is merchandised as part of the construction operation, has not been a particularly successful challenge to professional architectural practice, and should prove that a merchandising approach offers less than professional practice.*

A more recent phenomenon is the Zeckendorf-type entrepreneur who conceives, organizes and finances large integrated construction projects. I will assume that the architect is hired on a professional basis by the entrepreneur. This type of promotional activity presents an enormous challenge and opportunity to the architect because it provides an opportunity to plan the total complex as an integrated working and aesthetic whole. The site, traffic, parking, circulation, functional relationships may be co-ordinated with the aesthetic environment embracing architecture, landscaping, lighting, etc. The opportunity in this field is great and the rewards are equally great. Under happy circumstances great archi-

ture may result from this collaboration, but unfortunately, if the entrepreneur is a short-sighted chiseler, the experience may turn out to be a nightmare. The architect must look forward to increasing activity of this type, adjusting his services to the changing demands of business and society.

Now I would like to discuss the purely business aspect of the practice of architecture. The following remarks have equal emphasis for the small office and the large practice.

All professions, including the ministry, have their practical side — the collection of money, the paying of bills, the execution of agreements and contracts. Most professions have a reputation for carelessness and even incompetence in the handling of their business obligations. In architecture, it seems to me, the situation may be even worse, where there seems to be an arrogant disregard for the business-side of architecture. This contempt for the practical business details leads to law suits, angry clients and no end of turmoil in the office.

It is generally assumed that the creative mind must be allowed to range widely over its subject without inhibition and without the frustrations of budget and good construction practice — architecture is an art and it gains in strength and purity as it isolates itself from reality. *This is nonsense! Architecture differs from the fine arts in that it is subject to the engineering sciences, that it must satisfy functional requirements and provide a reasonably comfortable environment.* These very disciplines have given architecture strength and direction and protection from many of the fantasies in which the fine arts have in recent years lost themselves. It is my opinion that the art of architecture and the practical aspects of building not only can exist without conflict, but unless a reasonable harmony is established between these two areas, then no great architecture can result.

Unfortunately, however, architects are people with a wide range of talents — the creative artist and the practical hard-minded banker type. Traditionally, the more gifted and creative the designer, the less he is liable to be subject to the limitations of reality. The other extreme sees only reality and cannot rise above it. Both types may become great architects provided they realize and accept their limitations. The profession of architecture needs both types.

When the business end of architecture is controlled in an orderly manner, the designer has greater freedom. Yet the myth of incompatibility persists to the disadvantage of everyone.

There is a cult of architects who ardently believes that truly creative architecture cannot emerge from a *successful* practice — that somehow or other suffering must be a part of the creative act — that large offices are machines which must inevitably stifle creative effort. This is a curious point of view because Mr Saarinen and Mr Yamasaki have large architectural practices, and Skidmore, Owings and Merrill often employ over 500 men. These offices are among the great architectural firms in the world, directed



by leading creative architects. Their practices are large, well-organized, and on a sound business basis. It may shock some of you to learn that Mr Yamasaki's office has a time clock!

The architect has serious professional responsibilities from the management of the funds of his clients to the welfare and security of his employees. These responsibilities must be handled in a business-like manner without whimsey or romance. Employee relations—their security, their future—contract documents, all engineering calculations, cost estimates, checking the builder's estimates, billings, collections, etc. are purely business activities. A beautiful building structurally unsound because the designer would not permit adequate structure and bracing is valueless. An unrealistic attitude towards a client's budget or confusion concerning certificates of payment to the contractor, imprudent payments to the contractor which lead to financial loss to the owner or even bankruptcy, are in my opinion quite as unprofessional, quite as unscrupulous as an inferior design.

At this time I would like to refer to a recent re-organization experience in our own firm. We have grown in a few years from two lonely partners to a staff of 100 people. Neither Mr Thorshov nor myself has had any training in the business or management fields, and we finally arrived at a point where re-organization was imperative. Management techniques had not grown with the firm—small firm habits were simply stretched to the breaking point. We were aware of deficiencies in many areas and were reluctant to take time from the architectural activities to re-organize our management procedures. Our contracts were fuzzy. We had poor budget controls, responsibilities were vague, accounting and collections tended to be slighted. There was inadequate policy control over supervision. We employed a management consultant firm in Minneapolis, whose staff analyzed all our operations and had detailed interviews with approximately one-third of our staff. A pattern emerged highlighting a lack of control in all areas, confusion as to responsibility, and a general uneasiness in the organization because of the confusion.

The management consultant opened a new world of management techniques to us, and brought to us a highly developed science of management which had hitherto been unknown to all of us. The consultant's first recommendation was that we hire a Controller trained in all fiscal matters. This is the area in which the architect tends to have the least skill and is liable to become bored and impatient. The consultant hired a Controller for us, and within a year's time, had established complete fiscal control, budgets, bank credit policy, purchasing policy, re-worked all of our contracts, and set up a budget control system. We were suddenly relieved of the countless irksome tasks which the Controller handled with confidence and ease. We were free to spend our time at *architecture*. An electronic bookkeeping machine has since been installed which miraculously keeps all of our cost data current. This is particularly important to us since approximately 40 per cent of our business is on a cost-plus basis.

The most dramatic improvement was in the area of accountability. Most large jobs involved a partner, a project architect, a designer and other staff members, and it was never made clear who had the ultimate responsibility for the job. The result was that the project architect assumed that the partner was carrying complete responsibility, the partner, who spent only a part of his time on the project, was not aware of all of the problems and the result was confusion and a complete lack of accountability. If the design was less than we had hoped for, the designer could claim that the project architect had enforced structural details that diluted the concept or conversely the curtain wall leaks or the room cannot be heated adequately because the designer insisted upon visual conditions which were incompatible with the proper function.

The job definitions were set up for all of the supervisory positions, responsibility was defined in detail, and the accountability was established in measurable form. Certain activities, such as research, specifications and supervision, were grouped in order that the field experience could be co-ordinated with research activities and translated directly to our specifications. Promotion and architectural contacts became the responsibility of one partner. Often in the past when an inquiry was received from a prospective client, it was mislaid or passed around until it was too late. Now one partner receives all inquiries, is responsible for distributing the contacts, selects the partner best qualified to follow each contact and follows through to see that there is adequate coverage. Client budget control and estimating were grouped and responsibility placed with the chief draftsman to centralize experience and control in this important area.

Our office was originally organized with a design department, production department, etc. We have now changed to a project architect system wherein jobs are assigned to project architects who are given total responsibility for the resulting architecture and are also held completely accountable for all phases and quality of the completed building.

Each change was viewed with suspicion, but gradually we learned the system and found each step an improvement.

Finally, production budgets were established for all jobs. The total fee was broken down to a salary budget, which, in turn, was divided between design, plan-production, engineering and supervision. This final and basic control tool was adopted provisionally and only with great suspicion and reluctance on our part.

We concluded finally that there was no hazard in establishing production budgets. The danger lay only in our attitude toward it. If the production budget system tended to emphasize profit at the expense of quality and service, it would be an improper *use* of the system, and not a fault of the system. We proceeded to use the budget system as a guide and reference for our staff.

The budgets are not enforced, but rather act as a guide to the project architects. Bi-monthly reports on each job indicate the budget status of the job, and where

any phase of the production exceeds the assigned budget, the situation is studied and generally can be corrected, or where the design has not jelled or been sufficiently developed, we continue to rework the project and exceed the budget. When the budget is exceeded because of lack of decision or lack of cooperation and coordination, the failure becomes apparent very quickly and we have an opportunity to correct it.

At this stage many of you are probably thinking that we have, in budgeting the creative process, placed our designers in an economic straight-jacket, and that our reorganization has created the profit-seeking climate that I deprecated so thoroughly in the early part of this talk.

The opposite of this is true. We are, rather, isolating and controlling wasteful practices. For instance, all designers tend to be optimistic about their building cost budgets. The temptation to inflate the building program, to upgrade the quality of materials, is great, and this leads, of course, to rejected bids, reworking of the plans, loss of money on the job, an irate client, not to mention that terrible evening with the building committee when the bids are opened. The designer soon learns to respect and find comfort in the protection of a positive budget control. Although he may be disappointed in curtailing his design in the early stages, experience soon teaches him that this is by far the happier alternative.

There is a natural tendency for all designers, including myself, to put off the day of decision on a scheme. *There is no evidence in our experience that indefinite postponement of the decision on a design produces better architecture, but rather the idea gets reworked until it is threadbare, and the designer becomes lost and confused.* We find that a design budget helps the designer organize his productive effort within the time established, much as he did in school when each project was scheduled to be turned in on a given date. If the design budget is expended and the design fails to meet our standards, or if the design can be improved, the design is restudied, but only after consultation with our staff and the direction of the design restudy has been established.

The advantage in the budget system is that we know at all times where we stand, and we are able to make choices — not guesses.

We are also alerted in time to correct production problems as they develop. Approximately the same percentage of projects now exceed the budget as they did before the system was established, but corrections are made readily and patterns are emerging which may lead us to techniques which will reduce the incidents. A certain percentage of our designs, particularly special building types and churches, generally exceed the budgets, and we continue to have several design projects annually that exceed the design budgets several times or more. This is as it should be — certain buildings require an excessive amount of effort to produce a quality design.

Complete responsibility for the quality of the design is placed with the project architect who has skill as a de-

signer, but he may ask for specialized assistance in the design field. Both the project architect and the designer are aware of their complete responsibility and accountability for quality design, with the result that they will fight for their concept, and if they are over-ruled by the engineers or other staff members, a partner is called in to resolve the conflict. In the past, controversies of this kind tended to continue on in a stalemate.

We believe that the designer is much more secure in our organization than he has been in the past, that his position and his influence are more firmly defined and that the new system gives him more freedom and status than he had in our former pattern of informal relationships.

*We are finding also that some of our best designs are emerging within the assigned budget.* The budget system encourages decision, which quickly translates itself into more efficiency throughout the entire production process.

*At the management level we know precisely where we are on every project.* We are able to make intelligent choices and isolate the vague and wasteful practices, which were hidden before.

If my remarks suggest that we have achieved a kind of perfection in our organization and management set-up, this is, of course, not true.

Our reorganization plan has been in effect for two years during which we have established new techniques and policies which will correct the major organization deficiencies.

It is remarkable how quickly the benefits of the new plan were evident, particularly through the reduction of confusion in the organization. Management problems have been sharply reduced; management problems are no longer a barrier between the staff and the practice of architecture; time wasted unravelling confusion, correcting indecision, etc. can now be much more happily spent in the practice of architecture. Modern management techniques have released us from much wearisome detail.

In summary: is architecture a business or a profession?

The answer is that the profession of architecture is a combination of closely inter-related activities, all of which require skilful resolution, failure of any part will adversely affect the quality of the whole.

Architecture is a profession; it provides man an essential commodity — shelter.

It is not a business.

It is a profession which skilfully blends creative art, science and the efficiency of business.

It is our professional responsibility to stimulate the highest level of creativity, to explore and develop with the engineering profession the most effective scientific tools and implement art and science with the most efficient organization techniques.

The architect need not feel uneasy in the presence of business or science in architecture, but should rather exploit the techniques available to him and adapt them to his own purposes. Then both science and business techniques become the servants of the creative act. ❧

# Seminar

## “PROFESSIONAL RESPONSIBILITY”

The all day seminar on the “Professional Responsibility” was held at the new School of Architecture of the University of Manitoba, an arrangement which gave members and guests a welcome opportunity to see the new building. James Strutt, Ottawa, was chairman of

the seminar and the moderator was Sir Basil Spence. Six papers were given at the morning session and in the afternoon eight syndicates discussed problems of the profession. The papers and the summaries of the afternoon discussions given by syndicate rapporteurs follow.

### LARGE OFFICE

BY CHARLES E. PRATT, VANCOUVER

*“The Scope and Responsibilities Peculiar to the Larger Organization, Both as to Staff and Public”*

IT IS ONLY FAIR to let you know I suspect I am on this panel because someone in Winnipeg has a macabre sense of humor. I assure you I have never been considered an authority *on this topic*. Even the jargon of the company man has me mystified — I don’t know the “going interest rates.” I only recently found what is a debenture. The word “organization” frightens me as much as the word “bank”.

Now, other than fees, this topic is the most hotly debated subject in any architectural office in the land. During this seminar the advantages and disadvantages of the large and small office will be discussed. You will discuss optimum size, returns, overhead, profit, tax structure, benefits, pension plans, public relations, etc.

But don’t spend all day at it. Hire an efficiency expert. Let him do it. Forget your worries and get down to *work*. Your work is not just architecture — it is *good* architecture. And believe me in this country your work is cut out for you. Now, don’t get edgy when I suggest hiring an efficiency expert.

If my firm had one, and maybe we should, we would

have dispatched the Vice-President in Charge of Organization and Public Relations to make this speech, and from him I am sure you could anticipate an excellent talk — furthermore he would know what he was talking about.

If it is the wish of this seminar to determine which type of organization extracts the best architecture, that *this* is the goal of these discussions, then may I present a thought to you. Any architectural office existing as a business only is of no use to this profession. Any architectural office *existing for architecture* only is a blessing to the profession and to the community.

In recent years architects of small firms have been barely tolerant of the efforts of larger firms, in fact quite patronizing. I think it was Ayn Rand’s book, “The Fountainhead”, which made fashionable the “do-it-yourself school of architects.” With stars in their eyes, these young and dedicated graduates opened their own offices — to go it alone. They vowed they would do the sketches, the working drawings, the specifications, the mechanical engineering, the structural engineering, the ground services, contracts, supervision, plus, as I remember the book,

*The panel: left to right, John Bland, Director, School of Architecture, McGill University; C. E. Pratt, Vancouver; W. T. Pentland, Toronto; Chairman James Strutt, Ottawa; Moderator, Sir Basil Spence; Dean B. C. Binning, ARCA,*

*University of British Columbia; F. J. G. Dallyn, Sociologist, University of Manitoba; Rodney E. Engelen, Chief of Advanced Planning, Minneapolis City Planning Commission. After the papers, members of the panel answered questions.*



indulging in a little lechery. Thus evolved a great architect. A half million dollar job takes this idealist over a year to complete, working an eight hour day. And I have mentioned nothing yet as to his responsibilities peculiar to the small organization, both to himself and to the public. I hasten to add he wouldn't have much time for lechery.

There is lots of room for the large office. But I want to make sure you understand I am concerned with two types of large offices:

1. The big office existing for profits.
2. The big office existing for architecture.

Now I am sure every large organization would take exception if it were classed in the former category — the big office existing for profits. After all, the largest and so-called *best organizations* in North America, confronted with this question, would say, with righteous wrath that design is uppermost in *their* consideration.

I disagree. It just so happens we are in an era of easy architecture — mecano set architecture — Sweets Catalogue architecture. *This is ideally suited to the large organization.* Never, never, did the large organization have to do so little work to keep the overhead down. It's set up for them, and what is done in San Francisco by one firm, will be the same as is done in Connecticut by another. Mies Van der Rohe, in case the big boys don't know the guy, is good, and his architecture is ideally suited to the organization of the reprehensible group to which I referred. This type of organization, of course, just happened to hit a gold mine and talks about design in a glib and fanciful way, as if it were their prime interest. I suspect they would change their tune if this type of design caused a disappointing drop in the balance sheet.

We must be interested in the bigness only where it exists to promote fine architecture, and fine architecture is not always Miesian. Here is a different institution, existing purely for architecture. Its overhead is high, and economically it is not an improvement over the small office. It is specialized, but specialization has come about after each member has become familiar with all other

facets in the office. Here, in effect, is a small teaching college, a post-graduate school.

This haven of experimentation, this assembly for exchange of thought processes, this university of architectural offices, has a violent impact on the public. This office requires no public relations program. *It is a built-in propaganda machine.*

Such a climate cannot but attract the best creative brains in the profession. The staff are happy. They are not a portion of a big organization and they feel it. The closest comparison I can think of is that they are back in a class in the university where they are encouraged to discuss. They are not a slot in a slot machine, a nonentity. They are not, in army terms, a "body."

The reins of control of this office must not be too jealously guarded. It is most important that the incumbent officer in the firm find a talented successor or successors, to nurture and raise to equal level. At this time it is also necessary for the presumed successor or successors to start nurturing the third team. Truly, this is experience tempered with the enthusiasm of youth. Is it not tragic to see some old firms wither up and die, all because of vanity. The bosses didn't want to lose control. They didn't want to "share the wealth". The continuation of the firm for the future, not monetary return for the incumbent set of partners, is the driving force. It is not the robber baron concept of hiring brains — firing brains, a mere commodity. Then, perhaps, we can attain a standard of good architecture, and not merely a good standard of detail.

We all know the benefit of specialization, the benefits of a large firm; the best brains attached to various aspects of the job. There is a niche for each one.

My intent is to emphasize that a larger firm can fail in its responsibilities to the staff and public, through over-organization and hard headed business tactics; or, as an antithesis, a larger firm can succeed if its organization is primarily aimed at architecture.

"Not best because they're biggest, but biggest because they're best!"

## SMALL OFFICE

BY W. T. PENTLAND, TORONTO

*"The Scope and Responsibilities Peculiar to the Smaller Organization, Both as to Staff and Public"*

I REALLY DO NOT FEEL I am justified in claiming our office to be representative of small architectural offices. In fact, every other Friday when it comes to signing pay cheques, I am appalled at how huge we are. The Oxford dictionary in defining the word "small", states as follows: "SMALL — *Not large, of deficient or comparatively little size or strength or power or number, consisting of minute units, not doing thing on large scale.*"

This is, of course, rather deflating. Therefore, in order not to render myself speechless in humility, I wish you would consider our office as being "medium" sized.

As you probably know, I am also somewhat of a last

minute substitute: your original speaker obviously read Oxford's definition and headed immediately to Europe on a holiday.

As to the responsibility of the smaller architectural office, this does not, I feel, differ greatly from that of a large office. Our endeavour is to solve the client's problem in the most efficient, economical, practical and attractive manner possible. Should we achieve these objects, we have in doing so presumably done credit to our client, our profession and ourselves and have, therefore, fulfilled our purpose and may selfishly expect that the client will return to us should he require later architectural services. We can also hope that our fellow architects

may recognize our capabilities.

We have a further responsibility of equal importance and that is to the contractor. In the first instance, we must tell the contractor, through our drawings and specifications, what is expected of him in order that he will be able to fairly and accurately arrive at a cost for the work. Secondly, we must answer promptly all questions he may have throughout the construction of the building. If the three parties concerned, the client, contractor and architect, clearly understand what it is intended that they mutually accomplish, the work of design and construction should proceed to their mutual benefit and profit. In this relationship, the architect is truly the ham in the sandwich and unless the ham is fresh, the sandwich is tasteless or worse. By the same token, if either piece of bread is mouldy, the sandwich may be spoiled.

Now we all know that this is not as easy of accomplishment as it sounds and perhaps it is more difficult of achievement by the smaller office. The first, and often most difficult, problem is to find the client. Once having accomplished this minor miracle, the next problem is to produce the work. Inevitably it occurs to the one-client architect, generally in the middle of client number one's drawings, that another client is desirable. To find client No 2, it would be a great help to have someone to do the working drawings. Then client No. 1's building starts being built and the contractor begins ringing the telephone and letters need to be written. Perhaps a secretary would help. Now space becomes a problem. Better find office space. With luck, clients 3 and 4 and so on appear, or are dragged, through the door.

By now, things begin to develop, particularly the overhead and Ottawa also begins to take a financial interest in our budding architect's development. Additional staff becomes necessary, more space, more taxes, more clients. An unfortunate discovery is then made. Only the latter is profit, the former three are expense and the expense items are constant. Comes the day when clients seem to have evaporated, temporarily it is to be hoped. Profit must equal expense and profit depends upon clients. Perhaps our young architect has accomplished a second miracle and has managed to hide some profit from Ottawa that might bridge the temporary gap, or it would help if staff was reduced. Can he risk cutting staff? Good draughtsmen are not exactly a drug on the market should he need them again in a hurry.

Well, let us assume he worked that one out and still had turkey for Christmas. Clients have returned, in fact in larger numbers, and more staff is needed. Gradually, he realizes that ten \$100,000 jobs, while they may equal one million dollar job feewise, are not equal production costwise. The next problem is to find larger jobs, and so on ad infinitum. Somewhere the hope glimmers that the carry-over of work load profits from one year to the next will cover, or approach the next year's overhead, and somewhere the hope glimmers that he can find an hour or so each day to do a bit of design.

This brief description of the life of our hero may be

laying it on a bit thick, but these decisions do arise in the life of the architect in private practice and these problems can, because of the unfortunate necessity of money, lead to considerations of speculative commissions which most of us agree, are not usually to the credit of our profession to accept.

To capably handle projects of a larger size, a competent, well-oiled office organization is needed and it can be very frustrating building up that organization, affording it as you go, and hanging onto it over the blank spots. It takes some time also for clients to walk in the door without persuasion. The small architect is a man wearing many hats under his large hat labelled "architect": salesman, designer, draughtsman, specification writer, critic, accountant, occasional lawyer, and psychologist, always a crystal ball gazer and, somewhere in the middle, probably a husband and father. These are not necessarily named in order of importance; indeed all but the latter may be shared with others, providing that profits exceed expenses.

The scope of a firm, regardless of size, depends upon four things:

1. The competence of the architect.
2. The competence and efficiency of his staff.
3. Having time — allowing enough time to prepare fully instructive design and working drawings and specifications — giving the contractor and owner sufficient explanatory time during construction, and, in the same breath, limiting this time to ensure a fair profit remains to the architect upon the conclusion of the job.
4. Being able to spread the work evenly to eliminate blank periods and also to eliminate overtime sweat periods.

Any office which has managed to achieve all four, I would be delighted to hear of regardless of size. It may be that the bigger you are, the easier it becomes to approach Shangri-La, but, by the same token, it is more vital, I would imagine, for the big office to have a backlog of work in hand and at hand. You cannot, in my opinion, tool up rapidly to meet a large order. The competent staff are not there when you need them and without competent staff, you cannot efficiently produce.

The "Canadian Architect" published a most enlightening article in September, 1958 comparing office sizes and incomes. Briefly, it disclosed the following:

The one man office averages an annual volume of \$532,000. This decreases to \$225,000 per person in a four man office; goes up to over \$300,000 per man in a six man office and decreases to a low of \$149,000 per man in an eight man office.

A 10-14 man office averages an annual volume of \$2,750,000; a 15-25 man office an annual volume of \$6,500,000 and an office over 25, a volume of \$10,750,000.

The obvious conclusions one would, at first glance, draw therefrom are that an architect, considering entering private practice, should:

- (a) Decide not to do so.
- (b) Having been wrong in this decision, decide to stay a very small office, namely himself, in his basement – wife to answer telephone.
- (c) Not having realized this and finding himself committed to employees, to expand as rapidly as economics permit and become a large office.

This is perhaps the white and black of it: we admit to ignoring the greys and there are a number of highly respected greys who appear to have found other answers. I remember one distinguished American architect ad-

ressing, I believe, the OAA giving a very delightful description of his steps to successful and internationally recognized prominence. His concluding statement which I well remember was "of course, I must admit it helped very much when Miss Rockefeller consented to become my wife". Another well remembered architect managed to convince his draughtsmen that they should pay him for the privilege of doing his drawings and in their spare time should bring in his field crops.

My final conclusion is that it is too bad that money is so necessary.

## EDUCATOR-ARCHITECT

BY JOHN BLAND, MONTREAL

*"Bridging the Gap in an Ever Changing Environment"*

AS TEACHERS we have responsibilities in relation to the profession and I suppose each of us could say specifically what they believe them to be, but I think it would allow less misunderstanding to say what we do and therefore show what we unconsciously regard as our responsibility rather than to recite a number of desirable objectives such as the whole man and so on.

Schools are concerned with assisting a small group of gifted young people to develop an understanding of building design and to provide them with some knowledge and attitudes which we feel are necessary to the process of becoming an ideal architect. I mention ideal because practice as seen from the schools tends to be stereotype.

We only take people who are extremely able minded. A 70 per cent average is the new McGill minimum for entrance in the school leaving papers. The Ecole d'Architecture de Montreal requires a B.A. degree; British Columbia now requires three years of Arts.

We give them fundamental mathematics and physics in preparation for analytical work and for training their minds. We give them rather a lot of history of architecture to show them the solid remains of the civilizations that have produced our thought and feeling. We teach them to draw and we teach good practice in building construction because above all we believe architecture is fundamentally good building. "How do you build it?" is the basic question.

We teach that design evolves from construction, exploring how space can be built for human use and finally how spaces can not only be built well to meet social needs usefully but also meaningfully which perhaps is the real creed of architecture.

We continue with more elaborate tools of structural analysis and mechanical matters and questions of practice. We also attempt to understand environment by courses in civic design and town planning.

The objective is the production of a thoughtful adaptable person capable of becoming a competent architect – with the proper amount of practical experience.

In all the schools I know, ability in design is the criterion both among the students and staff – perhaps this is to be regretted because the gifted designer is rare.

Nevertheless the daily assessment of the student's progress is made in terms of design. The able designers are considered by staff and students alike, as the best students. They receive the prizes and go on and on to higher academic heights. Thus it appears that we consider the training of designers to be our primary responsibility.

This may be questionable but it does show that we feel architecture itself to be the most important thing in the curricula, as design and architecture are largely synonymous, which suggests that the schools regard *architecture in its broadest scope* as the primary responsibility of architects and therefore the chief professional responsibility.

In addition to work with the students, most schools of architecture are, in one way or another, concerned with pushing the profession along the lines which theory of design suggests. Notions of functionalism in preference to merely picturesque architecture, structural expression, realism as opposed to historical fancy, organized public housing rather than chance speculative building, town planning rather than thoughtless subdivision have all been cries first heard in schools of architecture.

All of this indicates that we regard criticism of practice and suggestions to practitioners as being something of our responsibility. To this end we have set up graduate courses in Town Planning and Housing and we have been concerned with public lectures, the preparation of reports upon public matters, research to some extent, and the writing of books.

Again, architecture in its broadest sense is what we strive for. Do we in any way bridge a gap in the ever changing environment? Encouraging students to be questioning, adaptable and to have some fundamental competence are our objectives and these we believe are the right attitudes and skills with which to meet new situations. "To build technically perfect and socially useful buildings fitting gracefully into their surroundings" is a reliable goal, good for any gap or crossroad or in any changing circumstance.

I mentioned the training is toward the ideal architect, that is, the architect who stands independently between the client and the builder. But the actual combinations of these three persons – client, architect and builder, pro-

vide the real scope of the situations of practice upon which to measure professional responsibility or the production of architecture.

1. Separately, client/architect/builder, is the ideal.
2. The client — architect combination with the builder separate might be called the corporation deal, the architect in public service and so on.
3. The client separate with the architect — builder combination is the package deal, the well known bogey.
4. The client — builder combination with separate architect might be called the promotional deal which we hear a bit about in Montreal.

In each situation if the architect is competent and intent upon producing architecture in the broad sense, one

feels the public can be well served and good architecture can result, but in the present circumstance, good architecture is not always the result of what is done, and somewhere in the process there must be hitches. I believe the fault lies either in the *competence* of the architect or in his inability to play his proper *rôle* in the various situations. Thus, in my view, the competence of the architect, as well as his ability to be effective in the situations of modern practice, are further professional responsibilities which we all share.

In the schools we have a clear picture of what we should do in part of this dilemma. But how we can help the architect in practice to be more effective in circumstances which are not ideal, is an area that needs some exploration.

## ALLIED FIELDS

BY B. C. BINNING, VANCOUVER

### *"The Need for Understanding and means of Implementation"*

I TAKE IT THAT where I am concerned in this seminar, "Allied Fields" means those things called The Arts that surround Architecture, or try to surround it, and this is what I have to talk about. This is all very well but, if I am to talk about the professional responsibilities of these allied fields towards architecture, then this is something else again. I am a little concerned that the noble aims and goals of your architectural responsibility stated by some of the previous speakers do not always apply here. It has been my experience at least that it has not been so much professional responsibility with you people as something of an enduring friendship. Indeed, this friendship has ranged almost in some instances into a love affair. I am sure most of you will agree that I have very little of the appearance of an appealing and desirable young woman but I must confess that in some of these relationships I have felt very much as though I were. And, indeed, you have no idea of the proposals, the advances and the propositions that have been put to me.

I thought it might be interesting and, I might say, instructive, if I were to tell you something about these affairs that I have had with you gentlemen. I do not know whether it is discreet for me to do so (I am not going to mention any names) but it might illuminate what I have to say if I were to. In doing this, may I classify my affairs with you under several general groups.

The first group I shall call the *Denialists*. I feel that I am in honor bound to mention them, simply because they make a total rejection of my charms. They will have nothing to do with me — with murals, mosaics, sculpture or anything else. They want their work to stand uncompromised, unenriched, in its own architectural grandeur and purity, radiating itself in its own light, space, mass and structure. I must say that this is a point of view and at least I have a respect for these people in their efforts to carry it to a sometimes stringent end.

There is, however, a group among the *Denialists* (a sort of subgroup) which should be mentioned. This in-

cludes those architects who think they can do my job for themselves. Usually this is done with T-square and compasses on the draughting board so that the result is a small-scale exposition of the over-all architectural result; monotonous perhaps, in some cases, but always bearing a unity to the architecture itself. Sometimes these people show certain fetishes for certain motifs. In the old days, it was usually the Classical; in Vancouver I have noticed a penchant for the West Coast Indian. So much for the *Denialists* and their independent spirit.

Now we come to the next group — the *Conformists*. They are those people who see me as a kind of status symbol. They are generally specialists of the older school and hence are the older men that I go around with. They are specialists mainly in office buildings of the expensive kind. Something is needed to indicate this — and this is where I come in. The building is usually a set piece with little variation: you find yourself entering an imposing doorway over which there is a great seal or crest in bronze, and at the far end of the foyer within, high on the wall, is the mural — 9 ft by 12 ft — unobtrusive in form, tonal in color and thoroughly respectable throughout. There is a place for everything and everything is in its place; on the right-hand side, the elevators; on the left-hand side, the news-stand. The subjects of the murals are all familiar: "Pioneering in the West", with glimpses of the future coming through a cloud; or "The History of the Steam Engine"; or "The Development of Fish Products". Common to all these subjects, whatever they may be, is one dominant thing — and always right in the middle of the mural — a clock. This unaccountable clock! How it got there I cannot tell you, and I suspect that *you* cannot tell *me*. Such are the mysteries of architecture!

Next, I come to another group, and one very current these days — the *Alarmists*; a group I am bound to say that puzzles me greatly and fills me with ominous wonder. These are the people who come to me in great concern and often in panic, some time towards the end of con-

struction or at completion of the building. Often I have been called upon like a doctor in the night to come rushing out to administer some sort of emergency treatment to this thing that they have brought into being. Usually this thing is an apartment block, built on a strict budget, restricted by by-laws, with a solution that has obviously come out of Sweet's catalogue, and the result is that it looks like everybody else's apartment block. Then comes the approach (or proposal, if you like) — Can you do something about it? The architect does not really care what or how, so long as it is cheap. Something with a little paint or wrought iron or concrete blocks. Something. Anything. Jazz it up a bit. Make it different. This is a gloomy love affair indeed.

The fourth group I call the *Stylists*. I have had very little to do with them except in one or two instances, possibly because they have not yet become so entrenched in Canada as they have in the United States. They exist there mostly in the large architectural offices and have, I understand, become known as "trend-setters". These are people who employ a "stable" of muralists, interior decorators, color consultants (what a breed!), psychiatrists, sociologists and efficiency experts in general. To be a member of such a stable it is essential that one can be counted upon as a dependable and reliable performer, with a reputation for responding as one did the last time to the architect's needs; one must have created some style or effect, and be willing to repeat it every time the architect pushes the button. In other words, these people are used in this accommodating manner to create certain characteristic effects in the architecture which in turn can add a sashet, by which it is known and easily recognizable, as the work of this or that architect. The result is a kind of glamor architecture, full of gimmicks, clichés and voguish styles, looking very much like a late model American car — real smart.

And so, finally, I come to my great love — the *Traditionalists*. I mean this word in its traditional sense — the

way in which architects have always worked with painters, muralists, sculptors, potters, weavers and other craftsmen. You usually find that the Traditionalists have such people for their friends. They know them well. They know what they can do, the style they work in, their special talents and their limitations. These architects have a wide knowledge of the arts. They know the difference between architecture, painting and sculpture. They know the similarities between the arts, their family likenesses of form, structure and space. They can distinguish between what is a private art (such as an easel painting) and a public art that has something to do with architecture. They know the difference between form and content; how form can give architectural meaning to a building; and the image-making possibilities of content. They know the whole scope and gamut of the materials used by the artist and sculptor, and how best they can be associated with a building. And they know what is perhaps even more important for an architect to know — how to use sculpture, murals and the like as an integral part of their architectural concept. For example, they know what sculpture or painting can do to architectural mass; how it can give scale, definition, emphasis, enrichment. They know how these things can affect space, giving direction, a point of reference; and how they can be a means to identify the in-dweller to that space. They know that the artist or artisan, if chosen properly, can give greater meaning to the building; can give it a greater satisfaction in a tactile and sensory way; can illuminate and enrich the original architectural concept as part and parcel of the building's total needs.

This is the part that we as artists have always played with you architects in the great history of architecture. And to this end, we have always worked closely with you from the original concept of the building as an allied worker and friend. This makes the architect-artist relationship a most private, intimate and human one, and in this sense it must be a love affair.

## SOCIAL-POLITICAL

BY F. J. G. DALLYN, WINNIPEG

*"A Realistic look at the Contributions of these fields and their use by the Architect"*

IT IS INDEED AN HONOR to have been asked to take part in your conference. I hope that what I can contribute will be of some value.

I would like to dispell any air of finality about what I have to say at the outset. However my remarks may be of special interest nevertheless, because I am, as a sociologist, technically an outsider. I may see things differently than you do, and ask different questions than normally arise in your day to day work.

The task officially assigned to me, I believe, could well be done by architects themselves, for I have found many to be excellent critics when encouraged to think in this way and when a means of expression for their views exists. But more of this later.

The problem which has been given to me is to assess the extent to which the architect in practice has shown

that he has taken the social and political facts characteristic of our society, as a whole, into consideration. My conclusion is that certain very important aspects have been very largely ignored. I shall mainly devote my efforts to suggesting why this should not continue, and why the architect should enlarge his concept of professional responsibility and re-define his role so as to act as a man of vision as well as an expert technician.

Let me begin by stating the chief challenge that faces society today and hence you as a profession. Can the various segments of society conduct their affairs by their own joint regulation in such a manner that they achieve both their own self-interest, and the good of society as a whole, each to a reasonable extent? If they are successful they will avoid the excesses that characterized that 19th century when the forces of the market place almost



alone gave direction to social life. They will also avoid the usurpation of power by those who claim to give direction to change via the technique of socialism or totalitarianism when crises arise that cause genuine public alarm.

Many people in society still act in accord with the ideology of 19th century liberalism and its laissez-faire philosophy. They assume that each person, by striving for the achievement of his own immediate good, will automatically bring about the best possible society for all. Direct purposive action toward the common good is not thought necessary, in fact it is to be avoided. Architects, no less than others, have neglected to see beyond the fascinating, engrossing, essential and endless tasks of the moment which they are professionally trained to meet. Less well defined areas involving common welfare are ignored; or it is left to political parties to discover problems, and devise and implement specialized solutions — ill equipped though they may be to do this. *Such action takes place in spite of the fact that liberal ideology also clearly points out that government functions should not be enlarged any more than absolutely essential, and that rational men should do for themselves everything that they possibly can do.* In the case of architects, attention was focused primarily on the needs of families in the top 10 per cent of the income range, and only spasmodic thought was given to the needs of communities as a whole. The insight and pride of some professional men has led them to do what they could in the larger arena, but they seem a minority.

*Where do architects stand today in terms of this broad challenge?*

On the one hand it seems matters could go on as they have in the past. There will be a sellers' market, barring a war or depression, for many years. According to the Gordon Commission's forecasts the amount of urban housing will more than double by 1980 from what it was in 1950 — 3,700,000 new housing units will be required by 1980.

On the other hand this very growth poses a challenge. Will the new urban areas be places of safety, quiet and convenience? Will property values be protected against unwarranted deterioration? Will people be able to find the kind of accommodation they require at the different stages of their life cycle? Will more and more people share in a rising level of domestic accommodation? Will uneconomical ribbon developments continue? Or will organized satellite communities appear? Will the new urban dwellers be satisfied with a continuation of conditions as they are, with future deterioration, and certainly with increased congestion from the use of three times as many cars as today.

What are the signs that unrest with current conditions may grow? Things such as the following suggest it will.

*The type of immigrant who has come to Canada since World War II is not like those who preceded him. He is well educated and likely has a trade. Once he learns the language and the customs prevailing in Canada he is not*

likely to be content with slum accommodations or fourth-hand housing located amid mixed land uses for his family, as were many who came to Canada after World War I, who were ill educated and from rural areas.

*More and more Canadians are continuing on into high school.* From 10% early in the 20th century the figure may reach 75% shortly. Current American figures indicate that 50% of young people plan to go on to college. Trends such as these suggest a drastic change in taste and purchasing power.

*Improvement in production techniques and output per man hour have made more leisure possible.* The trend will likely continue and increase due to union pressure. How is this leisure to be spent? A wise use of it will require more home space, and greater emphasis on related community facilities, such as libraries, community clubs, parks, golf courses and curling clubs, and space for gardening and play with children.

*With rising land and building costs how are people going to take advantage of new homes?* The Gordon Commission found that the average income of factory workers was \$3,104.00; While income necessary to qualify for a \$11,000 mortgage was \$3,986 under N.H.A. How are such people going to acquire suitable accommodation?

The challenge in Great Britain to rebuild cities was an obvious one. With us it is more subtle and hidden, but no less real. Accommodation of some type will no doubt be provided but will it meet worthy standards of a comprehensive nature? Will there be more to show for it than just shelter and the maintenance of needed high employment?

No doubt many compromises will always be necessary, but our goals should be stated clearly to give direction, and the goal should be as widely understood as those pertaining to water or driving safety. *It is not enough to have a National Capital Plan only.* Local and provincial people of power need to be convinced of the value of similar programmes in their own areas.

How long can urban areas afford the high cost of slum areas? Several studies have shown that ordinary residential areas pay their own way, that industry and business provides a surplus of tax revenues, and that it is the slum areas that absorb this surplus that could otherwise be used to reduce taxes for many people. Many of the costs are directly attributable to the type of housing and the congestion in these areas.

Nor is the suburban movement as it exists today, a satisfactory solution to the problems posed by cities, for it intensifies the core cities' problems at the same time that it temporarily meets the needs of some people and industries.

What of our stock of housing in Canada seen from an overall point of view. In 1951 CMHC claimed that nine per cent of urban dwellings were in need of major repair. By 1980, one million houses would be over 75 years old. The Gordon Commission estimated that one third of a million homes should be replaced by 1980 with the total

stock of housing then being somewhat over seven million units. The City of Toronto estimates that from 10 to 20 per cent of its housing requirements to 1980 should take the form of publicly aided housing for a variety of reasons. Rural housing in need of major repair in 1951 amounted to 20 per cent of the total. The implications implicit in each of these facts are extremely important in pointing out the direction in which it will be necessary to go if the fullest possible community welfare is to be achieved in the future.

*If architects decide to play a more vital role in the future, one thing they might well do is to take stock of their profession as others have done of theirs.* For studies exist in varying degrees of comprehensiveness of lawyers, medical men, university professors, army personnel, as well as other groups. These studies in general are overall reports of a single profession. In addition, today there is a growing interest in the points of similarity among professional groups and their structural and functional problems and organization. Professional groups are looking to this information as a basis for policy formation and an assessment of strengths and weaknesses.

A recent article by M. J. Huntington of Columbia University suggests some questions that a study of a profession might answer.

1. What is the nature and development of the unique and distinctive specialized intellectual technique that is the basis of their work?
2. What types of specialization exist with the profession?
3. What are the patterns of collaboration and/or conflict with other professionals and/or business men?
4. How are individuals prepared to fill the professional role both in terms of technical knowledge and skill, and of attitudes and values.
5. Who are the individuals who enter the profession? Do they have any prior preparation, or come from families of professional people?
6. How do people with divergent interests, talents, and bents find their niche in the profession.
7. What influence does ascribed characteristics play in the attainment of professional positions such as female status, sponsorship by successful professionals or minority group status?
8. What achievements are valuable for upward vertical mobility?
9. Is horizontal mobility, from office to office, a pattern of importance?
10. Is adjustment to one work situation for an indefinite period a common pattern?
11. How does professional practice differ according to the organizational context in which the work is carried on? As when professionals work on their own as compared to being salaried persons in a bureaucratic setting.
12. What are the relationships between client and professional? Is the problem as the client sees it a sufficient definition of the situation? What are the clients expectations of the professional's privileges and duties? How have they developed? How do they influence the choice of the professional and how do they affect the client — professional relationship?
13. How does the professional role affect the style of life,

habits, interests and attitudes of the professional?

14. *What is the functional significance of the profession in the total social system?*
15. What and how is control exercised by the professionals as a group over professional behaviour, since control by outsiders who do not possess the requisite knowledge to judge the work which professionals perform is not practicable in general, and since as a profession, they must not be open to the charge of exploiting clients for personal gain?
16. How do clients exert pressure on individual practitioners to conform to the norm of placing the client's interest above their own?

To be of greatest value, a study of a profession should reveal the actual patterns of behaviour and feeling, and not only the ideal or formally agreed upon patterns. A study would serve a valuable purpose in reporting what one would otherwise be limited to learning through their own personal experience alone. *The increase of self-understanding brought about by the group action which would be necessary to make such a study, is an important process in itself.*

A study such as this might point up current problems in common with other professional groups; solution to which could be sought for jointly.

Examples of such problems as might emerge when people are asked to express themselves in an organized manner about their life work are as follows:

1. How do you retrain older personnel who have a legitimate claim to a position in an organization but whose ideas are out-of-date?
2. How do you give specialists greater freedom, authority and responsibility so as to keep their interest and initiative alive?
3. How do you get some people to be happy in roles where they have to specialize in getting appropriate conditions for good work of others in the organization and in this indirect way make a significant contribution?
4. How do you get the right type of recruits from high school to enter the profession? Should summer openings be made for high school students in professional offices? Should appropriate competitions be conducted among high school students and be supervised by professional people with really significant awards attached?
5. How do you educate selected people outside the profession, say municipal officials, so that they have sufficient understanding to make sound decisions bearing on professional matters, and so that when democratic processes give them final authority, they can counteract disfunctional influences?
6. How do you give people the broad training they need today to understand society before or when they specialize?
7. How do you get professional people to set and agree upon goals so that the means by which to secure them can be explored?
8. How do you find quickly and fully the needs of the client?
9. How do you get agreement that certain practices common in the profession are not in the best interest of the profession as a whole, and curtail them?
10. How do you get professional people with common in-

terests to talk problems over in an informal and unofficial atmosphere?

*The experience of other professional groups suggests that such a study, especially a self-study, would be very rewarding.*

By what methods in general might a study of the architectural profession be undertaken? It should be national in scope, certainly with provincial organizations responsible for a report on their own members, but nevertheless following the same approach in each case. Appropriate outside consultants could be used to advantage in the design of the study and to supervise its execution, but for best results architects themselves should conduct and coordinate the study, as they alone have experience with the situations in question. Committees and sub-committees could be set up with specific tasks on which they would report. No doubt many difficulties would arise due to lack of agreement and lack of prior communication, but they would occur within a framework that exists to promote communication for this very reason.

What general benefits might one reasonably expect to emerge from a study of this kind? I hazard to suggest only a few obvious ones.

1. Perhaps it would be found that there is a general need for the use of local economic forecasts to give perspective when deciding upon the suitability of immediate recommended actions, and to act as a basis for deciding upon alternative solutions. Some specialists feel forecasting can be done today with considerable accuracy and that at least certain developments can be ruled out as highly unlikely.
2. Perhaps the need would become more apparent for considering communities as functioning wholes made up of housing, factories, traffic arteries and services as interdependent parts rather than each seen as isolated entities.
3. Perhaps the value of steps to ensure reasonable stability for investments in buildings and land would become more apparent, and thereby give a firm basis to the technique of zoning.
4. Perhaps, on a more fundamental level, reasons would emerge why limits in the public interest should be set on the returns from speculation on land, and thereby achieve the common good as well as societies do who uphold the principle of the exclusive public ownership and use of land.

## PLANNING

BY RODNEY E. ENGELEN, MINNEAPOLIS

*"The Fields of Mutual Contribution and Responsibility"*

I NOTICE IN THE ASSEMBLY PROGRAM that your "Committee of Inquiry into the Design of the Urban Environment" has travelled some 18,000 miles recently in an effort to develop Institute policy on suburban development. Unlike this committee, I have not had the advantage of listening to some 250 witnesses and reading some 450 briefs, but I too have been travelling. Monday of this week I returned from a trip that took me some 5,000 miles through a dozen major and unnumbered minor American cities. In the process, I talked to quite a few

5. It might become clear why home builders, say in a given area, should group together and hence be able to use and pay for architectural services, and thereby make it possible for middle income families to enjoy the benefits of architectural services of a high quality.
  6. Architects might discover it is only possible to render the type of service needed in the future as a member of a highly specialized group.
  7. Architects might see the need of finding out what kind of public service they can best provide to those who want and would benefit from their help but who can not pay for it, just as lawyers have done through their Legal Aid Societies.
  8. Architects might feel the need to devise a special solution to the problem of meeting the housing requirements in the best possible manner of people with lower than average incomes and tastes in housing standards and community services.
  9. Architects might come to see that they must work more closely with all political parties, and hence the government of the day, and make available extensive technical assistance if they want to realize their own broad professional objectives.
  10. This above action might require participation in programs designed to develop public taste, for instance, for types of housing little known about on this continent but used to advantage elsewhere.
  11. Architects might come to see the need for a broad education, especially in the Social Sciences, for some people before professional specialization in order to enable them to understand and deal with the real forces at work in political life that often control not only what architects must do but governments also.
  12. Finally, architects might come to realize the social inadequacies of some of their work, which they planned in ignorance of actually felt public needs, and to see the necessity to use the services of others who specialize in understanding public opinion and social behaviour.
- Without doubt architects have great accomplishments to their credit in the past. As good though their training and practice has been, there is abundant evidence that it tends to be too narrow for the needs of today and tomorrow. With organized action however, the future may be freed of some mistakes and inadequacies of the past, and ever greater total community welfare achieved. Architect and community planner must work closely together in the future, and both must work with specialists in the social sciences.

planners, architects and landscape architects. I also talked with persons who are engaged in research on the effect of environment on human beings. But most of all, I noted my own reactions to what I saw.

I would like to spend the next few minutes giving you my reactions and conclusions as they relate to the subject of the mutual responsibility of the architect and the planner.

These fall into three major heads:

First, I believe that if one is to deserve the title “professional,” in any field, he must take on a responsibility in his work which exceeds all others. It must exceed the need to earn a living, to have a particular status or to hold a particular job. This responsibility must assume the status of a moral principle which cannot be violated without jeopardizing the integrity of the individual involved and his claim to the title “professional.” In other words, to be a professional one must be a moral human being.

Second, the chief area of mutual responsibility of the planner and the architect (and I would add the landscape architect) is seeing to it that the element of *aesthetics* is given full weight in the building of our cities. Yes, we’re all responsible for assuring that the sciences of economics, sociology and engineering are applied — but we’re not alone in this; others also share this job.

But so far as I can see, architects, planners and landscape architects are the only “professionals” who claim a full-time, working responsibility for the aesthetic impact of our environment.

The planners’ concern is, by definition, comprehensive and must involve a compelling interest in the aesthetic impact of cities. And, while the architect’s *professional* responsibility may not be so broad as to include the aesthetics of the city as a whole, if nothing else, his interest in the beauty and proper functioning of individual buildings should drive him to it.

*Urban development is truly one field in which the whole can either greatly exceed or fall far short of the sum of its parts.*

Let me give an example.

On my trip, I saw dozens of beautiful buildings ruined in their appearance by poor planning. I also saw — notably around the squares of Savannah, Georgia and in many small towns — potentially charming town plans ruined by architecture which was gaudy, out of scale or poorly placed. But I also frequently saw pieces of individually good architecture fighting one another, clashing in their scale, their lines, their color and materials, making the overall scene one of garishness and conflict. Such scenes not only do not add to human enjoyment but, I submit, they represent an absolute subtraction — a taking away of the serenity and saneness of life which should be the right of every human being.

The fact that good, individual architecture is not necessarily essential to beauty (and does not necessarily create beauty) can be affirmed by looking at areas which are pleasurable, as well as those which do not please.

Some of you may have heard of the Marine Studios on the coast of Florida, where dolphins have been taught to perform and sea life is on display in huge tanks. This is just one of a number of such plainly commercial attractions in Florida. The buildings at Marineland are nondescript; although I saw them only eight days ago, I can’t remember an exterior feature of any one of them.

But I do remember that Marineland is about the only completely pleasant, commercial roadside stopping place we found in over 2,000 miles of driving. Buildings are in

harmony with each other; they and auto parking fit into the landscape and do not clash with it; trees, walks and drives are in scale. Although there is no doubt that the area could have more beautiful buildings, the overall impact stands out like a ray of sunshine from a clouded sky.

Contrast this with other roadside development outside any city you may be familiar with.

Along the same lines, John Ely Burchard, Professor of Humanities at MIT, has said:

*“A great urban aesthetic arises not from a cluster of architectural chefs d’oeuvre but from a sensitivity on the part of each successive builder to the amenities that are already there. No good architect (and I might add “planner”) would dream of destroying the beautiful natural terrain of an isolated site but would, instead, try to marry his building to the land and the vegetation, and the water and the sky. It is easier to forget and it is common to forget that there is also an urban terrain and that this, too, is entitled to respect, even to love. Urban aesthetics are not to be made over as lightly as ladies clothes.”*

This brings me to my third point. Observation, discussion and wide reading indicate that we are ill equipped — as planners or as architects — to discharge our responsibility for civic aesthetics. The literature of both fields contains much ranting and raving and moaning at the bar (somewhat like these comments) over the “terrible present state of affairs.” But, it sheds little light on “how we can do things better.”

My dictionary tells me that art is “production according to aesthetic principles.” If planning and architecture are arts — and they usually claim to be — then they must, presumably, embrace a body of principle.

Where, I would like to know, are the clear, strong statements of principle which can serve to guide urban design? So far as I can see, all that most of us know or can readily learn about civic design and the massing of groups of buildings, is covered in four or five clichés. Somehow we feel we have done our job if we have provided a setback, some lawn and a tree. Or, if we’re planners, if we have advocated a greenbelt or a shopping mall or a plaza or sign control.

*One thing which both architects and planners, individually and together, must do is to develop a keener knowledge of what, in fact, good civic design is.* We must develop a body of civic design principles comparable to those which exist for every other art. Just as a painter must learn the nature of his paints or the sculptor those of stone, we must develop a better knowledge of the materials of civic design: streets, green spaces, bluffs, valleys, focal points, etc. We must learn how these can be handled to create a more beautiful urban landscape. We must learn how to be sensitive to the urban terrain. We must somehow take over and civilize this no-mans-land of aesthetic knowledge. Until and unless we do this we shall fail in our claim to the title of either professional architect or professional planner. But more importantly, if we fail, our civilization will also fail to provide the serenity of life which only a sensitive, broadly aesthetic urban environment can give. ♣



*Syndicate 8 — Registration and Codes of Conduct*

## SYNDICATE DISCUSSIONS

### THE PROFESSION AND THE PACKAGE DEAL

Syndicate Chairman, Alvin Prack, Hamilton — Rapporteur, Cecil Blankstein, Winnipeg

This subject is quite difficult; in fact at last night's meeting after three and a half hours the participants were just getting to understand it. The Professional Usage Report expressed serious concern of most of the Provincial Associations of the inroads the package dealers are making. There was no general agreement to define the package dealer and it was felt that the Package Deal Committee should make a study and report on the varieties and forms of package dealers, some of whom use architects and pay full fees to the extreme case where they only employ draftsmen.

Opinions were expressed that lease-back financing is becoming more and more important in the present economy for two reasons: 1 Releases capital funds for operating purposes; 2 Allows larger and faster write-offs for income tax purposes than ownership of property. This is the tool that the package dealer is offering to the business world and he is selling this feature through his advertising.

The architect should be familiar with lease-back financing. Strong opinions suggested that the complete architectural services, if properly presented in terms familiar to the businessman, can keep the work in the architect's office.

Competitive bidding, whether handled through tendering to general contractors or on a fixed fee basis with the general contractor and tendering the sub-trades on a competitive basis on carefully produced plans, will result in lower construction costs than that of the package dealer. Package dealers presently in financial difficulties are seeking to tender. The opinion is that they should be allowed to, as they tender high. This can be used as a selling tool against them.

In addition to the profit that the package dealer makes on construction, is his profit on financing. This financing is based on the credit of the client. When the prospective client is made aware of same, he will, or should, take full advantage of this credit in the lease-back sale market, eliminating the package dealer's profit.

The package dealers have become quite competitive among themselves. Since their basic costs of material, labor

and their financing are the same, the determining selling point that is often used in selecting the package dealer is his design quality and the ability to plan with efficiency. Architecture, therefore, becomes one of his important selling tools and we as architects should not sell that service at bargain prices.

There are hundreds of real estate offices and entrepreneurs throughout Canada compared to a relatively few package dealers. All these offices and individuals require the experience of architects and architecture to develop their projects. We can strengthen their hand by educating the public of our service and by broadening our knowledge of the business world of real estate and finance.

An important selling point of the package dealer is speed of construction. Again, the architect should be familiar with the machinery of the selection and appointment of a contractor on a cost-plus percentage or fixed fee basis.

An opinion was expressed that our fee structure has priced ourselves out of the housing and apartment field and that we are now pricing ourselves out of the industrial work. Some felt that the architect can work with the package dealer and that it is not contrary to professional ethics. Partial fees, in some cases, were thought to be essential as it was felt that in some cases there is duplication of the service that the package dealer is providing. However, there was a definite opinion expressed that the architect can compete on his own terms by being a better businessman and offering a more complete and better service.

It was recommended that the Package Deal Committee should distribute to the architects research on the various forms of package deals and information on lease-back financing, and that the architects should be reviewing and improving the standard of service and completeness of same in their own offices. It was also recommended that since architects can not advertise, and in the nature of their business they lack the means of contact with the client who desires to build, the RAIC should seriously consider filling this void and making the client familiar with the vast amount of experience and services available to him.

### THE PROFESSION AND EDUCATION

Syndicate Chairman, John Davies, Vancouver — Rapporteur, James Donahue, Winnipeg

It is poor policy to make apologies to begin with, but needless to say in a brief half hour we didn't get too far. Here are a few of the pertinent points that we made — in one or two cases their interpolation was my own. I think that one of the principal points made was the lack of understanding between the practitioners practicing the profession and the teaching end of it. It is very difficult for us to understand one another because our time spent together and our experience together is somewhat limited, as you would all agree. However the feeling was that the universities — and incidentally some of these remarks were made by university men, but they were

not counteracted by practitioners and I will leave them as they stand — that the universities are out of step, possibly in the practical field and in some cases in our ideals and approaches to architectural problems. I can say personally that I know of no other group in professional fields today that is going through more soul searching than the schools of architecture, because of the tremendous change and transition that we are all aware of.

Now in a practical vein, the next point I would like to make is that if we assume our practical courses in a narrow sense are taught — and they are taught to a greater or lesser

degree in various schools — we must make a very clear distinction, that we can in no way establish the procedure of the practitioner who is out in the field. This is false and a tremendous pretence on the part of any particular school. However some points were made. One involves the possibility of continuance of architectural education, or the broadening of the continuity, you might say, in the extension and control of the continued training of the chap graduating beyond the time he gets into the office. That was the idea of the log book in which, whether it is a one year, two year or three year system for a man trying to get his licence, is kept, in conjunction with the authorized signatures, the work done in various offices. It is of benefit in that for example, he can go to the boys and say "Look, I have been drawing these fiddly details long enough. How about getting to structure and

#### THE PROFESSION — RAIC-INSTITUTE RESPONSIBILITY

Syndicate Chairman, George Masson, Windsor — Rapporteur, Peter Thornton, Vancouver

As you can imagine, the subject that we had to discuss was a very large one, and our chairman very wisely tried to focus our attention on what we could in a very short time consider and what appropriate action we could take. He outlined the Institute's responsibilities in the matters of discipline, professional protection, watching what is going on in the public press, etc., and what kind of constructive assistance the RAIC could make to provincial associations and the need for encouragement of study committees and the like. He then reviewed very quickly the Institute's responsibilities to the public, but unfortunately we did not have time to develop this half of the discussion.

In detail, the things which I think will interest all of you are these: discussion brought out the fact that the RAIC had retained a management consultant to assist during this period of expansion of central facilities in the RAIC, and that his advice is being followed. To date about 90 per cent of his recommendations have been implemented and that continuity of effort on the part of the central staff is assured.

#### THE PROFESSION AND THE FEE STRUCTURE

Syndicate Chairman, Neil Stewart, Fredericton — Rapporteur, John B. Parkin, Toronto

This is a subject, if I might add a personal note, which is very near to my heart at the moment, as I am chairman of the committee dealing with this subject in the Province of Ontario. We started out discussing rather briefly some of the fees and the changes in fees which were being made by various provincial associations, but this seemed like something that might have gone on five months and not too much accomplished, and so the discussion took a change in another direction when the question was asked — When we talk about a schedule of fees, do we think about a minimum schedule of fees which should be enforced by the Association, or is there any question in the minds of architects as to whether there is anything undignified or immoral about having such a minimum enforced schedule of fees?

So we proceeded to discuss the moral questions involved in setting minimum fees. One of the members of the discussion at that point suggested that we really needed to evolve a philosophy to direct us in the proper paths of rectitude in this connection. The statement was made that the setting of a minimum fee is necessarily undignified and should not be maintained as a basis of architects' scale of charges. In contradistinction, the idea was put forward that most codes of ethics that architects work under in every province have something to the effect that no architect should solicit work or use any means which should prove to be of unfair advantage in soliciting work when he is competing with another architect. So where is the moral point involved? The question is what is the proper thing for the profession to do, what is the proper attitude to take?

extras for a while." There was a feeling that there were more areas, those I call the selective areas, where it would depend on the judgment of the staff and the architects at large as to what the practising architect can contribute. Professional practice seems to be the one field in which nearly all of the schools are using outside help.

The concluding point, which is my own, is the fact that there must be realization by the practising and by the teaching and academic worlds that our aims are one and the same, but we must respect our own individuality and understand our problems, and I think this can only come about by a more constant liaison. These techniques were not discussed, but I think it is very important to realize that we have individual identities although we are a many-phased operation.

Another point that came out as a recommendation was that the value of the legal information which originates from Ontario is most appreciated across the country and that ways and means should be found to increase this effort and if possible to give it wide distribution.

There were two resolutions: first, that a unified and detailed code of ethics be drawn up by the RAIC and, when agreed to by Council, its adoption by all provincial associations be urged. I do not think I need go into the reasoning that prompted this resolution. Secondly, it was resolved that a joint committee of the RAIC, the Engineering Institute, the Society of Physicians and Surgeons, the Bar Association and other professional bodies, as long as they are truly professional bodies, be formed on a national basis for the purpose of discussion of matters of mutual interest, and that this idea be recommended to all provincial associations for their adoption on a provincial level. Such a committee has in fact been in operation in British Columbia for the past year. It has been of great use and it is highly recommended.

First of all, in order to keep the thing on a scale where we could really deal with it, it was decided that two particular phases should be set aside — those having to do with multiple housing and government commissions. These, we felt, were something which required separate and special rules and separate and special consideration. They would inevitably form a part of a schedule of fees but should be dealt with separately.

To illustrate how far from a standard fee schedule we can get, one of the members from Toronto indicated that it had come to his attention that there was a group in the Toronto district quoting fees for architectural services at 20 cents per square foot. Later he heard that this had been reduced on a bargain basement basis to 19 cents per square foot. These were architects and this shows just how low this type of "selling" can sink if we do not take the necessary steps to control it. The time has come to do something definite in dealing with this particular matter.

It was also pointed out that the minimum fee is a form of discipline used to produce a general upgrading of architects' services, the one means that the ruling professional bodies have to control their membership. If no minimum fee schedule were enforced the public only have the opportunity to complain of definite incompetence or inferior architectural services, for in effect they were not buying their services in accordance with any designated schedule of fees. The question of course of partial services and "partial partial" services came up as of course we all know this is the weakness which enters into any schedule of minimum fees which may be established. It was pointed out that it allows the

promoter and the package dealer to trade on the good reputation of the architectural profession at a very nominal and inadequate charge. Any of us can realize, if partial services were abolished, the tremendous implications this would have in dealing with this problem of the package deal. Real co-existence could be established if partial services were not allowed.

Partial services originally only applied to projects which did not proceed. Having hashed this thing back and forth, the best we could do is put forward one or two resolutions.

## THE PROFESSION – SOLICITING OF COMMISSIONS

Syndicate Chairman, Gerard Venne, Quebec City – Rapporteur, W. G. Leithead, Vancouver

The participants in this syndicate prepared themselves for discussion in an atmosphere charged with tension and apprehension.

After a capable introduction of the subject by the chairman had taken place and those present cautiously acknowledged the fact that they were, after all, brothers, as it were, a motion was put forward. Quite properly the chairman assented to the procedure allowing a vote to be taken as to whether any form of solicitation whatsoever should be permitted. The result of the vote indicated 14 in favor of some form of solicitation and 7 against any form of solicitation.

The meeting then proceeded to discuss some of the more colorful methods of securing clients. No one, it was noticed by this rapporteur, suggested riding fire engines to a place of conflagration – a method which Sir Basil Spence recalled in his luncheon talk – nor did anyone suggest an amalgamation of the professions of architects and arsonists as an effective means of both rebuilding our cities and securing clients, in spite of the fact that this latter method, with the enemy as a co-partner, apparently was extremely effective in Europe, as an aftermath of the last international altercation.

We did, however, hear of some very novel forms of solicitation. For example, one firm owns a Volkswagen van which is equipped as a mobile sample room. With this conveyance they visit prospective school or hospital clients and by inviting the building committee into the back of the van, can practically build the proposed project in model form for the committee's edification. Another firm on this continent (fortunately not in Canada) has employed the talents of animated cartoonists as a method of graphically presenting their talents to prospective clients. Perhaps the most subtle approach suggested was that of displaying an intense interest in the vocation of a person whom you believe is on the verge of erecting a building. This interest should continue for a suitable period, preferably over cocktails, until the psychological moment has arrived, when it can be casually mentioned to your listener that you happen to be an architect. This approach, it appeared, had been used quite successfully by at least one of the participants in the discussion and his frankness in presenting this method was generally appreciated. It appeared that the group were generally agreed

## THE PROFESSION AND ALLIED FIELDS

Syndicate Chairman, Dr F. Bruce Brown, Toronto – Rapporteur, K. C. Stanley, Edmonton

Our Chairman assisted a great deal in organizing this subject and itemizing those points which we could discuss to advantage. We managed to cover about half the items.

Since the services of the consulting engineer is an allied field, it represented the main topic of discussion. When should the engineer be brought in and how? It was agreed that engineers should become involved in any project as soon as possible, that is, at the commencement of sketches. In some cases it may be necessary to consult the soils engineer before the sketches may even commence. Though many aspects were discussed, the question of coordination between the structural and mechanical engineer and the architect was primary. The engineer cannot become an integrated

The first was passed almost unanimously: that an enforced minimum schedule of fees is desirable in the practice of architecture.

The second was unanimously adopted: that the RAIC recommended a minimum schedule of fees including per diem charges to the various provincial associations for their adoption.

It was further suggested that in the adopting of such a schedule of fees that study should be given to the moral and ethical problems involved in their establishment.

on the following several points:

1. Brochures produced by individual firms should be an accepted method of solicitation provided that the brochure is approved by the Provincial Council, is not distributed wholesale and if its contents are objective rather than self-laudatory.
2. Letters to prospective clients should be permitted providing that they also follow a form approved by the Provincial Councils.
3. The profession as a whole, both the RAIC nationally and Provincial bodies locally, should pursue a policy of informing the public generally concerning the duties and responsibilities of architects and the advantages of retaining an architect for building projects.
4. Government agencies responsible for the hiring of architects should invite letters from firms in their jurisdictional area. These letters would provide to them a file record of the experience and composition of architectural organizations.
5. The profession generally should attempt to be as altruistic as possible in their approach to solicitation. As individuals they should try to assist their fellow practitioners, even to the extent of stepping down and promoting any firm better fitted for a particular project than themselves. In this manner they would be acting as members of a profession in the best traditional manner.
6. It was recognized that within our present method of practice, we are faced with competition from the so-called package dealers and real estate entrepreneurs. Therefore, the subject of solicitation is one which should receive constant study by the RAIC, bearing in mind the most important fact, that we must keep in phase with the demands of contemporary business.

The meeting was in general agreement in recognizing the fact that solicitation exists in one form or another. As a body, the RAIC should ensure that solicitation by individuals must reflect a collective conscience and in so doing, do nothing which could be considered harmful to any recognized member of the profession; rather, an effort should be made by all practitioners to elevate the profession as a whole.

part of the team unless he is brought into the project at the very beginning. This will assist considerably in achieving this desired coordination.

The larger office has an advantage because staff is immediately available to work on any part of the project and because engineering consultants are physically adjacent; it is a simple matter to set up communication. We must be wary of assuming this knowledge of all architectural aspects. If a close check is not maintained he will undoubtedly put the clock or fire alarm right in the center of the mural.

Considerable awareness of the necessity of close coordination may be increased by making sure that the contract between the architect and the consulting engineer stipulates

that the engineer is absolutely responsible for that portion of the work which he undertakes. In other words, in his contract with the architect, it should state specifically that the mechanical system will work, the electrical system will work, and if there is conflict or confusion, it is his responsibility for that portion of his own work which is involved. Emphasis upon this point will insure that when there is conflict between the consulting engineer and the project architect, that the matter is quickly brought to a head and settled.

Although up to this point only the usual consulting services, structural, mechanical and electrical have been mentioned, acoustical should be included. The same requirements are applicable. Acoustics are of primary importance in the basic design of churches, auditoriums, etc. For example, the location and distribution of the pipes of the organ should be known by the designing architect as well as how the acoustic problem of combining musical programs with vocal programs can best be solved.

Another allied field which is assuming greater importance daily, namely architecture and the arts, was discussed to some extent. How can the architect coordinate his work with that of the artist? What is his responsibility to the client as well as the artist? Most architects feel a lack of public education in the use of artistic expression in modern buildings but it was agreed that this situation is changing more rapidly than most architects realize. The supporters of

modern art, some architects, and the artists have had their case for the modern approach to art and sculpture accepted by the public. Possibly many architects are dragging their feet by being excessively cautious in trying to relate architecture to artistic expression. Those architects that have had good experiences in encouraging this type of work have related the artist to the project from the very beginning. They have made him familiar with the objective and in many cases enlisted his support for a project that has some experimental nature. This cooperation gives a much better opportunity for success.

Mr Cerny of Minneapolis, who joined our group, suggested that this meeting nominate Dean Binning of Vancouver for the position of Artist Coordinator for Canada, who might arrange to have financial assistance from the Rockefeller Institute or the Canada Council, and that he prepare a list of artists and sculptors who appreciate and understand the problems of the architect. Mr Binning, however, suggested that any available money might be better used through the art schools for training young artists to have a more complete knowledge of architecture and the problems of the architect. He praised the Winnipeg School of Art, which does arrange to have their students visit the School of Architecture during each term.

Since no motion was made or decision on this final matter, it is presented as a recommendation.

## THE PROFESSION — REGISTRATION AND CODES OF CONDUCT

Syndicate Chairman, Eric Haldenby, Toronto — Rapporteur, H. H. G. Moody, Winnipeg

The beginning of the discussion included a review of the broader aspects of the young architects' education because we felt this had much influence on his attitudes to codes of conduct, and overlapped in the matters pertaining to registration.

It was agreed by all that the five Canadian schools of architecture were doing an excellent job already, but the Chairman invited any suggestions to improve, lengthen, or shorten the curriculum. It was generally agreed that all schools were somewhat short on the "humanity" subjects and could well expand such subjects as English, History, History of Architecture and Art, Economics, etc. It was noted the UBC have already changed their curriculum to this end in that they now require three years in an Arts course before entering the school of architecture. There was general agreement that it is difficult to lengthen the present courses in architecture in years, therefore, in order to add more time for the "humanities" it would be necessary to reduce time in some other subjects. It was suggested that less time could be given to teaching such purely technical subjects as "building construction details" and "production of working drawings" and perhaps "furniture design or industrial design". The former can be better taught (and learned) in an office after graduating — and the latter are rather specialized subjects which could be taken later by those few who may lean that way. In short, only those subjects should be taught at university which cannot be obtained elsewhere, and the technical things might be better taught in offices by practicing architect employers. If this were done it was then suggested that the length of period of apprenticeship in an architect's office could be lengthened as a requirement before registration, rather than lengthening the course at university.

The subject of post-graduate study and refresher courses in a university extension service was discussed. Most of those present did not agree with specializing in any one branch during an undergraduate course, as this could better be done by post-graduate study; it was generally agreed that in the undergraduate years the student should learn the essentials of all phases of an architect's practice. Refresher

courses on specialized subjects were to be highly recommended if they could be organized under university extension services, or might possibly be organized and taught at night classes by practicing architects. Mr Haldenby suggested that some offices may consider subsidizing some of their brighter young men to help them with either post-graduate work or these specialized courses.

On the subject of "registration" — we examined the comparison among the various provinces in regard to their standards of qualification. It was found there is a considerable variation, and the general opinion was that we should strive for standard and high requirements for all provinces of Canada. Some provinces require an oral examination, some a special exam in professional practice, some both. BC has the oral exam requirement now and Nova Scotia is considering this as a mandatory requirement. Mr Lort of BC quoted some statistics in the results of recent exams to the effect that only 18 had passed out of a list of 30 candidates, which rather pointed up the need for such tests.

Generally the pro-practice exam is only required of those who come in from foreign countries, or from those writing exams under the apprentice system, and not from graduates of either of the five Canadian schools of architecture. In order to bring about an equally high standard for registration for all provinces alike, this must be by agreement between all the provincial associations; it was recognized that the RAIC cannot do this within its constitution.

Mr Lester Page advocated a degree in architecture from an accredited university school of architecture as the final aim for all provinces before registration.

The problem of inter-provincial movement of Canadian architects and the influx of foreign architects into Canada was mentioned as one of the big problems of registration boards. For instance, where a Canadian from a province which has lower standards for registration moves into a province which has higher standards, this always leads to difficulties as does the problem of appraising the qualifications of a foreign architect who immigrates into any of the provinces. Ontario probably has the greatest experience of this, with BC the next greatest. Ontario now puts the onus upon the applicant to produce: (a) The exact syllabus which



he studied (and an explanation of it); (b) his marks attained (and proof); (c) examples of his own work; (d) testimonies from previous offices worked in; (e) personal interview and if necessary a pro-practice exam.

On the subject of codes of conduct we found that all provinces do not have a written code of ethics. We were all agreed that all provinces should have a uniform and similar code, and perhaps this could be drawn up by the RAIC within their constitution, to become a Canadian Code of Conduct and Ethics. In any such code the negative items — “thou shalt nots” — are much easier to define, whereas the positive side is more difficult and vague, depending much more on the character and stature of the architect for its application. All of the previous discussion in regard to a broader general education will have a great bearing upon this latter side of applying a code of ethics. The matter of enforcing a code was felt to be much more difficult than

## THE PROFESSION AND RESEARCH

Syndicate Chairman, Howard Bouey, Edmonton — Rapporteur, W. G. Raymore, Toronto

The syndicate considered the general field of architectural research and agreed that it was concerned with any of the problems of an architect's work, whether the practical problems of building construction and material use, or those problems connected with the most abstract factors of architectural aesthetics. In between are all the problems of planning for use, the construction or reconstruction of the urban environment, and the related disciplines of sociology, physiology, psychology; whatever, in fact, touches on human well-being.

The work of the Standing Committee on Building Research, who spear-head the RAIC's attack on these problems, was considered in order to attempt to see the road ahead. It was pointed out that the Technical Sub-Committee, consisting of Sam Gitterman, chairman, Stirling Ferguson of DBR, Watson Balharrie, with Robbins Elliott as secretary was meeting in Ottawa regularly, to consider action on problems referred to it by individuals or organizations. The Sub-Committee proposes to meet now at two-week intervals — a heavy load, it was agreed, for busy people to take on. It can be understood why Chairman Gitterman in his report said plaintively that “we need more architects interested in research”.

Some of the activities of the Sub-Committee were listed as follows: (1) considered again a questionnaire to be sent to all agencies or bodies who may do research, or are suspected of harboring ambitions in this direction, to discover what is taking place in the building research field; (2) cooperated with DBR in examining the drafts of the “Building Digest” inserts now appearing in the *Journal*; (3) composed and published a letter in the August *Journal* asking architects to write them about their building problems, with little response (conclusion — architects have no problems); (4) investigated the Building Science abstracts of building literature published by the Building Research Institute of the National Academy of Sciences, U.S.A., and came to the conclusion that RAIC members may be interested in them, and will do something about letting the membership know; (5) arranged with Walter Bowker to published DBR library accession lists; (6) discussed the problem of manufacturers' literature and the matter of a Building Products Register, having in mind the American publication of that name; (7) hope to start a column in the *Journal* dealing with building problems that architects have encountered and solved (or fumbled); (8) considered the publication of planning data dealing with the needs of paraplegics, at the request of the Canadian Paraplegic Association; (9) established a sub-sub-committee, including one member from the CCA, to produce a study on standard methods of cubing buildings, the preliminary draft to be ready in a few months; (10) finally,

the drafting of one. In connection with breaches of the code, these fall into two categories: (a) complaints from one architect against another; (b) complaints laid by the public — that is a client against his architect for some breach of practice.

The first category is more easily dealt with, because the latter often leads to litigation, bad publicity, and considerable expense.

Advertising practices were being discussed when the time was up — and during the short discussion it was agreed that any active or blatant self advertising was not to be tolerated, even when the press took the initiative. The individual architect should not cooperate in giving a big story to the press to his own aggrandizement. Architects could well take a page from the medical book, where it is definitely unethical for a doctor to have his name connected with some big piece of medical publicity. We should concentrate on publicity for the profession, rather than for the individual.

a topic which looms large in the Building Research Committee's thinking — the performance of buildings. The committee has received a carefully prepared preliminary report from R. F. Legget on what is known on this subject from scanning reports from eight different countries. The trial draft will be ready, it is hoped, by September.

While it was agreed that money was important to research, it was asserted by several members of the group that money was available to support worthwhile proposals. In fact, neither money or ideas were in short supply; what was needed most of all were people who wanted to do architectural research. Where these people were to be found was considered at some length. It was maintained that architects were doing research of a kind in their day-to-day work, but seem reluctant to write about their experience. Was it reluctance, or complaisancy? Or just over-work that held them back? Architects should write up and talk up their experiences. They were the best people available to pursue a program in assessing the performance of buildings.

Again and again the statement recurred: architects are reluctant to swap ideas. It was pointed out that the profession does not have a body of research material as other professions have; medical and legal groups were mentioned. It was stated that the medical profession had hired three doctors to read 1,200 articles on staphylococcus infection and record their findings for fellow practitioners.

The second group who came in for scrutiny as potential researchers were the university architectural school staffs. Of whom, said a practitioner, should we expect more in research than the professions? It was considered that new graduates might not make the best researchers, but after experience in the field of practice these could move into the schools to do teaching and research. How should research be started and fostered in the Schools? There were two ways of doing this: first, to appoint a research professor who would organize research, and (it was hoped) stimulate interest among staff and students, or alternatively depend on the present staff members to interest students to the point that post-graduate research might flourish. Several suggestions were made: that school staffs divide their time according to their capabilities and interests, and that they be encouraged to engage in research; also that the methods of research be taught to students.

Finally, the RAIC Standing Committee on Research was urged to take under consideration the means of promoting an increased interest by the architects in research, and an increased awareness of their responsibility for the exchange of information. The Schools of Architecture were urged to give more consideration to research techniques in under-graduate work, with an increased tempo in staff participation.

## REGISTRATIONS

### Manitoba Assn of Architects

February 4, 1960

**Chan, (Mrs) Diana Ming-Teh, B.Arch.** (Man); No. 36, St Elmo Apts., 177 Colony Street, Winnipeg 1, Man. (Green Blankstein Russell & Associates, Winnipeg)

**Herman, Charles Jack, B.Arch.** (Man); 318-81 Roslyn Road, Winnipeg, Man. (Pratt & Lindgren, Winnipeg)

**Ratray, Michael David, B.Arch.** (Man); 65 Dewdney Avenue, Winnipeg 2, Man. (Smith, Carter, Searle & Associates, Winnipeg)

March 3, 1960

**Jakab, Stephen J., Dipl.Arch.Ing.** (Budapest); 719 Jubilee Avenue, Winnipeg 13, Man. (Kurnarsky & Weinberg, Winnipeg)

**McFeetors, M. James, B.Arch.** (Man); 300 Rosedale Avenue, Winnipeg, Man. (Geo. A. Stewart, Winnipeg)

**Wilson, William B., B.Arch.** (Man); 38 Rowand Avenue, Winnipeg 12, Man. (Moody, Moore & Partners, Winnipeg)

May 19, 1960

**Mencik, Ivan Ferdinand, B.Arch.** (Man); 10 Barberry Road, St Boniface, Man. (Pratt & Lindgren, Winnipeg)

### Nova Scotia Assn of Architects

May 11, 1960

**de Silva, M. Walter Piyadasa, Dip.T.P.** (Lond.), ARIBA, AMTPI, (London); 193 Oxford Street, Apt. 7, Halifax, N.S. (Assistant Planner, City of Halifax, N.S.)

### Alberta Association of Architects

June 15, 1960

**Steel, John, ARIBA,** 806 Rideau Rd, Calgary, Alta. (Commissioner of Works and Utilities, City of Calgary)

### Architectural Institute of British Columbia

May 3, 1960

**Cochrane, John Andrew, B.Arch.** (UBC); 2012 Allenby Street, Victoria, B.C. (Dept. of Public Works, Provincial Government of British Columbia)

**Hartley, Gordon D., B.Arch.** (UBC); 318 Bernard Avenue, Kelowna, B.C. (Gordon Hartley, Architect)

**Hodgson, Alan James, MRAIC, MAIBC,** #2-212 Douglas Street, Victoria, B.C. (Dept. of Public Works, Provincial Government of British Columbia)

**Howard, Ronald Bassett, B.Arch.** (UBC); AIBC Award (UBC 1957); #6-1330 West 14th Avenue, Vancouver, B.C.

**Jones, Norman Sidney, B.Arch.** (UBC); Truss—B.C. Coast Woods Prize in Eng. 1st prize 1954, 1955; Factory—Atlas Asbestos Co. prize 1954, 1955; University Women's Club 1955, 1956; Plastering—Northwest Plaster Bureau prize 1957; Postgraduate—B.C.E. Fellowship 1959; 2574 Vine Street, Vancouver, B.C. (R. William Wilding, D.A. (Glas) ARIBA, MRAIC)

**Le Mare, Procter Stanway, Dip.Arch.** (L'pool), ARIBA; 2361 Jefferson Ave, W. Vancouver, B.C. (John Roberts, Vancouver, B.C.)

**Lort, Williams Ross, B.Arch.** (Man.); 1909 West Broadway, Vancouver 9, B.C. (Ross A. Lort, Vancouver)

**Mann, Derek Spalding, B.Arch.** (UBC); c/o 923 Denman Street, Vancouver 5, B.C. (John Lovatt Davies & Partner, Vancouver, B.C.)

**Thomson, Ronald M., MRAIC;** 3082 West 26th Avenue, Vancouver, B.C. (Smith & McCulloch, Vancouver)

**Tofin, Frank Peter;** 240 McKessock Avenue, Richmond, B.C.

### Ontario Association of Architects

May 13, 1960

**Ballyn, William Sydney, B.Arch.** (Tor); Atlas Asbestos (First Prize); 6 Redwing Place, Don Mills, Ontario. (Burston, Wells and Tampold, Toronto)

**Christie, (Mrs) Audrey E., B.Arch.** (Tor); 1429 Woodroffe Avenue, Ottawa 5, Ontario. (Central Mortgage & Housing Corporation, Architecture & Planning Division)

**Dzwonnik, Romuald Ryszard, Dipl.Ing.** Arch. (Polish University College, Lond. Eng.); 476 St. Clair Avenue E., Toronto, Ont. (Marani, Morris & Allan, Toronto)

**Hadley, Glenn Ray, B.Arch.** (Tor); 6 Landseer Road, Scarborough, Ont. (Rounthwaite & Fairfield, Toronto)

**Jager, Wladyslaw Jerzy, Dip.Arch.** (Polish University College, Lond. Eng.); 82 Rivercrest Road, Toronto, Ont. (Gordon S. Adamson & Associates, Toronto)

**Maclennan, Neil Kirk, B.A.** (Arch. Yale 1953), B. Arch. (Tor. 1958), Arkkitehti Kilta (A.K. Helsinki 1955); Graduate Architectural Work Yale 1954, Tor. 1955, Cam. 55-56; 17 Lascelles Blvd., Apt. 1705, Toronto, Ont. (Somerville, McMurrich & Oxley, Toronto)

**Moffat, Donald Ormond, B.Arch.** (Tor); 10 Rosedale Road, Toronto, Ont. (Weir, Cripps & Associates, Toronto)

## COMPETITIONS

### Recreational Centre, Red Deer, Alta.

The City of Red Deer is sponsoring a one stage competition for a Recreational Centre and Recreational Building, open to architects registered in Manitoba, Saskatchewan, Alberta and British Columbia. The Professional Adviser is Peter Thornton and the Jury consists of Prof. W. Gerson, Prof. A. J. Donahue, A. Key, Director, Allied Arts Centre, Calgary, and J. Miller, Director, Red Deer Recreation Commission. Estimated cost of the building is \$500,000. First prize is the commission and a \$1,000 advance on fee; second \$500 and third, \$250. Opening and closing dates are July 1 and September 22, 1960. Programs are available from Professional Adviser, c/o City Hall, Red Deer: cost \$5.00 in advance, not refundable.

### Extension to 18th Century Library, Trinity College, Dublin, Eire

Trinity College, Dublin, has just announced an international architectural competition for the design of a \$1,400,000 extension to the existing eighteenth century library building on its campus in the center of Dublin. Under the chairmanship of Lord Rosse, Vice-Chancellor of the University, the following will serve as judges on the "panel of assessors": Keyes DeWitt Metcalf, Librarian of Harvard College and Director of the Harvard University Library; Sir Hugh Casson, Professor of Interior Design at the Royal College of Art, London; Franco Albini, Professor of Architecture at Venice; and Raymond McGrath, Principal Architect of the Office of Public Works, Dublin. Details regarding submission of entries will be available in April and will be judged in November. First, second and third prizes in the sterling equivalents of \$4,200, \$2,100 and \$1,400 will be given. Including all fees, the first prize will be worth about \$65,000 to the winner.

Further information may be obtained from the American Council for Trinity College, Dublin, at 53 East 93rd Street, New York City 28.

### Ceramic Arts Competition

The Everson Museum of Art (formerly the Syracuse Museum of Fine Arts) announces the Fifth Competition for the Ceramic Arts as applied to architecture, to be held in connexion with the 21st Ceramic National, November 12, 1960, through January 8, 1961. American and Canadian artists are eligible. Entry blanks will be sent on request to 21st Ceramic National, Everson Museum of Art, Syracuse 3, New York.

# CANADIAN BUILDING DIGEST



DIVISION OF BUILDING RESEARCH • NATIONAL RESEARCH COUNCIL

CANADA

## Winter Construction

by C. R. Crocker

UDC 69.03 "324"

Winter construction is now an accepted fact in all parts of Canada. There are still, of course, some who believe that it is costly and produces low quality buildings, in spite of the many examples to the contrary which can be found in every part of our country. Winter construction is not new in Canada and much valuable experience has been accumulated over the years by contractors and sub-contractors. This experience, combined with new techniques and new materials which have come on the market in the past few years, has led to a marked change in the attitude of engineers, architects and owners toward winter building.

Larger building projects continue during winter months without interruption, and although it is still considered desirable to be "closed in" before the cold weather there are more and more cases where major projects are initiated during the winter. Most projects which are held over until spring are smaller ones which can be substantially completed in 6 to 8 months. It is here that one finds the greatest resistance to winter construction, due to the belief that although the extra direct cost of winter construction can be absorbed on a large job, it is just not feasible to provide the equipment necessary for quality construction and remain competitive on small jobs. In this note conditions under which winter work is carried on in Canada are examined, and the problems which arise and how they may be overcome are discussed.

It must be realized that winter construction is carried on under conditions that vary over a very wide range in different parts of the country. In the Atlantic Provinces, for example, the mean daily minimum temperature in January is +10°F. Storms with heavy

snow or rain and high winds are common. In southern Quebec and Ontario, minimum temperatures vary from 0°F in Quebec, Montreal and Ottawa to +15°F around Lake Erie. Storms are less frequent than along the coast, and although some areas near the Great Lakes receive heavy snowfall, precipitation is generally less and wind speeds lower than on the Atlantic Coast.

In the Prairie Provinces, the mean daily minimum temperature is -10°F in January and the average winter snowfall amounts to 40 inches. Although blizzards accompanied by high winds, low temperatures, and snow or drifting snow occur at intervals during the winter, there are only three days in January when precipitation amounts to 0.1 inch or more, and the hours of sunshine in the same period are the highest in Canada. Long periods of below-zero weather are not uncommon. In British Columbia, minimum temperatures vary from 10 degrees inland to 30 degrees along the coast. Precipitation is heavy, occurring mainly as snow in the mountains and as rain on the lower mainland and Vancouver Island. There is little sunshine, and precipitation amounting to 0.1 inch or more occurs, on the average, for more than 15 days along the Pacific Coast in January.

Winter, if defined as that period requiring special precautions to prevent damage by frost action or excess precipitation, varies from more than five months on the prairies to less than three months on the lower British Columbia mainland. Under average winter conditions, construction continues at a high level in all parts of Canada, but severe weather in any region will cause a stoppage of work unless adequate winter construction equipment is used. The effect of winter

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weather on various phases of construction is not always that which would be expected.

Excavation in deeply frozen ground is expensive. In most regions outside the Prairie Provinces and North Western Ontario, however, frost penetration under snow cover is seldom more than 1 foot. Where this is the case, excavation is not difficult and, in fact, is usually carried out with greater ease than in spring and fall because of the firm footing for equipment and trucks. Ground water levels are lower in winter except in coastal areas, and the sides of frozen cuts do not slump into the excavation. Where it is known in advance that excavation work will be carried out the depth of frost can be kept to a minimum by leaving the snow undisturbed or by covering the site with a layer of straw as insulation. As soon as an excavation is made, of course, steps must be taken to prevent frost getting into the ground. Again, straw is often used and can be re-used to protect footings after they are placed.

Protection for concrete is essential during placing and curing in any region where temperatures below freezing are expected. Good practice requires that the concrete be warm when placed and that it be kept above freezing until it has gained sufficient strength to prevent damage when frozen. Concrete which has attained a strength of 500 psi is considered past the danger stage, although it is still not capable of withstanding repeated cycles of freezing and thawing. Further gain in strength will depend on temperature and humidity conditions, but care must be taken to see that temperatures do not rise to a high level. Every effort should be made to keep the temperature of the concrete during the initial curing period as close as possible to the minimum curing temperatures. As given in the American Concrete Institute's "Recommended Practice for Winter Concreting", these temperatures are 70 degrees for three days or 50 degrees for five days.

The design of a building has considerable bearing on the ease with which it may be constructed in winter. Steel-frame buildings have advantage in that the structural steel may be erected in all but the most severe weather. Enclosures may then be attached to this framework to permit other phases of the

work to proceed. Reinforced concrete frame buildings require more care in that provision must be made to protect the concrete columns and beams until they have attained the desired strength.

Precast concrete is being used to overcome some of these difficulties. In fact, the growth of this industry is quite remarkable. One form of site precasting that lends itself to winter work is the lift-slab method of construction. Since all the floor and roof slabs are cast at ground level, enclosures are small and easy to heat. Wood-frame construction, widely used in residential buildings, is not affected by cold weather. In fact, the quality of such work is often better in winter since the frame is not subjected to wetting by rain as so often occurs in summer.

Regulations in general use in Canada and the United States which deal with cold weather masonry construction are based on the results of experiments carried out in the late thirties to determine the effect of low temperature on concrete. It was considered, apparently, that the mortar used in masonry construction would act in the same way as concrete. That this is not the case is shown by the many examples of fine brick masonry structures constructed during periods of violent weather with little or no protection. There are still cases being reported, however, where masonry has suffered damage and this damage has been blamed, rightly or wrongly, on the exposure conditions during winter construction. Until, therefore, more is known on this subject, it is advisable to require that bricks and mortar be warm when laid and masonry be protected from freezing for 48 hours.

Plastering often causes difficulties in winter because of condensation on cold surfaces such as windows, or even on exterior walls. High humidity conditions, particularly at temperatures of 40 to 50 degrees may prevent drying of the plaster; this greatly weakens the bond of the plaster to the base. After plaster has hydrated, which will be within 24 hours, ventilation must be provided to permit drying. If outside temperatures are below 40 degrees heat must be introduced to supplement ventilation. The temperature should be controlled, however, to prevent too rapid drying of the

plaster which may result in the formation of shrinkage cracks. A temperature of 65 degrees could be considered a desirable maximum level. Ventilation should be so arranged that air currents do not impinge on a freshly plastered surface. In very cold weather it is desirable to introduce air for ventilation at some point away from the area to be dried.

Painting should not be carried out at a temperature below 50 degrees. Ventilation is desirable not only to assist in the drying of the paint but also to remove the solvents which are sometimes toxic.

### *Shelters*

Since winter in Canada is severe, winter construction is a risky business if the contractor does not have the equipment to ensure good working conditions. Perhaps most important is shelter material, which should be of a type to permit repeated use.

Enclosures are not new in Canada. Over 30 years ago a shelter was developed which even by today's standards would be considered quite remarkable. This shelter, used in Montreal, was formed of light steel trusses in 8-foot sections bolted together to give a clear span of up to 80 feet. The trusses were carried on columns located outside the building line and, as work progressed, were jacked up the columns by a reciprocating steam cylinder working through a ratchet device. The framework was covered with tarpaulins and the enclosure heated. Under this shelter, the excavation for a five-story apartment building was started late in January 1928. Five concrete floors were placed in two weeks and within seven weeks the interior trim and painting were being completed. Although not as elaborate, many similar types of enclosures were used during this period. With the great drop in private construction during the depression, however, shelters of this type were forgotten; and only in recent years, mainly as a result of developments in the Prairie Provinces, have enclosures once again been seen on more and more construction sites. But in spite of the great advances in the development of new materials and construction equipment in the last thirty years, no shelters of the type used in Montreal in 1928 are to be found in Canada. They may be found,

however, in Sweden and possibly in other Scandinavian countries where they are now used through the winter months and, in fact, long before winter sets in.

The great advantage of using a shelter to enclose all or a portion of the work is that it permits the contractor to carry on without interruption under conditions selected to ensure maximum quality and productivity. He can in effect control the weather. The value of this is well illustrated with concrete construction.

Because of the volume of concrete used in construction in all parts of the world, a great deal of research has been undertaken to provide a greater knowledge of this remarkable construction material. The results of this work have been applied to winter concreting, and it is now known that concrete which is not allowed to freeze and which is placed and cured at low temperatures above freezing develops higher ultimate strength and greater durability than concrete placed at higher temperatures. It is only in the winter that the contractor can "control the weather" to ensure that the low temperatures required for top quality concrete are obtained.

Other materials also benefit by being put in place under controlled conditions. Uniform temperatures during construction reduce the possibility of cracking of masonry, plaster, and stucco; on the other hand many roofing failures can be traced to adverse weather conditions during the application of the roofing materials.

Most enclosures make use of transparent plastic films. Sometimes the plastic is used only as temporary hoarding for door and window openings or as window strips, but often the whole enclosure is covered with polyethylene. Other enclosures use panels of plywood or building board which are later recovered and used in construction. Tarpaulins are still widely used. Recently, plastic tarpaulins have been introduced which have the great advantage of remaining flexible at low temperatures. The transparent plastics also have the great advantage of trapping solar heat so that the temperature inside enclosures covered with polyethylene may be as much as 45 degrees above outside air temperatures during sunny weather. This

often provides all the heat that is required during the daytime. In very cold areas, additional insulation may be obtained with two layers of plastic to provide an air space to reduce heat loss during cloudy, windy weather and at night.

Shelters can be grouped in two general classifications. There are those which are self-supporting such as the laminated-arch plastic-covered enclosures first used in Winnipeg and now in use from coast to coast. Manufacturers of plastic coated fabric have introduced air supported structures large enough to cover an area the size of a football field. They have also developed a heater which can be used with an air blower to provide comfortable working conditions. These air supported structures are expensive, but development work is being done by polythene manufacturers to produce a similar but low cost shelter.

The second type of shelter uses the existing frame of the building for support and is generally used with steel or precast concrete frames. The most common type is the enclosed scaffold suspended from outriggers on the roof. This external working platform is raised from one story to the next as work progresses. Another method of enclosing the skeleton makes use of standard sections of tubular scaffolding and is generally most economical for buildings under four or five stories in height. The scaffold is braced against the frame and covered with plywood tarpaulins or plastic attached to a light frame wired to the outer members of the scaffold.

Any discussion of winter construction must consider cost, since in a great many cases the decision to build or not to build in winter is based on this factor. It is one of the most difficult questions to answer. There are many cases where bids on a building project which

offered the alternative of a fall or spring start produced identical prices. Many contractors believe that winter cold creates fewer problems than summer heat and rain. Where surveys have been made, however, the average figure for extra cost is usually given as 5 to 10 per cent. It is computed from the extra direct cost of providing tarpaulins, heaters, fuel, snow removal and insulation. It can, however, be very convincingly argued that on a well-planned project the indirect savings resulting from higher productivity, uninterrupted schedules, and greater control of the "weather" on the job will more than offset the direct costs. Winter costs are also compared with those for the previous summer, and yet in labour costs alone a \$100,000 project may cost anywhere from \$3,000 to \$4,000 more in the spring than during the previous fall. Winter weather in all parts of Canada requires careful planning, but with proper equipment and supervision any building programme can proceed on schedule. In the spring, it is assumed that the weather will cooperate, but all too often building projects are held up for weeks or carry on under adverse conditions because of "unseasonable" rain. Later, summer heat may so reduce productivity and the quality of workmanship that costs soar.

It is well in thinking of costs to consider the cost of not building in winter. The only alternative to winter construction is a complete shut-down as soon as cold weather arrives, and the effect of such action on an already full summer programme is not difficult to imagine. Canadians have, however, become so accustomed to winter construction activity that there is every indication that it will eventually equal in volume the work carried out in summer.

*This is one of a series of publications being produced by the Division of Building Research of the National Research Council as a contribution toward better building in Canada. The Division has issued many publications describing the work carried out in the several fields of research for which it is responsible. A list of these publications and additional copies of this Building Digest can be obtained by writing to the Publications Section, Division of Building Research, National Research Council, Ottawa, Canada.*

# INDUSTRY

## New Line of Floodlights

A new and complete line of Steber "rear-lamped" floodlights for sports and industrial application has just been announced by Pyle-National (Canada) Ltd. The new units are designed to meet NEMA specification FL6-210, Group B, types 1, 2, 3, 4 and 5. Rear section is attached to front reflector by three stainless steel spring latches. Thermal shock and impact resistant lens in aluminum lens ring is removable. Each unit is equipped with shielded condensate drain, simple aiming devices, built-on service wrench, etc. and is weather-proofed with silicone gasketing at all critical points.

Illustrated descriptive Bulletin No. 1097-C and a new, simple and convenient specification guide for Steber outdoor lighting fixtures accommodating sealed beam reflector lamps, No. 1098-C are available from the Company at 33 Ingram Drive, Toronto 15.



## File Folder on Dow Styrospan

A comprehensive file folder on Styrospan has been issued by Dow Chemical of Canada, Ltd. Styrospan (Dow expanded polystyrene) is a rigid insulation material for general building requirements and low temperature space. The folder contains illustrations, typical properties, recommended applications and methods of installation for Styrospan. Designed for permanent reference, the folder is indexed and fits a standard filing drawer. Information will be kept current by additions and amendments issued by Dow Chemical. The file folder on Styrospan is one of a series planned for architects, construction engineers and builders on the Dow line of chemically engineered building products. Copies may be obtained from Dow Chemical Company, Sarnia, Ont.



## Corrugated Transite Brochure

Canadian Johns-Manville have issued a revised 32-page brochure on Corrugated Asbestos Transite. Designed as a handbook for architects, specification writers, and builders, this brochure lists characteristics, specifications, and recommended uses of corrugated transite, as well as drawings and text covering the use of this product with other materials such as flat Transite and translucent Corrugulux. The brochure

describes various installation methods covering industrial, commercial, and institutional applications, and includes drawings and specifications of a wide range of accessories for various installation methods. Also included are complete lists of properties and characteristics of Corrugated Transite, flat Transite, and Corrugulux; hints on handling and application and specifications and recommendations for exterior and interior painting. Copies of the brochure (TR-192A) are available from Canadian Johns-Manville Co. Limited, 565 Lakeshore Rd E., Port Credit, Ont.



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## KeepRite Kwik-Fit Door Frames

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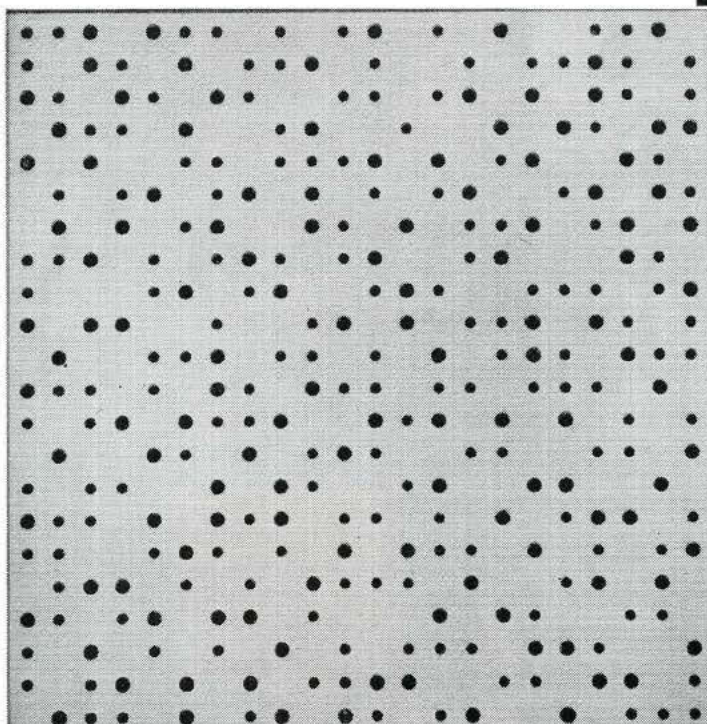
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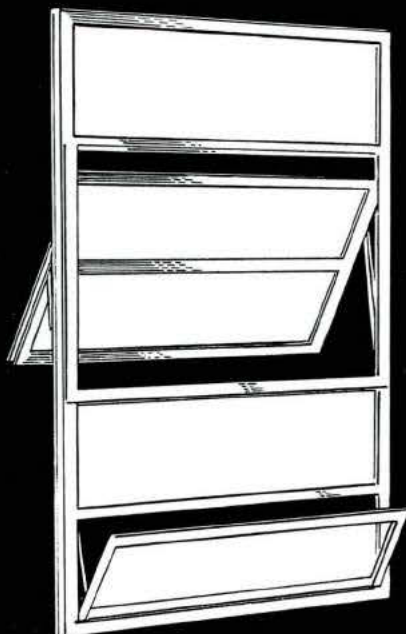
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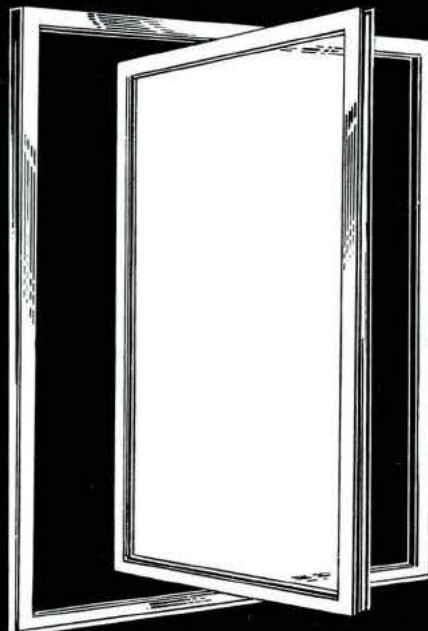
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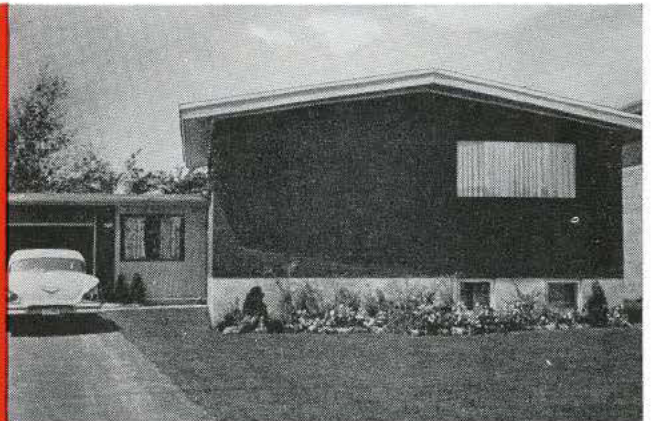
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Builder: Lewis Construction Co. Ltd., West Vancouver, B.C.



21025 Maple Ave., Langley, British Columbia.  
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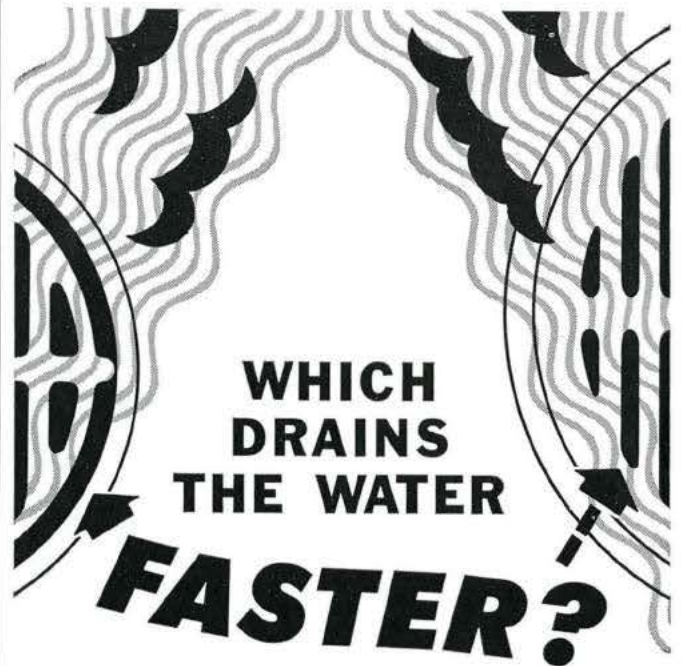
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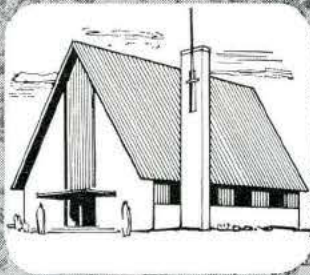
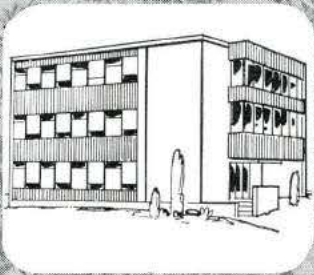
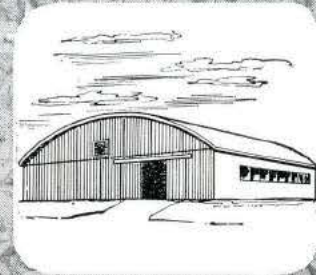
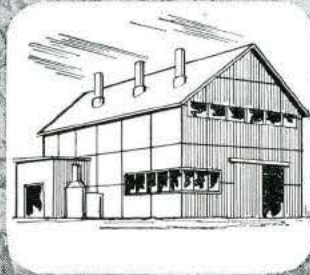
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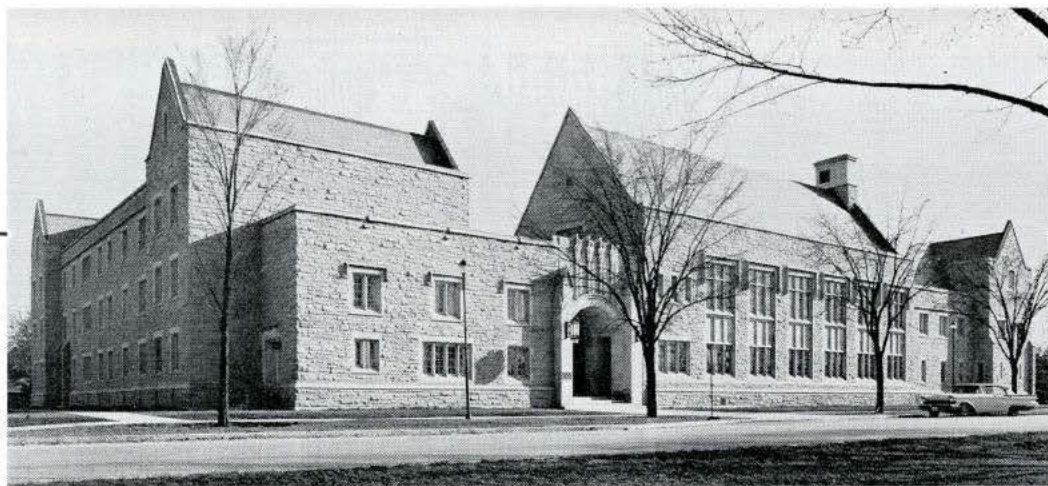
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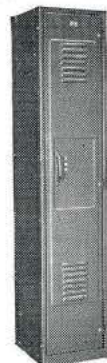
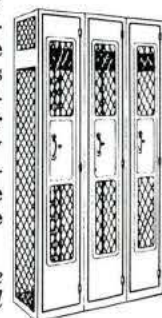
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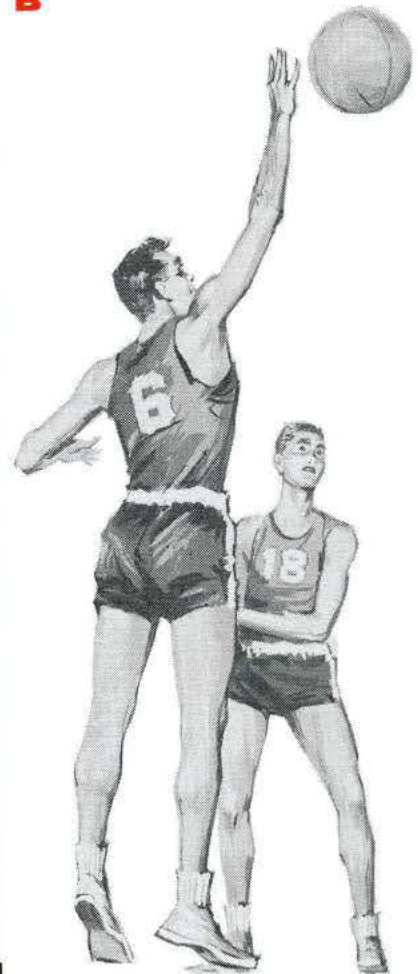
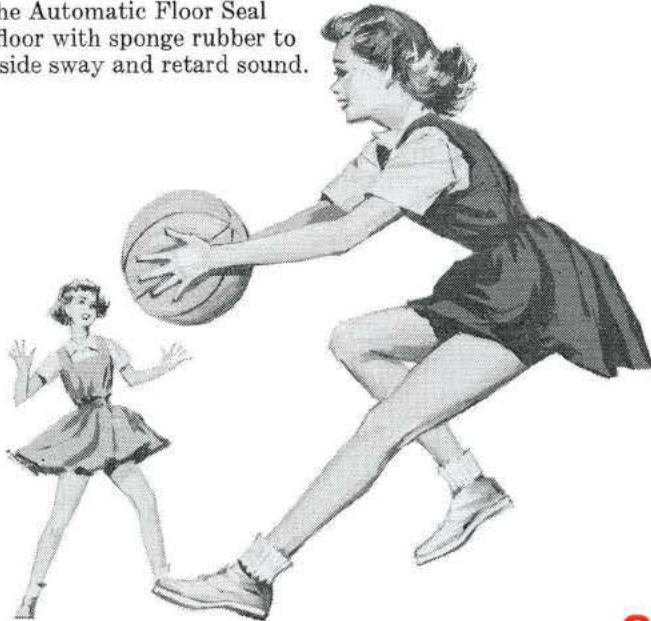
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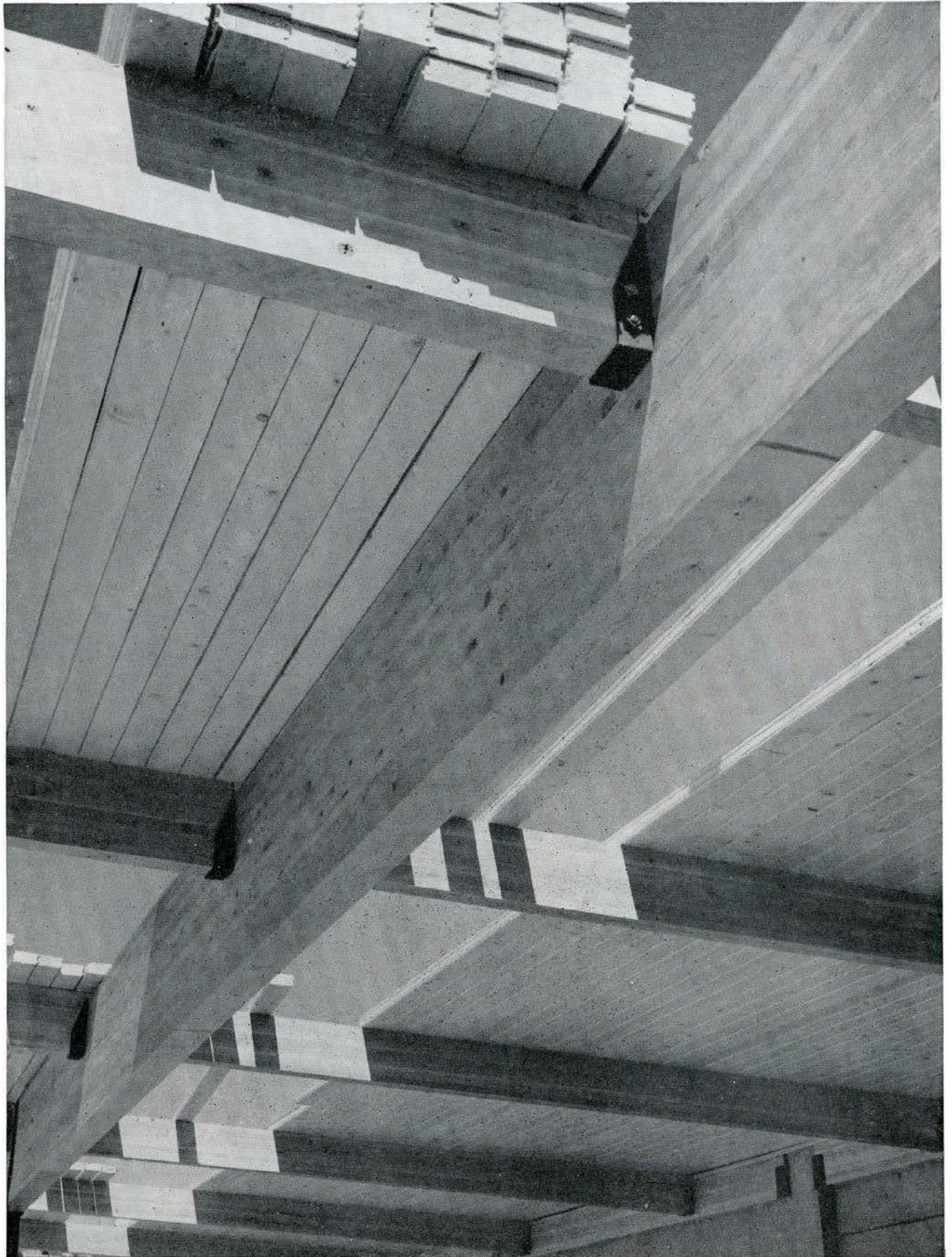
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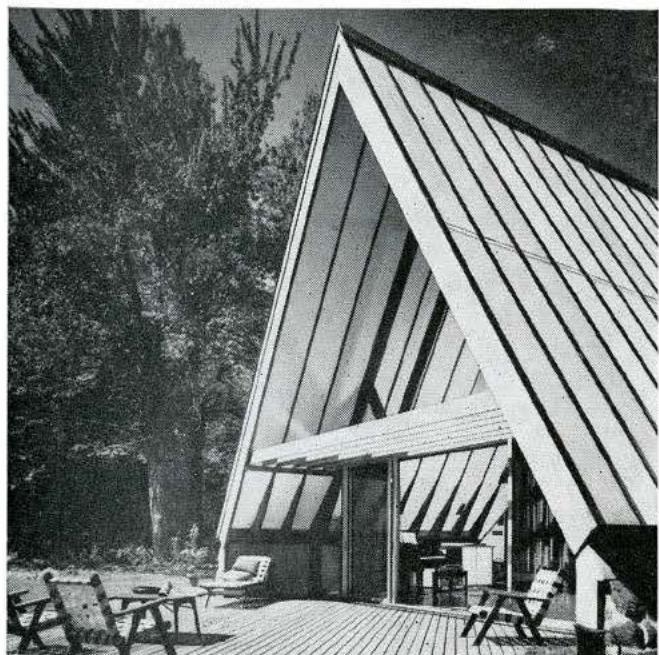


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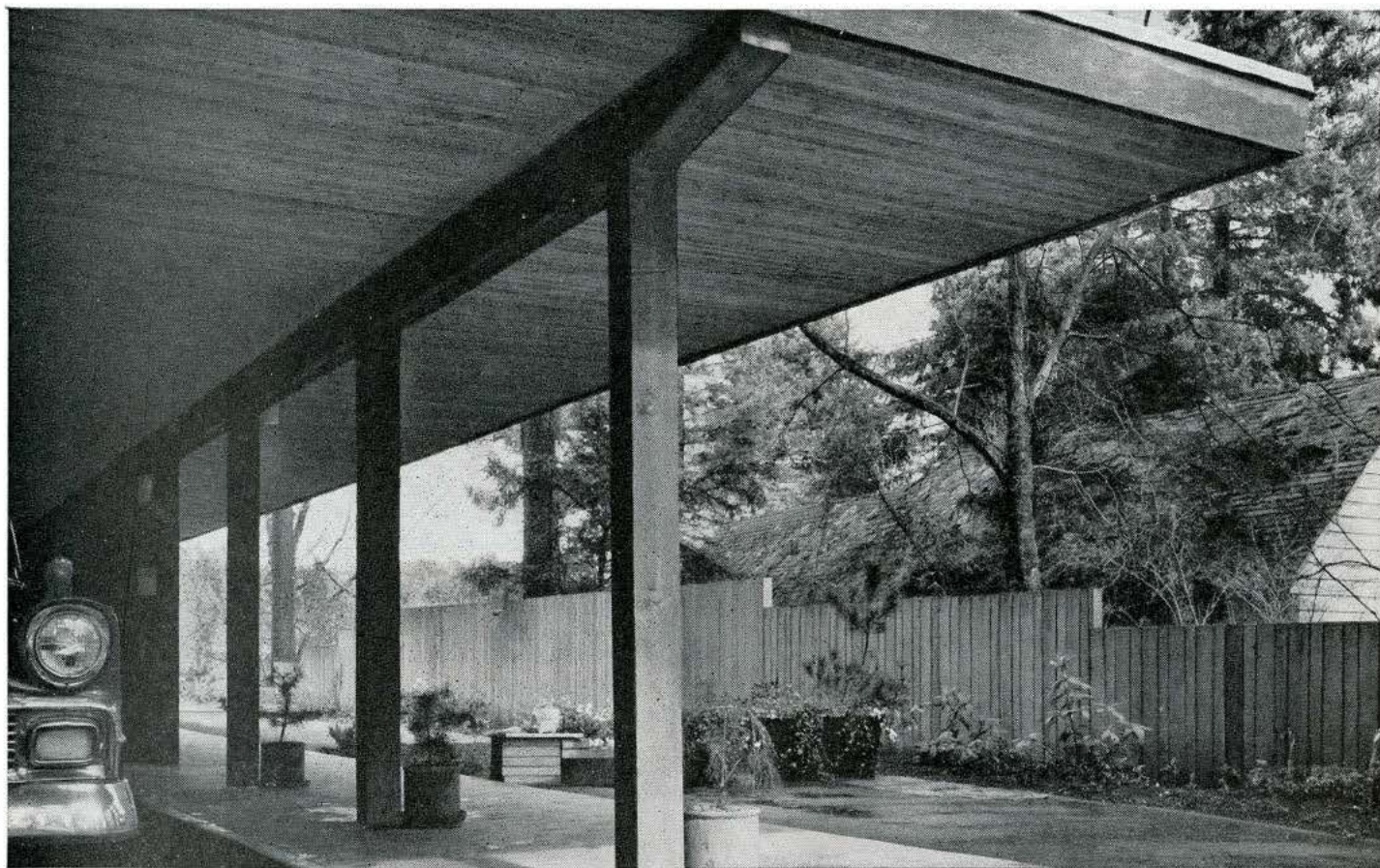
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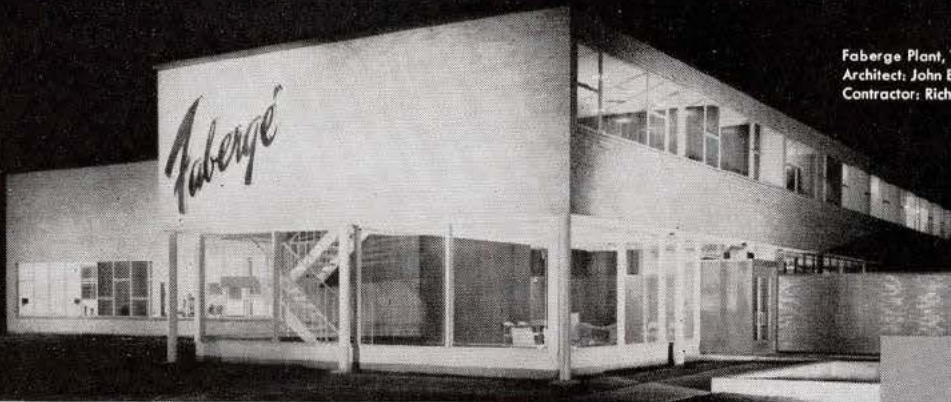
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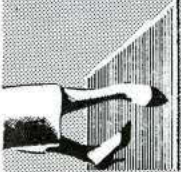
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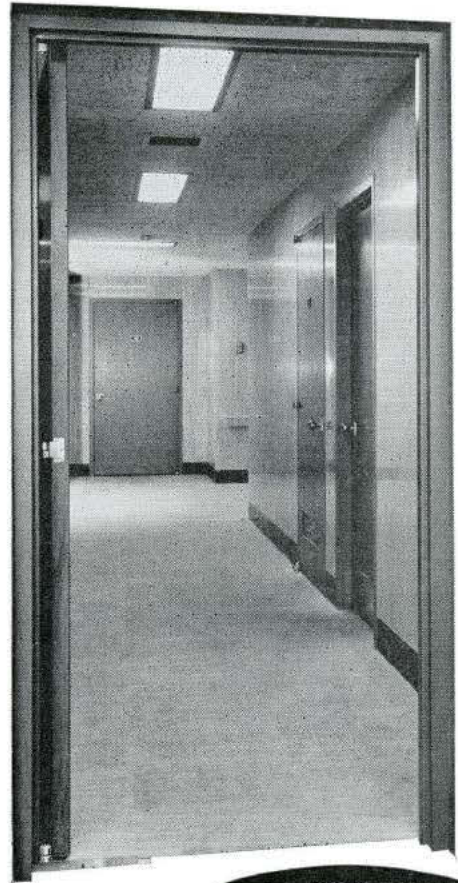
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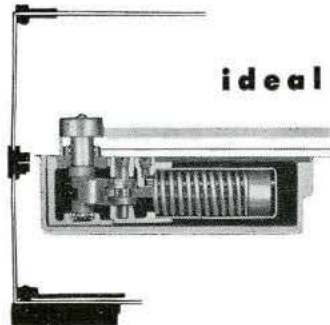
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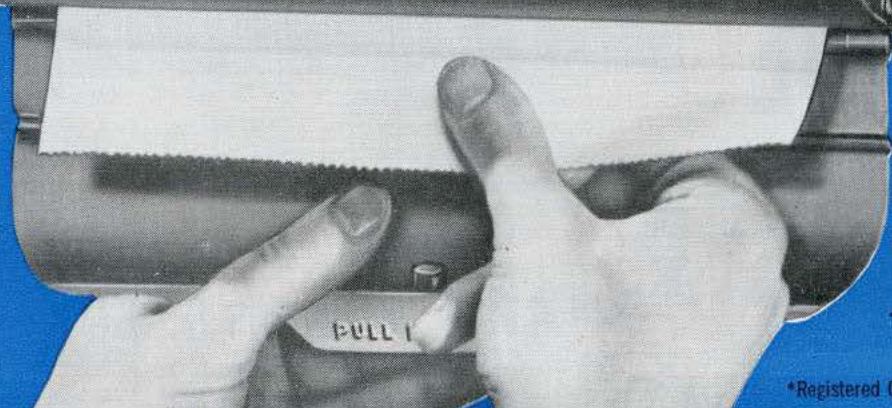
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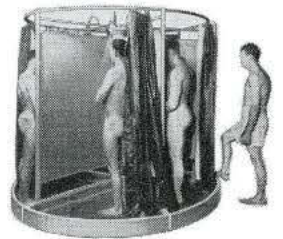
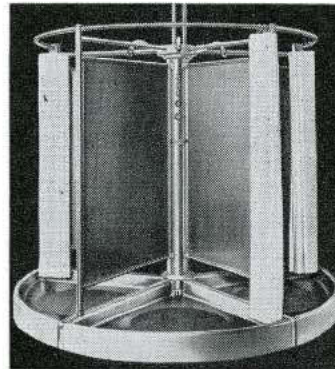
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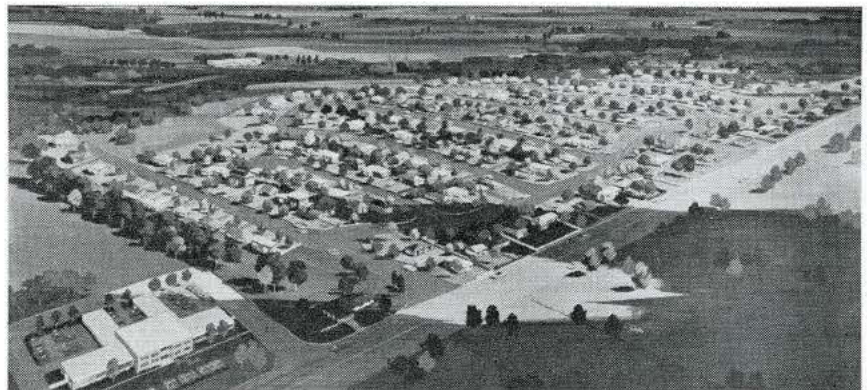
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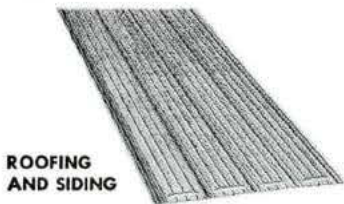
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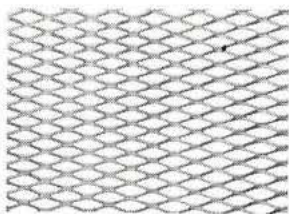
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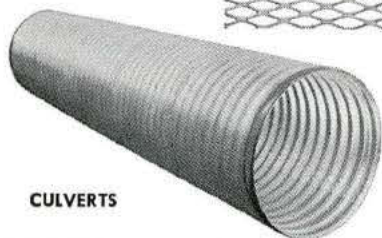
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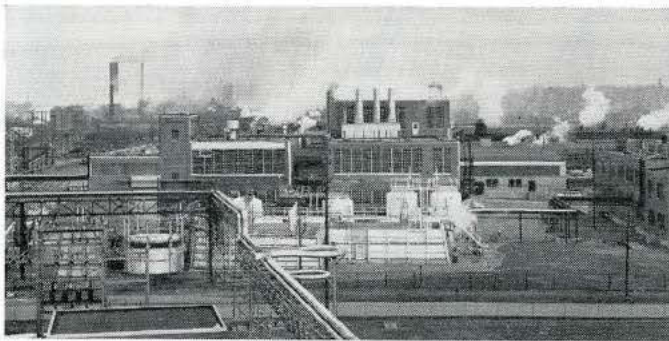


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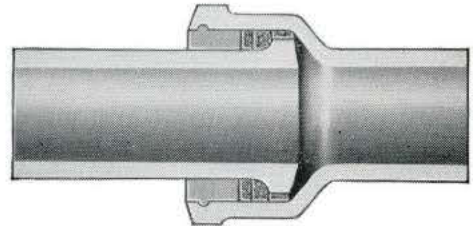
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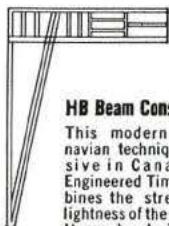
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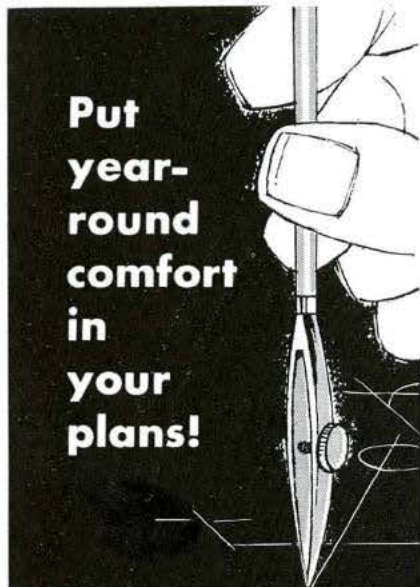


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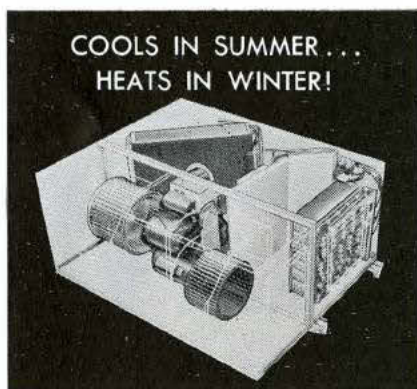
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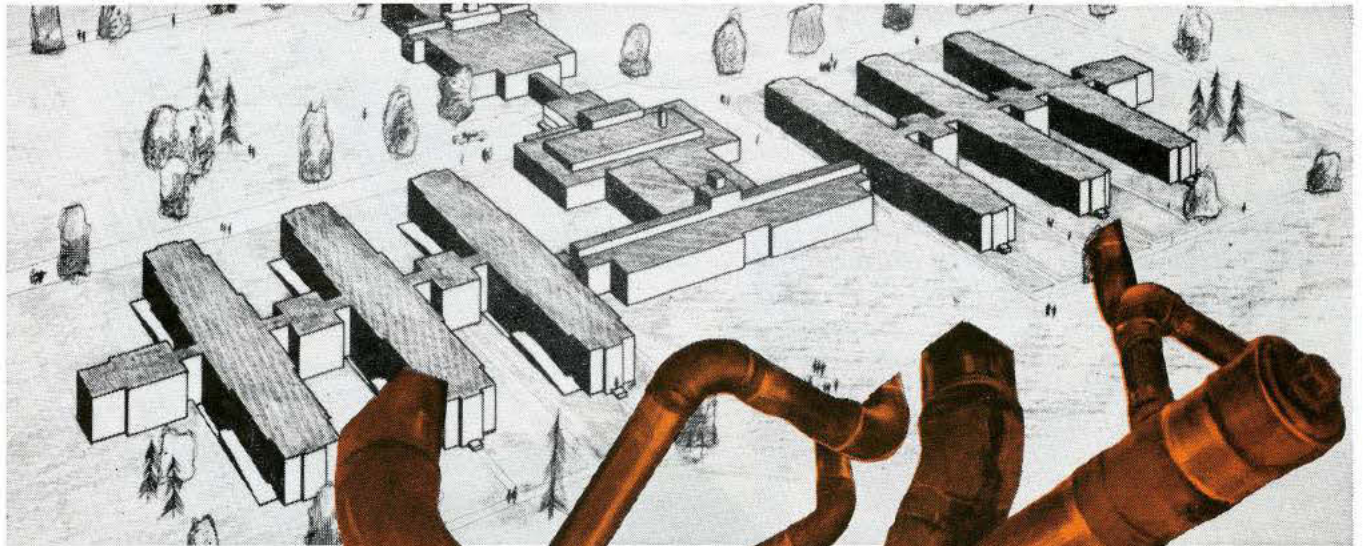
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### Noranda Copper Tube used throughout the Ontario Hospital at Cedar Springs\*

Canadian Comstock Co. Ltd., plumbing contractors for this job, are using Noranda Copper Tube throughout for the plumbing and drainage systems. McKeough & Sons Co. Ltd., Chatham, Ontario wholesaler, supplied the 62,000 feet of Noranda Copper Tube for the project. Quality controlled from mine to mill, Noranda Copper Tube

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\*Project of the Ontario Department of Public Works



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# Hot Weather Concreting

**The Problem.** At high temperatures, concrete sets too rapidly and with hot, drying winds there is very rapid evaporation of moisture. These factors introduce difficulties in handling, placing, finishing and curing operations. Unless precautions are taken, there is permanent reduction in strength, plus other structural problems.

**Technical Considerations.** ACI 605-59 "Recommended Practice For Hot Weather Concreting" contains important information for the architect, engineer, contractor and ready-mixed producer.

The following important aspects warrant special consideration.

## 1. Modify the Surrounding Conditions

Strive to lower the temperature of the area in which concrete is to be placed.

- Forms, reinforcing steel and subgrade should be sprayed periodically with water to keep them cool and to prevent absorption, once the concrete is placed.
- Sunshades help protect the concrete from direct sun and hot, drying winds. This minimizes plastic shrinkage, cracks and crazing of fresh concrete.

## 2. Modify Temperature of the Mix

Strive to lower the temperature of the materials (water, coarse aggregate, fine aggregate and cement).

- The temperature of freshly-placed concrete in hot weather should not be *more than* 90F. Use of crushed ice in the mix, replacing water pound-for-pound, is helpful.
- It may also be necessary to cool the aggregate.
- Avoid the use of "hot" cement.

## 3. Modify the Setting Time by Using a Retarder

The proper use of a good retarder can provide greater flexibility in handling, placing and finishing operations.

- The retarder corrects the primary cause of hot weather concreting problems—rapid setting.

## 4. Modify the Placing and Finishing Schedule

The contractor should carefully schedule delivery and placing.

- Discharge concrete from the truck within 15 minutes after its arrival at the job.
- Advise ready-mix producer immediately of any change in placing schedule.
- Provide sufficient manpower to proceed with finishing operations immediately after placing.

## 5. Adjust the Curing Conditions

Strive to maintain proper curing conditions (both temperature and moisture).

- Cure immediately to prevent moisture evaporation from the concrete during the first crucial hours after finishing. Continuous curing for at least 7 days is essential. Ponding, paper or other waterproof coverings, white pigmented or membrane curing compounds are most effective.
- Exteriors of forms should be sprayed with cool (but not cold) water at an early age. Do not rely on forms alone for curing during hot weather. Tops of walls, columns and other vertical elements should be wet-cured and covered.

## 6. Be Sure to Use Proper Test Procedures

- Immediately after test specimens are moulded, they should be covered with burlap and kept damp at 60F. to 80F. After 24 hours, the specimens should be carefully transported to standard curing facilities.

## Function of POZZOLITH® Retarder in Hot Weather Concreting

- Provides controlled rate of hardening with no loss of design strength.

At 90F, concrete containing POZZOLITH Retarder has about the same setting time as a plain mix at 70F.

At 70F, it delays the set about 2 hours.

At 50F, it does not retard the setting time more than a plain mix at the same low temperature. (POZZOLITH Retarder is unique in that it *automatically safeguards* against excessive retardation from an unexpected drop in temperature.

- Provides desired time for finishing large areas or for extended delays between mixing and placing operations.
- Provides lubrication, plus retarded set in pumped and pneumatically-placed concrete.
- Delays set effectively where re-vibration and reconsolidation are necessary.
- Permits full dead-load deflection in bridge decks, prior to initial set of slab concrete.
- Delays set to eliminate cold joints between successive pours.

PLUS . . . all the other inherent benefits which POZZOLITH provides through a maximum reduction of unit water content and its control of air entrainment: greater workability, reduced shrinkage, reduced permeability, greater durability . . . at lowest cost-in-place.

## Suggested Specification Clauses

*Design of mixes:* When job placing conditions with respect to humidity and temperature differ from standard laboratory conditions, to the point where problems are encountered, the contractor at his expense shall have an approved testing laboratory prepare mix designs for the various classes of concrete with rates of hardening modified to adapt the concrete to the existing conditions. These modified designs shall be submitted to the engineer (architect) for approval.

*Admixture:* POZZOLITH shall be used in accordance with the manufacturer's recommendations to secure maximum reduction in unit water content and to control the entrainment of air and rate of hardening (normal, retarded or accelerated, as required).

*Hot Weather Curing:* Protection against drying and excessive concrete temperature shall be provided for the first 7 days, especially in columns and other thick sections. Water at a lower temperature than the concrete (but not cold) shall be applied to all formed and exposed concrete surfaces, no reliance being placed on form work alone, for curing. Where permitted, a curing compound shall be applied, care being taken that the concrete shall not be dried prior to its application.

For additional information on hot weather concreting and on POZZOLITH, contact the local Master Builders field man

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POZZOLITH is a registered trademark of The Master Builders Company Ltd., for its concrete admixture to reduce water and control entrainment of air and rate of hardening.



A variety of Rusco Prime Window types and sizes were used by architect Keith L. Graham to achieve distinctive design and functional advantages for Parrsboro's newest school. For ventilation, both lift-out, sliding panels and hopper types were used. In the auditorium, a plate-glass gable end runs right to the roof line.

## NEW SCHOOL FOR PARRSBORO, NOVA SCOTIA

### ARCHITECT:

Keith L. Graham

The wide choice of window types and sizes, complete fabrication, and modern Slim-Line design were all factors in the choice of Rusco Prime Windows for this beautiful new school at Parrsboro, Nova Scotia.

Rusco's variety of fixed-light and ventilating window types gave complete flexibility in architectural design. Rusco's tubular steel sections permitted a freer use of glass without sacrificing structural strength. And, because the windows were delivered pre-fabricated for installation, the builders were able to close-in ahead of the cold weather, and save on installation time.

Rusco's baked-on decorator colors are another new dimensional beauty offered architects and builders from coast to coast.



Gleaming white, baked-enamel Rusco Slim-Line Windows were contrasted with the soft grey columns, pastel colored panels and brick for lasting beauty.

## RUSCO PRIME WINDOWS



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