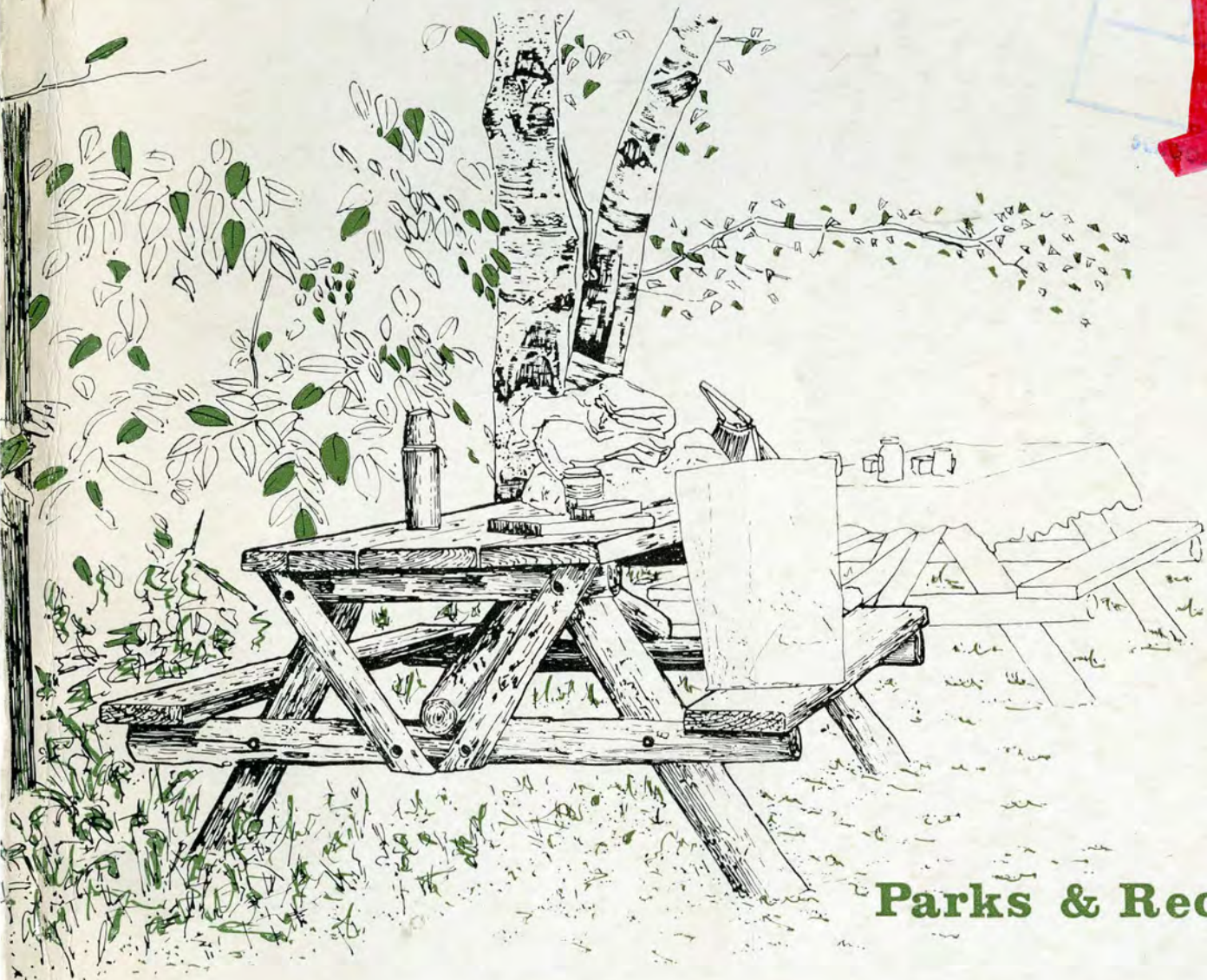


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Parks & Recreation

SEPTEMBER 1962

ROYAL ARCHITECTURAL INSTITUTE OF CANADA

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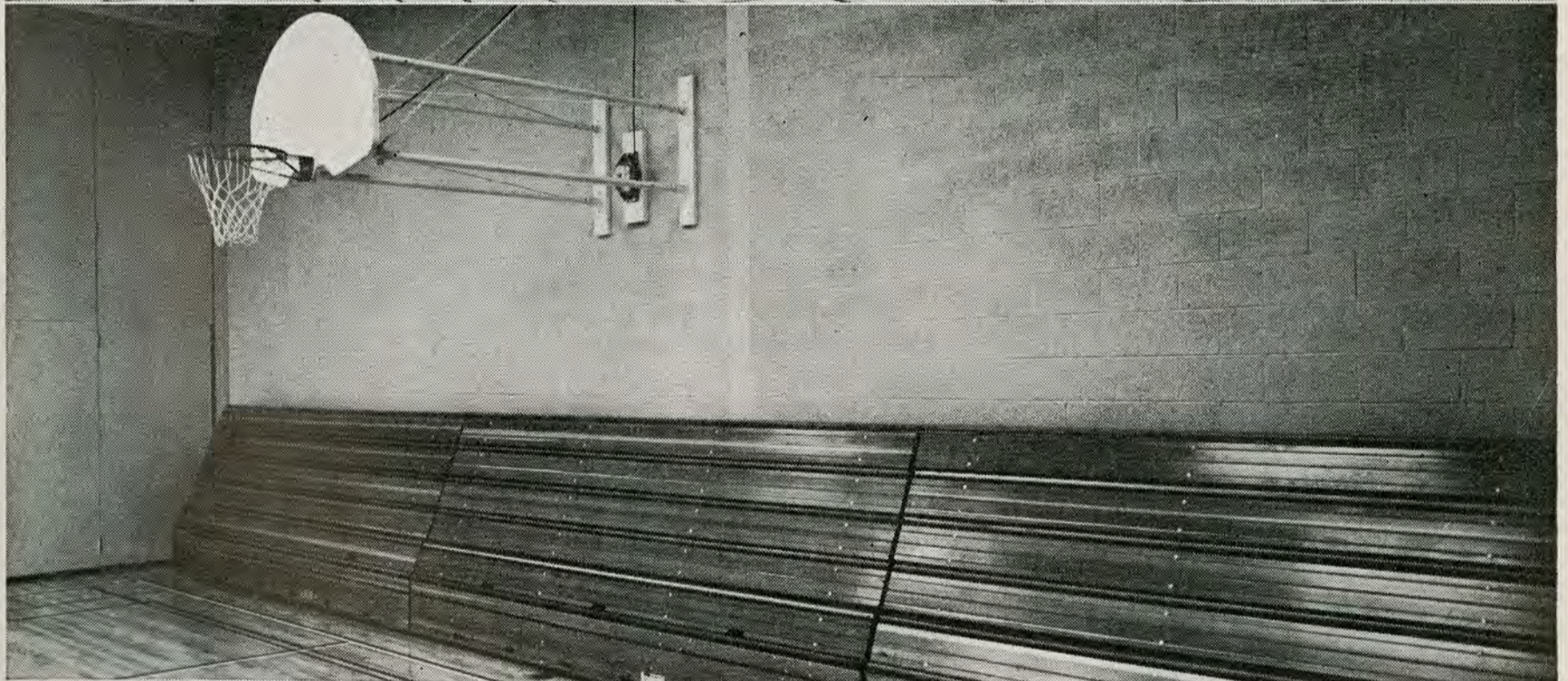
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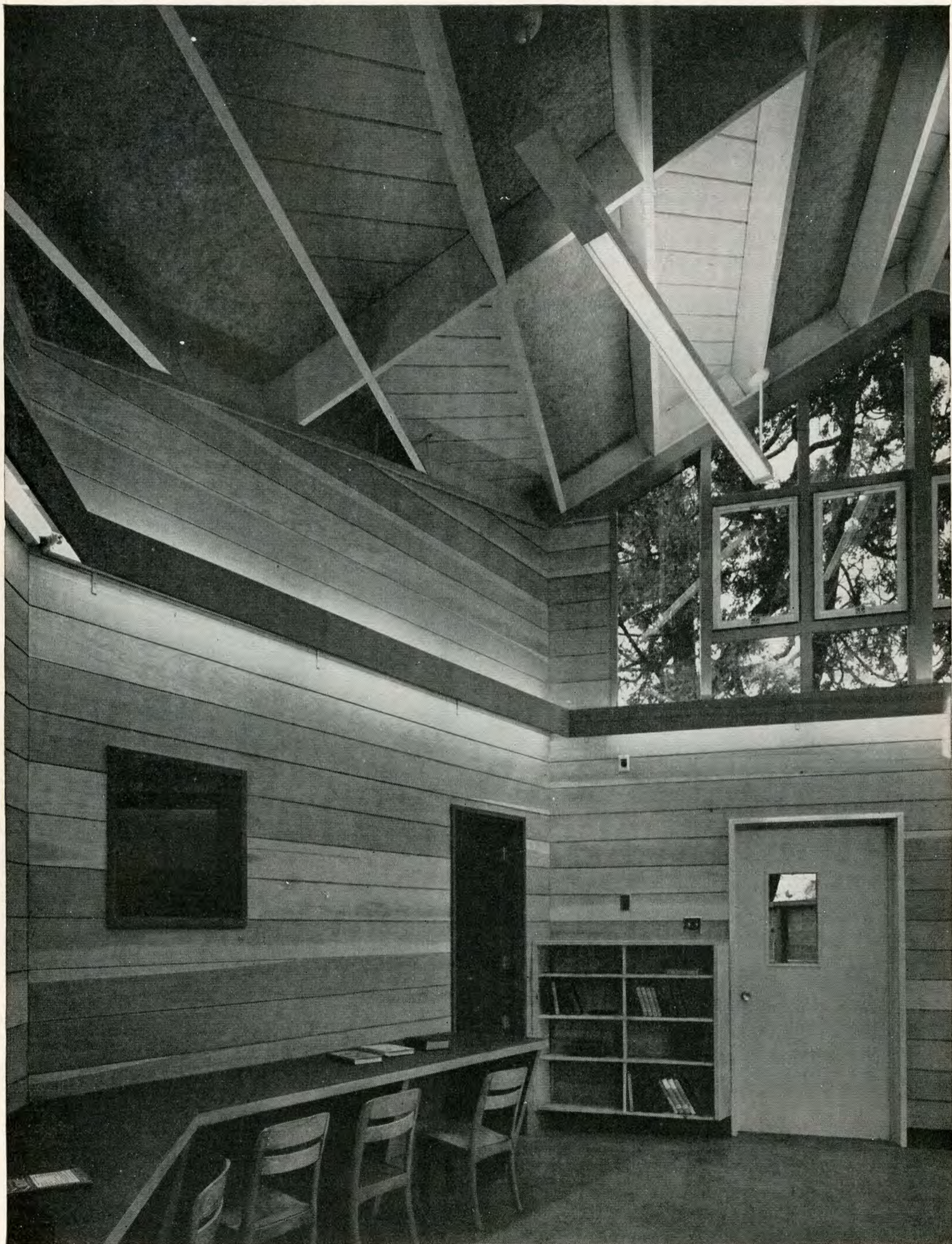
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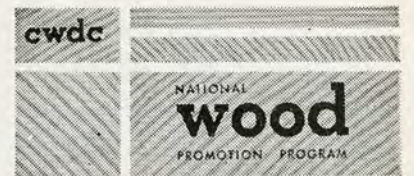
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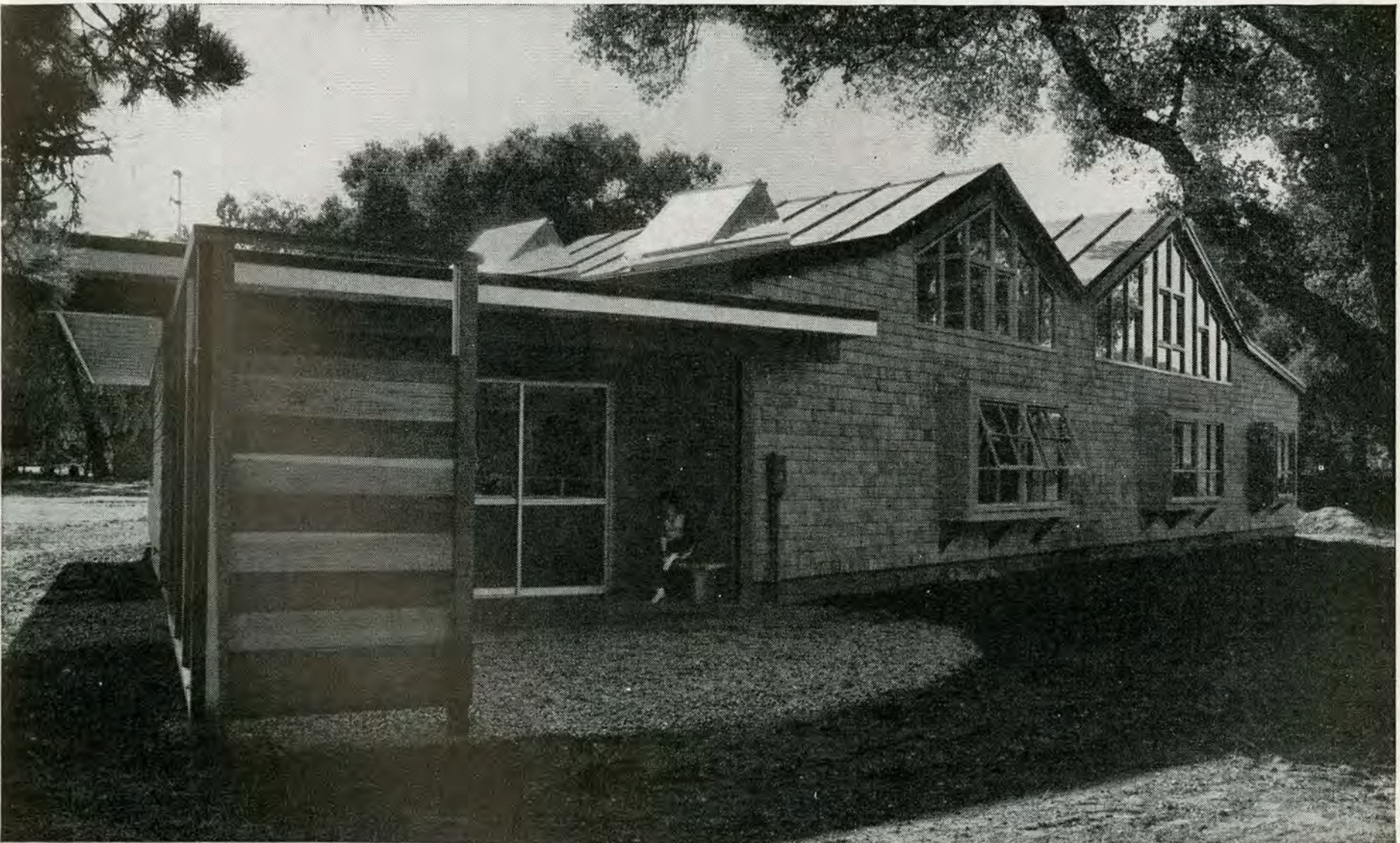
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PARKS AND RECREATION

- 43 DESIGNED FOR LEISURE
A Commentary by Macklin L. Hancock
- 57 CIVIC DESIGN: STRATFORD SEMINAR
by A. J. Dakin
- 60 PROJECT: THE LAURENTIAN UNIVERSITY
- 61 LESSON OF COVENTRY CATHEDRAL
by Peter Collins

NOUVELLES DE QUEBEC

- 70 DU SECRETARIAT DE L'AAPO
par Jacques Tisseur
- 72 TECHNICAL NEWS AND NOTES
Hyperboloid precast, pretensioned, concrete shell
- 73 FIRE AND THE COMPARTMENTATION OF BUILDINGS
by J. H. McGuire. The September Canadian Building Digest Supplement from the Division of Building Research, NRC, Ottawa

DEPARTMENTS

- 10 Institute News
- 16 Letters to the Editor
- 18 Industry
- 20 Coming Events
- 77 Book Reviews
- 98 Index to Advertisers

COVER: Leisure time and mobility — urban parks and wilderness spaces — relaxation. Sketch by Leonard Webster



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INSTITUTE NEWS

OFFICIAL PUBLICATIONS, as other human enterprises, benefit from periodic self-examination to ensure: (1) they are performing the functions for which they were founded; (2) they are carrying out their responsibilities to the profession they serve. Current needs and interests must be taken into account.

The *Journal* is no exception. After studies and discussions, begun last spring, the Editorial Board now announces a number of important changes in editorial policies and programs. These changes reflect new approaches and ideas, which emerged from the Board's annual meeting, at the Vancouver Assembly. Another factor was the Executive Committee's decision, in June, that *Journal* profits were no longer to be a source of Institute revenue.

The object is to use what is necessary of available resources to produce a stimulating, technically useful, and generally interesting professional magazine. At the same time, the *Journal* will continue its traditional role of official publication and recorder of the Royal Institute's activities. Surplus resources will be used to finance those enterprises the Institute decides are most necessary and useful for the advancement of the profession.

Since staff additions are necessary, we are pleased *Prof. Douglas H. Lee*, B.Arch., M.Sc., ARIBA, of the School of Architecture, University of Toronto, has accepted the position of technical editor. *Mr Norman J. P. Melnick*, B.A., LL.B., of Toronto, will conduct our legal column. No stranger to the membership, Mr Melnick served as secretary to the RAIC Committee on the Preservation of Historic Buildings.

Soon, we expect to have an editor for a new column on the allied arts.

Undoubtedly, the most interesting change in editorial

policy was the decision to begin professional appraisals of selected buildings and projects.

We had already asked *Prof. Peter Collins* to include Coventry in his European itinerary this summer, because we felt all who enjoyed meeting *Sir Basil Spence*, during his Canadian visit in 1950, would be interested in an article on the new St Michael's Cathedral. "The Lesson of Coventry" (page 61) is the result.

The November issue will contain two appraisals. One is by *Prof. Collins* — of the new Canadian Imperial Bank of Commerce Building, in Montreal (Peter Dickinson Associates; Ross, Fish, Duschenes and Barrett; Clifford and Laurie). In the French section, *Claude Beaulieu* will comment on Montreal's CIL Building (Skidmore, Owings and Merrill; Greenspoon, Freedlander and Dunne).

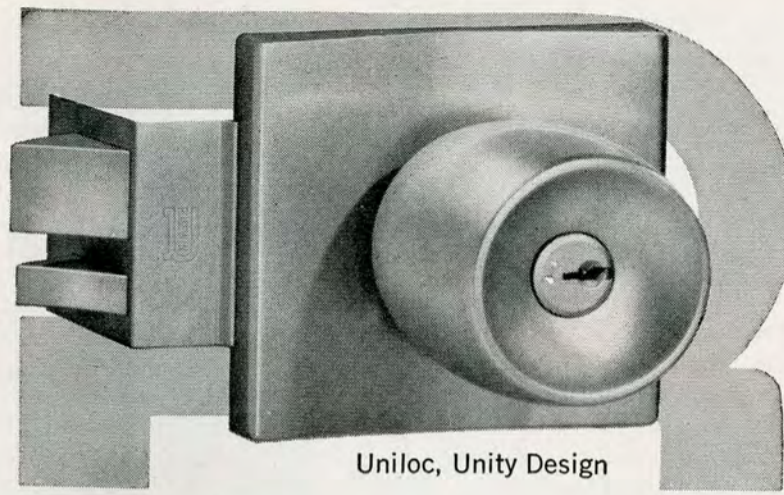
In our February 1963 issue, *Prof. John Bland* will appraise Montreal's newest and largest — Place Ville Marie (I.M. Pei and Associates, with Affleck, Desbarats, Dimakapoulos, Lebensold, Michaud, Sise in association).

Other appraisals in preparation include one by *Hart Massey*, who will deal with Ottawa's Northern Electric Research Centre (Bland, Le Moyne, Walker and E. C. Trudeau). Another, by *Dr Thomas Howarth*, will discuss the new UBC Fine Arts Centre (Thompson Berwick and Pratt).

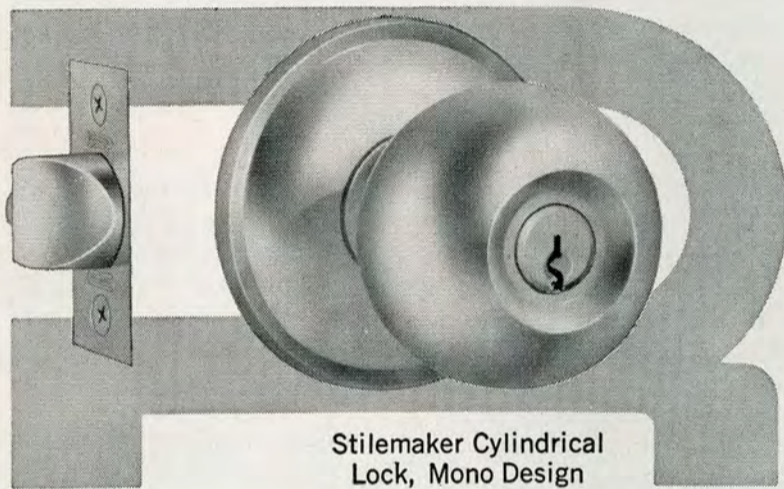
Early this year the RAIC-CMHC Joint Committee on Housing undertook to do a study of the subject for the *Journal*, and the results appear in the next issue. The contributors are *James A. Murray*, *John Bland*, *Henry Fliess* and *Humphrey Carver*. *C. Ross Anderson* was of great assistance in the search for suitable photographs. The housing project illustrated (in color) will be CMHC's Mulgrave Park, in Halifax.



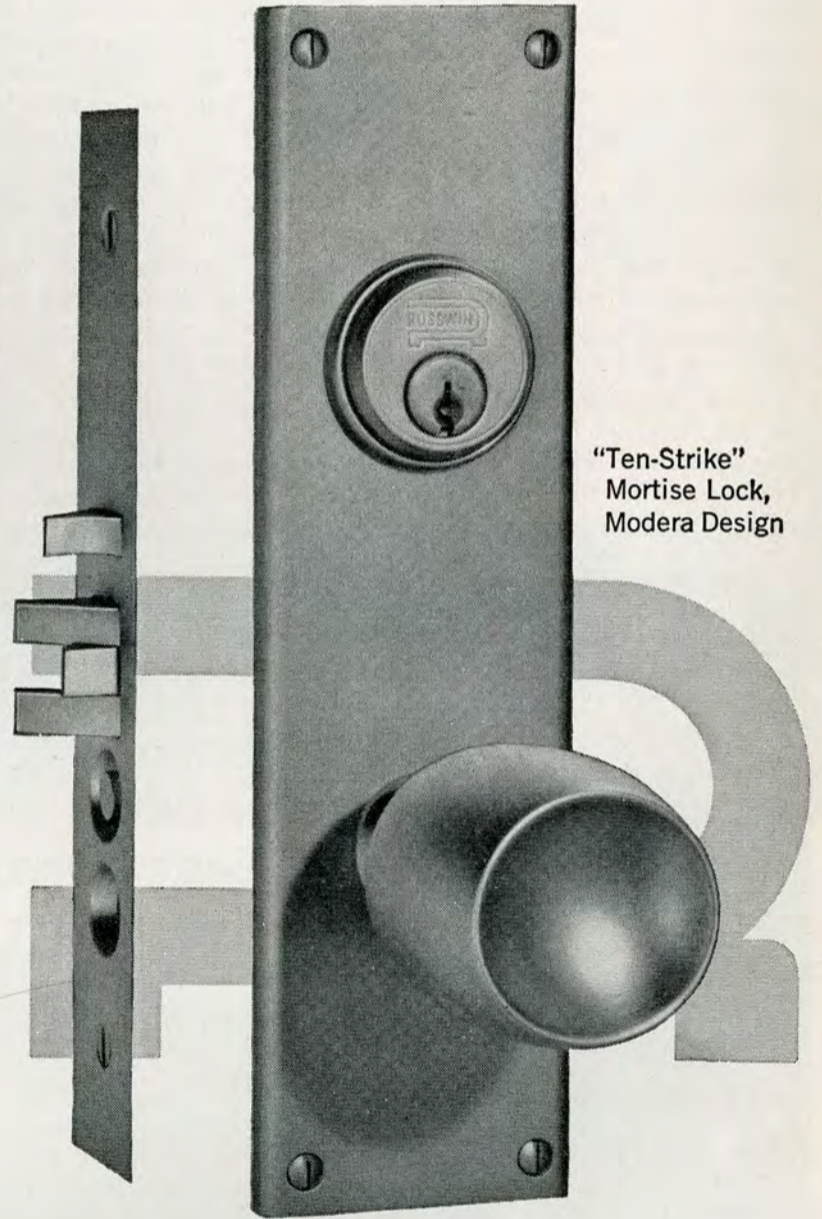
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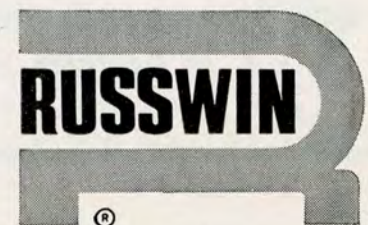


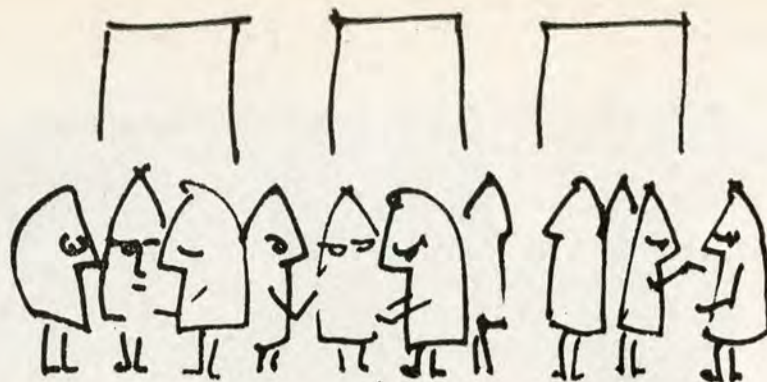
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NEXT YEAR THE RAIC joins the International Union of Architects. The Royal Institute will be sponsored and introduced to the general membership at the VII Congress, to be held at Havana, Cuba, from September 29 to October 3.

A warm welcome from Cuban architects is assured us by Architect *Raul Macias Franco*, president of the National College of Cuban Architects, in a Letter to the Editor, page 16, this issue.

Joseph Pettick, Regina, chairman of the RAIC International Relations Committee, who was RAIC observer at the VI Congress in London last year (*Journal*, August, 1961), writes that he has now received the regulations and provisional program for the Congress, and the main topic will be "Architecture in Countries in Process of Development."

Highly developed countries are requested to contribute papers on their experience concerning the development of any region, freely chosen, that has been developed in the last few years. They are asked to explain the procedure of planning and its accomplishments, including plans and fulfillment of city planning and housing construction. Such experiences will help to guide architects in less developed countries, and thus contribute towards the economical, physical, and social development of these countries.

Following the Congress, the Assembly of the IUA convenes in Mexico City October 8. Canadian architects will receive a special welcome there, as the *Sociedad de Arquitectos Mexicanos* is sponsoring Canada's membership in the IUA. Mr Pettick in Regina, or the RAIC offices in Ottawa, will be glad to answer inquiries from members

wanting more information about the 1963 Latin American interlude.

One other international note: the Institute will be represented at the meeting of Commonwealth architectural institutes in England next July.

On the home front, preliminary plans now are being made for the 56th Annual Assembly at the Sheraton-Connaught Hotel, Hamilton, from May 15 to 18. *Al Prack (F)*, of Hamilton, is chairman of the host committee. The Assembly theme will be "materials in Architecture."

A first contribution by the architectural profession to Centenary planning for 1967 is a manual on street decorations for the guidance of municipalities and local organizations. The draft manual is being prepared by a Vancouver Committee under the chairmanship of *W. G. Leithead (F)*.



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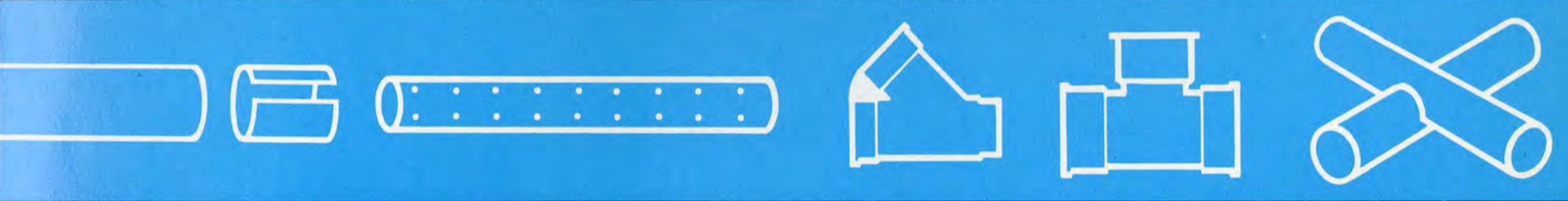
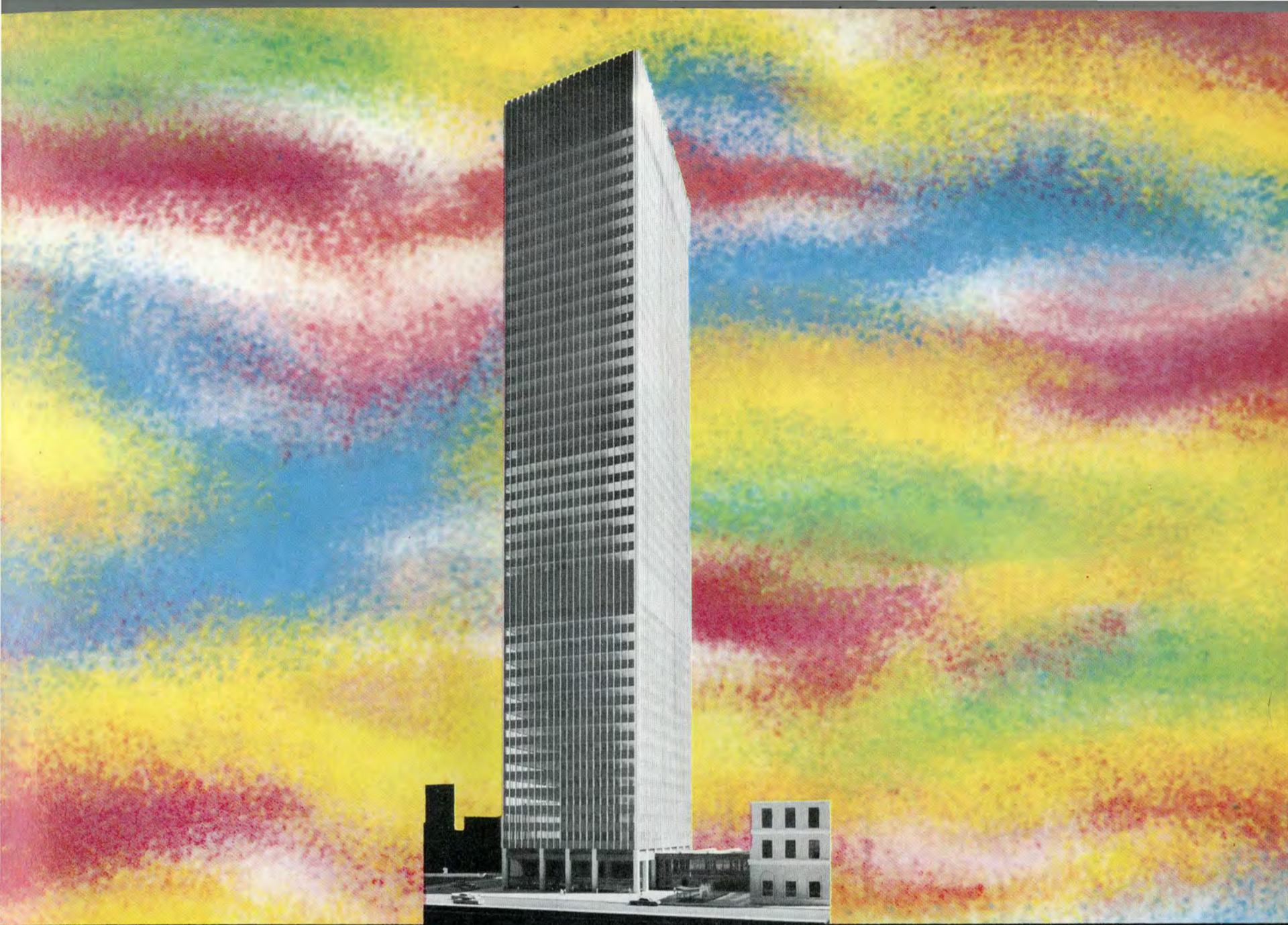
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UNITED STATES' TOUR of the 1961 *Massey Medals for Architecture* exhibition, sponsored by the Smithsonian Institution, opens at the American Institute of Architects building in Washington on October 16.

Mr William Alexander Allen, Principal of the Architectural Association School in London, since last September has been awarded the University of Manitoba Alumni Association Jubilee Award for 1962.

Mr Allen was graduated from the University of Manitoba in 1946 and went to England for post graduate studies. Soon after he began working with the Building Research Station at Watford and became its chief architect in 1953. During his association with the Station he completed significant tasks in the fields of acoustics, daylighting, planning and density problems in central urban areas, and studies in color ranges.

OLYMPIC GAMES CENTRE Competition, announced in the June issue, has drawn 161 competitor registrations, we are informed by the Professional Adviser, Prof. John A. Russell (F) of Winnipeg. The registration by provinces is: Ontario, 70; Quebec, 26; Alberta, 24; Manitoba 14; BC, 19; Saskatchewan 5; PEI, 1; and NS, 2. The Jury will visit the proposed site at Banff October 29; judging of the First Stage will take place at Calgary October 30-31.

The Canada Council has announced its 1963-64 program of scholarships and fellowships in the arts, humanities, and social sciences. Details are obtainable from the Council at 140 Wellington St, Ottawa.

SEVEN ARCHITECTS and thirty-seven engineers, representatives of government departments, private corporations and consulting firms, took part this spring in an orientation course at Arnprior, Ontario, to find out more about civil defense in Canada. The course,

designed specifically for the two allied professions by the Emergency Measures Organization, was the culmination of hard work undertaken by a joint committee of the Royal Architectural Institute of Canada and the Engineering Institute of Canada.



A group of the architects attending the Orientation course. Left to right front row: D. J. Russell, Calgary; L. J. Page, Halifax; T. A. Lench, St John's, Nfld.; D. M. McLeod, Edmonton; Back row: D. B. Douglas, Don Mills; A. G. Keith, Toronto; G. K. Pickard, Charlottetown.

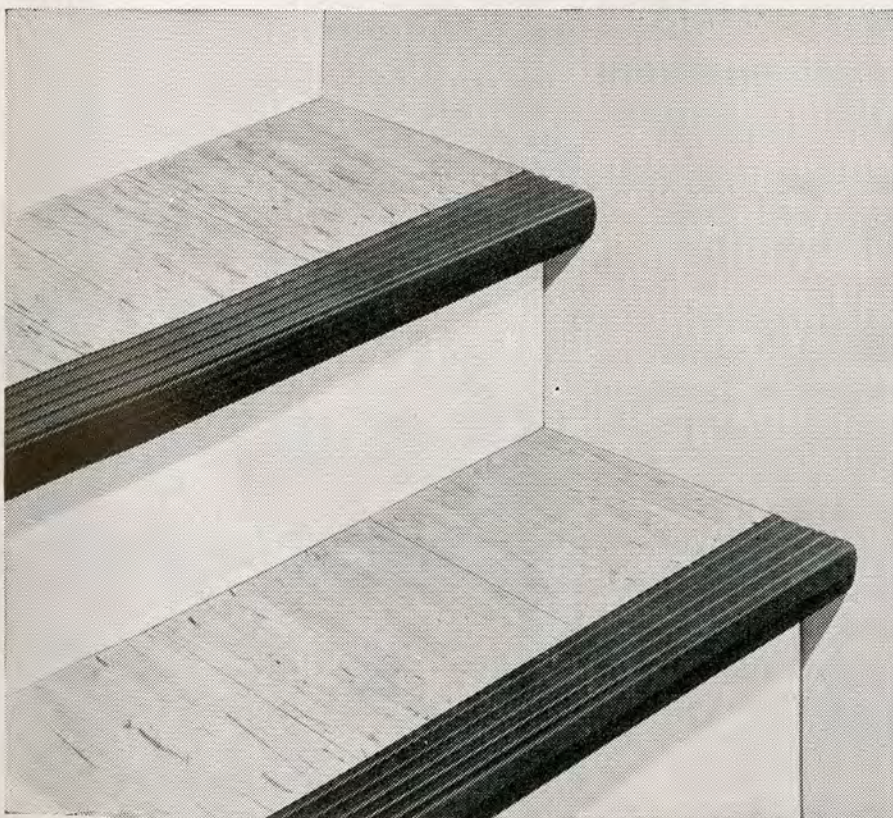
Wilson Salter of St Catharines has been appointed chairman of the RAIC Advisory Committee on Registration Standards.

The season for annual meetings of provincial associations is now upon us. The list of places and dates is published on page 20.

An exhibition of Architectural drawings over the past four centuries from the RIBA collection will be on view at the National Gallery at Ottawa, February 5-26, 1963.

Frank MacDowell, B.Arch., has been appointed chief architect for Canadian National Railways. Formerly CNR senior architect (special), he succeeds G. F. Lithglow, who retired recently.

Norman D. Macdonald, B.Arch., and Michael Zuberec, B.Arch., announce that the architectural practice they have carried on since 1959, under the name of Thomas R. Wiley and Associates, will be known as Macdonald & Zuberec. The firm will continue to practise at the same address, 157 King St, St Catharines, Ont.



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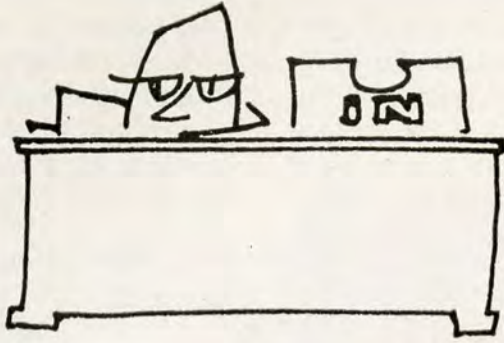
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WE GET LETTERS

Editor, RAIC *Journal*:

This is just a line to thank you and through you all of those concerned with our very wonderful and flattering presentation of the Salvation Army Matson Lodge, Victoria, in your August issue. Everyone concerned with the project is delighted.

John Wade, Victoria

Editor, RAIC *Journal*:

The May issue of the *Journal* was refreshing. However, on studying the residential designs and seeing some good work, I could not help wondering what form architecture would take if, instead of the 30° - 60° and 45° - 90° setsquares, it became a 27½" plastic tool. This I wonder not only of residential design but of all forms of architecture.

David E. Horne, Toronto.

P.S. The writer is mentally hamstrung by his tools.

Editor, RAIC *Journal*:

Would anyone knowing of a complete collection of the journal "*Canadian Architect and Builder*" which might be for sale please contact John Bland, School of Architecture, McGill University.

John Bland, Montreal

Editor, RAIC *Journal*:

The International Union of Architects (UIA) will hold its Seventh Congress in Havana, Cuba, during September, 1963, the theme of the convention being: "Architecture in the Underdeveloped Countries." The National College of Architects of Cuba, Cuban chapter of the UIA, is entrusted with the material and technical organization of this event.

The Cuban architects, conscious of their responsibility, are determined to make a success of this convention and hope their colleagues of every country will take part in these friendly meetings, in the course of which we propose to study the part which the architects are to play in relation to construction and planning, and the ways and means of carrying out the tasks entrusted to them, in this dynamic process of the development of their respective countries.

The Cuban architects wish to avail themselves of this opportunity to strengthen the ties of friendship with the colleagues of your country, and to this end they invite them cordially to participate in the activities of the convention, which will guide us all in the fulfillment of our obligations towards our respective countries and all mankind. Thus it is the duty of our profession to co-operate "in the realization of the legitimate aims, namely the material and spiritual welfare of man, and to thus contribute to the progress of humanity and the consolidation of world peace." Such was the motive which led to the setting up of the UIA.

We shall, in the near future, send our distinguished colleagues the rules of the convention and the standards to be used in the development of the theme and presentation of papers, and also all documents and information necessary to keep them posted on our activities in this regard.

Trusting our colleagues will accept our cordial invitation and attend the Seventh Congress of the UIA, we remain,

Yours very truly,
Architect Raul Macias Franco,
President, National College of
Cuban Architects, Havana.

ERRATUM

The *Journal* regrets the error in the credits for the Monarch Life Building by Smith Carter Searle in the July issue, which listed separate mechanical and electrical engineering services. Smith Carter Searle provide full engineering as well as architectural services in their own organization.



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New Literature

Micro-Graph Catalog covering over 280 types of graph sheets. **Canadian Charts and Supplies Ltd., Box 360, Oakville, Ontario.**

A condensed catalog of specification grade electrical wiring devices for indoor and outdoor uses. **Form No. 32-6. Bell Electric Co., 5735 S. Claremont Avenue, Chicago 36, Ill.**

Leaflet on Metalline cast acrylic plastic sheets. **Sign Division, O. H. Johns Glass Co. Ltd., 219 Broadview Avenue, Toronto 8.**

Brochure on Duraclad Coating for Aluminum. **Daymond Company Limited, Chatham, Ontario.**

Revised door and frame manual. **M. J. Daley Ltd., 354 McRae Drive, Toronto 17.**

Booklet illustrating glass as featured in architecture. Title: To Capture, Control or Create an Environment. **The American Saint-Gobain Corporation, Post Office Box 929, Kingsport, Tennessee.**

Leaflet on Sun-Stop. A transparent glass coating. **Atlantic Glass Coatings, 235 Dixon Rd., Westown Plaza, Weston, Ontario.**

Folder on Tuflex Tile. **Rubber Products Inc., 4521 West Crest Avenue, Tampa, Florida.**

Technical Information Manual on translucent fibreglass reinforced plastic panels. **Technical and Field Services Dept., Filon Corp., 333 N. Van Ness Avenue, Hawthorne, California.**

Catalogs on Solarstop and Solarpane double glazing units. **Engineering Products of Canada, 5035 Ontario Street, Montreal, P.Q.**

News Bulletin No. 43-62 from the **Viking Tile Corporation, Washington, New Jersey.**

Leaflet on the Series 100 Steel Safety Rails. **Hubert Industries, 385 King William Street, Hamilton, Ontario.**

Brochure on Styrotop insulation for built up roofs. **Courtaulds Plastics of Canada Ltd., Cornwall, Ontario.**

Brochure on Dodge range of tile patterns. **Dodge Cork Company Inc., Lancaster, Penn.**

8 Page catalog number NP-3 illustrating the Elkay range of stainless steel sinks. **Elkay Manufacturing Company, 2700 South 17th Avenue, Broadview, Ill.**

The complete line of Acousti-Celotex products is described in a new illustrated brochure. The Protectone brochure is available from the **Celotex Corporation, Dominion Sound Equipments Ltd., 4040 St. Catherines Street W., Montreal 6, P.Q.**

New 930 page catalog covering more than 10,000 products has been issued by **Appleton Electric Company, 1701 Wellington Avenue, Chicago 13, Ill.**

"Environment for Worship" a unique collection of modern Canadian churches. Text is in French and English. Copies are available free from the **Canadian Wood Development Council, 130 Slater Street, Ottawa 4.**

New Products

The Saturn, post-top mercury luminaire. **Canadian General Electric Company Limited, Lighting Equipment Sales, 830 Lansdowne Avenue, Toronto 4, Ontario.**

Insul-Custic tiles moulded from Dylite expandable polystyrene. **Plastics Division, Koppers Company Inc., Pittsburgh 19, Pa.**

The Clymatron. The first air-exchange fluorescent lighting unit to provide simultaneous air supply and return. **Day-Brite Lighting Inc. 6260 Broadway, St. Louis 15, Mo.**

The glass industry's first two-sided, full length laminated safety glass mirror for shower doors and tub enclosures. **Amerada Glass Corporation, 3301 S. Prairie Avenue, Chicago 16, Ill.**

A new line of high efficiency direct drive centrifugal roof ventilators. **American-Standard Products (Canada) Limited, 1201 Dupont St. Toronto 4, Ontario.**

Flexstrip. A parquet panel. **Homasote Company, Trenton 3, N.J.**

An aluminum, single hung window with sash easily removable for cleaning. **Arnold Altex Aluminum Company, Robert Rowley and Assoc. Inc. 186 S.W. 13th Street, Miami 36, Fla.**

Dry-type transformers designed to attain the highest safety factor resulting from natural air cooling. **Atlantic Transformer Co. 8306 Hegerman Street, Phila. 36, Penna.**

Wisp-O-Gold, one of two new Golden Patterns created by Barclay, manufacturers of plastic-finished, hardboard panels. **Barclay Manufacturing Co. Dept. SATS-62, Barclay Building, New York 52, New York.**

A heating unit and boiler which is installed in one compact combination package. **Atlantic Steel Boiler Co. 22nd & Washington Street, Phila. 46, Pa.**

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Compriband, a patented joint sealant material. **Compriband Inc. 1491 Daisy Avenue, Long Beach 13, Calif.**

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IN WITNESS whereof Officers of the Royal Institute have hereto set their hands, and the Common Seal of the Institute has been hereto affixed under authority of the Council dated the 4th day of September, 1962.



John D. Dain
President

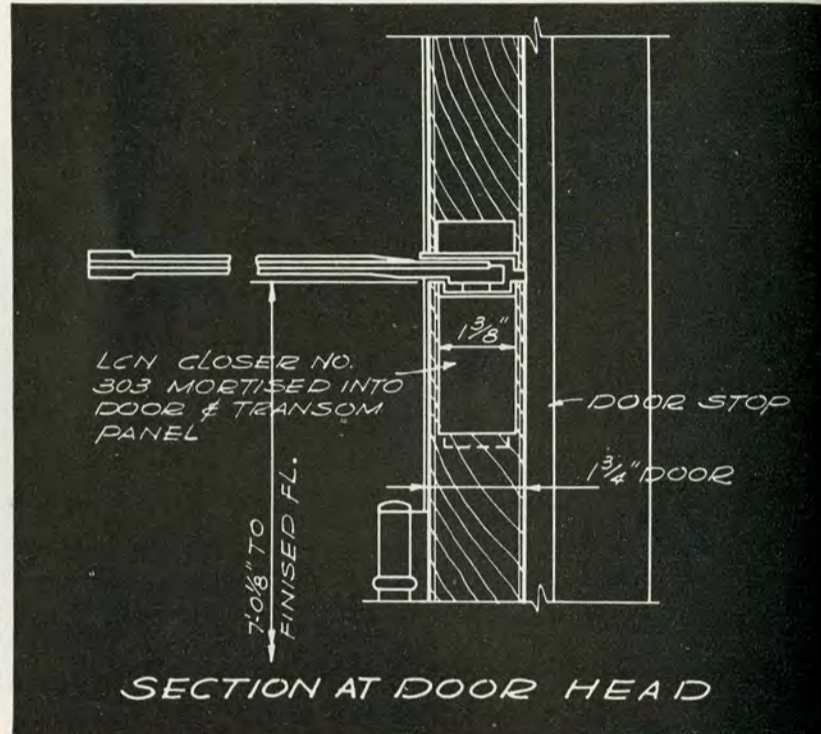
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FIRST COPY of the new Certificate of Membership in the Royal Architectural Institute of Canada was issued to James W. Strutt, of Ottawa. Designed to fill a long-felt need for a certificate of professional identification suitable for framing, the new certificate, measuring 22 x 15 inches, is printed and lettered in black, with the seal of the Institute in blue. Members may obtain them from the RAIC Secretary for a fee of \$5.00. After October 1, 1962, they will be issued to new members without charge.

Coming Events

- Architectural Institute of British Columbia
Hotel Vancouver, Vancouver
December 7-8
- Alberta Association of Architects
Macdonald Hotel, Edmonton
January 25-26
- Saskatchewan Association of Architects
Cavalier Motor Hotel, Saskatoon
October 19-20, 1962
- Manitoba Association of Architects
Winnipeg
January 19
- Ontario Association of Architects
Royal York Hotel, Toronto
February 7-8-9
- Province of Quebec Association of Architects
Manoir St Castin, Lac Beauport
January 24-25-26
- New Brunswick Association of Architects
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February 15-16
- Nova Scotia Association of Architects
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February 1-2

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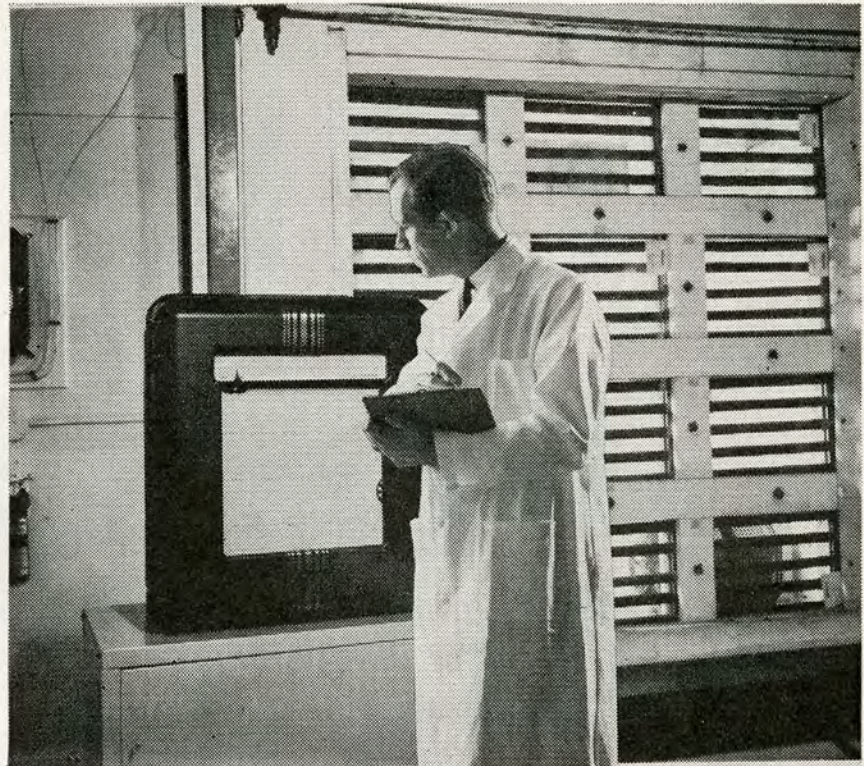
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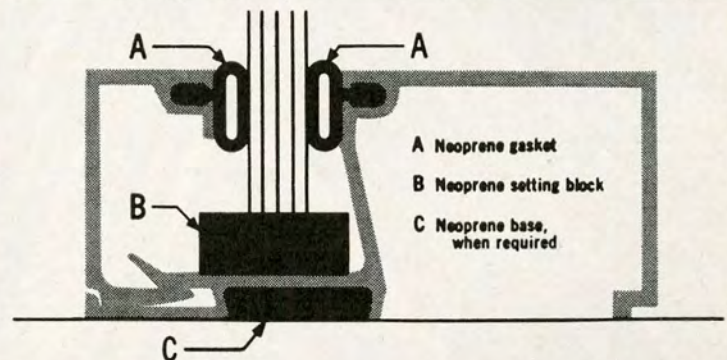
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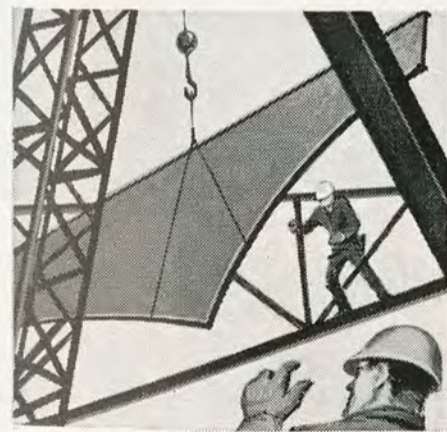
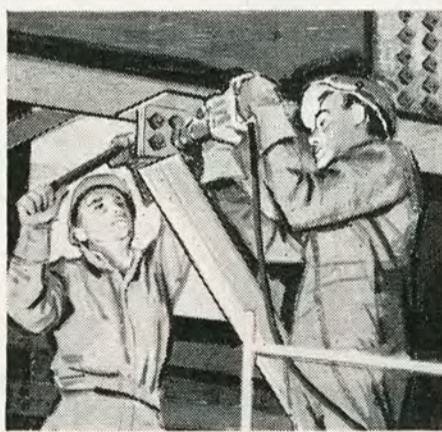
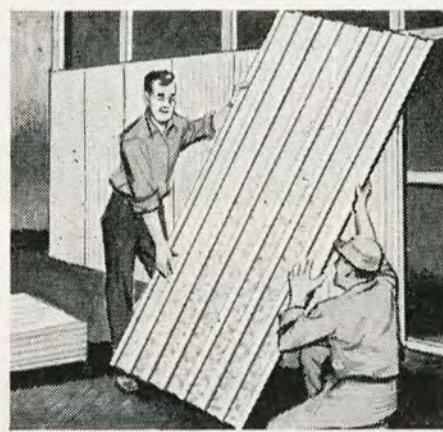


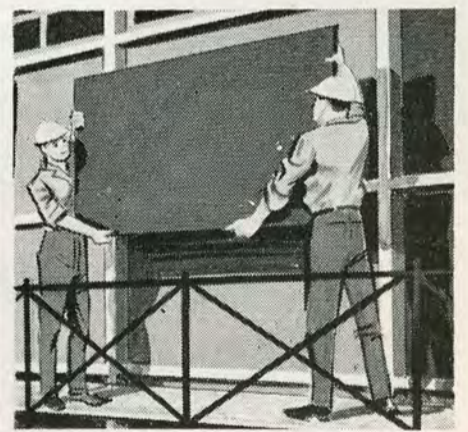
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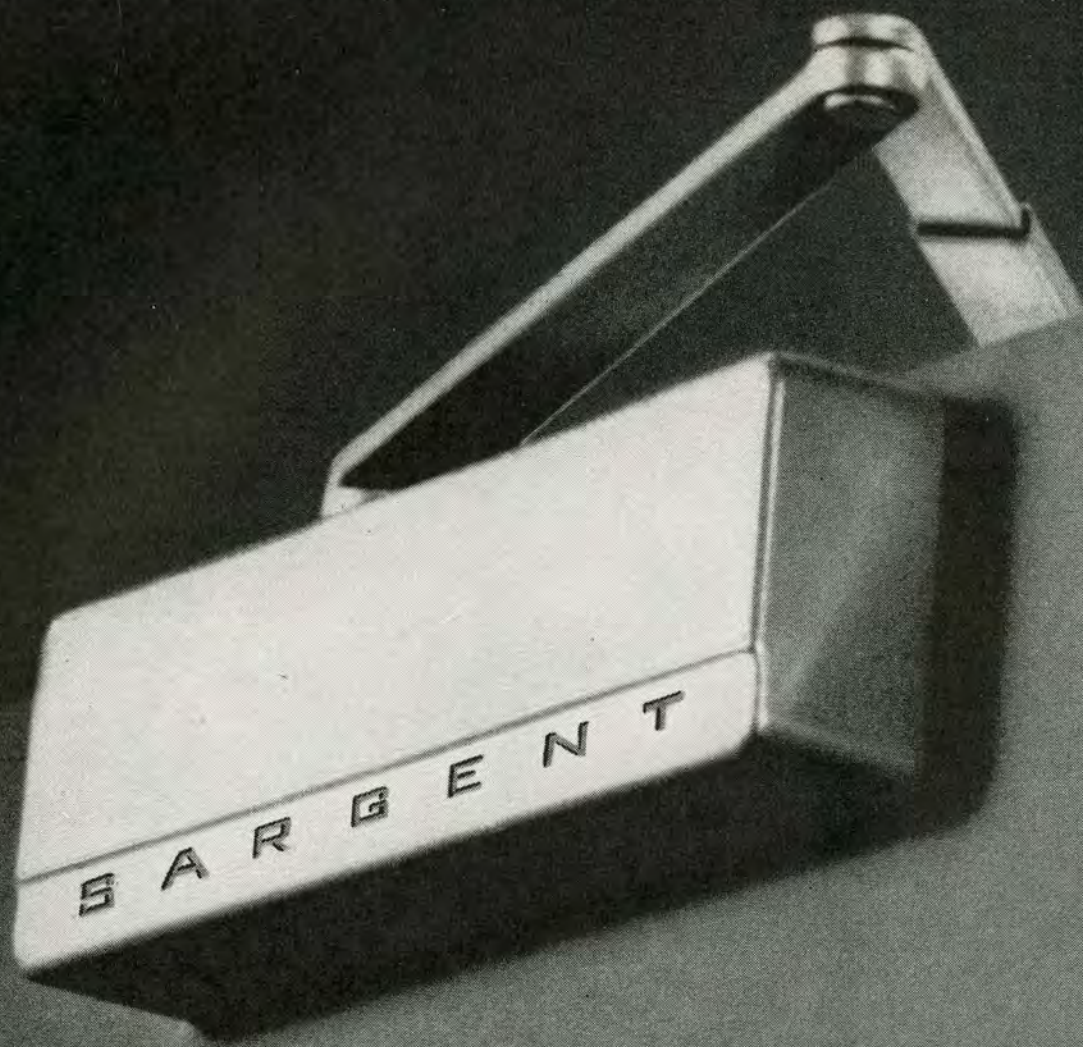
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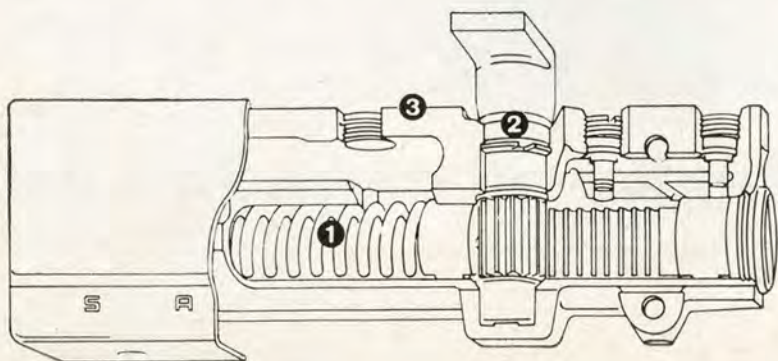
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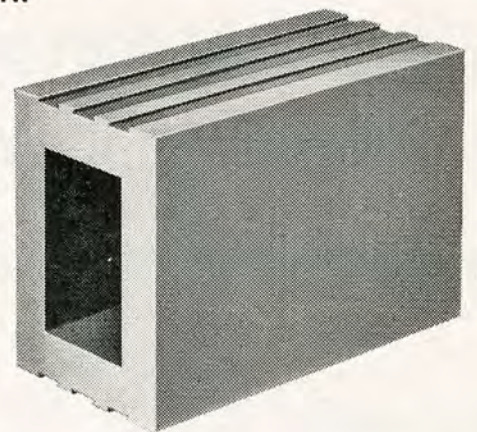
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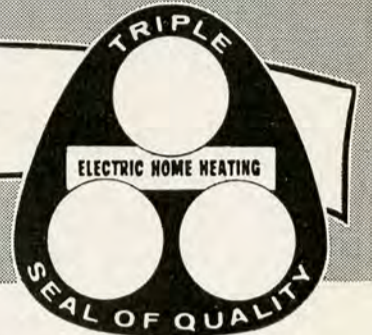
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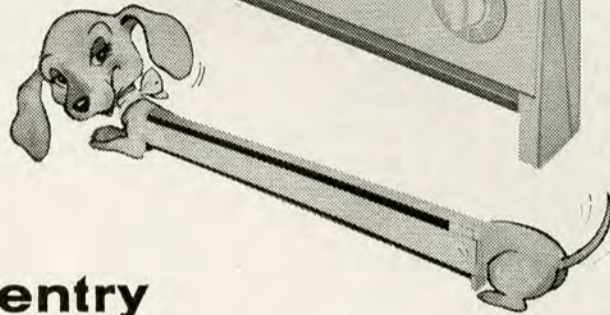


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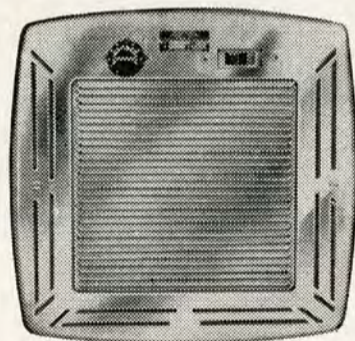
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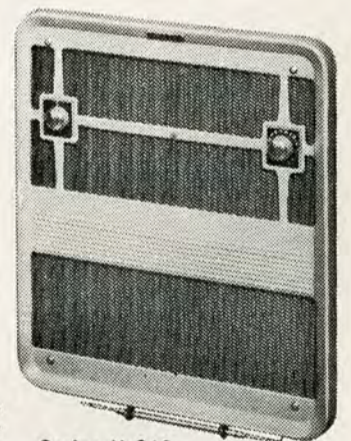


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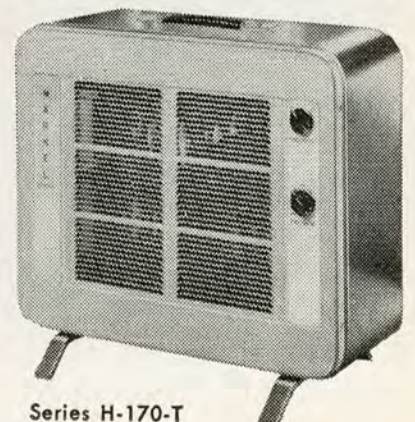
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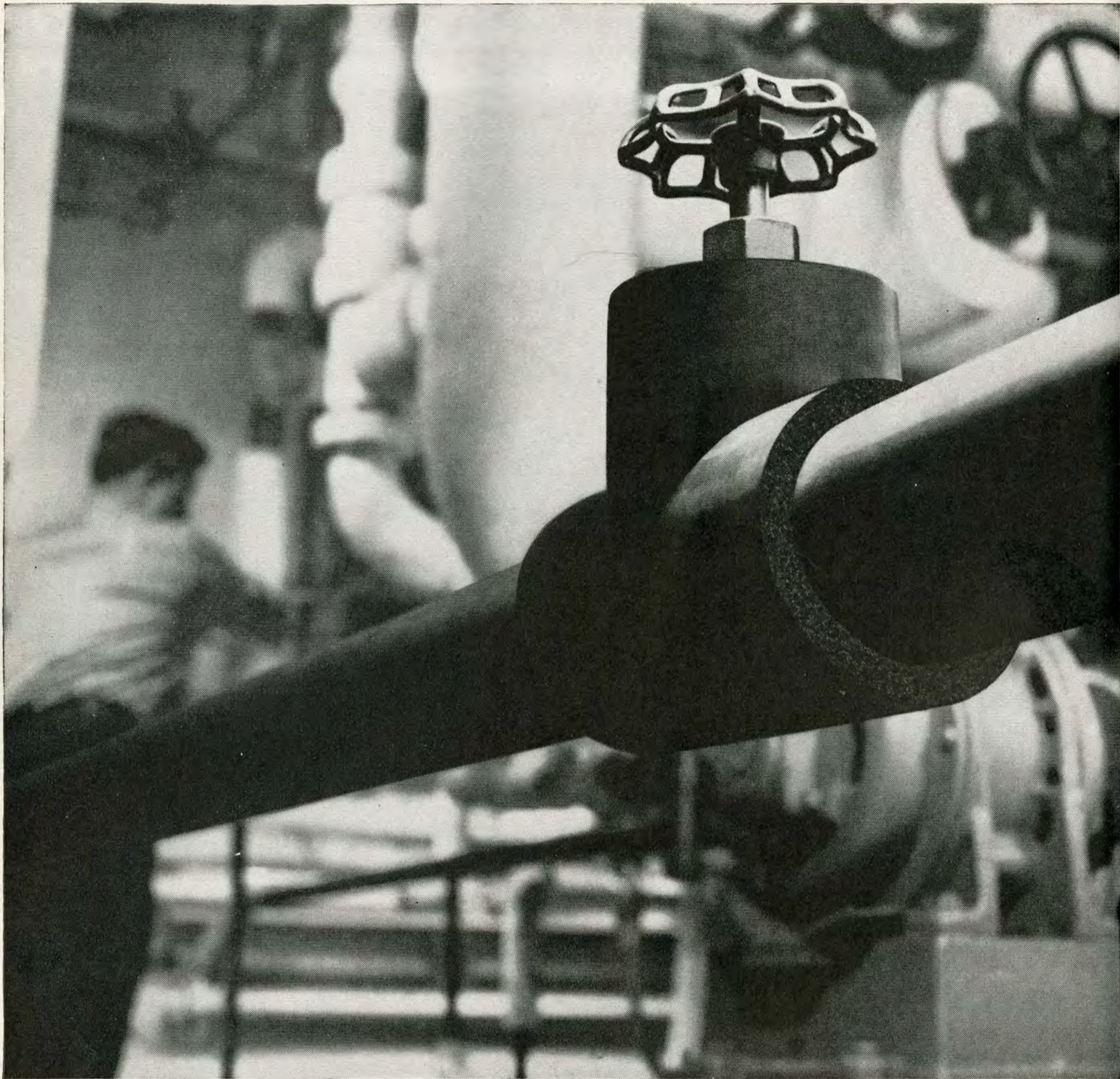
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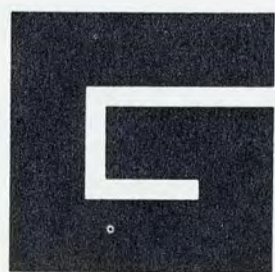
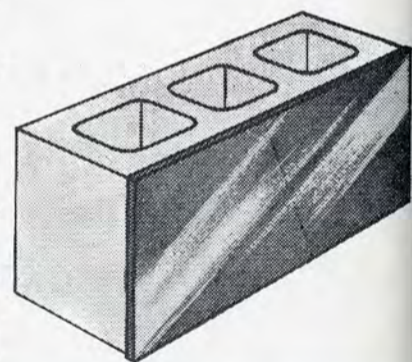
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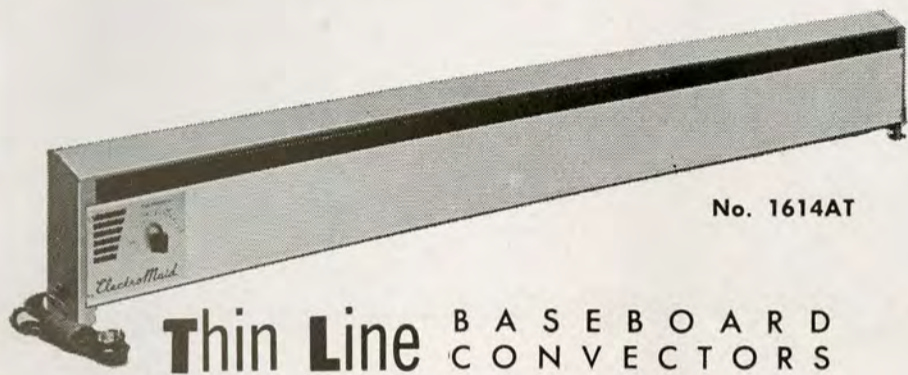
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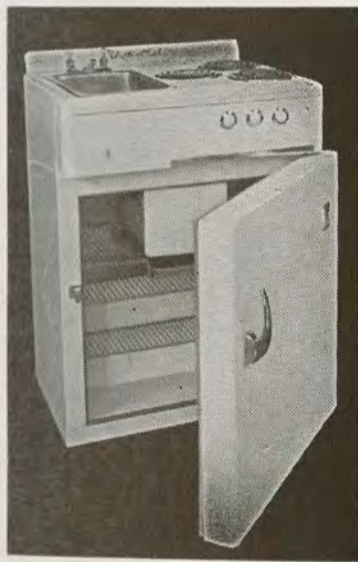


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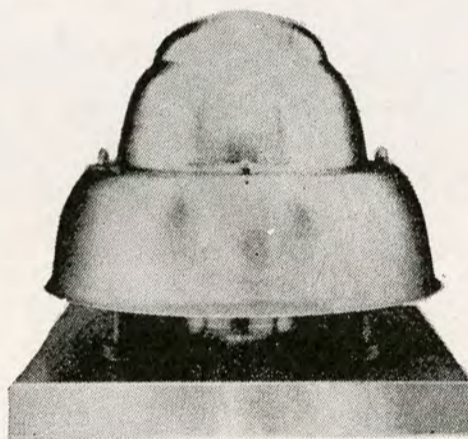
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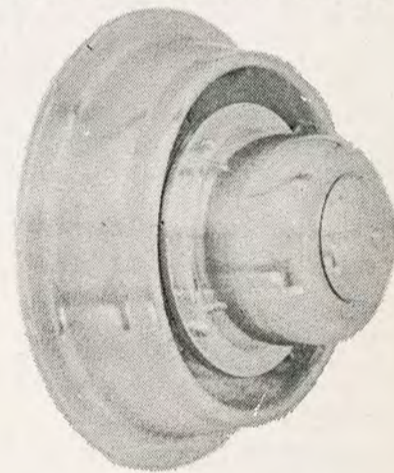


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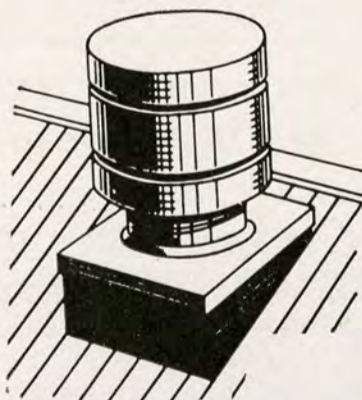
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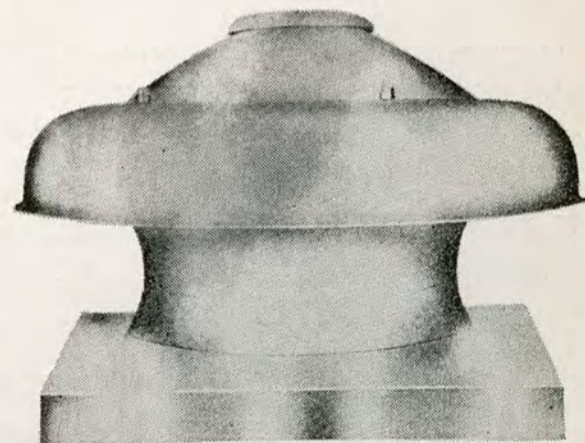
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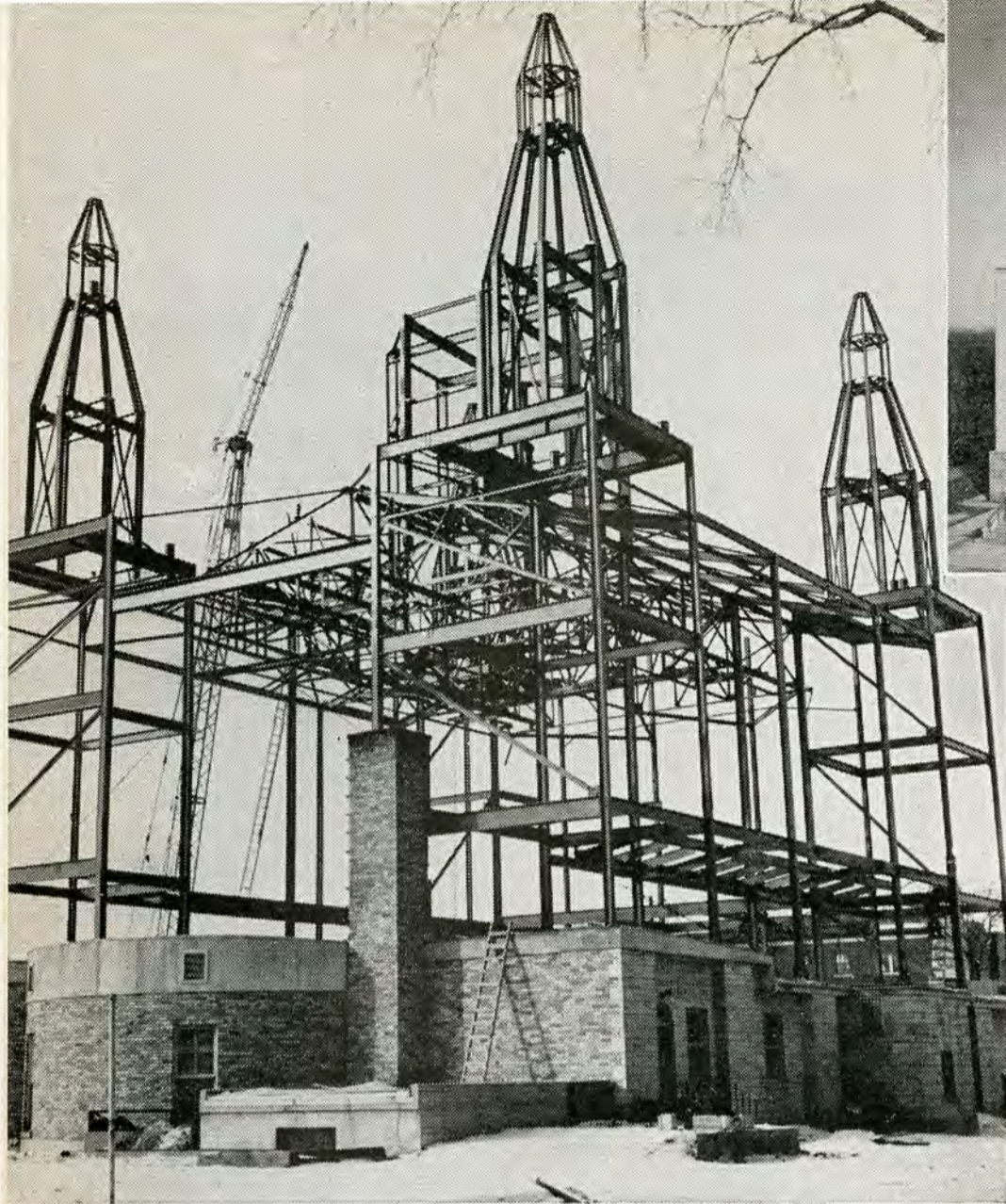
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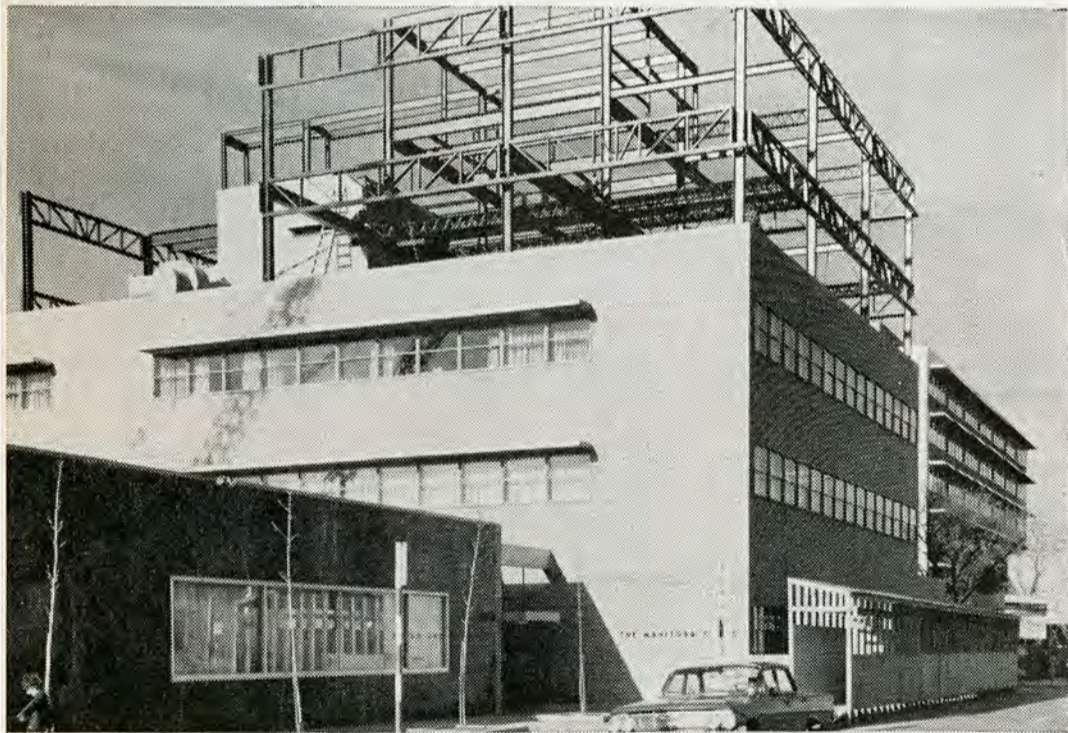
Quarries: Niagara Falls, Ontario



Steel is versatile

Structural steel can be used to build complex design shapes. This steel frame is for the Greek Orthodox Holy Trinity Cathedral in Winnipeg and inset is the finished building.

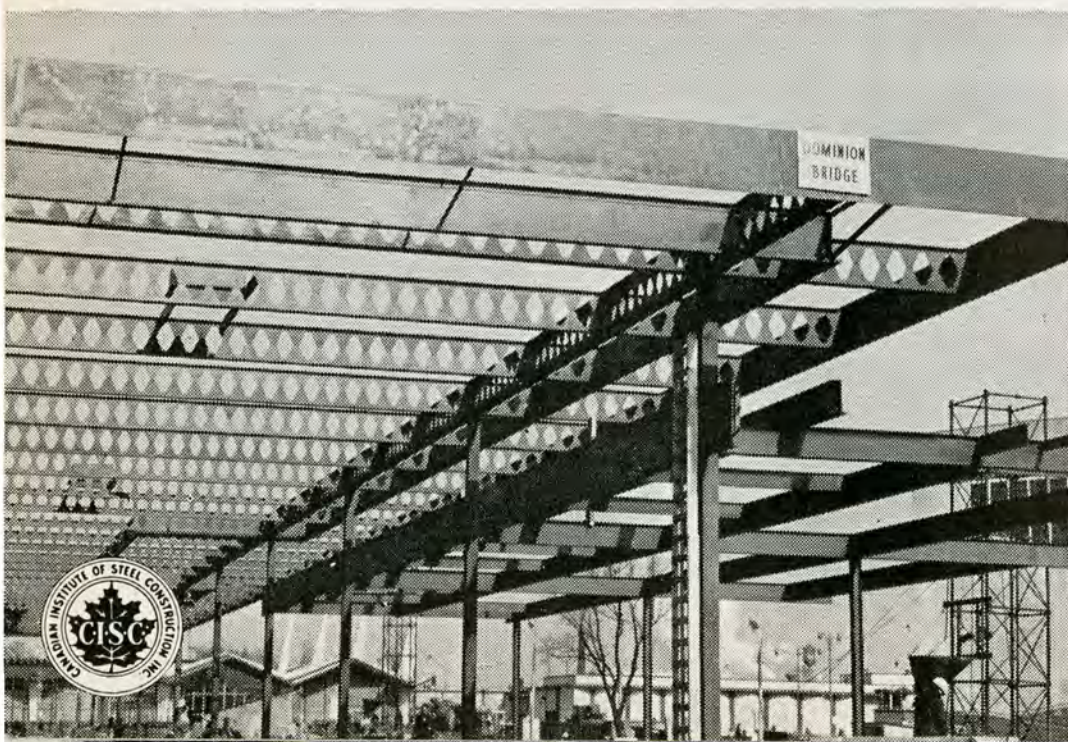
Architects: Green, Blankstein, Russell & Associates.



Additions are easy with steel

When this building was first constructed two extra floors at a later date were a possibility. Last year they became a reality. The tops of the main support columns of the original steel frame had been left exposed and the new steel was added quickly and economically.

Architects: Smith, Carter, Searle & Associates.



Castellated steel beams reduce weight

The use of castellated beams in the C.N.E. Home Furnishing Building in Toronto resulted in roof purlins that were about 75% of the weight of an equally strong rolled beam and about 60% of the weight of an equally rigid rolled beam. Beams are castellated by cutting the web zigzag fashion, offsetting the halves one notch and rewelding peak to peak. Castellated beams can free the designer from the restrictions of excessive deflections when using the new high strength steels.

Architects: Marani, Morris & Allan.

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Steel gives design freedom

Y-shaped with clear spans. This is the Saskatchewan Power Corporation's head office building in Regina. There are no columns inside the wings of the building and each floor is a wide open space 43 ft. x 270 ft. You can build this way with steel—it simplifies interior partitioning and makes future changes easy.

Architects: Joseph Pettick, M.R.A.I.C.

Consultants: C.C. Parker, Whittaker & Co. Ltd.

Steel shows some of its qualities

Some of the basic qualities of steel as a building material are illustrated in this roundup of recent projects from across the country. Steel produces light, flexible structures and its inherent qualities offer great scope to the imaginative architect.

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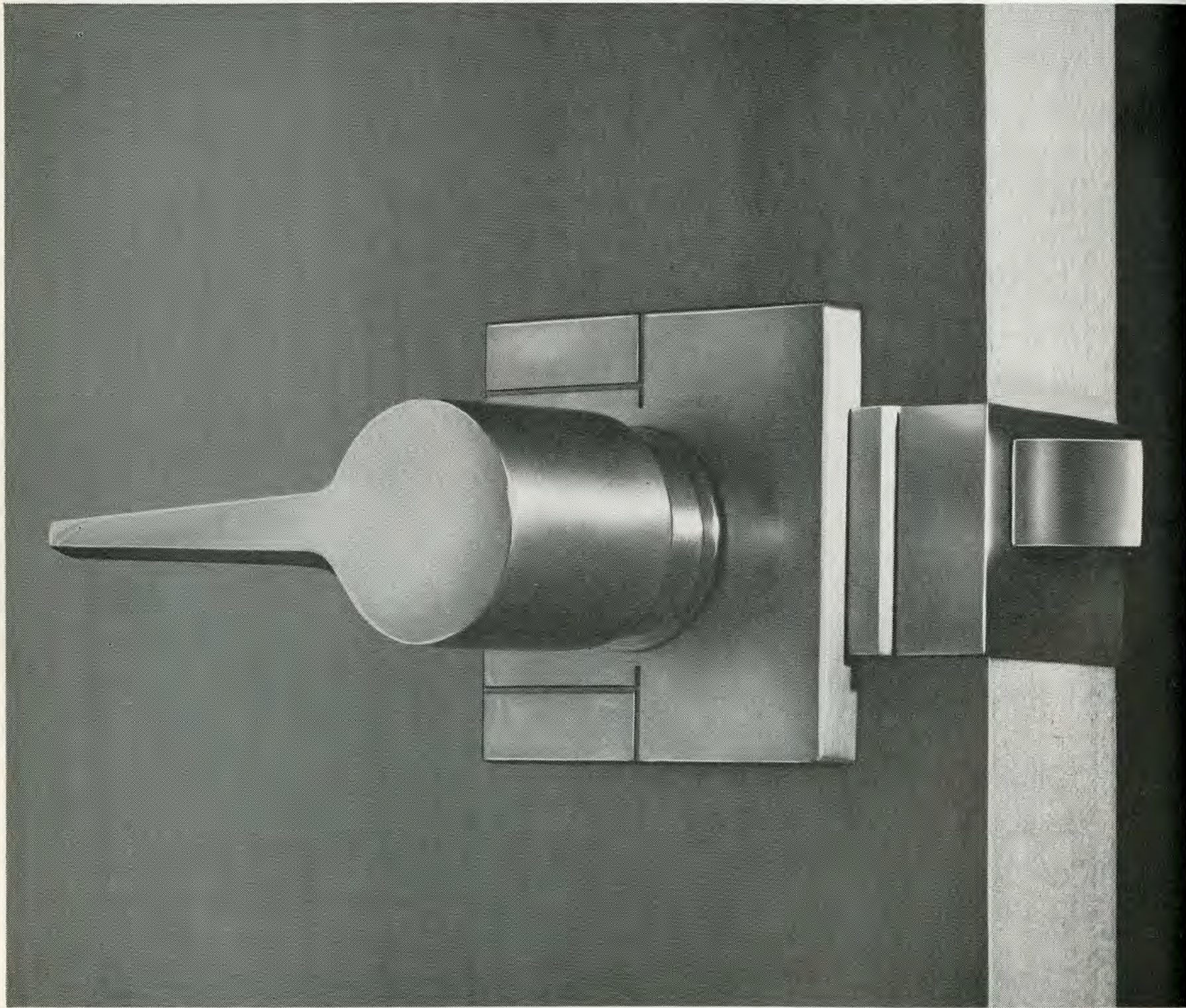
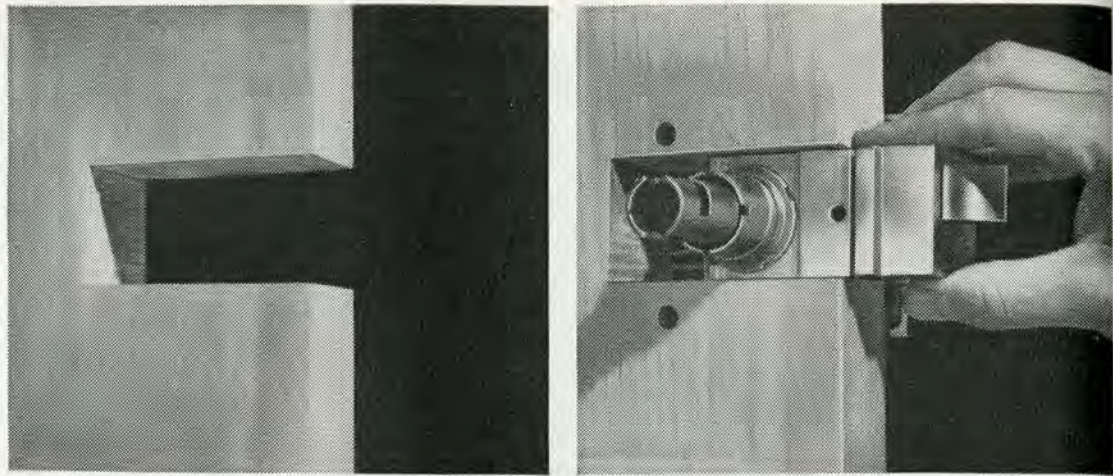
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Designed for Leisure

MORE LEISURE TIME and mobility have opened new architectural horizons in Canada.

Built up is a strong demand to provide outdoor recreational spaces at both urban and regional scale. This is influenced by political recognition that government activity is the medium to provide the necessary facilities.

Large-scale landscape, in the form of "wilderness nature" and "humanized spaces," provides the fundamental essential. This includes water, topographic forms, vegetation, dramatic or picturesque character or intellectual image.

Wherever people gather, however, structures are required for their shelter, convenience, and enjoyment. The sensitive architect has found that his seasoned skill, woven into the fabric of the park and recreational area, is providing not only unobtrusive building components, but also elements of delight and pleasure in themselves.

A summer week in the life of the modern regional city dweller, who now numbers over two-thirds of our population, will often encompass a trip to the local or metropolitan park and a weekend foray by automobile to a conservation, provincial, or national park.

Architecture for recreation is nostalgically recalled in the town scene by the Chambers-influenced park

*A
Commentary
by*

Macklin L. Hancock



bandshell. It is summoned up in more grand terms by the railroad design: *Seigniory Club, Banff Springs Hotel, Manoir Richelieu, or Minaki Lodge.*

With automobile ownership now almost universal, emphasis has shifted to modest-cost basic facilities. These are closely related, spatially, to car-parks—the concession building shelter, the lavatory-bathhouse, the picnic shelter, the entrance building—and sometimes include a simple restaurant building. Seldom is it possible for such plebeian structures to be described as great architecture, but a study of recent work illustrates how leisure can be enhanced by works of architectural elegance and quality.

The early post-war period left the nation almost solely with urban parks. These, with their fret-work buildings in Victorian design, wore out in the chugging days of the Model T. Gradually, as the impact of the industrial boom took shape, the “environmental professional” entered the new park design field, traditionally the area for the horticulturist and city parks administrator.

At first, the town planner and engineer made their influence felt. Later, the landscape architect, with his predecessor—Olmsted’s lofty example, *Mount Royal Park* and the *Niagara Frontier*—was called to play his part. Initially, buildings assumed a secondary or even casual importance: the municipal owner erected rudimentary structures. Since 1950, heralded by *Thompson, Berwick & Pratt’s Stanley Park* restaurant and *Balharrie’s Hog’s Back* refreshment pavilion—the architect has assumed a more properly balanced role. A struggle and search for form ensued in an attempt to determine the successful site and intellectual balance. Architects viewed the many new industrialized materials as an answer.

Since then, they’ve never looked back!

THE PONDEROUS STONE and heavy blackened logs and beams of the US National and State Park Services almost never influenced architects commissioned in the Canadian post-war programs. The urban pattern seemed to evoke interest in a more urban structure—simple rectangular lines, textures of brick, glass, steel, ceramic tiles

In the multiplying provincial parks



Vincent Massey Park’s entrance complex: Hart Massey’s solution for spatial excellence.

and conservation systems, lighter-weight wood frame, simple stone panel, and low-pitched asphalt or built-up roof—paraphrase the architectural design character in a more free sylvan surrounding.

An interesting balance is struck in the half-urban, half-national *Vincent Massey Park*, designed by the National Capital Commission’s landscape architect, E. I. Wood. Here, the first building, a small concession restaurant facility, with patterned fluted roof canopy, overlooks *Hog’s Back Falls*. Designed by Watson Balharrie, it has a Tivoli-like, gay, urban quality. Skilful landscape development integrates it into pastoral recreation spaces for civil servants from the nearby decentralized government buildings.

From an organized automobile harbor in the entrance sector, the visitor

enters Hart Massey’s complex of shelter, concession building, and lavatory facility—all in glazed brick of urban sophistication. In their space-modulating juxtaposition, they are fully an organic part of the park’s picnic and wooded areas. The same precision of plant forms and court spaces characterizes the particular purpose and location of the park.

More of a civic nature is *Windsor’s waterfront park* overlooking Detroit’s commanding skyline. The park is punctuated by the crisply outlined two-storey combined concession building and shelter by Johnson and McWhinnie.

A concern for restraint and hierarchy of design components is exhibited in the provincial park design at *Kakabeka Falls*, west of the Lakehead cities, on the *Kaministikwia River*.





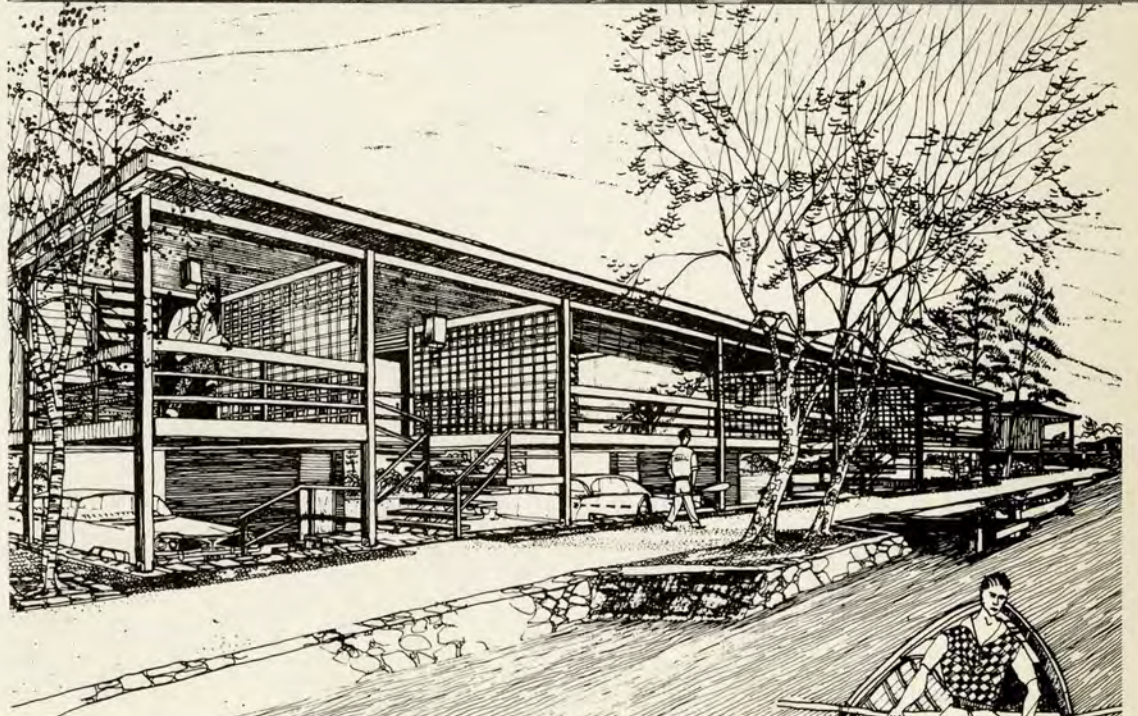
Unaffected stone and wood complement the low, rocky islets of the Thousand Island sector, Ontario-St Lawrence parks.

The stone and timber refectory and overlook — designed to place people in a comfortable position to enjoy a contemplative or dramatic scene as may be described by individual perception—illustrate “wilderness park” architecture. Designed landscape components of access, movement, planting, earth forms, and levels are kept simple and organic. This allows the major natural landscape, or rough contour and wooded slope, to be grasped—without the detracting coercion of discordant forms, textures, or colors.

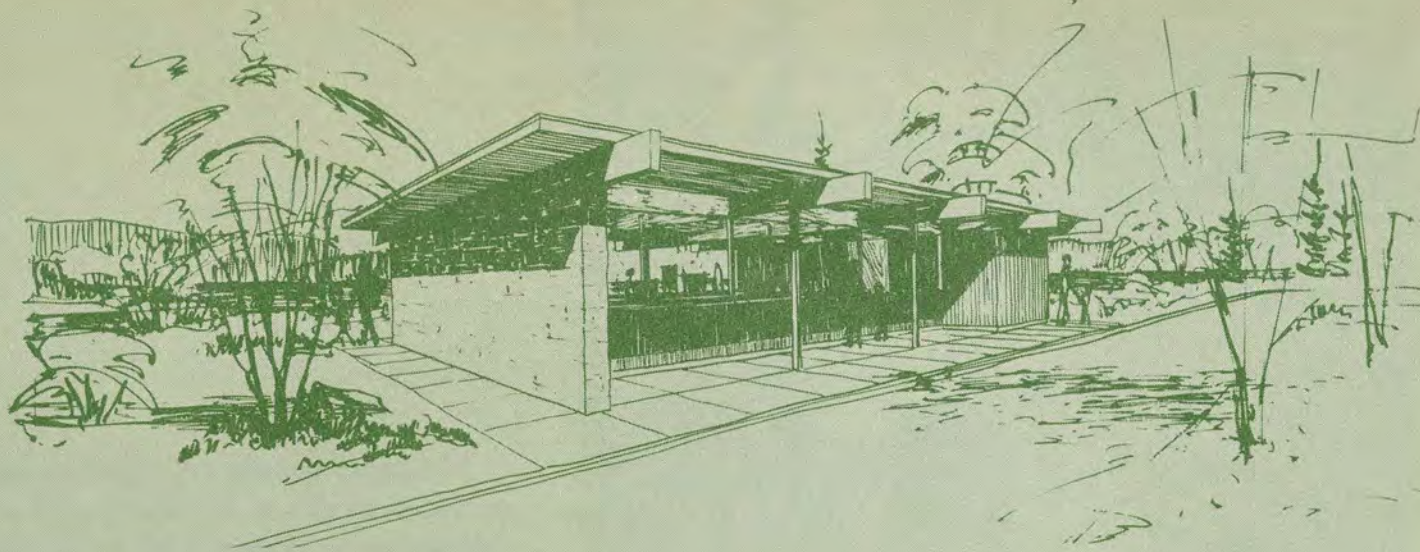
The same concern motivated the designs for the *Ontario-St Lawrence Parks*. The areas of land were wisely set aside for public use, contiguous to the combined major power project and the *St Lawrence Seaway*.



The inundation of the historic St Lawrence Loyalist frontier villages prompted the relocation, into a simulated village in early Ontario vintage, of significant, differentiated dwellings, stores, inns, and industrial components of the period. It was appropriately named *Upper Canada Village*. Architectural restoration consultant was Anthony Adamson; resident architect was Peter Stokes.



“Motel-Boatel,” designed by Alan Graham and Robert Calvert, is raised to overlook low profile shoreline of newly-created Lake St Lawrence.

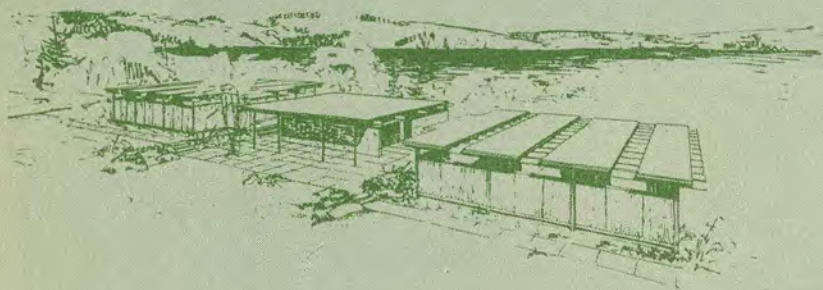
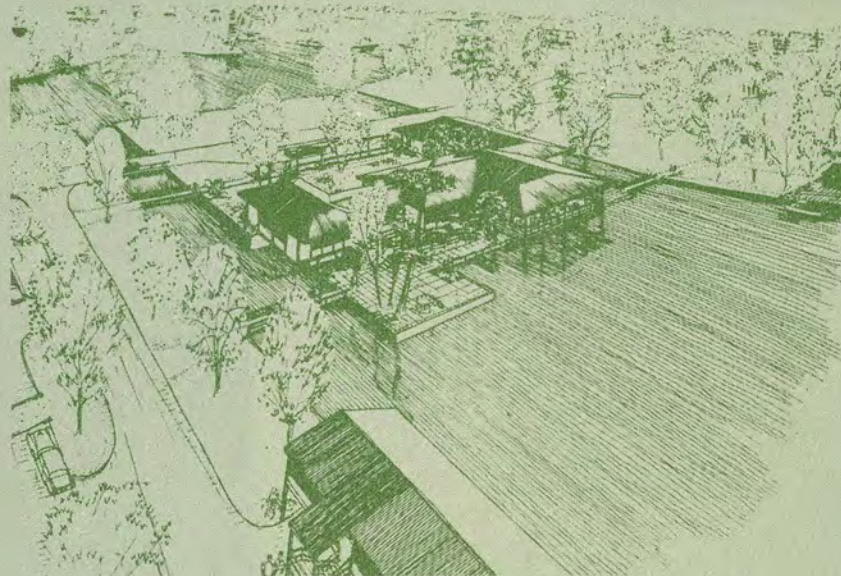
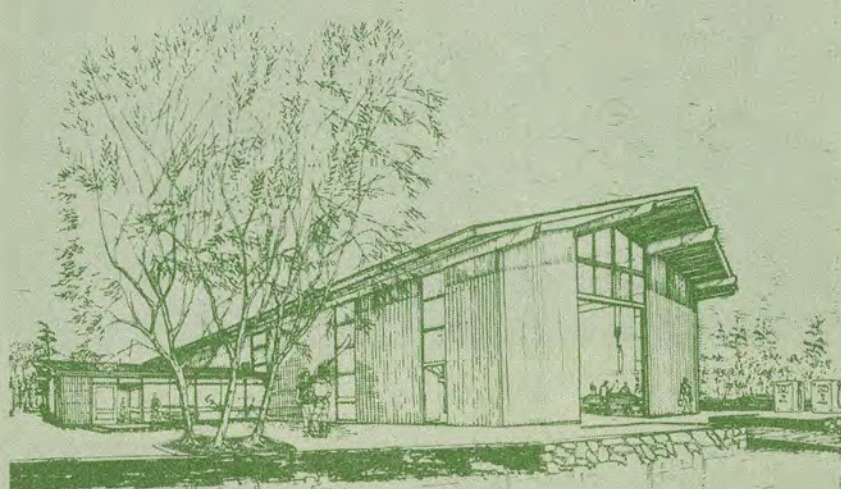


A PART of the regional parks system, the Village is located in *Crysler Battlefield Park*. Consultants to the Ontario-St Lawrence Development Commission, Hancock, Little, Calvert, Associates, have endeavoured to derive forms compatible with the historic site and village. These forms maintain the integrity and spell of the past and have the necessary relationship to the thousands of vehicular arrivals.

A simple and contemporary building, utilizing traditional materials, was chosen for the nearby restaurant. The user is reminded it is distinct from the restored Georgian and mid-nineteenth century pieces — though in close, yet separated, proximity.

Elsewhere in the same park, differentiated more sharply from the restoration to enhance the spell, are an entrance building and beach service buildings. Design for *Crysler Beach* is rooted in the flat, lacustrine profile of the power pool shoreline, formerly the farm fields and treed fence rows.

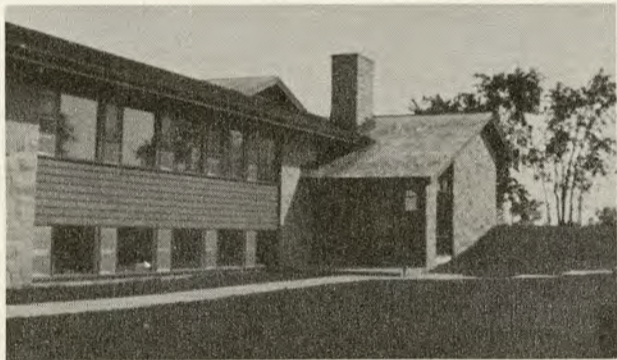
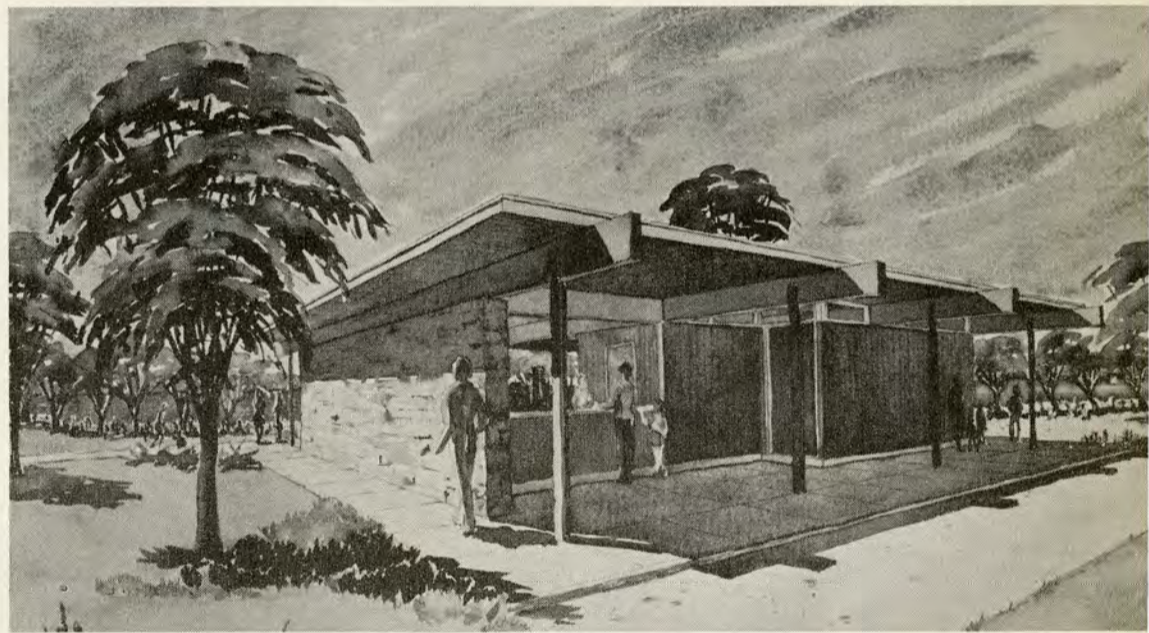
Its concession-bathhouse-lavatory complex is a flat granite, boulder-protected island, superimposed over a man-made beach. The buildings, connected by light modular canopies, are attenuated to draw air movement and spatial flows into a central court. Widely cantilevered post and beam timber structures echo the flat site and retain the singular abruptness of the nearby artificial earth mound, which was created to commemorate the stand of Loyalists against the American invaders.



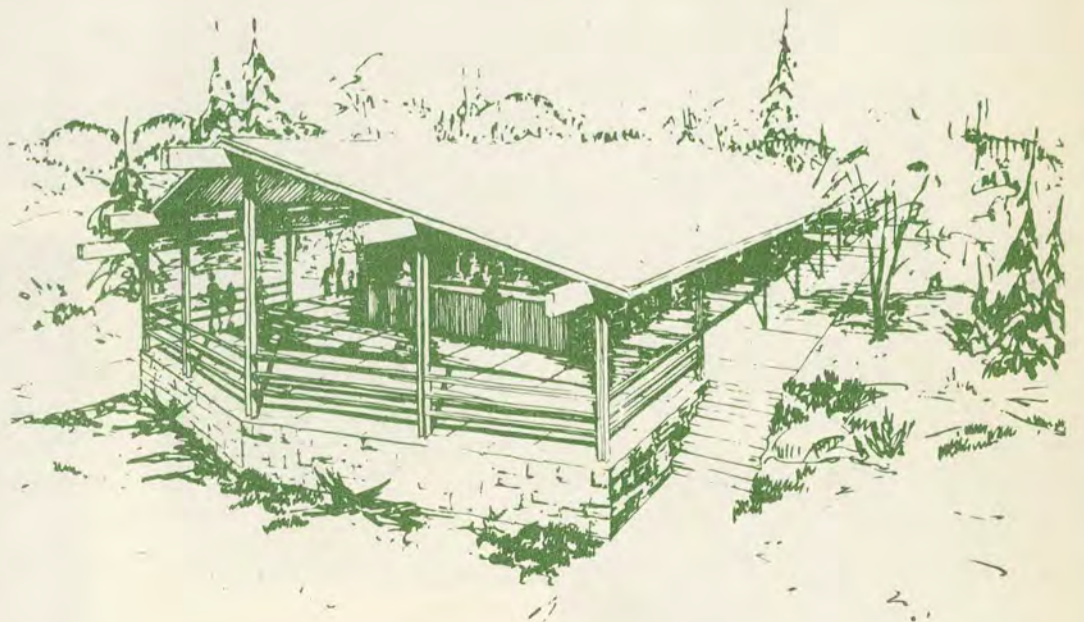
In the chains of islands, resulting from inundation, are a number of parks. These sometimes have a beach, but each has a view of a fascinating lake, where ships of the world sail to the center of the continent.

The islands are slightly mounded or even rolling, with hardwood trees and some pines. These factors permit a different interpretation for the feeling to be engendered by the organic structure of the park facility and buildings.

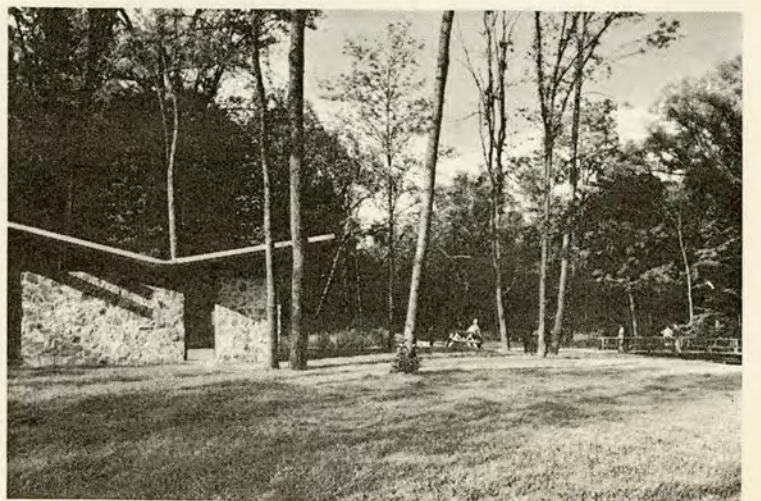
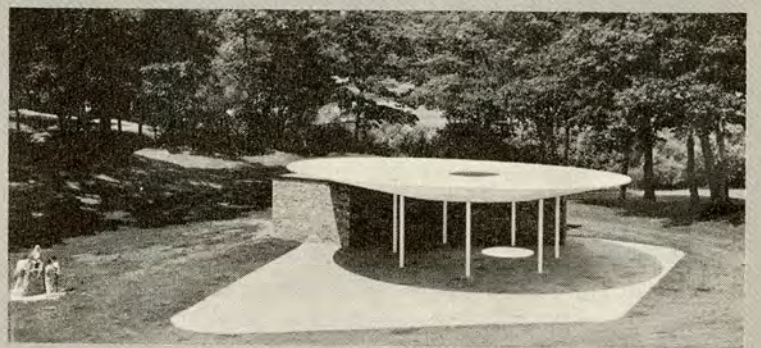
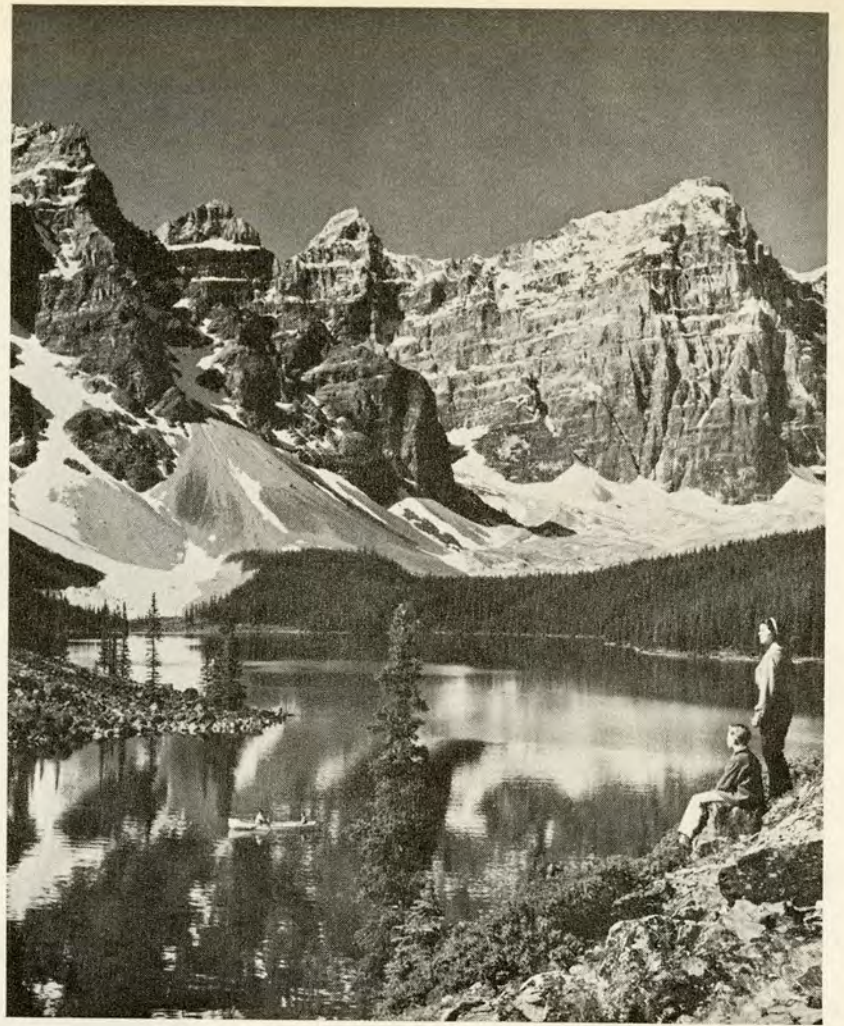




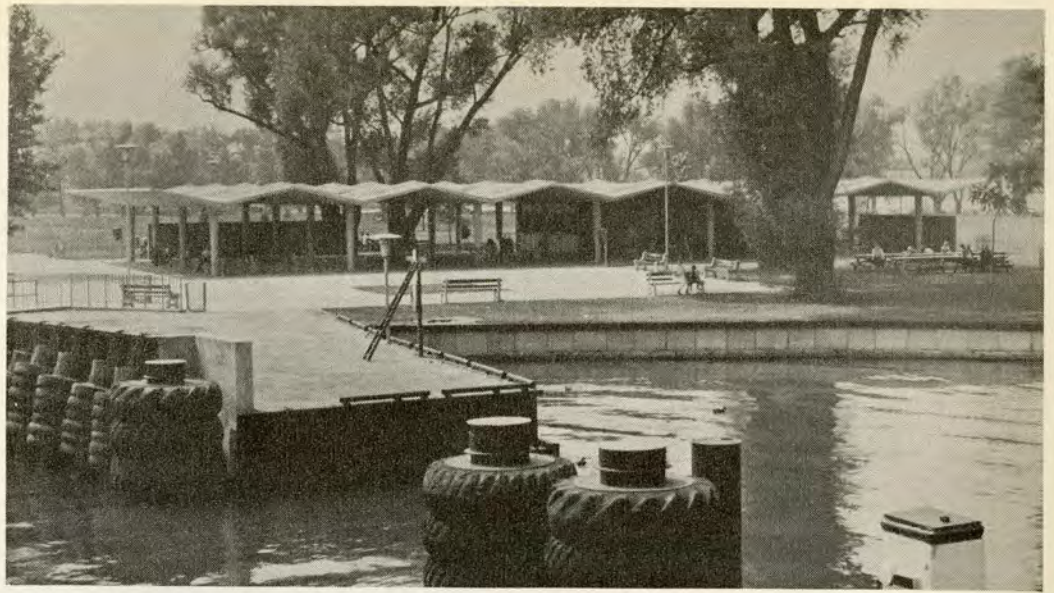
On a sharp slope at *Milles Roches Park*, the architect, Robert Calvert, has faced, to the beach, a deep gabled building. It has rough stone walls, a powerful ridge, and timber purlins. Wooded surroundings blend with the design, which is aimed to provide city folk a distinct change of pace from urban polish and restriction. The islands are tied to one another and to the mainland by a sinuous parkway, identified at its termini by gates. The gates, at the entrance from the provincial highway system, have been designed as control gatehouses, with horizontal timber beams extending across the road. The building's overhang provides shelter for control personnel; a large-scale orientation map is expressed as a wall panel facing a parking area.



CANADA'S METROPOLITAN park is assuming a decidedly different, large scale, comparable with anything in the largest US or European cities. *Stanley Park* boasts the vertical grandeur of towering Douglas Fir and, recently, a charming zoo. *Mount Royal* prides its Chalet and magnificent mountain-top drives.



THE TORONTO ISLANDS have long provided some families with a summer retreat. Access to this resource, a series of lagoon-separated, bridge-connected, low, sandy islets, is gained by ferry boat. These islets have been designated for redevelopment as a major open space for recreation and passive enjoyment. Following a master plan concept, areas have been chosen for picnicking in groups, beaches, sports, gardens, boating, historical sites, educational facilities, amusements, walks . . .



To begin the system, numerous structures have been built. A waiting pavilion, by Venchiarutti and Venchiarutti, greets the visitor at the Centre Island docks. Of ferro-concrete framing, it is brick infilled in the lavatory section. A folded roof is intended to echo wave shapes.

Focal to the *Centre Island* group is a small restaurant. Static in its hexagonal folded copper roof form, it sits astride the end of a small island, reached from the main pedestrian walk over a narrow bridge. Its entrances give onto terraced areas, subtended by low stone walls with the surfaces shaded by colorful umbrellas.

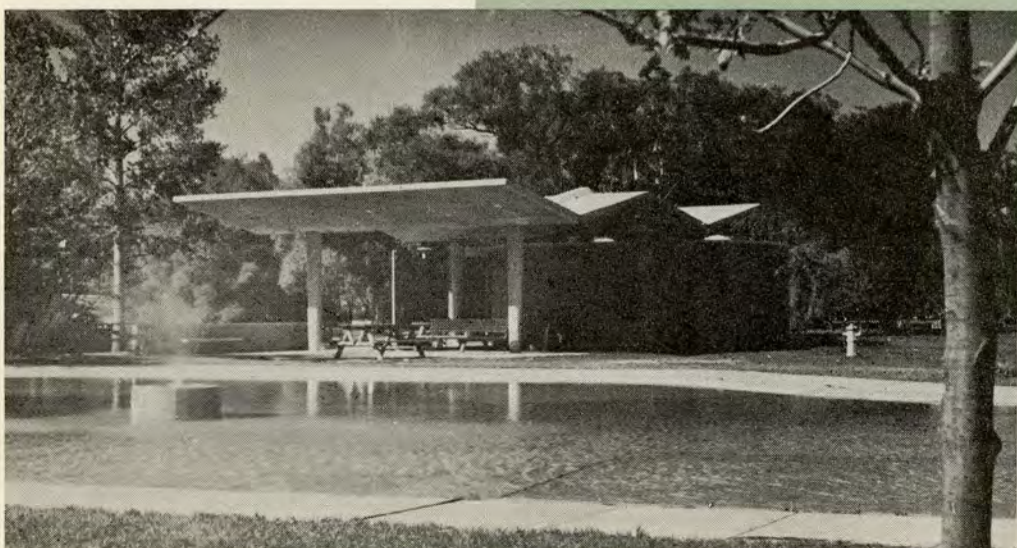
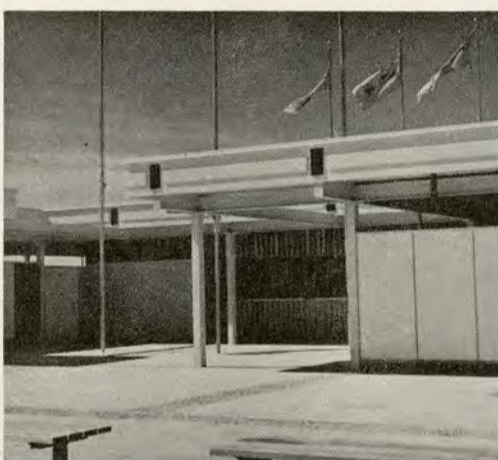
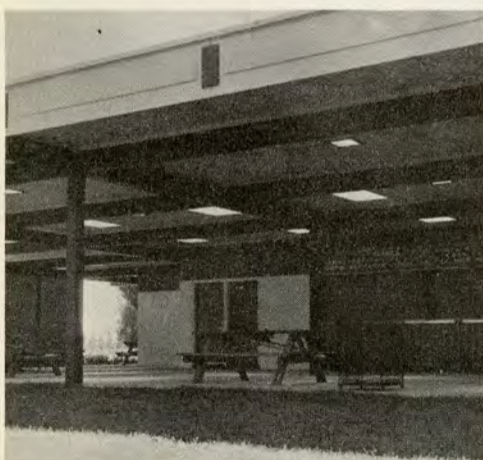
Main timber roof beams descend in a long slope from a finial toward the ground. Outside the roof, they are received by concrete buttresses, cupped to receive the run-off, which is collected in a shallow moat. Canoes and sleek power boats glide by or stop at the main island bridge, refurbished recently with new concrete arches to preserve late Victorian cast iron.



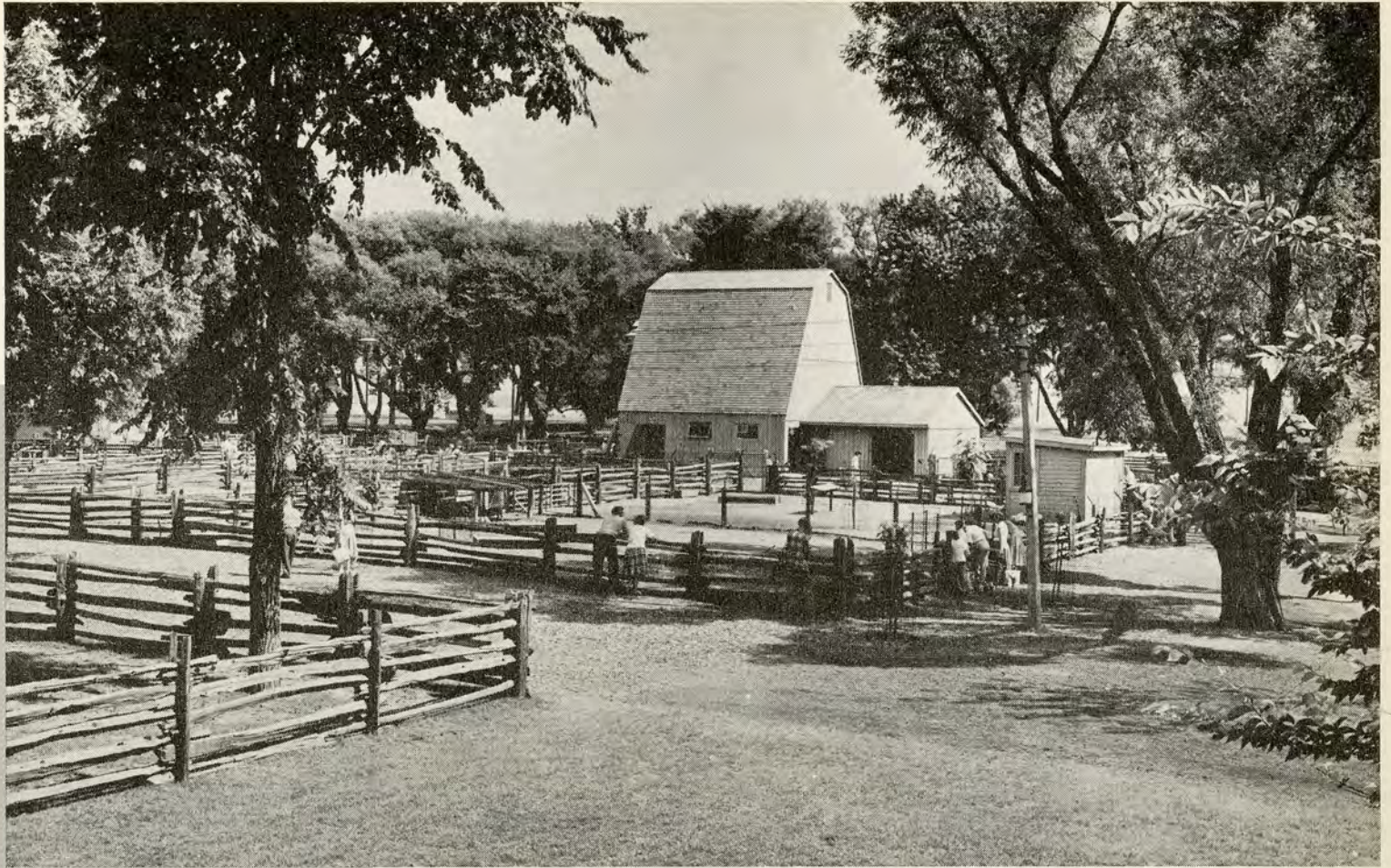
The central feature of the whole island group, currently in only its rudimentary stages, recognizes the fact that the islands are part of a truly urban development, and the pedestrian city dweller is an element of chief importance. The major axial feature, planted to capture a series of rectangular spaces, is held by ranks of fastigate trees and punctuated by aerial hedging and patterns of flower color. Spaces of granite paving blocks and concrete squares make up the interstices.

This feature is to be carried toward completion in 1963, with the development of a pedestrian pier, extending into Lake Ontario and terminated by eventual restaurant shelters overlooking a cupped boat basin.

Recently completed are gaily colored concession buildings and a bathhouse. These provide focal interest and beach function at the intersection of the main east-west walks and the mall. Strongly horizontal in steel with brick infill and punctuated by vertical flagpoles, they are urban in contrast to the sylvan concept. Buildings on the cross-axis are in the same design idiom.



Echoing wave shapes is folded roof of Venchiarutti's lavatory and shelter building, Toronto's Centre Island, lower left. Central core complex, above, by Hancock, Little, Calvert Associates, relate to axial mall and proposed pier extension.



Today, many big city parks have animal display. On *Centre Island*, however, is a small farm layout with almost authentic farmyard and barn, detailing down to the warm gray of the buildings. The farm — at the far end of the *Island Park* portion, where it is ancillary to the picnic areas — does not intrude. Public enthusiasm and acceptance is complete.

It is conceivable to think of the *Toronto Islands'* achieving the excellence of Hamburg's renowned *Plan ten and Blumën*, in the heart of Hamburg. It could also attain some of *Tivoli's* festive qualities.



A NUMBER OF URBAN or metropolitan parks projects are in the offing. Many architects are hoping these will be significant in the expansion of our interest in excellent civic development. One is the *Wascana Lake* development at *Regina*. Here, many years ago, a small stream was impounded to produce a lake and natural recreational areas adjoining the University and Saskatchewan's legislative buildings. The government recently commissioned Minoru Yamasaki, who obtained the services of Thomas Church, landscape architect, to prepare plans and designs for the area and its buildings. Expected to emerge is an impressive park facility.

Recently elaborated is layout of Regina's legislative grounds, designed by Thomas Mawson, 1912. Graveled walks and velvet grass frame stylized beds of brilliant annuals, lit at night by unobtrusive standards and luminaires.





HALIFAX is on the verge of preparing a master plan of staged development—recreation and open space—for its ancient Common, which has been whittled away with necessary, but expedient, developments in the past. At *Louisbourg*, near Sydney on Cape Breton, restoration of the old fortress and the construction of a new park facility by the Department of Northern Affairs are imminent.



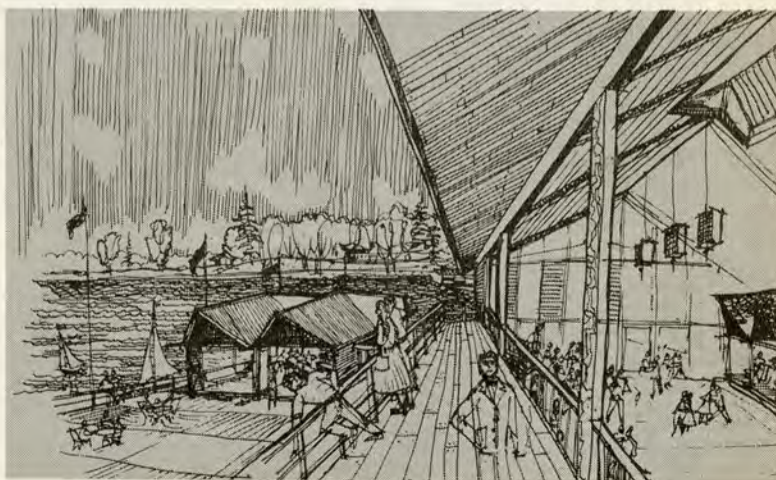
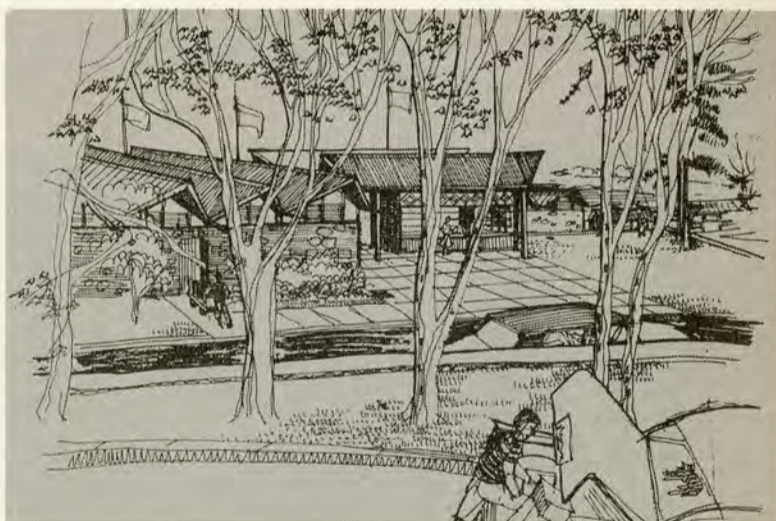
In the “wilderness park” field of development, *Elk Island Park*, northwest of Edmonton, is to be a large prairie provinces’ facility. It will be followed by *Waskesiu*, near Prince Albert. Many Canadians are awaiting standards of excellence for areas adjoining the *Saskatchewan Dam* project.





In Manitoba, the large *Grand Beach* development, recently acquired from the CNR by the provincial government, is rapidly being constructed. Redeveloping the recreational facilities and gaining proper automobile access will enable visitors to enjoy one of the finest beaches in North America. A master plan, prepared by Project Planning Associates Limited, establishes the concept and building components.

Line drawings indicate character of free, informal components of Grand Beach plan.



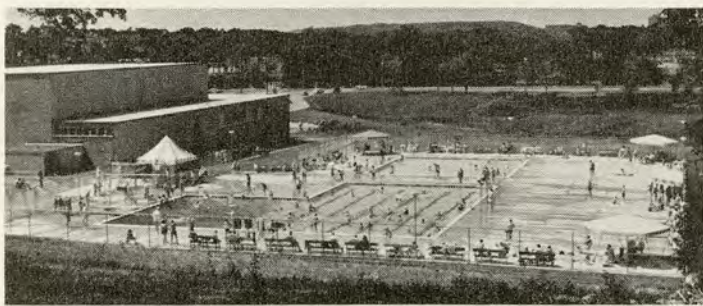
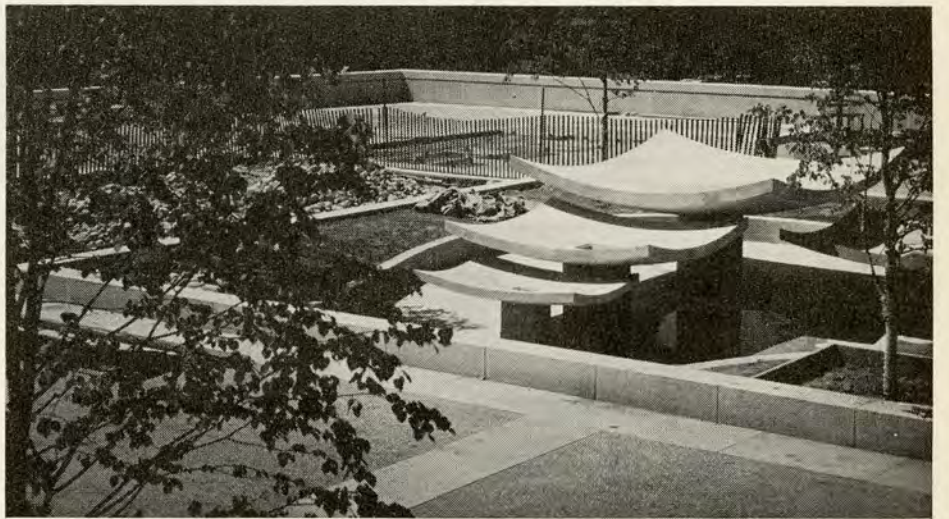


 Parks
&
Recreation



In the east, large new parks are being designed and constructed. *Fundy Park*, NB, and *Terra Nova*, eastern Newfoundland, are noteworthy. There is ample opportunity for high-grade enhancement through carefully designed building groupings. *Bowring Park*, outside St John's, a Newfoundland attraction of many years, has been added to; plans for redevelopment have been drawn up by Van Ginkel Associates. Ove Arup designed the new bridge, ancillary to the area.







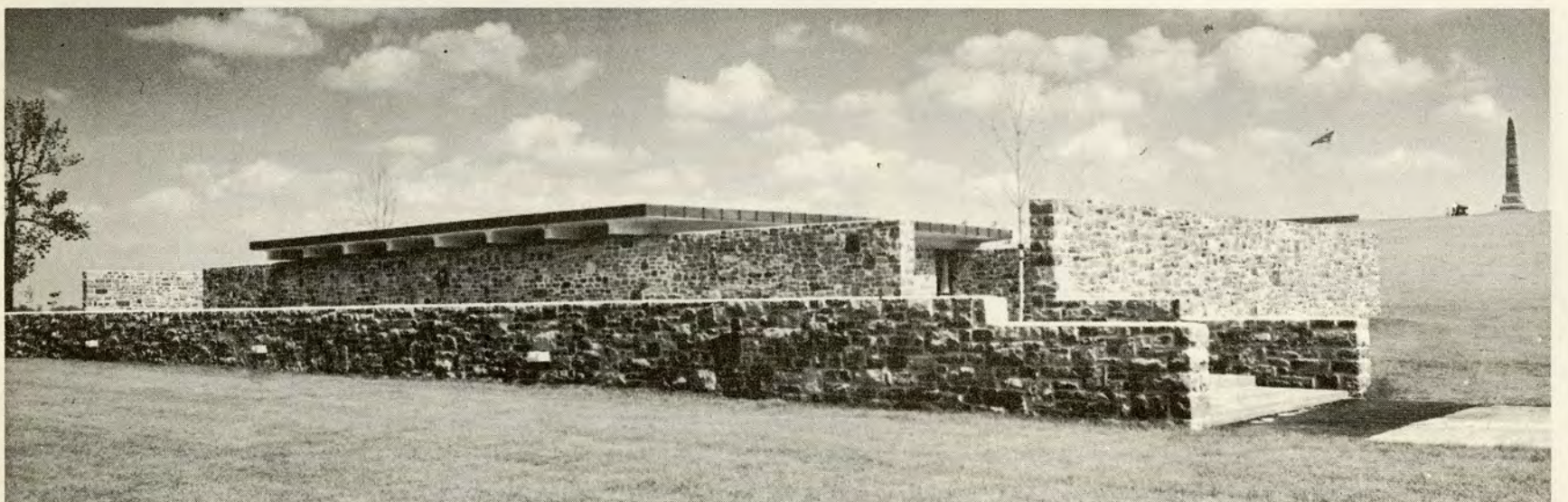
THERE IS NO DOUBT examples of the finest Canadian park design are the results of solid teamwork among the planner, architect, and landscape architect.

Let us remember, too, the engineer, whose diligent attention to electrical distribution, traffic circulation, water and sewage services, and handsome docks greatly assist in achieving excellence.

Canada's 100th birthday should encourage us even more to think as a team. For with leisure and mobility as our watchword, we are certain to see many new, impressive parks appear across Canada in the future.

MACKLIN L. HANCOCK is widely known for his Canadian park and town planning—from university endowment lands of BC's new town development . . . to Flemington Park, Ontario St Lawrence development, Toronto Islands' redevelopment, and urban renewal studies for St John's, Newfoundland. Mr Hancock is a graduate of University of Toronto and took post-graduate training in landscape architecture at Harvard University, where he is currently a visiting professor in the graduate school of design.

Crysler Battlefield Memorial Building. Architects: Elken and Becksted; consultant, Anthony Adamson.



Have we done the basic thinking?

*The Stratford
Seminar is
not conclusive*

by A. J. Dakin

The second Civic Design Seminar held in Stratford, Ont., in July produced no solutions, but it did stimulate thought by examining as case studies Flemingdon Park, downtown Guelph, Rideau Heights (Kingston), Sault Ste Marie redevelopment, Ottawa's parkways, Thames Valley Conservation Area. Dr A. J. Dakin, Head of the Division of Planning, School of Architecture, University of Toronto, here uses the Seminar to suggest some lines for further thought.

“THERE WAS MORE OF HAMLET'S ‘to be or not to be’ than of Henry V's battle cry ‘once more into the breach’.” So commented Kenneth Smith in the Toronto Globe and Mail. He was right; we produced no line of action.

The Seminar refused to define civic design. Since the half dozen background papers had each a different idea, the delegates can perhaps be excused for stalling. All took comfort from recognizing what Detroit Planning Director Charles Blessing called “the inescapable lack of quality”, and this was the Seminar's point of departure. Result: much unfocused discussion ranging from the micro-urban (Flemingdon Park) to the macro-rural (Thames Valley Conservation Area). Everyone was able to keep his own definition of the words — if he came with one — and wriggle out of the onerous business of being precise about the subjects under discussion.

Yet definition is important if real work is to be done. We must try at least to limit the words in their meaning. First, civic design belongs to the urban scene — it has to do with cities and citizens. Conservation areas and rural regional plans are not examples of civic design. Secondly, it is simpler if we agree not to include the whole urban planning process, since the word “planning” serves to describe the overall operation of guiding urban growth.

There is an area in which the words “civic design” could serve a vital and a precise purpose. We could agree that civic design deals with the impact of the city on the sensibility of the citizen. Wherever the city touches our sense of beauty, of grandeur, of civic pride, our feeling of being one of the community — *there* may be a legitimate area for civic design.

Our sensibility is very wide in its range. The architect should note that it is not confined to the esthetic. The sociologist should appreciate that it is wider than community sentiment; the engineer that it is more than the mere avoidance of frustration in traffic snarls. We must avoid the oversimplification of problems and solutions offered by self-styled experts whose narrowness of view can give a spurious cogency to argument.

The city touches our sensibility through our eyes. The individual gains a satisfaction or a revulsion from the urban landscape mainly through what he sees by conscious examination, or casually and subconsciously.

If, then, we say that civic design is chiefly concerned with the visual appearance of cities, we have a practical frame of reference within which to think and act.

Unfortunately we know very little about the visual effects of urban elements on people. We do not know how the ordinary person going about his daily preoccupations responds to what he sees in his town. Or even whether he responds significantly at all. One discussion group exploded some preconceptions by asserting that modern man may have not the slightest interest in civic pride or community feeling. Said a developer: “The very merit of the big metropolis downtown is that I can fall down dead on the sidewalk and no-one will pick me up — and I want it that way.” This is not exactly what the pundits approve, but it is the authentic voice of one human being telling us what civic design means to him.

Some said (quite loudly) : The Engineer Determines Civic Design

THE ARCHITECT is the obvious source of help in urban visual matters. Educated to use his eyes and responsible for the design of individual buildings and groups of buildings, he passes through his hands a considerable amount of the money spent on all building, and therefore should be able to influence the larger moneybags.

It is unfortunate, but a fact of growing importance, that the architect is not as effective in influencing the appearance of cities as he thinks, or as he should be, given his abilities and opportunities. The reasons are complex, but perhaps the area of most difficulty is that in North America the architect has not succeeded in winning public acceptance as the recognized authority in these matters, as in some European countries — for example Holland and Switzerland. Why the difference? Can it be that the North American architect in his heart of hearts has no real concern for civic design? There is, of course, much talk and protestation, but evidence on the ground is scanty that architects have any great sensibility toward the physical environment of their buildings.

Although it may be agreed that the architect's first concern is his client's satisfaction, *the touchstone in this matter of civic design is whether the architect is willing to allow informed discussion on, and even modification of, those aspects of his design which concern the total milieu.* Only when the architect fully understands that architecture is a public art and a public concern, will his voice carry authority on civic design. He should be as suspicious of being the sole arbiter of the appearance of his building as the planner should be of planning within the context of a political dictatorship.

It was several times mentioned that the engineer is now the major influence on civic design. Let us not pursue this old argument here, but mull over the idea that the engineer spends a great deal of public and private money and that his influence on the city is now enormous—roads, airfields, telecommunications, automation, transportation, control systems. There is no possibility of the architect "capturing" these.

Where are the Critics ?

THE SEMINAR noted briefly the value of public criticism in the literary and dramatic arts, and under promptings from Arthur Stinson, wondered why we could not have the same stimulus in civic design. There is the law of libel, the lack of a good tradition and literature of criticism itself, but perhaps most significant of all, there is a certain softness toward criticism which is really a tenderness toward ourselves. We like ourselves and our

work. So there is a conspiracy of silence about uncivic architecture which will be unmasked only by developing an *expectation* of criticism in the public, the architects and the planners. It is essential to our emerging civic design that we sharpen the sense of responsibility toward the public by making client and designer sensitive to public criticism. We should abolish our-self-imposed censorship.

The Irresponsibles

PONDERING THE DISCUSSIONS of the Seminar, failure of responsibility is a recurring thought. In our society this ranges from the behaviour of the private individual, who simply fails to take any interest in the appearance of his town, to the blinkered operations of industry and commerce which freely build private empires within the commonwealth.

As for public apathy, it was Irving Grossman who said we first have to persuade people how bad it all is before we can cure it. The public fails to realize how sick it is in not recognizing the horrors of our cities.

The majority of modern city-dwellers have abrogated their responsibility for the appearance of their city. They have fled physically, intellectually and emotionally — physically to the country, intellectually to more interesting fields (building has no great mental interest for our age), and emotionally to private and family compensations.

Business and industry probably never have been very responsible toward the public good. There is naturally much talk about service, but the aim is profits. This is to

be expected as we do not operate our economic activities in a way that stresses public responsibility. For example, we do not manufacture a "reasonable" number of motor-cars a year, but instead we make as many as the manufacturers think we can be persuaded to buy. The industry does not have to regulate its output according to the mileage of new roads made available or with reference to the amount of air pollution produced. If we are serious about civic design we must call for a greater sense of responsibility from industry and commerce. Great urban populations must not be regarded as just vast consumers' markets ripe for exploitation.

To these major areas of irresponsibility in our society must be added the derivative irresponsibility of the professions. The scientists are awakening to a realisation that they have been irresponsible in pursuing their discoveries without regard to the effects on society. The highway engineer has yet to awaken to the effects of his roads on land use. The politician almost everywhere has been grossly irresponsible in submitting to pressure for

unnecessary and unsatisfactory land subdivision — in urban terms the worst of all because the surface of the earth is a resource of supreme public importance.

Architects also act irresponsibly in terms of the public good. The general climate of the times has forced some to find diminishing satisfaction in the fact that architecture is a public art and to turn inward toward personal and esoteric expression. Their buildings strive to be original and individual, rejecting the public in favour of the idiosyncratic. Others have abandoned the unequal struggle. Their architecture has ceased to have any significance, either public or private. Their buildings are simply economic-engineering-institutional responses to stimuli in the society.

Both these reactions are irresponsible in terms of civic design. The first because all buildings are of public significance. They are the city, and the city is the most public thing that man makes. The second because it is a negation of the human desire to derive intellectual and emotional satisfaction from our surroundings.

Lack of responsibility in these identifiable areas — the public at large, industry and commerce, and the professions — naturally leads to the notion that intensive missionary work is needed to rouse individuals and groups from their torpor. Such activity is necessary and should be encouraged, but it is naive to expect startling results,

What Can We Do?

IN HIS INTRODUCTORY address Professor A. P. C. Adamson, speaking as a planner, said we simply do not know what the plan of a town should be. Most planners would agree that the winds of change are now blowing so hard through every nook and cranny of our society that it is almost impossible to produce any formula that will have validity long enough to be effective. In rare cases we are producing civic design in the form of new towns, and these experiments are extremely important. None is as yet so satisfactory, however, that we can say it is the solution for all towns and that we should redevelop our existing towns after this model. The great fact of our society is change. Not changing from this to that, but simply the fact that everything is in flux.

It is probable that civic design has appeared historically only in periods of reasonably homogeneous culture. Even then it has been sporadic and the work of a minority. In the chaos of the birth of a universal world culture we have to struggle toward the formulation and achievement of an adequate physical and social habitat on a mass scale and with reference to an egalitarian ideology. Our problem is how to transport, house, entertain, educate, provide work and leisure activities for very large masses of people.

In this context we have to rethink civic design. It is no longer the aristocratic terraces of Edinburgh or Bath. It is no longer the autocratic splendour of Versailles where the few live in magnificence. We have to find ways

because such approaches are nearly always based on a misunderstanding of the situation, and rest on false ideas about the nature of our society.

There are very strong pressures bearing on the individual to discourage him from being actively responsible for his town. The town is now a metropolis of which he knows only a fraction. The complexity of modern urban living makes government action increasingly inevitable in many spheres of life — we cannot be solely responsible for our children's education any longer, or for disposing of our garbage, or paying for our illnesses. Social facts of this kind leach the reality out of being responsible. "They" will look after things.

Business and industry have changed in their relation to society and to place. Once they were local in physical extent and operation. Now they are nation-wide and world-wide. They have moved from the personal to the impersonal level and there has departed that sense of local responsibility which was once a compensating factor in North American economic life. Now the big corporations belong everywhere and nowhere. Their buildings are identical — impersonal, universal in the sense of not typical of the place, and faceless. Their workers are from here and from there, anonymous, interchangeable, and also faceless. To what city can modern industry or commerce be loyal or responsible in effective terms?

of giving significant human value to our solutions for mass housing, large-scale places of work, mass transportation facilities and so on. *No society has ever faced this problem before.*

The first need is to understand the problem thoroughly. This means abandoning the traditional static thinking of the architect and making a strenuous effort to visualise the implications of change. Only then shall we start to think fruitfully about civic design.

This is long-term. What can we do now? We can examine our society to find out what people think civic design is, and what it might do for them. We could look carefully at the forces shaping our cities. Of these one of the most important is the increasing influence of large blocks of money used for investment purposes. We may accomplish much by talking effectively to a Zeckendorff. We should also take a hard look at the mounting budgets being spent by all levels of government on solid objects in cities — roads, schools, hospitals, open space, housing and redevelopment projects. We could think realistically about how we expect the land developer and the politician to mend their ways. What practical suggestions do we have to offer them? Have we really done the basic thinking?

Ian MacLennan suggested we might tell our school-children about cities, teaching them standards of expectation for urban living, developing an appreciative but critical eye.

Why don't we do that?

PROJECT



Laurentian University Sudbury, Ont.

Architect-Planner:

Thomas Howarth (F)FRIBA, Toronto

Architects appointed for the first phase:

Library and Podium, Dining & Assembly Buildings:

Gordon S. Adamson & Associates, Toronto

Science Unit 1 and Classroom Unit:

David, Barott & Boulva, Montreal

Arts Building and Athletics Building:

Rounthwaite & Associates, Toronto

Site work on Canada's newest university, The Laurentian University of Sudbury, is to begin this fall.

Phase one — comprising the library and podium, dining and assembly buildings; science unit No. 1 and classroom unit, and the arts and athletic buildings — is expected to be completed by the fall of 1964.

The campus is designed for an ultimate student population of 4,000, with phase one accommodating 1,200 students to 1968.

The university site, three miles east of the City of Sudbury, is typical of the Canadian Shield, with rocky outcroppings rising to about 160 ft above the level of three nearby lakes.



The Lesson of Coventry Cathedral



In view of the interest shown in the project for Coventry Cathedral when Sir Basil Spence visited Canada on his lecture tour, and later as keynote speaker for the 1960 Annual Assembly, we have invited Professor Collins to report on the completed building as he saw it last July.

by Peter Collins

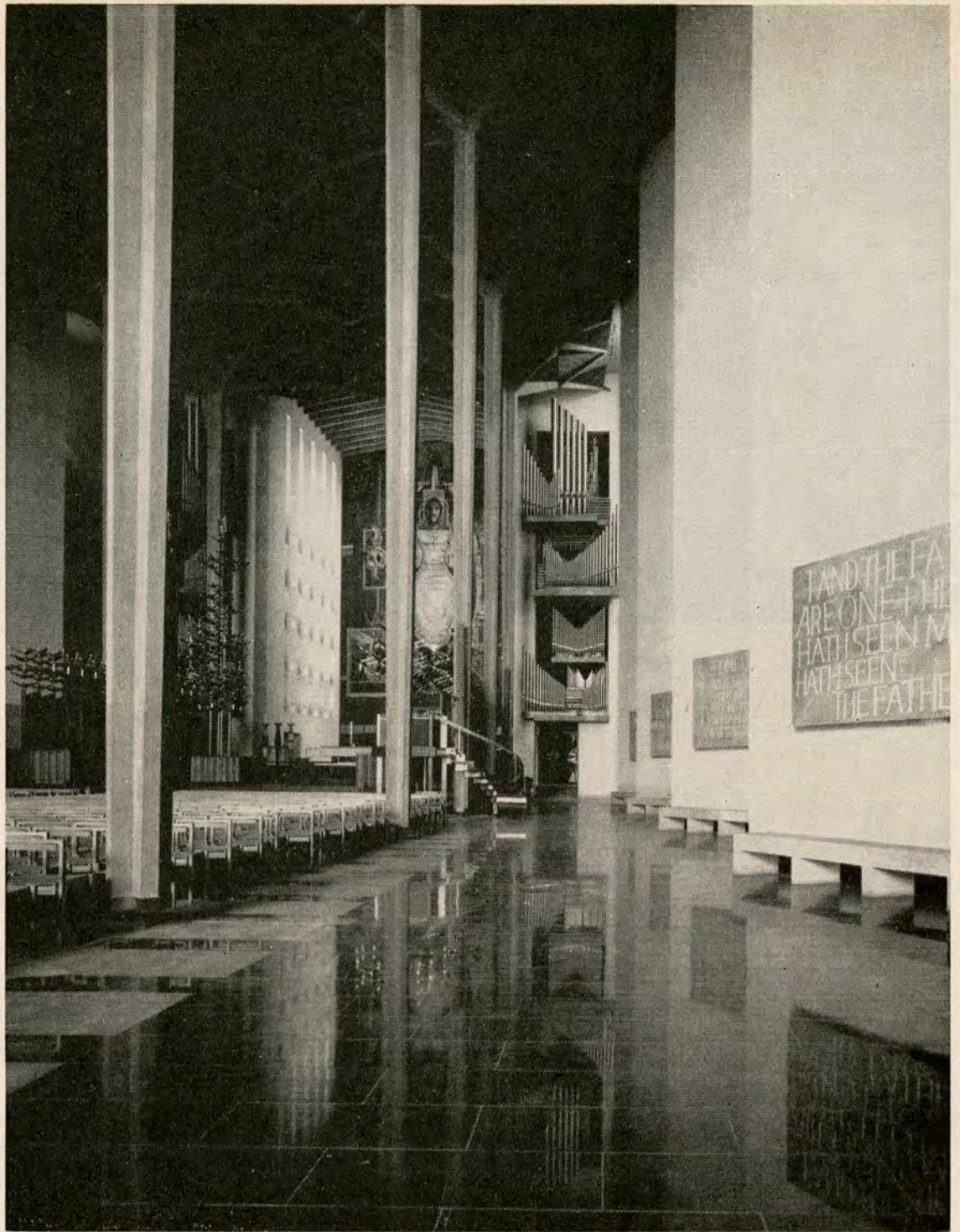
WHATEVER THE MERITS of the new cathedral at Coventry (and it may be recalled that even before it was half-completed, *Banister Fletcher* (17th edition) hailed it as "the major ecclesiastical building of the post-wars period"), it is unquestionably the most publicized building constructed in England since the last war. The consecration was televised throughout the country. The leading Sunday newspaper commemorated the event with a 24-page colored supplement. Reuter transmitted the story, in 785 words, round the world. Even the *New Yorker* carried a full-length article on it. As a result, sightseers have been flocking to visit it continuously, and even two months after its consecration (when I was there), the slowly moving queue was never less than a hundred yards long. There can be little doubt that the cathedral has very effectively focussed public attention on the aesthetic implications of modern architecture; for no one can doubt that these crowds who flock to the city made famous by Lady Godiva are composed more of oglers than of pilgrims. At any rate, this is the impression that one gets listening to the arguments which develop when the sightseers adjourn afterwards to the nearby taverns; arguments which give striking testimony to the strong and evidently stimulating impact of architectural criticisms (when published in the popular press) as well as to that of the local beer.

British architectural periodicals (animated more, one may suspect, by the bitter controversy which the circumstances of the competition aroused twelve years ago, than by more sober evaluations), have also given the cathedral their most flattering attention, to such an extent that even the architect himself, though not noted for shyness, seems to have become embarrassed. "At the wish of Sir Basil Spence", the July *RIBA JOURNAL* announces, "it has been decided that Coventry Cathedral will not after all be the subject of an appraisal," as had been announced in the previous issue. In truth, there is little descriptively or historically, laudatory or vituperatively, that remains to be said about the building now that Furneaux Jordan's brilliant and lengthy criticism has been published in the *Architectural Review*, and now that the *Architectural Review's* Assistant Editor's ribald Minority Report has appeared in the *Forum*. All that one can usefully do is to study the lessons to be

learned with respect to future church building; and I propose to do this, in a series of opinionated observations which assume that the basic requirements and arrangements of Coventry Cathedral are already known to the reader, and that Sir Basil Spence will be too tired of hearing about the building ever to read what I have to say.

First, the lighting. The general compositional *parti* of the new building is that of a traditional *hallenkirche* (i.e. the aisles are the same height as the central nave) **2,3**; but this arrangement has been modified in two respects, in that the traditional "west" window has been enlarged (to such an extent that the entrance wall is constituted simply by a glass screen), and the plan form has been modified by zig-zagging the side walls (in such a way that no stained glass is visible from the entrance except for the magnificent window behind the font). Thus, since all the lateral windows (with one lamentable exception, to be discussed later) are filled with stained glass, and the entrance wall is of uncoloured glass, the lighting varies down the length of the church from what is virtually out-door luminosity near the entrance to a subdued and slightly tinted glow near the altar — an eminently successful and dramatic effect.

The only criticism which may be made is that, in this particular instance, the blank plastered walling (for this,

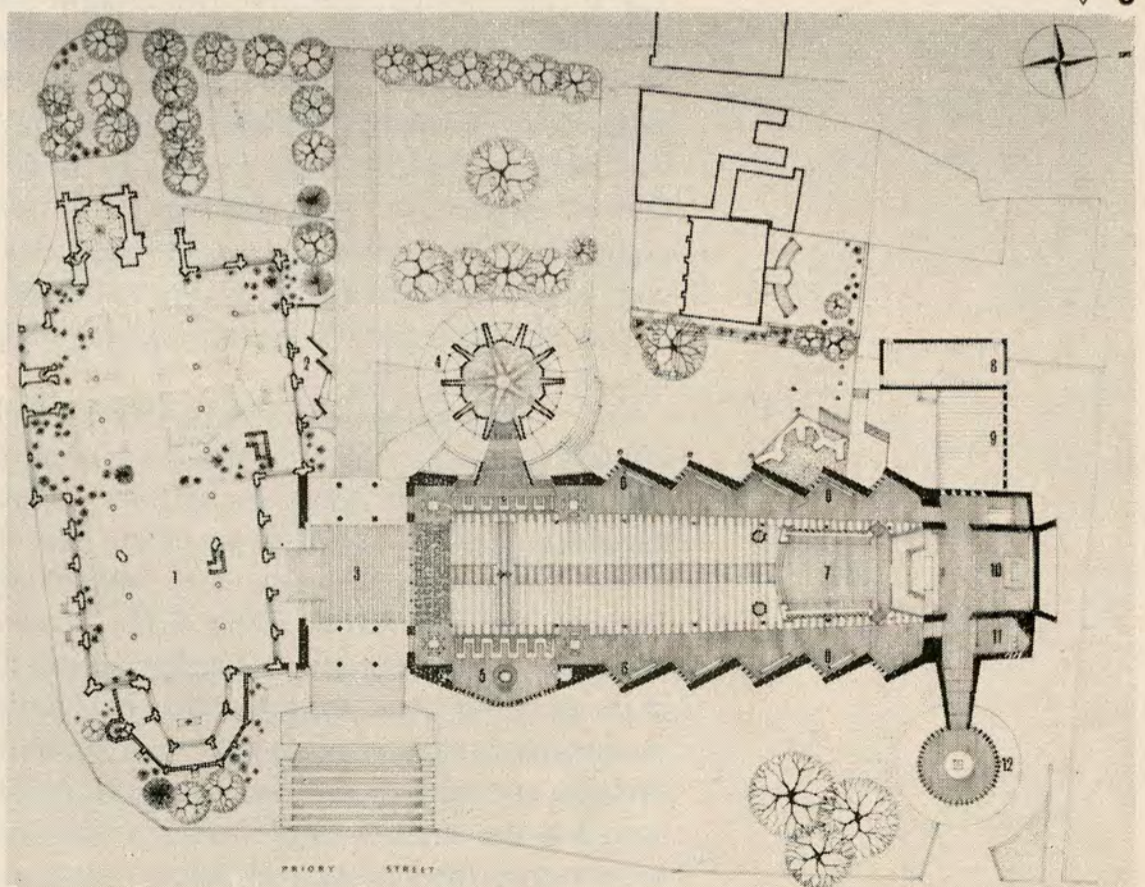


2 △

Coventry Cathedral

LEGEND

1. Cathedral Ruins
2. Bookshop
3. West Entrance Porch
4. Chapel of Unity
5. Baptistry
6. Tablets of the Word
7. Chancel
8. Vergers Flat
9. Refectory
10. Lady Chapel
11. Chapel of Christ in Gethsemane
12. Chapel of Christ the Servant



▽ 3

apart from the ornaments of the sanctuary and the organ, is in fact all one sees from the entrance) seems very bleak indeed. The justification given for the plaster is that it was essential in order to achieve a reverberation-time comparable to that produced in mediaeval cathedrals, where the reverberations are modified by alveolated carved surfaces, and by compositional elements, such as the triforia. But future designers, seeking the same compositional effects under comparable acoustic limitations, might well, after seeing Coventry, judge it wise to reject acoustic plaster, and to experiment with structural wall components possessing richer architectural qualities. At Coventry, where the solid walling consists of monolithic concrete between permanent formworks of masonry, even the structural system would seem to have indicated the desirability of using precast blocks internally, with patterns modelled in relief.

Apart from this, the composition seems highly effective, and the only radical change which it might be found desirable to adopt in similar circumstances concerns the orientation, in that it would seem preferable for the relative positions of the altar and the entrance to be reversed. It seems to me a cardinal error to have made the stained glass invisible to the congregation unless they turn round, for a single visit to Coventry Cathedral is

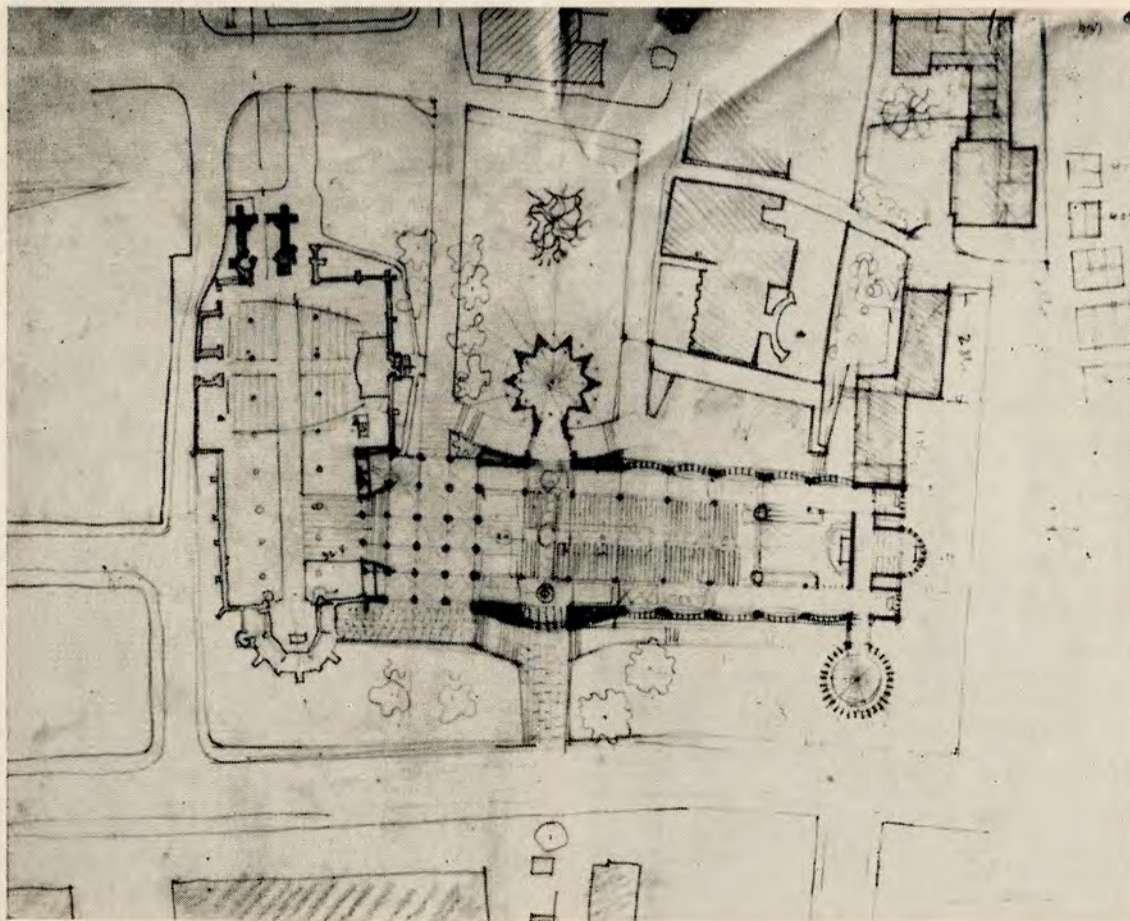
enough to convince anyone that the only works of art there which effectively meet the challenge of decorating — i.e. giving decorum to — a church are the windows. And this is not surprising, for whereas, in the Middle Ages, the craft which dominated all the others was masonry construction, in the mid-twentieth century it is undoubtedly to be found in the exploitation of glass.

In this respect, it is worth considering Sir Basil Spence's stated purpose in adopting a zig-zag wall plan (a modification, it will be noted, of his original sketch)⁴. The device is not in itself original, for it was used in 1938 by Concezio Petrucci in the church of the *Opera di S. Michele* in Foggia, where it was essentially a Baroque device for casting clear light onto the high altar from an invisible source. But Sir Basil Spence, having intended to use stained glass from the beginning (and hence taking into account that the light projected through it would be minimal) introduced the serrated wall for quite a different purpose, namely so that "as the communicants move up to the altar, they will progress through the changing light to the radiance of the sanctuary, and then, as they walk back, the glory of the glass will be seen". He now considers this idea "overplayed", but it is not so much overplayed as wasted. The idea of the contrast is splendid. It simply needs the sequence reversed, if

only for the sake of those who only attend Matins. Future designers could perhaps justify a reversal of orientation by arguing, equally poetically and without casuistry, in favour of the desirability of the communicant first walking in a radiance of coloured glass to receive the sacrament, and then walking away from the altar-rails in a light more conducive to *recueillement* and introspective devotion.

According to the architect and the cathedral authorities, all these windows, though essentially non-representational in design, possess a deep symbolic quality, as does everything else in the building. According to Sir Basil Spence, "the first pair represent childhood, and in these young greens predominate. The next pair, representing the puberty and passions of youth, incorporate much red glass. Next in progression come the multi-coloured windows of middle life, with all its trials and triumphs". According to the Provost, writing in the official guide (available in three languages): "red is for the intervention of God in history and in human life; multi-coloured for the clash of God's will with man's will in human life and in history". According to a caption under one of the official photographs published in *The Builder*, the windows symbolize "a progression of Man's development towards the perfection which God looks for in Man". The lesson here for architects seems to be that provided one can think up a nice shape, there will always be someone to think up a telling symbol, and if necessary the printer can be left to decide where to put the capital M.

4 ▽



Alternatively, perhaps architects who design churches should give more sympathetic attention to the problem of symbolism as it affects the people who will worship there, for the symbols at Coventry seem unnecessarily recondite. In an era when only revolutionary painting and sculpture is safe from scorn, intelligible contemporary symbolism is certainly difficult, but it seems hardly enough for the Bishop of Coventry to assert that his cathedral decorations will convey a message "when we begin to understand a little more clearly what modern artists are trying to say". He adds that "it may

take twenty or thirty years before we fully understand what the moderns are saying to our generation", but his own generation is already middle-aged, so the chances of any of them, including himself, ever understanding it seems small. In my opinion, the only decorative features at Coventry which will be symbolically intelligible in twenty or thirty years' time are those that are intelligible already, namely Epstein's "Saint Michael" and the splendid Angel in Gethsemane by Stephen Sykes.

Apart from such ornamental features contributed by collaborating artists, the general standard of detailing seemed to me rather inadequate in view of the nature and purpose of the building, and as such indicates perhaps the main problem against which all designers of contemporary churches have to contend. It is possible, of course, to deny that this problem exists, and even to prove that blank surfaces and crude detailing in a church are eminently traditional, by citing historical examples from the more poverty-stricken eras and areas of Christendom. Even Ruskin can be quoted in favour of the view that "the simplicity of a pastoral sanctuary is lovelier than the majesty of an urban temple; and it may be more than questioned whether, to the people, such majesty has ever been the source of any increase of effective piety". But in an age which can create a sense of richness in its skyscraper lobbies, it is surely permissible to expect a standard of de-

tailoring in a cathedral equal to that of, let us say, an International Air Terminal, or the restaurant of a new luxury hotel.

In the interior of Coventry Cathedral (where, as has been pointed out, all the wall surfaces are of acoustic plaster), a characteristically English subterfuge has been used to try to disguise the inadequacy of the detailing, namely the exploitation of what the eighteenth-century philosophers called Associations of Ideas — the very basis of all early Victorian Romanticism. Thus the font⁵, which is simply a rough boulder with a small shell-like cavity in the top, derives significance, we are told, from the fact that it came from Bethlehem, while the clergy seats, (which are about as elegant as butchers' blocks) are surmounted by canopies which, though perhaps less "Gothic" than Furneaux Jordan implies, are probably as near gothic as any member of the Royal Academy nowadays is likely to get.

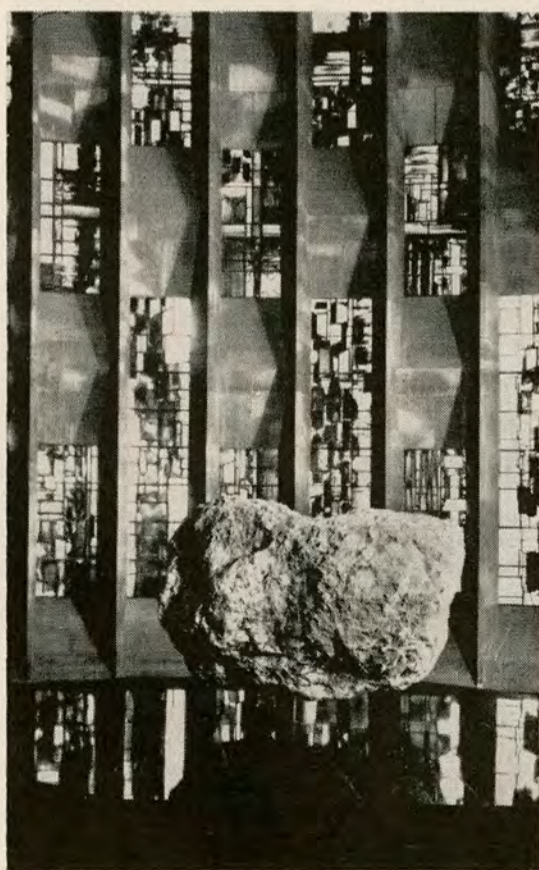
Disregarding Sir Basil Spence's inconsistency in this arrangement (for consistency would presumably have required that the canopies or the choir stalls be of, let us say, rough olive-branches from Nazareth), and disregarding also the fact that his boulder would have had no significance at all if, as originally intended, it had been brought from Iona, let us turn (if it is possible to do so without being too pretentious) to consider what might be done in future in comparable circum-

stances. First, it will be generally admitted that few other architects today, faced with the problem of designing stalls for a modern cathedral, could be relied upon to do better. But for this very reason it might well be desirable for others to approach the problem in a different way; for there seems no reason to assume that the stalls had to have canopies, that the architect had to design them concurrently with the building, or that they had to be entirely of wood.

Canopies were not introduced as permanent features until quite late in the Church's history, and there are even important Gothic cathedrals, such as Rheims, where the clergy's stalls, destroyed by the Huguenots or during the eighteenth century, still do not have canopies, and yet manage to look quite dignified. They seem particularly futile in a church heated with modern systems of ventilation, since they were originally intended as a protection against mediaeval draughts. However, assuming that they were insisted upon by the Coventry Cathedral authorities, it still seems questionable whether they should have taken their present form. The most obvious thing to be learnt from the canopies over mediaeval choir stalls is that, although they were always built of timber, and designed by master-carpenters, they look exactly as if they were built in stone. They were composed of midget columns, buttresses, pinnacles and vaults, and looked in fact like miniature churches, because masonry craftsmanship was the dominant art of the age. To be traditional, the canopies at Coventry should thus presumably have been what Sir John Summerson, in an essay devoted to this phenomenon in *Heavenly Mansions*, has called "aedicular"; i.e., miniature facsimilies of the actual building in which they were to be housed. To be contemporary, they should presumably have been designed according to the dominant art of the age, i.e. predominantly of glass. In any event, it seems fair to suggest that they should have been designed after the building was completed, if success was to be assured.

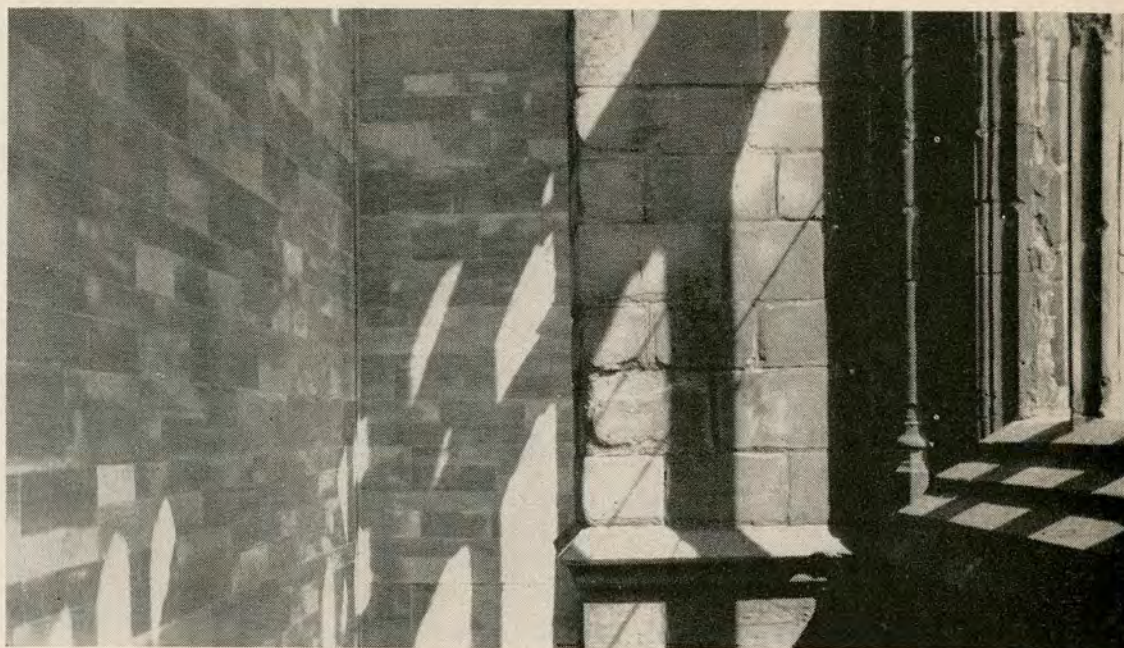
In the exterior architecture, the romanticism displayed in the timber canopies and the font was clearly impossible, and here the poverty of the detailing is unrelieved. Had the exterior walls been of machine-age materials, such plainness might have been compensated by other qualities, but

Coventry Cathedral



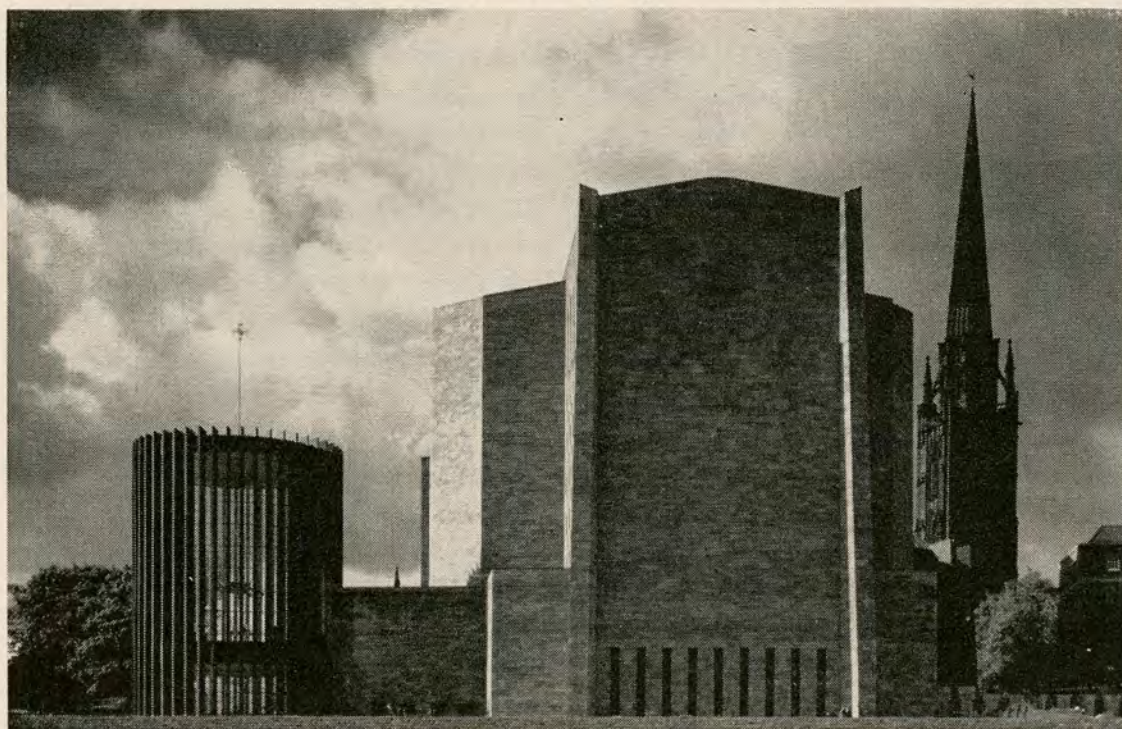
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all the external surfaces are of stone, and thus, juxtaposed against the delicately moulded surfaces of the earlier building, their bareness is uncomfortably accentuated⁶. Most disconcerting of all are the crude cylinders which support the porch (or rather encase the reinforced concrete columns which support the porch), and the exterior of the blank wall behind the altar⁷. Historically, such crudeness could doubtless be justified by reference to Romanesque precedents, but it seems oddly at variance with what one would expect from an architect trained by Sir Edwin Lutyens, and even more at variance with the deliberate intention to "resurrect" the ruined cathedral to which the new structure is attached.



7 ▽

△ 6



The awkwardness of the detailing is particularly noticeable at the junctions of different materials, as for example at the junction between the great west window and the vault⁸, and the junction between the Chapel of Unity and the north wall of the church¹⁰. Since the west window does not stand on the floor, but is suspended from the roof, it has to be maintained in position by substantial metal bracing-rods, and the problem was thus not only to form a junction between the top of the window and the vault, but also to terminate the tops of the rods. Moreover, the whole problem was rendered more complicated by the fact that the ceiling inside the church (a delicate reinforced-concrete frame filled in with timber slats) and the vault over the porch (a reinforced-concrete slab faced with plaster) do not meet at the line of the window⁹.

There were doubtless good and compelling reasons for maintaining the original design and position of the west window even after the design of the interior vault had been finally settled; but looking at the finished result, one cannot help wondering what would have been the total effect if the shape and position of the great window had been made to correspond with the zig-zag termination of the interior ceiling. Not only would the window, by being serrated on plan, have been more in harmony with the flanking walls, but its mullions, by being susceptible of horizontal bracing at the top, could have constituted a kind of space-frame which might well have obviated the ungainly rods now sticking into the ceiling at forty-five degrees. Such an arrangement might also have ameliorated the most widely criticized feature of this window, namely, the manner in which,

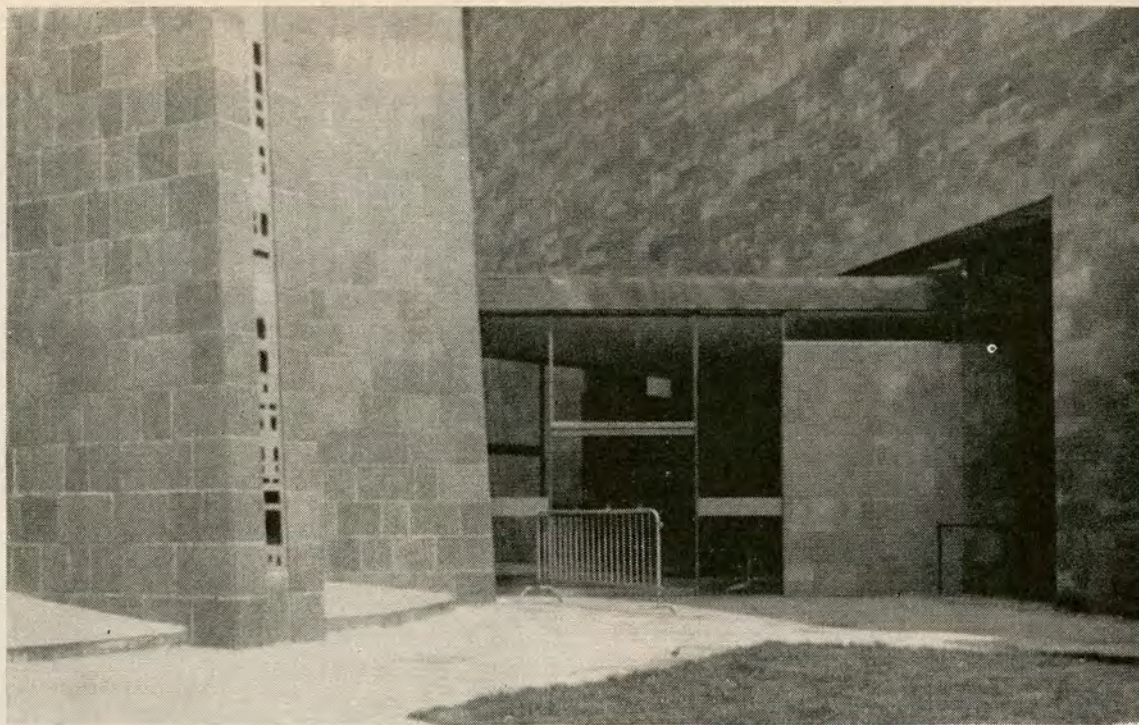


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Coventry Cathedral



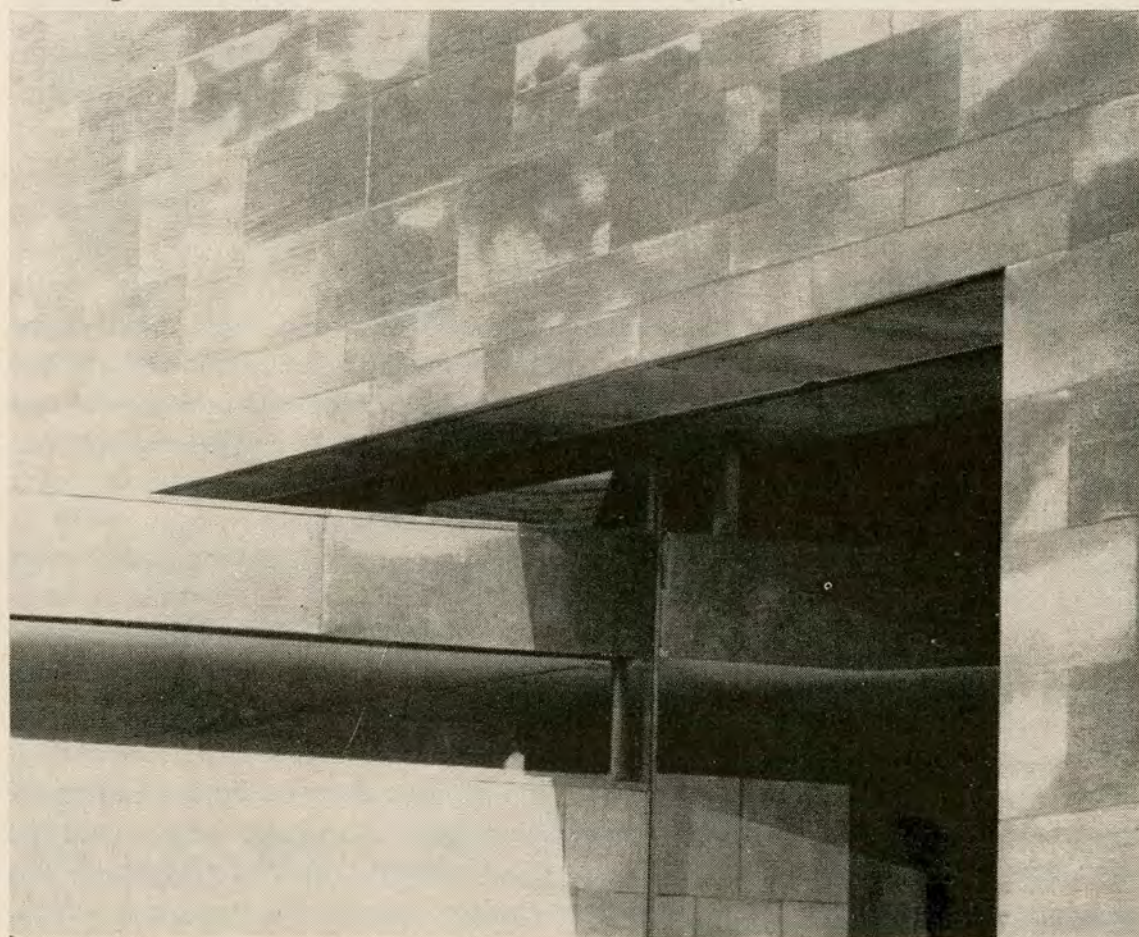
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instead of acting as a transparent screen, it reflects the image of those who approach it¹⁵. Ecclesiastical objections to zig-zag glazing, on the grounds that it would not have been sufficiently traditional, could have been triumphantly refuted by reference to the aisle windows of Henry VII's chapel at Westminster Abbey.

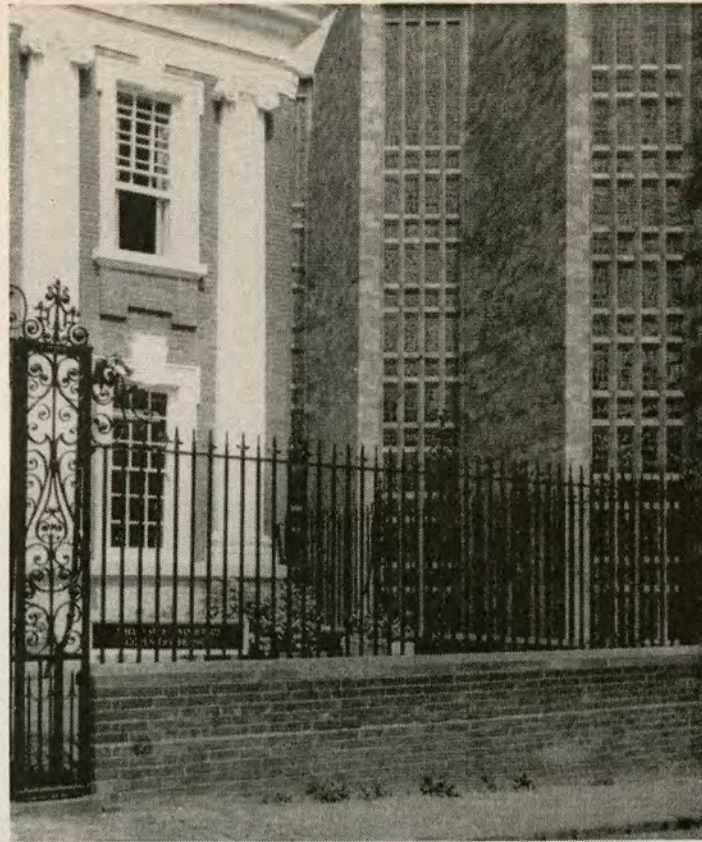
The defects of this window seem to have been the result of a determination to keep to the original project at any cost, but the clumsiness of the passage linking the church to the Chapel of Unity¹⁰ is particularly regrettable in that it corresponds to a quite unwarrantable change in the original compositional *parti*. Originally, the entrance to the chapel was through a doorway of ordinary dimensions, and if this arrangement had been maintained, the need for complicated detailing would have been obviated. As it is, Sir Basil Spence was led, for some reason, to widen this door into a forty-foot-wide gash through which the masonry and glass walls of the linking passageway now interpenetrate. Thus not only has the admirable *parti* with respect to the lighting been compromised by introducing plain glass into the side walls, but the junctions of the various materials have involved problems or detailing which no one could possibly solve¹¹. As completed, the result looks incongruously like something left over from the Festival of Britain, and constitutes a striking memorial to the survival of the Victorian love of complexity and confusion, as a means of creating the illusion of richness of effect.

"It is far better", wrote J. C. Loudon in his *Encyclopedia of Cottage, Farm and Villa Architecture*, "that there should be a strong relish, though even of a questionable quality, than those insipid decencies which it is hazardous to censure, yet utterly impossible to commend". But the introduction of this forty-foot aperture, though doubtless satisfactory as a means of gingering up a composition which was perhaps considered too tame, introduced other insipidities due to the fact that the structure is faced in sandstone, and the lintel is barely visible. Admittedly, at least one standard textbook on Modern Architecture has asserted that "the expectation that we shall be able

to understand at a glance why a building stands up is a survival of the handicraft age that had disappeared even in the days of William Morris". But even those who agree with this remark would probably find the tenuous course of ashlar which frames the aperture depressingly troublesome to the eye. However, it is fair to say, and important to emphasise, that this is the only place in the building where such structural inconsistency is to be remarked. Whilst architects educated according to the doctrines of Viollet-le-Duc may regret that the structural material — i.e. reinforced concrete — is completely hidden, it is only in the situation just described that the nature



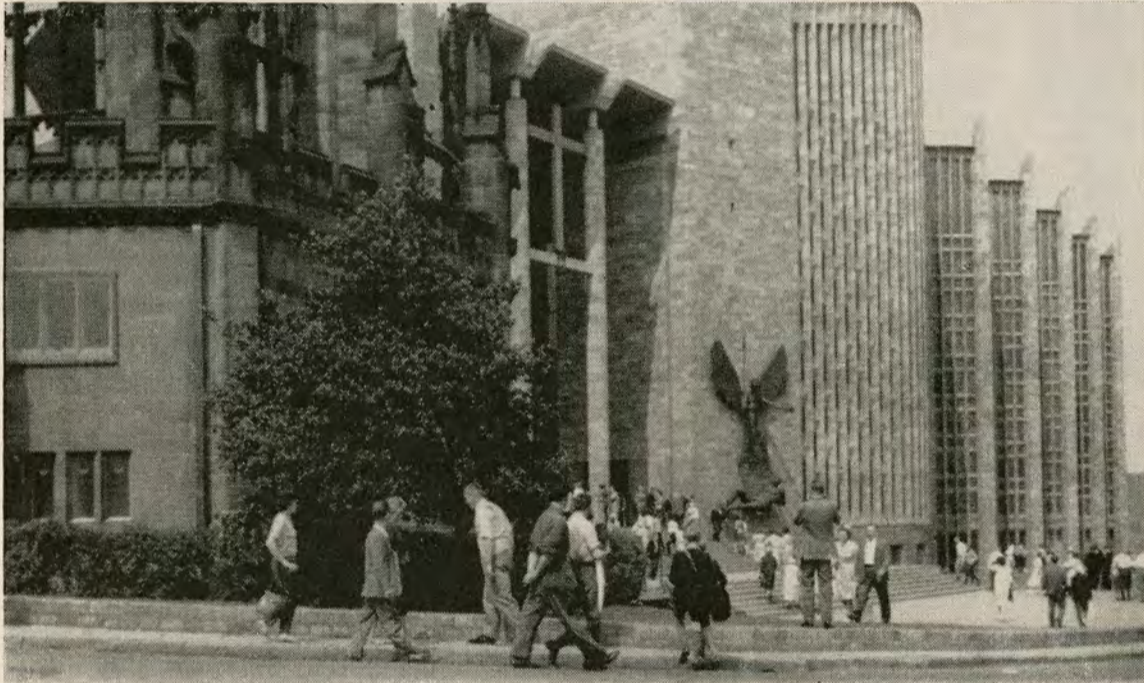
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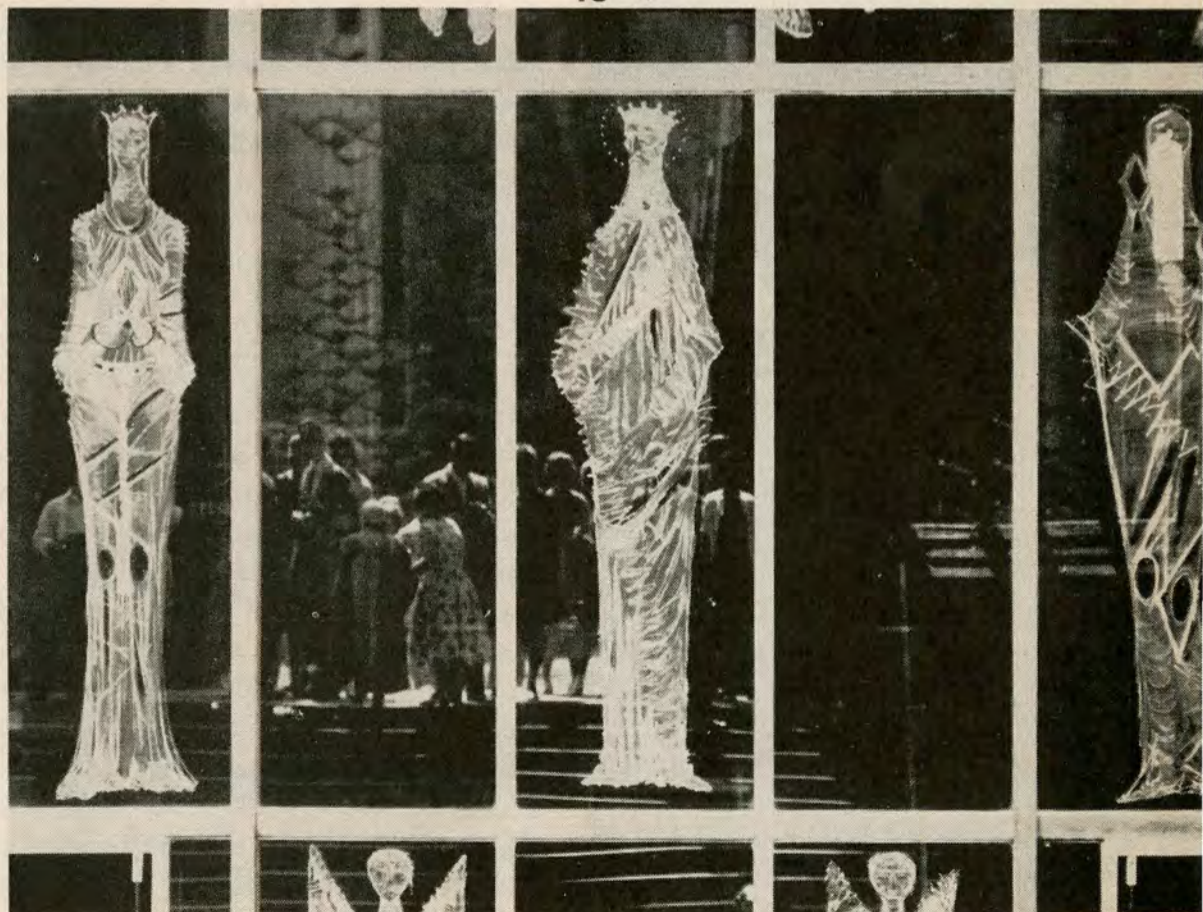
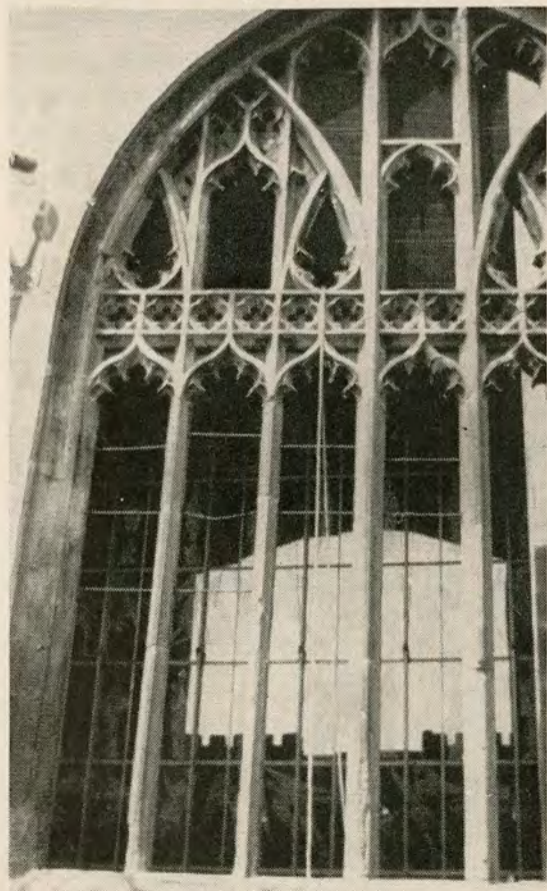
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of the structural system seems to be visually repudiated. Elsewhere the massive quality of the load-bearing walls, carrying a roof spanning eighty feet, stands out with considerable aesthetic force¹².

Moreover, there is no doubt that the choice of sandstone as permanent formwork was a most happy decision on the part of the architect, once it was decided to relate the new cathedral physically and symbolically to the ruins of the old. Whether or not Sir Basil Spence was right to leave the bombed ruins standing is a matter of opinion; my own view is that, in general, few ruins appear picturesque unless they are situated in a natural landscape, and that these particular ruins have nothing artistically to recommend them at all. But accepting his romantic notion that the new cathedral must unquestionably be built next to the old so as to symbolize christian belief in the Resurrection, his decision to face the structure with sandstone from the same quarry as was used when building the old was as courageous as it was dramatic, and it has, generally speaking, been justified by the final result¹³.

He has shown, in fact, remarkable skill in a sphere of design where few architects today seem to desire to excel; but it is a sphere of design which will, I suspect, prove to be the key to the principal aesthetic problems of the

next generation: namely, how to make new buildings harmonize with what is already there. In this domain, Sir Basil Spence has shown great dexterity, as for example in the relationship between the fifteenth-century windows and his own great "West" window, which can be seen through them^{14, 15}, and which reflects the old cathedral across the great open porch. The whole of this area, in fact, with its variety of vistas and transitions of perspective is, as Furneaux Jordan rightly says, "one of the great moments of Coventry"; and it shows what drama can be created by a really gifted architect out of judiciously arranged masses, a change of levels and a flight of steps¹⁶.

Equally remarkable is the magnificent and beautifully proportioned ceiling which, by means of its supporting shafts, divides the body of the church into a nave with two aisles. After experimenting with various arrangements, Sir Basil Spence eventually adopted the idea of a vast "baldachino" as he calls it — a huge canopy of concrete ribs supported on tapering concrete columns (which are in turn supported from the floor on bronze pins) and filled in with wooden slats, as previously mentioned¹⁷. Less like the interior of Notre Dame du Raincy than some of his earlier schemes¹⁸, it still resembles it strongly, and it might

Coventry Cathedral

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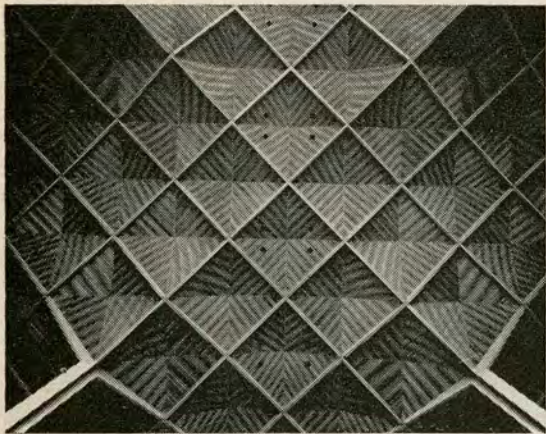


therefore be argued that, as such, it is technologically retrograde, in that the vault at Le Raincy supports the external roofing, whereas here the ceiling is to some extent duplicated by an independent roof-slab concealed above it, and spanning the clear distance between the exterior walls.

Nevertheless, when one considers the acoustical advantages of a ceiling composed entirely of adjustable wooden slats, and the facility — perhaps too timidly exploited at Coventry — for using the concealed space above them for lighting equipment, it must be recognized that Sir Basil Spence has evolved a compositional *parti* of the utmost importance, and one which will lend itself to innumerable variations. What he has done, in effect, is to take the traditional mediaeval relationship of vault and roof, and reverse it, so that whereas, in mediaeval cathedrals, a heavy wooden roof shelters a fragile fireproof vault of masonry, here, at Coventry, a heavy fireproof roof shelters a fragile acoustic ceiling of wood. As finally completed, this ceiling — designed in collaboration with Ove Arup and partners — is perfect for its location, but for this very reason the

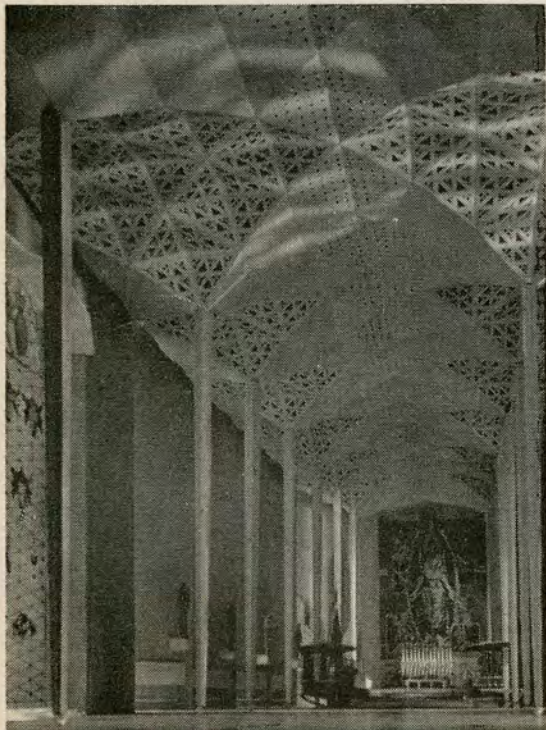
idea behind it could be exploited elsewhere in many different ways, and there seems no reason why future designers could not, with equal success, adapt it to other circumstances by experimenting with different patterns and dimensions, and perhaps even by introducing different colours. It is a type of vault which could undoubtedly provide a classic solution to the problem of creating church interiors which, whilst fully in harmony with modern technology, are also traditional in sentiment, and human in scale.

Those who think that the whole design is totally wrong, because it corresponds to a programme drawn up before a "radical reassessment of cathedral functions was undertaken", and was not based on "a fundamental and imaginative enquiry into those functions engendered by the rites and responsibilities of episcopacy that distinguish cathedrals from other churches", will regard such considerations, and indeed all the others dealt with in this appraisal, as totally irrelevant. But then that, as Abbot Suger would have said, is another story.



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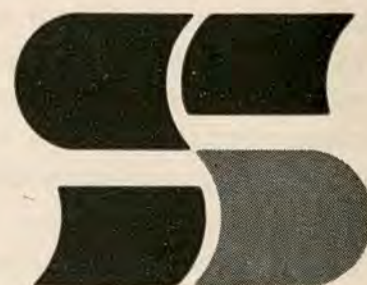


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DU SECRETARIAT DE L'AAPQ

LE DERNIER CONGRES, on s'en souvient, a donné naissance à la bourse d'études de l'AAPQ. La publication des détails relatifs à la bourse doit se faire prochainement, c'est-à-dire aussitôt que les autorités de l'Association se seront entendues sur les modalités de son octroi.

Il n'est que juste de rappeler ici que cette bourse a vu le jour grâce en très large part à la ténacité indéfectible d'un *Pierre Morency* qui n'a jamais abandonné la partie, mais qui est revenu à la charge à chaque assemblée générale au cours des dernières années jusqu'à ce qu'enfin, au congrès du Reine Elizabeth le printemps dernier, l'objectif visé depuis au-delà de dix ans ait été atteint.

On n'oublie pas d'autre part qu'en plus de prôner la création d'une bourse verbalement et par écrit et de présenter résolution après résolution à cet effet, le directeur de l'Ecole d'architecture de Montréal a versé au fonds de bourse la jolie somme de \$1,000, geste généreux qui malheureusement n'a pas eu le don de dénouer d'autres cordons.

En passant, il semble à propos de redire, pour éliminer toute erreur possible d'interprétation, que des cent dollars versés annuellement par chaque membre, vingt dollars s'en va à l'Institut royal et cinq dollars au fonds de bourse créé cette année. Il ne reste donc que soixante-quinze dollars à l'AAPQ pour ses opérations.

Avec le nombre restreint de 725 membres que compte présentement l'Association, elle dispose en chiffre rond d'un budget de \$54,000 ce qui ne représente nullement une extravagance quand on le compare à ceux des autres groupes professionnels et quand on considère les services mis à la disposition de membres, y inclus les facilités d'un bar et d'une salle à manger, les nombreuses communications, les différentes activités, les multiples démarches effectuées auprès des diverses autorités gouvernementales, etc.

Mais revenons à la bourse. Il s'est avéré un peu moins facile qu'on aurait pu le croire d'arrêter les règlements qui présideront au choix du candidat le plus méritant. Un travail préparé à

cet effet en 1954 suggérait comme conditions d'éligibilité: *citoyenneté canadienne, âge inférieur à 30 ans, études poursuivies en substance au Québec, demande produite dans les trois ans de l'obtention du diplôme d'architecture, ou du succès obtenu à l'examen d'inscription de l'Association.*

Après trois assemblées du nouveau Comité spécial nommé Comité des fiduciaires de la bourse de l'AAPQ on a écarté l'idée qu'il faille faire partie de l'AAPQ pour se qualifier comme candidat à la bourse. Le moment tout choisi pour profiter d'une bourse, il semble, c'est au terme des études. Si l'étudiant fait ses deux ans de cléricature en vue de se faire admettre dans l'Association, il y a bien des chances qu'il ne puisse à ce stade quitter le travail, renoncer à un revenu déjà intéressant, pour retourner aux études. De cette façon, d'excellents candidats se trouveraient éliminés.

On a donc proposé de considérer les demandes faites par tout porteur de diplôme d'architecture ou à la suite de huit ans de cléricature dans les autres cas, et ceci sans limite d'âge ni de temps pour présenter sa demande. Le Conseil de l'AAPQ ne veut pas poser de conditions trop rigides au départ de façon à ne pas éliminer des aspirants de valeur simplement pour une question d'âge ou de délai.

Dans le contexte actuel où les sphères d'architecture, de génie et d'urbanisme semblent chevaucher l'une sur l'autre au point de créer des conflits qui peuvent paraître insolubles, il n'aurait pas été de mauvaise politique, comme l'a suggéré l'un des fiduciaires, d'exiger du récipiendaire

de la bourse que ses études post-universitaires portent sur un sujet de génie, d'urbanisme, ou de toute autre science connexe, de façon à renforcer la position de l'architecte vis-à-vis des autres professions.

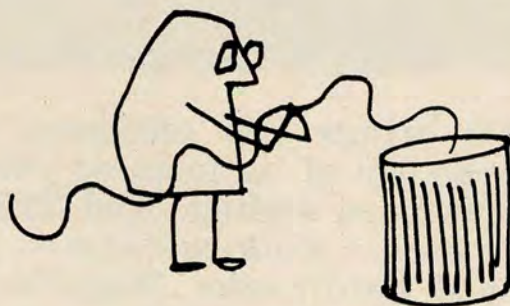
Mais après mûre réflexion on a jugé que si un candidat a démontré des qualifications que le Comité d'admission jugera dignes de lui mériter la bourse il n'y a pas lieu de lui imposer de domaine précis; mais plutôt de le laisser choisir la sphère de recherches qui convient le mieux à ses goûts et aspirations, de tout sujet à l'approbation du Comité de sélection.

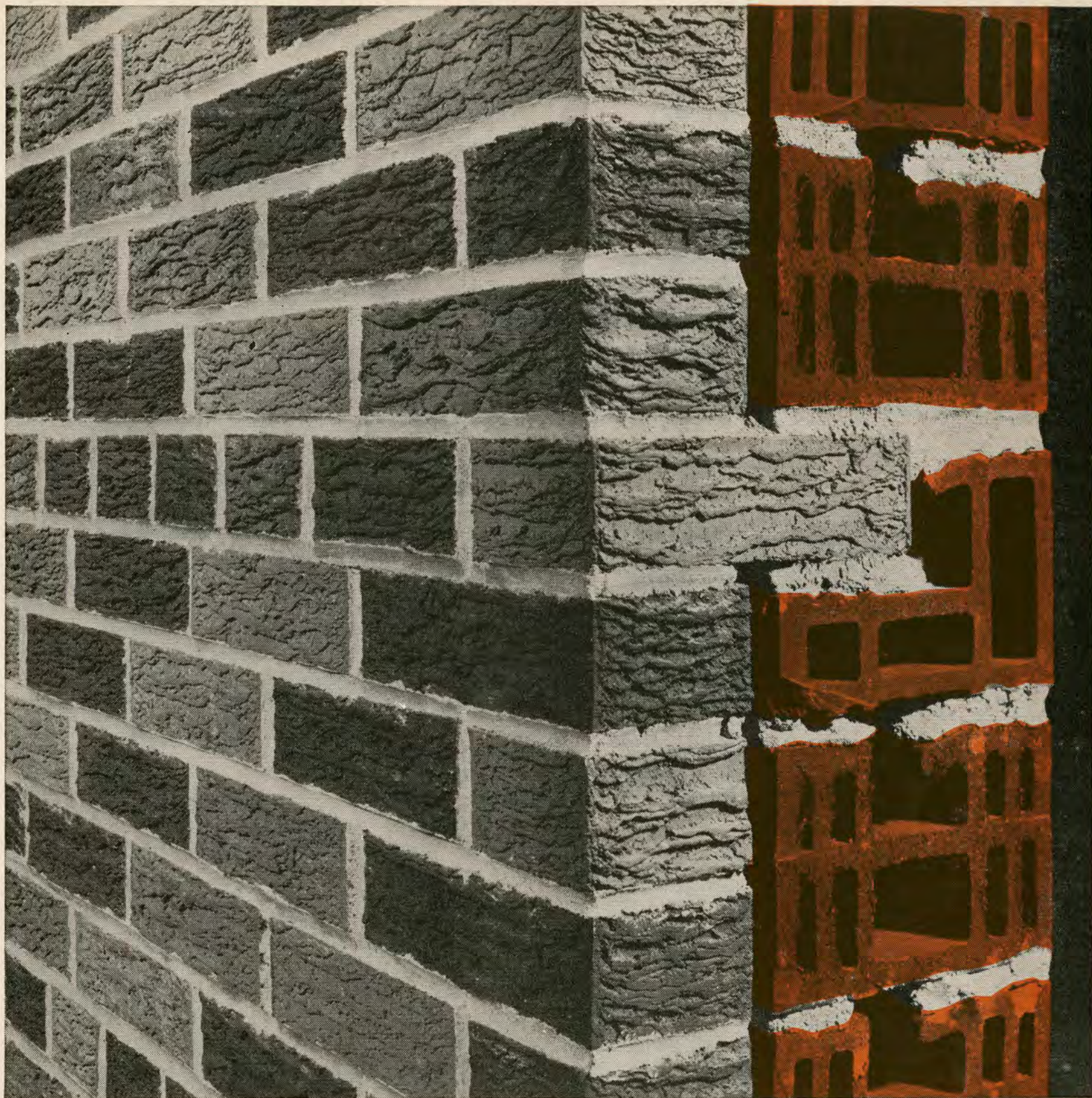
Quant au montant de la bourse, il ne doit pas constituer un handicap. Toute somme inférieure à \$2,500 ne peut permettre des études sérieuses et ne constituerait tout probablement que le cadeau d'un voyage à l'étranger. D'autre part, c'est l'avis des fiduciaires que le plein montant contribué par les membres ne doit pas nécessairement être remis au complet à l'heureux élu. La différence de capital accumulée, plus les intérêts, pourra permettre dans quelques années la remise annuelle de deux bourses, ce qui est tout-à-fait souhaitable.

De toute façon, même si les règlements relatifs à la bourse n'ont pas l'heur de plaire d'emblée à tous les souscripteurs, il faut se féliciter d'avoir une bourse. Je me demande si une autre Association provinciale en accorde. Le cas ne doit certainement pas être général. C'est un pas en avant qui déjà dans deux décades d'ici avec ses vingt récipiendaires ou plus apportera un bagage de connaissances supérieures qui ne manquera certes pas de profiter non seulement aux heureux candidats mais également à l'ensemble des membres.

A l'heure où le rôle et le prestige de l'architecte font le sujet de maintes discussions et de critiques parfois acerbes en certains milieux, cette décision de l'Association ne pouvait tomber plus à point. Toute décision qui a pour but d'accroître la compétence du groupe architectural mérite l'endossement et le support de tous.

Jacques Tisseur





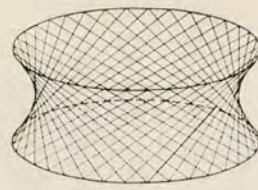
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Hyperboloid precast, pretensioned, concrete roof shell

USED IN MOST OF Western Europe for the past six years, the Silberkuhl HP Roof Shell was the subject of a recent illustrated address to a group of Toronto architects in the lounge of the Ontario Association of Architects' Building. The speaker, Johannes Hohla, technical director, the Silberkuhl organization, of Essen, West Germany, was introduced by K. Giddings, P.Eng., of Pre-Con Ltd, Brampton.

Its patented element represents a double-curved precast and prestressed concrete shell. What are commonly known as "HP" shells are structural shells, which geometrically represent a hyperbolic paraboloid. The Silberkuhl shell, however, is a hyperboloid, generated by rotating a hyperbola around an axis perpendicular to the axis of the hyperbola — thus creating a rotation surface.

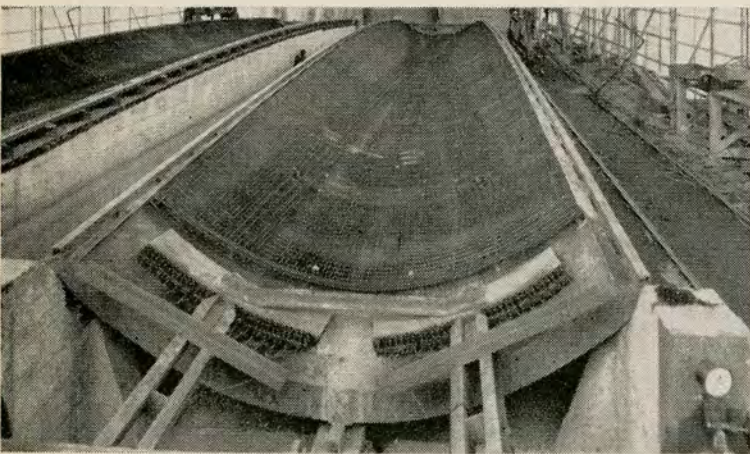
"Though the difference in curvature between a parabola and a hyperbola, near the longitudinal axis, may not be essential, there is still a difference of major importance insofar as the characteristics of the surface of a pretensioned element are concerned," explains Hohla. ". . . The hyperboloid is a double-curved surface, which contains two bands of parallel straight lines. This is why pretensioning by means of straight strands is possible . . ."

Other features: the curvature along its longitudinal section is a slight one, owing to a comparatively large radius of the circle of rotation (600 ft); it is said to minimize edge-stiffening conditions through the appropriate choice of the longitudinal curvature. "It thereby represents a self-supporting structural element in the pure sense of the word," says Hohla.

The shells are manufactured in concrete molds, which are lined with steel or any other appropriate material. Exposed aggregates may be used insofar as they correspond to the required compressive strength of 6000 psi. The batch is distributed and compacted by means of mobile vibrator screeds. Wet steam curing will allow detensioning of the $\frac{3}{8}$ -in. strands within 24 hours.

Erecting the shell "does not give rise to any problems other than those found in common practice with large-span precast members." Usually, it is accomplished by a mobile crane, unless field bridge-cranes are preferable, say, in cases when the floor does not have sufficient capacity to carry the loads. These bridge-cranes may travel upon roof-supporting beams of the superstructure.

Hohla maintains the shell can be applied in a wide variety of roof systems and will correspond to any desired modulus of design. "Because of its size, minimum of joints, and self-draining function, it can add to a building's integrity and aesthetic appeal."



Top: hyperboloid, right, creates rotation surface for 54-ft-span roof shells, covering 12,750 sq ft, at Pertrix Battery Plant, Frankfurt. Center: mold ready to receive. Bottom: erecting roof shell.



Fire and the compartmentation of buildings

by J. H. McGuire

UDC 699.81

No building is free from the threat of fire. A designer, however, can ensure that only limited damage will result if fire breaks out by reducing the over-all fire risk. There are various means at his disposal, but the single design feature that will contribute most to this reduction of risk is his use of fire-resistant construction to separate a building into fire-resistant compartments.

Fire-resistant construction may be described as construction that continues to fulfil its function during the course of a fire, and where walls, floors and partitions are involved prevents the transmission of fire beyond these boundaries. It must not be confused with non-combustible construction, which may or may not have the requisite degree of fire resistance in a given set of circumstances. It is, however, frequently necessary to resort to largely non-combustible construction in order to achieve substantial fire endurance (i.e. a long fire resistance time).

The fire resistance or fire endurance of a structural element is universally defined in terms of the length of time it will meet certain requirements when exposed in a test furnace that follows a specified time-temperature curve. For a particular building the fire endurance requirements are in turn related to the fire load within it.

Fire Load

The fire load in a building is the heat of combustion of the component materials and contents per unit floor area of each storey. Most combustible materials found in buildings are of a cellulosic nature, for which the heat of combustion may be taken as 8,000 Btu/lb, but for some materials (e.g. petroleum fuels) the value can be as much as 20,000 Btu/lb. A convenient source for more detailed information is the *Handbook of Fire Protection* issued by the National Fire Protection Association, Boston, Massachusetts.

A relationship between fire load and duration of a fire, corresponding to fire resistance furnace exposure, was first developed in the U.S.A. in 1928 and is summarized in Table I.

TABLE I
AMERICAN RESULTS

Combustible Content		Equivalent Severity of Fire in Hours of Standard Test
Weight lb/sq ft	Fire Load* Btu/sq ft	
10	80,000	1
15	120,000	1½
20	160,000	2
30	240,000	3
40	320,000	4½
50	380,000	6
60	432,000	7½

* Calorific value of materials taken as 7000-8000 Btu/lb.

Subsequent work carried out at the British Building Research Station led to the recommendations given in Table II; these differ appreciably at higher fire loads. The discrepancy between the two tables is probably associated with the fact that fire resistance requirements should not, strictly speaking, be related solely to fire load.

Since buildings in any one category of occupancy will probably have similar fire loads, the intermediate step of referring to fire load is often omitted when building codes are formulated. Fire resistance requirements, in terms of time, are often specified directly for the various categories of occupancy into which buildings can be divided. Such an approach assumes that fire load will be dependent solely on occupancy, and although this is only an approximation the problem involved in fram-

TABLE II
BRITISH RECOMMENDATIONS

Weight lb/sq ft	Fire Load Btu/sq ft	Equivalent Severity of Fire in Hours of Standard Test
13	Less than 100,000 (low fire load)	1
13 - 27	100,000-200,000 (moderate fire load)	2
27 - 55	200,000-400,000 (high fire load)	4

ing building codes appears to necessitate such a simplification.

Size of Compartment

Probably the most important issue the designer must consider is the size and nature of the compartments into which he should divide a building. His choice will depend on considerations of life and property risks, which in turn will be influenced by such factors as the probability of an outbreak of fire in various locations throughout the building and the proportions to which such a fire can be allowed to develop. The probability of fire may be assessed to a degree from an examination of the statistical reports that are usually issued from time to time by the appropriate department of the central government of a country. In Canada such reports are issued annually by the Dominion Fire Commissioner. In a very crude way the probability may also be estimated from a consideration of the special risks that may be involved in the actual use of the building. It cannot be said, however, that this subject is yet capable of a very satisfactory scientific treatment.

An interesting feature of many building codes, and one that may be taken as an illustration of the application of the above concept, is the allowance of larger areas if sprinkler protection is provided. Sprinkler protection reduces the probability of the development of a substantial fire. Hence, it is logical on a statistical basis to permit a larger compartment area where such protection is provided in order to establish the same over-all risk. Over the years the incidence of fire will be lower, although any one fire may impose a larger loss.

If sprinklers are installed many building codes permit an increase in area by a factor of two.

The concept of determining in advance the extent to which a fire will be allowed to develop before it is controlled or extinguished may appear to be unorthodox. In fact, the design of the building will regulate this development within remarkably close limits. Although fire fighting might succeed in restricting the dimensions of a fire to less than those of the fire-resistant compartment involved, the designer should, in the first instance, disregard this possibility and assume that the fire will involve the whole of the compartment in which it originates. As a general rule the size of the compartment will have been chosen to reduce life and property risks to economically acceptable proportions.

An assessment of the appropriate size of compartments with regard to life risk is not simple, but it may be approximated by considering whether the prescribed hypothetical boundaries of the fire will cut off escape routes of the occupants of various parts of the building. Almost universally it can be recommended that separate storeys should constitute separate compartments, and further subdivision will very often also be desirable.

When property risks are considered, the basis of a suitable choice of size of compartment becomes more obvious. One of the principles may be illustrated by the following examples. A fire-resistant safe in which jewellery is stored may be taken as a limiting case of a compartment from various points of view. The probability that fire will originate in the safe is remote. It is the object of the fire-resistant construction to protect valuable property from fire originating in neighbouring compartments. The argument for confining a paint spray booth by fire-resistant construction is almost exactly the reverse. The value of the materials within the compartment is small, but the probability of fire substantial. The primary object of fire-resistant construction in this case is to protect lives and property in adjacent compartments.

Where life and property risks are both low compartments may be large. The question arises as to what upper limits should be set. This is still a matter of dispute, but a popular concept maintains that one of the dimensions of a compartment should not exceed twice the maximum effective range of an average fire hose, which is of the order 60 to 120 feet. It

is not desirable that a fire-resistant compartment should be more than one storey high.

Special Compartments

Certain fire-resistant compartments will be of a very special nature. In all high buildings staircases, whether for normal use or specifically intended as escape stairwells, must constitute fire-resistant compartments with direct access to the exterior of the building at ground level. It should not be inferred that the construction of a staircase as a fire-resistant compartment will detract from its appearance. In fact, it need not be apparent to the eye that it is self-contained and fire-resistant. The main staircase in a building may differ, however, from escape stairwells in that the building finish materials are not necessarily of a type that will minimize the possibility of a primary fire in this area.

The interrelationship of the various compartments of a building, particularly the escape stairwells, will have a substantial influence on life safety. It is desirable that a large building should have at least two escape stairwells. If possible, the areas between two such stairwells should be divided into at least two compartments. Under these circumstances, assuming that the appropriate doors are closed immediately on the outbreak of a fire, it is most unlikely that both stairwells would become smoke logged and impassable at the same time. Smoke migration is such a pernicious phenomenon that flow around one door is often sufficient to foul the compartment immediately adjacent to the one on fire.

Other compartments of a special nature will include elevator shafts and shafts that might be required for convenience in distribution of services. The general principles underlying the design of these completely enclosed shafts is obvious enough to need no elaboration. The remarks which follow on the question of doors can be taken to apply to elevator doors.

The use of a shaft from top to bottom of a building to carry services is not fundamentally objectionable provided it constitutes a fire-resistant compartment. It is probable, however, that the quantity of combustible materials involved, for example in the insulation of electric cables, would be sufficient to allow a substantial fire to develop in the area. It must, therefore, be remembered that various service facilities could be seriously disrupted throughout the building by such a fire. For this reason

it might be desirable to exclude from this shaft certain services such as emergency lighting and the wiring of an automatic fire detection system.

Closure in Fire-resistant Construction

One of the problems in dividing a building into compartments is that some links between them are almost invariably essential. Services will usually be common and a number of cables, pipes, and ducts will be required to pass through the fire-resistant partitions bounding the various compartments. Pipes should present no problem. Careful patching of the wall where it is penetrated should be satisfactory. Electric cable will generally penetrate the wall via a conduit. With most acceptable modern cables it is improbable that the materials themselves will propagate the fire from one side of a boundary to the other, but sealing of the conduit on the two sides is necessary, if only to reduce the transmission of smoke.

More detailed attention is necessary for air ducts, each of which requires at least one damper that will provide a fairly effective gas seal. On several counts it is desirable that there should be two dampers, one on each side of the partition. In this way an effective seal can be achieved regardless of the sign or direction of the pressure difference between the two compartments. Two dampers with an appreciable (e.g. 6-inch) separation between them would also tend to reduce the probability of ignition of materials on the unexposed side of the partition by thermal conduction along the duct material. It is desirable in any case that combustible materials should not be in contact with the duct for some 6 inches to a foot on either side of the partition.

The most difficult problem is presented by the necessity for free passage between compartments under normal conditions; it may well be equally essential during the preliminary stages of a fire. Doors constituting parts of the boundaries of a fire-resistant compartment must have some measure of fire endurance. To achieve an appropriate measure is often not easy. In addition, some consideration must be given to what constitutes appropriate fire resistance. A fire resistance of several hours may be required of some partitions, although the doors forming part of them may be expected to have the appearance of simple, relatively lightweight, conventional ones. In many instances wired glass will meet the requirements, for doors incorporating wired glass can achieve a fire resistance of an hour or more. Fire re-

sistance in this context need not involve a temperature requirement at the unexposed surface, for it can be ensured that combustible materials will not be placed very near to them.

Where fire endurance times of the order of hours are involved, it may not be practical to expect a door to have the performance of the remainder of the structure, even if the temperature requirement is waived. Where a very great measure of fire safety is desirable it can be achieved by using two doors separated by some few feet, the construction of the area between them being non-combustible and fire resistant. A simpler approach would be to reduce to a reasonable minimum the area of the wired glass involved, and to ensure that building materials for several feet on either side of the doors are non-combustible and the construction fire resistant. Thus, if some flaming were to occur in the region of the unexposed face from leakage of flammable gases around the door it would not be likely to initiate a developing fire. A further complementary approach would be to install on either side of the door sprinklers of a type that could be remotely operated by some means on the outbreak of fire.

When subjected to fire, doors will probably be distorted. It is difficult to generalize regarding their suitability, but before a choice is made the results of fire resistance tests should be studied. A door should remain an effective fire stop for a period of at least 30 minutes so that the escape of occupants from other areas of the building will not be impaired by the spread of fire. On this count the door should also remain a reasonably effective gas seal for the same period in order to reduce problems associated with the migration of smoke. In most circumstances it should be possible to select doors that will retain some measure of effectiveness for the whole period of fire endurance required of the compartment involved, although the above requirement may be relaxed to some extent where it is considered that fire fighting can be effective in the region of the unexposed surface.

Closing of Doors

No reference has yet been made to how the doors and dampers described will be closed in the event of fire. Where migration of smoke is not considered a problem the use of fusible links will often be effective. It is, of course,

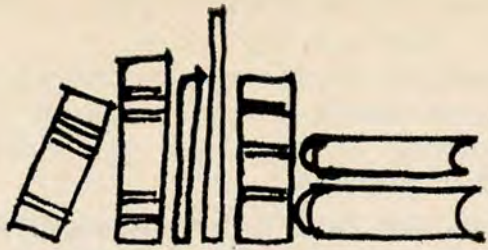
fundamental that doors should never be wedged open, although it should be assumed that they will frequently need to be held open. Suitable means for achieving this under the control of a device such as a fusible link should be incorporated. The fusible link, however, is not the best device possible. It is quite possible that fire will occasionally propagate to the next compartment prior to the operation of the fusible link. Furthermore, it is almost certain that large quantities of smoke will flow into the next compartment before the fusible link operates. The term "smoke" is here loosely applied to the gaseous products of combustion, many of which can constitute a serious life hazard. Alternatives to the fusible link include automatic door-closing mechanisms or simple electro-magnetic door catches released by manual fire alarms or automatic fire detecting systems. Automatic door-closing devices can be most effective but are, in general, expensive. The electro-magnetically operated door release can be equally effective but need not be expensive. Its use would, of course, be effective only on doors fitted with the door-closing mechanisms currently found in most modern buildings.

Fire Resistance and Life Safety

The fire resistance requirements so far discussed have all been related to the duration of the fire, but if complete destruction of the property is tolerable a modified concept may be introduced. Evacuation of the building would then be the only feature to be considered. A suitable fire resistance recommendation might be that all elements should comply with structural requirements for 1 hour and temperature requirements for 30 minutes. This discrepancy in time is suggested on the basis that collapse constitutes a serious impediment to escape, whereas waiving the temperature criteria after 30 minutes merely gives rise to the possibility that a fire might develop (involving time for development) on the far side of the partition involved.

Such an approach must be given the most careful thought. It can only be valid where adequate warning can be expected from detection and alarm systems, and where it is known that the response to an alarm will be the complete evacuation of the building. Special provision may be necessary where there are infant, senile or restrained occupants.

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BOOK REVIEWS

TOWNSCAPE by Gordon Cullen.
Published by The Architectural
Press, London. 315 pp. Price:
56/-.

This book is probably the most definitive statement on the art of designing the urban environment that we have yet seen. In essence, it sums up the point of view, expressed by the *Architectural Review* over a period of years, that townscape is not something left to chance or incidental to problems of traffic, engineering, real estate values, zoning laws, or the design of individual buildings. Rather, it must be considered as a vital part of the planning technique if the ideas of city and urbanity are to have any meaning; if what we are ultimately concerned with is the creation of an environment for people. The book is thus an analysis of the visual elements that make up the city, and how they may best be put together.

Although its contents are geared to the peculiar problems and layout of the English urban scene, the principles set forth are as pertinent to North America as they are anywhere else. For instance, traffic circulation is considered in balance with other parts of the urban fabric, with pedestrian circulation separated from, and yet in contact with, wheeled traffic; there are the now familiar analyses and proposals for the development of a town's greatest potential—such as the water front, and the analysis of various kinds of urban space, scale, street furniture. These ideas are old hat to readers of the *Review*, but still have to be applied in practice in our own urban environment, where the automobile has assumed the status of the Sacred Cow, and where buildings have little relation to their surroundings or the spaces they either create or destroy.

The book's content is arranged in a step-by-step progression from the elements that make up the urban scene to studies of actual towns and schematic proposals for various projects. They are accompanied by plans and sketches (by Gordon Cullen), which illustrate

vividly the design principles discussed, and whose only fault is that they delight the eye to the point where even the worst portrayal of outrage becomes infused with a certain glamour.

The rather irritating phraseology — “towniness,” “here and there,” “thisness” — which has become the stock-in-trade *Architectural Review* criticism, should not detract the reader's attention from the intrinsic value of the message: to awaken us to the need for imagination and positive thinking in terms of urban design, where all the elements of the townscape are brought into meaningful relationship to each other, rather than considered in isolation — in short, where the town is conceived as the best and most exciting place to live.

Michael Hough, Toronto

Two Urban Renewal Studies

URBAN RENEWAL: LONDON, ONTARIO. Donald Guard, Director and Gordon Stephenson, Consultant. Published by the Corporation of the City of London, 1960, pp. 64. 22 plates (4 in colour).

URBAN RENEWAL STUDY FOR VICTORIA. A. H. Roberts and B. Wiesman, Directors. Published by the Capital Region Planning Board of British Columbia, Victoria. 1961. pp. 48. 21 plates (7 in colour).

BOTH STUDIES were made within the provisions of Section 33-1 (h) of the National Housing Act, and CMHC was responsible for three quarters of the costs.

The London report states the terms of reference for such studies; to determine the redevelopment necessary and recommend methods, to discover what housing rehabilitation is required and to indicate treatment, and to estimate new housing requirements in the period up to 1980.

London has small pockets of blighted housing scattered throughout the city, need for low rental housing, an undeveloped amenity in the valley of the Thames, and a healthy central area in spite of its lack of an adequate peripheral road. The population has doubled in 25 years and may reach 400,000 by 1980. This will mean doubling the size of the city and will bring a marked intensification of development in the central area. This potential increase in land use is probably London's most serious planning problem.

The major residential development area is at the west end of downtown between Richmond and Wellington and is intelligently related to the improvement of the river valley. It is recommended that the land should be cleared

by the municipality and sold to one or two good developers for high density development. This proposal, which will meet the need for apartments, fits in with the historical tendency of the centre of gravity of London to move eastwards, leaving an area of decline at the west end of the CBD.

Dundas between Wellington to Talbot is recommended for a pedestrian mall, with short term parking immediately behind the shops and long term parking on the periphery of the central area. The interiors of the blocks will be used for service, parking and pedestrian ways.

Recommendations on amending the existing zoning by-law are enlivened by an amusing section on the history of zoning in London and the pitfalls of mistaking zoning for planning. Thomas Adams produced a plan for London in the 1920's which was implemented in a 1928 by-law. The new by-law, enacted in 1947, was less realistic and the unfortunate mistake was made of adopting the zoning map as the Official Plan. This mishap will not be corrected until a new Official Plan is completed and the by-law amended accordingly.

It is commendable that, whilst everything necessary has been included in the report, every effort has been made in presenting the material to give the reader an easy grasp of the major points. The report, which is a very useful contribution to the overall planning of London, should be read with the London Area Traffic Plan by A. D. Margison and Associates.

THE VICTORIA STUDY must be considered in the context of the Capital Region of 144,000 people, as city development must take place within the provisions of the Regional Plan, 1959.

The report includes a brief survey and proposals for downtown. The aim is to make it as attractive as possible for tourists and residents by means of malls, the definition of a precinct for semi-public buildings and a program of face-lifting.

The housing program divides itself into priority redevelopment—Blanshard and Spring Ridge; tentative redevelopment—four areas which would be upgraded into the priority group by 1967; and spot redevelopment which is applicable to small islands of blight. There are also programs of rehabilitation and conservation for areas that do not warrant redevelopment.

The Blanshard and Spring Ridge proposals are given in detail. Of 129 Blanshard residential buildings 62 were very poor. As there is a need for low rental housing and the area would be suitable for motels, the new proposals are devoted to these uses plus accom-

modation for old people. It is unfortunate that a new major road will bisect the site.

Rehabilitation programs for Chinatown and Victoria West are given, the latter featuring a new park strip made out of existing roads in an area where 36% of the land is now used for streets. It will be interesting to hear how this experiment works out.

Although recommendations are made to improve the use zoning of the city, this well presented document suffers from a failure to relate the renewal proposals to any general planning provisions. It is therefore difficult to assess the real value of the programs recommended.

John Dakin, University of Toronto

PROCEEDINGS OF THE SYMPOSIUM ON SHELL RESEARCH by A. M. Hass and A. L. Bouma. Published by North Holland Publishing Co., Holland; Interscience Publishers Inc., NY. 362 pp. Price: \$14.75.

These proceedings are a collection of technical papers, presented during the International Symposium on Shell Research, held in Delft (Holland) in

the summer of 1961. The 16 major contributions and the 15 short essays by internationally-known authors provide an excellent insight into the variety and complexity of shell problems.

Dynamic developments in numerous areas of shell research and design are documented. The papers contain several reports on experimental studies on conventional cylindrical and hyperbolic types of shells, which were conducted to verify theoretical studies. One author contributed an interesting study on the behaviour of huge domes made from circular tubes. Buckling problems of shells that, with decreasing shell thickness, become increasingly important were treated by another author. The majority of contributions, however, concern the various aspects and new developments of model techniques (Moirè method, for example) and materials.

These proceedings should be of considerable value not only to the specialist, but also to anyone concerned with the design, analysis, and construction of shells, because they reflect the status of the current efforts in the area of thin shell structures.

Dr J. Schwaighofer, Toronto

THE STRUCTURIST: VOL I, 1960-61 AND VOL II, 1961-62.

Edited by Eli Bornstein, University of Saskatchewan (copies available by ordering directly from the Editor) \$2.50 per copy.

DESIGN FOR GOOD ACOUSTICS J. E. Moore, FRIBA. Published by The Architectural Press. 91 pages. 16s.

PUBLIC CONSTRUCTION CONTRACTS AND THE LAW

Henry A. Cohen. Published by F. W. Dodge Corporation. 400 pages. \$14.95

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Norman Foster. Published by F. W. Dodge Corporation. 246 pages. \$13.50

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Finn Monies. Published by McGraw-Hill Company of Canada Limited. 113 pages. \$8.00

AMERICAN BUILDING ART — THE TWENTIETH CENTURY

Carl W. Condit. Published by the Oxford University Press. 427 pages. \$15.00

MECHANICS OF ENGINEERING STRUCTURES

Grover L. Rogers and M. Lander Causey. Published by John Wiley & Sons, Inc. 428 pages. Price \$8.50.



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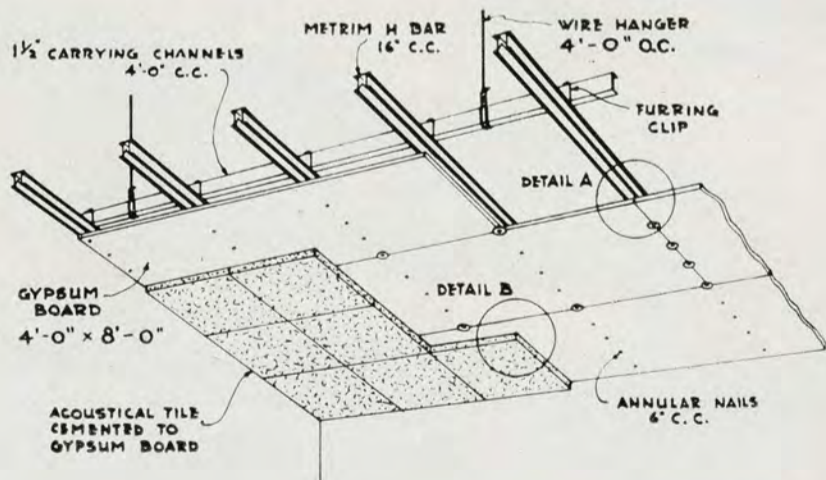
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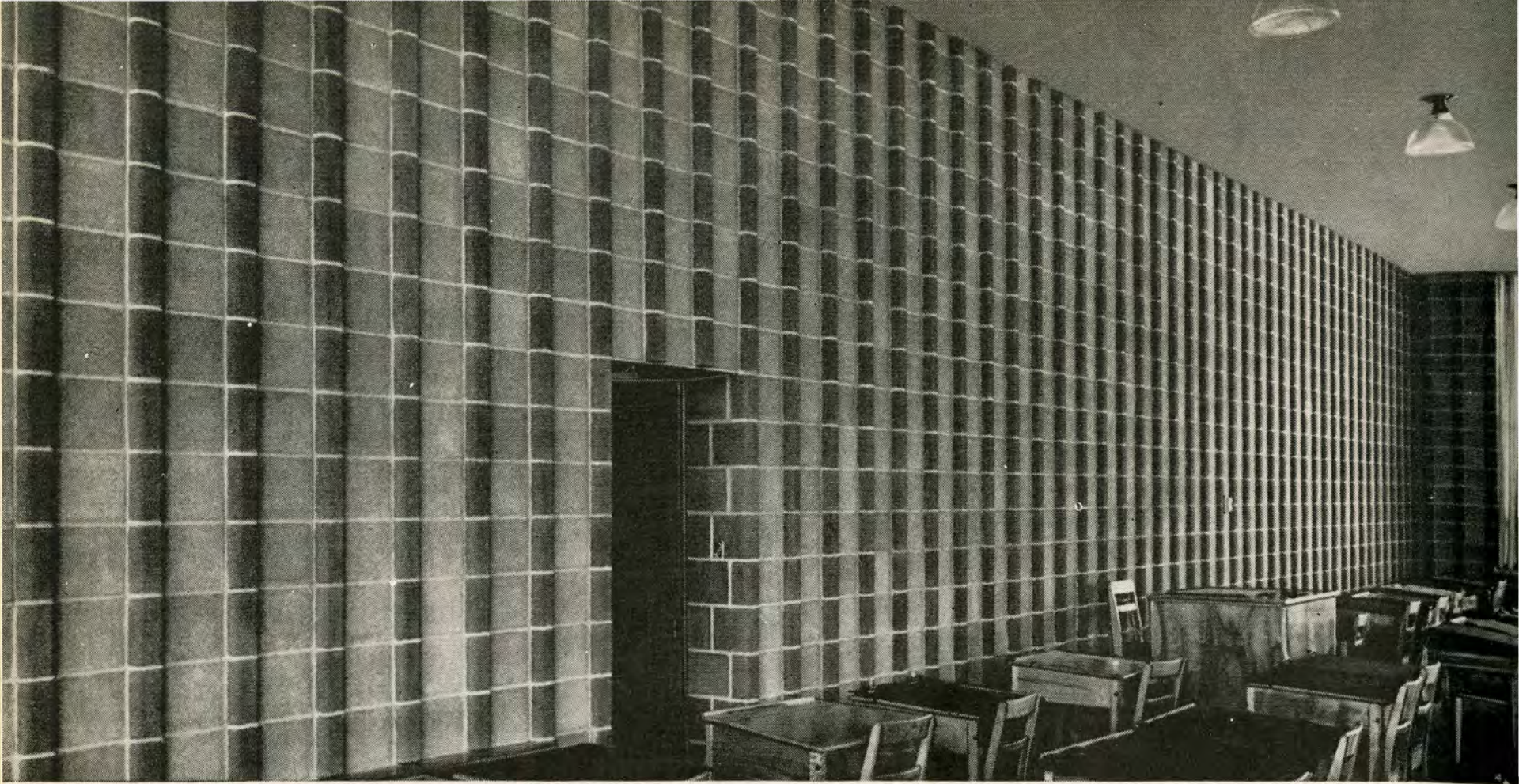


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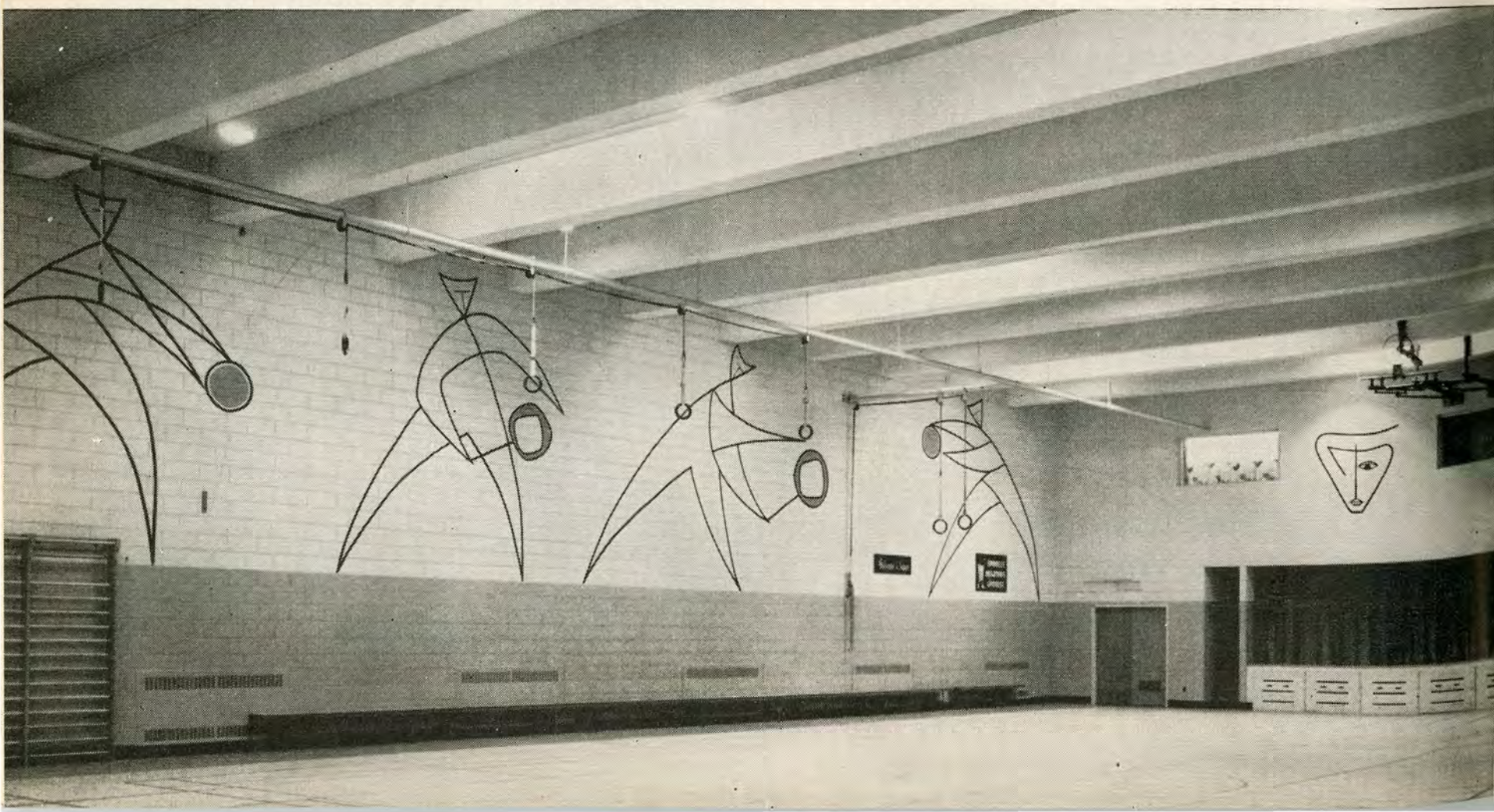


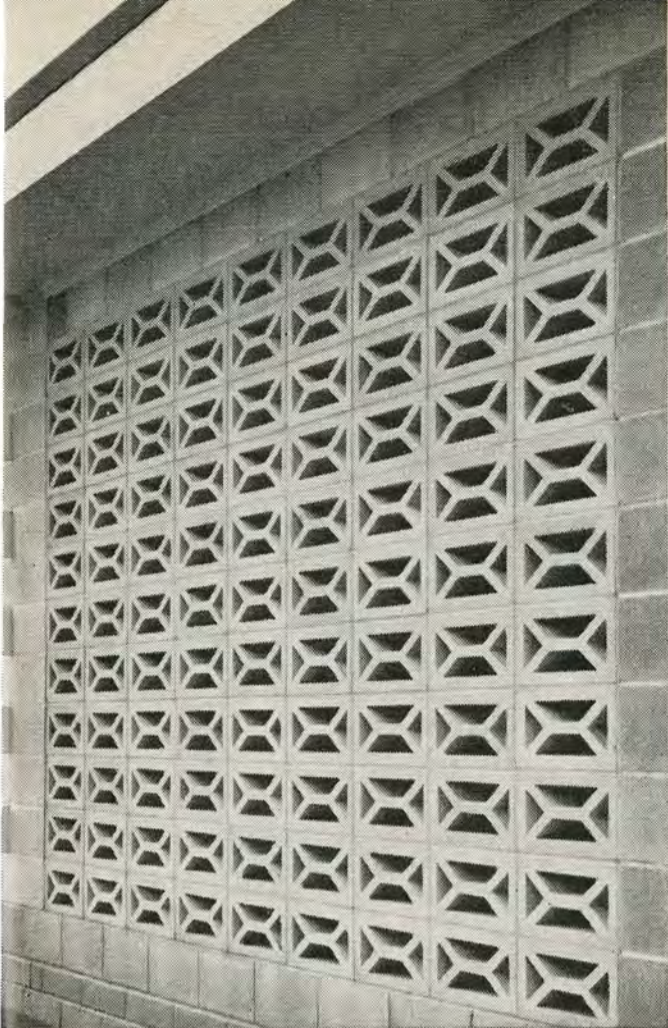
VALLEYFIELD SEMINARY, Valleyfield, Que. Architect: **Pierre Dionne**. Consulting Engineer: **Bourgeois, Dérôme et Martineau**. General Contractor: **Alta Construction Ltd.** Concrete masonry units by: **Pressure Pipe Ltd.**

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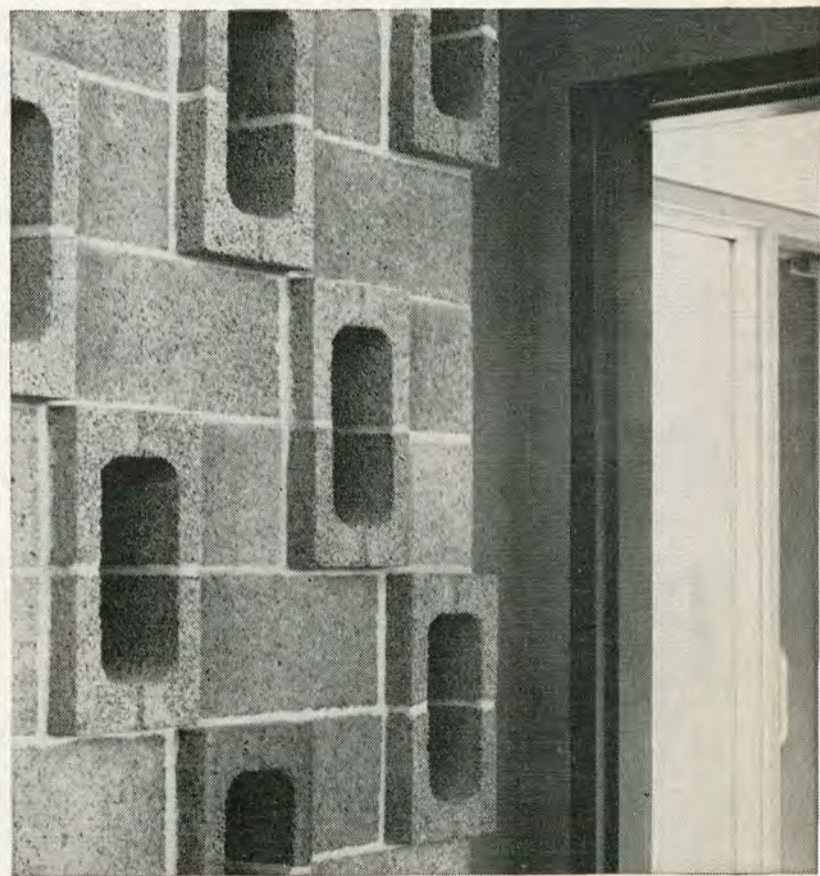
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BLUE BONNETS RACETRACK BUILDING, Montreal. Architects: **Paul H. Lapointe & Paul Goyer**, Montreal. General Contractor: **Collet Frères Ltée**, Montreal. Masonry Work Contractor: **Laurent Molini Inc.** Montreal. Concrete "Dilcolite" blocks: **Dilco Concrete Products Ltd.** Montreal.

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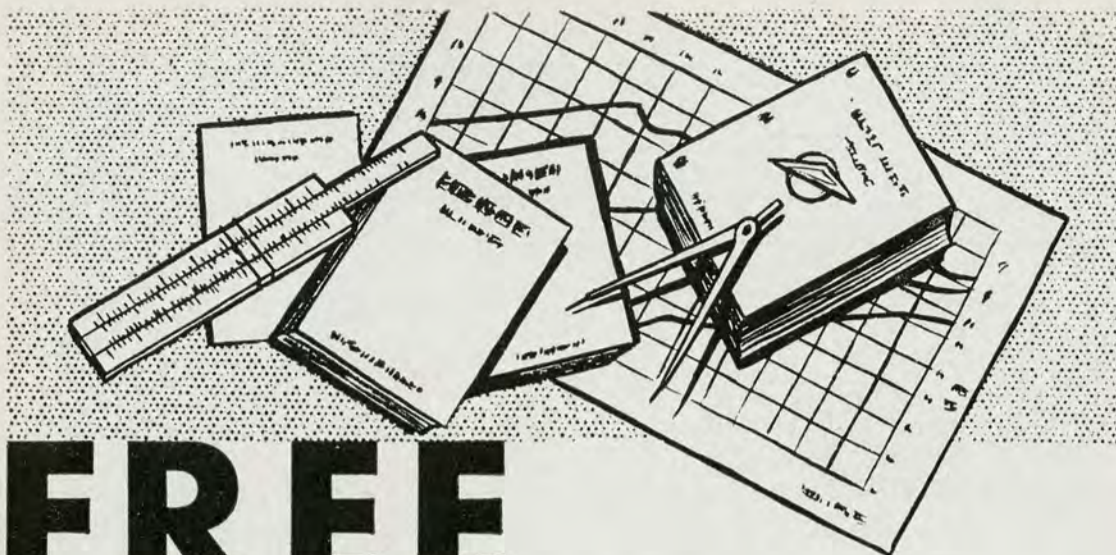
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PLANNING ATOMIC SHELTERS: A guidebook for architects and engineers. Edited by Clifford H. Albright. Published by the Pennsylvania State University Press. 196 pages. Price \$10.00

INDUSTRIAL BUILDING VOL II Proceedings of the Industrial Building Congress held in conjunction with the second Industrial Building Exposition, New York Sept. 1961. Published by Clapp and Poliak Inc. New York. 203 pages. Price \$5.00

Coming in Oct.: The Journal's special housing issue. Contributors: James A. Murray, John Bland (F), Henry Fliess, Humphrey Carver, Ross Anderson. In color: CMHC's Mulgrave Park housing project in Halifax.



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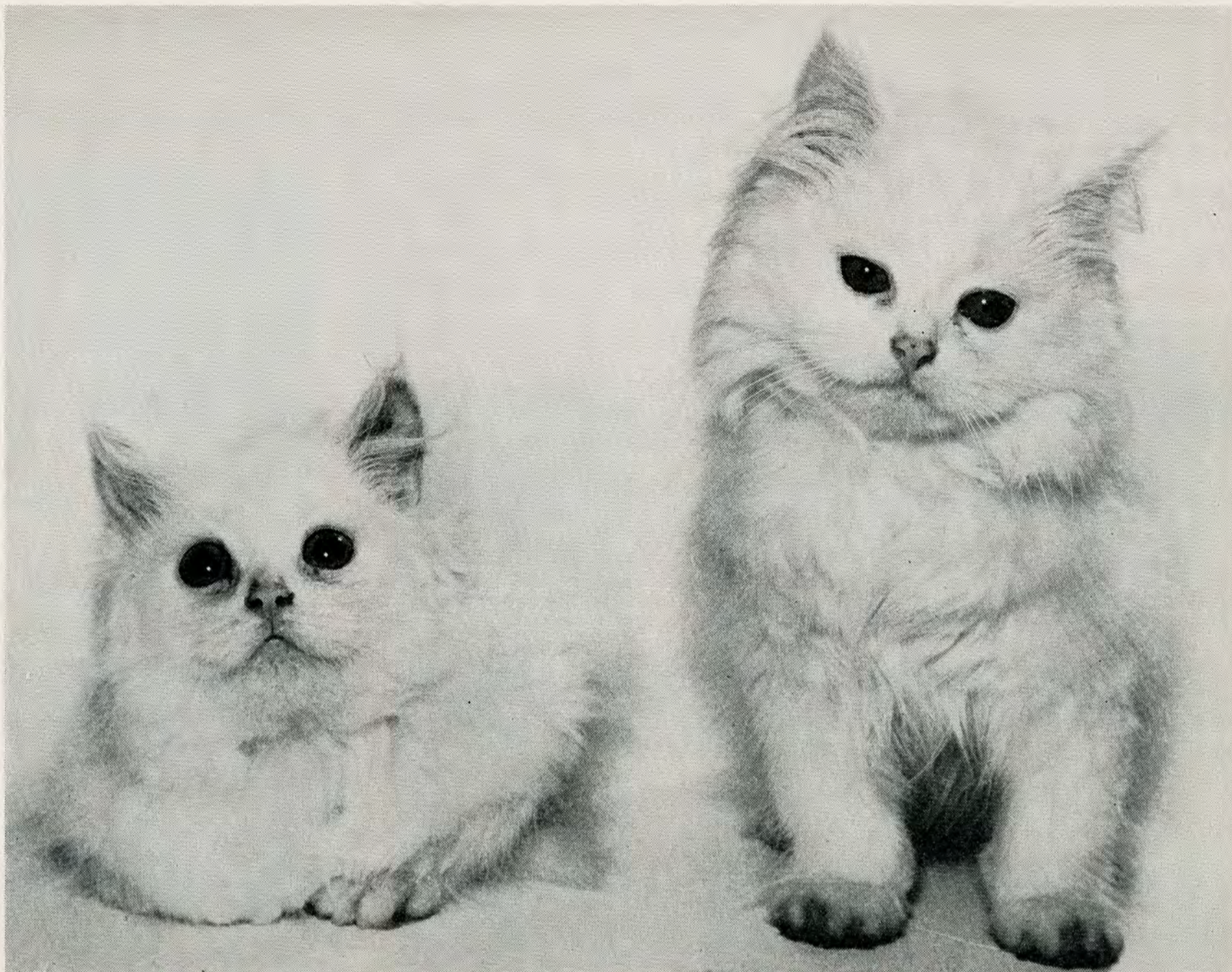
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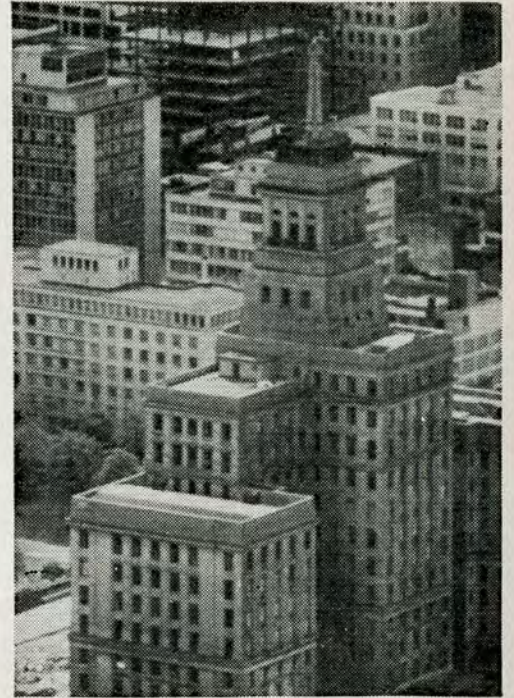




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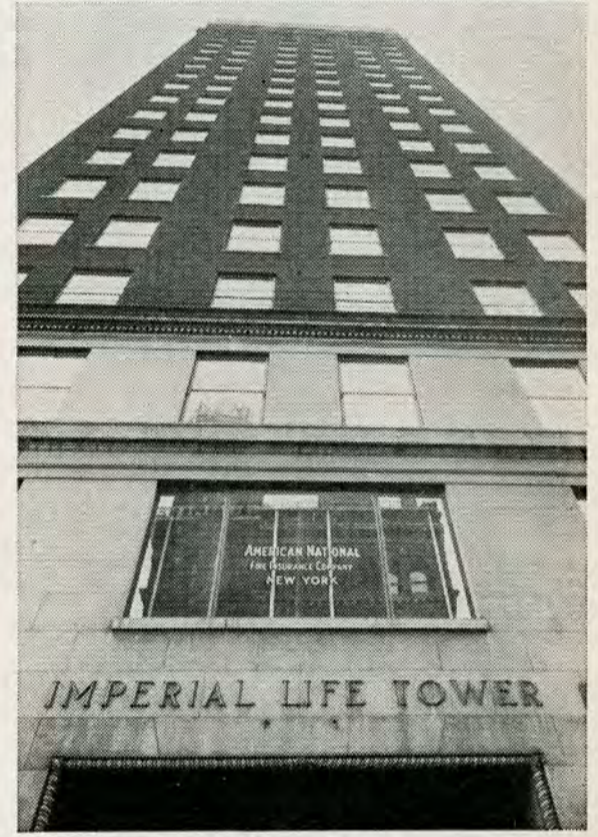
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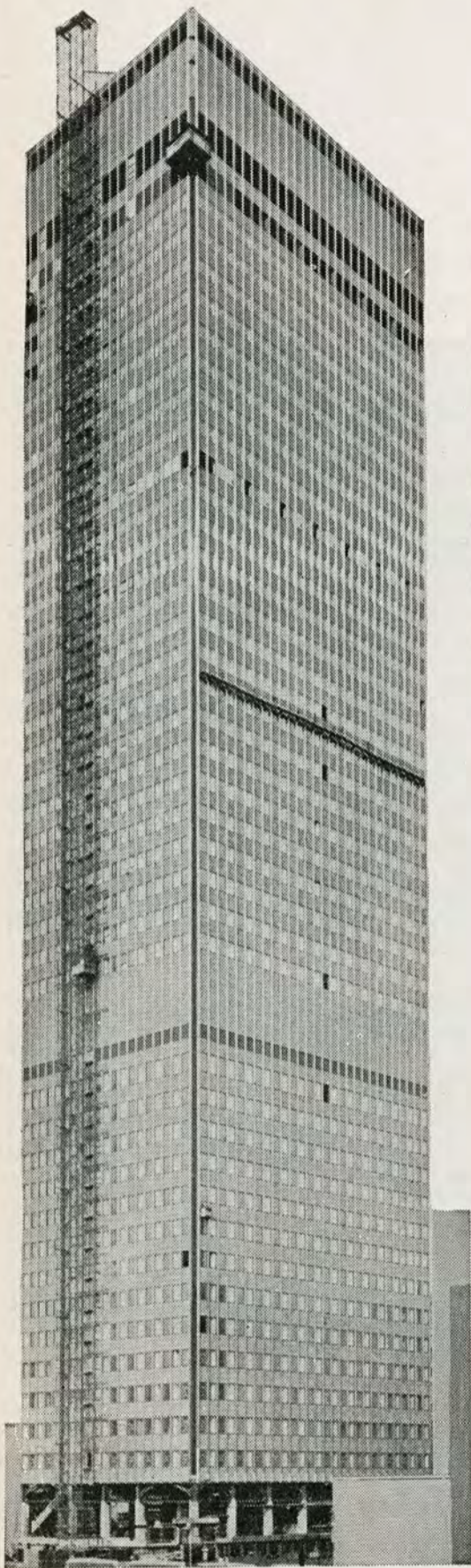


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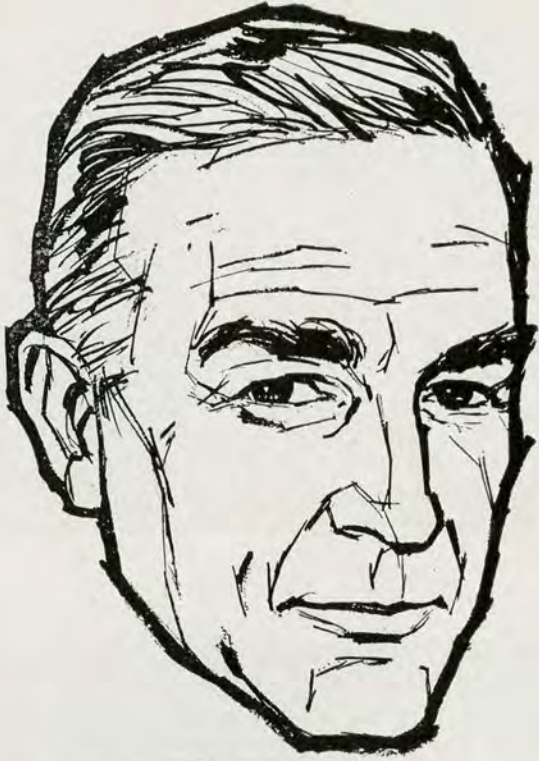


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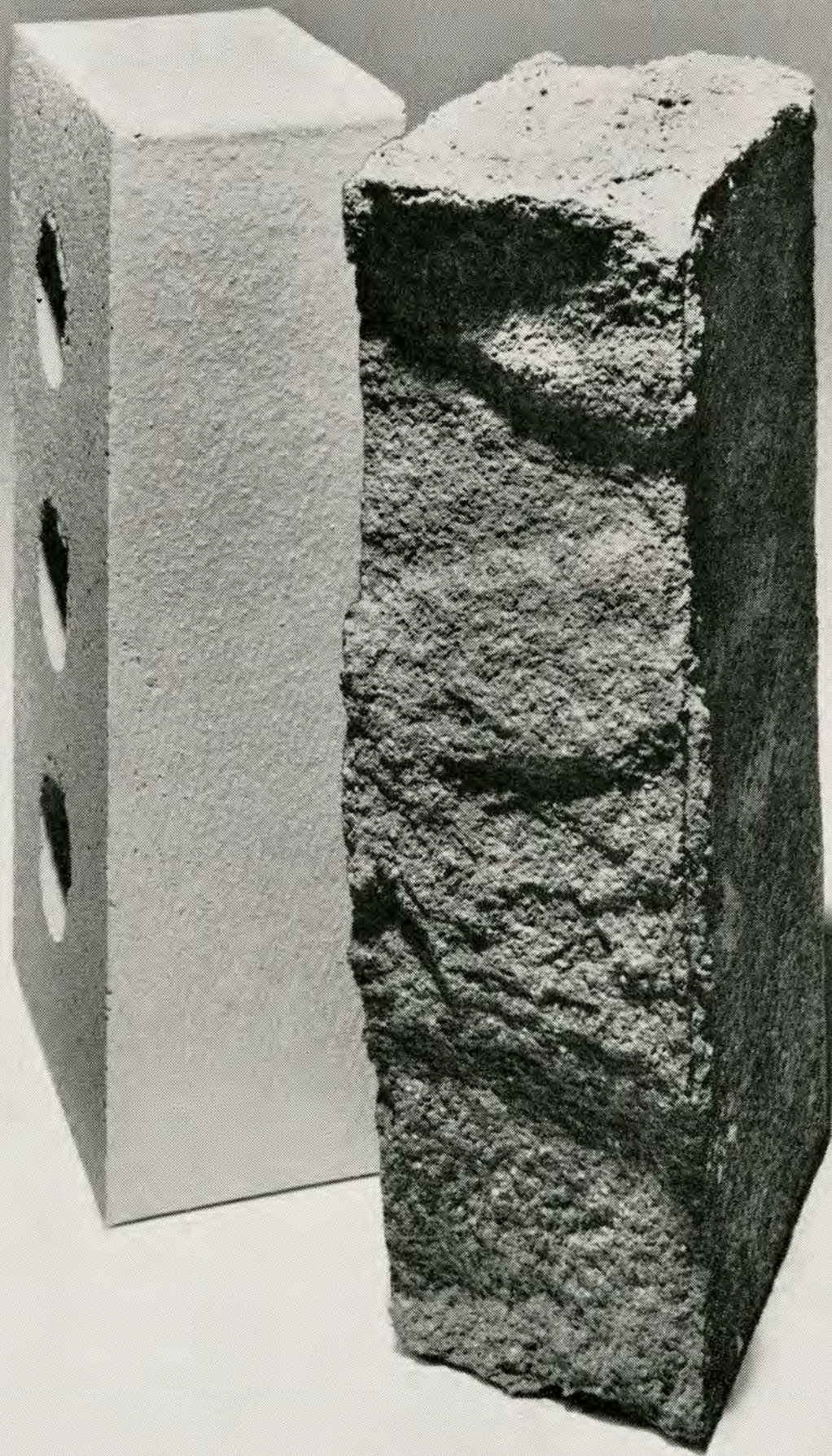
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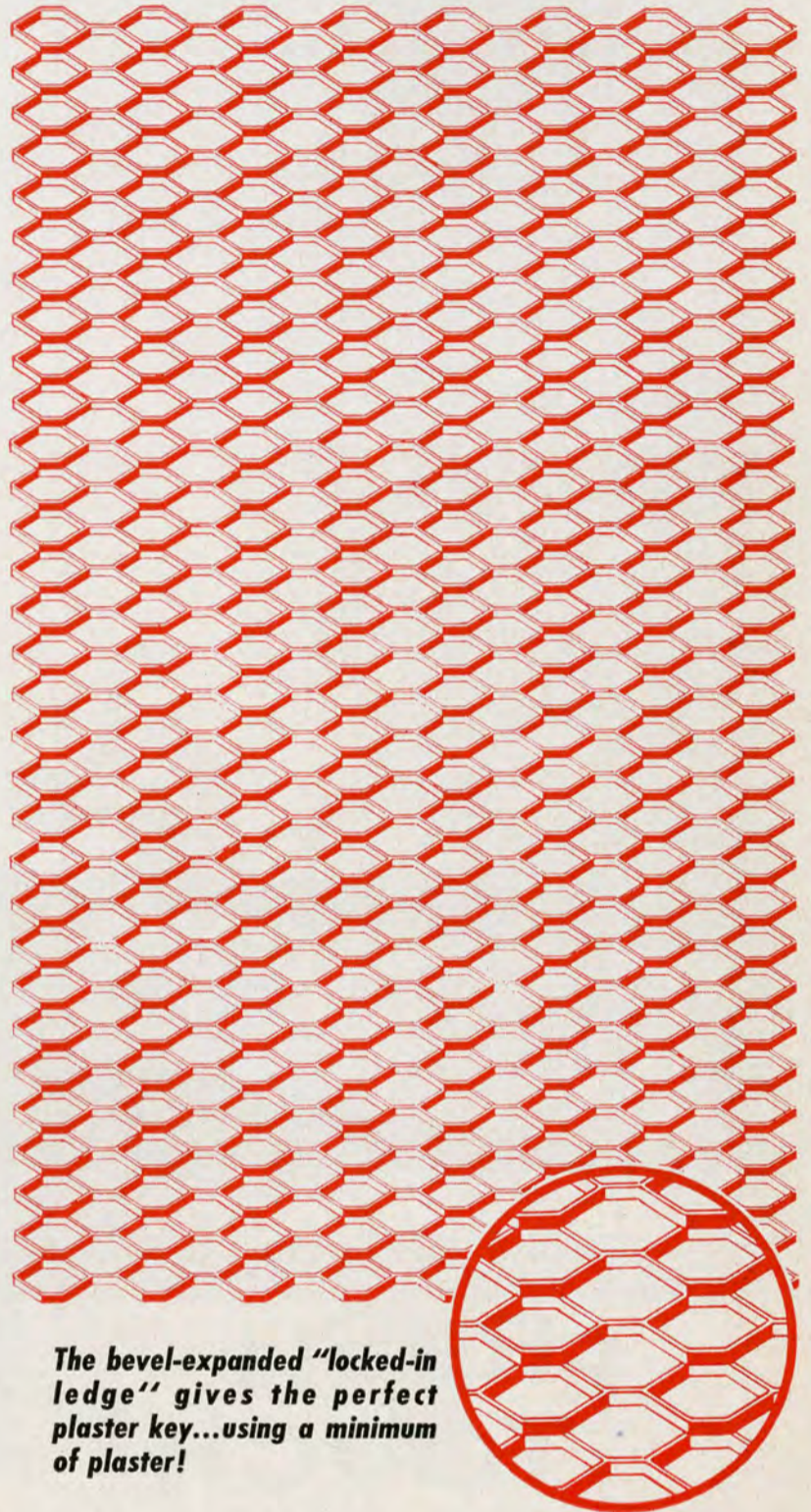
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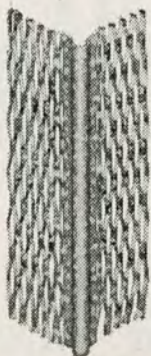
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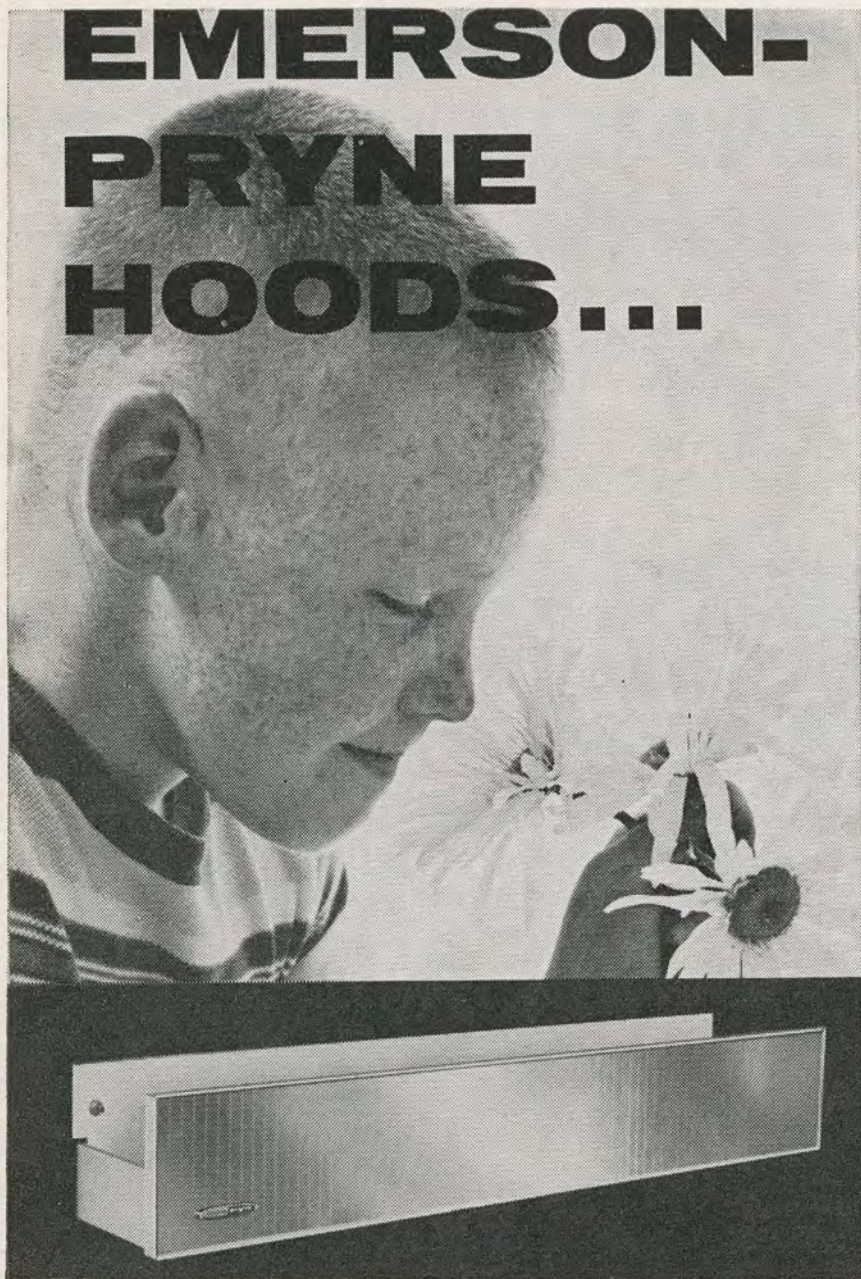
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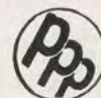
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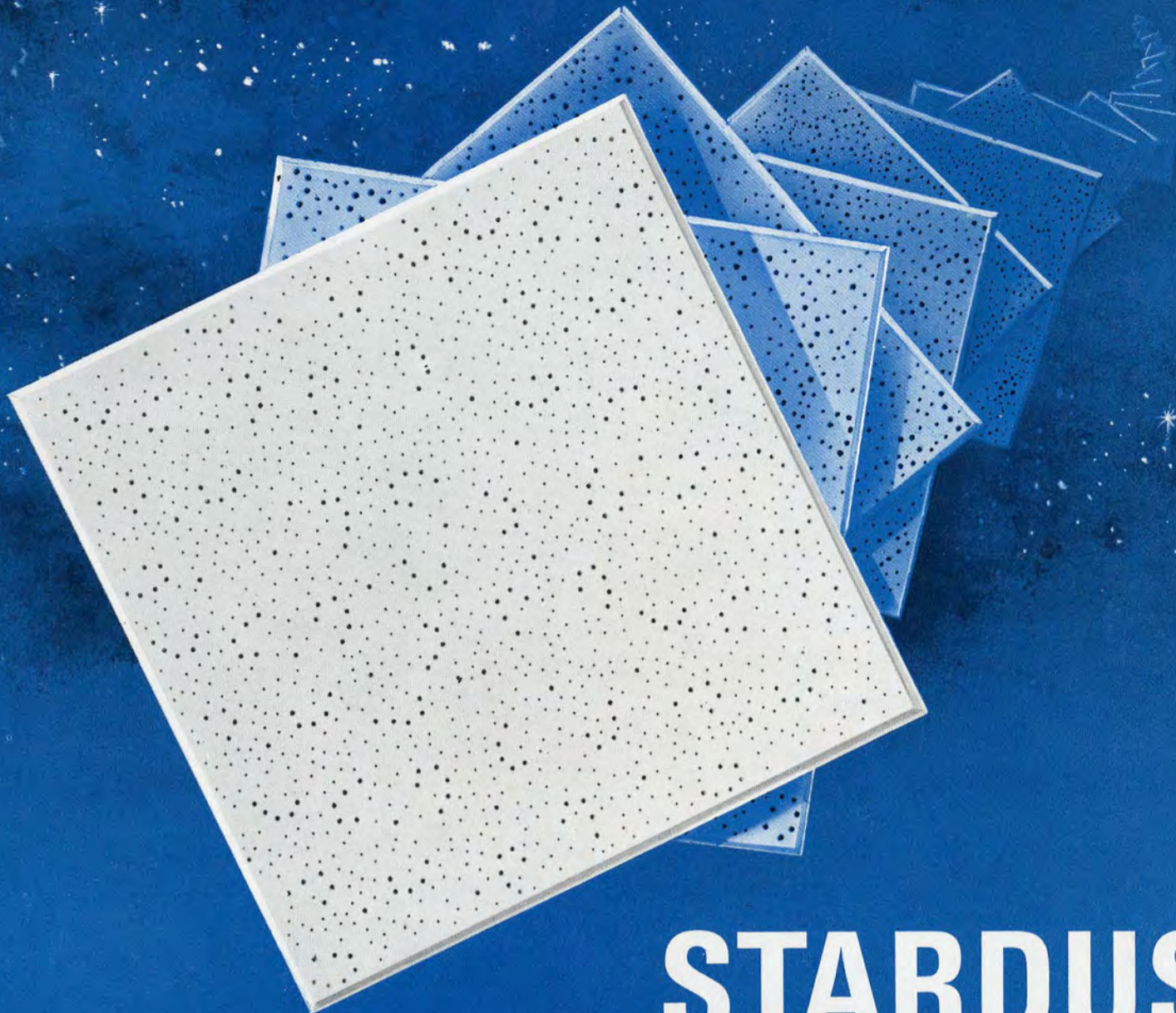
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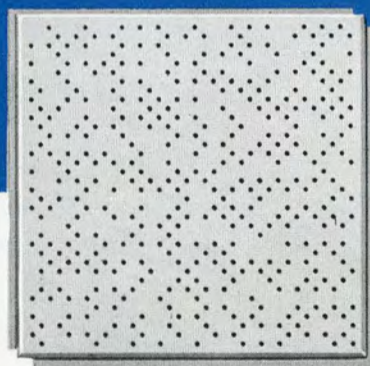
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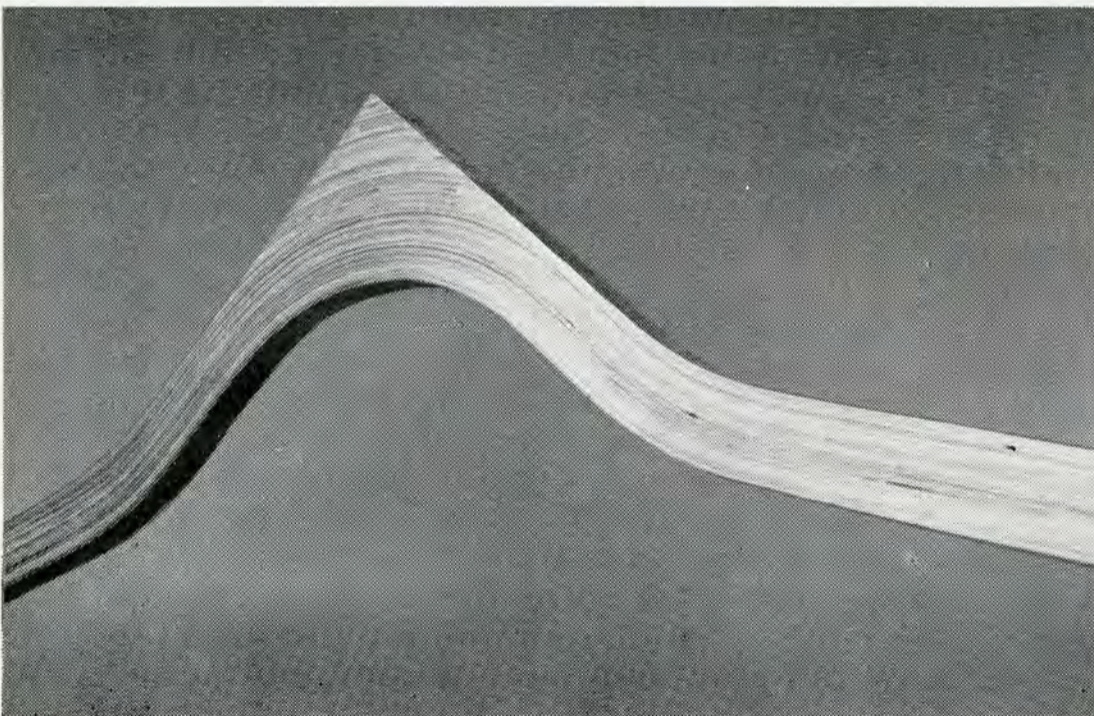
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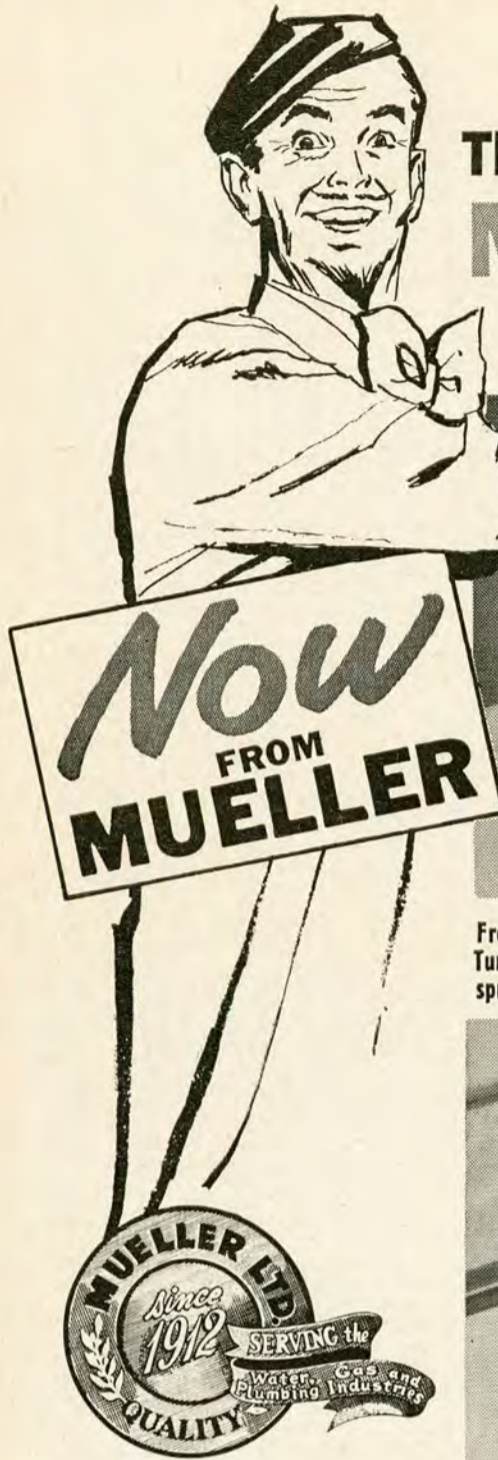
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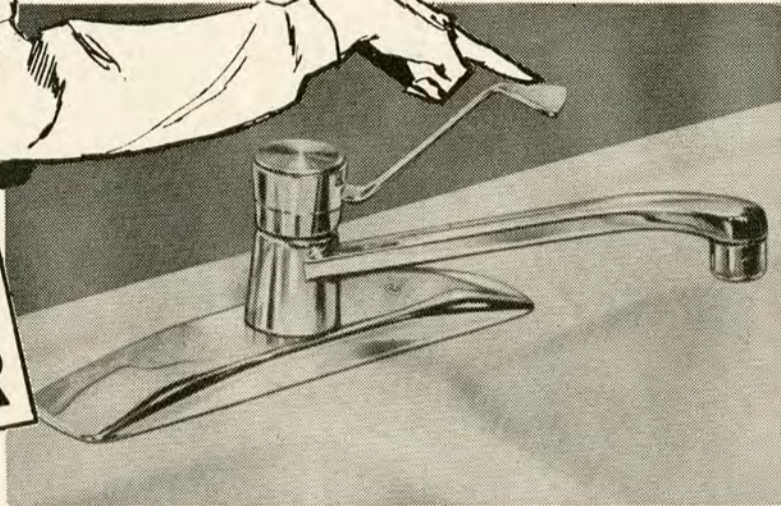
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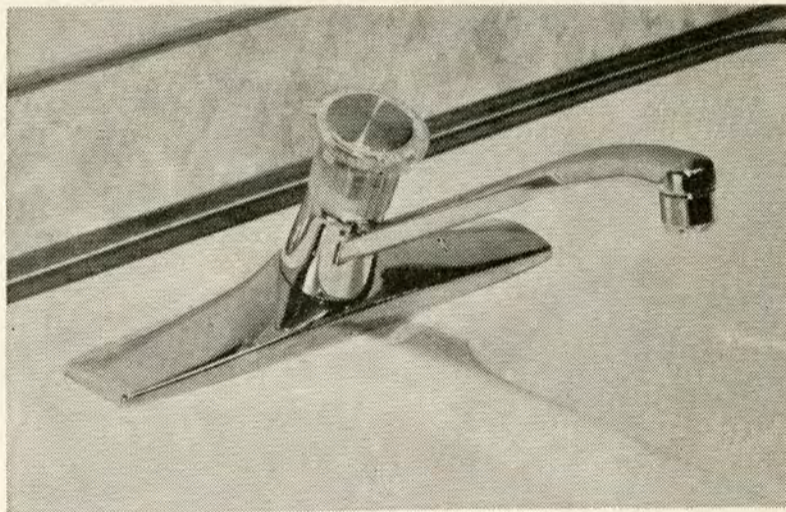
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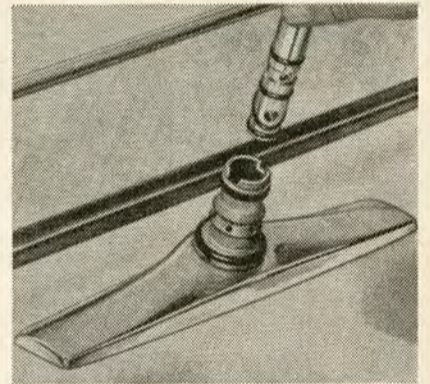
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Lift knob UP for any volume. Push knob DOWN to shut off. Turn right for cold — left for hot or any mixture in between.

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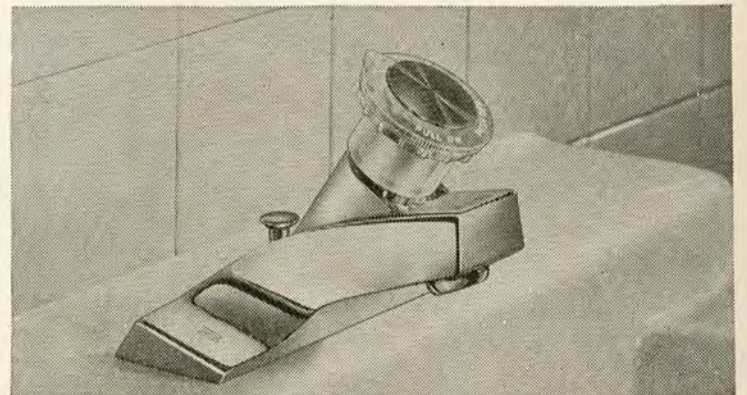


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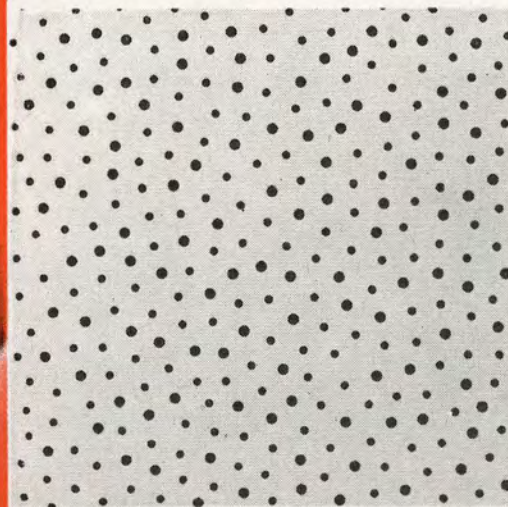
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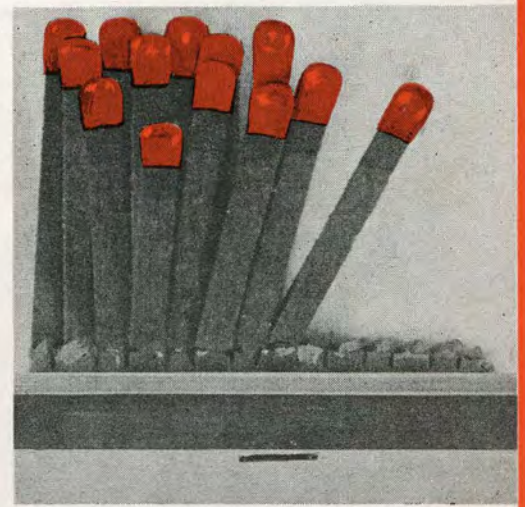
fissured



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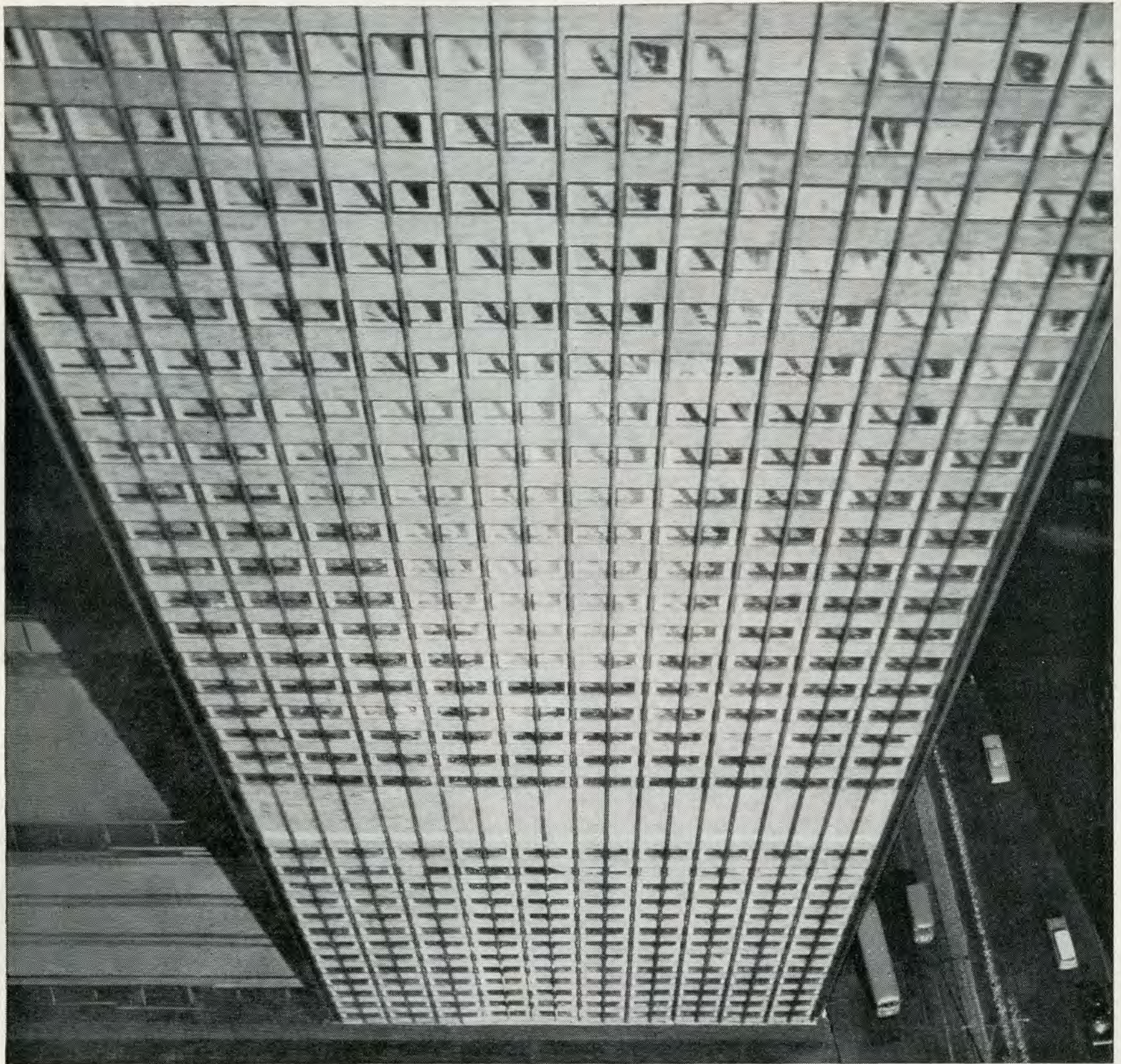


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