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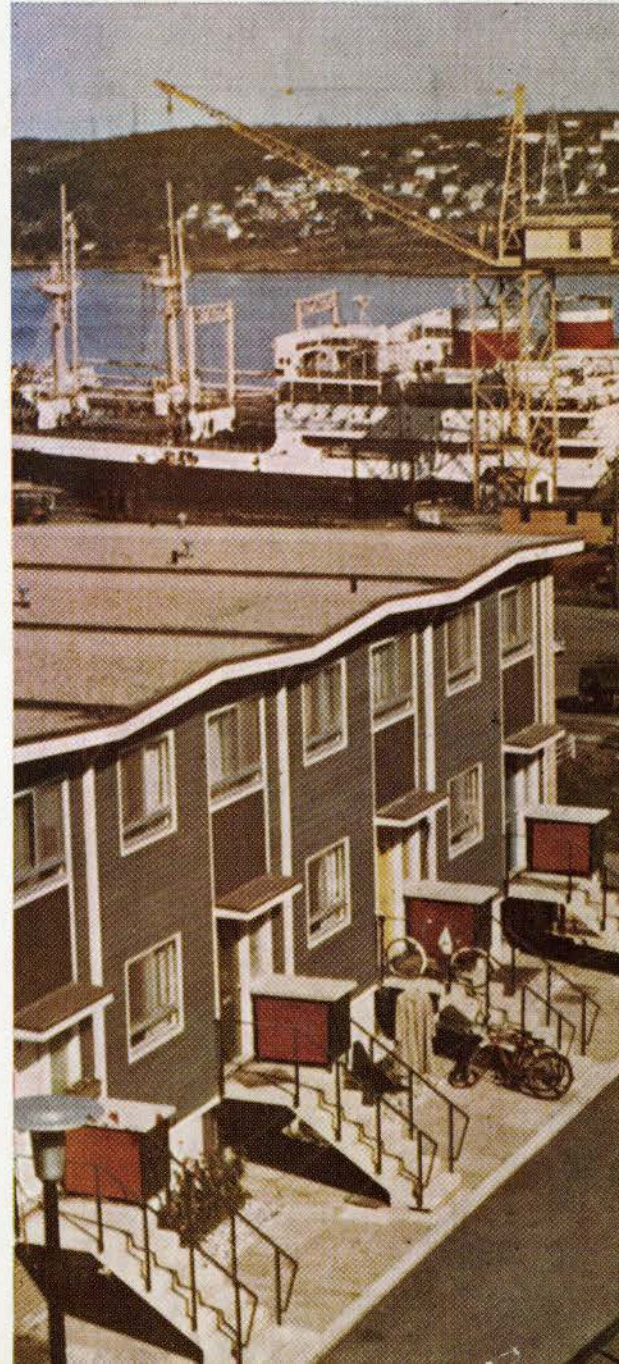
# ROYAL ARCHITECTURAL INSTITUTE OF CANADA JOURNAL

*Housing / A Study*



OCTOBER 1962

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





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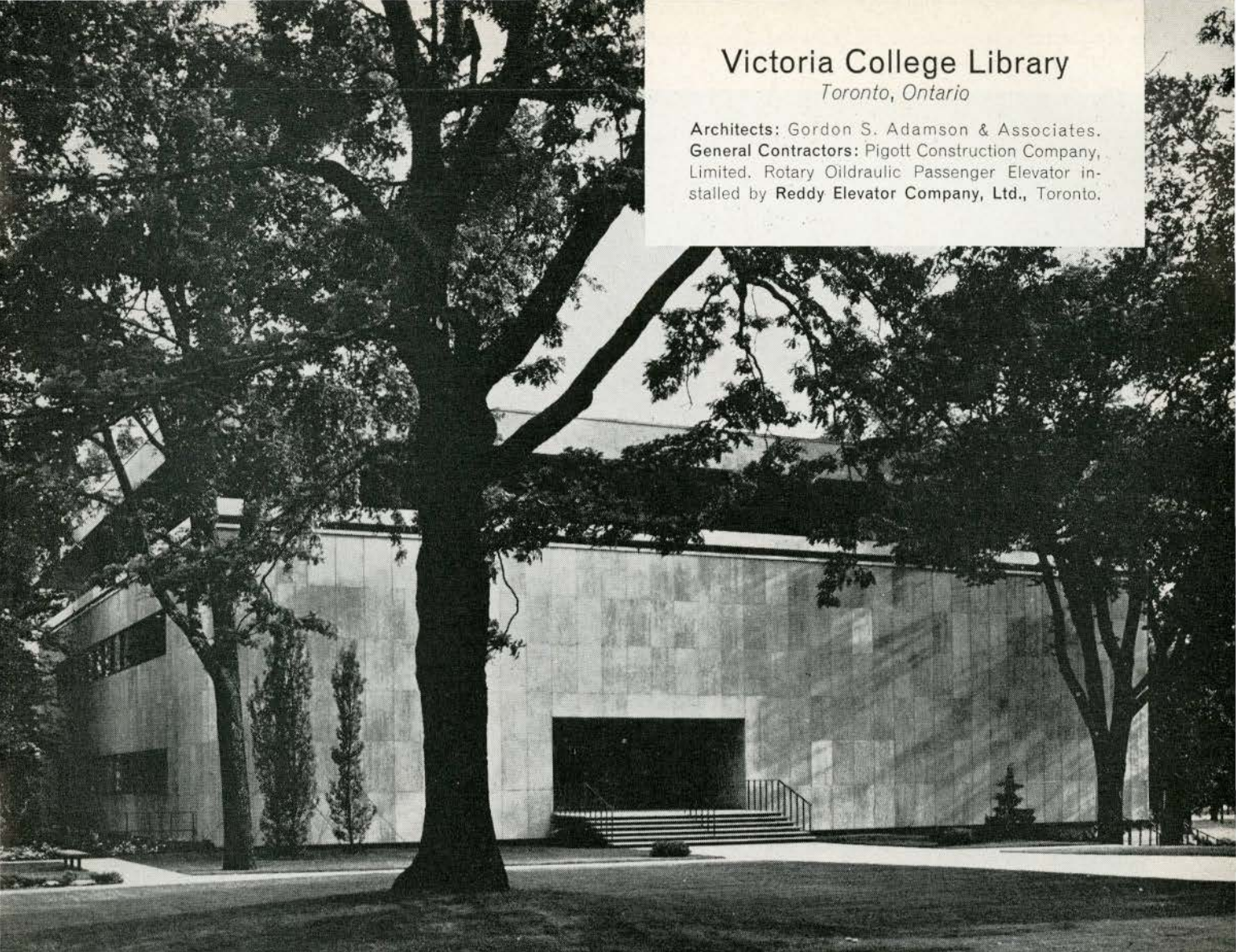
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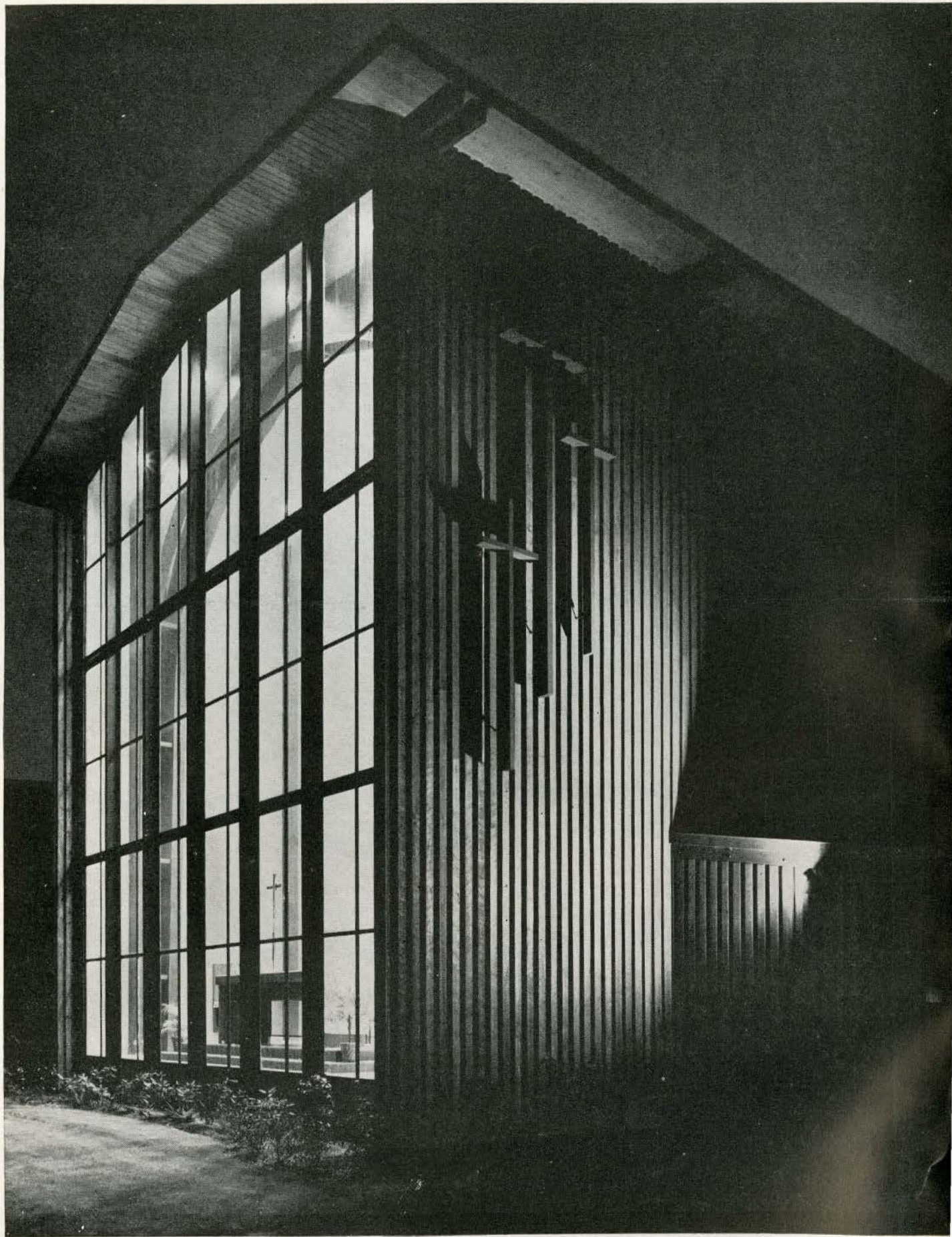
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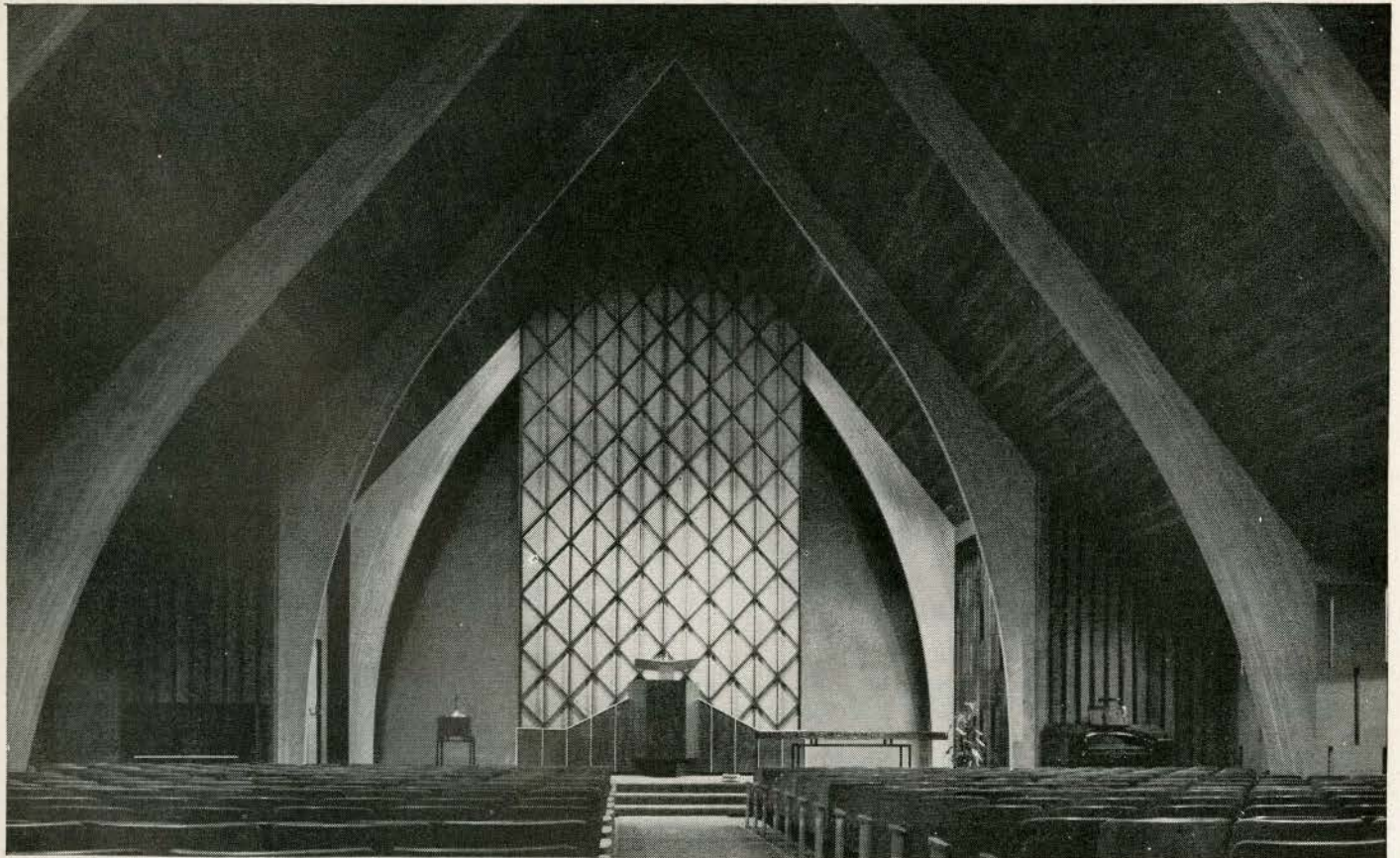
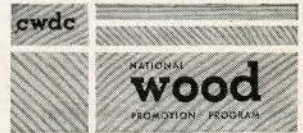
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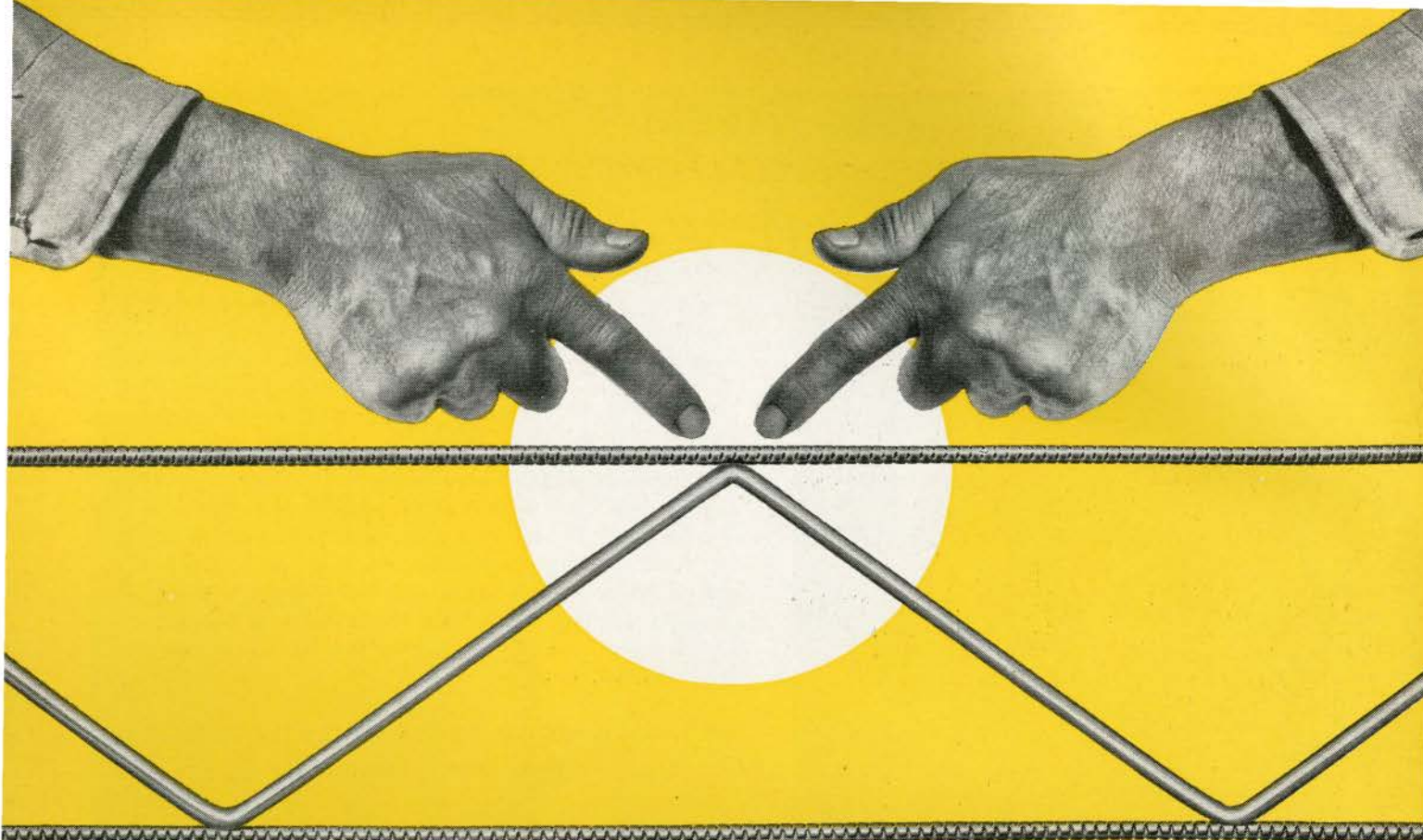


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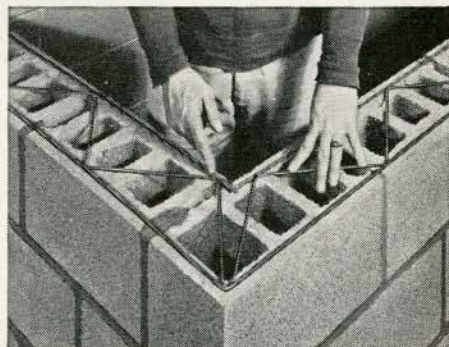
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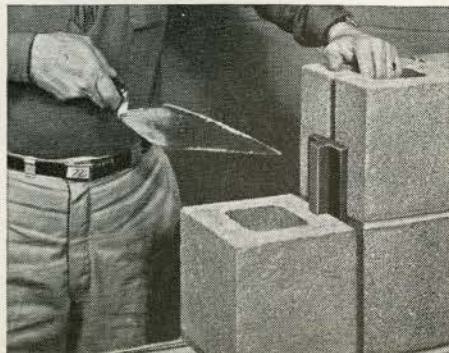
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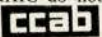
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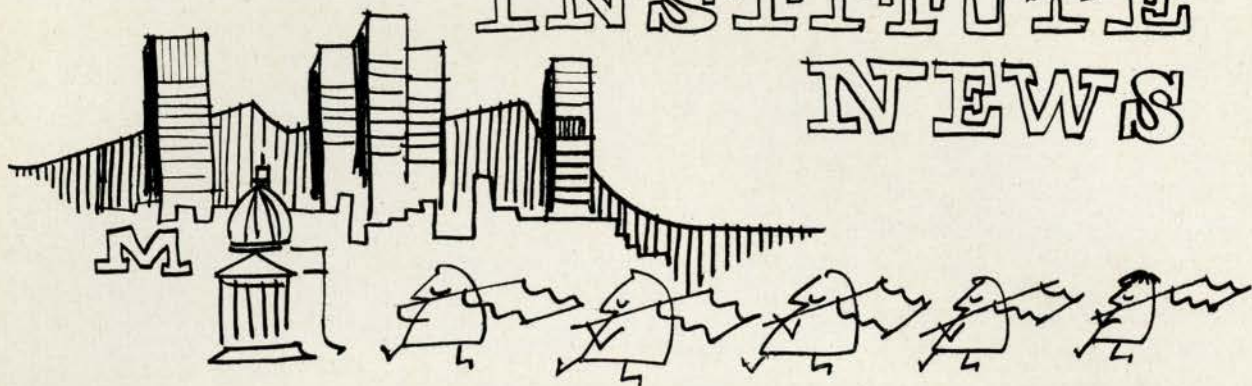
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# INSTITUTE NEWS



**T**HE RAIC COUNCIL, meeting at Montreal on September 21, approved a motion designed to provide the \$85,000 minimum annual budget stipulated at the 1962 Assembly at Vancouver, by increasing the Institute's share of annual provincial assessments from \$20 to \$35.

The motion, made by *Mr H. H. G. Moody (F)*, Chairman, Committee on the Profession, was passed by a vote of 20 to 6 in favor with 3 abstentions.

The Committee on the Profession had originally put forward a scheme based on the "ability to pay" or "sliding scale." For a variety of reasons, it was unacceptable to the Councils of the Provincial Associations.

In presenting his Committee's motion, Mr Moody emphasized that all other professions in the world are progressing steadily, and the architectural profession as a whole will suffer if it does not keep pace. He stated that building a strong organization is essential; a powerful RAIC could help with problems and situations arising provincially.

Text of the resolution, presented to Council, follows:

WHEREAS the following resolution was passed at the RAIC Annual Assembly of 1962: The Committee on the Profession, after consideration of the services rendered to the profession by the RAIC, the mounting cost of maintaining a national organization for this purpose, the desirability of maintaining and increasing these services to keep pace with the growth of Canada and the architectural profession, recommends the following resolution to be ratified at this Assembly:

BE IT RESOLVED that this general Assembly approve the principle of increasing the revenues of the RAIC organization to the extent of increasing the yearly budget to a minimum total sum of \$85,000. This sum to be exclusive of any revenues derived from the RAIC *Journal*. That all revenues from the *Journal* be allocated to a capital fund. That the Committee on the Profession give further study to a concrete formula by which this increased revenue may be raised.

FURTHER BE IT RESOLVED that the incoming Council (1962-63) should arrive at a concrete solution for presentation to, and consideration by, each Provincial Association. I hereby move that the Council of the RAIC accept the concrete formula for assessing each member of the RAIC an annual assessment of \$35, which amount will be collected by each Provincial Association from its own members and forwarded to the treasurer of the RAIC for the purpose of conducting the Institute affairs; and that this concrete formula be sent forward to all

Provincial Associations for their consideration and acceptance.

As a result of discussion of the motion, the following rider was added: "As a part of the motion, it is suggested that provinces may vary the formula and could use an 'ability to pay' method, as long as the total amount remitted to the RAIC is equal to an amount calculated on the basis of \$35 per member of that Association."

**S**ECOND PART OF THE REPORT by the Committee on the Profession confirmed there was no undue expenditure in the operations of the RAIC headquarters and expressed the opinion that the Executive Director is the proper officer to keep expenditures under review and advise the Council.

The Committee suggested that the organization of the Royal Institute might be made more effective and efficient through reduction in the size of Council and the Executive Committee. While it was agreed that efficiency and economy could be served by the suggested reduction, Council decided the subject was open to question, because of the feeling that a large Council might help to maintain a wider contact with members of the Associations. RAIC officers are to bring definite and specific suggestions, with full supporting reasons, to the next meeting of Council.

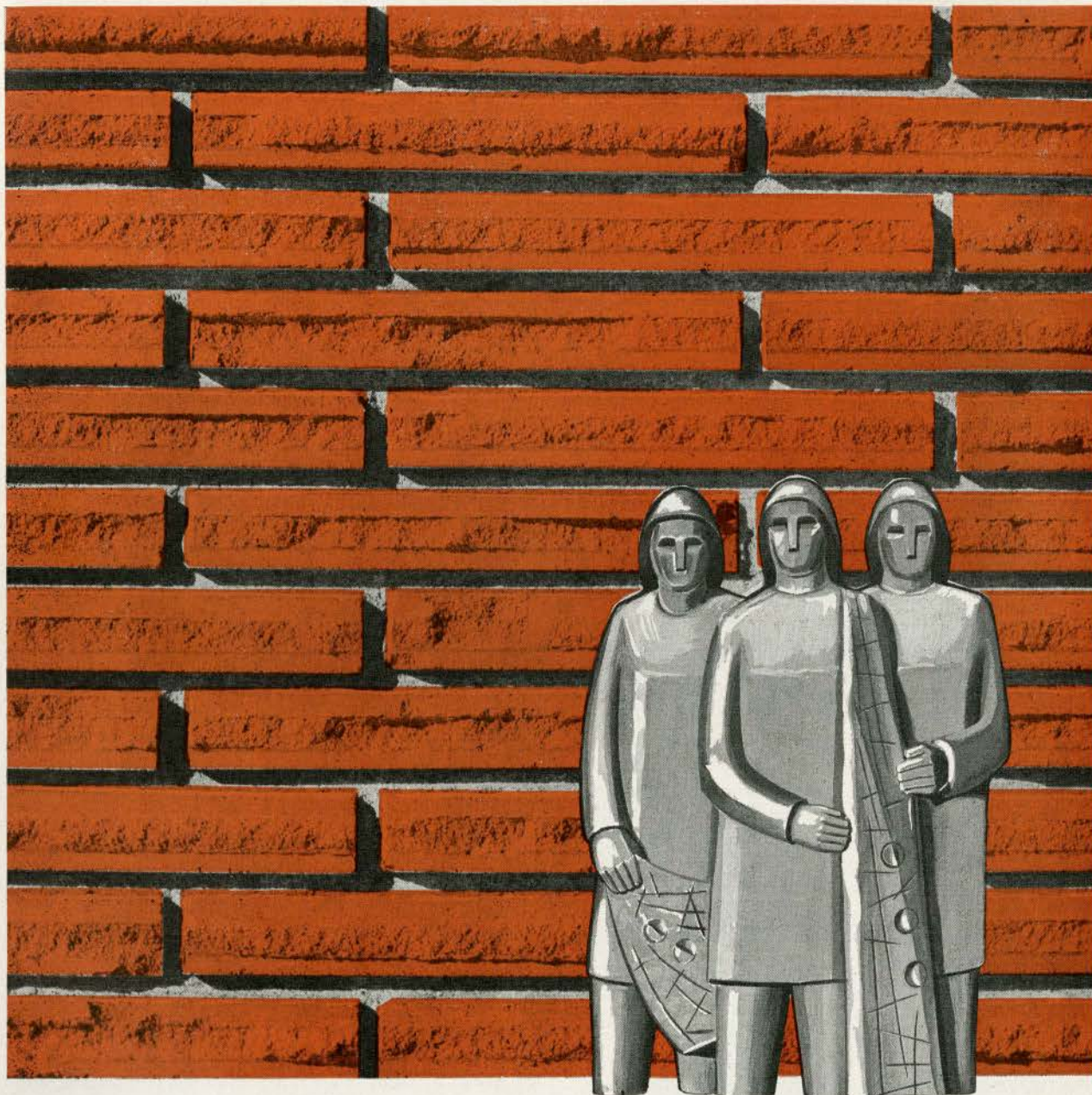
**A**MONG MANY OTHER ITEMS of business at the mid-year Council meeting were the following:

*Finance:* Budget statement for the period ending August 31, 1962, was presented and approved. The Council noted with satisfaction that expenditures were within the planned budget, and appreciation was expressed to the Architectural Institute of British Columbia Host Committee for their excellent work on the Assembly.

*Journal Operations:* The Executive Director reported on steps being taken towards improvement of advertising sales. Important changes are taking place this fall in the RAIC *Journal*. They include new makeup to attract advertising, appraisals of buildings and projects, reinstatement of a legal column, development of a technical column, and reasonable payment for editorial material. (See *Journal*, September, 1962, p. 10.)

*The 1963 Assembly:* Host Committee of the OAA Hamilton Chapter met recently with the Executive Director in Hamilton, and discussions have been held with the Sheraton-Connaught Hotel, Hamilton, where the 1963 Assembly will be held. Consideration is being given to





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Statue "The Fishermen"  
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making the 1963 Assembly a working convention by increasing the number of seminars and eliminating as many committee meetings as feasible. Suggested theme: "Materials in Architecture." This has not been finalized. The Executive Director tabled a draft of the program.

*Public Information:* Peter T. M. Barott (F), Chairman of the Public Information Committee, reported his Committee thought little can be done without an adequate budget. It was proposed the Committee should be granted a yearly budget of about \$10,000. The Committee would handle projects that are national in scope and of benefit to all members. These include the preparation of posters for distribution to secondary schools and, possibly, the production of a film, describing the services rendered by the architect, to be developed in a centenary film series.

A new brochure could be prepared for distribution to members — as well as other architectural literature — and the existing film library could be extended. This Committee should be in a position to supply other RAIC committees with material.

Mr Barott felt that his Committee should meet at least once a year, preferably in the fall — not in conjunction with the Annual Assembly. He stressed the importance of having public relations chairmen from the Provincial Associations attend these meetings, and he plans to write to each, giving suggestions and asking for comments on the program.

*Massey Medals, 1961 Exhibition:* The Executive Director announced that the Massey Medals 1961 exhibition, consisting of the panels representing the 100 best entries in the competition, were sent to the Smithsonian Institution, who are sponsoring an American tour, which opened at the AIA Octagon Gallery in Washington October 22, with the Canadian Ambassador officiating. The Smithsonian Institution has purchased 500 copies of the RAIC brochure on the competition and exhibition.

*International Relations:* James W. Strutt (F) stated the RAIC will be entitled to send three official delegates to the VII Congress of the International Union of Architects, at Havana, Cuba, from September 28 to October 3, 1963, where the RAIC is being admitted to the Union. It was expected these delegates would also attend the International Symposium on Architecture at the Assembly of the IUA, sponsored by the Society of Mexican Architects in Mexico City from October 8 to October 12. (Hope was expressed that as many RAIC members as possible will attend this Congress.)

*Joint Committee on Construction Materials:* The Association of Consulting Engineers of Canada has now joined with the Royal Institute and the Canadian Construction Association on this Committee. Presidents of the three organizations participated in the presentation at the first Product Literature Competition Awards Dinner in Ottawa last summer. At P. T. M. Barott's request, a presentation luncheon for the 1963 competition is being incorporated into the planning for the 1963 Assembly.

*Housing:* James W. Strutt reported on the housing conference held at Carleton University, Ottawa, during the first week in September, in which about 40 architects

participated. Mr Strutt, in reporting for this committee, drew attention to the October issue of the *Journal*, which features housing. Further, a committee under the chairmanship of Prof. J. B. Milner, of the University of Toronto, has been set up to study zoning regulations and bylaws across Canada, with particular regard to sociological, biological, and physical aspects.

*Membership Certificate:* The newly authorized RAIC Membership Certificate was displayed to Council, and it was announced it will also be available in the French language. The certificate will be supplied to existing members at \$5, but will be presented free of charge to new members of the Institute from October 1 on.

*Code for Conduct of Architectural Competitions:* The Executive Director announced that Document No. 4 was almost finalized; there are now only two minor points to be settled. Council decided an RAIC Committee should rigidly review proposals submitted by professional advisers as each new competition develops — to determine whether rules of each competition conform to established procedures. The President was authorized to add to the existing committee of one to form a full committee to approve conditions of architectural competitions in Canada, as submitted to the RAIC from time to time. Council accepted the kind offer of Mr G. D. Gibson (F) to produce a draft manual for guidance of professional advisers.

*RAIC Headquarters Building:* The National Capital Commission has indicated there is little likelihood the RAIC will be able to obtain a property on Sussex Drive in Ottawa for a nominal sum. It now appears the Institute will have to consider alternative headquarters sites in Ottawa.

*Centenary Planning:* Mr Peter Thornton (F), Chairman of the Centenary Planning Committee, reported further representation had been made to the federal government to appoint a Centenary Commissioner. It was believed action would be taken shortly. To stimulate interest at the provincial and municipal levels of government, action is required at the federal level.

*Fee Uniformity:* Committee Chairman, E. C. S. Cox (F), will send a draft document to all Provincial Associations for consideration and comment.

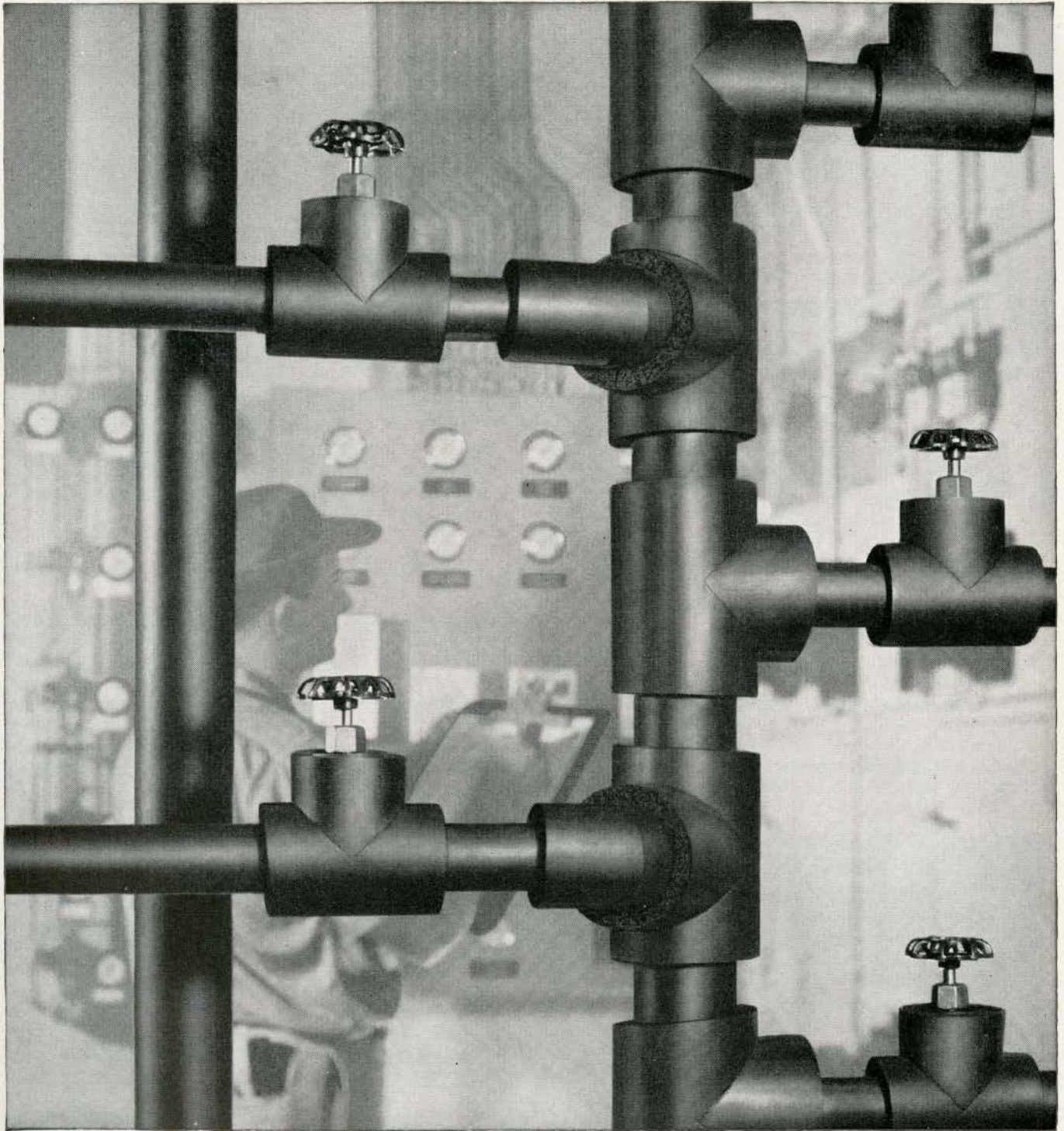
*Duty on Plans:* It is expected a brief, being prepared by Mr L. E. Shore (F), Chairman of this Committee, and the Executive Director will be presented to the Minister of Finance shortly.

*Architecture Abroad:* Mr Henri S. Labelle (F) of Montreal, has been appointed as the new member representing Eastern Canada on this Committee.

*Architects in Government Employ:* Representations were made by Mr Arthur W. Davison, and a letter was read from Mr J. J. Olson, Secretary of the Architects' Group of the Professional Institute of the Public Service of Canada, seeking special membership in the Royal Institute.

The President will appoint a committee to study the situation of architects in the employ of federal, provincial, and municipal governments and Crown Corporations in Canada in relation to the Provincial Architectural Associations and the Royal Institute, with a view to making specific proposals towards bringing about





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effective official identification with the Associations and the Institute.

*Chief Architect, Public Works:* Appointment of a chief architect for the Department of Public Works is expected to be made in the near future. The RAIC offer to assist in the selection has been accepted. Possibility of extension of this assistance, to apply to the filling of all architect positions in the government service, is to be explored.

*Israel Institute of Technology:* The Canadian Technion Society has proposed that the RAIC provide technical sponsorship of the Israel Institute of Technology. This technical sponsorship, on a non-financial basis, has been requested, so when problems in research, design, or application occur, the Royal Institute may be advised of these problems to ascertain whether their solution has already been found in Canada. This proposal is to be studied by the RAIC Standing Committee on Building Research.

*Thanks to PQAA:* Council extended a vote of thanks to the Province of Quebec Association of Architects for their kindness and co-operation in providing facilities for the meeting.

WITH PRESIDENT JOHN L. DAVIES (F) presiding, 23 members were present at the Montreal meeting. They represented all nine of the Provincial Architectural Associations. Fifteen Councillors, who could not attend, were represented by proxies.

In addition to the President, those attending were: *Peter M. Thornton (F)*, British Columbia; *Howard L. Bouey (F)*, Alberta; *Gordon R. Arnott*, Saskatchewan; *H. H. G. Moody (F)*, *James E. Searle*, Manitoba. Representing Ontario were: *F. Bruce Brown (F)*, *Arthur W. Davison*, *James W. Strutt (F)*, *G. Everett Wilson (F)*; and representing Quebec: *Peter T. M. Barott (F)*, *Randolph C. Betts (F)*, *Richard E. Bolton (F)*, *Peter Dobush (F)*, *Henri Mercier (F)*, *Pierre Morency (F)*, *Francis J. Nobbs (F)*, *Edouard W. Tremblay*, *Gerard Venne (F)*. Representing the Maritimes were: *Neil M. Stewart (F)*, New Brunswick; *C. A. E. Fowler (F)*, *M. H. F. Harrington*, Nova Scotia; *T. A. Lench*, Newfoundland. The RAIC solicitor, *A. L. Fleming, QC*, also was in attendance.

This meeting followed the practice first established in Toronto, in 1961, of holding mid-year RAIC Council meetings between Annual Assemblies.

## PROVINCIAL NEWS

ONTARIO ASSOCIATION of Architects is busy preparing an exhibition to be held next winter at the Toronto Art Gallery. Titled "The Face of Our Town," the exhibition will illustrate past, present, and future architectural development in Ontario.

Three galleries have been reserved for the exhibition, which opens January 12 and runs for a month. In the first

gallery, early Canadian architecture, up to about the turn of the century, will be featured.

Second gallery will be hung with examples of the best in contemporary architectural design, embracing the past 15 years or so. In the third gallery, the School of Architecture, University of Toronto, will show how an area in downtown Toronto can be redeveloped.

Planning of the exhibition has been in the hands of a special art gallery exhibition committee of the OAA, composed of *William A. Strong*, chairman, and *David Horne*, *Jerome Markson*, and *Gerald Davies*. They have been selecting exhibits from among the nearly 400 building projects submitted by OAA members.

To help in assessing these, a screening committee was selected. Its members, who represent both older and younger members of the profession in Ontario, are: *Gordon S. Adamson*, *Anthony Adamson*, *Jerome Markson*, *James Strutt*, *Eberhard Zeidler*, and *Robert Fairfield*. Mr Strong is also chairman of this committee.

### OAA School Brochure

Third edition of "Suggestions for the Layout and Construction of Schools in Ontario" is now available from the OAA's Advisory Committee on School Planning, 50 Park Rd, Toronto. Securing recommendations from technical and educational experts, the Committee also participates directly in experiments.

On the Committee are: *Burwell R. Coon (F)*, Chairman; *W. E. Barnett*, *Allan M. Ingleson*, *B. M. McLean*, Technical Advisor, Ontario Department of Education; *F. J. K. Nicol*, *D. G. W. McRae (F)*, *Harland Steele (F)*, *John N. Shaw*.



Members of the Ontario Association of Architects screening committee meet in OAA headquarters, Toronto, to assess the nearly 400 building projects submitted by Association members for showing at next January's architectural exhibition in the Toronto Art Gallery. L to r: *Gordon S. Adamson*, *William A. Strong*, committee chairman; *Anthony Adamson*. Standing: *Eberhard Zeidler*, *James Strutt*, *Jerome Markson*.



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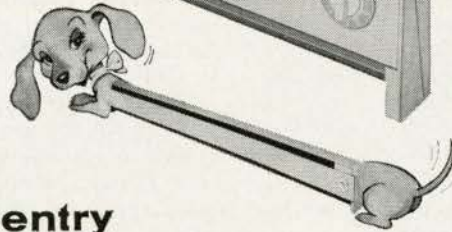


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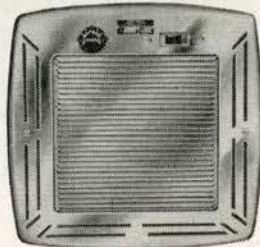
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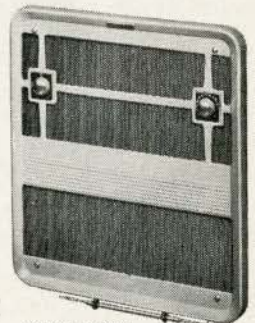


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At AIBC head table, Vancouver: John Lishman, secretary; Frank Russell, chairman; Prof. Henry Elder, director, UBC School of Architecture; Prof. Wolfgang Gerson, UBC School of Architecture

## New Director, UBC School of Architecture

### Vancouver Chapter Welcomes Prof. Henry Elder

OPENING MEETING of the AIBC's Vancouver Chapter recently welcomed Prof. Henry Elder, new director of the UBC School of Architecture.

Over the past several years, the Chapter has invited final year architecture students and senior artcled students to attend this meeting as guests. This provides an opportunity for members of the profession to meet their future assistants, associates, and colleagues.

Introduced by Prof. Wolfgang Gerson, Prof. Elder spoke on the search for a better world for architecture by educator and practitioner. His provocative talk touched off a lengthy and enthusiastic question - and - answer period.

"I shall be provocative," said Prof. Elder, "but with intent to clear the air and point the way to a purpose — to define goals towards which we may travel and create a climate for the expression of the individual philosophy of the artist, the architect, in his journey toward architecture."

Prof. Elder stated that Vancouver disappointed him — "The site is nature at its best, the city man at his worst."

He mentioned lack of indigenous architectural forms, respectful of the nature of British Columbia, and lack of fight for good architecture.

"In fact, never has there been so much building and so little architecture. Never has the public been so ignorant of our purpose or our possible contribution. And the architects pass the blame to society and to education."

"Within this confusion, I feel we have one ray of hope." Prof. Elder paid tribute to his late predecessor, Prof. Fred Lasserre, "who apparently saw much the same picture and had the courage to take the first steps." Prof. Elder said it is his privilege to continue what Lasserre started and reminded his audience of some of Lasserre's aims.

"First, to place architecture in the academic climate of the university, whereas in many parts of the world it is linked with technical or trade schools.

"Second, Lasserre's program called for a total of six years — three in the field of science and the humanities, three in intensive professional training. This at a time when other schools are clamoring for increases in training. Thus training is placed in the univer-

sity context, and the university accepts architecture as a university subject."

The sort of knowledge in which the university is interested is not the "how" of architecture, but the "why," commented Prof. Elder. This inevitably changes the pattern of education. It accepts the first step as "understanding" instead of "doing." "Without such understanding, we have only building not architecture."

"Since understanding is not exclusively the province of the architect," stated Prof. Elder, "the university is also obliged to make other students aware of architecture and its meaning."

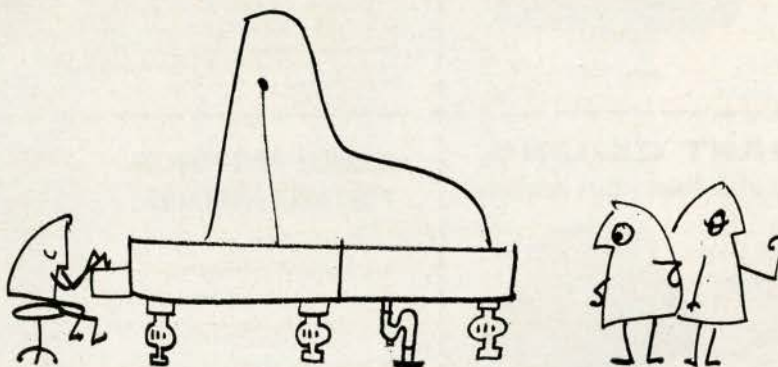
Prof. Elder stressed that we are long overdue a change from the lingering Beaux Arts and the more recent influence of Bauhaus. He underlined the great need for scholars of architecture and asked: "If a new architecture is being born, it must have a home. Why not Vancouver?"

### CMHC Grant

Planning Institute of British Columbia has received a \$3,200 grant from CMHC to assist in the compilation and publication of a subdivision casebook. Study will be directed by Vancouver planner, Mary Rawson.

### Robert & Howard Bouey

Robert and Howard Bouey have opened practice under this name at 212 Windsor Building, Edmonton. Mr Howard Bouey (F) was formerly associated with the firm of McKernan & Bouey.



\$62

"..... AND THAT IS OUR EXPERT ON HANDELS WATER MUSIC....."





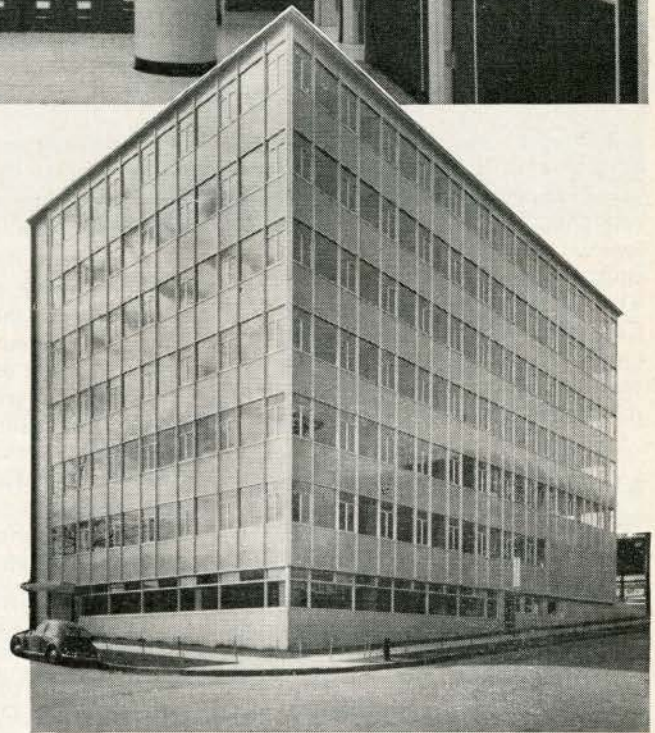
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## Journal Legal Advisor

The many friends of Mr *Walter S. Johnson*, QC, of Montreal, will be pleased to learn that McGill University has conferred upon him the degree of Doctor of Civil Law, *honoris causa*. Mr Johnson, prior to his retirement, was for many years solicitor to the Province of Quebec Association of Architects. He took a special interest in the law respecting architectural practice and building construction and at one time wrote a regular column in the *Canadian Builder* on the subject. He recently consented to act as advisor to the *Journal* on our own legal column, which is being edited by Mr *Norman J. P. Melnick* of Toronto.

## F. L. Wright Exhibit

Arrangements have been made by the School of Architecture, University of Toronto, to have the only Canadian showing of the exhibition of original drawings by the late Frank Lloyd Wright. The exhibition, which will be on view at the School from 20th of December to 15th of January, records 70 years of the ideas and achievements of FLW as shown in his own drawings.

## Prediction: "Architractors" To Be the Rule

Here are some pertinent and telling quotes from a recent discussion on urban planning and architecture, with reference to sociological and psychological effects on urban life of the future. (Discussion was sponsored by The French Exhibition Agency, The Consul of France, Seattle, and Sait Gobain Glass Co.) Warnett Kennedy, executive director, AIBC, was among the speakers.

*Traffic*: "Here is the problem: traffic is not just a vague statistical flow. It is made up of innumerable purposeful journeys from the doors of one kind of building to the doors of other kinds of buildings. Hitherto, we have not tried to chart these activities with accuracy, but, eventually, computers will do it for us. We shall then discover it is buildings that generate traffic, and each building generates a predictable maximum of traffic. For example, the traffic factors of homes will differ calculably from those of schools, offices, shopping centres, or theatres.

"In the city of the future, the sum total of the traffic factors of all buildings will be the 'saturation' point of the city in respect to traffic. We architects will be expected to design and group our buildings accordingly — not just for aesthetic reasons. (Incidentally, all fast long-distance traffic will bypass these environmental built-up areas.)

## REGISTRATIONS

Ontario Association of Architects  
21 September 1962

- Endel Arro, B.Arch., 23 Lascelles Blvd, Toronto.  
Douglas A. Craig, D.A. (Dundee), ARIBA, 12 Wilberton Rd, Toronto.  
John F. Flanders, Dipl. Arch., ARIBA, 132 McLeod St, Ottawa.  
Akos Frick, B.Arch., 1720 Paris St, Sudbury.  
James N. Gavin, Dipl. Arch., ARIBA, 30 Driveway, Ottawa.  
Nobuo Kubota, B.Arch., 310 Kennedy Ave, Toronto.  
Mrs Gail E. Lamb, B.Arch., 526 Waterloo St, London.  
Mrs Natalie Liacas, B.Arch., 166 Balliol St, Toronto.  
Jean F. Morin, ADBA, 0119 Clement St, LaSalle, Que.  
P. G. Nash, ARIBA, 913 Crawford Place, Ft William.  
James J. Nowiski, B.Arch., 574 Millwood Rd, Toronto.  
David Oberman, B.Arch., 5065 Western Ave, Montreal.  
Hugh M. Samuel, B.Arch., 150 Stewart Blvd, Brockville.  
S. A. Stefaniszyn, B.Arch., 1302 Henry Farm Drive, Ottawa.  
Jean J. Thibodeau, B.A., B.Sc., B.Arch., 1100 Chemin Marlboro, Ville Mt-Royal, Que.

For the first time we shall be able to build human aesthetic environment, which is adapted to automobiles—truly the regional city of the future."

*Planners, Architects, Engineers*: "The planning profession is really in its infancy — the experts of today are like the old-time doctors or 'bleeders.' Now we need delicate brain surgeons. I predict that within 20 years the professions of planning, architecture, and engineering, practised together, will be the rule rather than the exception. Also, that new groupings called 'architractors' will be offering whole 'packaged' communities on a lease-back basis to brainwashed legislatures."

*Future of Cities*: "Very rarely has a first-rate mind invented a Utopia.

"The secret of prophecy is to predict doom. Every Old Testament prophet knew that one.

"The Utopian City of *Le Corbusier* was a city of towers, rising from a sea of greenery. The dream city of *Frank Lloyd Wright* was known as Broadacre City (every man to his own acre).

"I have not yet drawn up my personal Utopia city, but it might perhaps meet the specification laid down in the year 1500 BC by the architect *Sansovina*. He said, 'A city should be for the safety and convenience of its citizens and the surprise and delight of strangers.'"



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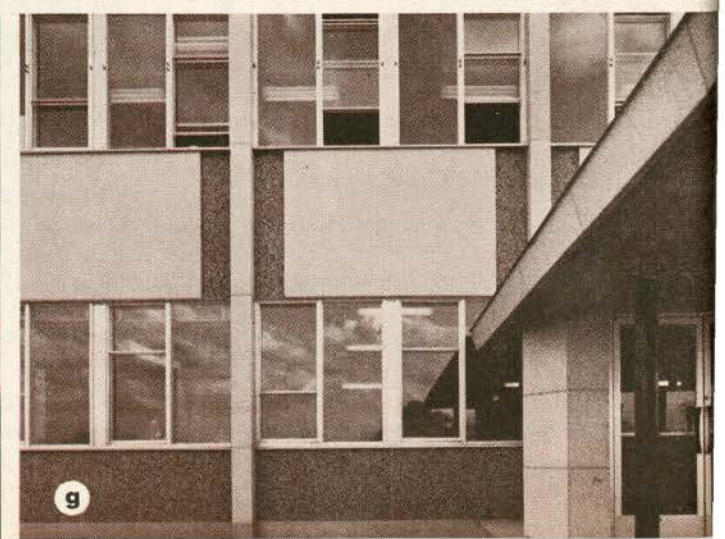
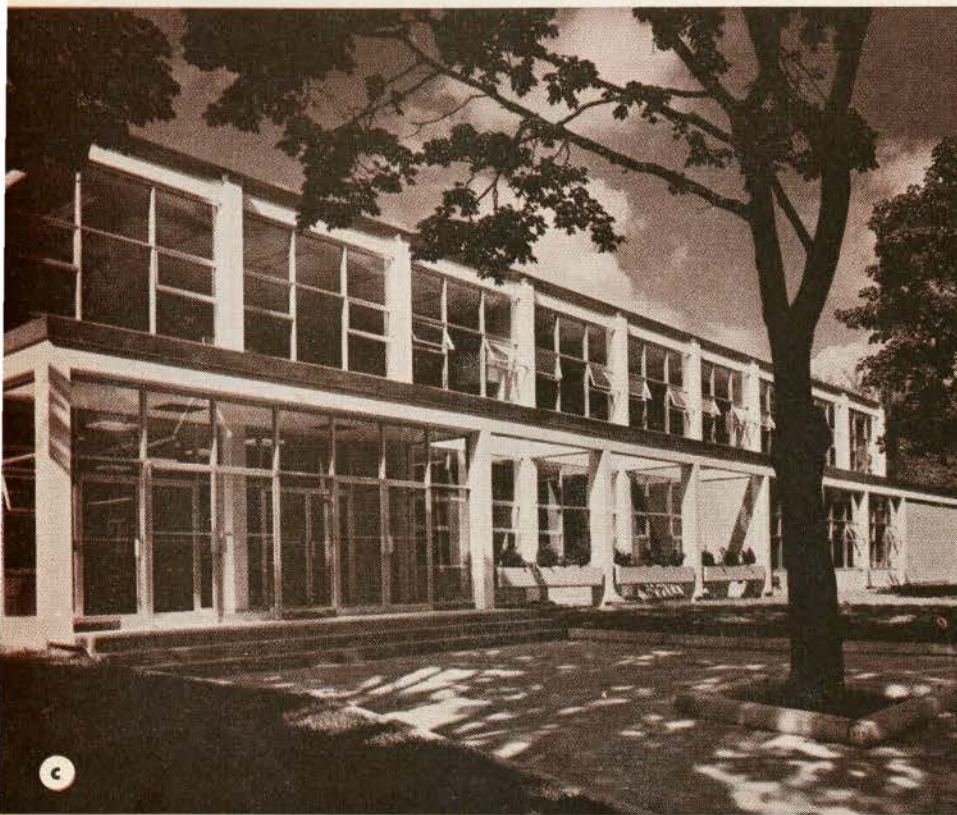
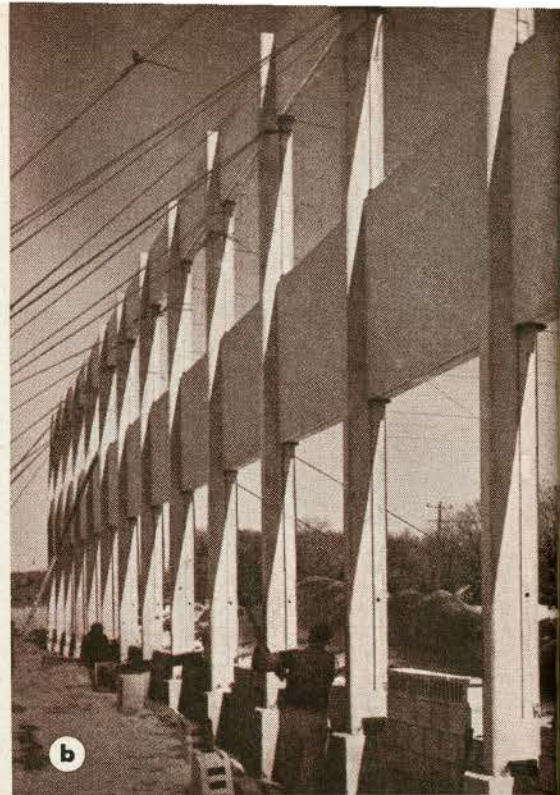
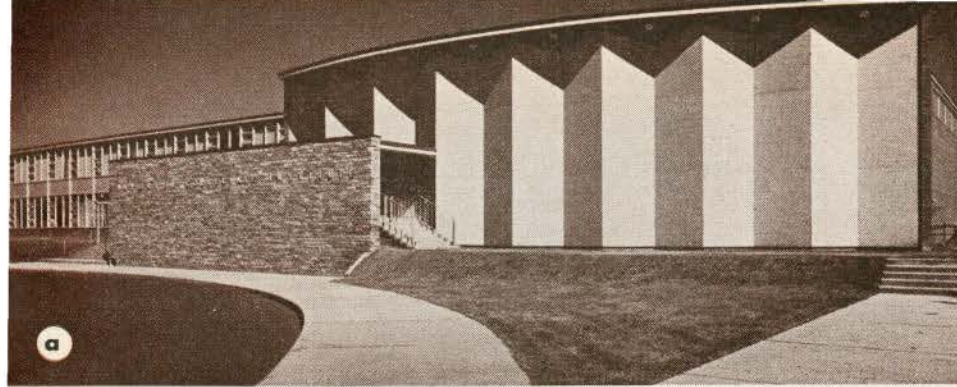
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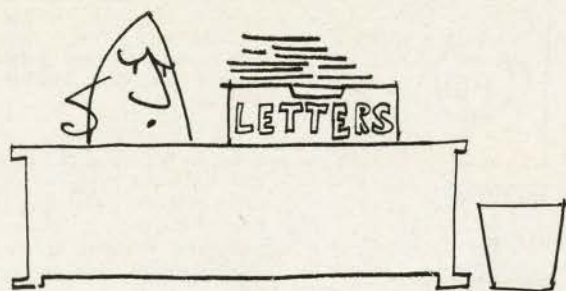
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## Homes for the Aged

Editor, RAIC Journal:

I was interested to see that your August issue dealt primarily with homes for the aged, for I have just completed research into the subject of homes and housing for old people.

I find both the comment and the buildings illustrated rather misleading. For example, no difference in type was noted between the Oshawa and Toronto homes featured, although these are two distinctly different buildings, both in purpose and name. The latter is a charitable institution, built and managed by the Salvation Army, caring for well, able-bodied old persons only, accommodating them in single rooms. (The photograph of "a room" illustrated for this building shows a three-bed infirmary, thus is quite misleading.)

The Oshawa home, on the other hand, was built by the city under the Homes for the Aged Act, and thus cares for three different types of old people: under normal care, bed care, and special care — the accommodation being of a variety of rooms, single rooms however in the minority. One of the main criticisms of this building, given to me during a visit last year, was that the number of rooms for men and women were more or less equal, while the true picture reveals a two-to-one dominance of women over men wishing accommodation.

The policy, which can be attributed to the Homes for the Aged Branch of the Public Welfare Department together with Homes for the Aged Act, has been challenged and criticised and not without reason.

For instance, it is difficult to see how Mr Ralston can urge in his comment, and I quote, "The closer a Home for the Aged can approach an everyday family house the better," when four-bed rooms are thought of as economical by the Department, and the old person's belongings are stored in a locker, way down the corridor.

Again, "the three\* types of care under the same roof" has long been a bone of contention with the Department, a policy that is no longer carried out in Europe, where the different kinds of person and care demand separate accommodation. Metropolitan Toronto, however, has accepted these differences and houses bed care in homes in the Metropolitan area, special care in Newmarket, while the normal care person is encouraged to live a normal life independently in apartments or boarding homes.

It is hoped that in the future the Homes for the Aged Act will be revised together with the outdated policies of that Branch of the Public Welfare Department, especially with regard to the siting of homes and the old persons accommodated. Perhaps then, the old person will no longer live far from the family and friends, because 225, to quote Mr Ralston, happens to be an economical figure in the running of an old age home. This of course is more of a social problem than one of planning, but it is also part of architecture, for the architect should be concerned with people (even old people) and with the environment he creates for them.

D. Warrilow, Toronto

\* Actually four types, the fourth person in need of care being a retarded person of any age.

### CORRECTION

The Journal regrets the error in the article on "Parks and Recreation" by Mr Macklin Hancock in the September issue, in which Stanley Park Restaurant was attributed to Thompson, Berwick and Pratt. The restaurant was designed by Underwood, McKinley and Cameron, who have been architects for the Vancouver Board of Parks and Recreation since the war and, as such, have been responsible for all parks and recreation projects, including some 38 buildings of every variety — from zoo structures to administration buildings.

## Look what's happened to the little red schoolhouse!

The extensive influence of precast concrete is illustrated in these seven school buildings built in the last four years. Foremost school architects claim current designs are primarily in precast concrete and its versatility will be further exploited as experience grows. Chief advantages they list are design flexibility, durability, fast erection, minimum maintenance and competitive cost, particularly on schools over \$500,000, where fire marshal requirements increase.

- a. *Mo-Sai Wall Panels and Precast Frame* — Addn. W. A. Porter Memorial Collegiate, Scarborough — Architects: Coleman & Rankin — Engineers: C. D. Carruthers & Wallace
- b. *Precast Frame and Mo-Sai Beam Panels* — Wm. G. Miller Public School — Architect: Peter Dickin-son Assoc. — Engineers: M. S. Yolles & Assoc.
- c. *Precast Structural Frame* — Pauline Ave. Public School, Toronto — Architects: Craig, Madill, Abram & Ingleson — Engineers: M. S. Yolles & Assoc.
- d. *Precast Frame, Floor and Roof* (®Stresscore) — Waterloo Arts Bldg. — Architects & Engineers: Shore & Moffatt and Partners
- e. *Precast Frame and Mo-Sai Beam Panels* — Parkside High School, Dundas — Architects: Kyles & Kyles
- f. *Precast Structural Frame* — Wil- lowdale Junior High School — Architects: Page & Steele — En- gineers: M. S. Yolles & Assoc.
- g. *Mo-Sai Wall Panels and Column Covers* — Woodroffe High School, Ottawa — Architects: Hazelgrove, Lithwick, Lambert & Sim — En- gineers: J. Klassen & Associates Ltd.

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## COMING EVENTS

### Lumbermen's Seminars

Currently, the Canadian Lumbermen's Association is sponsoring fourteen seminars between Winnipeg and Halifax to provide up-to-date information on lumber and wood products.

Seminars are aimed at architects, specification writers, engineers, purchasing agents, design technicians, building inspectors — and others whose work requires this knowledge.

Seminar speakers are selected to talk on behalf of the industry, not their own firms or products. Technical discussions deal with specifying by species, grade, and use; lumber, plywood and hardwood flooring grades; wood windows, doors, and millwork. . . .

Two French-speaking seminars will be held in Quebec during December: Dec. 4, Quebec City, Laval University; Dec. 6, Montreal, Institute of Applied Arts.

Other dates and places: Jan. 18, Ottawa, Forest Products Laboratory; March 19, Halifax, NS Technical College; March 22, Fredericton, UNB Forestry Faculty; April 17, Three Rivers, Hotel Saint-Maurice; April 19, Arvida, Saguenay Inn; April 23, Kingston, Muttart Bldrs Supply.

May 28 there will be a seminar in London, Ont., at the Western Fair Grounds, and on May 30, in Niagara Falls, at Fonthill Lumber Ltd. (The one English-speaking seminar in the Province of Quebec will be held June 14 at Montreal's Institute of Applied Arts.)

### Reynolds Award

Nominations may now be made for the 1963 *R. S. Reynolds Memorial Award* of \$25,000, given annually by the Reynolds Metal Company for the creation of a significant work of architecture in which aluminum has been an important contributing factor. Nomination forms, which must be submitted by March 12, 1963, and other information may be obtained by writing the R. S. Reynolds Memorial Award, The American Institute of Architects, 1735 New York Avenue, N.W., Washington 6, D.C. (The competition has been approved by the RAIC.)

### Architectural Drawings

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.



Cuisine Console stainless steel sink featuring an attached thin-line light above the sink working area. **Elkay Manufacturing Company, 2700 South 17th Avenue, Broadview, Ill.**

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An architectural glass which incorporates a new concept to soak up sound, cut down heat transmission and glare from the sun's rays. **Amerada Glass Corporation, 3301 South Prairie Avenue, Chicago 16, Ill.**

The Imperial single contact locker specially designed for schools. **Jackson Metal Industries, Frid Street, Hamilton, Ontario.**

Peacock range of upholstery weight vinyl fabrics. **Fabrikoid Division, Canadian Industries Limited, 207 New Toronto Street, New Toronto, Ontario.**

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Model TC Thrush Circulator for heating and cooling systems, water distillers, panel and high resistance heating systems. **H. A. Thrush & Co., Peru, Indiana.**

Stainless Steel multiple bubbler wall drinking fountain. **Haws Drinking Faucet Co., 4th & Page Streets, Berkley 10, California.**

A new style basket rack. **Lyon Metal Products Inc., 50 Plant Avenue, Aurora, Ill.**

A power service pedestal to meet the requirements of most utilities for underground distribution. **CLM Industries, McGraw-Edison (Canada) Ltd., 3595 St. Clair Avenue East, Scarborough, Ontario.**

Emcor II Modular Enclosure System for housing electronic, electro-mechanical, instrumentation and automation control equipment. **Ingersoll Products, Division of Borg-Warner Corp. 1000 West 120th Street, Chicago 43, Ill.**

The Pioneer Fireproof Door Company announces the availability of the first rated soundproof louvre door. For descriptive literature of the complete Soundproof door and frame line, write to **Pioneer Fireproof Door Company, division of Pioneer Industries, Inc., Carlstadt, New Jersey.**

A heavy duty line voltage thermostat to accurately control electric radiant ceiling cable, baseboard and ceiling panel installations is now available from the General Electric Company. For information write the **Electric Comfort Heating Section, General Electric Company, Appliance Park, Louisville, Ky.**

Electriduct, a nearly flat rubber-encased cord to furnish electric power to any place in the room without hampering traffic or cleaning. A six-page brochure, ED-62, may be obtained by writing **Electriduct Division, IDEAS, Inc., 214 Ivinson Avenue, Laramie, Wyoming.**

The "All-New" Saturn garbage disposer, made by **In-Sink-Erator Manufacturing Company, Racine, Wisconsin.**

Automatic Reseating #171 Temperature and Pressure Thrush Relief Valve providing accurate and safe temperature and pressure protection for direct fired hot water storage heaters and storage tanks. From **H. A. Thrush & Company, Peru, Indiana.**

A six page illustrated folder containing eleven colour chips matched to solitone panels, plus five gold fleck patterns. **Barclay Manufacturing Company, Dept. BA62-112, Barclay Building, New York 51, New York.**

26 page manual featuring the steps to follow in developing and assembling the Emcor Modular Enclosure System. **Ingersoll Products, Division of Borg-Warner Corp., 1000 West 120th Street, Chicago 43, Ill.**

A folder featuring six different types and accessories for "RAWLBOLT" heavy duty expansion shields. Copies are available from **Rawplug Products (Canada) Limited, 7320 Upper Lachine Road, Montreal 28, Quebec.**

For product designers, engineers, and specifiers concerned with materials selection is "Fiberglas Reinforced Plastics," a 24-page manual published by **Fiberglas Canada Limited.**

New brochure, No. 38, is available from **McKee Door of Canada Limited.** The Powermaster Operators are all gearhead type with worm and gear running in oil in drip-proof housing.

**CSA Standard A100-1962, Asphalt Floor Tile, \$1,** supersedes the first edition published in 1949. Purpose of this edition is to specify minimum quality requirements and standard sizes for the benefit of both consumer and producer.

Full engineering and other technical data on Roofmate FR, plus photographic installation instructions, is available in pamphlet form from the Plastic Sales Division, **Dow Chemical of Canada Ltd., Sarnia.**





## DEHYDRATING AN AEROQUAY!

The entire Malton Aeroquay is under-drained  
with light, modern NO-CO-RODE

Thousands of feet of NO-CO-RODE perforated pipe, with solid NO-CO-RODE collector runs, well specified and installed, ensure complete drainage for the Aeroquay of Toronto's International Airport. The long, lightweight lengths of pitch fibre pipe have two rows of  $\frac{1}{2}$ " holes on 4" centres, 120° apart to provide uniform seepage. This pipe will not corrode or disintegrate, nor crack with soil settlement.

Specify NO-CO-RODE pipe. It's light to handle, easy and fast to install. Uses simple fittings and cross joints for smooth, constant drainage. The architect: John B. Parkin Associates, the General Contractor: the Foundation Company of Canada Limited. *NO-CO-RODE is an all-Canadian product.* Write for full information to DOMTAR Construction Materials Ltd., 1 Place Ville Marie, Montreal 2, Que.

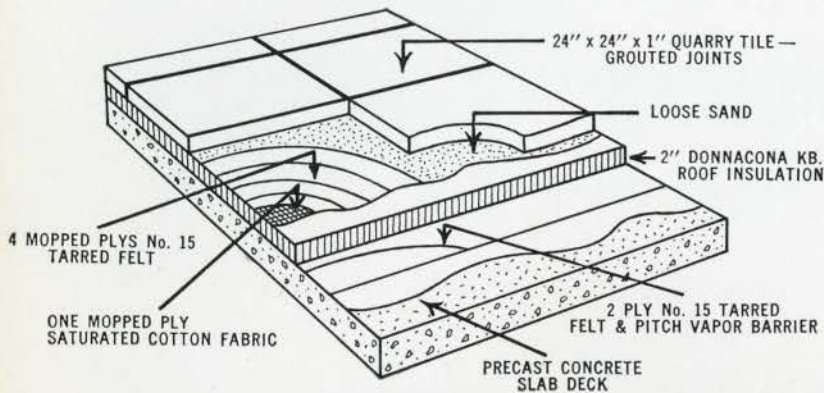
**DOMTAR** Construction Materials Ltd.

SAINT JOHN, N.B. • MONTREAL • TORONTO • WINNIPEG • SASKATOON • EDMONTON • CALGARY • VANCOUVER



# A COMPLETE TECHNICAL ROOFING SERVICE!

HERE ARE 3 EXCEPTIONAL EXAMPLES OF  
SPECIAL BUILT-UP ROOFING APPLICATIONS.  
BY DOMTAR CONSTRUCTION MATERIALS LTD.



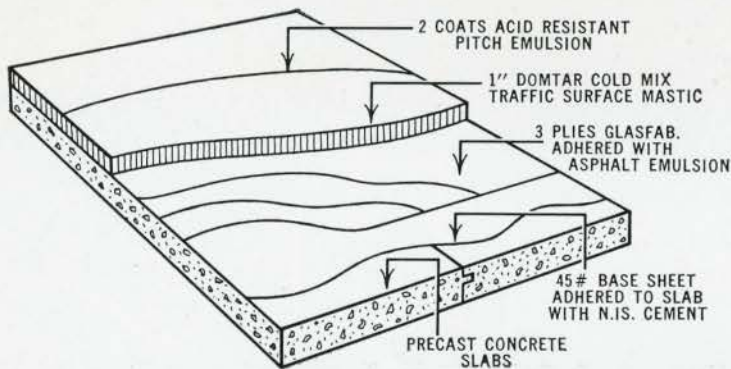
## TO BUILD A ROOF STRONG ENOUGH TO LAND AND HOLD A HELICOPTER...

Sectioned diagram shows special treatment for a helicopter landing area using Murray-Brantford Built-up Roofing materials, on the roof of St. Justines Hospital, Montreal.

ROOFER: Philibert Bedard Ltd.

GENERAL CONTRACTOR: Damien Boileau Ltd.

ARCHITECT: Henri S. Labelle.



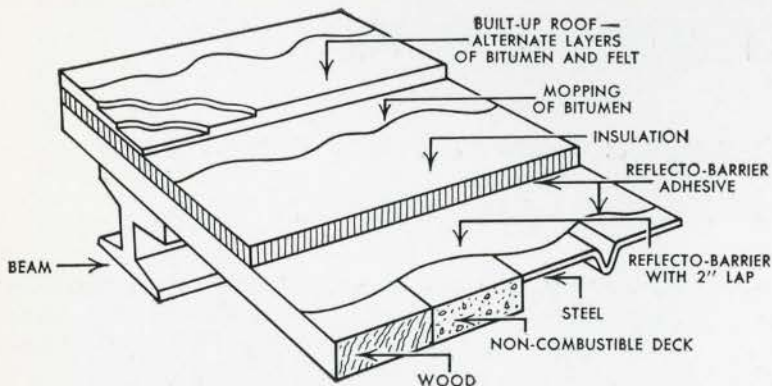
## TO ROOF A POWER STATION...

Here's a section of the special traffic surface roof, also employing Murray-Brantford Built-up Roofing materials, for the hydro-Quebec Power Station, Carillon, Que.

ROOFER: Simard et Freres, Engr.

GENERAL CONTRACTOR: Hydro-Quebec.

DESIGNER: Shawinigan Engineering Co. Ltd.



## TO REDUCE FIRE HAZARDS...

Adhesive and vinyl film vapour barrier with other non-combustible and non-toxic laminations offer a variety of built-up roofing treatments, using Murray-Brantford Reflecto Barrier Fire Retardant Vapour Barrier System in conjunction with various B.U.R. Membrane Systems.

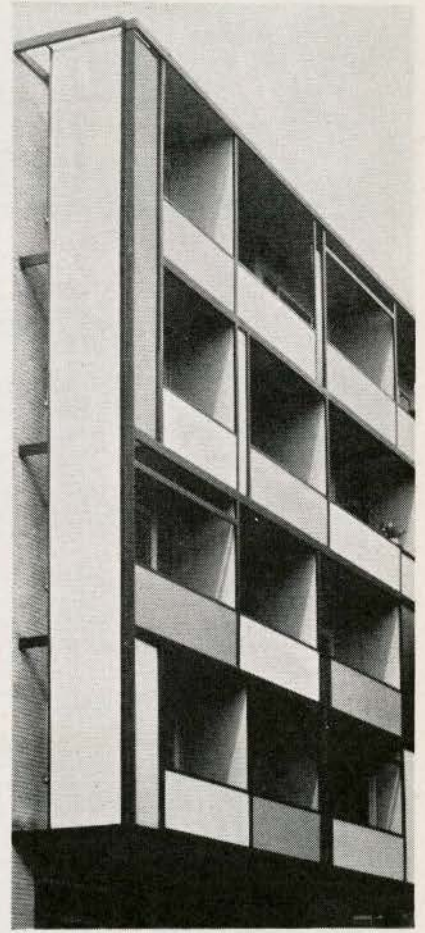
LOOK FOR THESE AND MANY OTHER ROOFING SPECIFICATIONS WHICH ARE DETAILED IN THE MURRAY-BRANTFORD B.U.R. SPECIFICATIONS HANDBOOK.

For further information write to: 1 Place Ville Marie, Montreal 2, Que.

**DOMTAR** Construction Materials Ltd.

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## Weldwood-Westply Paneling Assures Functional Beauty Indoors and Out

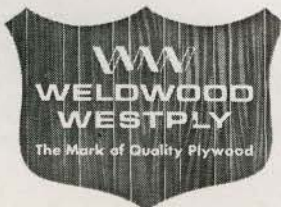
The beauty of Weldwood-Westply architectural paneling, such as the blueprint matched sliced teak paneling shown here, is achieved by cutting, matching and registering the veneers in sequence.

There is virtually no limit to the variety of beautiful wood-paneled interiors you may achieve through Weldwood-Westply's skill. You have the choice of a wide range of ready-made sequence-matched architectural panels or they can be made to your specifications in any exotic wood.

For help from a Weldwood-Westply representative in planning your next paneling interior, contact the nearest Weldwood-Westply branch.

### WELDWOOD GLASWELD

An exterior-grade asbestos reinforced panel with a permanent all-mineral enamel surface. It is one of the most versatile of all building materials. Its colours are permanent. It appears optically flat, is fully weatherproof – unaffected by moisture, 100% incombustible, dimensionally stable, and comes in a wide range of colours. Several different colours of Weldwood Glasweld were used on the exterior of the attractive new Montreal apartment building shown on the right. For full information on Glasweld, contact Roland Desrochers, Weldwood Allied Products Limited, Montreal or one of the Weldwood-Westply branches listed below.



### WELLDWOOD-WESTPLY LIMITED

principal offices and showrooms: VANCOUVER • MONTREAL  
 branches: CALGARY • EDMONTON • REGINA • SASKATOON • WINNIPEG  
 LAKEHEAD • SUDBURY • WINDSOR • LONDON • HAMILTON  
 TORONTO • ORILLIA • PETERBOROUGH • KINGSTON • OTTAWA  
 SHERBROOKE • TROIS RIVIERES • QUEBEC • CHICOUTIMI • HALIFAX



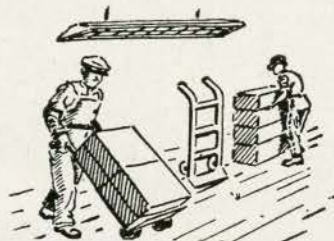
# ElectroMaid

Trade Mark Reg'd.

## HEATERS, FANS REFRIGERATORS

### RADIANT SPOT HEATING FOR INDOORS & OUTDOORS

The directed rays from a Spot Heater heat persons and objects, and not vast wall surfaces and large quantities of room air. For this reason, heating with Spot Heaters is very economical, and since the heat is instant its use is recommended for rooms infrequently occupied. Spot heating is healthy and natural, heats like the sun or like fire in a fireplace.



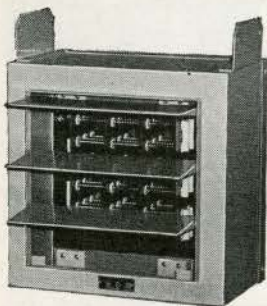
- Radiant
- Corrosion Resistant
- Modern Appearance
- Fully protected
- Easily installed
- Safety wired
- Low cost
- Sun's wonder rays



No. 1614AT

**Thin Line** BASEBOARD  
CONVECTORS

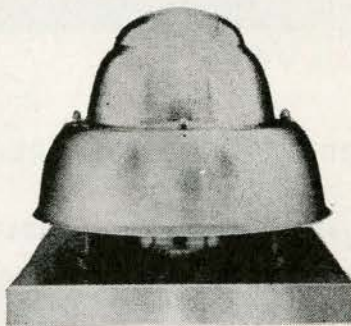
Available in sizes from 30" up to 108" long. Capacity of: 500W, up to 3,000W. Voltage both 120 volts and 240 volts. It is absolutely fire-proof, absolutely quiet. The heating elements are guaranteed by a 5-year protection plan. Supplied with or without thermostat. Full details in general catalogue.



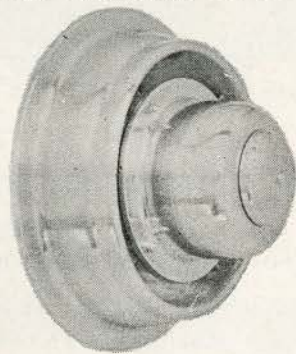
### UNIT HEATERS

Propeller type shown  
Capacities from 1500W up to 60000W. Any voltage up to 575 Volts, as specified. Propeller and Blower type Unit Heaters for various industrial applications.

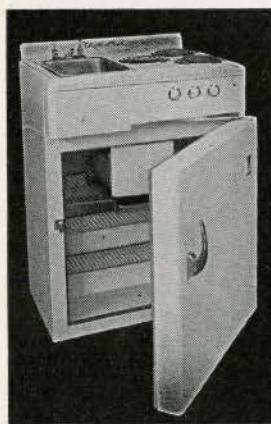
### SPUN LINE VENTILATORS



Centrifugal Roof Ventilator  
MODEL C



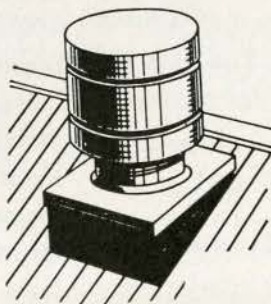
Centrifugal Sidewall Fan  
MODEL S



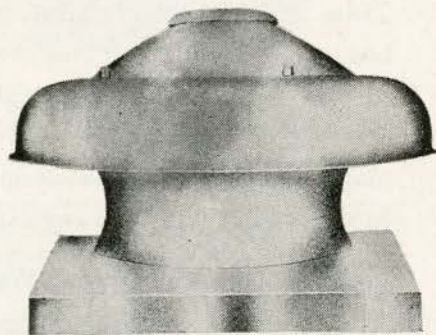
### ELECTROMAID

**COMBINATION 3 IN 1 UNIT**  
Refrigerator — 5 cubic feet  
Stove — 3 Burner  
Sink — Stainless Steel

A real space saver, this is a complete kitchen unit, ideal for apartments and motels. It won a National Design Award in 1955. This is part of a line manufactured by us in Canada, one of the most versatile in the country.



Industrial Roof Ventilator  
MODEL UNC



Axial Roof Ventilator  
MODEL A

Our line of ventilators, illustrated in part at right, is nationally known and distributed from coast to coast. This company, Canadian Armature Works Inc. has served Canada for over 25 years.

Cooperation on projects with architects and their consultants is our specialty.



Ask for Bulletin 113 FG for performance data and complete model information.

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

Write for our catalogue describing our complete line of products.



# Wisper

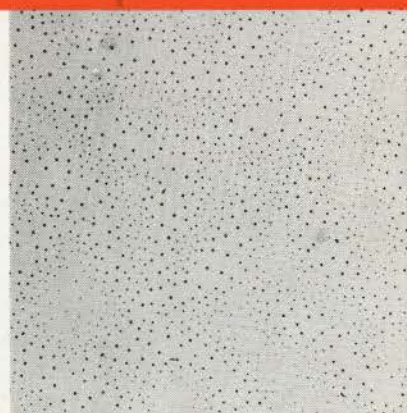
# Tone\*

U/L Fire-rated mineral acoustical ceiling tile & ceiling board

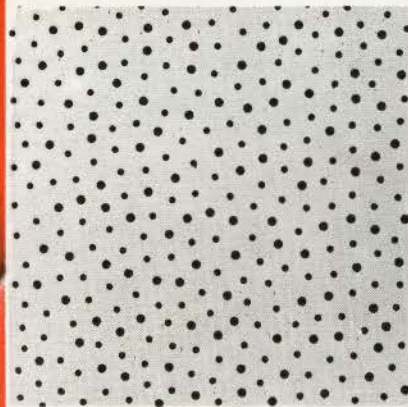
Your IP. technical representative will be pleased to supply complete information on our wide range of mineral products.



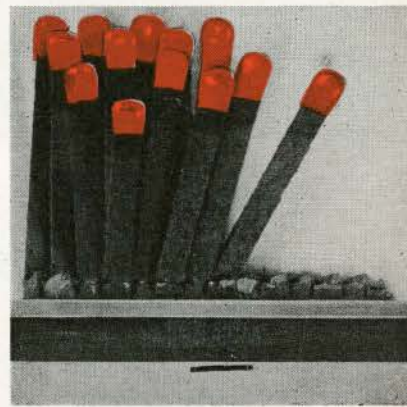
fissured



micro\*



random



fire-rated



INTERNATIONAL PANEL BOARDS LIMITED

SUN LIFE BUILDING, MONTREAL

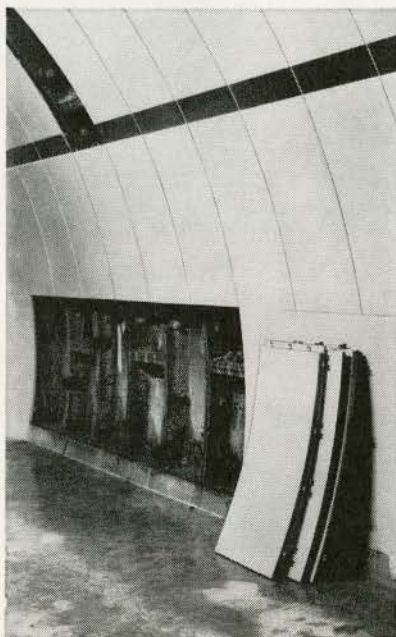
A SUBSIDIARY OF CANADIAN INTERNATIONAL PAPER COMPANY

\*TRADE MARK

AIA-RAIC FILE NO. 39-B ACOUSTICAL PRODUCTS



*Beauty  
Fused  
to Strength.*



IN NEW EAST-WEST TORONTO SUBWAY, Porcelain Enamelled Steel was selected by the Toronto Transit Commission for panelling in tunnelled stations. CURVED PANELS were essential to station design. The requirements of strength, shape, durability and attractive finish—all within strict limitations of space—were met by porcelain enamelled steel.

**TUNNELLED STATIONS OWNER:**

Toronto Transit Commission

**ARCHITECTURAL DESIGNERS &**

**CONSULTING ENGINEERS:**

W. S. Atkins & Associates

**CONSULTING ARCHITECTS:**

John B. Parkin Associates

Margison & Keith Engineers &

Architect

**GENERAL CONTRACTORS:**

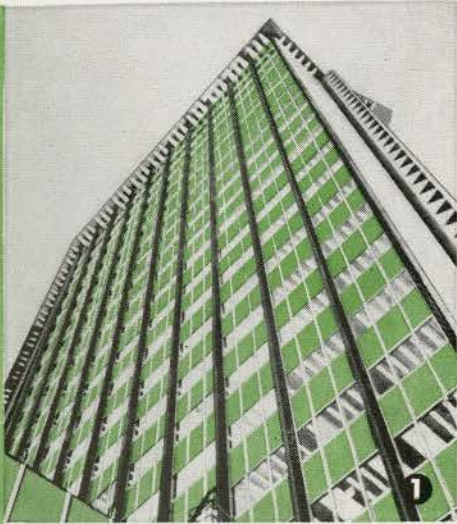
Anglin-Norcross Ontario, Limited

**ARCHITECTURAL PORCELAIN**

**PANELS** by Moffat's Limited



# PORCELAIN ENAMEL *on a top quality Canadian steel!*



The strength of steel sheet . . . the lifetime beauty of colour . . . are combined in Porcelain Enamelled Steel.

This modern material was chosen for the Toronto Transit Commission's new Bloor-Danforth-University subway. It has a durable, scratch proof finish requiring minimum maintenance. It is used here to follow both curved and "mirror flat" lines, within strict limits of space. It is easily moved or removed if necessary.

Porcelain Enamelled Steel offers permanent colours ranging between full gloss and a variety of matt, matching and simulated finishes. It gives the designer exceptional freedom at costs competitive with other quality materials.

For further information contact any Stelco Sales Office. A copy of the brochure "Accent on Colour" is available upon request.



①

**OWNER:**  
British Columbia Hydro & Power Authority, Vancouver, B.C.

**ARCHITECTS:**  
Thompson, Berwick & Pratt, Vancouver, B.C.

**GENERAL CONTRACTORS:**  
John Laing & Son (Canada) Limited

**ARCHITECTURAL PORCELAIN PANELS** by Cerametal Industries Limited

②

**OWNER:**  
La Compagnie d'Assurance, Canadienne Mercantile, St-Hyacinthe, Quebec

**ARCHITECTS:**  
David & David, Architects, Montreal

**STRUCTURAL ENGINEERS:**  
Lalonde & Valois, Montreal

**MECHANICAL ENGINEERS:**  
Huza & Thibault, Montreal

**GENERAL CONTRACTOR:**  
Charles Gilbert Limitée, St-Hyacinthe

**ARCHITECTURAL PORCELAIN PANELS** by General Steelwares Limited

③

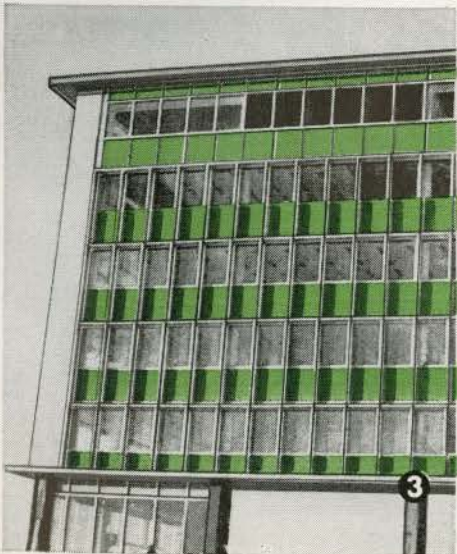
**OWNER:**  
Ford Motor Company of Canada, Limited

**ARCHITECTS:**  
Allward & Gouinlock

**CONSULTING ENGINEERS:**  
Griffels & Vallet Limited

**GENERAL CONTRACTORS:**  
Taylor Woodrow (Canada) Limited

**ARCHITECTURAL PORCELAIN PANELS** by P. Graham Bell Associates Limited



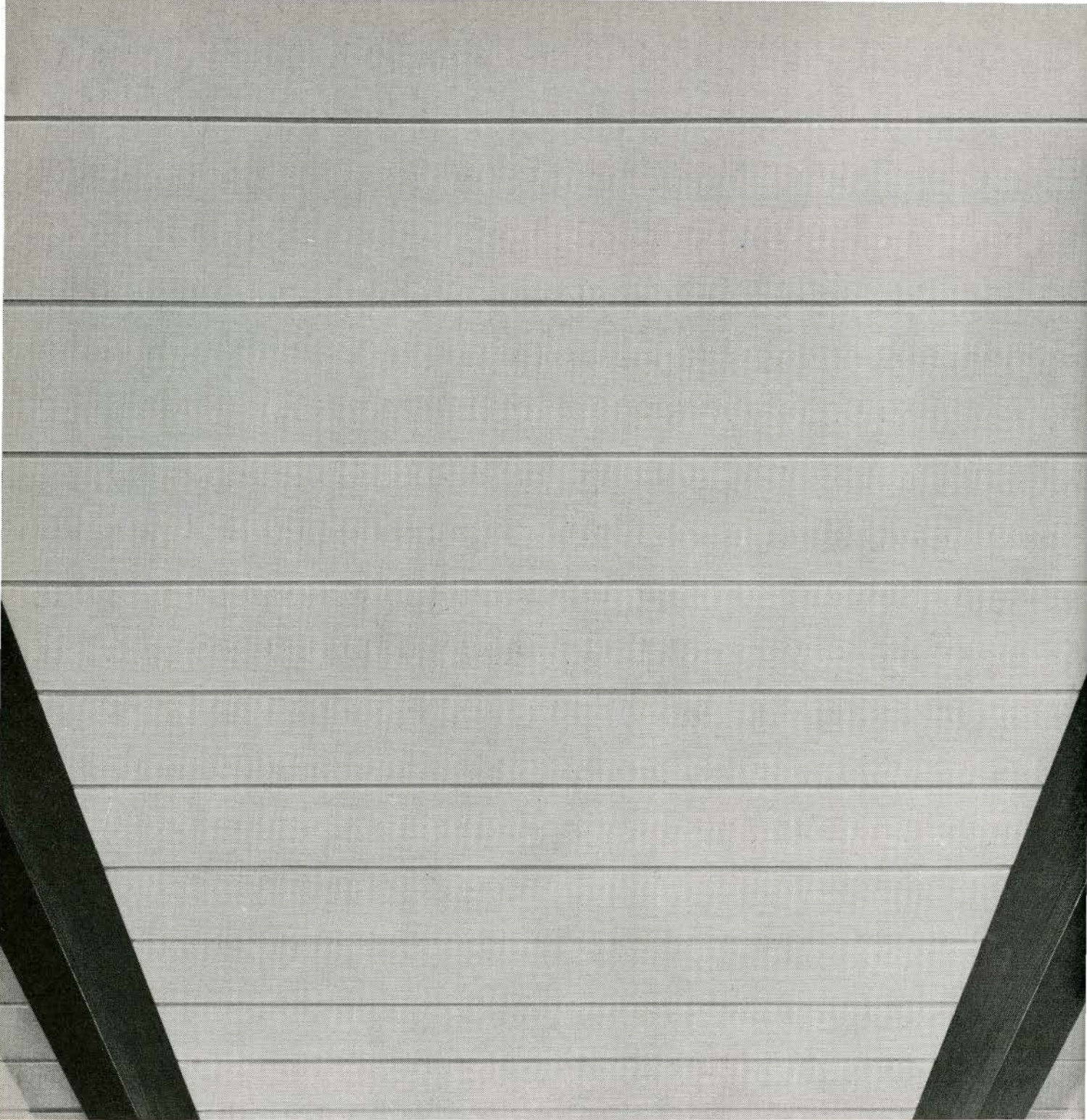
**THE STEEL COMPANY OF CANADA, LIMITED**

Hamilton • Montreal

Sales Offices across Canada, and Representatives in principal overseas markets







## No other roof deck looks and performs like Siporex

Siporex is unique. It is the *only* roof decking material that can give you clean, dramatic lines with all these other advantages:

Light in weight, a Siporex precast, cellular concrete roof deck erects quickly and economically. It is completely self-insulating.

This unusual roof decking also has the superior fire rating you might normally expect in a concrete product, and it adapts easily to different shapes...unique designs.

The roof deck you create with Siporex is clean. Neat.

You can almost feel the extra breathing space as broad, off-white spans make a room seem larger, airier, brighter. Ceilings are wide and open, uncluttered by numerous joists. And the beams you do require stand out in vivid contrast to accent the light, warm texture of these wire-cut slabs.

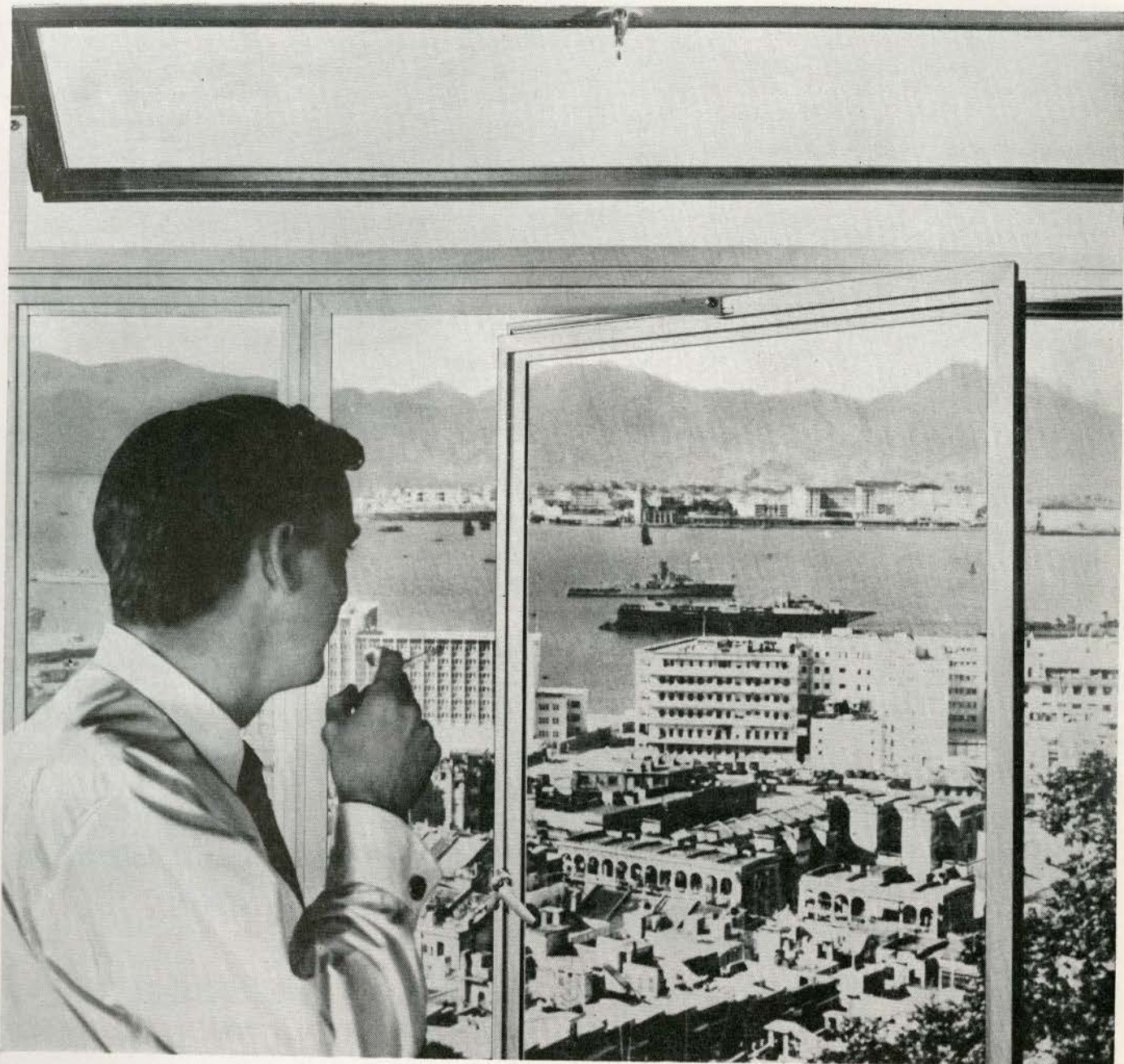
High fire rating, light weight, insulation; adaptability and attractive appearance—all in a single product. Get full information by writing Siporex Limited, 3285 Cavendish Boulevard, Montreal, Quebec.

**SIPOREX<sup>®</sup>**  
**LIMITED**

MONTREAL • TORONTO • OTTAWA • QUEBEC

Division of Dominion Tar & Chemical Company Limited





People  
all over  
the world  
look  
through

## ALUMINUM AND STEEL WINDOWS

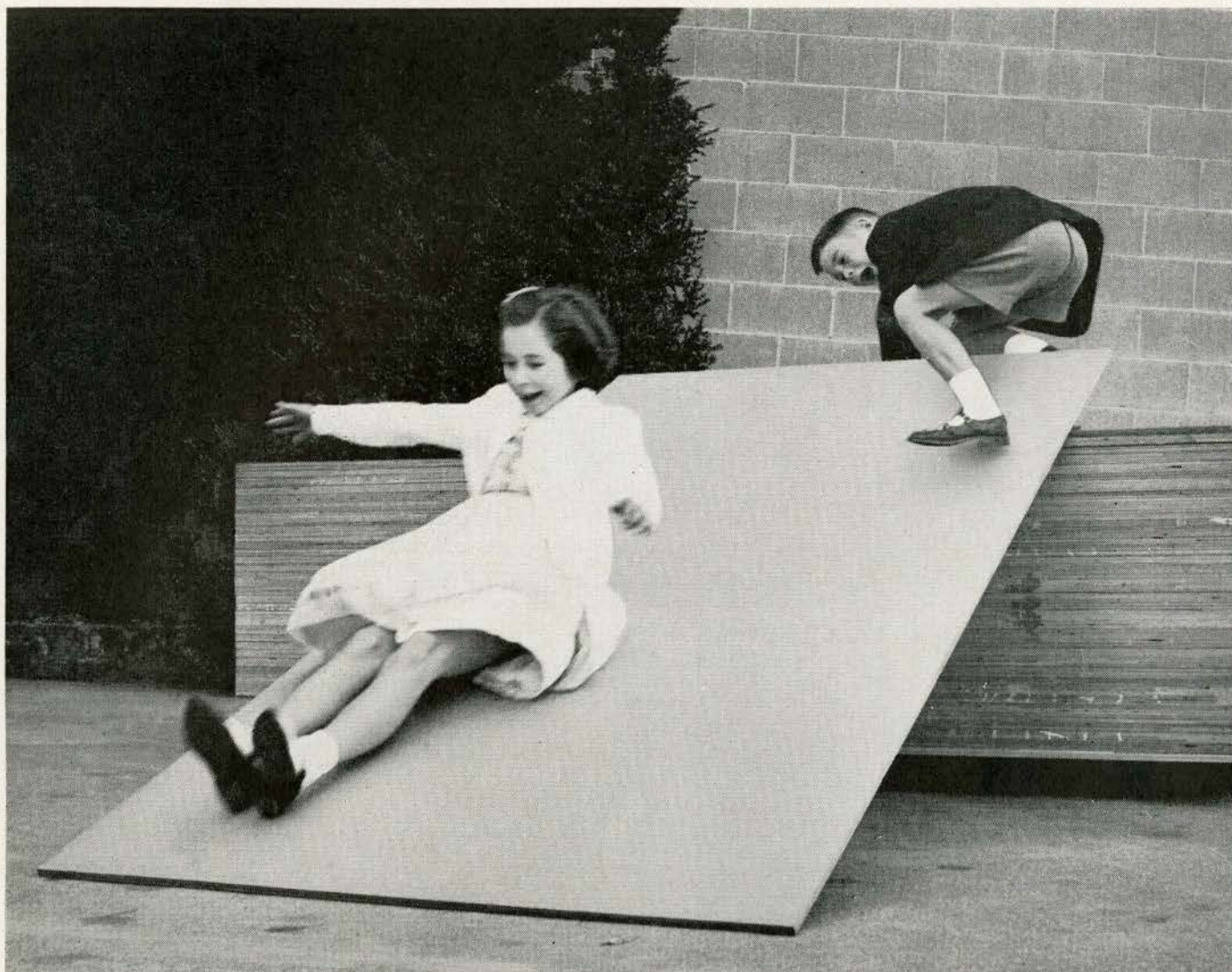
by Crittall have earned a world-wide reputation for Built In Quality, Long Life, Low First Cost, and Low Maintenance Cost.

CANADIAN CRITTALL METAL WINDOW, LIMITED - 685 Warden Ave., Toronto  
Suite 360 - 3300 Cavendish Boulevard, Montreal 28

# CRITTALL

metal windows





## Look what's happened to Sylvaply plywood ...

We'd like to send you a sample of Permashield - Sylvaply waterproof-glue plywood with a remarkable resin-fibre "plating" bonded *into* one or both faces. You can't soak, boil or pry this plating away from the wood. It has a velvety smoothness that takes and holds paint better than any wood product.

It *can't* check or show grain raising.

It brushes off hard knocks and abrasion. You will find it one of the most versatile of materials for interior or exterior applications that ever solved an architectural problem at modest cost.

Just write the word PERMASHIELD on your letterhead and send it to us. We'll mail you your sample and some literature.

*Permashield sample: P.O. Box 335 Postal Station A • Vancouver 1 • B.C.*

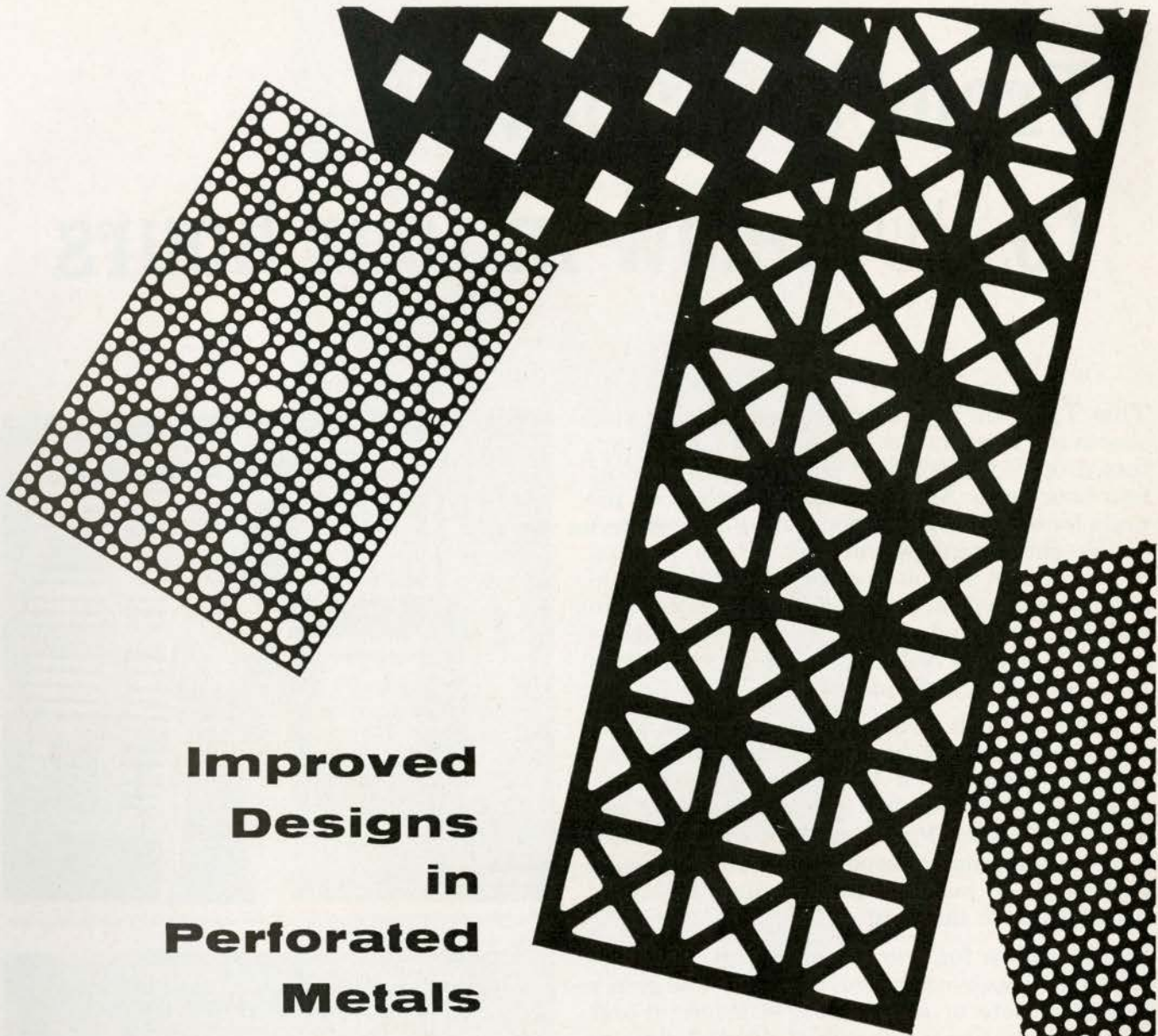
**SYLVAPLY**  
**PERMASHIELD** \* Sylvaply brand Plywood with resin-fibre overlay  
\*Registered trademark



**MACMILLAN, BLOEDEL AND POWELL RIVER LIMITED**

SERVING LUMBER DEALERS COAST TO COAST THROUGH VANCOUVER : CALGARY : EDMONTON : LETHBRIDGE : REGINA : SASKATOON : WINNIPEG : TORONTO : LONDON : WINDSOR : NIAGARA FALLS : OTTAWA : MONTREAL : QUEBEC : RIMOUSKI : TRURO





## Improved Designs in Perforated Metals

for contemporary decoration  
and utility

Great visual charm and improved function result from the tasteful use of contemporary perforated metals. Growing design opportunities in architectural applications and in accessories stem from improved techniques in perforating, and of course new demand stimulates greater research in metal perforating.

A constantly expanding line of patterns is at your disposal, here at Donald, in a host of materials . . . in all metals, alloys, plastic, rubber, most anything. Our Technical Department would be pleased to collaborate with you.

Please write for our brochure on Perforated Metals.



Other offices and warehouses in Montreal, Winnipeg, Regina,  
Edmonton, and Vancouver. Field representatives all across Canada

D-79



# From 130° above to 30° below in four hours

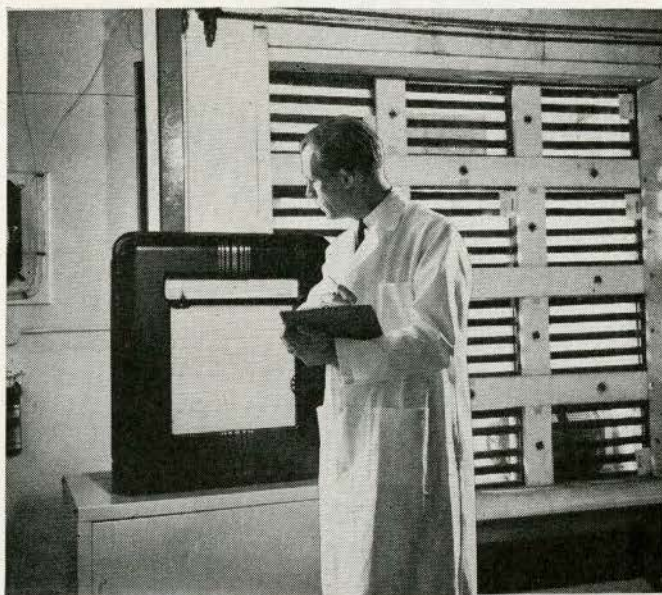
This Twindow\* accelerated weathering test shoots the temperature to a sizzling 130° above, then drops it to a frigid 30° below — in a repeating four-hour cycle. As well, water is sprayed on the units for a 10-minute period during the cycle. A double-glazed window unit built to take this kind of punishment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

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

**Use Twindow for every application.** Twindow is CMHC approved (approval #1002), and comes in either plate or sheet glass, in standard and custom sizes. For conditions of unusual glare or extreme heat, Twindow can be supplied in Solex\* green tint or neutral Solargray\* or Graylite\* heat-absorbing, glare-reducing glass.

Why not investigate the many advantages and cost-cutting economies of including Twindow in your building plans? For further information, including our illustrated booklet, "Two types of Twindow," write to Canadian Pittsburgh Industries Limited, 48 St. Clair Ave., W., Toronto 7, Ontario.

\*T.M. Reg'd.



*Technician checks temperature graph during accelerated weathering test.*

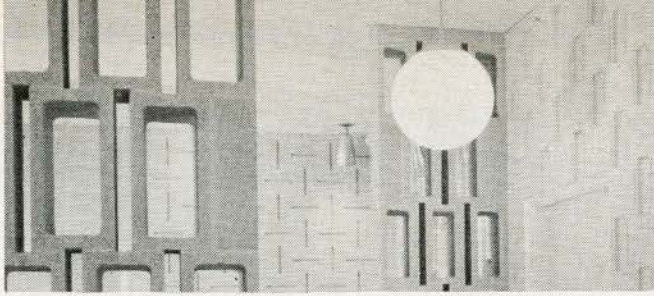


*Twindow installation at Montreal International Airport, Dorval, P.Q.*  
ARCHITECTS: Illsley, Templeton & Archibald, Larose & Larose,  
Associated Architects  
GENERAL CONTRACTOR: The Foundation Company of Canada Limited  
GLAZING CONTRACTOR: Canadian Pittsburgh Industries Limited

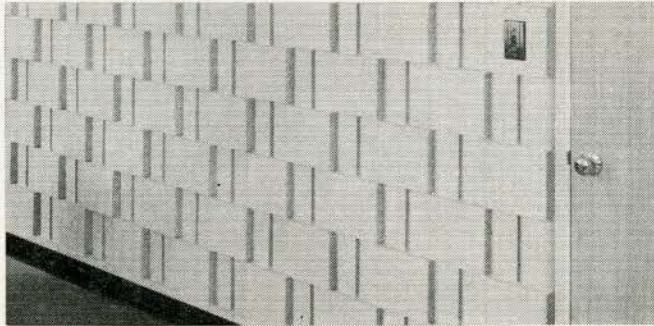
*genuine* **T**<sup>\*</sup>**WINDOW**

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

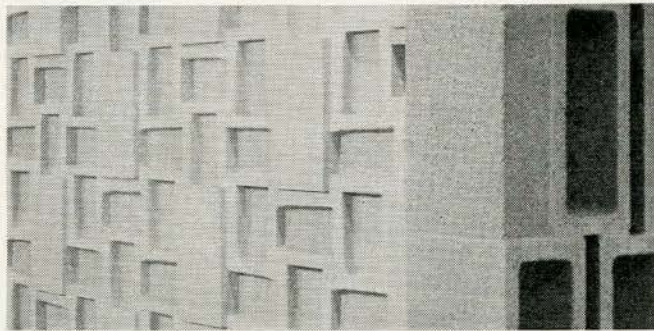




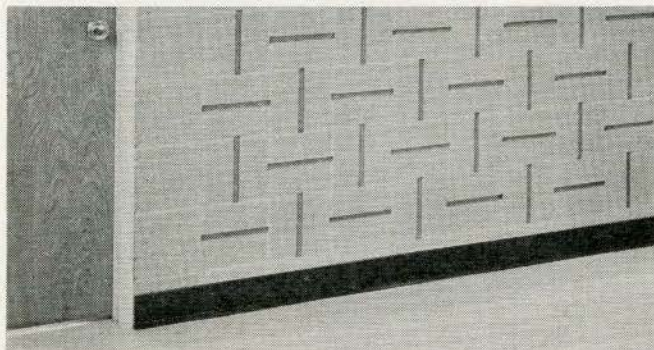
**Here's an interesting effect.**



**Here's another**



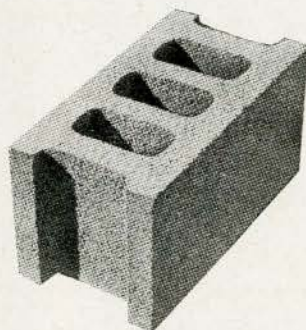
**and another.**



**Ever notice how often good ideas  
are expressed in Haydite?**

Every wall pattern on this page has been constructed with Haydite masonry units. These are made from a lightweight expanded shale aggregate, which gives them a unique texture no other exposed masonry units can consistently match.

You can do so much with Haydite. You can vary texture, bonding patterns — or the unit itself. Its uniform colour will do justice to the simplest or most intricate design. Haydite can be integrally coloured or painted, so its texture



colour-blends with the decor of any room. And structurally, you will appreciate its uniformity of size and high strength.

A wall of Haydite masonry has good sound absorption characteristics, and enjoys exceptional fire ratings. Because Haydite weighs  $\frac{1}{3}$  less than conventional units, it can offer advantages wherever weight is an important factor.

When you get right down to it, there are many reasons why good ideas are expressed in Haydite. Appearance is just one of them.

**HAYDITE**® IS A PRODUCT OF **DOMTAR** CONSTRUCTION MATERIALS LIMITED SAINT JOHN • MONTREAL • TORONTO • WINNIPEG • SASKATOON • EDMONTON • VANCOUVER



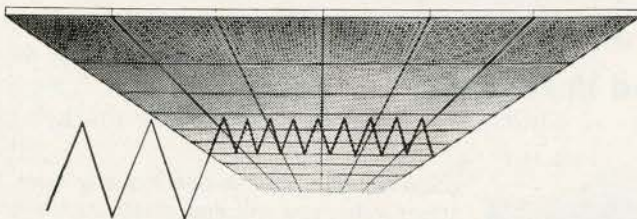
**JOHNS-MANVILLE HUSHES THE DISTURBING  
DIN AT A BIG SUPERMARKET**

# A nipper can nap at **DOMINION**

Several hundred people under one roof is a noisy proposition. Especially when they're equipped with metal shopping carts — and Junior. Dominion Stores Limited, one of Canada's largest and most progressive food chains, control the noise at their Long Branch, Ontario supermarket with J-M Acoustical ceilings. These days, shoppers hunt the aisles in peace and quiet.

Johns-Manville acoustical ceilings discipline noise, trap and break up sound waves, prevent echoes from forming and absorb up to 75% of the din that strikes them.

J-M acoustical engineers would like to help you attain a peaceful atmosphere to work or live in. The proper J-M materials are available for almost every situation. For an analysis of your sound control problem or for a free copy of our book "Sound Control", write Department BA, Canadian Johns-Manville, Port Credit, Ontario.



"THE SOUND PEOPLE"

**JOHNS-MANVILLE** 

A-5066N











..the difference in **DAF** grid systems

gives you complete flexibility of design and a choice of 1 inch, 1½ inch and 2 inch exposed flange systems.

The wide variety of its use is illustrated by its adaptability to curved ceilings, and profiles of many kinds.

It may be used with all "lay in" accoustical boards, perforated metal panels or luminous ceilings. This all aluminum grid maintains a completely even and smooth surface with all infill materials. Its strength, modern appearance and low cost makes the DAF grid system ideally suited for both new construction and the modernization of older buildings.

\*  
enlarged section

**DOMINION ALUMINUM FABRICATING • LIMITED**

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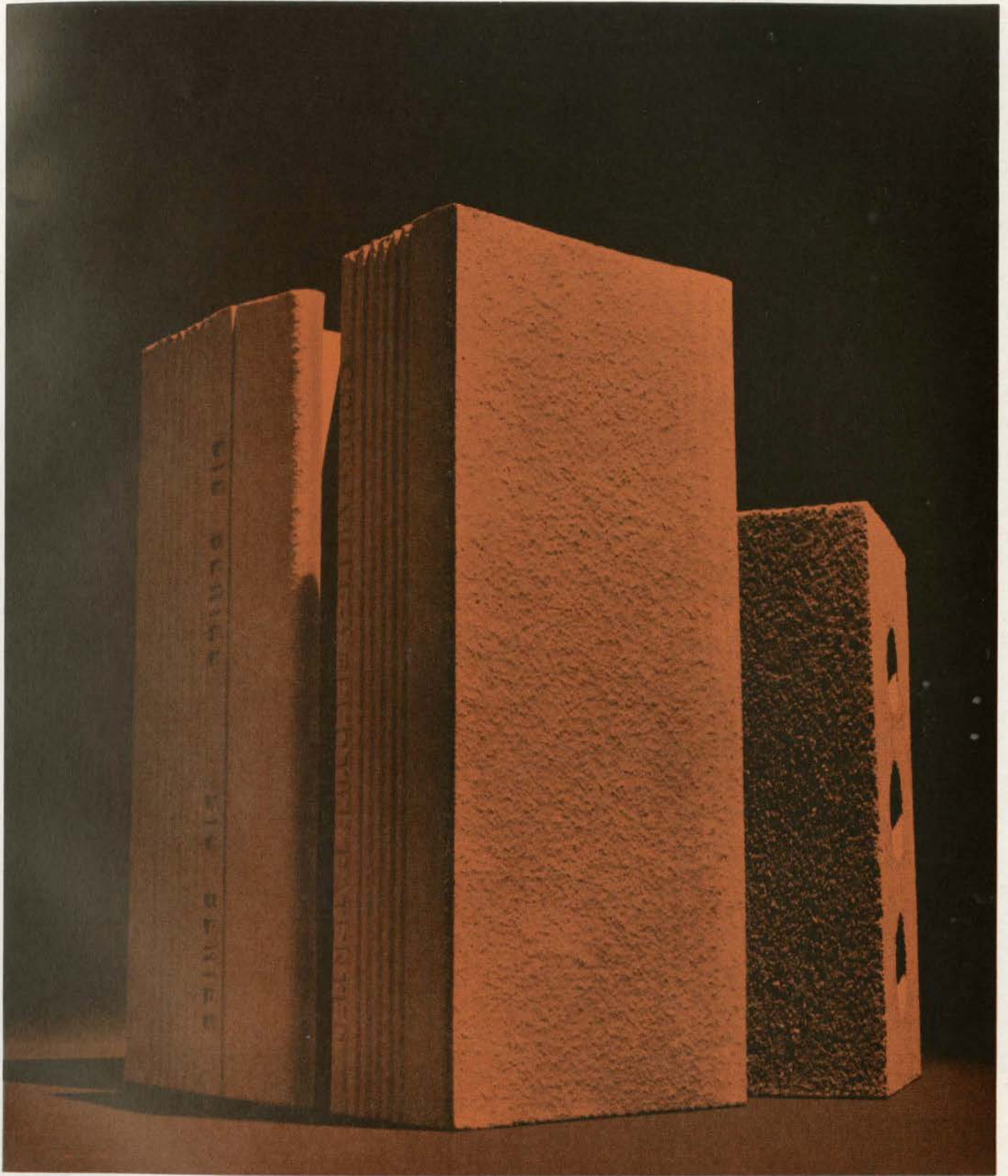
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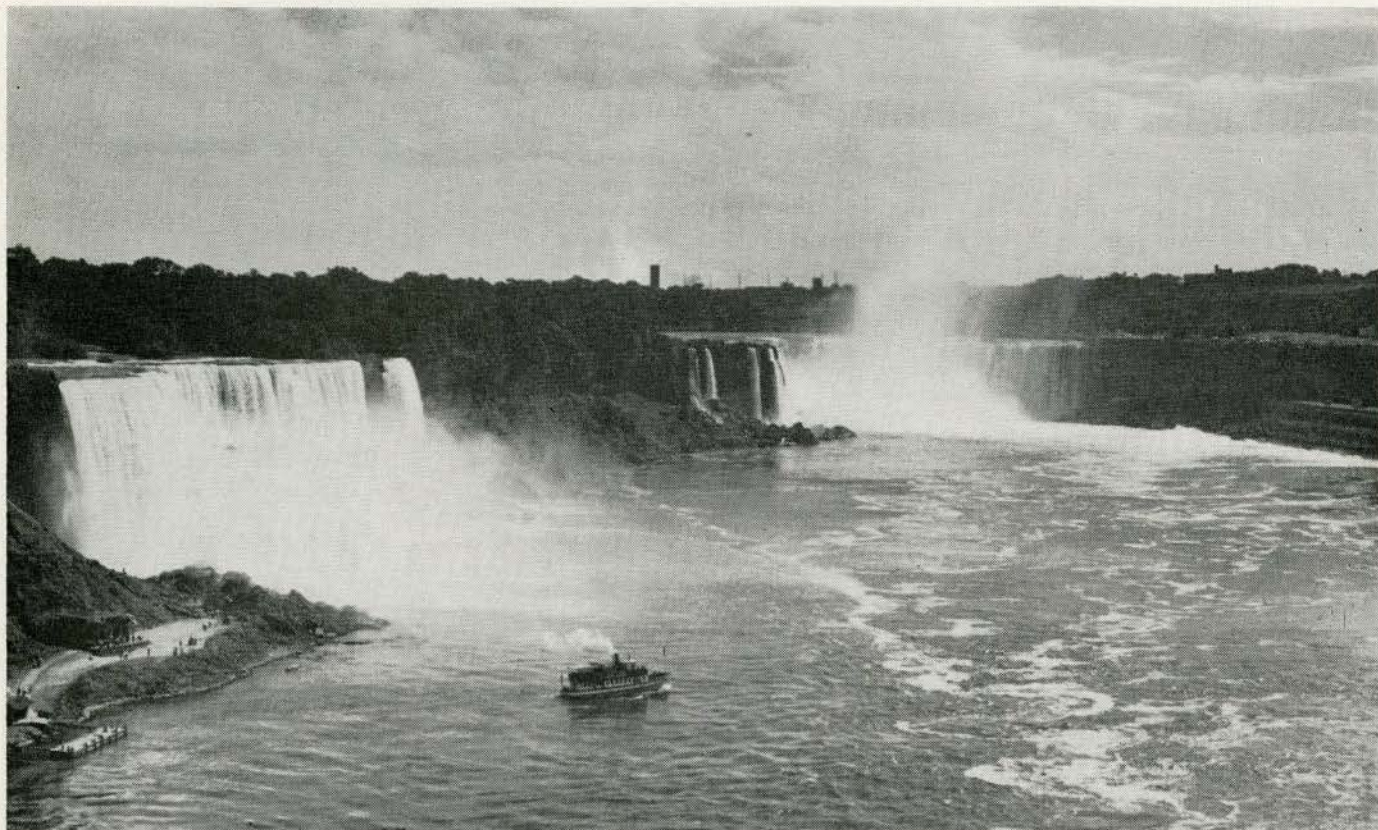
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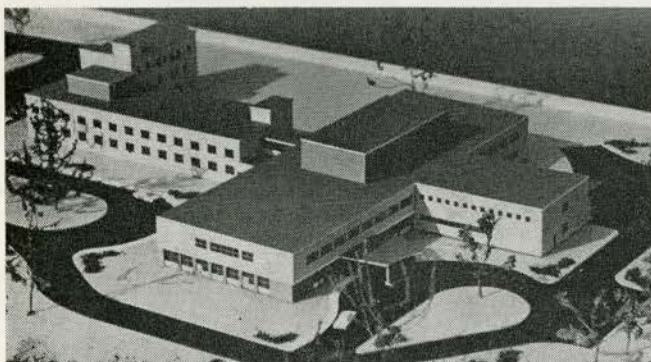
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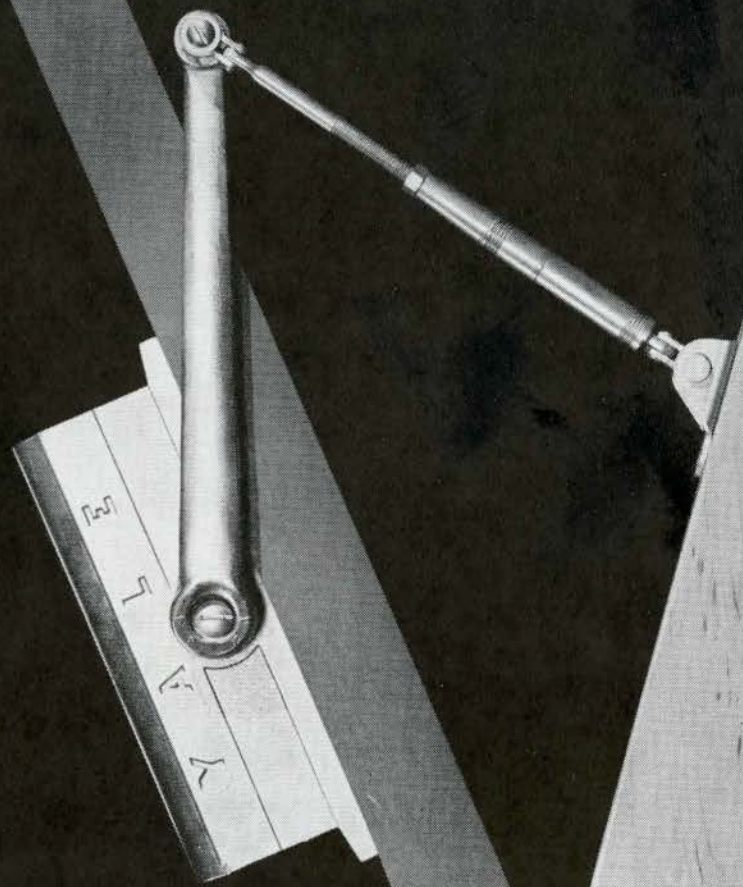
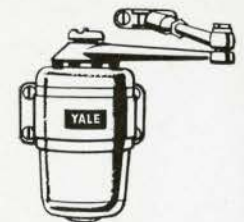
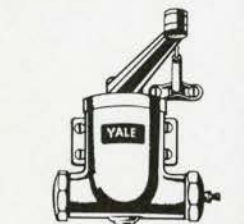
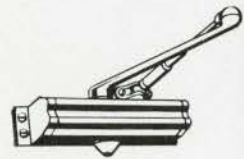
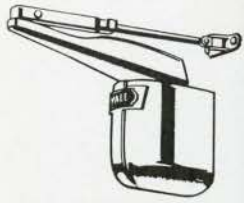


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# Housing

An Introduction by J. A. Murray (F), Chairman of the RAIC-CMHC Joint Committee on Housing

WHAT POSSIBLE INCENTIVE will sustain an architect in a housing practice? The very terminology of housing is forbidding — rehabilitation, renewal, redevelopment, project, dwelling unit. It's never far from a statistically faceless thirty-two persons bleakly occupying an arid net acre — little of the poet, little of the artist, little of liveliness.

Absent for the architect is the fascinating face-to-face interplay between the designer and the designee. The ultimate client is an abstraction, an unreal family of 3.7 average-smoothed persons, perceived but dimly over the shoulder of an interviewing developer, builder, agency, financier, or government.

It's even popular for the elite designer to despise all his victim's values: he sees him in the stereotyped distortions of the dope suburbanite, the prisoner of family futilities, the culturally two-dimensional conformist.

Gone from the architect is the opportunity for impressive structural acrobatics: the problem is not photogenic. Even sadder is the missing opportunity for an architectural *dernier cri*.

*Customers aren't listening!* This leads to the saddest, most frustrating aspect of all. Every instinct of design judgment, search for harmony, simplicity, and so-called eternal qualities oppose qualities seemingly valued by the market.

The market is looking for individuality, elaboration, and the fascinations of fashionable form. *What do we do when our values are not their values?* A shattering thought: *are they right or even partly right? And there are other, more practical, problems in housing.*

Housing is served too often by the most amateur, unskilled, uncaring, and uncommitted segment of the building industry.

Design integrity is at the mercy not only of the builder but of the inhabitant. Finally, as a business, housing is chancy — its ethics elastic, its client-architect relationships ambiguous, its fee system uncertain. Why bother?

We have several choices. Forget about it (except for grandiose apart-

ments and opulent private clients providing opportunities for our design virtuosity). This we did in the past. Fiddle with it — as must perforce a profession disorganized as to questions ranging from fees to owner-builder relationships, a profession sociologically uninformed about the nature of the task, technically imprisoned by the status quo of the current field practices. And economically uncertain. This we are at present.

There is another and further alternative: face up to housing as a serious problem that has much to teach us and much to learn from us.

Fortunately, for the quality of housing in Canada, there are signs architecture, individually and professionally, is prepared to face the housing challenge. An increasing number of architects find the possibilities outweigh the problems.

At a professional level, there was the earlier formation, and continuing activity, of the Joint Committee of the RAIC and CMHC on Housing. This committee, among other activities, undertook this issue of the *Journal* and brought to its pages the ideas of distinguished architects, thinking about the relevance of the past, the search for form, and the search for focus in housing.

Most important, the RAIC Committee of Enquiry into Residential Environment aroused national attention. From its recommendations, diverse activities are springing — campaigns for underground wiring and the formation of a Canadian Council on Urban and Regional Research. . . . The RAIC has under way a serious study of zoning codes, with an eye to a better visual and functional solution to living in cities. CHMC continues, as a matter of general policy, and with particular effectiveness in its architectural department, to make truly significant contributions towards a more dynamic and creative residential architecture. The Corporation does this not only through executed works of a sensitive and experienced nature, but through design competition that seeks new solutions to dwelling and planning. The Cana-

dian Housing Design Council operates effectively to raise standards of design by its system of awards and publications.

Perhaps, most important of all, private architects are producing multiple housing solutions. Their conception and execution are commanding international attention. Architects sit on planning boards, housing authorities and government advisory committees. They devote time and energy to important housing studies.

Not least, among more vigorous acceptance of housing responsibilities, was the successful two-day resident conference at Carleton University, September. The conference, organized by the RAIC-CHMC Joint Committee, also enjoyed the sponsorship of the Canadian Housing Design Council. To Carleton came 45 architects, from Vancouver to Halifax, on their own incentive (frequently at considerable expense). Four important Canadian solutions, two public and two private, were presented by these architects and evaluated in study groups. Thus, housing as a design problem has shown more ability to spark architects' interest and critical appraisal than any other building form. The conference proves it.

All of this is a step in the right direction. But it is far from good enough, and the record of failure abounds.

So we return to the question: *what possible incentive is there to attract and sustain an architect in a housing practice?* There is, of course, the opportunity to work at the scale of a complex of buildings, rather than an individual building, with attendant problems of a larger purposeful landscape. But the architect's answer drives deeper.

Ultimately, it requires a creative respect for people, a lively curiosity to understand, as an architect should, about living patterns and habits. It involves the way good housing may benefit, and be benefitted, by such understanding. This is not an unrewarding task, this social derivation of architecture. It has its own peculiar dimensions of imagination, humor, delight.



# A la recherche d'architectes

Par J. A. Murray (F), président du Comité mixte de l'IRAC et de la SCHL sur l'habitation

COMMENT LA CONSTRUCTION d'habitations arrivera-t-elle à retenir l'architecte? Même la terminologie y est rébarbative: réhabilitation, renouvellement, réaménagement, projet, unité d'habitation! On y frôle continuellement la statistique pure, trente-deux occupants impersonnels et sans visage d'une acre de terre aride. Il n'y a là rien pour le poète ni pour l'artiste; c'est un domaine sans vie.

Il manque à l'architecte cette confrontation fascinante entre le dessinateur et le futur occupant. Le client ultime est une abstraction, une famille immatérielle d'en moyenne 3.7 personnes ordinaires, à peine entrevue à travers le négociateur qui peut être un aménageur, un constructeur, un organisme quelconque, un financier ou le gouvernement.

Le dessinateur de haut ton se plaît à mépriser tous les goûts de sa victime. Ne voit-il pas en elle les caricatures stéréotypées du lourd faubourgeois, prisonnier des futilités familiales, le conformiste à deux dimensions?

L'architecte est privé de l'occasion de se livrer à d'impressionnantes acrobaties structurelles. Le problème n'est pas d'ordre photogénique. Mais ce qu'il y a de plus triste encore, impossible de produire de l'architecture dernier cri: *les clients n'écoulent pas!* Et ainsi on en arrive à ce qu'il y a de plus déplorable et de plus frustrant. A tous les instincts de beauté de dessin, de recherche d'harmonie, de simplicité, de ces qualités dites éternelles s'opposent les qualités que le marché semble exiger.

Les acheteurs réclament de l'individualité, du détail et la fascination d'une forme à la mode. *Que faire quand nos valeurs ne sont pas les leurs?* Ici, une question se pose, inquiétante: *Auraient-ils raison, ou partiellement raison? Y aurait-il dans l'habitation d'autres problèmes, d'ordre plus pratique?*

Trop souvent le domaine de l'habitation est exploité par le secteur le plus amateur, le plus incompetent, le plus insoucieux, le moins engagé de l'industrie du bâtiment. Le respect du dessin est à la merci non seulement du constructeur mais aussi de l'occupant. Enfin, comme entreprise, la construction d'habitations est aléatoire, ses normes de morale sont élastiques, les

relations entre client et architecte imprécises et les honoraires incertains. Alors à quoi bon?

Nous avons la possibilité de divers choix. Ne pas nous en occuper, sauf pour les appartements grandioses et les résidences opulentes qui se prêtent à la virtuosité du dessin. C'est ce que nous avons fait dans le passé. Nous y intéresser à moitié, comme doit le faire une profession désorganisée, ignorante des relations entre propriétaire et constructeur, de l'importance sociologique de sa tâche, techniquement emprisonnée dans l'immobilité des pratiques courantes et économiquement incertaine. C'est ce que nous faisons à l'heure actuelle.

Il y a une autre solution: faire face à l'habitation, la reconnaître comme une question sérieuse, une source d'améliorations mutuelles.

Heureusement pour la qualité de l'habitation on commence à constater que la profession comme telle et les architectes en particulier sont prêts à se mesurer à la tâche. De plus en plus d'architectes estiment que les possibilités l'emportent sur les difficultés.

Sur le plan professionnel, nous avons eu et avons encore le Comité mixte de l'IRAC et de la SCHL sur l'habitation qui, entre autres tâches, s'est chargé du présent numéro du *Journal* et y a apporté les idées d'architectes éminents sur l'importance du passé, et la recherche de la forme et d'un objectif commun.

Nous avons eu surtout le Comité d'enquête de l'IRAC sur les conditions d'habitation qui a éveillé l'attention nationale. Ses recommandations nous ont valu divers programmes d'enfouissement des fils et la formation du Conseil canadien de recherche urbaine et régionale. . . . L'IRAC fait une étude sérieuse des codes de zonage en vue de rendre nos villes plus belles et d'y rendre la vie plus agréable. La SCHL continue de façon générale, surtout par son département de l'architecture, à travailler à l'établissement d'une architecture résidentielle plus dynamique et plus proprement créative, et, cela, non seulement par des oeuvres marquées de plus de sensibilité et de plus d'expérience mais par la tenue de concours de dessins en vue d'obtenir de nouvelles solutions aux problèmes d'habitation et

d'aménagement. Par son régime de subventions et de publications, le Conseil canadien de dessins d'habitations contribue également à relever les normes des modèles.

Mais il y a peut-être plus important encore. Des architectes privés offrent diverses solutions; leurs plans et leurs réalisations attirent une attention internationale. Des architectes font partie d'offices de planification, de services de logement et de comités consultatifs des gouvernements. Ils consacrent beaucoup de temps et d'énergie à d'importantes études sur l'habitation.

La meilleure preuve de l'acceptation des responsabilités en matière d'habitation a été le succès de la conférence tenue à l'Université Carleton en septembre. Cette conférence, organisée par le Comité mixte de l'IRAC et de la SCHL sous le patronage du Conseil canadien de dessins d'habitations a réuni 45 architectes venus de Vancouver à Halifax de leur propre chef (et souvent à grands frais). Quatre solutions canadiennes, deux publiques et deux privées, ont été présentées par ces architectes et examinées en groupes d'études. Ainsi, et la réunion l'a prouvé, l'habitation, comme question de dessin, a soulevé chez les architectes plus d'intérêt et plus de sens critique que toute autre forme de bâtiment.

Voilà un pas dans la bonne voie, mais ce n'est pas suffisant et les déficiences sont trop nombreuses.

Ainsi, nous revenons à notre question: *Comment la construction d'habitations arrivera-t-elle à attirer et à retenir l'architecte?* Il y a évidemment la possibilité de travailler au plan des complexes de bâtiments, plutôt qu'à celui des bâtiments individuels, et de venir ainsi en contact avec les problèmes d'aménagement d'ensemble. Mais la réponse de l'architecte doit s'inspirer d'un sentiment plus profond.

Elle doit s'inspirer d'un respect créateur envers la population, du désir de comprendre, comme tout architecte doit le faire, les modes de vie et les habitudes des citoyens. Elle doit tenir compte des avantages pour l'habitation et les intéressés à l'habitation d'une telle compréhension. Ce côté social de l'architecture n'est pas à dédaigner. Il est un appel à l'imagination, à l'humour et une grande source de contentement.



## The Old Forms

THE PLEASANT, RATIONAL appearance of old sections of long settled villages and towns of the Atlantic Provinces, Quebec, and Ontario raises the question:

*Why is something so difficult to achieve today that was once so easy?*

Aside from the charm of mellow buildings, which shows the wear of time and the care of men, nice relationships — of houses to shops and to public buildings, and the unified character of delightful streets — suggest a vanished judgment or taste in these matters. They well deserve exploration.

FIRST: There is the difference in size between developments now and a century ago. Then, even the great towns were small; because they were chiefly pedestrian places, they were also closely built. Streets were narrower than those now required for motor vehicles, and sidewalks were broader, particularly those used by shoppers. Squares, terraces, promenades, and landscape gardens provided happy contrasts to the streets and passages between buildings.

A pedestrian requires variety in spaces to maintain his interest, as recent shopping centre developers have rediscovered; and the patterns of old parts of Quebec, Kingston, and Halifax suggest this was once well understood. The motor car and the vast increase in urban population have enlarged the scale of cities. This trend has not yet been well handled in this country, where the tendency has been to enlarge all streets to accommodate traffic rather than to channel it into a few great arteries and permit the intervening spaces to have a pedestrian scale.

SECOND: It seems that a hundred to a hundred-and-fifty years ago, builders controlled their craft so skilfully they were able to devote a lot of their time to problems of siting and composition — which today are considered insignificant compared to the complex mechanical, financial, and organizational problems of mass building. Canada's 19th-century handcraft building custom contained many classical attitudes that worked well, until invalidated by unprecedented social and industrial developments of modern times. Traces of a fine avenue of trees, a major building with a forecourt, a row of houses, or even one house boasting a discreet and balanced facade — savor of a former polite charm and order.

Some years ago, *Eric Arthur* likened 18th-century architects to actors playing well-known parts in which they were word perfect; whereas, today, architects find themselves in plays in which there is no text. His analogy seems even more apt now, when the excitement of watching spectacular — apparently unrehearsed — achievement, as in a game, is preferred to hearing an old tale, no matter how moving the story and its telling.

Creative improvisation, without too many rules, is currently more admired than a studied performance of any kind. Thus, there is little sympathy for the strict manners and accepted patterns of the buildings of the 19th century. Nevertheless, it can be easily seen that their sureness, which stemmed from these things, gave them a noble feeling and (in groups) a dignity few modern buildings have.

Being so sure and handsomely sited, 19th-century buildings demonstrate that an established way of building frees a builder, who knows and follows the familiar traditions, to attend to many details overlooked by one less sure of what he is doing. Yet, this point of view is no longer considered so important as a readiness to search and experiment, which is thought more appropriate to these dynamic times.

The notion that someone who follows a tradition is not being progressive is understandable when old ways are inadequate. But it should be remembered that when a tradition is flourishing such a view is wrong, as it encourages senseless experimenting and greatly diminishes the opportunity for gradual modification and improvement toward a more perfect form, which in the end must be regarded as the essence of progress in the art of building.

The handcraft technique — the old tradition — is finished. It belonged to circumstances that have changed. Meantime, new forms are being established, based on new building technology that, when perfected, will provide builders with the basic sureness they need to turn again to matters that occupied their 19th-century counterparts.

THIRD: Though slow growth, or gradual adaptation to the needs and preferences of persons, has been the experience of all old settlements, the newer ones have more often been the result of rapid construction in which the opinions of people in all but their most superficial aspects have been ignored. To meet the purely quantitative demand, it became customary to lay out streets and build houses in quantity for unknown, so-called "average" people, who would be attracted to them primarily by their accessibility and price and, perhaps, by their appearance in a symbolic sense.

For success, the method depends on the judgment of entrepreneurs and, of course, extensive advertising. At best, it is a hit-and-miss process. To counteract its inadequacies and possibly to achieve an even greater rapidity of construction, uniformity of development, and other economies — the notion that a satisfactory solution can best be obtained by planning, based upon broad analyses and projections, has been generally adopted from British and American experience.

Now, the use of planning techniques forms a large part of the new building technology that differentiates old and new areas of towns. Where planning as a preparation for rapid growth has been used, it has been found to produce results far superior to those of the hit-and-miss method. Its success has led to something like "conviction" that satisfactory conditions depend entirely on planning, as well as the more questionable corollary belief: *things that have just grown (Topsy-like), without benefit of planners, are necessarily gangling and unhappy.*



That the whole problem is one of development tempo is seldom mentioned; the old settlements, however, demonstrate that slow growth and gradual adjustment to new conditions can assure both harmony of buildings and suitability to local conditions just as well as planning.

Moreover, when development is slow, the planning process is unreliable: in such cases, plans are usually superseded long before the development they were intended to guide actually occurs. Thus, it could be a mistake to regard something satisfactory as Dufferin Terrace, which is the result of an unplanned slow growth, as merely an accident. Planners need to be sensitive, indeed, to local circumstances — to be as effective as the collective opinion of men directly concerned with meeting their evolving requirements.

For example: a right allowance for climate and terrain, or the subtle regard for view and the relationship to surrounding buildings, is more likely to be correct, if it

depends on first-hand decision based on the senses.

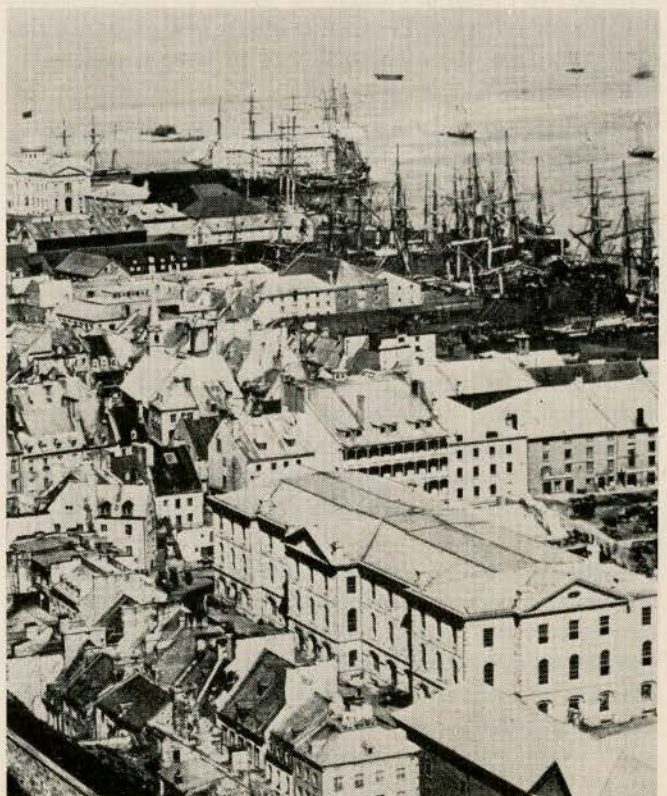
This matter seems related to the instinctive ability living things have to select a place to rest: *an extraordinarily reliable, almost simultaneous assessment of a multiplicity of physical and emotional circumstances, bearing upon comfort and security.*

No one experiences any real difficulty in choosing a favorable place to pause to enjoy a view, to be in the sun if the body is cool, or in a breeze or shade if it be warm. Clustered with others, if the mood be garrulous, or alone as the case may be. The senses more than the mind are involved in these matters.

No one, who is not closely concerned, can be aroused to use or trust his senses, which moreover can never be used second hand without the intervention of some work of art. Therefore, it can be argued that a good part of the satisfaction felt in seeing a group of houses in a protected cove, having windows open to the sun and view, is due to



*Quebec from Levis, Livernois, 1864:* Originally, Quebec was built on a rocky point in the St Lawrence. In crowded Lower Town, docks, warehouses, official buildings, private dwellings, and small hotels press as close as possible to the anchorages of great ships. The more spacious Upper Town spreads out on almost inaccessible terraces.



*Lower Town from The Citadel, Quebec, Livernois, 1864:* Lower Town was as crowded as any European sea port. Its houses, attached in rows and separated by slabs of chimneys, were usually three storeys high in stone, with one or two additional floors in the roofs. Streets were narrow, but appropriate for carts and pedestrians.



the human pleasure in observing something sensitive and through it sharing the feeling of those responsible. *Empathy*. At the outset, direct methods of craft building encouraged sensitivity, as it constantly involved personal decision, unhindered by remote factors characteristic of industrialized building.

FINALLY: There is another aspect of old buildings that distinguishes them from their modern counterparts and augments the feeling they convey: *in all cases, their builders were identified with them in more direct ways than are possible through the multiple web of involvement in modern construction*. Pride and satisfaction in work, as well as honor and recognition given a good craftsman for a particular job well done, were part of the usual payment. In return, there was a greater measure of responsibility than results from the largely anonymous ways of building now customary.

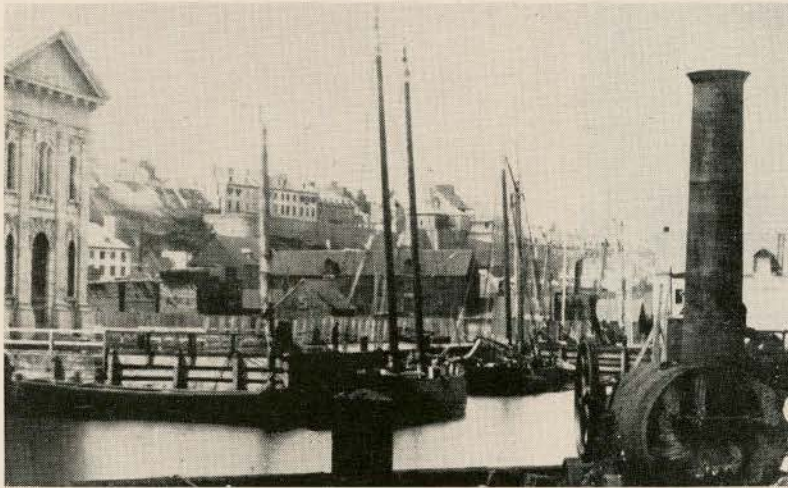
*Advantages* of the old patterns and methods of build-

ing were chiefly humanistic: human scale, craftsmanship, sensitivity, thoughtful consideration, and personal responsibility were involved in the pleasant, rational character of the old settlements.

*Disadvantages* were mechanical — inadequacy to meet change, slowness in operation, and wasteful human labor (compared to the rapidity and work capacity of machines).

The change in building methods was inevitable. Although incomplete and, with few exceptions, still crude, the new methods have massive potentialities for human satisfaction well beyond the lingering pleasures of the old ways. The question of taming and further developing industrialized building remains a fascinating area for speculation.

Even a brief comparison of the new method with the old — such as this article — suggests the need to stress all those human considerations that are not so evidently a part of industrialized building as they naturally were of craft building.



*Custom house dock, Quebec, Livernois, 1864: Pattern of Lower Town was intricate and small in scale. A good bit was built on tidal flats, following the wharves and warehouses, which were progressively extended to deep water to meet the greater drafts of ships.*



*Le Parc d'Artillerie, Quebec, Livernois, 1871: Quebec's mountains assured unusual interest in the development of streets and sites for buildings. As buildings were uniform in materials — window arrangement, glazing pattern, roof lines — variety was mainly in the grouping of buildings.*



*Citadel from the terrace, Quebec, Vallee, 1875: Since Champlain built the Chateau St Louis in Upper Town, there's been a balcony here for people to enjoy a spectacular landscape and fascinating ship activities.*

*Foot of King Street, Saint John, 1870: Wagons cluster around the schooners in the harbor, and you can sense the whole purpose, history, and life of the city. Streets and sidewalks are commodious — planned to be greatest where the most congestion can be expected.*



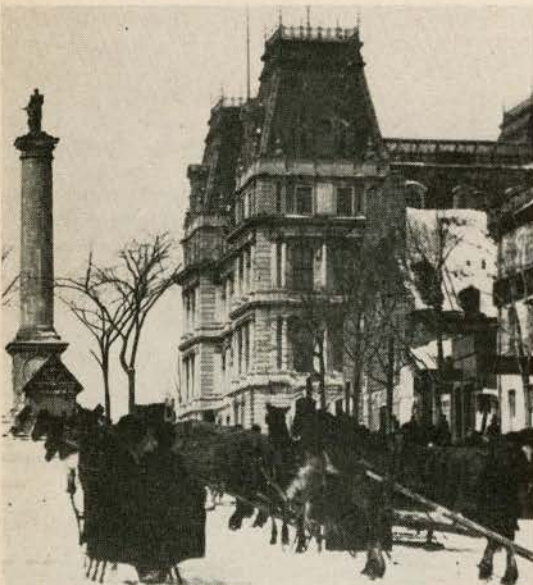




*North Market Square, Saint John, 1870:* These orderly buildings are typical of most American business streets a hundred years ago. They have a politeness that suggest careful breeding and well-established norms of behaviour. Each building has a simple label to identify it.



*Germain Street, Saint John, 1870:* On high ground, removed from the bustle of the harbor, substantial houses provide space for the affairs of professional men. You can see special attention has been given to the entrances of each, where individuality and distinction have been achieved by subtle variations on a restricted theme.



*Place Jacques Cartier, Montreal, Henderson, 1870:* During this expansion period, Montreal's architecture changed from the essentially classical simple manners of merchants and soldiers to the elaborate and romantic styles of the new gilded age in America.



*Notre Dame Street, Montreal, Sproule, 1830:* Civic character of 19th-century Montreal is perhaps idealized by the anticipated completion of the towers of Notre Dame, which were not built until many years after the old church was removed.



## The Old Forms



*Bonsecour Market, Montreal, Henderson, 1865:* The harbor was the front of Montreal throughout the 19th century. Buildings along Commissioners Street, across from the wharves, gave the city a handsome facade. None was more splendid than the block-long Bonsecour Market, which comprised a sales area on two levels, a city hall, and police station.



*Royal Insurance Building, Montreal, Henderson, 1860:* This may well express the architectural ideal of the era. The building, magnificently composed in European architectural terms, provides the whole area with a monumental clocktower and clock. It symbolizes British investment and asserts: "Montreal is well on the European side of the western frontier."

*Murray Bay Village, Henderson, 1865:* The village was a straggling group of rural cottages and barns, along a road that followed the features of the land in the most effortless way. The result was picturesque: land and forms were dominant, giving the whole scene a calm naturalness.

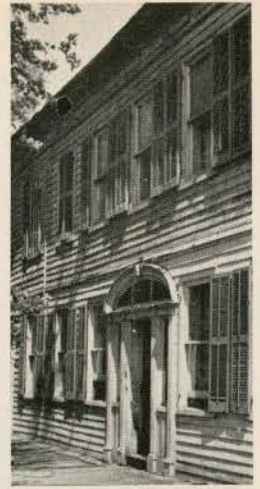


*Mile-End Road, Montreal, Henderson, 1870:* Just as villages were agglomerations of rural buildings, towns were extended by closely grouped cottages built by country people, who gathered round to find employment in the factories. Immigrants, arriving at harbor fronts or railway depots, crowded central areas.

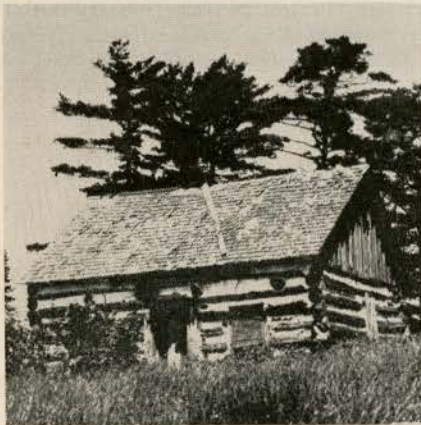




*Conselon, Porter's Hotel, Ross Anderson, 1960: Melancholy survival of gentlemanly architecture was brought to Canada by Loyalists. Even in its shabby condition, this facade has polite agreeableness; it is disciplined in its basic order and principled in details and use of materials.*



*Shop fronts, Niagara-on-the-Lake, Ross Anderson, 1960: Loyalist manners survived in little towns, which were least affected by industrialization and the confusion of tastes of the numerous new settlers.*



*Abandoned log house, Carleton County, Meredith, 1920: This pioneer house is a part of the frontier woods, close to native ways. It shows a surprising scope in our immediate architectural heritage.*



*Mill at Morton, County of Leeds, Meredith, 1920: Water power for milling and sawing was a fundamental economic factor in the development of pioneer settlements. Technological advance has nowhere been more marked than in this aspect of our culture. The early industrial building was related – in a craft sense – to all its companion buildings in structure, material, human scale, and subordination to nature.*

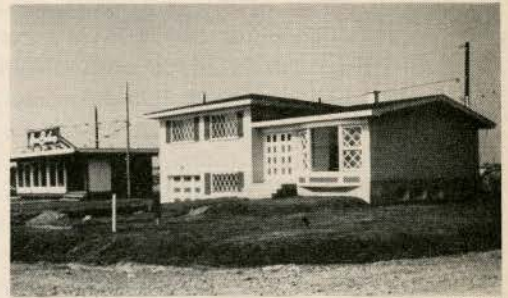
*Portugal Cove, Newfoundland, Chris Lund (NFB): Coastal fishing engenders lonely settlements, consisting of a small boat harbor and wharf, lock-up sheds, flakes for drying cod, snug houses, and a few shops. It is rugged nature only slightly modified by men most familiar with the sea.*



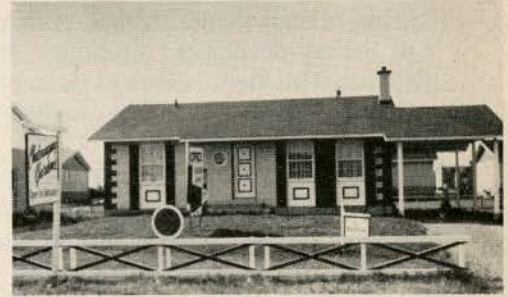


# Housing / A Search for Expression

by Henry Fliess



PANDA



BOULT



MAJOR ADVANCES in Canadian housing have been in the multiple form. Here, the combined vision of architects and developers is providing first-class housing, which serves needs efficiently and offers stimulating and satisfying visual appeal.

But the single family house offers a more difficult problem to solve. After initial successes in communities across Canada — and what seemed like considerable progress — there has been a serious set back to single family housing. The logical and aesthetic solutions architects have brought to bear on the single family house do not appear to satisfy the public for reasons not completely clear. (They would be interesting to analyse psychologically.)

In the last decade, the architects' contribution to the single family house has been considerable and of much greater importance than is publicly realized and admitted by the builder-developer. Architects transformed the badly planned builders' houses of the pre-war period into well planned houses — good in circulation, easy to furnish, adequate in storage space.

They developed simple and well proportioned houses, which could be economically built and satisfied the public. Further, the better examples of the single family house were created for carefully planned communities or well considered housing subdivisions, where street planning, house grouping, and community facilities were taken into account. The package proved attractive to house buyers.

What happened, unfortunately, was that these solutions were copied by second-rate builders; and, let's face it, by second-rate architects. The good proportions were destroyed; the crisp details disappeared; cheap materials were substituted. The result: ugly housing by any standards!

This dreariness was magnified by second-rate subdivisions, where monotony of the grid was replaced by equal monotony of endlessly repeated curved streets.

But the question must be asked: *Is a certain amount of monotony and lack of quality inherent in mass housing?* The answer: *When thousands of acres are built up every year in large urban areas, the resultant housing,*

*whatever its merit, is bound to bore us eventually.* Inevitably, similar problems are bound to lead to similar solutions. Even if this were not so, the forces working in the direction of standardization — the zoning by-laws, mortgaging regulations and attitudes, and product uniformity — would insure basically similar answers.

In any case, the public considered the resulting residential environment dull and unattractive. To stem the dreaded monotony, city councils enacted by-laws that, in one form or another, required adjacent houses on a street to be different. This type of action misdirected proper effort towards revitalizing our residential areas, for likeness by itself is not the major problem of our housing communities. Artificial variations in elevation and indiscriminate mixing of one-storey split level and two-storey houses do not alleviate monotony and drabness.

The other reaction to sterility in house design resulted in clothing standard house designs in various fashions by directly applying various forms of gingerbread, whether derived from traditional idioms, from Disneyland, from modern clichés, or a combination of all — using as many artificial or natural materials as possible.

In Toronto, this is exemplified by a fake "Colonial" application with scalloped friezes, arched porticoes, shutters, and Mansard roofs added to the standard bungalow, split-level, or two-storey house. (This lack of taste would have horrified our forebears!)

In Winnipeg, a "Cinderella" house has suddenly become popular. Characterized by crossbars over windows and those homey shutters found in story book illustrations, it's an application imported from California, where it is now passé. But apparently in Winnipeg, house buyers are succumbing to this latest of "styles."

In Montreal, traditional and Disneyland motifs have been merged with a modernistic blending of materials.

All these houses have public appeal and outsell tastefully designed houses by enormous margins. To achieve these effects, builders either have drawn their own plans or have asked architects, who were willing, to apply the necessary window dressing. The architects' role of leadership in aesthetic expression of single family housing has thus been temporarily removed; he has to follow the fashions, or his builder clients will forsake him and leave him to his ideological pursuits. Only the most resolute builders can resist the strongly shown preferences of the public.

It might be interesting to contemplate the various reasons for the trends that have developed. A reaction to the sterility of the sea of residential subdivisions is probably the prime cause. Contemporary idiom in house design proved too severe. It lacked warmth and character and an adequate feeling of home and shelter. Details were too practical, neither softening nor invigorating to house design solutions. They did not satisfy the buyers' romantic yen.

The other cause derives from a change in the housing market, which has shifted from a sellers to a buyers' market, and with rising land prices and increased build-



*Monotony of mass housing cannot be alleviated by changing "styles" from house to house; only an imaginative planning process can save our environment*



# A Search for Expression

ing costs, from a lower to an upper income category. In such a market, sales techniques play an important part. It is obviously easier to sell a new fashion, which can be so advertised, than a product that is simple and restrained.

Similarly, there has been a tendency on the part of some magazines to exploit new ideas whatever their value. There is always a dearth of valid new ideas that can be propagated; any new fashion is immediately glamorized and given emphasis unrelated to its contribution. Further, the new class that the single family housing industry serves is more conscious of status, and the house is now the major status symbol, replacing the motor car.\*

A recent *Look* article ("The Bathroom: New Status Symbol") illustrates the point only too well and indicates the ridiculous emphasis placed on house elements that would logically appear to be of minor importance. It also underlines another long-known fact: women tend to make the final decision in house buying; and women tend to be more susceptible to fashion and emotional appeal.

Closely related to the house as the status symbol is, of course, the tendency to buy houses that will impress acquaintances and friends — and therefore to buy houses that are in fashion and conform with the latest ideas propagated by mass media. It is a strange irony that the expression of individuality, which appears to be fostered by the new fashions in house design, is merely another facet of mass thought and conformity. Probably the "sweetening" of house design and the search for individual expression are also reactions to our strongly organized technical society — *The Organization Man*, *The Man in the Grey Flannel Suit*, etc. — which requires a retreat from the highly organized, impersonal world.

*\*With a resulting improvement in automobile design.*



*Shutters, scalloped friezes, panelling, and stone are used to soften and "sweeten" the house exterior. This is what the public appears to want*



*The house as "Status Symbol"*



*Even the low cost semi-detached house has an applied status symbol, the two-storey colonnade of the old colonial mansion*



WHATEVER THE CAUSES, the new trends in house design, which are so far removed from good architectural solutions, suggest that architects have not sufficiently satisfied the emotional and psychological needs of house buyers and the public. A more human approach to house design is required: a better understanding of the elements that make the traditional house so satisfying. As it so happens, these are qualities architects themselves have been searching for and, in other areas of building, have been able to achieve. I'm thinking of the recent work of *Minoru Yamasaki*, *Paul Rudolph*, and *Phillip Johnson*. But these remarks should not be made without some expression of doubt that these aims can be fulfilled.

At a recent Canadian Design Conference on Housing, where some of the more imaginative and capable architects in the housing field were present, it was agreed the single family house was a singularly difficult problem of design, and it was admitted no architect present felt completely happy with the design solutions evolved.

It seems incomprehensible that such an able group of architects could not adequately solve the problems of the single family house, however difficult; in other fields of housing and building, solutions of great merit have been evolved.

Is the problem incapable of solution, because it is incorrectly stated or contradictory in nature? Are the functional demands and the psychological needs that have to be met contradictory to solutions aesthetically satisfying to the public and the architect alike?

Is it possible to design gracious houses on 60-ft lots, where double garages and side yards take up almost half the frontage? Or worse still, is it possible when houses must be semi-detached on a 30-ft frontage that must also accommodate the housing of one car? Can we produce natural warmth and charm when materials have to be cheap, and by-laws prohibit the use of wood shingles and allow wood siding to be applied only to a masonry backing, as various Toronto by-laws require?

Probably the greatest possibilities for improving our residential environment rest in the direction of community and town planning. Fortunately, this approach to our residential environment has a functional as well as aesthetic basis. Planning is the only process that can effectively solve problems of traffic and engineering, problems of properly locating the various residential, commercial, recreational, and communal uses. And planning can consider the broader relationship of a residential community to its surrounding area. It also presents the major aesthetic opportunity to create a visually satisfying environment.

What gives a residential area its character is the arrangement of houses on the streets or around courts — the structure of the community in which it sits, and the expression of its community core. What has been lacking in Canadian and U.S. residential suburbs is a feeling of space and community. It is the creation of interesting and varied spaces that makes a residential environment visually stimulating. All sorts of devices are available to create spaces interesting to move through.

For instance: we can create changes of scale from a major artery to a residential street, from community focus to the housing group; we can provide a change of character by planning spaces for intensive use and for

quiet relaxation, for the pedestrian or for the motor car. We can make them formal or informal. In addition, there must be a diversity of buildings and of land uses, places for work, for shopping, for education, for meeting, and for recreation — as well as for living.

Such diversity will create communities that fully provide for the needs of its residents, and at the same time will allow for a diversity in scale, in height, and in character. This will mean a more visually stimulating environment. There must also be a diversity of housing types — the total range from the single family house to the high-rise apartment, with various forms of horizontal multiple units in between.

If houses are set in a well designed environment, the individual unit will be of small importance, particularly if sufficient landscaping has been carried out, and if the landscape design has considered the intended special effects. It does not take too many years before the landscaping takes over and enhances and emphasizes design patterns. The houses will then form only a backdrop to trees and hedges, and a sufficiently human environment will have been created (whatever the qualities of the individual house design).

Fortunately, then, the design of the house exterior is not so important as it seems at first hand: the more severe forms will be softened, the poor proportions and false applications hidden from sight. (Witness any old residential area.) It seems pointless in single family house design to engage in aesthetic acrobatics. We do not have to look far back into the past to establish that simple and well proportioned houses, sensitively sited, repeating basically the same vernacular, have produced some of the finest housing ever created. It is at the core of the community where imaginative and strong architectural expression is called for.

One further thought: perhaps the problem of the single family house need re-examining in the light of new pressures and circumstances. Rapid urbanization of Canada is making the single family house even more expensive and an even greater luxury. Yet, multiple housing does not solve the real demands of all Canadians. A denser form of single family housing might well be able to provide better and more economical solutions as well as greater visual satisfaction.

A pooling of car storage facilities, above or below ground, could make possible more satisfactory single family housing patterns and more economical land solutions. Such methods, however, require new attitudes and methods of ownership, perhaps on a co-operative pattern. Coupled with this, there must be reconsideration of by-laws that require 66-ft streets and 25-ft set backs, which make economical land use impossible and prevent the creation of anything but uniform spatial effects.

Two facts offer hope for the future: on the one hand, the favorable public reaction to the new forms of multiple housing, which follow the principles expressed in this article; on the other, the experience in Don Mills, where a tendency has been to add to existing houses and stay in the community, rather than move on to the new traditionally clothed houses.\*

*\*This leads, perhaps, to a matter unrelated to this article: the importance of expandable houses to the stability of a community. a subject currently of little concern to the mortgaging companies.*



Simple and well designed houses, in a carefully planned community, seem to have proved themselves. The persons living in them are emotionally satisfied and conscious of a community sense. In short: when given the choice, they want to stay.



*View of a curved street in Leaside, Metropolitan Toronto. Houses are not great architecture by any standard, but the trees and landscaping have taken over and made this one of the more pleasant residential areas*



CRAMBART

*A pleasant group of houses in Rockcliffe, Ottawa, designed by Andrew Hazeland. Houses are simple, well proportioned, and have been carefully grouped in a fine landscaped setting*

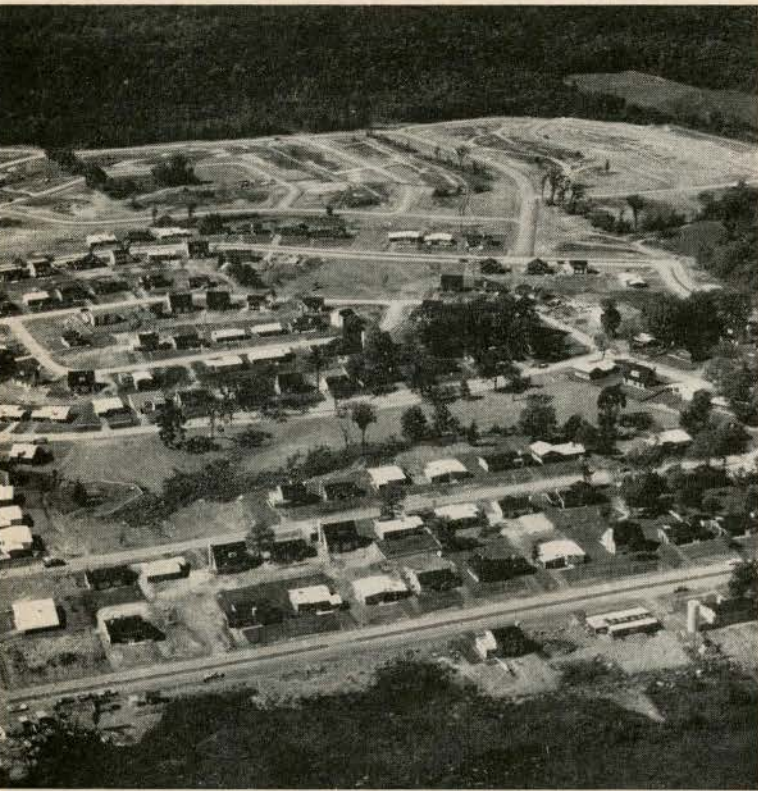


*Street in Midland Park, Metropolitan Toronto, designed by E. Ross for Curran-Hall Ltd. Simple and well designed houses, using warm materials, carefully grouped on the street. Existing trees are carefully preserved, and new planting already provides a pleasant landscape setting*



LESSER





FRANK

*Aerial view of the first of two subdivisions in the town of Lorraine, near Montreal. Community park has been preserved in its natural state. Consulting architect: John Shreiber, Montreal*

*The old mansion is being preserved as the town's future municipal library*



HANS VAN DER AA



CREATIVE

*Houses and street grouping. Right: by Papineau Gerin-Lajoie Le Blanc, Montreal. Below: by David Reich, Montreal*



HANS VAN DER AA



# A Search For Expression



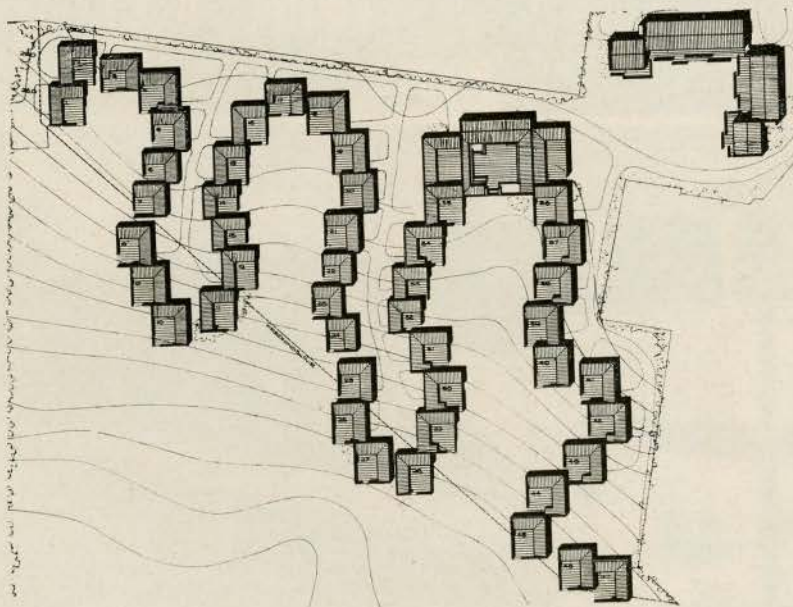
SAMULEWITZ

*Houses in Seignory Park. Architects: Affleck, Desbarats, Dimakopoulos, Lebensold, Michaud, Sise*



*Quadruplex in Seignory Park. Architects: Affleck, Desbarats, Dimakopoulos, Lebensold, Michaud, Sise*

SAMULEWITZ



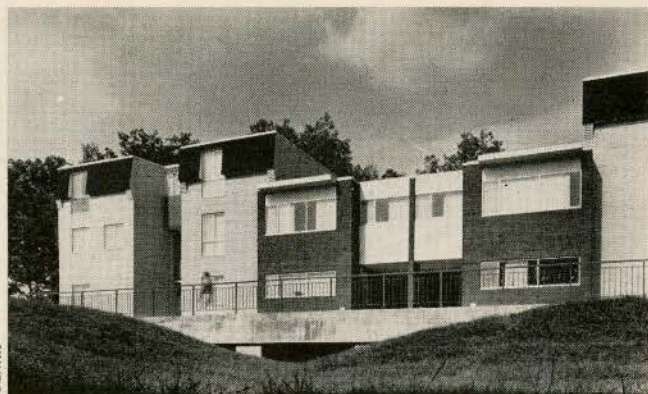
*Site plan of houses at Elsinore, Denmark, designed by Jørn Utzon. This grouping of court houses gives some indication of the direction in which the single family housing solution may evolve*



# Housing / A Search for Expression



*Delbrook Garden Apartments, Vancouver. Architects: Lund King & Associates, Vancouver*



CLARK

*Housing Court, Flemington Park, North York. Architect: Irving Grossman*



NEWTON

*The Cloisters of the Don, Don Mills. Architects: James A. Murray & Henry Fliess*

*Oakdale Manor, North York. Architects: Jack Klein & Henry Sears*

*In multiple housing, architects have been able to achieve cohesive communities with a sense of unity and a feeling of space. The nature of the problem allows the creation of an architectural symphony in which unity, repetition, variation, and progression in space all play their part — all the qualities that are so difficult to achieve in the individual single family house, because of the nature of the problem*



PANDA



# *Housing* / A Search for Focus

by *Humphrey Carver*



*Corner of King and Bay, Toronto. The geometrical centre of a great urban region is dedicated to the financial mechanics of society. Heart of the community's life has moved out to the suburbs*

IN TODAY'S CONFUSED, SCATTERED, and disorganized urban regions, we search for some new theme of design that could give coherence and meaning to city life.

The old heart of the city is no longer the focus of community affairs. It has become the control centre for the new public and private bureaucracies. Populations have departed into the sprawling spaces of the suburbs and taken with them most of the social institutions that used to compose the centres of great cities.

Yes, the heart of the city has been torn to pieces, and the fragments scattered far and wide. *Can we put these pieces together again to form new sub-centres around which city people can congregate with some real sense of attachment?*

The term "community planning" has surely little meaning, unless this is a social art focussed on the city elements that give purpose and coherence to our lives. Purpose of community planning, in its physical design, is to give outward expression to the underlying shape of social organization. Without such an aim, there can be no intelligible arrangement of housing in the growing city; there must be some recognizable and rational basis for placing many varieties of housing for people — at different stages of life, at different incomes, and with different choices of accommodation. These could be related to a system of regional sub-centres.

Cities remained in focus on a single centre as long as people's movements depended on walking and public transportation. Then came the tremendous upheaval of the last two decades, as everyone scattered in cars to low-density subdivisions and as industries decentralized to one-floor suburban plants served by trucks. The upheaval caught the art of town-planning unprepared. Only two general themes of urban design have been widely acknowledged, and neither of them has fitted the new circumstances. One of these is the "neighborhood" idea; the other, the notion of a satellite "new town."

The "neighborhood" idea is generally taken to mean the arrangement of family homes around an elementary school. (Size of this social unit is governed by teaching requirements and walking distance for children up to the eighth grade.) By this definition, the attention of a neighborhood is focussed on an educational nursery. This is a limited, if important, community of interest and excludes many people and most of the vital institutions around which city life actually revolves.

For instance, high schools are far more significant than elementary schools. Besides giving secondary education, they generally provide adult night classes — a matter of increasing importance in an age of rapidly changing technology. Further, their auditoriums are used for many kinds of public performance.



And what of the suburban shopping centre? This clearly lies outside the elementary school neighborhood and has now demonstrated its importance as a social magnet.

And what of churches and libraries and recreation centres and medical clinics and restaurants and all the other apparatus of a community's social life? There is no need for these in the main city centre, and they obviously have no place on the domestic hearth of an elementary school neighborhood. So the design of the urban region must be based on a social unit considerably larger than the "neighborhood."

The satellite "new town" idea is, of course, an inheritance from the theory of Garden Cities, enunciated by *Ebenezer Howard*, sixty years ago, and linked with antecedents in Utopian literature. Much of this philosophy is inspired by a hostility to old-fashioned big cities in which the poor industrial worker is seen chained to a grimy satanic factory in a central district, far from the healthy pastoral landscape, where shepherd and maidens pose in Elysian virtue.

To plant a new industrial settlement out in the greenbelt seemed to be the obvious way of recapturing some of this rustic innocence. But circumstances have changed; the size of the metropolitan city is no longer sinister. That is where everyone wants to go, because in the big city are the most favorable opportunities for mobility of employment and personal advancement. Furthermore, the curse has been taken off the big city by the mobility of travel; we can visualize, at least, the possibility of free-ranging travel on regional parkway systems. So the original motive for the satellite "new town" has largely disappeared. Rather than trying to project satellites into the greenbelt and further extending urban sprawl, it would be better to try to keep city growth more compactly clustered around new focal points within the suburbs.

These are, briefly, the arguments for believing suburban "Town Centre" should now become a most important feature of community planning. Three or four family neighborhoods can be linked together by a new Town Centre, serving their common needs. Housing of higher density can be clustered around each centre, providing apartments, town-houses, and rows for older people, and for unmarried people, who are not naturally accommodated in child-raising neighborhoods and are specially dependent on the services of a Town Centre for shopping, eating, and social relationships.

*How would such Town Centres be created in the process of urban expansion?* Here is a new and challenging opportunity for the arts of local government, community planning, and architecture.

Each metropolitan government might well assume responsibility for acquiring sites and looking after the development of centres for its daughter communities. In the traditional role of a senior state, it could look after new settlements of its people, until they become ready to assume responsibility for their own affairs. In the evolution of administrative systems for the modern urban region, we are clearly still at a primitive stage; so far, metropolitan regional government has largely been considered as a static system rather than an organic process for nurturing and shaping new growth. This process can



MOUTIER, Switzerland

be resolved into a series of specific actions — the establishment of each new Town Centre could mark the creation of a new community in the region.

The design of such Centres offers an opportunity for the finest civic and landscape design, to provide a campus-setting for the important features of community affairs. Here, church and school can be restored to their proper place at the centre of our lives.

Restaurants and fountains, the shop-window and the shade-tree, the sculpture in the piazza, the concert hall and the steps where you meet your friends — here the centre of town can regain its place as the principal theatre of city life.

*Here, instead of merely serving the mechanical functions of shelter, architecture could once more become both serious and contemplative.*

GUELPH, Ontario





QUEBEC CITY, Quebec



SERVICE D'URBANISME

SUDBURY, Ontario



*Founders of the oldest Canadian cities followed the European tradition of building communities around formal town centres. At the heart of 18th-century Quebec is a harmonious composition of civic, educational, and religious buildings. Among Ontario cities, perhaps Guelph (bottom of pages 60 and 61) retains most clearly its 19th-century intentions for public squares and church sites. The modern city is deprived of this individuality and social expression. From coast to coast, our blunt commercial "Main Streets" are indistinguishable from one another. As marketplaces, our shopping streets have suffered from the interruption of wheeled traffic. Is the clutter of Sudbury's town centre as inviting to a shopper as that limpid pool of space in the little town of Moutier?*

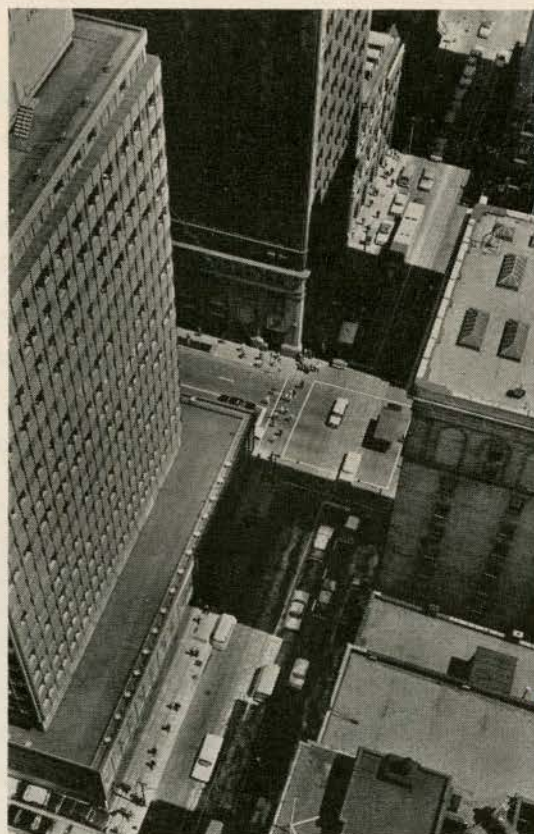




**Growth and Change of the Town Centre Measured on the Main Axis of Toronto:** *As the active community life of the regional city spreads farther from the original downtown core, new town centres should be planted at focal points in the design of the suburbs. Thus, the sprawling city can grow in an organic pattern of new communities, each clustering around a service centre with individual character and civic dignity. Along Yonge Street, the north-south axis of Toronto, are a series of focal points, each having its dynamic function in the life of the city. At St Clair and Finch are well developed hearts of local communities; these may be prototypes for future centres farther out on the axes of the city's growth*



**EGLINTON & YONGE:** *At the uptown head of the subway line, a handsome group of new office buildings has rapidly congregated to form a new work centre. This is, in effect, a detached piece of the downtown business centre, closely connected by rapid transit, taking some of the traffic load off the centre*



**KING & YONGE:** *Here, at the starting point of the axis, the street is a narrow chasm, overshadowed by the vast bulk of the city's administrative bureaucracies, where the initiative is generated for the further expansion of the spreading urban region*





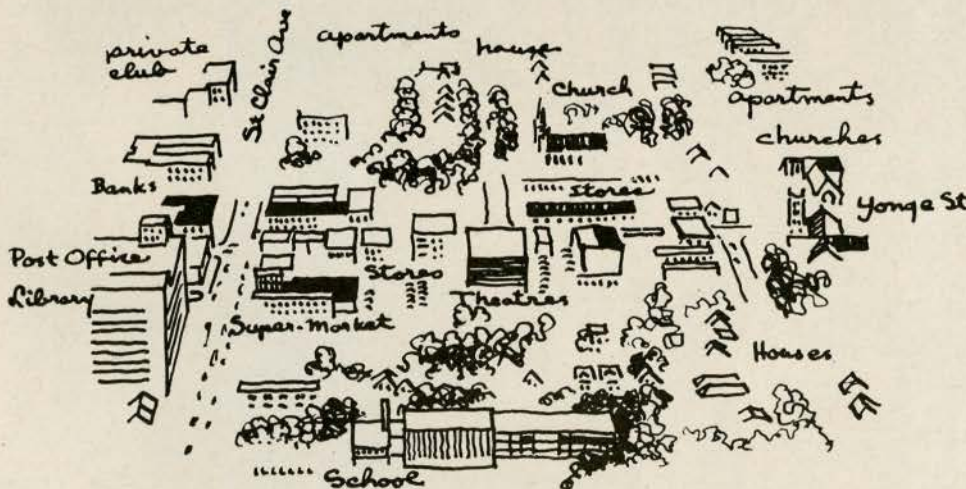


PANDA

*FINCH & YONGE: Here, the township of North York has grouped some community buildings to form a rudimentary town centre. Largest building is the public library with the swimming pool and community hall nearby. The post office and municipal services are also close*



*ST CLAIR & YONGE: Since the 1920s, this intersection has been the heart of a suburban community – originally at the head of the streetcar line. Without conscious vision or design, all the elements of a town centre gathered here – churches, library, school, and a complete roster of restaurants and shops. Shown in its present mantle of trees, it almost resembles a New England town. The recent crop of apartment houses on Avenue Road has added an additional flavour of Vallingby, the model suburban satellite of Stockholm (page 65). Such a spontaneous gathering of a town centre is not likely to occur again without deliberate planning and design*







*ABOVE: Endless, shapeless suburbs, without climax, without reason*

*BELOW: Vigorous, intelligent attempt to give focus and meaning to the arrangement of suburbs. Don Mills, Toronto*

HUNTING SURVEY







FLYGFOTOTJÄNST OSCAR BLADH

*VALLINGBY: Stockholm suburb, reached by subway in 30 minutes. Note grouping of housing around the Town Centre and underground subway station*



*OTTAWA: CMHC and the Ontario government retained the town planning firm of Project Planning Associates to prepare designs for a large suburban housing site, Borden Park. Design shows family neighborhoods clustered around a small Town Centre, with parks and community buildings. High-rise rental housing is placed close to the centre, so shops and public transportation will be accessible to single and older persons*





BLAKE

*STEVENAGE: As other British satellite towns, Stevenage has a carefully designed centre to give coherence to the arrangement of residential areas and provide a focus for community life*



*BRACKNELL: British "New Town" for 25,000 population, besides its principal Town Centre, has three minor neighborhood centres. This is shopping square of Priestwood neighborhood*



# Mulgrave Park

Halifax, N.S.

Central Mortgage & Housing Corporation

Chief Architect and Planner: *Ian MacLennan (F)*

Project Architect: *Maurice Clayton*

Regional Architect: *A. McG. Henderson*

## Consultants

Architectural: *Leslie R. Fairn & Associates, J. Philip Dumaresq, Halifax*

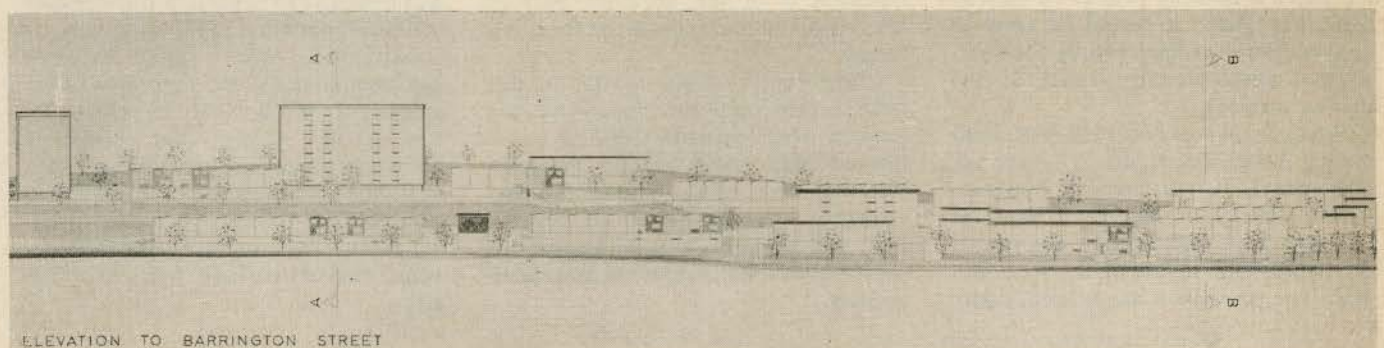
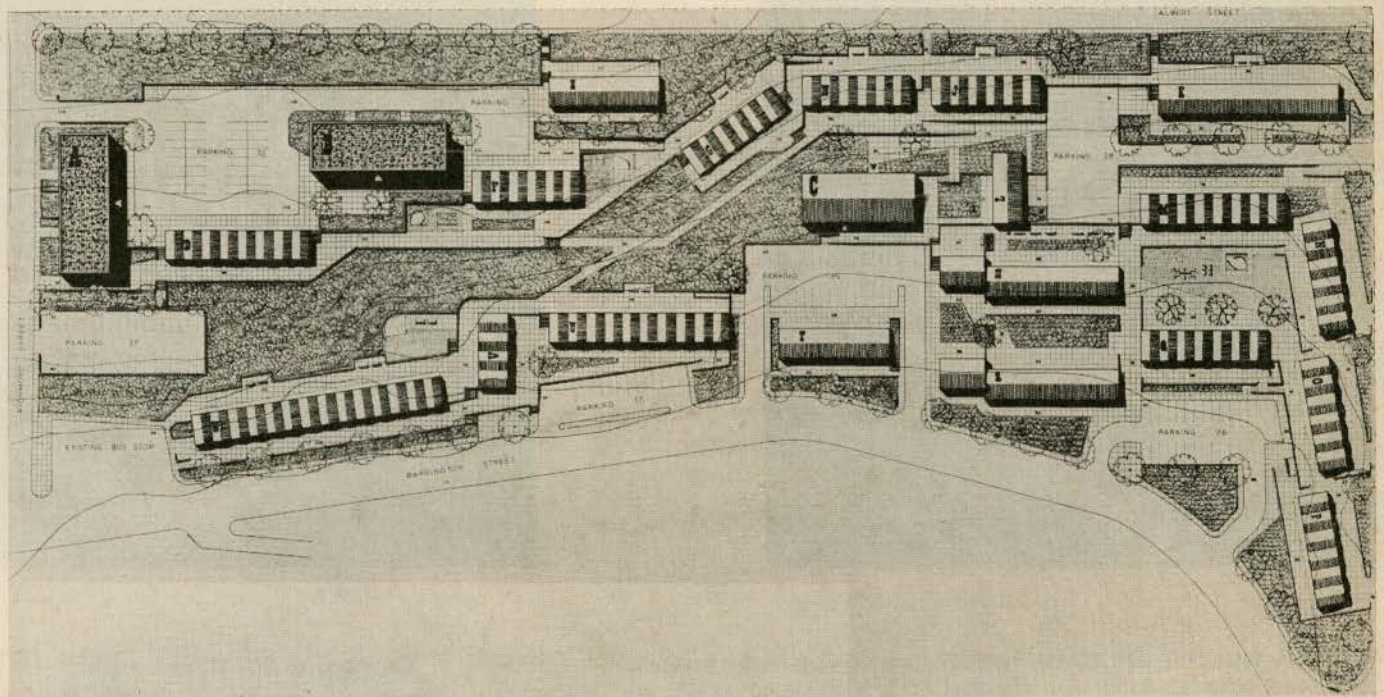
Structural: *Whitman, Benn and Associates, Halifax*

Heating and Electrical: *Connor and O'Neill Associates, Halifax*  
*H. H. Angus Heating Engineers, Toronto*

Services: *G. L. West, Commissioner of Works, Halifax*

## General Contractor

*Eastern Woodworkers Company Limited, New Glasgow, N.S.*





## Housing / Mulgrave Park



**I**N 1957, PROF. GORDON STEPHENSON'S urban renewal study for Halifax suggested a housing project be built at Mulgrave Park. It would be used to rehouse families displaced by the commercial development in part of the downtown area.

Apart from some barrack huts, built during World War II, the 11½-acre site was vacant. It was covered, however, with a steep 80-ft fall across much of the site. This reduced the amount of buildable land to about 8 acres. But this slope provides a magnificent pano-

ramic view of the harbor and the Angus L. Macdonald bridge to Dartmouth. Location is in the northern part of Halifax about two miles from the city's centre.

Construction started in 1958 on this federal-provincial-municipal housing project, which provides 348 low rental housing units under Section 36 of the National Housing Act. The federal government is paying 75 per cent of the cost, and the remaining 25 per cent is shared between the province and municipality.

Because of the limited amount of available building land in Halifax, it was essential to achieve a high density of accommodation. This was done by constructing two 9-storey high-rise apartment blocks; one 4-storey walk-up apartment block; and 19 blocks of row housing — the latter combining both apartment and maisonette units, all giving a total density of 32 dwellings per acre. The project provides for varying family sizes and contains bachelor (one, two, three, and four) bedroom units.





Halifax is of course one of the oldest cities in Canada; it contains in its older parts a large amount of the architectural vernacular generally found in the Maritime Provinces. Mulgrave Park recognizes this. The attempt has been made — by using forms of low pitched roofs, fronting gables, horizontal clapboard, strong wall colors, white trim, etc. — to continue the character so evident in the city.

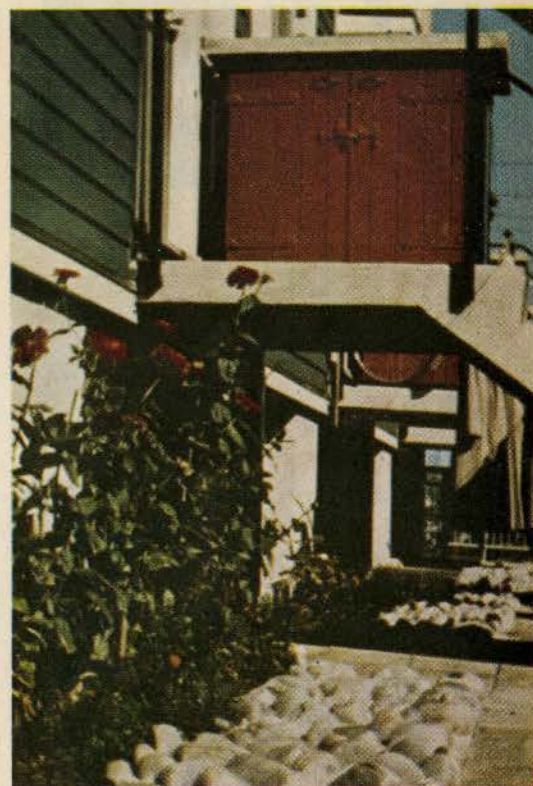
Primary aim of the design was to provide as much accommodation as possible with direct access to the outside. This, combined with such a steep fall across the site, meant the site planning was rigidly controlled by the contours of the ground — to provide adequate space for children's play areas, parking, and to give good access for fire-fighting and delivery vehicles.

Convenient site access for baby carriages to each unit, without the necessity to use steps, was also required. The retaining walls needed for these facilities have been used with the buildings themselves to create and define individual spaces throughout the project. Where possible, designs have been cast into the concrete walls to help achieve the lively and exciting quality essential in a scheme of this nature.

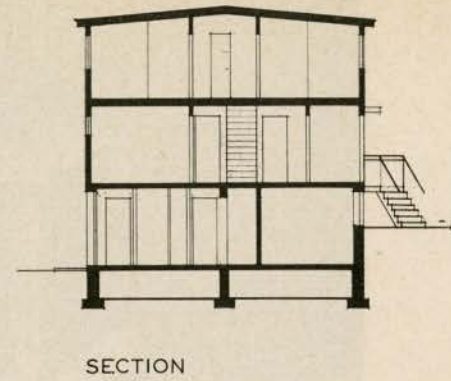
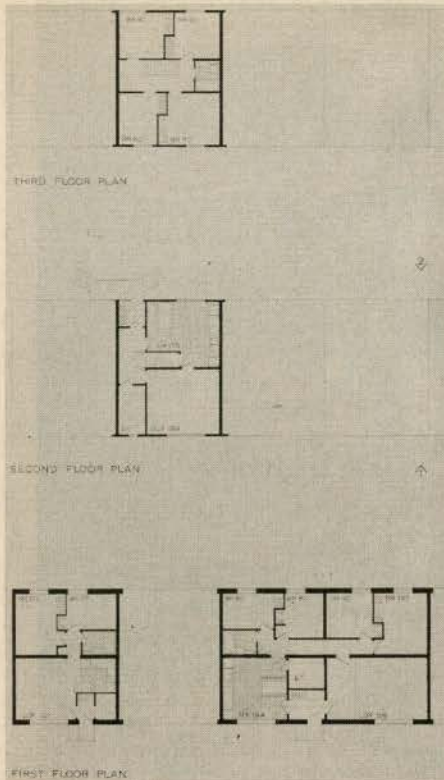
The high-rise apartments are of reinforced concrete with brick facing. The walk-up apartment is of load bearing masonry walls, with reinforced concrete floors. Ground floor of the row houses, containing the apartments, is reinforced concrete; the upper storeys, containing the maisonettes, have masonry party walls for fire and sound protection, with the external walls frame constructed.

A coal-fired heating plant, in a central boiler house, supplies hot water for both heating and domestic use.

Storage space for the Housing Authority has been located throughout the project as well as eight communal laundry rooms. These have been provided owing to a lack of space for adequate external drying areas for each tenant. At the site's south end, space is also available for four small shops — in the ground floor of the row house block, adjacent to the main bus stop.







#### Materials & Suppliers

Windows: *Security Windows, Montreal*; Floor Tile: *Dominion Oilcloth and Linoleum Limited*; Roofing: *Murray Brantford*; Plumbing Fixtures: *Crane*; Bricks: *L. E. Shaw Limited, Halifax*; Boilers: *Robb Engineering Limited, Amherst, N.S.*; Hardware: *Schlage*; Paints: *Standard Paint Company Limited of Newfoundland*; Exterior Stains: *Cabots*.



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SI LE TARIF DE 1912 n'accuse pas de regain de jeunesse et de ce fait continue à causer des maux de tête et surtout de bourse à plusieurs, on ne peut imputer de manquement à l'administration courante.

En effet, à son assemblée du 1<sup>er</sup> août dernier, le Conseil avait adopté une dernière version du Tableau des honoraires dont le passage le plus significatif est sans aucun doute celui qui prévoit un pourcentage minimum de 6½% sur le premier demi-million et de 6% sur toute tranche au-delà.

Dans la semaine qui a suivi l'adoption, le président, *Paul-O. Trépanier*, s'est empressé de solliciter une entrevue du premier ministre de la province dans le but de lui exposer et expliquer les grandes lignes des modifications apportées et les raisons à l'appui de ces changements. *Monsieur Lesage* nous a alors fait savoir que ses "nombreux engagements pris pour l'été et pour l'automne" l'empêchaient de fixer un rendez-vous à ce moment. Et puis, le déclenchement des élections!

C'est donc dire que le tarif va mûrir encore quelques mois, ce qui ne sera pas nécessairement de nature à consacrer chez les membres l'unanimité d'interprétation surtout en ce qui concerne les numéros 8 et 12 en particulier. De toute façon, nous avons inscrit une note pour le 15 novembre de revenir à la charge.

Il en va de même bien entendu des bills des architectes, des ingénieurs et des urbanistes; il faudra attendre la constitution du nouveau comité des bills. Dans l'entretemps, on n'a rien relégué aux oubliettes; on est à refondre presque entièrement la Loi des architectes. Autant en profiter, s'est-on-dit, pour corriger tout ce qui semble incorrect ou imprécis. Du côté urbanisme, le Conseil a formé depuis un Comité spécial sous la présidence d'*Andre Blouin* avec mandat de faire une étude approfondie de la question et par la suite de rencontrer les requérants du bill et de leur soumettre une nouvelle définition des termes.

L'autre point principal qui retient l'attention du nouveau comité a trait aux conditions d'entrées des architectes dans la Corporation à créer. Qui est le plus près de l'urbanisme? L'avocat, le sociologue, le géographe, ou l'architecte? Voilà une question qu'il est fort légitime de se poser. Un texte déjà proposé ne semblait pas faire de différence entre ces hommes de profession.

Dans un autre domaine non moins controversé, c'est-à-dire les règlements de l'AAPQ, un effort suprême a été fourni au cours des derniers mois. Pas moins de vingt assemblées de comités et du Conseil ont eu lieu dans le but de reviser tous les règlements y inclus le

Code d'éthique. Ce ne fut pas chose facile, les avis étant fort partagés sur plus d'un sujet. Tout d'abord, disons tout de suite qu'à l'instar de l'OAA, l'Association a divisé les règlements en trois documents distincts: (1) les règlements généraux de l'Association (2) les règlements relatifs à l'admission et (3) le Code d'éthique. Signalons ici quelques-uns des amendements apportés.

Le comité des nominations dont le quorum est d'au moins 5 anciens présidents et d'au moins 2 délégués des sociétés régionales dresse une liste de 15 candidats dont 2 du District de Québec et dont au moins 7 ont fait partie du Conseil au moins une année. A part la liste proposée par le Comité, d'autres candidats peuvent également être mis en nomination par 10 membres; le nombre de proposeurs requis était de 8 auparavant. Le bulletin de vote indiquera l'année d'admission dans l'Association. Dorénavant, c'est le président de l'Association qui agira comme président d'élection, à condition, il est clair, qu'il ne soit pas de nouveau sur les rangs.

Sauf au cas de maladie ou de congé approuvé par le Conseil, tout membre du Conseil qui est absent à 3 (au lieu de 4) réunions consécutives sera considéré comme démissionnaire. Le Conseil se réunit au moins 10 fois par année. Précédemment c'était à chaque mois. Le quorum du Conseil a été porté de 5 à 7 membres.

Toute question d'intérêt général pour l'Association peut être soumise à l'assemblée annuelle, à condition d'en demander par écrit au secrétaire l'inscription à l'ordre du jour au moins trois semaines avant l'assemblée. A l'assemblée annuelle, on ne peut discuter que des items inscrits à l'ordre du jour.

Ce n'est plus le Conseil, mais bien l'Association, à l'assemblée annuelle, qui retient les services d'un comptable

agréé aux fins de vérifier les livres de l'Association, ce qui est plus conforme à la pratique en vigueur dans le monde des affaires. Une assemblée générale spéciale peut être convoquée sur demande signée par 25 membres, et non plus 10. Le quorum d'une assemblée générale a été haussé de 15 à 35.

Le Comité exécutif, maintenant constitué légalement, a le pouvoir de disposer des affaires courantes n'impliquant pas une décision de politique générale. Désormais, le Conseil ne nomme que les présidents de Comités; à leur tour les présidents choisissent les membres de leurs comités, sujet toutefois à l'approbation du Conseil. Seuls les Comités d'admission & bourses, de pratique professionnelle, et de législation & règlements devront par règlement être présidés par un membre du Conseil ou par un ancien président.

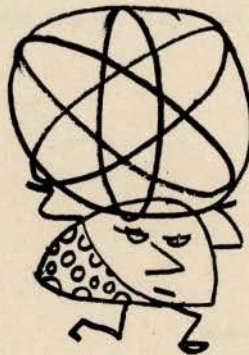
Les Comités à demeure sont au nombre de 11 maintenant, au lieu de 9, dont ceux des finances et des honoraires. Le président du Comité d'admission & bourses ne sera ni professeur à plein temps ni directeur d'école. Ce comité recommande également au Conseil les personnes qu'il juge dignes de bénéficier des bourses d'études de l'Association.

Ce qui ressort principalement de toutes ces modifications, c'est que le Comité de législation & règlements et le Conseil ont voulu adapter les règlements généraux à la conjoncture actuelle et à la situation présente de l'Association. Le quorum de certaines assemblées était beaucoup trop bas, eu égard au nombre qui dépasse maintenant les 730.

Par exemple, la réunion générale pouvait se tenir en présence de 15 membres seulement, et lorsqu'on sait que les ⅓ des membres présents peuvent amender les règlements, il s'en suivait un risque évident qu'il fallait de toute nécessité écarter. D'autre part, il existe une limite maximum. Logiquement on pourrait ou devrait exiger une représentation d'au moins 15%, ce qui signifie au-delà de 100 architectes; mais l'expérience démontre qu'à aucune séance d'affaires jusqu'ici ce chiffre n'avait été atteint.

De là les questions qu'on est en droit de se poser sur les moyens à prendre pour stimuler l'intérêt des membres aux affaires de l'Association, qui en somme sont leurs affaires. Peut-être est-ce là une marque de confiance illimitée envers les dirigeants de l'heure?

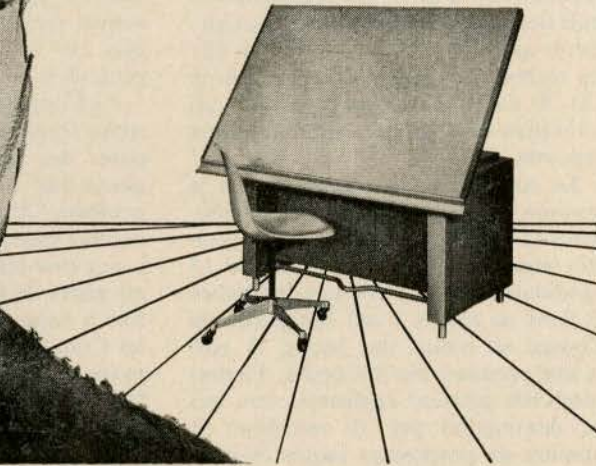
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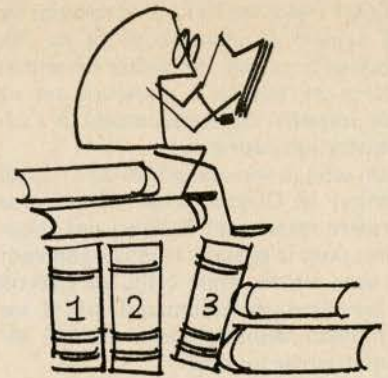
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## BOOK REVIEWS

**FRAME ANALYSIS: A UNIFIED INTRODUCTION TO THE MATRIX ANALYSIS OF STRUCTURES.** By A. S. Hall and R. W. Woodhead. Published by John Wiley & Sons, Inc.

USE OF STRUCTURAL frames in buildings is well known to architects and structural engineers. When these frames or frameworks are composed of discontinuous elements, the problems of structural analysis and design are relatively simple and such frames have been employed extensively throughout the building industry.

With the development of new jointing techniques (welding of steel, gluing of timber and poured-in-place concrete), designers were quick to appreciate the aesthetic, economic, and other advantages of continuous structural frames. They were also confronted with more complicated problems of analysis that such frames presented.

Many techniques of mathematical analysis were developed for statically indeterminate structures, including such classical methods as "Virtual Work," "Moment Areas," "Slope Deflection," and "Least Work," which the late *Professor Thomas Clark Shedd* called the method of "Most Work." But the solution by these methods of any but the simplest of frames required considerable time and effort.

The development of the "Moment Distribution" method by *Professor Hardy Cross* in the 1920s greatly simplified the analysis of continuous frames. Their increased use during the 1930s, particularly in large engineering structures, attest to the significance of *Professor Cross's* work. Still, the analysis of many framed structures, especially those continuous in three dimensions, required a great deal of work, and this prohibited their use except in very special situations.



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It is not surprising, therefore, that following the last war, when electronic computers were used to solve many of the problems of business and industry, structural designers were hopeful they might be engaged upon the design and analysis of complex building frames. That they have been successful in this field is evidenced by the number of interesting structures built in recent years, where knowledge gained from studies by electronic computers has played a major role in design.

All this is by way of background to the following comments on the book *Frame Analysis* by Messrs Hall and Woodhead. The authors, civil engineers, teach at the University of New South Wales and are particularly interested in the use of electronic computers for structural analysis. Their book deals with the analysis of simple frameworks and covers the fundamental principles underlying various mathematical methods based on the assumptions of elasticity. In this regard the subject has been well covered by other writers.

This book is unique, however, because the material is organized and presented to form a basis for structural analysis by electronic computers. In solving any problem using computers, it is necessary to set up a program in terms the apparatus can apply.

In structural design, the notations of Matrix Algebra ("A system of grouping algebraic or numerical quantities in such a way that a single symbol suffices to denote the whole group") have been invaluable in providing such terms, and they are used extensively throughout this book.

Those familiar with structural design will undoubtedly recognize the basic principles and methods of analyses presented, even though they are treated in a somewhat different form. A prior knowledge of elementary frame analysis is assumed by the authors and would appear to be essential if a reader is to derive benefit from this book. Computers are not specifically mentioned, but their use is implied in the more difficult problems described.

*Frame Analysis* is a rather special presentation. It is not likely practising architects will find it of particular interest. It will probably be of greater value to structural engineers and students of structural design, who are concerned with mathematical analysis, and who wish to become familiar with structural frames expressed in terms of Matrix Algebra as a foundation for analysis using electronic computers.

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## Wind Pressures On Buildings

by W. A. Dalgliesh and W. R. Schriever

UDC 624.042.41

Wind is one of the significant forces of nature that must be considered in the design of buildings. Structural loads applied by high winds are readily appreciated, even if the method of determining them is not so easily understood. Other effects that can be caused even by moderate breezes are commonly overlooked, however, because very often there is no obvious link between wind and the behaviour of a building.

Masonry walls may be displaced by ice accumulating in the wall as a result of moisture-laden air drawn out of a building under the action of wind suction. Rain leakage around flashings and through joints in curtain walls may be due to a pressure gradient across the wall, and the functioning of ventilating and heating systems may be affected by pressure distributions where ducts and openings are located.

Thus it is not only the structural engineer who must consider wind action but the architect and mechanical engineer as well. The latter are often concerned with average or day-to-day pressures, whereas the structural engineer is chiefly concerned with the maximum pressures that can reasonably be expected to occur during the useful life of the structure.

### *Conversion from Wind Speeds to Wind Pressures*

Wind pressures exerted on a structure depend on the speed of the wind as well as the interaction between the air flow and the structure. Since wind is air in motion the pressures it can exert are related to its kinetic energy. If the full kinetic energy is transformed into

pressure then the resulting increase is given by the expression

$$q = \frac{1}{2} \rho V^2$$

where  $\rho$  is the mass density and  $V$  the velocity of the air. This is called the "stagnation pressure" and is the maximum positive increase over ambient pressure that can be exerted on a building surface by wind of any given speed. It is the basic pressure to which all other pressures over the structure are referred.

The wind speed to be used in computing the design pressure depends on the particular component of the building being designed. For structural purposes the maximum value is required and will vary with the geographical location. Meteorological records of wind speed are analysed to yield the most probable maximum that will be equalled or exceeded, on the average, once during a given period of time comparable to the life of a structure. In the *National Building Code of Canada 1960* the "return period," as it is called, has been set at 30 years.

### *Interaction of Wind and Structures*

The distribution of pressures and suction over a building depends largely on how it disturbs the air flow. In this discussion the datum from which all pressures and suction are measured is the ambient pressure in the undisturbed air flow.

When wind strikes a simple structure such as a free standing wall, the streamlines in line with the wall are forced to diverge and pass around the edges. The direction and magni-



tude of the original wind velocity are therefore altered by the encounter and cause changes in pressure.

Stagnation pressure is produced near the centre of the wall, but there is an increasingly steep pressure gradient towards the edges where the flow, diverted by the wall, regains its velocity in a direction parallel instead of perpendicular to it as before. Figure 1(a) is a plot of the pressures on the windward face.

Behind the wall a different situation prevails. The streamlines of flow are unable to come together immediately because of the inertia of the air and a wake is left where they are separated from the wall. Air from the wake region is "entrained" by the fast-moving flow lines, thus reducing the pressure below the ambient pressure of the undisturbed flow and creating "suction." Figure 1(b) shows the

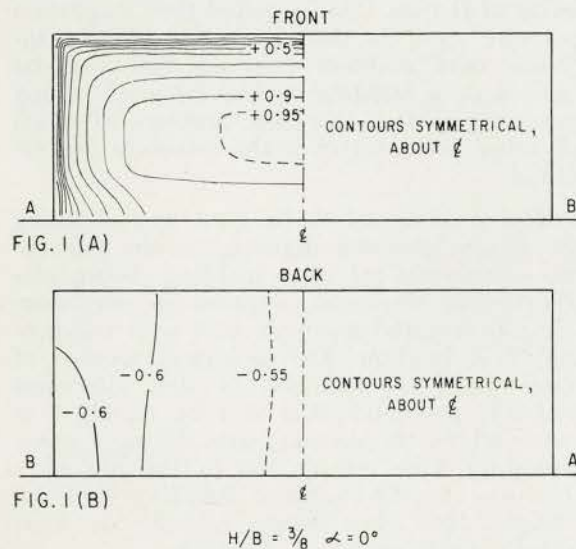


Figure 1

Pressure contours on a wall at right angles to wind direction (From: "Wind tunnel studies of pressure distribution on elementary building forms" by Chien *et al.* Iowa Institute of Hydraulic Research 1951)

pressure distribution for the rear of the wall. The numbers on the isobars (lines of equal pressure) are the factors by which the stagnation pressure is multiplied to give the pressure at the various points on the surface. These are the pressure coefficients (sometimes called shape factors) that relate the pressure and suction on a structure to the basic design velocity pressure or stagnation pressure. Negative values indicate suction.

Pressure is not usually constant over a wall or roof surface; but to simplify design procedures an average coefficient is specified for a given surface; when multiplied by the area and the basic pressure it gives the total force on the surface. The net force on the free standing wall would of course be the result of both the pressure on the windward side and the suction on the leeward side. Correspondingly, for an exterior wall of a building the net pressure on the wall would be the difference in pressures outside and inside the building, the inside pressure being a function of openings, as is discussed later.

### Flow Around a Building

Figure 2 illustrates a more complicated shape and the flow lines associated with it. For buildings with flat and low-sloped roofs the windward wall is the only surface subjected to pressure; all other surfaces are located in the wake where pressures are below the ambient. The reason for this is again that the flow lines deflected around the windward

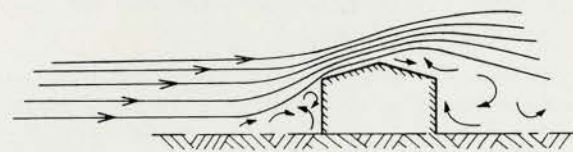


Figure 2

Flow lines around a simple building shape

edges are unable to "cling" to the building surfaces as they pass around the sharp corners and a separation occurs between the wind and the building. Figure 3 is a cross-section of the pressure distribution on the building. It should be noted that the pressures are not uniform and that, in particular, certain small areas experience suction much higher than the average.

### Pressure Coefficients

Pressure coefficients used in practice have usually been obtained experimentally by testing models of different types of structures in wind tunnels. Commonly used coefficients refer to the average pressure or suction over a surface. Tangential forces are considered insignificant, so that the forces referred to act at right angles to the surfaces in question. Values for a fairly wide range of building shapes are catalogued in Supplement No. 3 to the 1960 edition of the *National Building Code of Canada*, "Handbook of Pressure Coefficients for Wind Loads 1961."



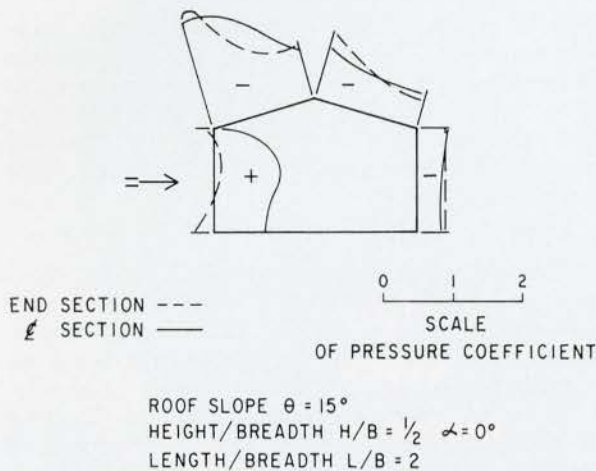


Figure 3

Distribution of pressures (+) and suctions (-) on house with a low-sloped roof with wind perpendicular to eave

#### Variables Affecting Pressure Distributions

**Building Shape.** Pressures on certain parts of a structure are rather sensitive to changes in the shape of the building. The suctions on the windward roof slope, for instance, vary considerably with the slope of the roof, the ratio of height to width, and the ratio of width to length of the building. Suctions on the leeward wall, on the other hand, are not greatly affected by such variables.

Sometimes shape details have an unexpectedly large effect on the wind pressure distribution. Parapet walls, large chimneys, silos and spires may have a considerable influence, and often the only way to assess such effects is to test a scale model in a wind tunnel.

**Openings.** The size and location of openings such as windows and doors determine the internal pressure that must be considered in the calculation of net forces on walls and roofs. Internal pressures tend to take on the values appropriate to the exterior of the wall in which the openings predominate. If they are small and uniformly distributed, values of  $\pm 0.2$  are recommended, the more unfavourable of the two to be considered in each case.

**Wind Direction.** The orientation of a building to the wind has a marked effect on pressure distribution, particularly on suction maxima, which occur over a small area near the leading edges of roofs. The "Handbook of Pressure Coefficients for Wind Loads 1961" provides special local pressure coefficients for such areas that may be used in designing fas-

tenings for roofing, building panels and similar details.

**Increase of Wind Speed with Height.** Since the wind speed and consequently the velocity pressure increase with height above the ground, a height factor is applied to the basic pressure (based on a height of 30 feet) in the design of buildings. For example, if a building is 90 feet high, the height factors that apply are 0.8 for the first 20 feet, 1.0 for next 20 feet, and 1.2 for the top 50 feet.

**Shielding.** Other buildings, trees and similar large objects in the immediate vicinity have a bearing on pressure distribution. The shielding provided is usually difficult to estimate, and model tests provide the most convenient means of determining design values. The assignment of reductions for shielding is complicated by the fact that conditions could change during the life of the structure. Shielding does not always have a beneficial effect, and in some cases suction coefficients should be increased because of the proximity of a neighbouring building.

#### Wind Pressures (On Various Parts of Buildings)

**Roofs.** The roof is usually the critical area in the wind design of low buildings, particularly residential structures. Where it is made up of light-weight components particular attention must be paid to anchorage details because of the suction condition prevailing over most, if not all, of it. A good example of such precautions is the time-honoured custom of weighting roofs in Alpine areas with large stones.

**Critical Angle, Windward Slope.** For every sloped roof there is a certain slope angle at which the suction coefficient over the windward slope reaches a numerical maximum. For low buildings this angle may be around 5 degrees; for average shapes such as the usual bungalow, from 5 to 15 degrees. For higher buildings with height to width ratios ranging up to 2:1 the critical angle may be as high as 25 or 30 degrees. The average pressure coefficient for the critical angle is in the range  $-0.7$  to  $-1.4$ .

**Steep Roofs.** As the roof slope increases beyond the critical angle the average pressure coefficient decreases numerically to zero; it then increases in a positive direction, indicating pressure, to a maximum of  $+0.8$  or so for a slope angle of 90 degrees (i.e. in the plane of the windward wall). The angle at which



the coefficient is zero varies from 20 to 45 degrees, increasing with the ratio of height to width of the building.

*Leeward Slope.* The effects of slope and building dimension ratios are much less pronounced on suction on the leeward slope and for general purposes could probably be disregarded. Average values range from  $-0.5$  to  $-0.8$  for most building shapes and slopes.

*Local Suctions.* Local suction is most serious for wind at an angle (usually about 45 degrees) to the side of the building. Local pressure coefficients of  $-2.0$  are not unusual, and in certain model studies values down to  $-5.0$  have been measured over very small areas near corners projecting into the wind; this indicates the importance of proper fastening of roof coverings at such points.

*Walls.* For tall, slender structures the design of the walls and the frame, with regard to overturning moment, are likely to be critical. The trend toward high-rise buildings and curtain wall construction may lead to greater problems in limiting sway and in specifying the strength of fastenings for wall panels. Although average coefficients for leeward and side walls are only  $-0.5$  to  $-0.7$  high suction occurs just around the corners from the windward edges, and where stagnation pressures are high (near the top of tall buildings) these local suction may be appreciable (possibly as high as  $-1.5$ ).

*Shielding.* Model tests investigating the effects of building proximity have shown that where two buildings are close together rather high suction may occur on the facing walls if the wind blows parallel to the "alley" between them. Average values of  $-1.0$  have been measured, with local suction along the windward edges as high as  $-2.0$ .

#### *General Comments*

*Dynamic Nature of Wind.* It is well known that wind is far from steady and that pressures on a building fluctuate widely both in time

and in space. Design procedures to the present time have been based on the substitution of static loads considered equal to or greater than actual dynamic loads in their effect on the structure. Design speeds for the *National Building Code of Canada 1960*, however, have been based on gust speeds (duration of 3 or 4 seconds) and not on hourly mean speeds.

Certain types of structures such as tall slender buildings, masts or chimneys may react dynamically to a certain periodic gustiness. Other structures may cause an unstable flow pattern to be set up that will result in oscillatory forces. The possibility of dynamic loading of this nature necessitates the development of design procedures in which the dynamic structure of the wind and the dynamic response of the building are investigated. Research is being carried out along these lines at present.

*Measurements on Full-scale Buildings.* Perhaps the greatest need is for check measurements on full-scale structures in natural wind. The expense of instrumenting structures is high and the great variety of shapes and sizes precludes anything like an exhaustive study. Such checks are now being made, however, to give added confidence in the use of coefficients obtained from model tests.

#### *Conclusion*

Pressure coefficient tables now available are considerably more extensive and accurate than were those of previous simple approaches. Many more variables known to be significant have been taken into account and many new situations have been investigated.

Inevitably design procedures are becoming more complicated. In dealing with a phenomenon as complex as wind the prospect is for more involved load assumptions rather than the reverse. By recognizing the features that are actually significant, however, the designer will be able to provide a more deliberate and balanced degree of safety and economy in his structures.

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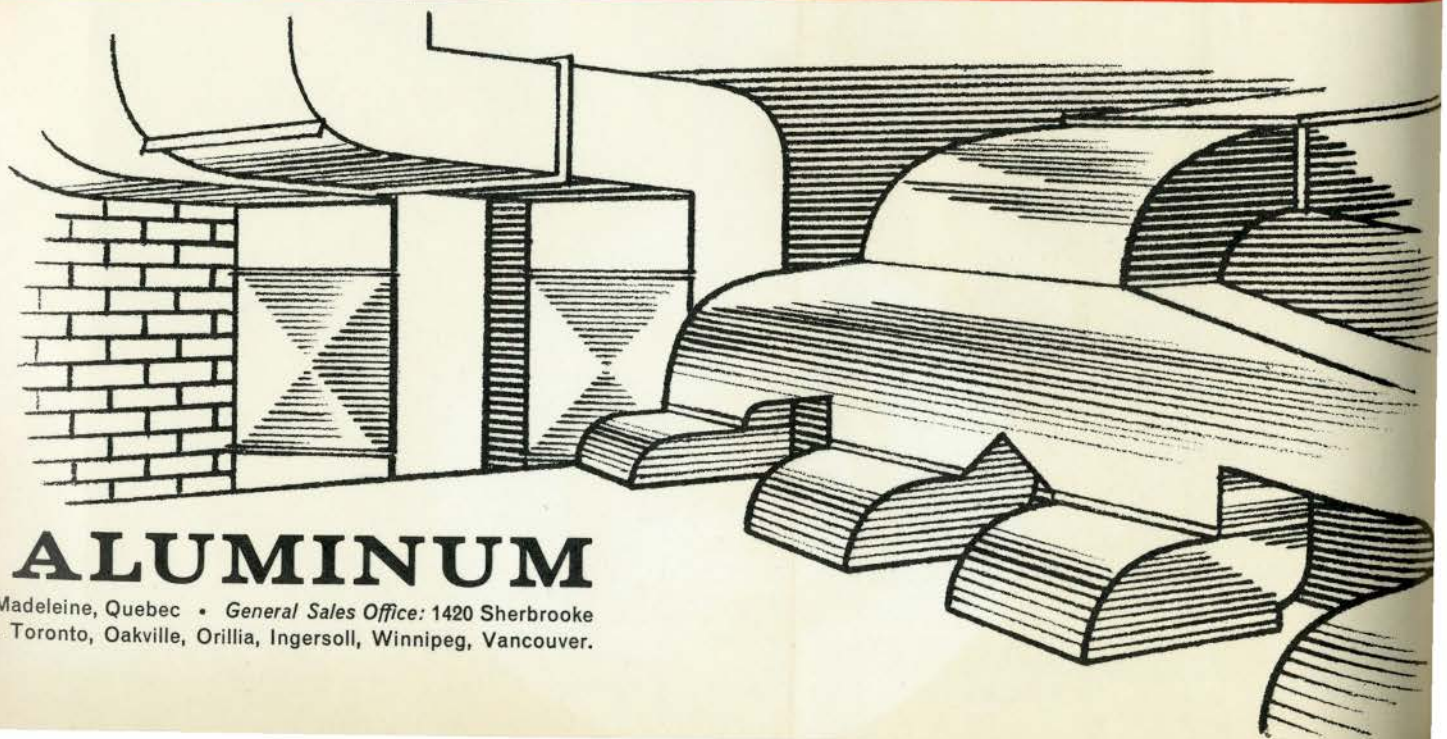
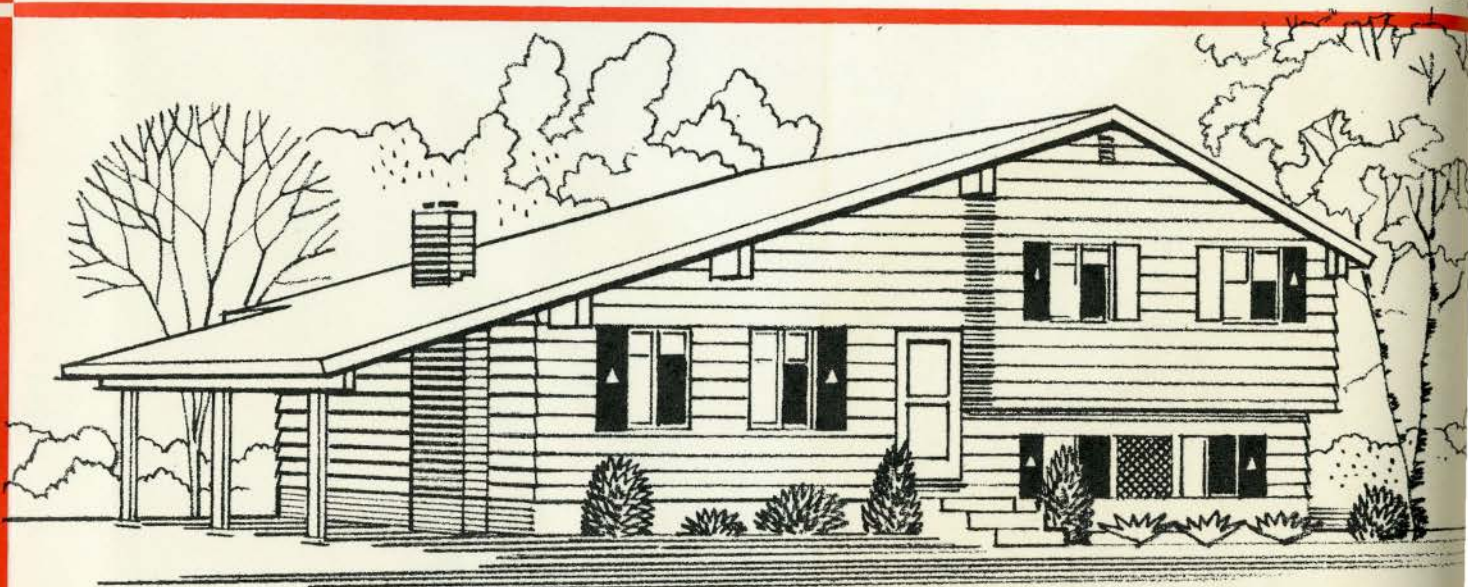
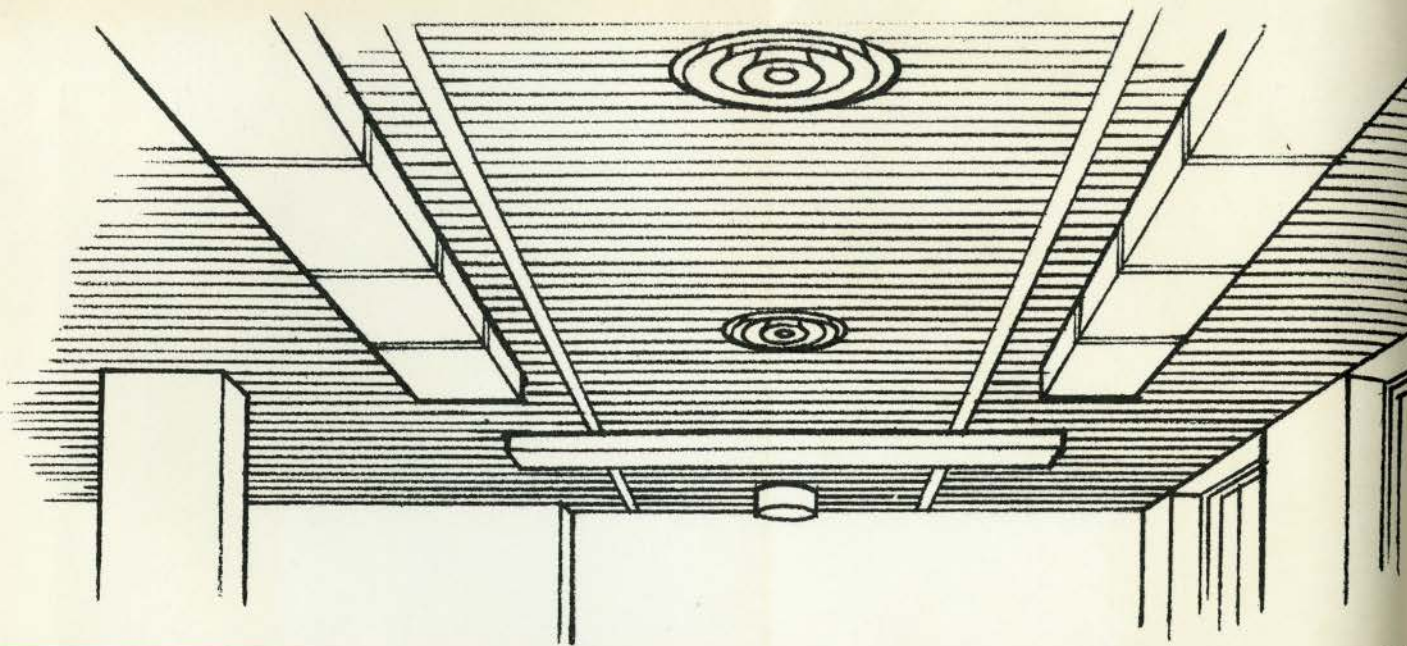
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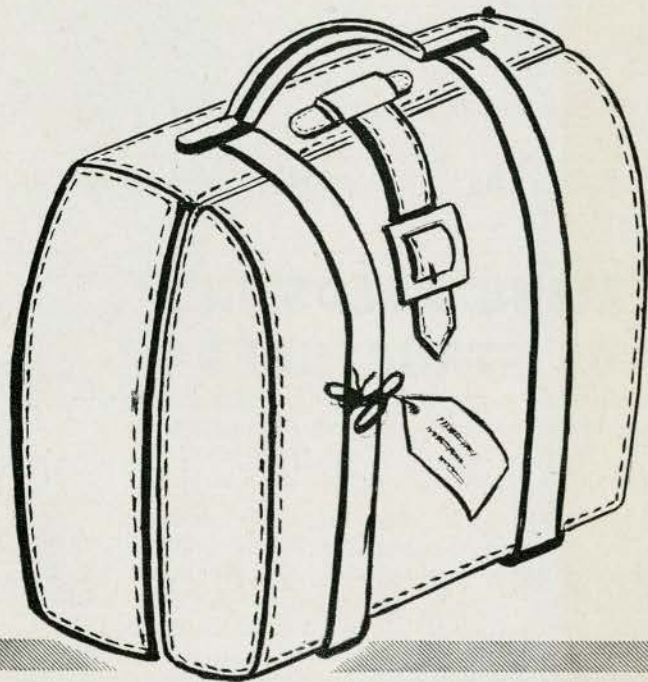


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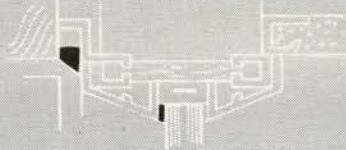


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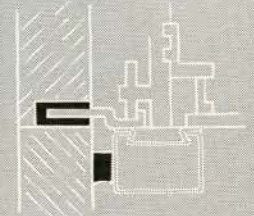
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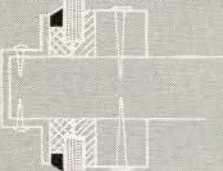
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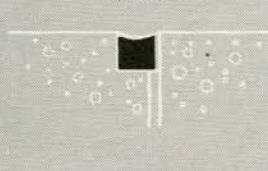
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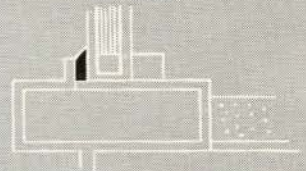
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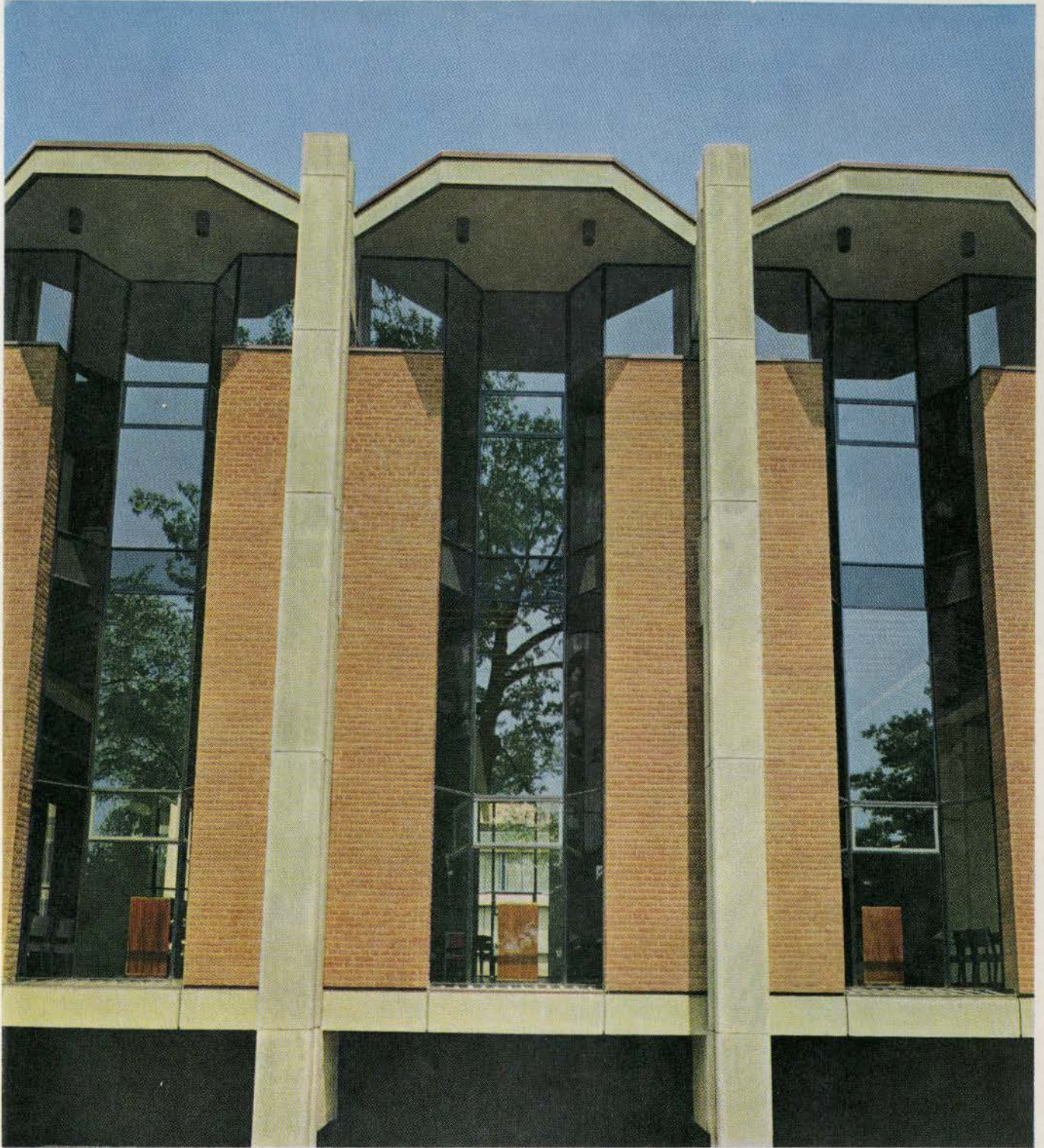
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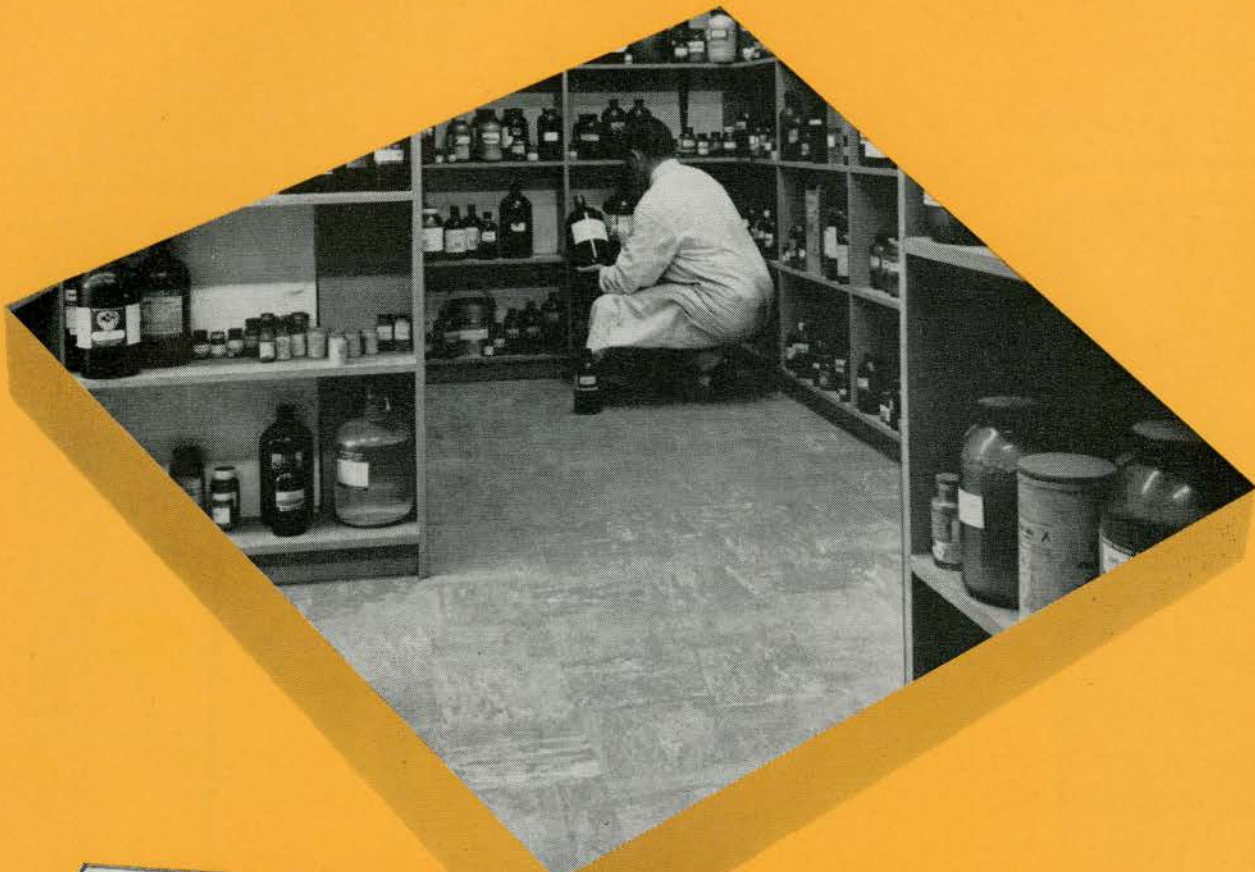
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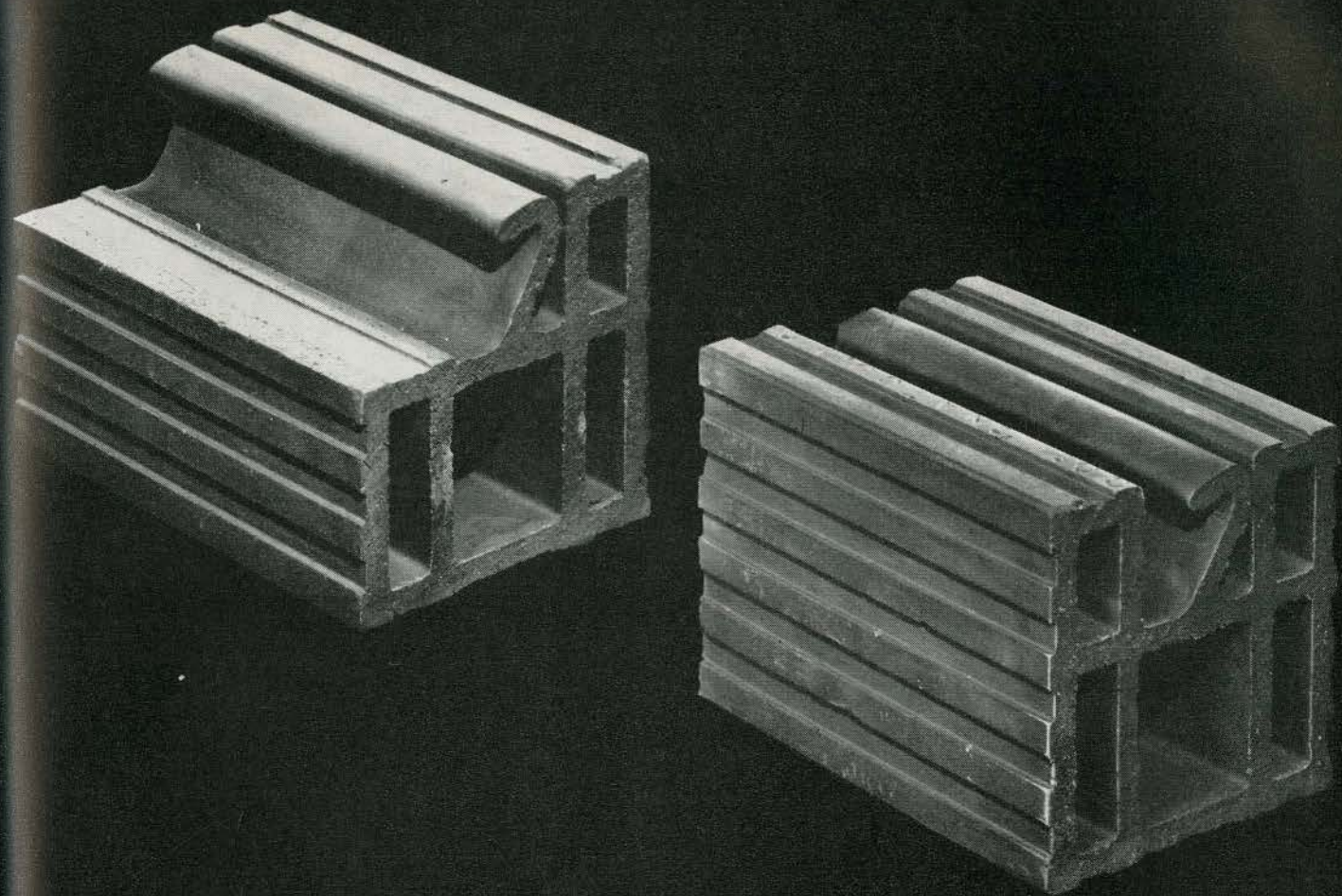
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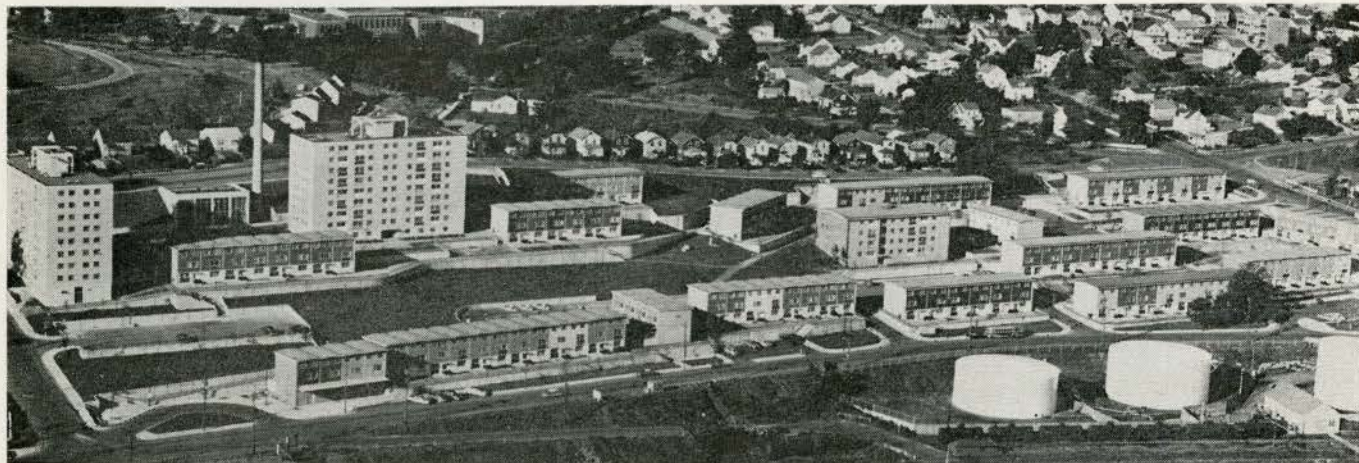
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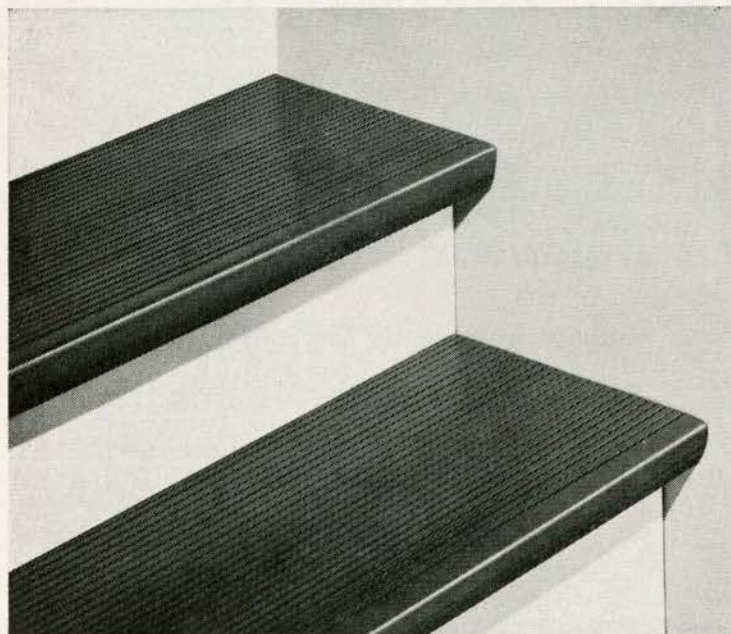
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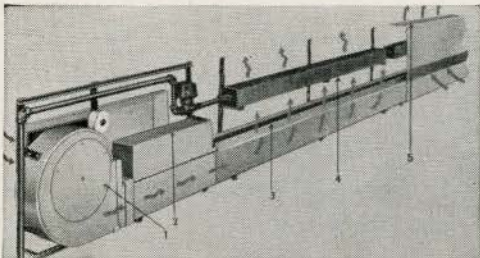


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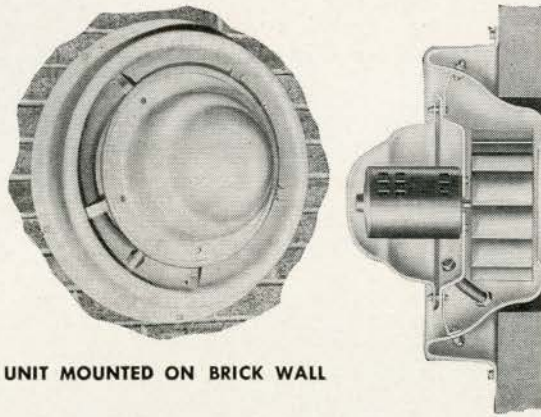


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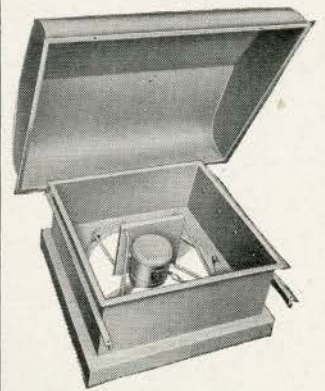


**FIBER-AIRE CENTRIFUGAL WALL VENTILATOR**

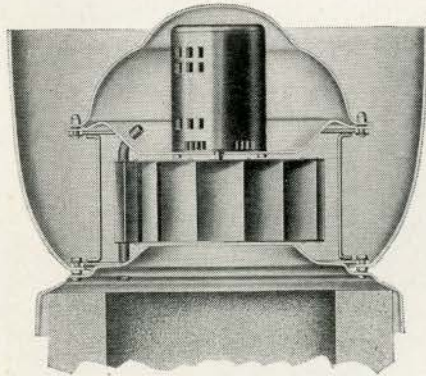
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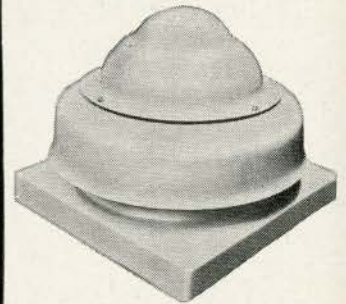


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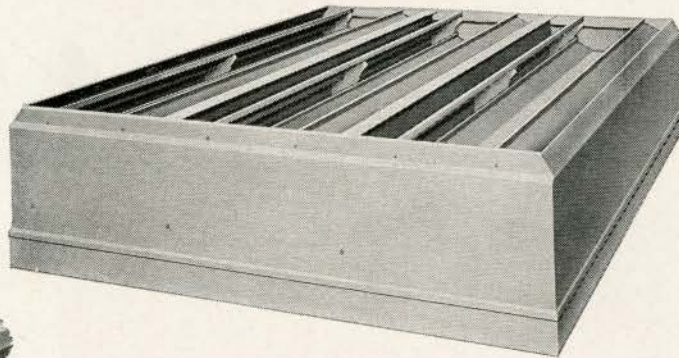
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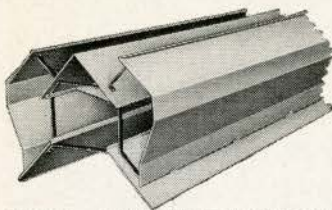
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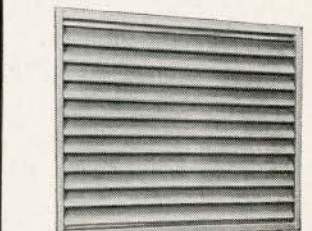


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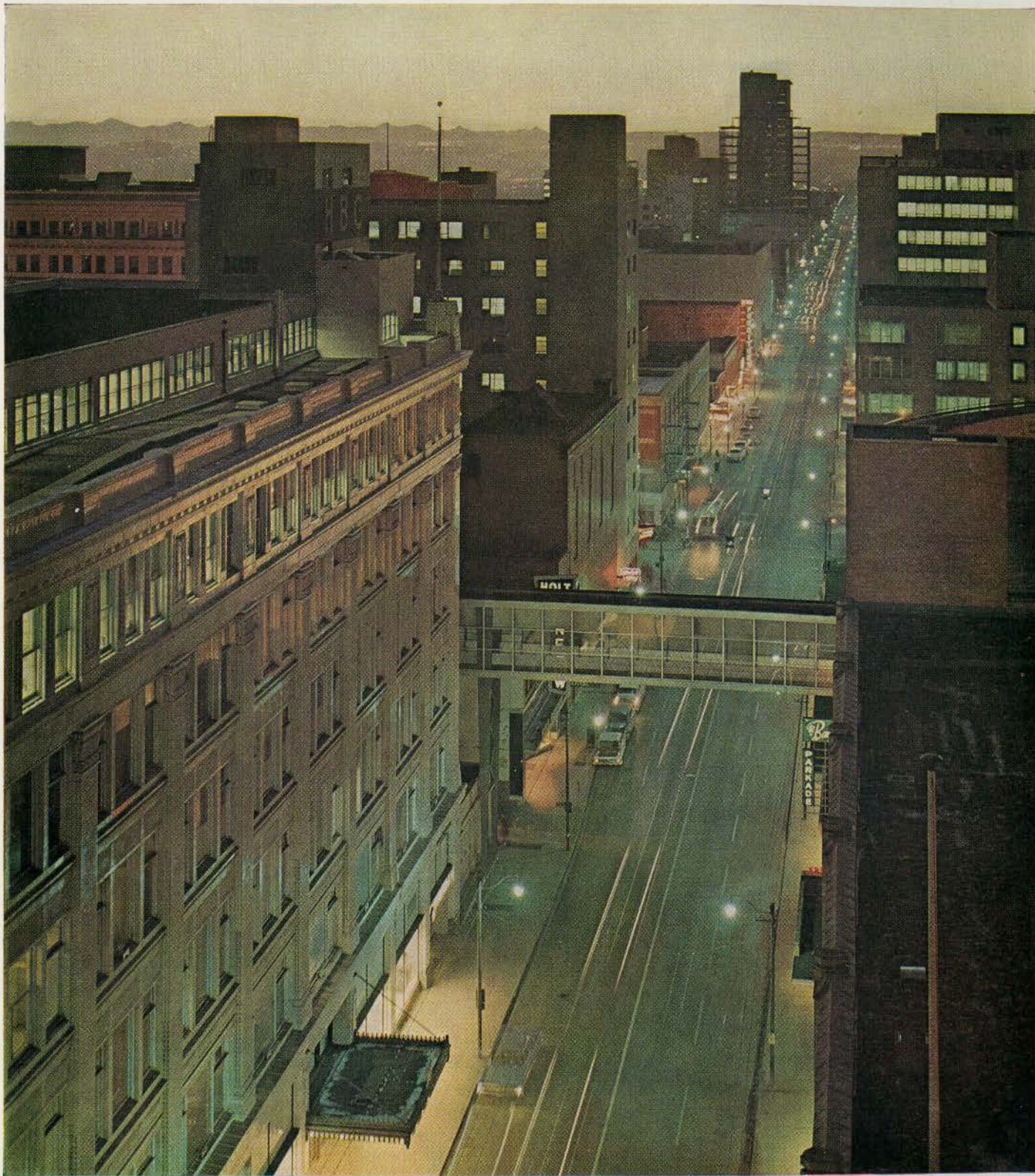
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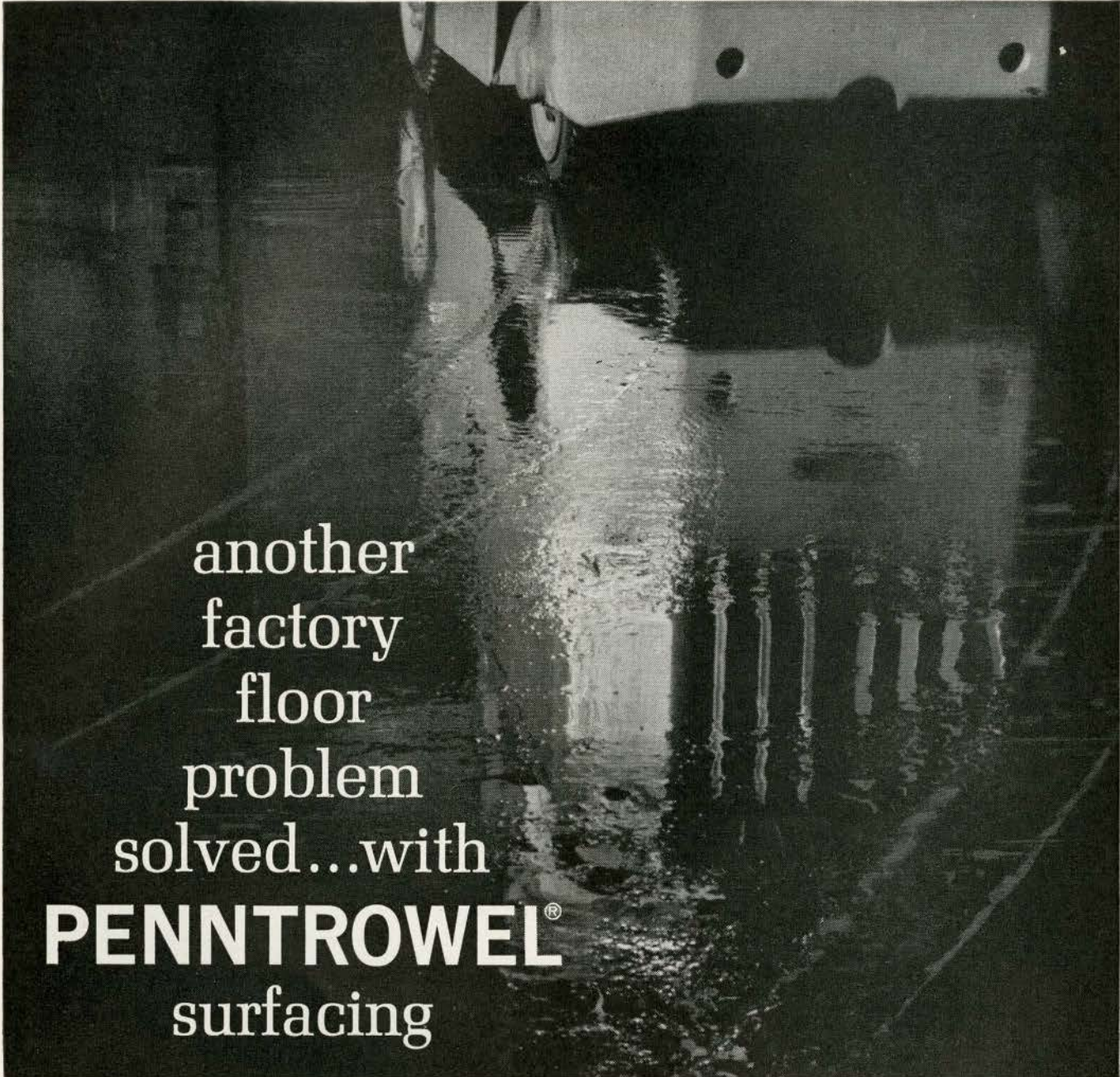
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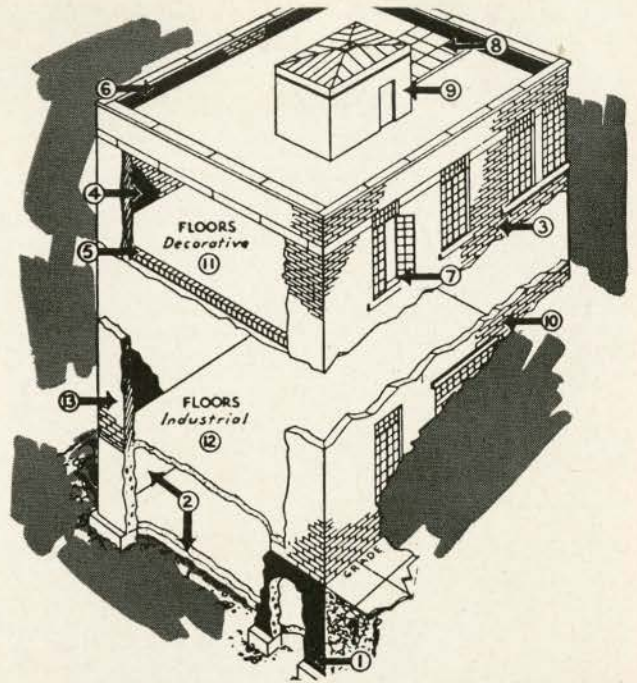
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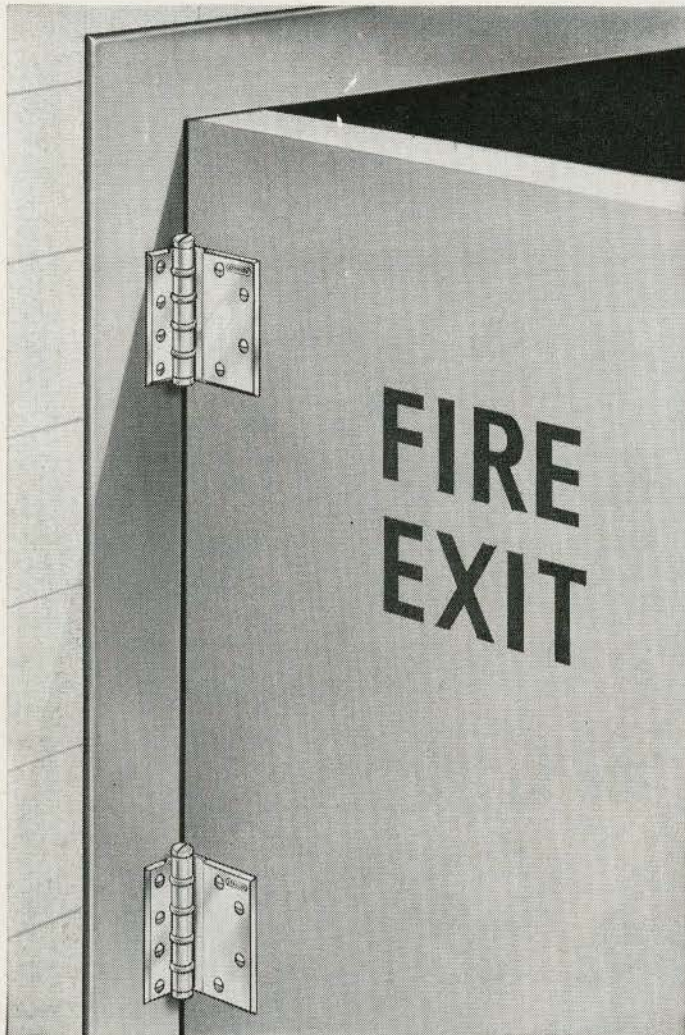
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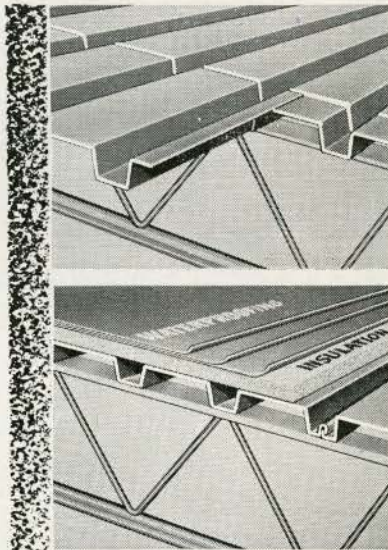
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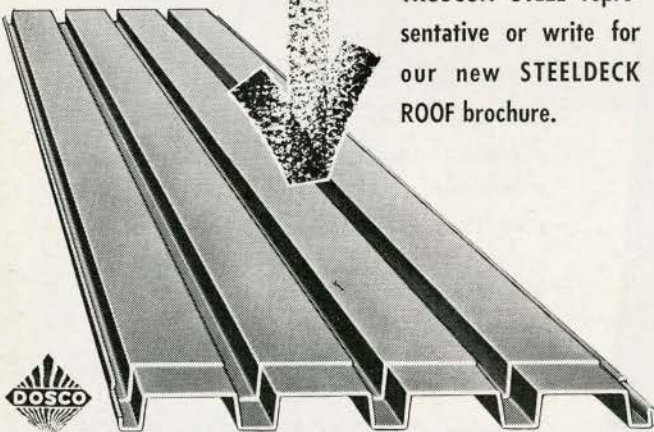
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PRODUCT	APPROX. THICKNESS IN INCHES	COVERAGE PER BOX	SHIPPING WEIGHT
80 tiles per box	$\frac{1}{8}$	45 sq. ft.	61 lbs.
80 tiles per box	.080	45 sq. ft.	40 lbs.
80 tiles per box	$\frac{1}{16}$	45 sq. ft.	31 lbs.

### DOMINION BATTLESHIP LINOLEUM — MARBOLEUM, JASPÉ, HANDICRAFT

PRODUCT	GAUGE	THICKNESS IN MM.	APPROX. THICKNESS IN INCHES	WIDTH IN YARDS	APPROX. YARDAGE IN SQ. YDS.	APPROX. WT. PER SQUARE YARD
Battleship on Canvas	AA	4.50	$\frac{3}{16}$	2	60	10.6 lbs.
Battleship on Canvas	A	3.20	$\frac{1}{8}$	2	60	7.4 lbs.
Marboleum on Canvas	AA	4.50	$\frac{3}{16}$	2	60	10.6 lbs.
Marboleum on Canvas	A	3.20	$\frac{1}{8}$	2	60	7.4 lbs.
Marboleum on Felt	A	3.20	$\frac{1}{8}$	2	60	7.4 lbs.
Marboleum on Felt	Domestic	2.05	$\frac{5}{64}$	2	60	4.5 lbs.
Jaspé — Canvas back	AA	—	—	2	60	10.6 lbs.
Jaspé — Canvas back	A	—	—	2	60	7.4 lbs.
Handicraft — Canvas back	AA	—	—	2	60	10.6 lbs.
Handicraft — Felt back	A	—	—	2	60	7.4 lbs.

### DOMINION LINOLEUM TILES — MARBOLEUM, JASPÉ AND HANDICRAFT

Stock (package 9" x 9" tiles)

PRODUCT	GAUGE	THICKNESS IN MM.	APPROX. THICKNESS IN INCHES	APPROX. COVERAGE PER BOX	SHIPPING WEIGHT
70 tiles per box	AA	4.50	$\frac{3}{16}$	39.3 sq. ft.	48 lbs.
100 tiles per box	A	3.20	$\frac{1}{8}$	56.2 sq. ft.	45 lbs.
125 tiles per box	Standard	2.50	$\frac{3}{32}$	70.3 sq. ft.	45 lbs.
150 tiles per box	Domestic	2.05	$\frac{5}{64}$	84.3 sq. ft.	45 lbs.

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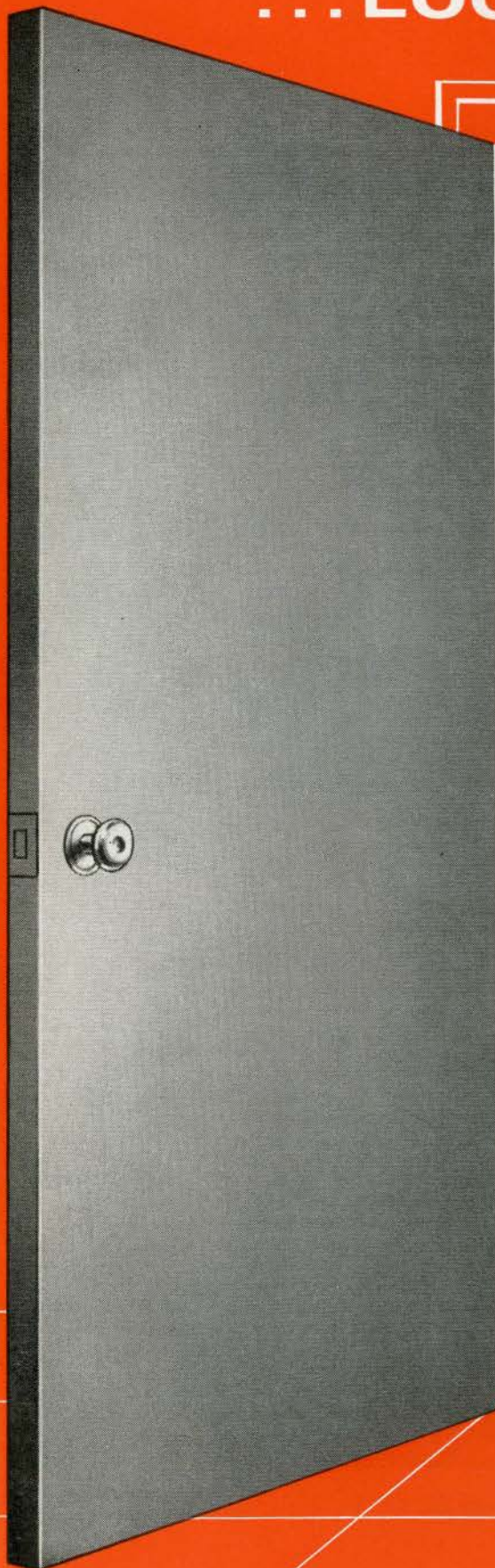
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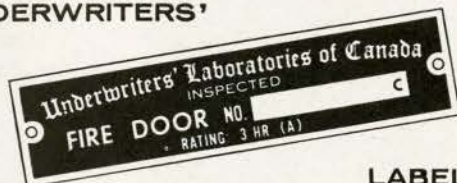


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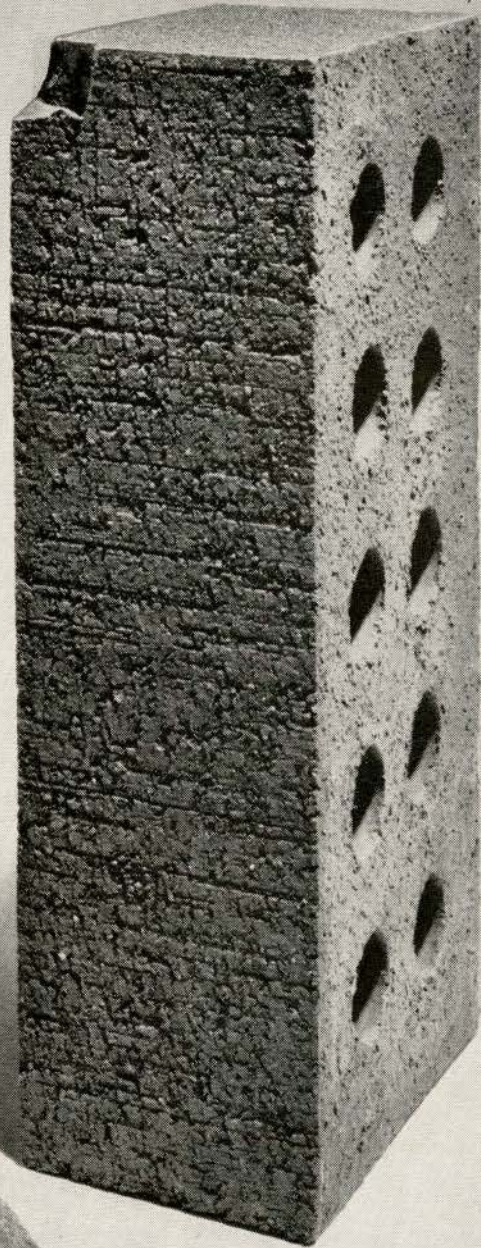
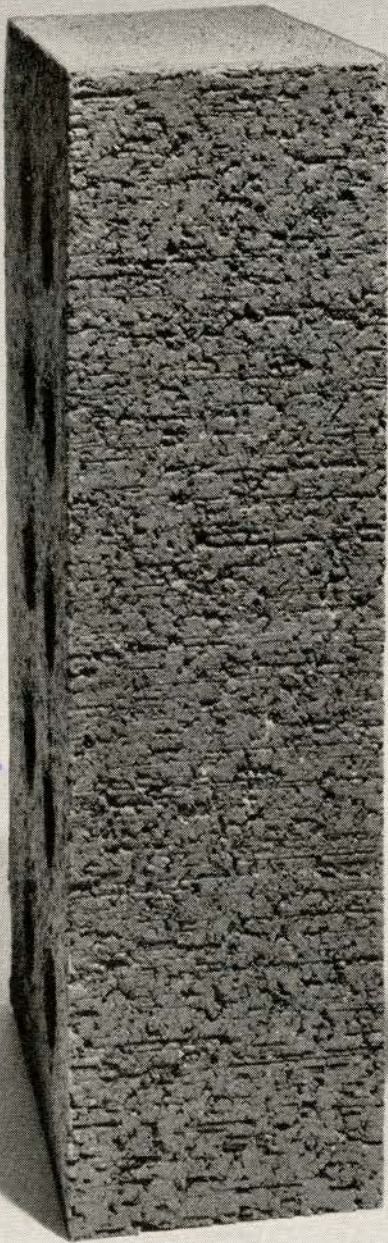
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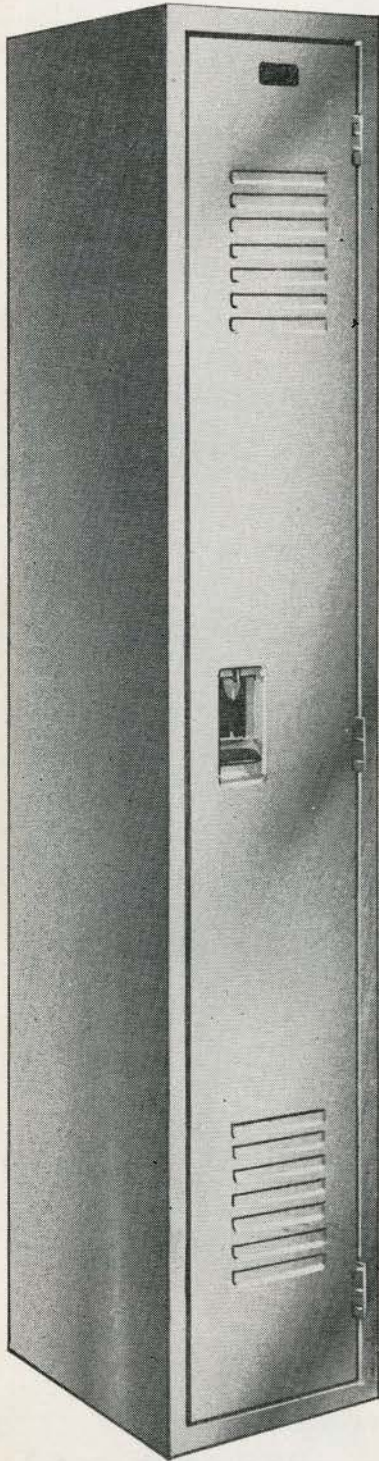
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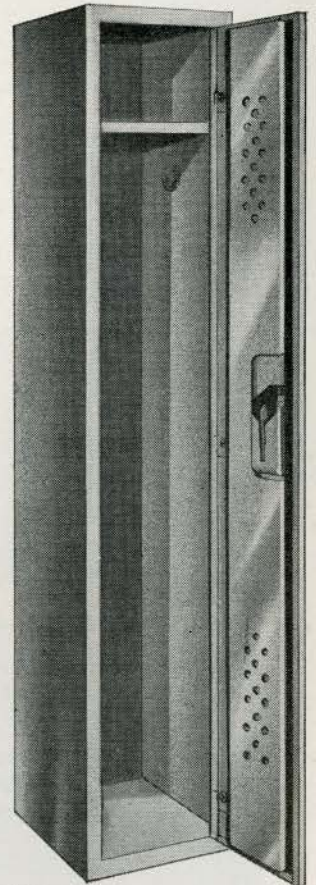


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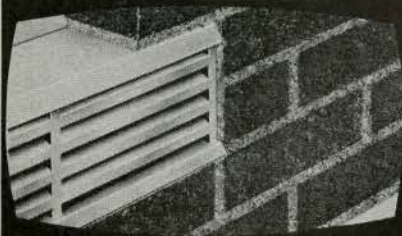
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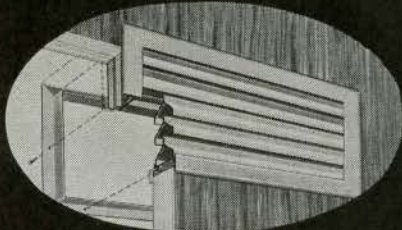


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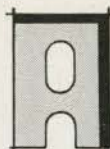
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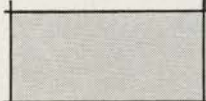
coves - caps - jambs



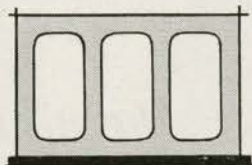
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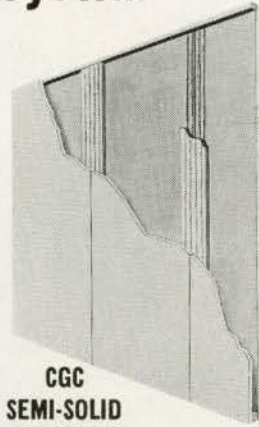
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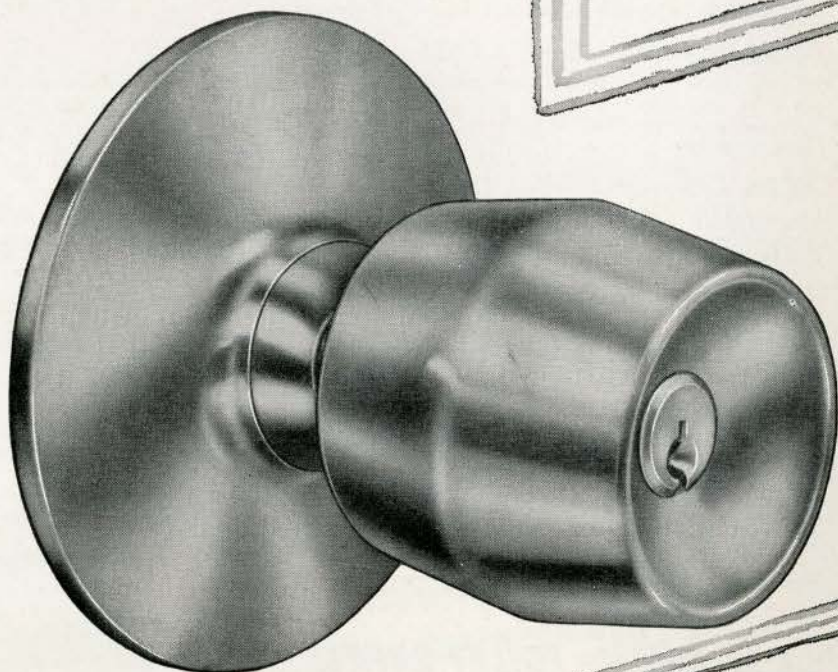
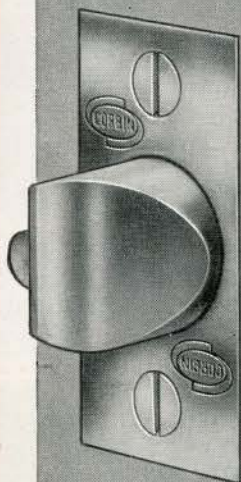
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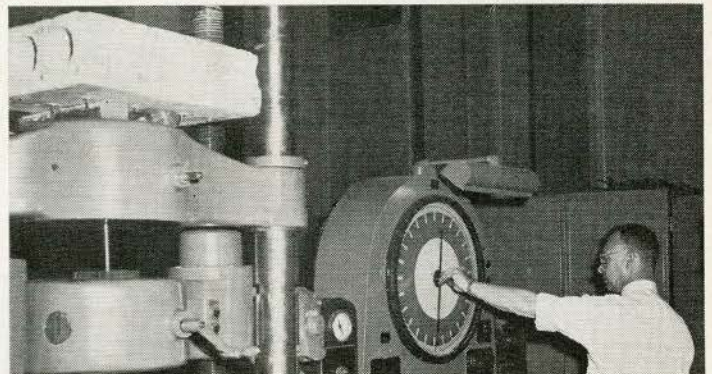
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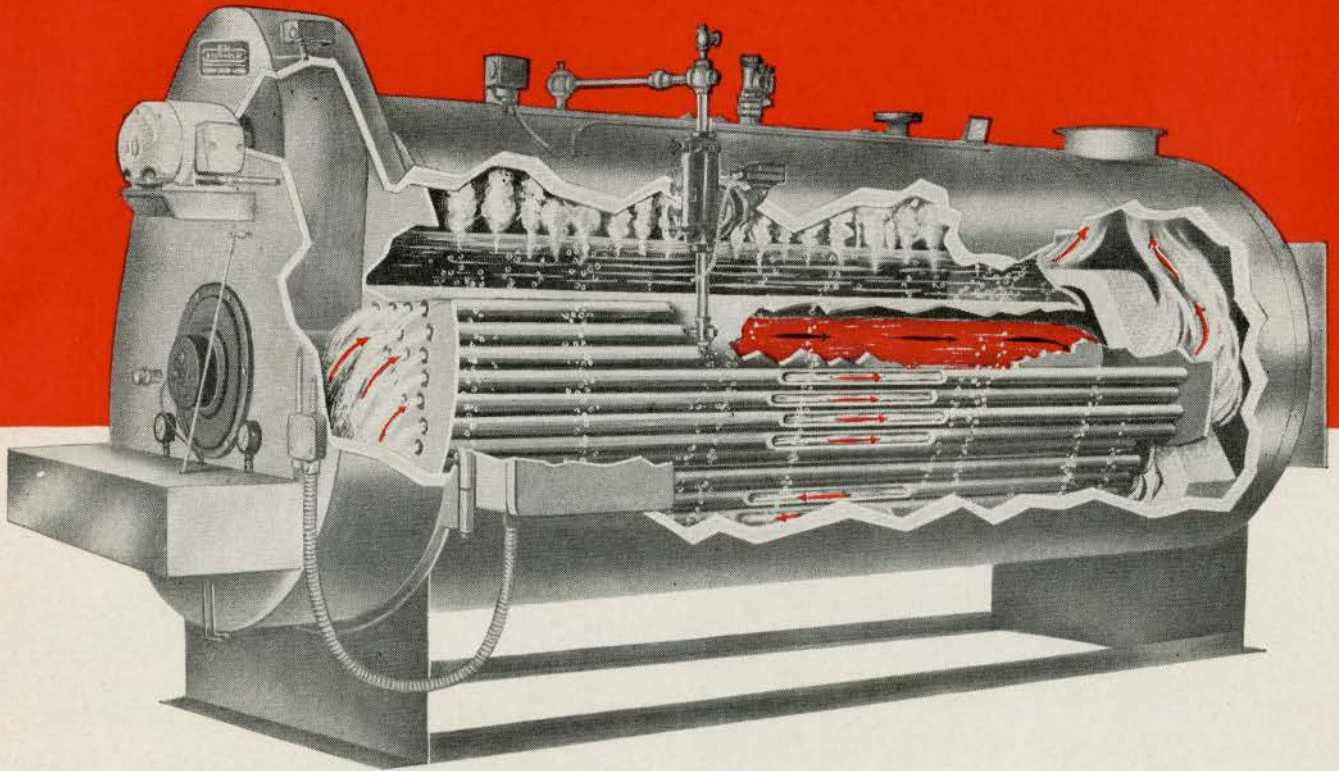
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