THE LOVENAL ROYAL ARCHITECTVRAL INSTITUTE OF CANADA

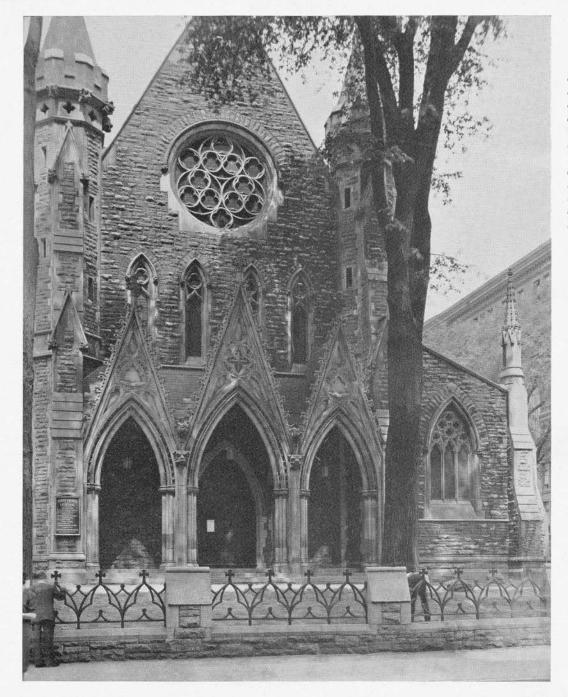


Vol. XIV, No. 6

JUNE, 1937

TORONTO





This is the third of a series of advertisements which we believe will be of more than ordinary interest to Canadian Architects. The series will illustrate examples of the older Canadian buildings, constructed of stone, and which by reason of their design and structure have a definite place in the architectural history of the Dominion.

CHRIST CHURCH CATHEDRAL, MONTREAL

Architect: Mr. F. Wills, Salisbury, England

Long considered one of Canada's most beautiful cathedrals, Christ Church was commenced in 1857 and opened on November 27th, 1860. Designed by Mr. F. Wills of Salisbury, England, it was, after his death in 1857, completed from his plans under the direction of Mr. Thomas S. Scott of Montreal. The building is constructed of Montreal limestone trimmed with English stone and is 203 feet long by 109 feet at its greatest width. It cost approximately \$175,000.00, which was a large undertaking when one considers that the population of the whole city at that time was only 75,000 of whom two-thirds were French speaking.

RITCHIE CUT STONE COMPANY LIMITED
1221 BAY STREET - TORONTO

LASALLE STONE & MARBLE CO. LIMITED MONTREAL - - QUEBEC

Page i June, 1937



Because the plumbing and heating are vital parts of a building and Crane gives me the quality I want.

- "... because Crane designs are up-to-theminute without being freakish. This superior styling is of the utmost importance especially in residential construction.
- "... because in both plumbing and heating Crane has been in the forefront of the industry with new ideas. There are the antisyphon supply fixtures, for example, and the new 'Convection' radiators.
- ". . . because Crane has the necessary technical knowledge I may want in solving a problem.
- ". . . **because** I take pride in my work and like to specify the best."

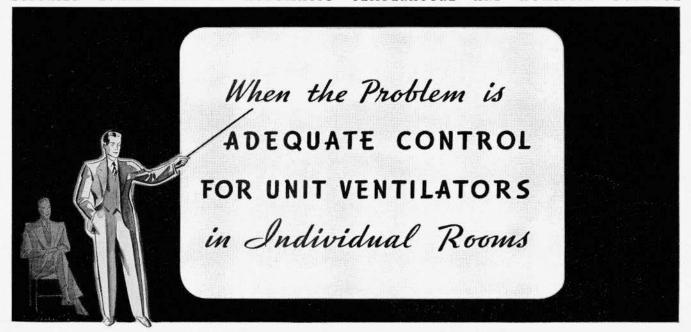
Many architects find it a distinct advantage to specify Crane materials. If there is any aspect of our service on which you would like information, call or write our nearest branch.

CRANE

HEAD OFFICE: 1170 BEAVER HALL SQUARE, MONTREAL

Branches in Eighteen Cities

VALVES . FITTINGS . FABRICATED PIPE . PUMPS . HEATING AND PLUMBING MATERIALS



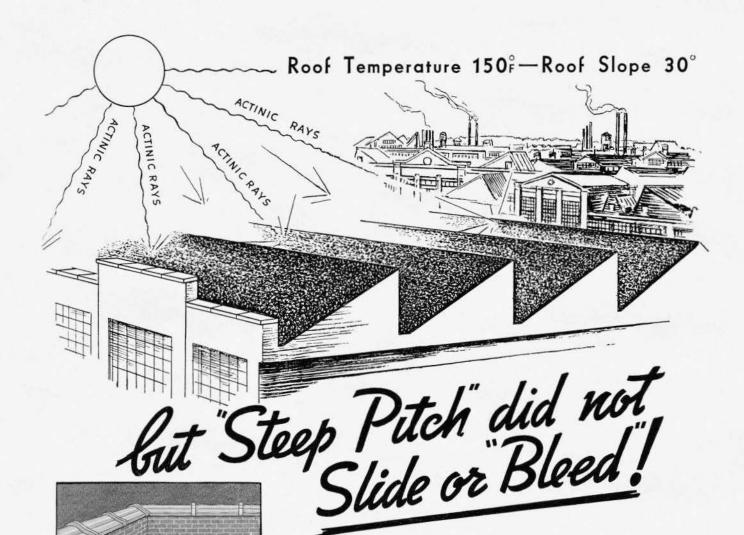
PROPER SEQUENCE OF OPERATION IN ALL CONTROL DEVICES insures desired result

Drafts or overheating are eliminated only by proper arrangement of the automatic temperature regulation devices which control unit ventilators and auxiliary direct radiators. When the control equipment is JOHNSON, the correct sequence of operation is assured. Johnson gradual acting thermostats are built so that they may be balanced on the job to secure the required relationship between all heating and ventilating elements.

Present-day practice demands, in almost every case, the operation of valves which feed steam to the units and to the direct radiators. In addition, mixing dampers or fresh and return air dampers, or all three, must be controlled, depending upon the type of unit selected. In some cases, an auxiliary thermostat is required to sense the temperature of the stream of air leaving the unit, in addition to the usual "roomtype" thermostat . . . Johnson valves and damper operators are simple, rugged, fool-proof.

Johnson studies the individual problem presented by each type of unit ventilator, works out the proper sequence of operation in co-operation with each manufacturer. With confidence, these intricate problems in automatic temperature control may be turned over to Johnson, a single, nation-wide organization, devoted to just this one line of business.







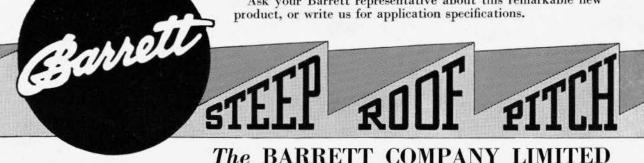
There is no "equal" to a Barrett Specification Roof—the accepted standard for built-up roof construction. Where economy is necessary specify Barrett "Black Diamond". Where inclines exceed 2" per foot, specify Barrett "Steep Roof Pitch". Barrett Roofs of approved construction employing any of these materials are bonded by Barrett—"the greatest name in roofing".

New Barrett Product shows remarkable STABILITY

The problem of satisfactorily surfacing steep roofs has been solved with the introduction of Barrett Steep Roof Pitch. Now you can secure Barrett Felt and Pitch Roofs on structures having inclines as steep as 6" to the foot and confidently anticipate a degree of permanence and satisfaction that has characterized roofs of this type on flat surfaces for eighty-three years.

Actual field tests have shown that Barrett Steep Roof Pitch combines in one basic product remarkable stability with all the established waterproofing, weatherproofing, and other desirable qualities of Coal Tar Pitch. Experience has shown that it does not slide or "bleed" under extreme roof temperatures; does not crack or lose its bond in sub-zero weather, and holds surfacing material firmly embedded giving additional protection at no

Ask your Barrett representative about this remarkable new



MONTREAL

TORONTO

WINNIPEG

VANCOUVER



Left: Hydro-Electric sub-station at Brantford, Ont.

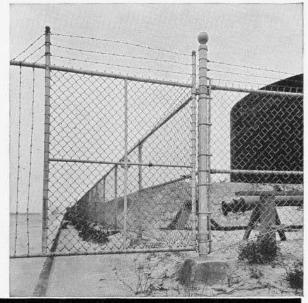
Below: Hydro-Electric sub-station at Hamilton, Ont.

Where Danger Lurks STELCO

CHAIN LINK FENCE Keeps Meddlers Out

> Below: Unusual installation for the Sun Oil Company, Toronto, Ont. affords protection from both land and water.

THERE are many places where danger — to themselves and to others — lies in wait for unwary trespassers. High voltage power stations, gasoline storage "farms", railways, airports and other danger zones need the protection of Stelco Chain Link Fence. This strong fence of woven steel wire is erected on a frame of Stelco Scale-Free Pipe. It requires no upkeep and offers unusual rust and weather resistance because the wire fabric contains copper and is extra heavily galvanized after weaving. Stelco Chain Link Fence is the ideal enclosure for industrial plants, schools, estates, race tracks, cemeteries, mines, institutions and wherever permanent protection is required, The advice of our fence engineers is free for the asking.



THE STEEL COMPANY OF CANADA, LIMITED

HAMILTON - EXECUTIVE OFFICES - MONTREAL

SALES OFFICES: HALIFAX, ST. JOHN, MONTREAL, TORONTO, HAMILTON, WINNIPEG VANCOUVER WORKS: HAMILTON, MONTREAL, TORONTO, BRANTFORD, LONDON, GANANOQUE

Of Harmonious Design . . .



A PART entirely from the pleasure and health it brings to the family, a conservatory, when properly designed, definitely contributes to the architectural beauty of a home.

Great advances have been made during the past few years in creating conservatory plans in harmony with architectural tendencies. Many Canadian architects, either with or without the co-operation of Lord and Burnham executives, have designed conservatories to the delight of their clients.

For eighty years, the Lord and Burnham Company have

and specialized in the design and erection of conservatories and greenhouses. Their experience is freely available to you.

This Company would be happy to serve you, either in connection with the building of a new residence or the remodelling

of an old home.

All conservatories and greenhouses are made in Canada at St. Catharines.

Lord & Burnham C., Limited

ST. CATHARINES ONTARIO

MONTREAL

TORONTO

a 3 way CONTROL SYSTEM

WITH the addition of National
Regulator Company Air Operated
Controls, the Minneapolis-Honeywell
Modutrol System now offers a threeway control system – electric, pneumatic or a combination of electric and
pneumatic, as the job requires. Experience has shown that neither air nor
electric control is sufficiently flexible

lectric control is sufficiently flexible
in its application to be adapted to all
control problems. This is the first time
any manufacturer can truthfully offer
"The Right Control For Every Installation." Complete information is available.
Write for it or consult the Minneapolis-

Honeywell branch office in or near your city. Minneapolis-Honeywell Regulator Co. Ltd., 117 Peter Street, Toronto.

Branches: Montreal, Winnipeg, Calgary, Vancouver. In England, Honeywell-Brown Limited.

The Right Control System for Every Installation

ELECTRIC + PNEUMATIC

for Large Buildings

ELECTRIC + PNEUMATIC

MINNEAPOLIS-HONEYWELL

Control Systems

BROWN INDUSTRIAL INSTRUMENTS NATIONAL PNEUMATIC CONTROLS

THE JOURNAL

ROYAL ARCHITECTURAL INSTITUTE OF CANADA

Serial No. 142

TORONTO, JUNE, 1937

Vol. XIV. No. 6

CONTENTS

ADDRESS BY THE HON. VINCENT MASSEY AT THE ANNUAL DINNER OF THE R.I.B.A	103
THE SEAFORTH ARMOURY, VANCOUVER B.C.	104
ST. JAMES' CHURCH, VANCOUVER, B.C.	107
CHROMIUM AND GLASS, BY W. L. SOMERVILLE, P.R.A.I.C.	110
HOME IMPROVEMENT PLAN MAKES PROGRESS	110
FOREST HILL VILLAGE PREPARATORY SCHOOL	112
DESIGN—A REVIEW OF MR. NOBBS' BOOK BY SIR ANDREW MACPHAIL	114
ACTIVITIES OF PROVINCIAL ASSOCIATIONS	116
NOTES	117
PLATE ILLUSTRATIONS	
ILLUMINATED ADDRESS SENT BY THE R.A.I.C. TO HIS MAJESTY KING GEORGE VI FRONTISP	TECE
SEAFORTH HIGHLANDERS ARMOURY, VANCOUVER, B.C.	105
ST. JAMES' CHURCH, VANCOUVER, B.C.	106

PUBLISHED EVERY MONTH FOR THE

ROYAL ARCHITECTURAL INSTITUTE OF CANADA

Editor-I. MARKUS

EDITORIAL BOARD

ALLAN GEORGE PHILIP J. TURNER (F) RICHARD A. FISHER MACKENZIE WATERS JOHN Y. McCARTER

BURWELL R. COON, Chairman GORDON S. ADAMSON H, CLAIRE MOTT (F) E. J. GILBERT E. R. ARTHUR P. C. UNDERWOOD

EMILE VENNE MILTON S. OSBORNE (F) A. T. GALT DURNFORD W. M. BROWN EDGAR S. MARROTTE

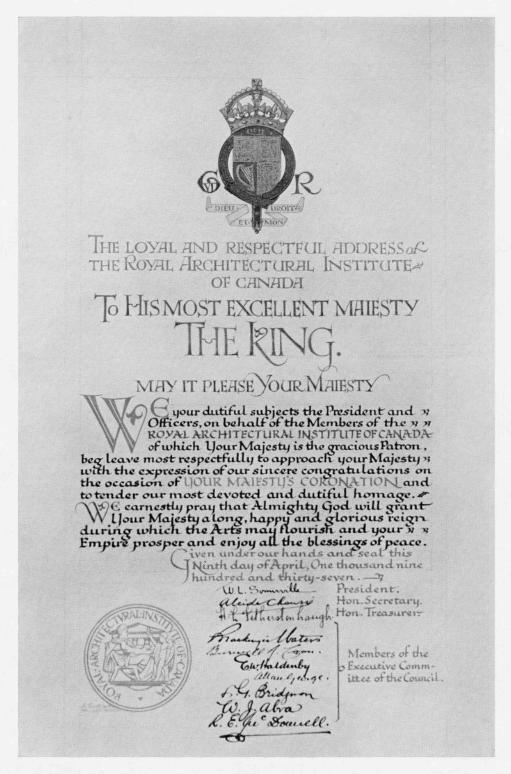
PUBLISHERS: ARCHITECTURAL PUBLICATIONS

Great Britain Representative...C. Rowley Ltd., 53 & 54 Ave. Chambers, Southampton Row, London W.C.I, England

SUBSCRIPTIONS

Canada and Newfoundland-Three Dollars per year. Great Britain, British Possessions, United States and Mexico-Five Dollars per year. All Other Countries-Six Dollars per year. Single Copies-Canada 50 Cents; Other Countries 75 Cents.

Page ix June, 1937



Illuminated Address sent by The Royal Architectural Institute of Canada to His Majesty King George VI on the occasion of his Coronation.

A. Scott Carter, M.R.A.I.C., R.C.A., Del.

ADDRESS BY THE HON. VINCENT MASSEY

AT THE ANNUAL DINNER OF THE R.I.B.A.

Editor's Note: The following speech by the High Commissioner for Canada, was given in response to the Toast of "Our Guests" at the recent Annual Dinner of the Royal Institute of British Architects.

COUNT it a very great honour to be asked to respond to the toast of "Our Guests". There are some subjects, architecture included, on which it might be difficult for any one person to speak for the group of distinguished gentlemen I see to-night on either side of me. We probably hold very different views on many things. I doubt, for instance, if we could come to any reasonable agreement on Mr. Epstein's sculpture, or on the best way to clean Old Masters (Laughter). But there is one point upon which we are in perfect accord, and that is that we have greatly enjoyed the charming hospitality of our hosts this evening, and that we wish to thank them for the pleasure they have given us.

I am personally very happy indeed to be able to forgather with you tonight. The work which this Institute is doing on behalf of a great profession and a great art is too well known to require any comment. I am very glad that in Canada we are associated with your membership through a number of architects in the Dominion who are privileged to print the five familiar and distinguished letters after their names.

There is another link between us. Your chairman has referred this evening to a Bill which has just been introduced into Parliament at the request of the Architects Registration Council. It would be unbecoming for me to offer any observations on this measure, but I have been much interested to know that in this legislation you have been guided by the experience of some of the Provinces of Canada, particularly that of Ontario. May I say that we are very glad indeed if our experience has been of any use in the efforts which you have been making for the welfare of the profession here and the protection of the public. Having the privilege to be an honorary member of the Ontario Association of Architects I welcome this with peculiar satisfaction.

Let me say, gentlemen, that it is always a very genuine pleasure to me to find myself in the company of architects. It has been my good fortune all my life to be very closely associated with your profession. I have been lucky in finding myself very often a member of those interesting if temperamental bodies known as building committees, and some of the happiest hours which I have ever spent have been in the work-shops of architect friends. Perhaps the hours in question may not have been so happy for them. I am not blind, of

course, to the suffering which the clients' shortcomings impose on the architect. Would it be some compensation to feel that the greatness of your profession might be due in part to the chastening you thus receive? The client can probably be regarded quite fairly as the architect's hair shirt (Laughter).

I hope, gentlemen, you realize the danger of permitting a layman to speak on an occasion like this. You must know that every layman knows all about architecture. It is, of course, the one inescapable art. Those who have no taste for music can avoid concerts, those who dislike pictures can remain outside art galleries—architecture we cannot avoid. Few of us can be producers, but we are all consumers. Perhaps this is why you are never quite immune from the ardent layman who may wish to embark on a talk about such esoteric matters as the principles of fenestration or the use of the ogee arch.

I should have liked to say something about the new architecture that I have discovered since I returned here a few months ago after an absence of a few years. My words would be in terms of admiration, and they would be very sincere, but I recall as a warning the story which was told of Sydney Smith who one day discovered his little granddaughter stroking the back of a turtle. "Why do you do that?" he asked, "Grandfather I do that to please the turtle." "My dear," he said, "you might just as well stroke the Dome of St. Paul's to please the Dean and Chapter" (Laughter). Therefore it would be an impertinence for me to attempt metaphorically to stroke the Dome of St. Paul's by offering any words of eulogy, and if I did I am afraid that you as the Dean and Chapter would remain quite unmoved. But I cannot help saying just the same that contemporary building in Great Britain—and I have travelled extensively in these Islands since I arrived—is a splendid example of that spirit of true renaissance which in the last few years has shown itself in every department of life in the United Kingdom.

You are building brilliantly on a very great tradition which you skilfully adapt to new purposes and new needs when occasion demands such changes. I came across in my commonplace book a remark of Inigo Jones which is probably well known to you, "Architecture should be solid, masculine and unaffected." These three adjectives are probably true of all that is best in English

architecture, particularly the 'unaffected'. Perhaps there is something else—moderation. Modernism can never be very extreme or traditionalism very pedantic in a country so happily given to moderation as this.

We do not applaud nationalism these days, and rightly so. But I am one of those who believe that art provides an appropriate sphere for national feeling—where nationalism in the right sense can safely and appropriately be practised. Long may English architecture remain English. If a visitor in your midst dare make one comment on the style of contemporary building it is to express the

hope that English architecture will always speak in its own vernacular. Perhaps one feels this more strongly in this great city, for an inter-nationalized London would cease to be London.

However, gentlemen, I am falling into the very danger I touched on a minute ago, but I shall comfort you by saying that I have no intention to submit however humbly any observations on art. My purpose is far simpler just to offer you again on behalf of your guests not only our very sincere thanks for your hospitality this evening, but also our gratitude to a profession which has made and is making England more and more worth living in.

THE SEAFORTH ARMOURY, VANCOUVER, B.C.

McCARTER AND NAIRNE, MM.R.A.I.C., ARCHITECTS

The New Armoury Building recently completed for the 72nd Battalion Seaforth Highlanders of Canada, has been designed in the Scots Baronial style of architecture, and is a distinct addition to the architectural achievements of the city of Vancouver.

The building is comprised of a drill hall on the south end, a three-storey administration building at the north end, with a miniature rifle range and four Company rooms at the side of the drill hall to the rear. The drill hall is 200′ 0″ by 100′ 0″ with steel truss roof and concrete galleries on three sides, the floor is of asphalt and the upper part of the wall surfaces are covered with insulating board for acoustical purposes. The Company rooms are entered from the drill hall and are each 20′ 0″ by 25′ 0″ with rifle and equipment racks and Company commanders' offices. The rifle range and ante room are equipped with miniature rifle and revolver targets, and provided with fan ventilation.

The administration building has accommodation on the ground floor of commanding officers' room, orderly room, paymaster's office, guard room, officers' dressing room, cadets' room, gymnasium 60' 0" by 36' 0", shower room, lavatories, writing room, club room, machine gun and rifle rooms, and Q.M. stores.

The mezzanine floor contains caretaker's quarters, men's dressing rooms, showers, lavatories, sand room, and Q.M. stores.

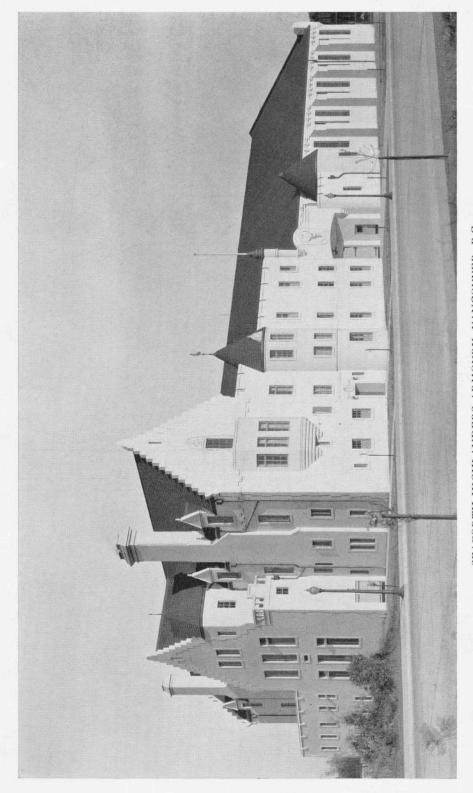
The second floor is occupied with officers' mess with oak floors, wood beamed and panelled ceiling, stone fireplace with regimental motto carved on mantel. Ante room and entrance hall, cloak rooms, lavatory, kitchen and serving pantry.

The lecture room is 60' 0" by 36' 0" with kitchen and serving pantry adjacent. On the east side of the lecture room the sergeants' quarters have a mess room, cloak room, lavatories, kitchen, and pantry. The third floor contains signallers' lecture room, cadets' room, and band room.

The exterior of the entire building is finished in architectural monolithic concrete, special precautions having been taken to keep the jointing of form work horizontal on all sides. The exterior concrete being given two coats of waterproof paint at completion.

The grounds in front of the building are laid out in lawns and shrubs and the parade grounds at the rear covering an area of three acres are completed with asphalt paving.

The cost of the building was \$167,609.00.



SEAFORTH HIGHLANDERS ARMOURY, VANCOUVER, B.C. McCarler and Nairne, M.R.A.I.C., Architects

Page 105



ST. JAMES' CHURCH, VANCOUVER, B.C.

Adrian Gilbert Scott, F.R.I.B.A., (London, England) Architect G. L. Thornton Sharp, M.R.A.I.C., and C. J. Thompson, M.R.A.I.C., Associated Architects

ST. JAMES' CHURCH, VANCOUVER, B.C.

LTHOUGH St. James' is not a large church, it required considerable study in planning to entirely fill the remaining portion of a constricted city lot, with a church hall already occupying nearly half of it, and a clergy house another corner.

The church is built on a cruciform plan lying east and west with short transepts north and south with an octagonal tower over the intersection. This tower is roofed with a steep pitched octagonal slate roof with copper louvres in the top section running completely around it, and is surmounted by a gilded wrought iron cross. Inside the tower there is a flat ceiling fifty feet above the floor level, with a belfry above this designed to contain a peal of bells. These bells when installed will weigh from ten to twelve tons, and are carried on four concrete trusses of queen post form, intersecting each other at the posts. The trusses are fourteen feet, six inches, top to bottom with a span of forty-six feet.

The main entrance is on an angle, one storey high with a circular baptistry on one side between it and the south transept, and a similar circular space on the other side occupied by a concrete stair leading to the gallery over the west end of the paye.

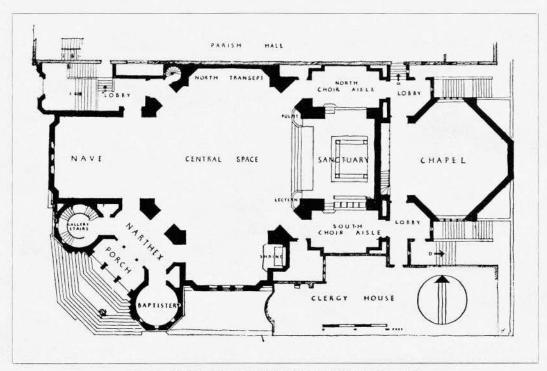
Behind the sanctuary at the east end is an ambulatory, connecting the Church Hall and the Clergy House. This is reached from the church

by north and south choir aisles and beyond it, separated with a glazed screen, is the Lady Chapel, octagonal in shape. Above the screen and ambulatory is a gallery to the chapel and this opens into the main church with unglazed windows high up in the east wall on either side of the altar.

On the east wall of the south transept is a small altar and in the north transept an organ loft reached by a circular turret stair leading from the north-west entrance which serves the church and the hall, and the basement. The organ loft, owing to the restriction of the site, is cantilevered over the hall roof, the floor following the slope of the roof.

All the various portions of the building are separated from one another by a series of arches; the nave, north and south transepts and sanctuary having plaster arched ceilings, and the central portion of nave under the tower and all other portions having flat cedar ceilings. The walls are panelled with cedar about six feet high, the balance of the walls and ceiling being of acoustic plaster, with the exception of the two ends which are of ordinary plaster matching the acoustic in texture and colour.

The building is lighted by long vertical lancet windows glazed with antique white glass in diamond lead panes set directly in the concrete, and these result in a very soft but very efficient light.



PLAN OF ST. JAMES' CHURCH, VANCOUVER, B.C.

The exterior is simple and shows clearly the construction and plan of the church, the walls are concrete with a brush dash coating of plaster through which the form lines can be seen, the roofs are of green slate, with copper down pipes.

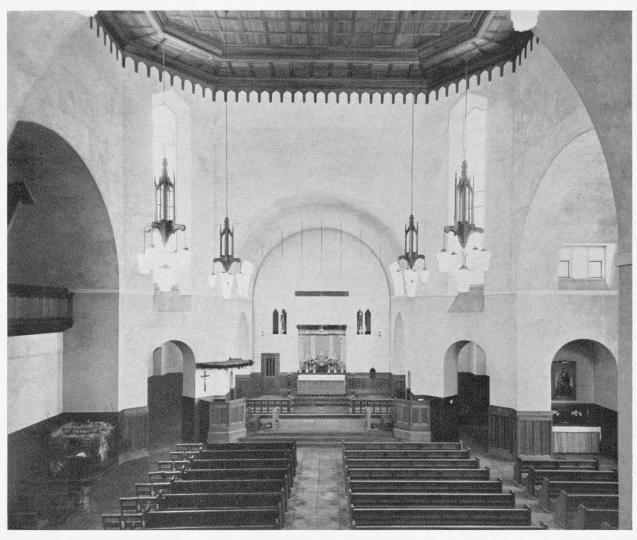
The central tower is supported on an outer eight inch wall, a two foot space and an inner wall of five inches. This gives depth to the reveals of the long windows, and to the arches on the four short sides of the octagon; the space in these piers gives adequate room for the engineering requirements.

All features such as the tracery in the chapel, the gargoyles, and the reticulated parapet walls were poured monolithically with the main structure.

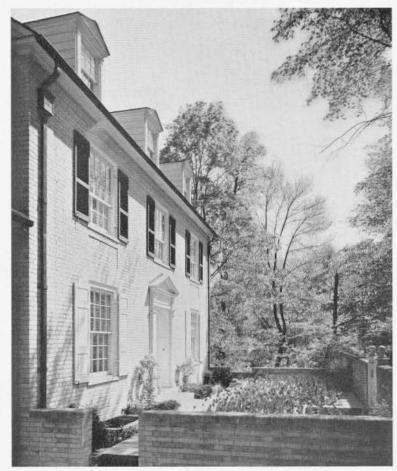
The basement is used as a large assembly hall, with kitchen, cloak rooms and heating chamber.

The church is heated by a panel system of coils laid in three inch concrete on top of the floor slab. This is the only example of this method of heating on this continent, with the exception of the British Embassy at Washington, and has so far proved very satisfactory in the climate of British Columbia which more nearly resembles that of Great Britain than the rest of the continent.

The architect responsible for the design was Adrian Gilbert Scott, F.R.I.B.A., of London, England. With him were associated Messrs. G. L. Thornton Sharp, M.R.A.I.C., and C. J. Thompson, M.R.A.I.C., of Vancouver, who supervised the erection of the structure and took care of local conditions. This entailed a considerable revision of the concrete structure in which Mr. F. W. Urry assisted as structural engineer.



INTERIOR OF ST. JAMES' CHURCH, VANCOUVER, B.C. LOOKING TOWARDS SANCTUARY



RESIDENCE OF W. D. MATTHEWS, ESQ., TORONTO Saunders and Ryrie, MM.R.A.I.C., Architects



RESIDENCE OF DONALD C. MULHOLLAND, ESQ., TORONTO Molesworth and Secord, M.M.R.A.I.C., Architects

CHROMIUM AND GLASS

BY W. L. SOMERVILLE, P.R.A.I.C.

HESE modern materials, the product of research laboratories of recent years, are influencing design of to-day whether it be architecture, furniture, motor cars, aeroplanes, or railway coaches.

Essentially modern, they are nevertheless but traditional materials improved and used in a new way. Metals that will not corrode, glass that is structural, materials that are light but strong. The mere mention of these materials brings to mind things of to-day. They had no place in the past. They have the appeal of something new, and are a tremendous stimulation to the imagination of the designer. He is not tempted to "crib" from the great periods of the past. He is forced to find his own solutions.

Every age has had some outstanding characteristic that has been unconsciously expressed in its architecture. The machine with its extreme functionalism, has led to the development of new materials, new conceptions of form and a new standard of beauty which might be called "fitness". This may be the source of influence that will prove to be the strongest and most characteristic of our age. This demand for "fitness" in the design of to-day corresponds to that for "respectability" in the 19th century and "elegance" in the 18th. Fitness demands efficiency. The elimination of non-essentials with emphasis placed on simplicity of line and form. Fitness which has always been an element of beauty has in modern design become as important as form and colour.

The 19th century desire for respectability as expressed by a yearning for the antique, on the premise that anything old must be respectable, led to many absurdities, and likewise in the 18th century when the standard of elegance demanded by the English gentlemen of the period could only be satisfied by the reproduction of Italian Villas. To-day in modern design, with its demand for fitness and efficiency one also sees many absurdities,

such as streamlined chairs and office desks, designed to reduce their wind resistance to a minimum. Another which fortunately has made little headway, is the mass production of the pre-fabricated houses. Designed as a machine for living, or rather an annex to the garage where one may sleep and eat when not dashing about in a motor car or aeroplane.

Another absurdity that has made considerable headway, is the over emphasis placed on the bathrooms and kitchens of moderate sized homes. One would not belittle the important strides made in the design and equipment of these conveniences, but good taste can hardly accept the importance that is frequently placed upon them by those building medium cost homes who must keep up with Hollywood, especially where limited funds means that other portions of the house must suffer. Absurd, yes, but quite a common circumstance in houses costing less than \$20,000.00 as every architect can bear witness.

It is these absurdities that prejudice many people against the so-called modern architecture, but the designers of to-day, architects, decorators and designers of furniture know that we are entering an age with new demands, new standards, and new materials just as surely as did our predecessors in the great periods of revolutionary changes in the past.

As Sir Edwin Lutyens said in his foreword to A. S. G. Butler's book "The Substance of Architecture"—

"It is conceivable that the Creator took little heed as to what the devil might say regarding the world He was by cause and effect creating.

"This precedent should be followed by architects, now, as of old. They should give no heed as to what the critics may or may not say, but should face their problems with the same sincerity as the sap within a tree creating by its energy a thing alive and beautiful."

HOME IMPROVEMENT PLAN MAKES PROGRESS

Far exceeding any previous fortnightly period, Home Improvement loans reported by the Minister of Finance for the first two weeks of May numbered 2,248, and amounted to \$827,836.27. This is an increase of 471 loans totalling \$168,529.56 over the latter half of April, previously the period of largest loan totals under the plan.

Total loans made up to May 15th, 1937, numbered 11,844 amounting to \$4,472,800.98, the dis-

tribution by provinces being as follows:

Tourion of provinces come no rono no.
Prince Edward Island \$ 41,690.22
Nova Scotia
New Brunswick 574 201,621.73
Quebec
Ontario
Manitoba 643 237,005.05
Saskatchewan
Alberta
British Columbia 1,404 478,143.90



 $\begin{array}{c} {\rm STAIR\ HALL} \\ {\rm RESIDENCE\ OF\ N.\ R.\ FIRSTBROOK,\ ESQ.,\ TORONTO} \end{array}$



RESIDENCE OF N. R. FIRSTBROOK, ESQ., TORONTO Bruce H. Wright, M.R.A.I.C., Architect



FOREST HILL VILLAGE PREPARATORY SCHOOL, FOREST HILL VILLAGE, ONT.

Forsey Page and Steele, M.M.R.A.I.C. Architects

FOREST HILL VILLAGE PREPARATORY SCHOOL

FORSEY PAGE AND STEELE, ARCHITECTS

N THE new educational programme it is aimed to give the teaching of health first place. To assist in this matter the school plant must be designed to give proper ventilation, light without strain, and to provide for a cheerful atmosphere in which the mental as well as the physical health receives proper stimuli for growth. It has been proven beyond a doubt that growing children should not be at their desks all day long, and that their academic work should be broken by activity programmes. The traditional school building has not been planned to provide for activity programmes without a great deal of disturbance.

In the new plan, the buildings are designed to assist teachers to organize such programmes with a minimum of disturbance. Under the guidance of the right teacher, the activity programmes should be just as educational in content as any of the straight academic classes. If they are properly integrated, they can have an added value by creating a zest for a greater interest in the traditional academic subjects than when they were taught only by the abstract method.

In planning for the future education in their community, the Board of School Trustees of Forest Hill Village in the suburbs of the city of Toronto, decided to build one central community school equipped to provide intermediate school and high school courses and facilities for cultural and recreational activities for all citizens and a number of small elementary or "Preparatory" schools strategically located for convenience of attendance, and specially equipped for pupils from kindergarten to approximately ten years of age or the sixth grade.

The first "Preparatory" school unit was opened at the beginning of the 1936 school term. The new school, costing \$80,000 and accommodating three hundred and twenty pupils, incorporates important innovations in elementary school planning and construction and, indeed, in many ways sets the pace for future schools of its type. The building is set in generous, well planned grounds; is planned to serve the needs of the most progressive educational methods, and is fully and efficiently equipped as a self-contained school plant.

The school is a long, low, one-story brick and concrete structure in the Georgian style modified to meet modern requirements. The building faces south and is entered by a main door in the centre and by two pupils' entrances from porches at either end of the central section of the structure. The porches are a novel innovation and are planned to provide accommodation for outdoor classes in fine weather. The entrances lead through to a main corridor which runs back of two classrooms in the front centre section and joins a large kindergarten room at the east and a double-size primary room at the west. Two large efficiently equipped combination washrooms and lavatories are located off the two pupil entrance halls. On the north side of the main corridor are located a combination principal's office and library, a teachers' common room and kitchenette, and a health room. Exits to small porches and a lawn to the north are provided opposite the front entrance halls.

The kindergarten is a large, cheerful room brightly decorated, with a huge bow window at the south and generous windows on the east. The windows are equipped with venetian blinds. Cloak, storage rooms, and lavatories are provided at the north end of the room.

The primary room at the west end of the building is double classroom size and balances the kindergarten at the east. It is also provided with a large bow window on the south and generous window space on the west and also the north. This room contains a very special feature in a sliding sound-proof curtain partition with which the huge room may be divided as desired. An eighteen foot portable glass blackboard (on wheels) that may be used in any part of the room desired is also an innovation.

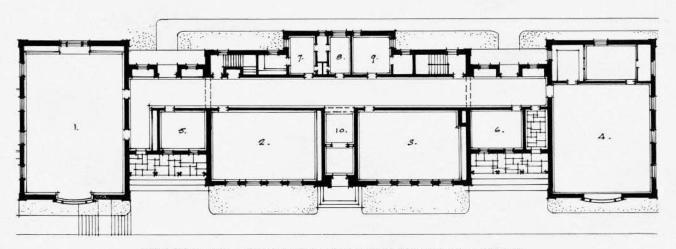
Only two standard classrooms are provided. These rooms are in the centre of the building on either side of the main entrance and have southern exposures.

The combination principal's office and library is a restful, pleasant room that breathes the atmosphere of a fine private library in a home rather than an institution. Two administrative aids are provided in a time control system and central radio system which contacts every room with loud speakers and will ultimately give connection with the headmaster's office in the main school for the "prep" school is not a separate unit sufficient unto itself, but a part of the whole scheme of education participating in the facilities of the senior school.

In constructing the school the architects took full advantage of the character of the land. As a result accommodation has been provided in the basement which is definitely not basement or even semi-basement space. Under the primary room is a huge playroom which opens on to the level ground at the west. This room is called a community room and is furnished with a portable stage.

Besides this playroom the basement contains a modern oil-burning heating plant, two shower rooms for boys and girls, a manual training room, a lunch room for fifty, a well equipped kitchen and a handball court.

The grounds have been planned to make full use of outdoor activities. On the north a level lawn will be used for dramatic work with the entrance porches serving as small stages. There are two full-size playing fields and the south-west section of the lot which is a small rugged gully will be developed into a natural garden for nature study.



KEY TO PLAN-FOREST HILL VILLAGE PREPARATORY SCHOOL

- 1. Primary Room
- 2. Standard Classroom
- 3. Standard Classroom
- 4. Kindergarten
- 5. Lavatory
- 6. Lavatory
- 7. Teachers' Common Room with Kitchen adjoining
- 8. Health Room
- 9. Principal's Office and Library

DESIGN*

A REVIEW OF MR. NOBBS' BOOK BY SIR ANDREW MACPHAIL

The advent of this book upon Design from so powerful a press would appear to suggest that the ancient dispute about taste has not yet come to an end. The principles underlying beauty are permanent; the philosophy of taste changes with fresh perceptions of beauty. Sensation is the ultimate vehicle of the beautiful, and modern science has aroused new sensations; but even yet, science is not the antithesis of the æsthetic. Indeed, the æsthetic sentiment cannot be divorced from the scientific, nor is there any gulf between knowledge and beauty. The scientist is not debarred from an appreciation and love of the beautiful.

This high theme with all its variations is the matter of Mr. Nobbs' Design. He is an architect. As one walks the streets of any modern city cumbered with edifices of the past century, with the massive steel and concrete of this, it is refreshing to hear him proclaim that the transmission of sensory impressions, a devotion to beauty, the making of a building or a chair suitable for its purpose and agreeable to a cultivated taste is still the function of the architect.

The book is divided into four parts, dealing successively with the sciences of art, theoretic considerations, the solution of problems, design and artistry. The thesis occupies twenty-eight chapters, the most important of which are those dealing with the scientific basis of esthetic phenomena, scale, proportion, correction, refinement, and ornament. The problems for which a solution is sought are function, material, and form; organic and group planning. The fourth part, dealing with design and artistry, brings the theme to an inevitable conclusion, analyzing structure, composition, and detail, with a slighter reference to the graphic arts and sculpture. Finally there is a passage dealing with the critical appreciation of form by the public as well as by the professional critics.

Walter Bagehot more than eighty years ago uttered the dry scoff: The reason why so few good books are written is that so few people who can write know anything; to this Rudyard Kipling added: And those who know anything cannot write. Mr. Nobbs knows and he has written. There is no parade of knowledge, but there is throughout the book a constant, sudden, and almost unconscious allusion that implies intimate personal familiarity with things done, and an incidental, casual and perpetual reference to the world of art and activity in all its manifold forms.

One would not surmise from his single reference to salmon fishing in Labrador that he had written for experts a book on Salmon Tactics, with his own drawings, in which he discloses that he has seen the scarlet and silver leap, and felt the thrill of the reel on many rivers in which salmon are to be lured by the fly. The text and figures disclose also that he has followed the moose with his Indian guides. He is equally at home on the sea; he has learned the design of ships with his own hand upon the tiller.

Nor would one suspect from his illustration of weapons alone that he was competent to hold his ground against many a professional swordsman. Indeed, he has written another book on Fencing Tactics, with a chapter on the evolution and history of fencing by R. H. Corble, who some will remember was British amateur sabre champion in 1922-27. Mr. Nobbs himself it appears was foil medallist in the 1908 Olympics, and gives a pious tribute to his masters, Masiello in Florence, Rouleau in Paris, Magrini and Mimiague in London, "who taught him the headwork of fencing so thoroughly that he is yet able to discount the years." Deeper still, it was a visit to the Greek collections in the Hermitage in 1885 that first

*Design, a Treatise on the Discovery of Form. By Percy E. Nobbs, M.A. (Edin.), Professor of Design, McGill University, Montreal. Oxford University Press, pp. 404, with 177 illustrations. 1957. Price—\$9.00.

turned his thoughts to emotional expression. He lived his early years from two to twelve in Russia with his Scottish parents.

Design is not a text-book; it is rather a religio architecti, using the term in the Greek and Latin sense of deviser, author, maker, or craftsman. There is in it a massive aggregate of technology, but there is in addition a just element of science and philosophy by which a fabric is created to support the intimacy between esthetic thought and material construction. It is the secretion of an original mind enriched by long labour and wide experience.

Indeed, in the outset, Mr. Nobbs boldly sets forth his qualifications for the task. Many men of many races have been his masters; artists, scholars, prize-fighters, statesmen, craftsmen, merchants, soldiers. Proud cities, raw townships, quiet villages in the old world and the new have harboured him in the practice of his trade. He has had intervals, sailing the seas, lying in hospitals, and depressions in business wherein he might collect his thoughts; he has known the zest of work and sport and of war; his experience at the drawing-board, his masters', his own, his students' extends behind him for more than forty years; the treasure of civilization has been his delight since childhood. If all this does not carry conviction, he has been the architect of those massive buildings which two universities demanded of him, of hospitals and schools. If he has not been called upon to build a church he has renovated the interiors of many. These buildings are his confession of faith, which seems to be much the same as that of Inigo Jones: Architecture should be solid, proportional according to the rules, masculine and unaffected.

Scholarship, as Mr. Nobbs affirms, is essential to design; the architect has a heritage built up during two thousand years. The great architects of that time knew very well what they were doing when they imparted qualities to their work by various artifices or resorted to ornament for the expression of function or sentiment. The argument is that the better one understands the technique of Hellenic, Gothic, or Georgian art the less likely he is to resort to repetitions to produce an impression, and the more likely to rely upon scale proportion and refinement, and to invoke invention and imagination. Regarding certain modern tendencies in design the author has more fear than hope, and impatience with the disregard of tradition. The masters with a scholarship in their equipment solved their problems without recourse to style-mongering or to the antics of originality for its own sake.

The principles of design, he says, are as unchanging as the principles of war. The designer may not be content with pure form, that is, engineering; but he must be careful of exploiting his feelings in his quality of artist, although a work of design fully developed into a work of art in essential ingredient differs in no way from any other work of art. The design is the theme, the occasion, the excuse; the true subject or content of a work of art is the feeling or mood which the artist seeks to share with his public. It is nowhere suggested what the mood or spirit should be; this is for the designer to decide; but the author does set forth the means whereby pure form can be inflected, accented, punctuated, and endowed with the grace of metre, rhythm, and even garnished with rhetoric.

As Mr. Nobbs finds himself rather at variance with many recent writers upon æsthetics, he might think it bold on the part of a reviewer to extract from his somewhat condensed writing a still more condensed statement of his position; but that is the risk every author assumes in submitting his book for review: Æsthetic activity embraces all expression. Design is the discovery of form, and is a mode of expression common to nature and man. Form is a composite of purpose, material, and technique; it occurs in three degrees of per-

fection or purity; it is purest in nature, nearly so in engineering, of more modified purity in works of art. The function of art is the transmission of emotion. Form modified by art occupies a limited area within the field of design. The work of art involves a basis in form. The created work of art makes appeal both through present sense and through the inherited experience of sense, which involves association, tradition, convention, and a grammar of technique, of all which implies the hedonic.

Although full credit is given for the general debt to Benedetto Croce, it will be seen at once that Mr. Nobbs is not in full agreement with him. Mr. Nobbs insists upon the limitation of art to a small place within a field of expression wider that Croce's, in which there is room for nature when manifested in design. He infers that Croce would deny the possibility of beauty outside the expressional activities of man, whilst he himself finds no difficulty in admitting the beautiful as potential wherever form is apprehended, outside as well as inside the limits of art, in engineering as well as in nature. He therefore gives but a qualified assent to Croce's Critique of the Artistic and Literary Categories. Beauty of course is a quality of mind, not of things, liable to be aroused by the contemplation of form and by no means limited to agreeable sensory stimulation or the presence of artistry. It is to be studiously avoided as a criterion of form; either as to what the designer discovers in what is to be, or as to what the public discovers in what has been wrought.

The analogy between the methods of literary expression and those for the discovery of form is pressed throughout the book. Pure form is regarded as clear statement. Modification by scale, by proportion, and by refinement is regarded as elaboration of a thesis; the orders as metrical formulae functional ornament, as syntax, decoration as rhetoric and allusion. From this it is inferred that clarity of design like clarity in the written word is a virtue, and over-elaboration in form as in speech, defeats its own purpose. In the case of major works of design this analogy is very clear. The plan is the plot; its structural development may create dramatic situations. The building may smile or frown or rest serene; its structural elements may chatter or chant, do their work with drilled precision or with playful exuberance. The artist in design controls all this behaviour. At his will there is discreet mystery or expansive garrulity, frivolity or seriousness. It is not alone in the plot but in the telling of the story that art is manifest; a like mood is engendered in the hearer of the tale and in the spectator of a building.

He does not disdain ornament, but he insists that the art of the ornament-maker is distinct from the work of the designer. It may be significant or inane; effective or vacuous; apt or inept, if it is not in relation to the context of the object to which it is applied; it must have appropriate significance, and become part of the object superior to itself. Ornaments fail of their purpose if they obscure the argument or the narrative of events.

The reader is never allowed to forget that Mr. Nobbs is an architect. When he deals with structure and function; when he makes a comparative analysis of one group of schoolplans for their efficiency, of another for the cost per room and child; when he describes a plan for a commerical building with reference to capital and revenue; he brings all to the test of discovering a complex form that will meet practical demands. The philosophy of the æsthetic, the science of vision and colour, the sculpture of the human form, are laid under tribute to demonstrate the synthesis of purpose, material, and technique that underlies the building of a university or a chair. This work can only begin after the raw material of composition, that is the form that functions, has been discovered. Once this is accomplished, it is for the architect by the artifice of scale to impart impression of size, by the artifice of proportion to impart rhythm, by the artifice of refinement to impart elegance. By resort to functional modification of structural elements it is then open to him to render the fabric loquent or even eloquent, and by decoration to enliven all with human sentiment.

The book is not too technical for the general reader, unless indeed the section on colour vision, which no exposition could make any clearer; but the more abstruse sections on æsthetics may be reduced to a summary: 1. That it is not the end of art to engender the pleasurable. 2. That the doctrines of colour preference and colour influence, being based upon illusions, offer no basis for artistic practice. 3. That the technique of colour-contrast requires revision to bring it into harmony with "colour-flooding". 4. That the configuration of retinal images has little to do, and that indirectly, with the apprehension of form, and nothing to do with its appreciation. 5. That the technique of corrections has no basis in mathematics; it is based in experience. 6. That the doctrine of proportion based on numerical ratios is pure astrology, and has no visual basis. 7. That the canon of proportion in the human figure is meaningless. 8. That form independent of the context of an object lacks all significance even if it is conceivable. 9. That facial configuration is no index to character.

There is plenty of free thought in the book but no thoughtlessness. To be told that symmetry as such has no value is disturbing and also that specific forms do not engender specific moods. Indeed it is affirmed that contemplation cannot awaken the precise mood the artist felt, that abstract form is unthinkable, that art can have no "soundness" since there are no absolute values, that "reliance on seeming" is due to illusion. There is always experience of a thing behind a form, the author insists: We think we like a colour when it is something of that colour that is agreeable; we think we like a form when it is something of that form we like, although the technique of art takes cognizance of our likes and is ever busy engendering new ones, for without the hedonic appeal through sense all art is impotent.

Mr. Nobbs does not hesitate to appraise the architects of time past and even his own contemporaries. The masters created a vogue or established a school; in that there was an element of evil, for their assiduous and feeble imitators brought their work into disregard. That was the fate of Norman Shaw, of Ludwig Hoffman, and of Michael Angelo himself. As T. R. Glover says, "the master needs pray to be delivered from his disciples, and the parody is all the tribute that some have for the masterpiece." The more modern architects deserving comment are Lorimer his own master to whom the book is dedicated; Lutyens, White, the Scotts, Garner, Goodhue, Tapper. Writers upon the subject are not neglected; the whole field of literature has been searched.

The illustrations are not the least important part of the book. They are one hundred and seventy-seven in number. They are not pictures but small figures mostly drawn by the author himself to illustrate a statement that cannot be fully specified by words. They include animals, wild and domestic, cattle, dogs, birds, fishes, the moose, the bear, the pelican; of inanimate things they range from cathedrals, abbeys, hospitals, and bridges to log-cabins; to canoe and schooner forms; to chests, knockers, dishes, harps, weapons, chairs, and cradle-boards. They are drawn from all places, from every European country ancient and modern, but especially from Britain, and from the Dominions and the United States. A fruitful source is Edinburgh, but England yields the richest treasure, and London most of all. Even Scotland Yard is not neglected.

Mr. Nobbs concludes that the world is in danger of entering into a period of artistic decadence, and this he ascribes to a confusion of thought in the minds of artists, critics, and the public. In discarding many doctrinal precepts, proposals and superstitions, he has made a brave attempt to co-ordinate the newer knowledge with all that has stood the test of time. In that alone he thinks that safety lies.

ACTIVITIES OF PROVINCIAL ASSOCIATIONS

PROVINCE OF QUEBEC ASSOCIATION OF ARCHITECTS

The following amendments to the By-laws of the Province of Quebec Association of Architects were adopted by the Council at a meeting held on May 4th, 1937, increasing the fees for registration, re-registration and examination.

The Council may, at its discretion hold a special registration examination for one or more candidates who make application for same, upon payment of a special examination fee of one hundred (\$100) dollars each, plus the registration fees. A special examination in "Professional Practice" may be granted at any time upon application duly made to the Council, upon payment of an examination fee of fifty (\$50) dollars and such examination shall be held within three weeks after the date of the application.

A candidate who fails in not more than two subjects shall be allowed by the Council to sit for a new examination on the unsuccessful subjects at an additional fee of ten (\$10) dollars per subject; should he, then, fail again, the fees will be confiscated and to be admitted he will have to take all the subjects of the examination over again, upon the payment of a new fee equal to half the original fee.

A candidate for admission as a Student-Associate shall make application to the honorary secretary at least one month before the date of examination. Such application shall be accompanied by his full name, address, age, the matriculation fee of twenty-five (\$25) dollars, and the candidate's "Testimonies of Study."

A candidate for admission as a "Member" shall make application to the honorary secretary at least one month before the date of the registration examination. Such application shall be accompanied by his full name, address, age, registration fee of one hundred (\$100) dollars, and the candidate's "Testimonies of Study," together with the affidavit of the principal or principals with whom the candidate has served his indenture, that he has satisfactorily served the prescribed period of indenture required under By-laws Nos. 7 and 8.

The entrance fees, payable at the time of application for admission to the Association, shall be as follows:

Matriculation fee for Student-Associate	\$25
Registration fee for Non-Resident Associate	\$100
Registration fee for membership	\$100
Special Registration Examination fee	\$100
Special Examination fee for Professional Practice	\$50
Fee for Examination in Professional Practice	\$25

The Council shall have, at its discretion, the power to re-admit upon application, a member whose name has been removed from the "Architects' Register" for non-payment of dues, upon the payment of all arrears, a re-registration fee of fifty (\$50) dollars and the annual dues for the current year.

The Council shall also have, at its discretion, the power to

re-admit a member who having duly resigned, makes application for reinstatement, upon payment of a re-registration fee of fifty (\$50) dollars and the annual dues for the current year.

MANITOBA ASSOCIATION OF ARCHITECTS

Plans are being made for an exhibition of photographs, drawings, and architectural models as the Manitoba Association's part in "Art Week," which is being arranged by the Winnipeg Art Gallery for early next Fall. Special exhibitions of painting and sculpture will be a part of the program together with a series of lectures on various subjects related to the arts. The Winnipeg Art Gallery hopes in this way to reach everyone in the community who is interested in the Fine Arts and should demonstrate the splendid work the gallery is doing in the development of the cultural life of the province.

As a part of the gallery's educational program, several art lectures, of a general nature, including handicrafts, production processes, and architecture are given in the gallery's lecture room during the winter months. Three lectures on architecture that have been enthusiastically received were "The Aesthetic Sense" by Mr. Percy Over, "Canadian Architecture" by Mr. H. H. Moody, and "From Stonhenge to Modern Times" by Mr. C. W. U. Chivers.

A fine program in art education throughout the province is being carried on by Miss Alice Johannsen under the sponsorship of the National Gallery at Ottawa. This work is in the form of lectures, exhibitions, and study classes, with illustrative material from the gallery, the museum and the Department of Architecture.

The Manitoba Association of Architects will again grant a scholarship to the Department of Architecture as an annual prize to the student with the highest aggregate of marks at the end of his third year. This is an award of fifty dollars and will be a worthy incentive to students of the department.

There has been a concerted effort on the part of newspapers, civic organizations, architects and builders to interest the general public in home building and remodelling. The housing situation is such that some program that will arouse public interest must soon be adopted.

The University of Manitoba, in its radio lecture series has attempted to interest the public in the possibilities of home improvement through redecorating, the addition of much needed space, and the modernization of the mechanical equipment of the house. The lectures were given in two series, one entitled "The Home Designed for Comfortable Living" and the other "The Remodelling of the Home." The departments of architecture, civil and electrical engineering and home economics took part in the series of eight lectures. There has been an enthusiastic response and interesting comment on the material discussed.

R.A.I.C. CONTRACT DOCUMENTS

Members of the Institute are advised that copies of the R.A.I.C. contract documents may be obtained from the secretary, 74 King Street East, Toronto, at the following prices:

Copies of the "Stipulated Sum" and "Cost Plus" forms of contract are also obtainable in French either from the office of the Royal Architectural Institute of Canada or the Province of

Quebec Association of Architects.

Money orders or cheques payable at par in Toronto must accompany all orders for contract forms.

NOTES

At the annual meeting of the National Construction Council of Canada held at the King Edward Hotel, Toronto, on May 20th, 1937, Gordon M. West, PP.R.A.I.C., was reelected president for the ensuing year. Other officers elected were: first vice-president, L. L. Anthes; second vice-president, Joseph Wilde; honorary treasurer, A. Ross Robertson, A.M.E.I.C.; general secretary, I. Markus, M.R.A.I.C. Messrs. James H. Craig, M.R.A.I.C., and F. H. Marani, M.R.A.I.C., were elected Ex-Officio Members of the Council for the ensuing year.

Philip J. Turner, F.R.A.I.C., of Montreal, addressed a meeting of the Lions Club on May 6th, on "The Abbey as the Architectural Background to the Coronation."

The annual golf tournament of the Toronto Chapter, Ontario Association of Architects, will be held at St. Andrew's Golf Club on June 21st, 1937. The tournament will be followed by a dinner for the members and their guests.

Alcide Chaussé, honorary secretary of the Royal Architectural Institute of Canada, has moved his office to 7816 Avenue DeGaspe, Montreal.

Messrs. Mayerovitch and Bernstein, architects, announce the removal of their offices from 1430 Bleury Street to 2040 Union Avenue, Montreal.

B. Evan Parry, F.R.A.I.C., addressed a meeting of the Kiwanis Club at Midland, Ontario, on May 25th, 1937, his subject being "Decentralization of Industry."

According to an announcement recently made by the Minister of Finance, 994 loans have been made under the Dominion Housing Act, totally \$7,064,237. These loans have provided housing accommodation for 1,583 family units at an average loan per family unit of \$4,463. Ontario leads the other Provinces with 468 loans, Quebec is next with 298, then follow Nova Scotia 159, British Columbia 27, New Brunswick 19, Manitoba 16, Prince Edward Island 6, and Saskatchewan 1. No loans have been made under the Act in the Province of Alberta.

The following have been elected officers of the Toronto Chapter of the Ontario Association of Architects for the ensuing year: chairman, R. S. Schofield Morris; vice-chairman, Raymond H. Collinge; honorary treasurer, Arthur H. Eadie; honorary secretary, Earle L. Sheppard; executive members, L. E. Shore, W. Ford Howland and Bruce H. Wright.

The disciplinary regulations of the Ontario Association of Architects' Registration Board were approved by the Lieutenant-Governor-in-Council on May 27th, 1937.

The medal awarded annually by the Royal Architectural Institute of Canada to the student in each of the recognized schools of architecture who has obtained high marks throughout his entire course and who gives promise of being an architect of distinction after graduation, has been awarded to the following students for the year 1937:

Victor E. Meech—University of Alberta
W. E. Fleury—University of Toronto
Raymond Martineau—Ecole des Beaux-Arts, Quebec
H. C. Hammond—McGill University

Heating and Air-Conditioning of Buildings

By Oscar Faber, O.B.E., D.C.L., D.Sc. and J. R. Kell, M.I.H.V.E.

This book is a notable addition to technical literature and contains the latest data available on a subject which has recently made rapid advances and is becoming of increasing importance in modern building practice. Written by two experts who have had many years of practical experience, the book describes the most up-to-date methods of heating and air-conditioning of all manner and kinds of buildings. It has been the authors' aim, also, to deal with the various problems in terms sufficiently well-informed to be of service to the architect, engineer and contractor, and yet develop the theme in simple language for the benefit of the non-technical person. The book may therefore be recommended equally well to the student, the architect and the technician. The latter will find of particular value the running costs and costs of installation included throughout.

Besides containing a valuable series of 75 tables, the book is illustrated by over 240 line drawings and 32 pages of halftone plates.

Price \$7.50 - All charges prepaid

ARCHITECTURAL PUBLICATIONS LIMITED 74 KING STREET EAST - TORONTO, ONT.

Cheques payable to Architectural Publications Limited

ALUMINIUM

We carry in stock a large variety of structural shapes, also Aluminium ingots and Alloys for immediate delivery. On account of its lightness, freedom from tarnish, ease of installation and long life, Aluminium is finding increased favor for structural purposes. Its Alloys are used because of their beauty, strength and permanency. Full particulars on request.

The

BRITISH ALUMINIUM

COMPANY LIMITED

380 ADELAIDE ST. W. TORONTO 620 CATHCART ST. MONTREAL



B.P. Specification

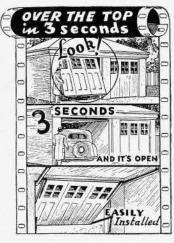
TILE FLOORING

Durable, decorative, resilient tiles in a variety of sizes and colours. Recommended for schools, office buildings, auditoriums, hospitals, churches, apartment houses and residences. Specification literature and samples immediately upon request.

BUILDING PRODUCTS LIMITED

Montreal Winnipeg Toronto St. John Hamilton Halifax

Make ANY Set of Doors Open Over-the-Top



- Spring Operated.
- No pulling or lifting.
- Doors completely out of sight when open.
- Require no servicing.

NEW BEAUTY FOR GARAGES

OVER-THE-TOP equipment fits any type of door

permitting extreme latitude in door design.

Spring Operated—OVER-THE-TOP doors open with a turn of the handle. Disappear completely under the header when open. Easily installed in minimum space at remarkably low cost. Write NOW for catalogue.

LADORE & COMPANY LIMITED

WALKERVILLE, ONTARIO

For DEPENDABLE Quality AND Prompt DELIVERY



DOMINION STEEL & COAL CORPORATION

"Peck Rolling Mills" Division

Executive and Sales Offices

Canada Cement Building, Montreal

FOR HEATING LINES

COPPER TUBES are "the last word"



COPPER TUBES lead to greater efficiency in hot water heating systems . . . give longer and more reliable service. Permanently smooth inside surfaces reduce resistance to the flow . . . especially in forced circulation systems. And hot water conveyed through copper tubes loses only about one-half as much heat as when black iron is used. Faster flow and reduced heat losses mean quicker circulation; the maximum amount of heat is delivered to radiators in the least possible time.

The cost? Assembled with "solder-type" fittings,* the cost of a copper tube installation is very little more than that of rustable material.

Anaconda Copper Tubes are trade-marked for easy identification, and are produced to the close tolerances necessary for tight and strong soldered joints.

Where standard-size, rigid pipe is required, Anaconda 85 Red-Brass Pipe has long been the standard of quality. It offers the highest resistance to corrosion of any water pipe commercially obtainable.

*Where temperature range does not exceed 180°F., soft solder made of 95% tin and 5% antimony is recommended. "Sil-Fos" brazing is suggested for higher temperature.

ANACONDA AMERICAN BRASS LIMITED

(Made-in-Canada Products)

MAIN OFFICE AND MILL: NEW TORONTO, ONT.
MONTREAL OFFICE: DOMINION SQUARE BUILDING

Anaconda Copper & Brass

Page xi June, 1937



IN THIS LIBRARY BUILT ON PIERS

Cork locks out dampness . . . aids air conditioning efficiency

More than 100,000 board feet of Armstrong's Corkboard were used in the construction of the new air conditioned Library.

This Library is built entirely on piers and it spans both a broad mill race and a traction subway line which uses the abandoned bed of an old Canal. To guard against the moisture and exposure resulting from this situation, the entire lower floor slab is insulated with $1\frac{1}{2}$ inch corkboard.

In addition, maximum efficiency and economy of the large Carrier air conditioning system is assured through insulation of all ducts, air-washers and other equipment with Armstrong's Corkboard. Pipe lines in connection with this equipment are insulated with Armstrong's Cork Covering.

Thanks to the natural cell structure of cork, both Armstrong's Corkboard and Armstrong's Cork Covering provide low thermal conductivity plus a high resistance to the efficiency-destroying effects of moisture. As a result, they offer permanent insulating

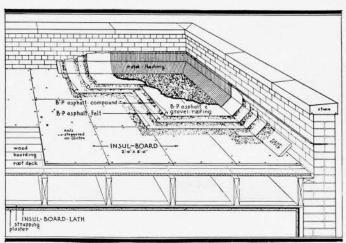
efficiency for all types of air conditioned and normally-heated buildings. For small air conditioning installations, the new Armstrong's Dl Corkboard in $\frac{1}{2}$ inch thickness is recommended. Write today for complete information and samples.

ARMSTRONG CORK & INSULATION COMPANY LIMITED
MONTREAL TORONTO WINNIPEG



Bonded BUILT-UP ROOFS

Specialized intelligent co-operation with architects for all roofing and water-proofing problems. B.P. Built-Up Roofs for use over wood, concrete, tile or steel 'roof decks are in service on some of the most important buildings, industrial plants and mills in Canada. B.P. Built-up Roofs are bonded for 10 years—15 years—20 years. Complete specifications and plans immediately upon request.



Insul-Board Roof Insulator over wooden roof deck, according to B.P. Specification "A"

INSUL-BOARD

A moisture-proof insulating board—layer-built for greater structural strength. For roof insulation, Insul-Board Roof Insulator, size 2'x 5', supplied in standard thickness of 7/16" and up to 2", or greater if necessary. Insul-Board Roof Insulator 1" thick or more, can be supplied with a 2" offset.

BUILDING PRODUCTS LIMITED

MONTREAL

TORONTO

HAMILTON

WINNIPEG

ST. JOHN

HALIFAX

"I know it's good
PIPE . . . because
It's STELCO"



The STEEL-MARK of QUALITY

Stelco Pipe never lets you down. It's a clean-run, accurately threaded pipe that cuts easily and assures permanent, goodwill - building plumbing jobs. It's SCALE-FREE which means it delivers clean water all the time — without clogging. Uniform, dependable Stelco Pipe is made by us in Canada. Standard and Extra Heavy in Black or Galvanized; also special pipe for many special purposes. Architects specify it. Good plumbers insist on getting it. Jobbers everywhere stock it.

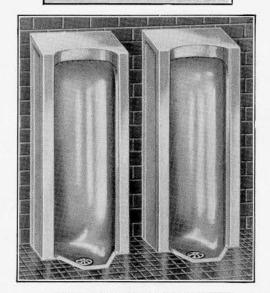


THE STEEL COMPANY OF CANADA, LIMITED

HAMILTON - EXECUTIVE OFFICES - MONTREAL

SALES OFFICES: HALIFAX, ST. JOHN, MONTREAL, TORONTO, HAMILTON, WINNIPEG VANCOUVER WORKS: HAMILTON, MONTREAL, TORONTO, BRANTFORD, LONDON, GANANOQUE

RUGGEDLY BUILT



VITRIAN URINALS will not CRAZE or

DISCOLOUR

Simple in design . . . ruggedly built, "Vitrian" Urinals will not craze or discolour. Integral flushing rim eliminates the use of a metal spreader, resulting in greater economy. Types available for every requirement. Urinals illustrated have sloping top especially desirable for school installations. Solid vitreous china throughout.



CLOSETS

The Canadian Potteries line includes closets in a wide variety of types. The "Simcoe" shown here with seat operated valve is as nearly foolproof as a closet can be.

Sanitary ware with this trade-mark is made of heavy vitreous china.

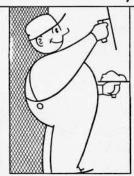


It will not craze or discolour and is impervious to moisture, acids, bacteria.

CANADIAN POTTERIES

SAINT JOHNS QUEBEC

The Plasterer Says:



Why not go after the

STUCCO overcoating jobs?

Owners of frame houses are fine prospects this year for the builder and the plastering contractor. The Home Improvement Plan opens the way to rejuvenate the old home with alterations on the interior and modern stucco on the exterior. This is where *Pedlar's Universal Metal Lath* enters the picture.



THE LATH THAT BACK-PLASTERS AS THE MATERIAL IS APPLIED

This 2-coat, plaster-saving lath has an insulation backing that acts automatically in back-plastering the job. It is the ideal reinforcing for stucco overcoating work, providing a snug covering that insulates against loss of heat, against sound, and it keeps out dampness. For interior walls and ceilings it assures a smooth surface that will never be marred by cracks. We also make: Plaster Saving Metal Lath, "Superior" Rib Lath, Corner Bead, Channels, Base Screed, Picture Mould, etc.

Write for full particulars and samples.

THE PEDLAR PEOPLE LIMITED

Established 1861

HEAD OFFICE-OSHAWA, ONTARIO

treal - Toronto -

Ottawa

Winnipeg



"Standard" for Smartness in

Matched Bathroom Suites

When you are striving for certain exterior effects and endeavouring to be true to period, naturally you wish to have harmony in your interiors also.

When it comes to the bathroom specify one of the many "Standard" matched bathroom suites. In these suites you will find harmony of design between the various pieces. Also you will appreciate their size—each piece in scale with the others.

"Standard" suites, though "matched", are not necessarily expensive. They range in price from the simple bathrooms to quite luxurious ones, from compact suites for apartments and multiple dwellings to more spacious ones for large residences.



Standard Sanitary Mfg. Co.

TORONTO, ONTARIO

SALES OFFICES:

VANCOUVER

CALGARY WINNIPEG

IPEG MONTREAL



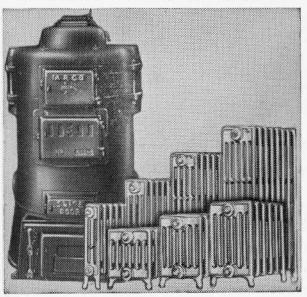
ARCO AND BOILER

A Strong Combination for Efficient Heating

Miscellaneous equipment for an engineering job is seldom satisfactory. That is why architects generally specify Dominion equipment which is designed and manufactured to work harmoniously for efficient heating.

The favorite Arco boiler and Corto radiators are a fine example of a balanced installation accomplished by Dominion products.

CORTO





<u>Dominion Radiator and Boiler</u> (

MONTREAL

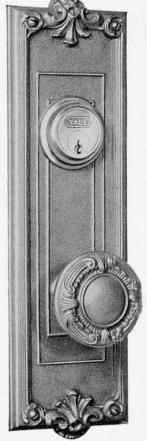
BRANTFORD

TORONTO

WINNIPEG

SPECIFY

TRADE YALE MARK BUILDERS' HARDWARE



YALE RIBERAC DESIGN

ARCHITECTS Know---

That what is worth doing at all is worth doing WELL. **Any** good building, whether commercial or residence, merits the best materials obtainable — from foundation rock to hardware.

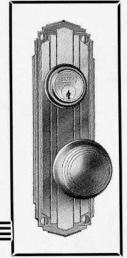
Yale Builders' Hardware has for many years enjoyed a reputation for highest quality—dependability and wide range of patterns to conform to any architectural motif.

Throughout the Dominion, architects are writing YALE into their specification for Builders' Hardware.

YALE VERTICON DESIGN

THE YALE & TOWNE

Canadian Division St. Catharines, Ont.



RED DIAMOND SCALE FREE PIPE



YOU CANNOT buy better pipe than RED DIAMOND. Plumbers, Builders, Architects and Engineers know that it represents the highest quality that high grade material and modern engineering skill have yet produced. It is entirely scale free. Every length is tested over 700 lbs. hydraulic pressure.

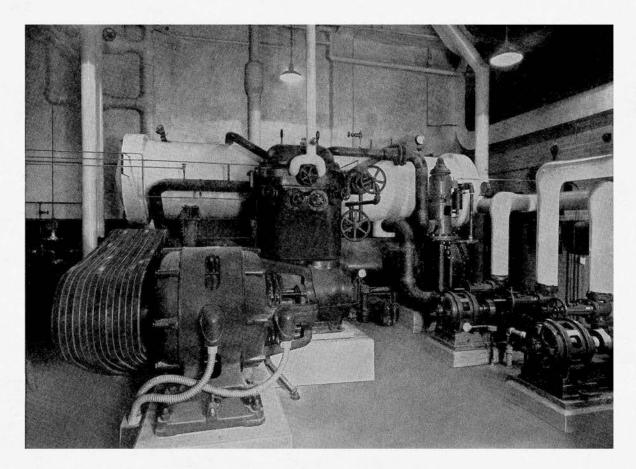
Look for the red diamond, the red tags on the small size pipe. All jobbers carry "RED DIAMOND."

We also manufacture nipples and couplings, black and galvanized, in all sizes.

Canadian
Tube & Steel
Products

Montreal, Quebec

ELECTRICAL EQUIPMENT for the MODERN BUILDING



OTHER things being equal, the office building best equipped for ideal working conditions will be most in demand. Conditioned air, good lighting and convenience are essential today.

Pictured above is an installation in one up-to-date office building—the new Hamilton Public Building. This shows a Freon compressor, driven by Westinghouse motor by means of Cog-Belt drive. Circulating pumps are also Westinghouse motor driven.

Compact Nofuz panel boards distribute power throughout the building, providing the ultimate in convenience and safety. Westinghouse Transformers are also installed for lighting and power requirements.

Westinghouse makes every type of Electrical apparatus required by the building industry: motors, switchgear, control boards, lighting equipment... Everything Electrical. Be sure to ask your nearest Westinghouse office for any electrical information you want.

CANADIAN WESTINGHOUSE COMPANY, LIMITED

Branch Offices and Repair Shops
VANCOUVER, CALGARY, EDMONTON, REGINA, WINNIPEG, FORT WILLIAM, TORONTO, SWASTIKA, MONTREAL, HALIFAX

8264

Westinghouse

A Few of the Many Prominent Hotels Using Powers Control



The luxury and comfort of dining, dancing, drinking, lounging, or attending banquets, in rooms properly air conditioned and automatically regulated by Powers control is an important part of the hospitality offered by these modern hotels. . . . Whenever you want to be sure

of getting the most dependable and economical regulation for heating, cooling, or air conditioning use Powers control. Its first cost is often higher, but its superior dependability, long life, low operating and maintenance cost, make it a most profitable investment.

The Canadian Powers Regulator Company, Ltd., 106 Lombard Street, Toronto; 344 University Tower,

WERS

Montreal; 406 Tribune Building, Winnipeg. Offices also in Calgary, Halifax and Vancouver.

TEMPERATURE AND HUMIDITY CONTROL

for Heating . Cooling . Air Conditioning . Industrial Processes