

THE
JOURNAL
ROYAL ARCHITECTURAL
INSTITUTE OF CANADA



Vol. XI, No. 1

JANUARY, 1934

TORONTO

RECENT ARCHITECTURAL BOOKS

The following is a partial list of architectural books which may be obtained from Architectural Publications Limited, at the published price, carriage and customs duties prepaid.

ARCHITECTURAL GRAPHIC STANDARDS

By Charles G. Ramsey and Harold R. Sleeper \$6.50

This book will prove invaluable to architects and draughtsmen because of its practicality and comprehensiveness. It contains 213 plates of details which give in graphic form a great deal of information regarding types of construction and dimensions of standard equipment used in different classes of buildings. The variety of the subjects covered include such details as floor construction, roof construction, various types of framing, doors and windows, fireplaces, chimneys, etc., also a great deal of useful information giving sizes of tennis courts, bowling alleys, hand ball courts, kitchen equipment, swimming pools, furniture, bath room accessories, etc.

The book is indexed so that all information can be found easily, and it is sure to find almost daily use in every architect's office. It contains 233 pages, and is 9 $\frac{1}{4}$ " x 11 $\frac{3}{4}$ " in size.

GOOD PRACTICE IN CONSTRUCTION

By Philip G. Knobloch \$6.00

Parts I and II Combined and Revised

This book, consisting of 52 plates, was first published in 1923, followed in 1925 by Part II containing an equal number of plates. The present volume combines both, with the addition of 10 new plates. The author's aim has been to present useful details in a convenient form for use in the drafting room. The drawings are made on a large enough scale to show clearly all details, to which explanatory notes are added.

KIDDER-PARKER ARCHITECTS' AND BUILDERS' HANDBOOK

Harry Parker, Editor-in-Chief \$8.00

An unequalled work-and-reference-book universally recognized as an indispensable aid for architects and builders. The authors have spared no pains to give sufficient detail and information for all ordinary purposes and the key to many of the larger problems that are met with during the course of professional practice.

THE VILLAGES OF ENGLAND

By A. K. Wickham \$3.50

This book contains 64 pages of text and 107 photographic illustrations on 100 plates of which 16 are in colotype, of old villages, general and detailed views, etc., frontispiece in colour, 15 line illustrations in the text reproduced from pen drawings by F. L. Griggs, R.A., W. Curtis Green, A.R.A., Sydney R. Jones and others, and a special coloured geological map. The book is 6 $\frac{1}{4}$ " x 9 $\frac{1}{4}$ " in size.

THE DESIGN OF LETTERING

By Egon Weiss \$5.00

This book presents the author's original, simple and practical method for the precision letter spacing of inscriptions and so forth by means of "Net Values" assigned to each letter in every alphabet. It contains Hebrew and Greek alphabets, Arabic numerals, Roman alphabets, Roman Minuscules, Gothic Uncials, Gothic alphabets, Italic and Script, Commercial and Single Stroke Letters, Numerals, Monograms and Initials. The book is 9" x 12" in size and contains 192 pages, 155 text illustrations and 29 plate pages showing fine examples of ancient and modern lettering.

HUDSON ON THE LAW OF BUILDING AND ENGINEERING CONTRACTS

And of the Duties and Liabilities of Engineers, Architects, and Surveyors
(Published in England)

By Arnold Inman, O.B.E.,
and Lawrence Mead, Barrister-at-Law \$16.50

There can hardly be any legal question arising in connection with engineering and building which cannot be answered with the assistance of this work. Originally written by an architect who afterwards went to the Bar and had a technical knowledge of building combined with a practical knowledge of the complicated legal questions. The book is 6 $\frac{1}{2}$ " x 10" in size, and contains 607 pages.

HOMES AND GARDENS OF ENGLAND

By Harry Batsford, Hon. A.R.I.B.A., and Charles Fry \$3.50

This book contains 72 pages of text, and 175 photographic illustrations of 135 fine old country houses and their gardens, of the Mediaeval, Tudor, Stuart, and Georgian periods, with a few Victorian examples. With a frontispiece in colour, map, and numerous line cuts in the text. The book is 6 $\frac{1}{4}$ " x 9 $\frac{1}{2}$ " in size.

THE LANDSCAPE OF ENGLAND

By Charles Bradley Ford \$3.50

This book contains 80 pages of text, and 135 superb photographic views of the English countryside; its hills, valleys, woodlands, streams, mountains, lakes, coast and old buildings in their rural settings; with a frontispiece in colour and 25 pen drawings in the text reproduced from originals by Brian Cook. Also an index and 6 maps. The book is 6 $\frac{1}{4}$ " x 9 $\frac{1}{4}$ " in size.

RECENT ENGLISH DOMESTIC ARCHITECTURE

\$5.00

This volume presents the most distinguished record of the English domestic work of the present century yet made. It contains more than one hundred large pages of photographs and plans of the best modern houses by the leading architects of the day; notes on the materials used are given in each case, and where possible the actual buildings costs, together with the price per cube foot. The houses are arranged in a rough "chronological" sequence. Actually all have been built during the last few years, but those which follow the Tudor style have been placed first, the Georgian second, and finally the Modern.

THE METAL CRAFTS IN ARCHITECTURE

By Gerald K. Geerlings \$7.50

Metal work, ancient and modern, in architecture and interior decoration has been reproduced in numerous photographs and drawings, and explained by an architect who has sought historic examples in Europe and America, and has obtained first-hand information by visiting the leading foundries and workshops. Each metal has been treated in a separate section, and among the headings are: Bronze, Brass, Cast Iron, Copper, Lead, Zinc, Tin, Lighting Fixtures, Preparation of Specifications, not to speak of current developments, such as enamelling and electrical aids in depositing metals. With about 300 photographs and drawings. 9 x 12 inches.

In addition to the above list, we carry in stock a large number of other architectural books which can be seen at the office of The Journal, R.A.I.C. A list of these books will be sent to architects outside of Toronto upon request.

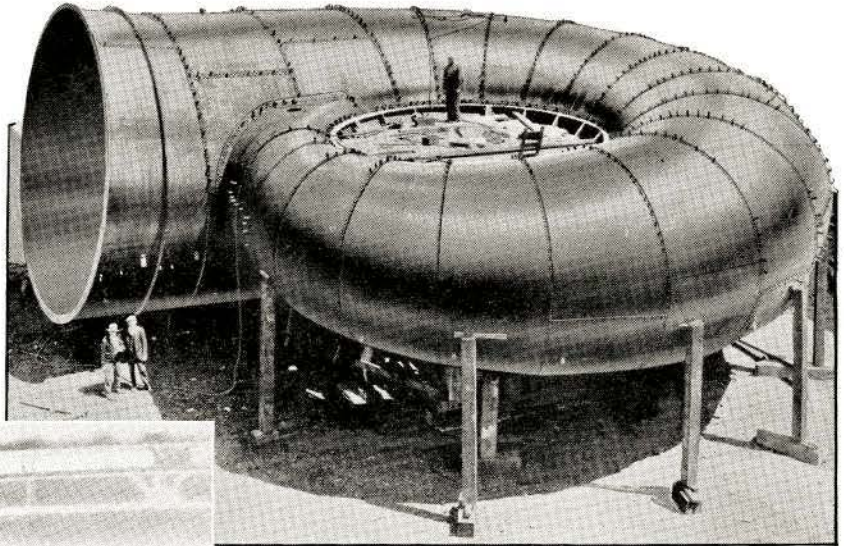
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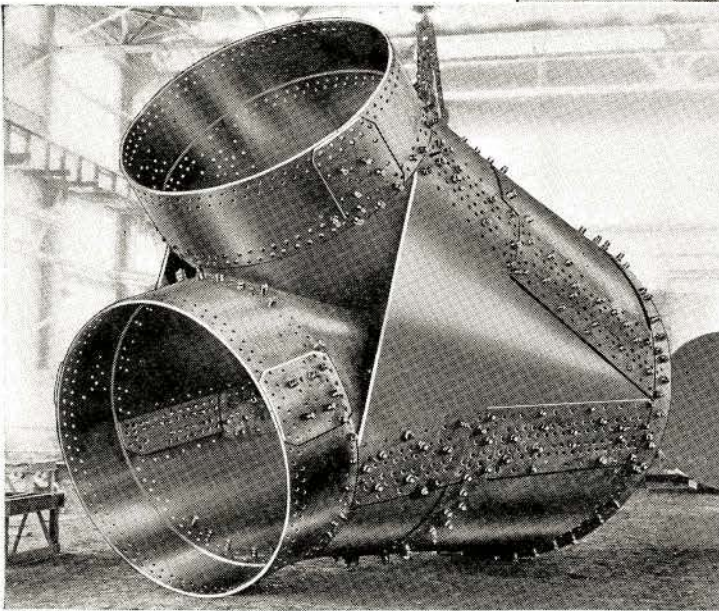
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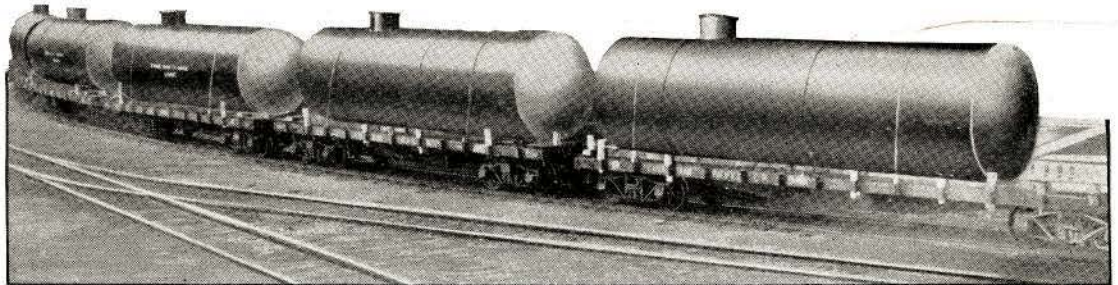
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THE JOURNAL

ROYAL ARCHITECTURAL INSTITUTE OF CANADA

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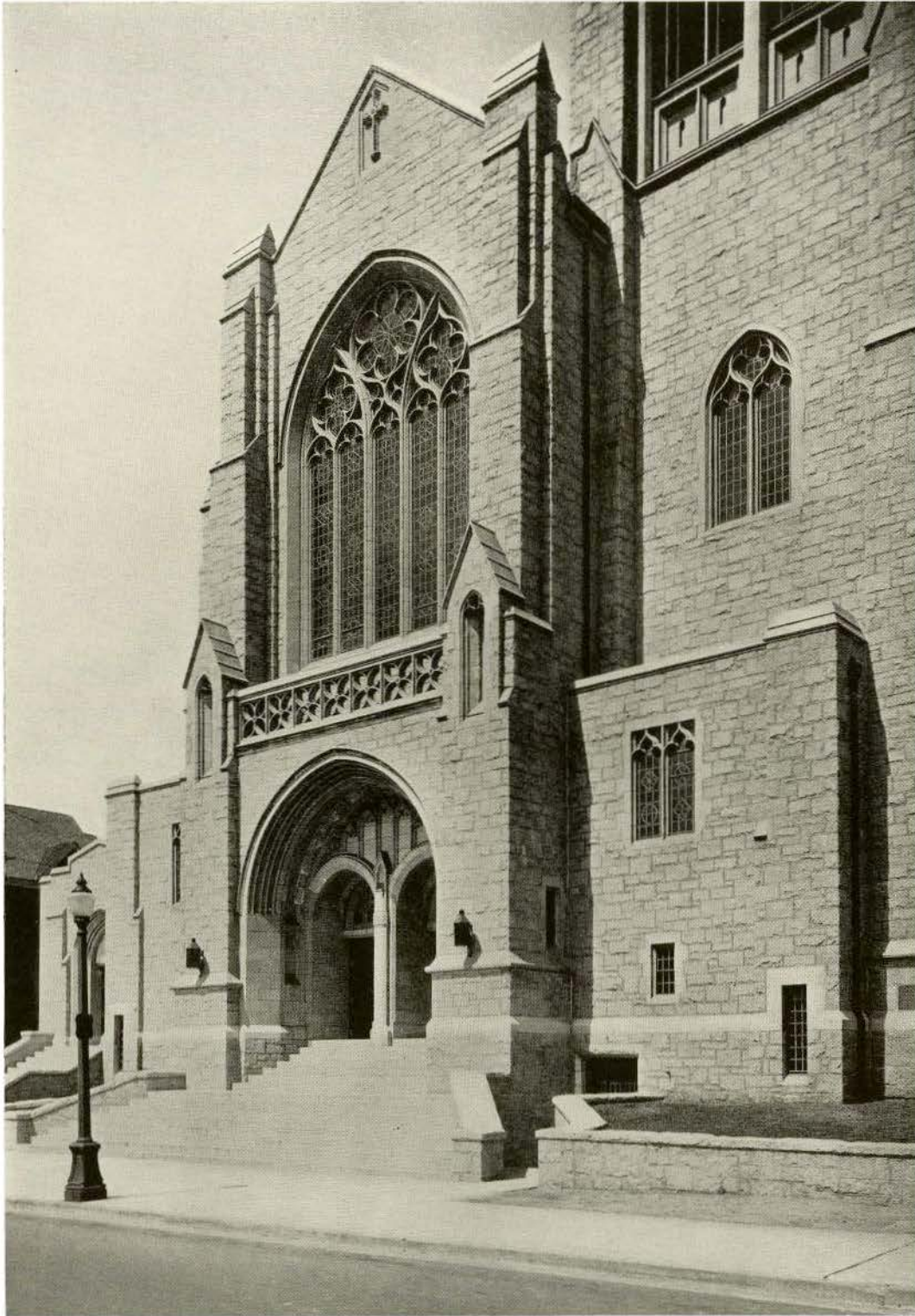
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DETAIL OF MAIN ENTRANCE FRONT
ST. ANDREWS-WESLEY UNITED CHURCH, VANCOUVER, B.C.

Twizell and Twizell, M.M.R.A.I.C., Architects

Exterior walls of granite backed with concrete and furred inside with hollow tile. Dressings and traceries of terra cotta to match local Haddington Island stone.

ATTACKING THE BUSINESS SIDE OF ARCHITECTURE

BY GORDON M. WEST, P.R.A.I.C.

EDITOR'S NOTE—The following article by the president of the Institute is intended to serve as an introduction to a series of articles to be published in subsequent issues of THE JOURNAL dealing with the economic and business side of architecture.

IT will be remembered that nearly two years ago, through the initiative, kindness and forethought of John S. Archibald, F.R.A.I.C., and of Ross & Macdonald, FF.R.A.I.C., well known architects of Montreal, a fund was subscribed at an Institute annual meeting at Lucerne-in-Quebec, the proceeds of which were to be used to promote the study of "The Economics of Architecture."

For some time ways and means have been under discussion as to how best to utilize the fund to achieve its purpose, and it has been recently decided to use our journal as the medium, in the first instance, through which an attack on the subject will be made.

Your editorial board, in its wisdom, has indicated that it is the president's duty to introduce this new policy and outline as best he can what is to be attempted, and it is in pursuance of this duty and in obedience to this request that this introduction to a new journal editorial policy is being written.

In brief, the new policy will be to use the letter press of THE JOURNAL for articles and matter looking toward the improvement of professional knowledge on the executive and business side of architectural work, while at the same time continuing to cover the design and art side as usual through the plates and illustrations and the comment thereon.

In adopting a policy of this sort your journal is somewhat belatedly following, in a general way, the line taken for some time by numerous other architectural magazines, such as *The Architectural Forum*, *The Architectural Record*, and others. It is my hope that this being so, the articles which will be carried in our journal, though of necessity restricted by the limited space at present available, will have the advantage to be gained from the perusal of much already published material directed along similar lines.

It would seem to me that in addition to the workaday detail of business methods in architecture that the time is ripe for open and frank discussion in the architectural press upon several of the fundamental principles upon which the business side of the architectural profession rests, and it is to be hoped that those, upon whom will devolve the task of writing our articles on this economic (or business) side of architecture, will deal with some of the fundamentals rather than

with the usual workaday detail of business administration.

I refer particularly, among other things, to the constant tendency which has been evident in recent years for architects to *approve* the purchase of this or that building material put forward by their contractors rather than to take upon themselves the work and responsibility involved in direct selection, and contact, with the placing of orders for materials. This tendency to *delegate* purchasing power violates the rather elementary principle that it is control of purchasing which makes for power and standing in business circles, and there seems to be a lack of understanding of this simple principle of business among professional men.

Another point which requires a good deal of open discussion is the question of the long term effect upon the architectural profession, if the growing habit of supplying partial services (plans, specifications and details) to speculators and others is allowed to spread, resulting, it is to be noted, in the diversion of control of purchasing away from the architect almost entirely.

There is also plenty of room for improvement by the majority of the profession in the matter of the accuracy of their preliminary estimates. Here again it seems to your president that our profession requires, not so much instruction in the technicalities of how to make and obtain accurate estimates, as open discussion of the damage which has been done to the profession through having made inaccurate (or perhaps it would be more correct to say incomplete) preliminary estimates.

For many years now our architectural schools have concentrated on the problem of improving the designing abilities of their students, and I do not believe any person would refuse to admit, either, that this concentration was urgently needed or that it has produced most excellent results.

It behooves the profession, however, to avoid the usual error of allowing the pendulum to swing too far in one direction.

In recent years there seems to have been a tendency in most professions to feel that its education of the professional man along general lines should be broadened. This seems to me to be essentially true in architecture, and I hope to see the articles

(Continued on page 17).



ST. ANDREWS-WESLEY UNITED CHURCH

VANCOUVER, B.C.

ALTHOUGH plans for the new St. Andrews-Wesley United Church were prepared early in 1929, construction of the building did not actually get under way until February, 1931. This delay, together with a further delay of seven months in 1932, was due to financial conditions and it was not until May, 1933, that the church was finally opened for services.

The church has been erected with no material change having been made in the original design except that due to the continued financial depression much of the interior oak finish, such as organ cases, screens and panelling, has been temporarily deferred. Two of the organ chamber openings facing the church have a temporary filling of dummy pipes, and the others are filled in with cloth screens.

The main entrance front of the church faces the east, and there is a gallery at this end over the main vestibule. The organ is in three sections, at each side of the chancel and at each end of the gallery.

Some idea of the size and scale of the building may be obtained from the following dimensions:

Total length of building.....	183'0"
Maximum width at transepts.....	116'0"
Length of nave, including gallery.....	136'7"
Width of nave at clerestorey.....	47'8"
Height of tower from sidewalk.....	109'0"

The seating capacity of the church is eighteen hundred persons, with provision for a choir of one hundred.

Messrs. Twizell and Twizell were the architects for the building, and Frederick Davies of Vancouver was the general contractor.



INTERIOR VIEW FROM SOUTH AISLE TOWARDS CHANCEL AND NORTH TRANSEPT
ST. ANDREWS-WESLEY UNITED CHURCH, VANCOUVER, B.C.

Twizell and Twizell, M.M.R.A.I.C., Architects

Interior piers and arcades of reinforced concrete with special finish. Inside walls finished with an acoustic plaster except at piers and arches which have caen stone finish with York Fossil marble bases. Roof trusses are of solid timber construction fir cased. Panels between rafters are finished with acoustic plaster. Roofs are of slate and floors have tiled finish on top of concrete sub-floors.

A MUNICIPAL HOUSING PROJECT THAT WILL PAY

BY JAMES H. CRAIG, M.R.A.I.C.

Editor's Note: While the following article deals specifically with a Municipal Housing Project for the city of Toronto, it will serve as a guide for other municipalities where a similar project is desirable.

SPONSORED by three representative organizations of the construction industry in the City of Toronto*, a low cost housing project which will accomplish a threefold purpose, has been an election issue in the recent municipal elections, and will be submitted in detail to the mayor and the board of control at the first regular meeting of the board in January.

Nearly every municipality has acquired through tax sales, street extensions and widenings, vacant property for which there is no market at the present time, and which represents a potential source of revenue if it were improved or sold.

The City of Toronto has acquired over two million dollars worth of such land, and a preliminary survey shows that approximately ten thousand feet frontage valued at over half a million dollars is suitable for the construction of low cost housing at the present time. The municipality will be asked to proceed at once with the construction of low cost housing on these various properties at an expenditure of not more than \$2,500,000.00.

The proposal, if accepted, will accomplish three primary purposes, any one of which, in itself, might be considered as ample justification for its adoption. It will provide employment direct and indirect through the normal channels of industry, distributing approximately \$2,050,000 in wages. This figure is based on statistics carefully compiled by the National Construction Council of Canada, and has been checked with the figures compiled by such authorities as John M. Keynes. It will provide proper low cost housing for 750 families, and it will convert a dead asset of the city into a live one, showing a return on the investment, and will facilitate the ultimate sale of the land.

A study of figures published in the annual reports of the city assessment commissioner reveals that in Toronto private enterprise has failed to maintain the average number of house vacancies. From available figures, 834 additional vacancies should exist to maintain the average over an eight year period. Apartments show more than the average number of vacancies, but over 15,000 families have doubled up, and in many cases are living under anti-social conditions which will ultimately result in an inferior type of citizenship. Private

enterprise has failed to provide decent single family accommodation at low rentals and elsewhere, in England, throughout Europe and in the United States the provision of such accommodation has been recognized as a social and civic obligation. Toronto, while lacking many of the external appearances of slum conditions which exist in older cities, has many houses which, on an average, house one family in a room, with the common use of the kitchen and bathroom.

On August 11th, the Hon. H. H. Stevens, in a radio address, spoke as follows:

"I would point out that there is not a city in Canada (and I have visited practically all of them) where one will not find slum conditions. This is a challenge to the citizens of these communities to insist that these slum areas be abolished and replaced with modern sanitary buildings. One has not time to elaborate, but if any of my hearers will walk through their own community tomorrow, they will find illustrations of what I have described, and I inject here at this point that I challenge the right of a landlord to receive rentals from an insanitary and dilapidated building when he is financially able to replace it with a decent structure.

"To my mind, there is in this proposal alone enough new and needed construction to give such stimulus to employment as to materially, if not wholly, eliminate the want and suffering with which we are confronted.

"I am quite aware that the problem has its difficulties, financial and actual, but I am convinced that if our citizens would take an intelligent interest in this and other opportunities now lying unheeded, really surprising results could be achieved."

The Prime Minister in his radio talk on Monday, November 20th, showed a clear understanding of the need for government financed construction programmes as a basis for distributing purchasing power and his forecast of such a programme is an augury of government financial assistance to municipalities in the type of undertaking proposed. The problem of the depression, as intimated by the Rt. Hon. R. B. Bennett, is one of distributing and maintaining purchasing power in order that producers may consume the products which collectively they helped to produce. In Canada since

*The Toronto Chapter of the Ontario Association of Architects, The Toronto Building and Construction Association, and the Toronto Building Trades Council.

October, 1929, the chartered banks have retired current loans totalling some \$560,000,000.00. This was the basis on which the purchasing power for hundreds of thousands of Canadians was previously established. New credit must be forthcoming from some source if the unemployed are ever to be re-absorbed in industry.

During times of depression, private enterprise has not sufficient confidence in future prospects to take the initiative in re-starting the wheels of industry. The public Will to Recovery should then assert itself by the initiation of work which can be conducted with the greatest degree of success by municipalities and governments. In the past, in Toronto, low cost housing projects such as that proposed, have been possible, only where funds were available at low interest rates, and when conducted on a large scale by the municipality, or when the municipality guaranteed the issue of securities which financed the project.

The Toronto Housing Company was established in 1912, with \$100,000 subscribed and paid up capital bearing a limited 5% dividend. This company borrowed \$900,000 on bonds which were guaranteed by the municipality. The company made profits, always paid its bond interest, and in 1923 and 1925 built new buildings costing \$300,000 out of the surplus profits earned after paying all charges.

The Toronto Housing Commission established by the city in 1919 was unfortunate in that it conducted building operations when construction costs were high and those who bought houses on a long term purchase plan saw their initial equity payments disappear with falling prices, but even this project was paying until a year ago, according to civic officials who were responsible for its operations. If some defaults have occurred in the past year, the merits of the project can hardly be censured when so many other normally sound enterprises are in the red.

Building material costs are little over one-half of what they were in 1920 when the Housing Commission was active. The Dominion Bureau of Statistics index figure for building materials in that year was 144, as compared with 78.5 in 1933, the figure for 1926 being 100.

Labour costs today, unfortunately, are whatever the employer wishes to pay and a comparison on this basis is valueless. It should be noted that evidence is available to show that a continuance of unemployment relief in preference to work for the unemployed through the normal channels of employment has contributed to the delinquency of labour costs. Men on relief are working for unscrupulous employers at a pittance, which, however, together with relief rations, etc., make possible a fair standard of living.

Unemployment relief costs in Toronto, totalled six millions of dollars for the year just ended, and it is argued that if this amount were expended on relief works programmes, approximately \$2,500,000 must be spent on materials. However, it must be admitted that in the last analysis, the cost of materials also provides for expenditures on labour and that well over 80% of all construction costs are labour costs, either directly on the works, in the preparation of materials, or in the mines, quarries, etc., or in transportation.

The vote given to the city controller who headed the polls would indicate that his policy of providing work for the unemployed has met with popular approval, and that a growing public opinion is opposed to taxation which keeps men on relief in profitless idleness, rather than employed in productive work. Some months ago Professor J. M. Keynes published an article in the *London Times* which included a series of calculations to prove that by spending £15,000,000 a year more than it spends at present, keeping 400,000 unemployed, the state could employ those 400,000 men and get executed £45,000,000 worth of work. These calculations have not been refuted. It is surely more logical to tax the public to bring prosperity than it is to tax for the purpose of increasing the depression.

The proposed housing programme, however, will not cause an increase in taxation. On the contrary, it will convert property which is now a dead loss into a source of revenue, and as it is a capital purpose which will last many years and which will pay a return over many years, it is only ordinary financial common sense to finance the expenditure by a loan.

It is proposed that the necessary funds be raised either:

- (a) Partially by grant and partially by borrowing from the Dominion and Provincial Governments;
- (b) By borrowing from the Dominion Government on such terms as may be extended to municipalities under the Government's construction programme;
- (c) By borrowing through an issue of debentures, with or without the Dominion Government's guarantee.

At the World Economic Conference in London last July, M. Asquini of Italy, in advocating public works programmes, said, "Since the onset of the crisis it had been the Italian Government's opinion that a sound policy of public works was the only way of remedying the temporary set-back to private initiative and ensuring a certain measure of equilibrium in the purchasing power of the market . . ." "The work Italy had accomplished spoke for itself."

Since March, 1919, England and Wales has built over 2,060,000 new homes. During this same

period Canada has built approximately 230,000, or on a per capita basis, about 45% of the number built in England. On the building of these houses £148,500,000 in subsidies were subscribed by the State and Municipalities. This programme is being daily augmented, and on December 10th, the Prince of Wales launched a vigorous offensive against the slums, inaugurating a plan to demolish 210,000 houses in various parts of the country, which presumably will be replaced by modern dwelling quarters as the housing programme is carried on.

One hundred million dollars from the public works fund has recently been granted the Emergency Housing Corporation by the United States Government, and \$6,000,000.00 has been granted the City of Detroit which is undertaking a slum clearance project which will ultimately cost \$30,000,000.00.

The Canadian Minister of Finance, the Hon. R. N. Rhodes, recently on two occasions has expressed the view that programmes of public works in times of depression, and curtailment of public works programmes in times of expansion would tend to maintain a balance of construction works in the country at all times. It now remains to set in motion in Canada such a programme of works as will result in all industry receiving an elixir of life, and in this effort municipalities may play an important part.

The Toronto project, in order to obtain a maximum distribution of purchasing power, proposes that the commissions for architectural services for the respective units be distributed among architects in private practice. That contracts be awarded by tender to bona fide local contractors, and that mechanics and tradesmen be employed at a fair wage standard.

A recommendation is made that competent architects be employed to conduct the detailed social, civic, economic and architectural surveys previous to the allocation of the work among local architects and to collaborate with the city commissioner of buildings in allotting and carrying out the work.

Much preliminary work has been accomplished and a recapitulation sheet is appended hereto showing the basis upon which preliminary computations have been made.

The benefits to be derived by the city from adopting the proposal are summarized as follows:

1. It will provide employment and distribute directly and indirectly approximately \$2,050,000 in wages.
2. It will distribute purchasing power to more men than the adoption of engineering construction works as over 80% of the cost will be distributed in wages.

3. Over a period of six years in Toronto, building construction has comprised 87% of the total of all construction, and relief works such as here proposed will tend to maintain this ratio.
4. Purchasing power will be distributed to over 100 architects and over 800 contractors, who in most cases will otherwise be unable to pay taxes.
5. Many men who are now receiving direct relief will find employment under this housing plan, and the cost of keeping them in profitless idleness will be saved.
6. It will provide good and attractive housing accommodation for 750 families at low rentals or on a long term purchase plan which is within the means of the low income groups. From a preliminary survey there are hundreds of families housed in congested downtown areas in buildings which are unfit for human habitation, and which bring no revenue in taxes to the city. At present these properties cannot be condemned as no better accommodation in central locations at low costs is available.
7. It will tend to reduce the cost of health, fire and police service by removing overcrowding which tends to create unsocial conditions and fire hazards.
8. It will tend to stimulate private enterprise in house construction.
9. It will not interfere with private enterprise because such enterprise has failed to provide decent housing accommodation in downtown areas for the low income groups and has failed to maintain house construction in Toronto to keep up the average number of vacancies.
10. Some of this land which was once suitable for industrial sites is no longer in demand owing to the fact that more suitable industrial sites have been provided by the Harbour Commission, and only development by a large corporation, such as the city itself, will make it attractive as housing property.
11. The city will realize on a dead asset valued at over half a million dollars. This property, when improved, will bring a net return in rentals of over fifty-six thousand dollars a year or approximately 10% on the value of the land.
12. With a rising price level assured by the U.S. policy of inflation, the city need not fear that home buyers will see their equities disappear, on the contrary, the purchasers will find it increasingly easy to make payments as prices rise. The situation being reversed from that in which the municipality found itself following the establishment of the Toronto Housing Commission in 1919.

13. The policy of instituting timed public works as advocated by many leading Canadians, will tend to lessen the undesirable boom conditions which would result from a housing shortage when prices begin to rise.
14. It will strike at the heart of the depression by providing a starter for the construction in-

dustry, which, with its dependent industries, normally employs much the largest group of workers in urban centres. Construction contracts, in the City of Toronto, have decreased in volume since 1929 by over 88%, and only concerted action by the respective governments can rectify this condition.

RECAPITULATION SHEET

Type of Building	Land Frontage in Feet	Value of Land	Estimated cost of Buildings	Estimated No. of Families Housed	Gross Revenue at approx. 8% on the Investment	Average Rent per Annum	Average Rent per Month	Deductions in Gross Rentals for Vacancies	
								Per cent	Amount
Houses.....	4,215	\$149,800	\$ 632,250	166	\$ 62,564	\$377	\$51.50	2.52	\$ 1,576
Houses or Duplexes.....	1,909	94,985	496,340	140	47,306	328	27.35*	2.52 6.43 8.95	4.48 2,119
Duplex or Apartments.....	2,298	163,382	538,440	250	56,146	225	18.80*	6.43 13.77 20.20	10.1 5,670
Apartments or Stores and Apartments.....	1,561	146,190	774,440	60 Stores 194	73,650	600 193	50.00 16.10*	13.77 14.70 28.47	10.1 10.1 14.24
Unassigned.....			58,530		4,682			10	468
	9,983	\$554,257	\$2,500,000	750	\$244,348	*Cost of Heat to be added			\$20,220

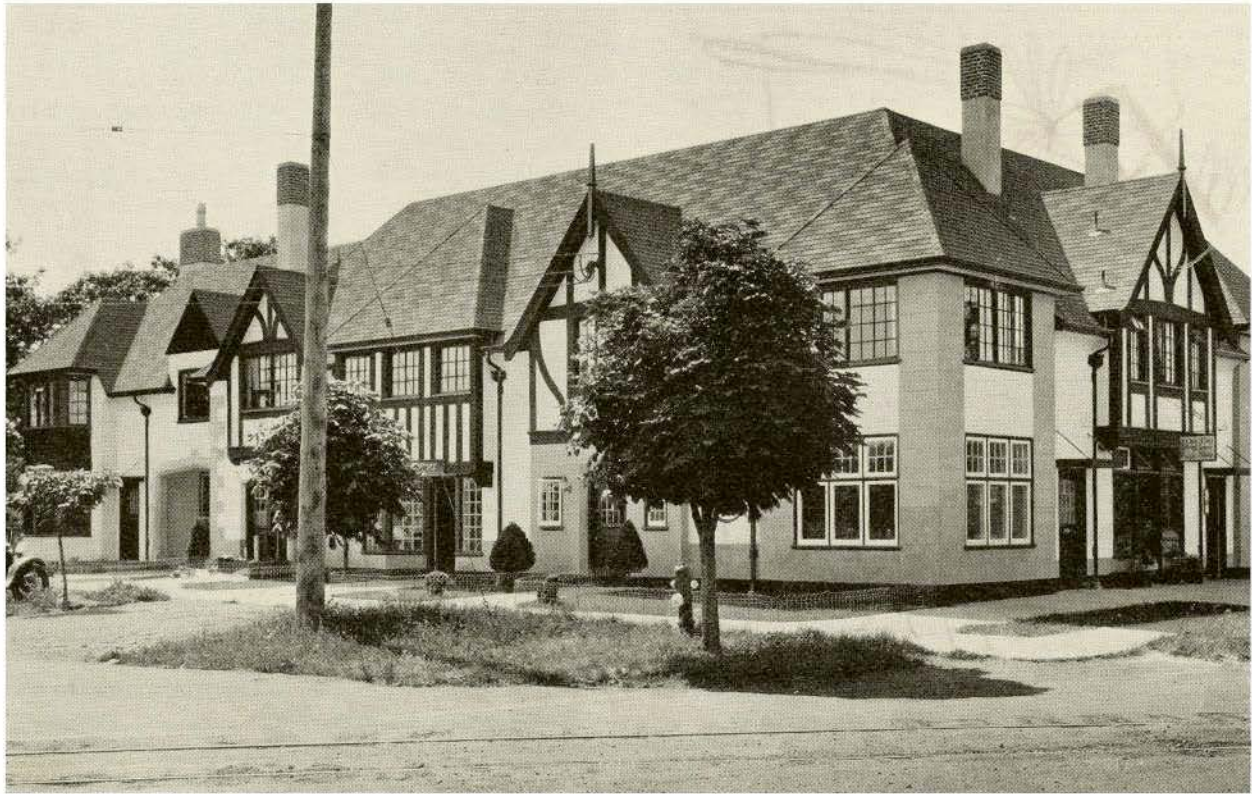
Average House Vacancies in Toronto, computed from figures published in the Annual Reports of the Assessment Commissioner.

Year	Vacancies	Vacancies pro rata with 1933 Population	
1925	4,382	5,319	Average Yearly Vacancies... 3,504
1926	5,068	5,497	Vacancies 1932..... 2,670
1927	4,343	4,752	
1928	3,253	3,464	Less than average vacancies 834
1929	2,340	2,404	Proposed accommodation for 750
1930	1,745	1,750	Leaving house vacancies
1931	2,205	2,192	below average..... 84
1932	2,670	2,656	
		28,034	
		8	= 3,504

Note: Apartments show more than the average number of vacancies, but this is offset by the fact that over 15,000 families have doubled up.

Gross Revenue.....	\$244,348.00
Less—	
Deductions for Vacancies.....	\$ 20,220.00
Deductions for Depreciation....	50,000.00
Deductions for Insurance.....	5,000.00
Deductions for Interest at 4½%	112,500.00
	187,720.00
Net Annual Return to City.....	\$ 56,628.00

Note: This return on the City's enterprise to provide employment, provide low cost housing and to realize on an unproductive asset, thus will pay a return of over 10% on the value of the land.



WINDSOR APARTMENTS, OAK BAY, VICTORIA, B.C.

J. Graham Johnson, M.R.A.I.C., Architect

Building consists of five stores, four apartments and a detached gasoline station with garages. Exterior is "Caen Stone" Old English finish stucco with deeper tone quoins, etc., and black base. The half timbering is all hand adzed and stained a medium dark brown. Casements are steel and small lights and store windows have zinc cames. Roofs are covered with asphalt slate shingles of three shades of brown. Eaves are stucco and coved to main walls.



SOUTH ELEVATION SHOWING TWO STOREY APARTMENT AND DRIVEWAY TO
GARAGES AND GASOLINE STATION
WINDSOR APARTMENTS, OAK BAY, VICTORIA, B.C.

J. Graham Johnson, M.R.A.I.C., Architect

THE MODERN RADIO STATION

BY W. R. MOSCRIP, B.Sc. (Cambridge)*

AS with any new art, Radio has, during the past few years, passed from the purely experimental to an intensely commercial form, and has attained first adolescence and now maturity, to take its place among the older educational and communication arts, and has become part of our daily lives. During this period we have seen in domestic use specimens of apparatus which revived memories of the early flying machines, or the first automobile, in their obviously experimental character. These have given way to the modern instrument which has a life of many years and is improved upon year by year in matters of detail only, as in the case of the modern car where last year's model may appear odd to the eye but is a good car nevertheless.

Radio transmitting stations have presented firstly the appearance of a scientific exhibition, then the appearance of a series of metal boxes standing uncomfortably about a room which might be used for many purposes, and now with the settling down of radio into its place among the arts, the station building and the apparatus are being designed each for the other and a real radio technique is crystallizing.

Recently, at Kalundborg, in Denmark, a new station was opened in which the ideal aimed at was to render building and equipment a congruous whole. Power gear, in power stations, is handled in a manner which has proven its value through many years of use. It is right to mount heavy items of power gear in fire-proof vaults with adequate precautions for the protection of life and the gear itself. So in the perfect radio station power gear is dealt with as power gear. So with water gear. In a radio station of high power, water cooling is indispensable. In water station work a high standard of technique has grown up involving the use of large, costly valves, heavy pumps, high capacity filters, and reliable pressure and flow measuring devices. In the modern radio station the best in water practice is borrowed and the portion of the station required to handle the water supply is made suitable for the purpose assigned to it.

In the past years it has been common to arrange the radio circuits on metal racks and to provide these racks with panel fronts to resemble power control boards. There is no reason why this should be the best way of placing the items involved. On

the other hand many of the items are not suitable for rack mounting. Out of these considerations grew the conception of a twin row of tile lined vaults, separated by a corridor, and protected by glass lined grille doors to house the radio circuit components which in a high power station are apt to be large and heavy, and the partitioning into cubicles arrived at on circuit considerations alone.

In one pair of rooms are mounted the valves, say each valve in its cubicle, corresponding to one-half of the push-pull pair. With the valve is mounted its spare. In another pair of rooms comes the output circuit, with symmetry, as seen from the corridor, comparable to that appearing on the circuit schematic. One condenser is on the right hand; its companion is on the left. And so, through the circuit. If an item is large it is given space on the floor. If it is small it is mounted on a suitable shelf or bracket in the electrically correct place in three dimensional space to enable it to do its job most efficiently.

The radio art has necessitated the development of rectifier gear such as was never needed by power technique proper. How to mount these items was the question. Could the mind be freed of ties with power technique and evolve something suitable based only on the needs and merits of the case? It could. The result has been to place the rectifiers apart from their transformers, which rightly go in fireproof vaults, and to assemble them in glass-fronted rooms, spare rectifiers alongside service ones, with the whole protected and controlled by a system of switches, interlocked for safety, and operated from outside the glass-fronted room.

All the items mentioned had designed for them the most suitable method of housing and then the architect was called in to make these individual rooms, vaults and cubicles into a station building that would not offend the eye and would prove practical from an operating point of view. The result has exceeded the most optimistic hopes of the originators.

View the building as a visitor. The spacious transmitting hall with its high ceiling and hardwood floor seems worthy of the service for which the whole was designed. In the centre stands the supervisory desk at which sits the station attendant. In clear view on the left is the power supply board with meters indicating the state of all the supplies coming in to the transmitter. On the left and beyond the side door is the water supply board showing on prominent instruments the state of each branch of the water supply system. Facing the attendant is the panel-mounted low power radio

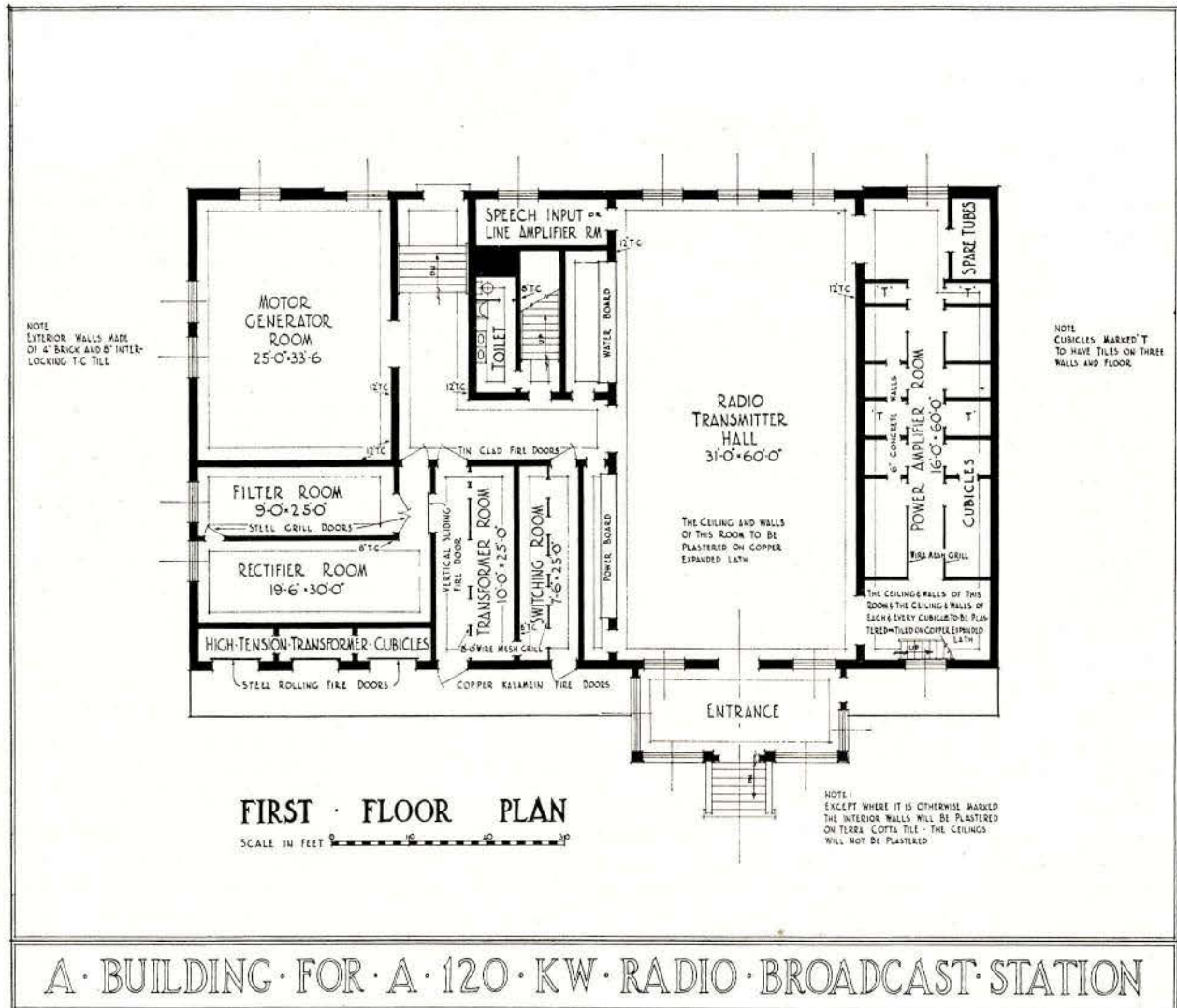
*Mr. W. R. Moscrip, at present with the Northern Electric Company Limited, is connected with the Standard Telephones and Cables, Limited, of London, England, and has had much to do with the development and recent installation for government purposes of Microray Communication Equipment across the English Channel, as well as the engineering features of high-powered broadcasting equipment on the continent.

gear, and on the right is the tile-fronted bank of cubicles housing the power radio stages.

All items that require visual inspection can be seen clearly while the station is functioning. It is intended that two attendants shall be on duty together. The one will be responsible for supervision in the transmitter hall, while the other will move about observing conditions in the power cubicles through the grilles, in the rectifier rooms through

cape, or enter and cause harm, the matter has been dealt with along these lines. A large part of the building is screened by plastering the walls of the transmitting hall over bonded metal lathing. The roof of the whole building is covered with copper over which the conventional tar and gravel roof is spread.

In short, the architect has turned the tricks of his trade to account in meeting the needs of the



the glass doors, and in the amplifier cubicles from the central corridor.

The architect's problem is rather more involved than would be the case were the building required for other service. The radiation from the high power amplifiers and the consequent troubles are required to be controlled by means of screening. Screening is usually unsightly when applied in the form of perforated metal to a unit of a transmitter. In the newer art, however, the cubicle construction of the amplifiers allows the screening to be applied under the plaster or the tiling in the form of expanded metal lathing, so that no screening is visible at all, but in all cases where radio power might es-

engineer who, in his turn, has studied the architect's problem to make his designs reasonable and applicable to the space which the architect can reasonably provide. The finished station presents an appearance which suggests something definite. It is not a power station, not a studio, nor a factory. It has an atmosphere which suggests a radio station as one enters, and avoids that jarring note which has always been present in the past in the presence of steel racks and sharp corners.

The accompanying plan shows a possible layout of the ground floor of a station of 120 kilowatt power. This layout has been arrived at as representing the technical requirements as conceived by

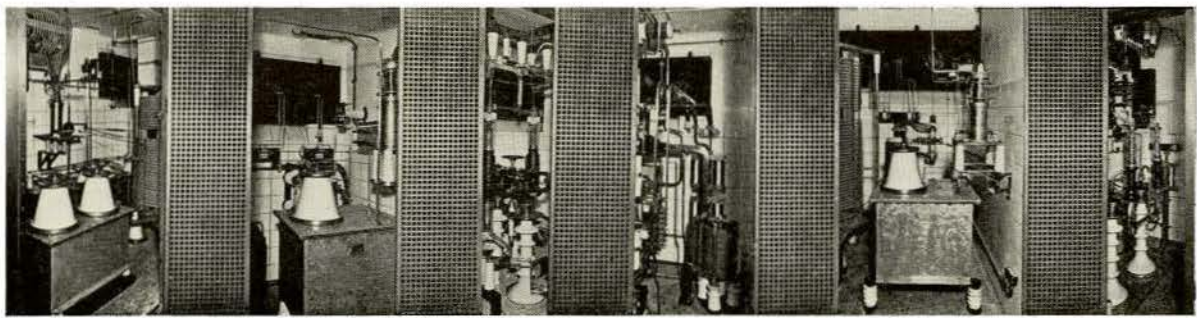
the radio engineer, these being embodied by the architect in a building which allows the chosen type of technique to be used for each type of gear. Accessibility, ease of installation, convenience in operation are all given their due weight.

The unloading platform, disguised as a verandah, gives easy installation. Wide corridors and convenient doors give ease of access and allow replacement to be made with a minimum of inconvenience. The use of fireproof compartments for the transformers and for the switching gear, makes for safety. The generator room is at a point remote from the hall for considerations of noise.

The power amplifier cubicles are accessible from both ends of the corridor, while the spare valve cupboard, housing as it does valuable spares, is located convenient to the amplifiers and at a safe point as regards the valves themselves. In the

cubicles where water is used at pressure, the walls are tiled as precaution in case a burst should occur. Likewise, in case of a burst, the doors behind which charged water is used are glass lined, since a burst with the high voltage on, might blind an attendant if he were to be in the path of a jet.

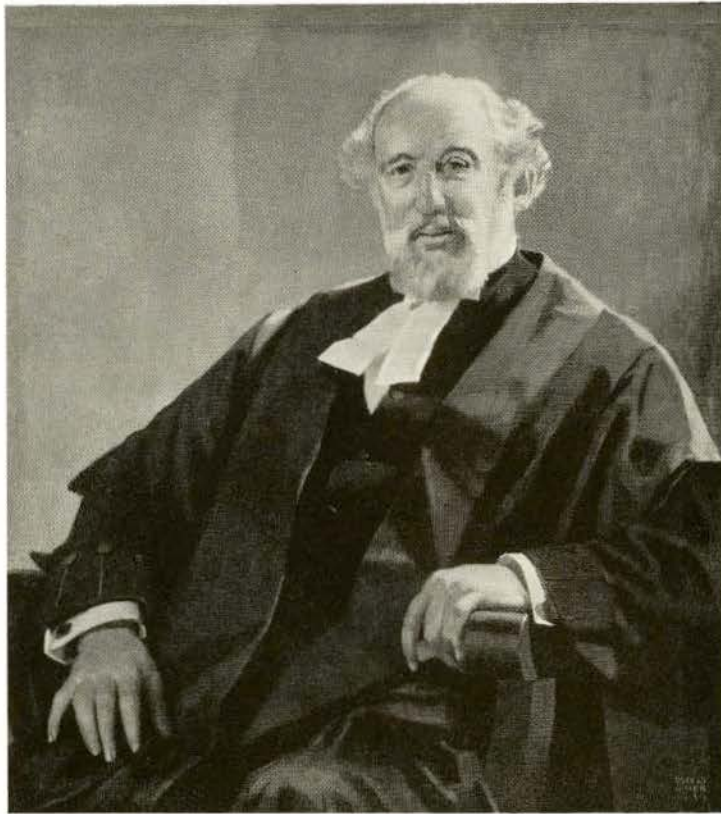
Built into the building are a range of fixtures to accommodate the interlock system of levers used in the interests of safety to regulate the opening and closing of doors and switches, where in the absence of such controls danger might lurk. No electrical device is relied upon, either positively or negatively, in this safety system, the whole being mechanical. To the architect, as much as to the engineer, goes the credit for an effective system which is not unsightly as these systems of levers often are, unless studied in this way.



CUBICLES IN POWER AMPLIFIER ROOM

The power amplifier is built into a brick or concrete cubicle approximately 38' long x 7' high x 15' deep, having a corridor passing down the centre. On each side of the corridor the cubicle is divided by transverse partitions into six compartments in which the equipment is mounted on the floor and on shelves and brackets on the walls in a regular manner following logically the symmetry of the circuit compartment in order to permit easy access to all components.





A PORTRAIT BY E. WYLY GRIER, P.R.C.A.
Shown at the recent Exhibition of the Royal Canadian Academy

THE FIFTY-FOURTH EXHIBITION OF THE ROYAL CANADIAN ACADEMY OF ARTS

The recent exhibition of the Royal Canadian Academy of Arts, which was held at the Gallery of the Art Association of Montreal, was outstanding for at least two reasons, the first, because it was one of the finest exhibitions ever held by the Academy, and the second, because the opening of the show on November 16th was graced by the presence of Their Excellencies the Governor-General and Countess Bessborough.

In officially opening the exhibition, His Excellency pointed out that the Academy had been founded by his predecessor, the Duke of Argyll, fifty-three years ago, and since then, every Governor-General had been given the privilege of officiating at one of its annual exhibitions. While congratulating the Royal Canadian Academy on its history of half a century's pioneering as a professional art institution, he also stressed the necessity of extending the Academy's functions beyond the boundaries of annual exhibitions, however excellent they were, to the realms of improving public taste and educating the younger generation to an appreciation of beautiful things.

This year's exhibition contained a very representative group of paintings, and included two hundred and thirty-nine exhibits in oil and water colour from practically all of the well-known painters, together with a fair proportion of work from artists of promise. Landscapes seemed to predominate at the exhibition with portraits occupying a very important place.

The black and white section was comparatively small, containing about fifty etchings, drawings, designs and illustrations, while sculpture was represented by only twenty-eight exhibits.

The architectural section, containing comparatively few exhibits, was augmented very materially by a fine exhibition of work executed by members of the Royal Architectural Institute of Canada, consisting of ninety photographic enlargements submitted in competition for the medal of honour and other awards offered by the Institute.

At the invitation of the National Gallery, over eighty works have been selected from this year's exhibition for the purpose of being sent on tour throughout the Dominion.

—I.M.

AN EFFORT TO ELIMINATE BID PEDDLING

A statement by W. L. Somerville, F.R.A.I.C., Chairman of the Joint Committee of the Royal Architectural Institute of Canada and the Canadian Construction Association.

FOR the past year a joint committee of the Royal Architectural Institute of Canada and the Canadian Construction Association, consisting of three representatives from each organization, have had under consideration some means of stopping the pernicious practice of "bid peddling" which has wrought such havoc in the building industry during the past few years.

After a great deal of discussion it was finally decided that the best method of control would be through the medium of a form of tender. As a result of the committee's study of various forms in use, a draft was prepared, which after legal advice on a number of points raised, has been finally approved by the R.A.I.C. executive and is now ready for distribution.

Although this standard form of tender will cover conditions under which the majority of tenders are called for, there will no doubt be many exceptions which may require the insertion of special clauses, but the committee feels that attention should be drawn to their reasons for the inclusion and form of certain clauses which are essential in the consideration of a standard form designed for general use.

For example, in the paragraph in which the amount of tender is to be given, the troublesome matter of fluctuating government sales and other taxes has been provided for, and in fairness to both parties of the contract should not be omitted.

The custom of requiring a bid bond or marked cheque is also provided for. Owing to abuses of the use of marked cheques and the unfairness of holding such cheques for an undue length of time, in some cases possibly unavoidable, it was decided that except in the cases of government departments or other public corporations, only a bid bond should be required.

The clauses most important as regard the elimination of "bid peddling" are those requiring the contractor to list in his tender the trades which he proposes to execute himself, together with the names of sub-contractors for each of the other trades. To prevent the substitution of other sub-contractors for those named, at a later date, for

other than legitimate reasons, such as lack of financial responsibility, evidence of which must be submitted, the architect is given absolute authority.

It will be noticed that the amounts of the sub-contractors' tenders are not called for as is sometimes done, but the contractor agrees to furnish an analysis of the contract sum upon the signing of the contract. This arrangement is vital to prevent the abuse of switching sub-contractors from one general contractor's tender to lower the total of another. This practice, although obviously unethical, is nevertheless a common one, and one which sometimes places the architect in an embarrassing position with his client who may have different ideas and can see no wrong, due to lack of knowledge, of the evils of such practice.

The committee has come to the conclusion that the calling for alternative prices on various types of construction and finish, etc., is not only unfair to the contractor, but makes it almost impossible for him to give properly a list of sub-contractors. This is due to the possibility of one sub-contractor having a lower price based on one alternative and higher on another. Alternative prices have a tendency to cause confusion in tendering and multiply the chances of error. The committee therefore strongly recommends against this practice in calling for tenders.

Another source of confusion in tendering is a long list of unit prices required. It is recommended that such a list be confined to simple units as excavation and foundation work, or other such items easily defined. Should the standard form be found inadequate for the listing of unit prices required, it is suggested that such a list be given in the specifications so that the form can be used without alteration.

The impossibility of preparing a form that would take care of all possible requirements has been recognized and the limitations of this recommended form realized, but it is hoped that the underlying principles vital for the elimination of "bid peddling" will be adopted by all practising architects who are interested in the welfare of the construction industry and the ethical standing of their profession.

CANADIAN STANDARD FORM OF TENDER

Messrs.....
(Name and Address of Architect or Owner)

Gentlemen:

Having examined the drawings numbered.....
inclusive, and the general conditions and specifications
prepared by.....for the
(Name of Architects)

.....
(State name of building as per title used on drawings and in specifications)
we hereby offer to furnish all materials, plant and labour
necessary for the proper completion of.....
(Name entire work, if
such is required, or state names of each trade or trades as covered by the
instructions of the Architect)

including all prime costs, allowances and Government Sales or other Taxes, in force at this date (but not including any additional or deductible allowances of Taxes, that may be imposed subsequent to this date, and which shall be payable by or to the Owner), in accordance with the above mentioned documents, for the sum of.....Dollars. (\$.....) in lawful money of Canada.

We enclose herewith:

(a) a bid bond issued by the.....Company of Canada

or

(b) a certified cheque drawn in favour of the Owner, in the amount of.....Dollars (\$.....) which is.....per cent of the amount of our tender, to be held in escrow and dealt with as follows:

(Note: The deposit of a certified cheque is not recommended for private work.)

(1) In the event of the above tender being accepted within days of the time stated for the closing of receipt of tenders, and our failing or declining to enter into a contract in the form hereinafter mentioned for the amount of our tender, the said {bid bond / certified cheque} shall be forfeited to the Owner in lieu of any damages to which he may be entitled by reason of our failure or refusal to enter into such contract;

(2) In the event of our tender not being accepted within days of the time stated for the closing of receipt of tenders, the {bid bond / certified cheque} uncashed, will be returned to us forthwith, unless a satisfactory arrangement is made with us covering its retention for a further stated period.

In submitting this tender, we recognize the right of the Owner to accept any tender at the price submitted, or to reject all tenders, it being understood, and this tender is submitted on the express condition, that revised tenders shall not be called for if minor changes only are contemplated.

We submit herewith:

- (a) A list of the trades we propose to execute ourselves;
- (b) A list of sub-contractors we propose to use on this contract, reserving to us, however, the right to substitute other sub-contractors for any trades in the event of any sub-contractor withdrawing his tender or becoming bankrupt after the date hereof. Any such substitution shall be subject to the approval of the Owner and contingent upon evidence of withdrawal or bankruptcy, satisfactory to the Architect.

If we are notified of the acceptance of this tender within the time above specified, we will:

- (a) Execute the form of contract approved by the Royal Architectural Institute of Canada and the Canadian Construction Association;
- (b) Furnish guaranty bond {at our expense / to be paid for as specified} for the proper completion of the work, the said bond to be issued by a Canadian Company satisfactory to the Owner in the amount of per cent (.....%) of the amount of the contract, and maintain this security bond in force for a period of one year after the date of the Architect's final certificate.
- (c) Furnish a general analysis of the contract sum, the total aggregating the amount of our tender.
- (d) Complete the entire work included in the contract on or before..... (Date)
- (e) If required, furnish a list of unit prices for extra work (to apply to additional excavation and foundation work and other simple construction units).

Yours truly,

Signature.....

Address.....

ATTACKING THE BUSINESS SIDE OF ARCHITECTURE

(Continued from Page 3)

which your editorial board intends to publish on the business and economic affairs of our professional work coloured by a broad knowledge of affairs, and to find the workaday details therein dealt with in a broad gauge manner which will fit them into a sound policy, the general direction of which will redound to the benefit of the architectural profession and through it, to that of the general public which is interested in honest, sound and well designed buildings.

Your editorial board has an important task on its hands in the successful attainment of their objective, and one which, if successfully achieved,

will have a great influence on architecture as it is practised in Canada, for many years to come.

This is particularly so, as it is the intention once the material has been assembled, to re-issue it in pamphlet form later for the use of the Canadian schools of architecture.

Mr. Archibald and Messrs. Ross and Macdonald have done something in making this possible, which may prove of inestimable benefit to the architects of the future and which may make the practice of architecture a more effective and important affair in the community than has been the case in recent years.

CORRESPONDENCE

GRAVESTONES AND RADIO CABINETS

Editor, THE JOURNAL, R.A.I.C.

I have considered writing a letter to the Press on a subject which has long been on my mind. It is the matter of gravestones and radio cabinets. At first sight they would seem to be an odd pair but they have a common vulgarity which I think it is your duty to expose. No other papers would publish my thoughts on this subject because of their advertising. THE JOURNAL is happily aloof from such sordid considerations and I earnestly hope that you will give me a little space. A year ago I should have included in my list pianos and house clocks, but I have noticed in that period an almost imperceptible desire on the part of their designers to give us something beautiful. We shall wait one more year before passing judgment.

But I do not know anything in the world more vulgar, more insulting to the taste of even the so-called "average" man than radios and gravestones. I wandered about the other day in the radio department of a large departmental store and gazed on the assembled "ultimate achievements" of some half dozen companies. The salesman agreed with me that the tone and gadgets of his "machines" were much about the same so I had to decide only on a cabinet. With the usual exasperating ignorance of a salesman, he showed me a gaudy cabinet which might have fitted the kind of pseudo-Moorish mansions which American millionaires were reputed to have built in or about the year 1900. I pointed out apologetically that I liked plain things. He stopped half way to the "plain thing" to prepare me for the shock of its chaste simplicity. It seems that company "x" had had some of the best designers on the continent working on this cabinet for a year. We arrived, and for some minutes I was silent. I couldn't bear to look at the salesman though I knew instinctively that he was mortified by my lack of enthusiasm. I once took an English friend to see Niagara Falls and he looked just as I did to the poor salesman. But this radio was no Niagara, it was a muddy whirlpool of ideas. Its veneers were badly matched and of different woods, and its mouldings were dreadful, though I admit there weren't

many of them. It fell foul of the most elementary rules of design.

Would it do any good, Sir, if we asked ourselves or the radio manufacturers (perhaps they are organized and have an institute, a president and all that like ourselves) how long we must suffer their insults? I have a normal house and I am not too exacting in my tastes—I buy electric clocks and ready made modern furniture, but there is not a radio cabinet in the city of Toronto that I would put in an attic bedroom. I am awfully interested to know who these famous designers are. I could name half a dozen architects in this city who could design a cheaper and more saleable case in 12 hours instead of 12 months. I purposely did not say a better case because I know of no architect in Canada who could design a worse one.

It has been said that the best thing that could happen to this sad world would be another flood. We should all disappear except possibly the Toronto Rowanians with their wives or stenographers. They would come in handy to start off in a fresh world because, I understand, there is one each of them, a plumber, an architect, a tailor, an obstetrician, etc. What a help it would have been to Noah to have disembarked and called such a Brain Trust together. Mr. John Lyle must often think wistfully of Noah going down the gang plank with two skunks, two gophers, two Canada geese, two fish hooks, two ears of wheat, two of each kind, one male and one female. A dream of bliss for Mr. Lyle who prefers skunks to Rowanians, Anthemions, Corinthians or anything else.

I must apologize, Sir, for this digression. I was about to say that you have not space in this issue for my views on gravestones. I would like to close these comments, however, with a glorious idea which occurred to me as a suitable prelude to the Flood. Can you imagine the tombstone makers of this country pooling their ideas and resources in the erection of a granite monument over the grave of the best radios of the biggest concerns on the continent. I am confident that it would be a worthy one.

(Signed) ERIC ARTHUR.

NOTES

Wm. Bow, M.R.A.I.C., of Vancouver, was elected president of the Architectural Institute of British Columbia at the annual meeting of that association held in Vancouver on December 6th, 1955.

* * * *

Mr. Raoul Lacroix, M.R.A.I.C., of Montreal, delivered an interesting radio address on December 5th on the subject of "Housing for the Workers." Mr. Lacroix's address was given under the auspices of the City Improvement League of Montreal.

* * * *

The board of control of the city of Toronto has, at the suggestion of the Toronto Chapter of the Ontario Association of Architects, authorized the building commissioner to appoint an advisory board of architects and engineers to co-operate with his department whenever revisions to the building by-laws are found necessary, or when special problems arise out of new types of construction.

* * * *

E. Vincent Harris, O.B.E., F.R.I.B.A., prominent architect of London, England, has been selected to design the new buildings at Whitehall. It will be recalled that some months ago the Royal Institute of British Architects was requested to name ten architects not over fifty-five years of age, from whom the British Government would select one to design the ten million dollar administration building.

The annual meetings of the following provincial associations will be held as follows: Manitoba, January 15th, 1954; New Brunswick, January 15th, 1954; Alberta, January 26th, 1954; Quebec, January 27th, 1954; Ontario, February 17th, 1954.

* * * *

Members of the Province of Quebec Association of Architects have been invited to exhibit at the spring exhibition of the Art Association of Montreal to be held in March.

* * * *

At the recent dedication of the Basilica of Christ The King, the new centre of Roman Catholic faith in the Diocese of Hamilton, an honour was conferred upon William R. Souter, M.R.A.I.C., of the firm of Hutton and Souter, architects of the Cathedral, who received the "Bene Merenti" Medal from the Apostolic Delegate to Canada.

* * * *

Arrangements have recently been completed between Canadian Nickel Products Limited, marketing subsidiary of the International Nickel Company of Canada, Limited, and General Steel Wares Limited, whereby the latter Company will take over the manufacture and sale of Monel Metal Hot Water Tanks in Canada. Monel Metal Hot Water Tanks have been on the market in the United States for several months and arrangements have now been made whereby the new tanks will be sold by plumbing jobbers throughout the Dominion.

THE ROYAL ARCHITECTURAL INSTITUTE OF CANADA

TWENTY-SEVENTH GENERAL ANNUAL MEETING

AT MONTREAL

ON FRIDAY AND SATURDAY, THE 23RD AND 24TH FEBRUARY, 1934

The Business Sessions and all meetings of the Fellows, the Executive Committee and the Council will be held in the rooms of The Province of Quebec Association of Architects, No. 627 West Dorchester Street, Montreal.

Programme

FRIDAY, THE 23RD FEBRUARY, 1934

- 5.30 P.M.—Meeting of the Fellows.
- 8.00 P.M.—Meeting of the retiring Executive Committee of Council.
- 9.00 P.M.—Meeting of the retiring Council.

SATURDAY, THE 24TH FEBRUARY, 1934

- 9.00 A.M.—Registration of Members.
- 9.30 A.M.—Inaugural session of the Twenty-Seventh General Meeting of The Royal Architectural Institute of Canada.
 - (a) Reading of the minutes of the Twenty-Sixth General Meeting of The Royal Architectural Institute of Canada, held at Toronto, Ont., on the 17th and 18th February, 1933.
 - (b) Report of the Council.
 - (c) Discussion on the Report of the Council.
 - (d) Reports of Standing Committees:
 - (1) Architectural Training, Mr. W. S. Maxwell (F), Chairman;
 - (2) Scholarships, Mr. E. R. Rolph (F), Chairman;
 - (3) Art, Science and Research, Mr. B. Evan Parry (F), Chairman;
 - (4) Professional Usages, Mr. Gordon M. West (F), Chairman;
 - (5) Public Relations, Mr. James H. Craig, Chairman;
 - (6) Editorial Board, "The Journal—R.A.I.C.", Mr. A. S. Mathers, Chairman;
 - (7) Joint Committee of R.A.I.C. and C.C.A., Mr. W. L. Somerville (F), Chairman;
 - (8) Exhibitions and Awards, Mr. W. S. Maxwell (F), Chairman.
 - (e) National Construction Council
 - (f) Report of the Honorary Treasurer, including the Auditor's Report, Mr. W. S. Maxwell (F), Honorary Treasurer.
 - (g) Report of the Election of the Delegates from the Component Societies to the (1934) Council of The Royal Architectural Institute of Canada. Mr. Alcide Chaussé (F), Honorary Secretary.
- 12.50 P.M.—Group Photograph to be taken.
- 1.00 P.M.—Luncheon.
- 2.30 P.M.—Business Session.
 - (h) Unfinished business from previous session.
 - (i) New business.
- 4.00 P.M.—Meeting of the (1934) Council.
 - (1) Election of Officers.
 - (2) Appointment of the Executive Committee of the Council.
 - (3) Budget for 1934.
 - (4) Appointment of an Auditor.
 - (5) Appointment of Standing Committees.
 - (6) Delegation of powers to the Executive Committee.
 - (7) Authorization for the Honorary Treasurer to pay certain expenses.
 - (8) Place of Next Annual Meeting.
 - (9) Other Business.
- 5.00 P.M.—Meeting of the (1934) Executive Committee of the Council.
- 7.30 P.M.—Annual Dinner (Informal).
Presentations of Diplomas to Fellows.

COMMITTEE OF ARRANGEMENTS

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This programme is subject to change. Announcement of changes will be made at the business sessions.

627 West, Dorchester Street,
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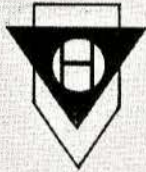
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