

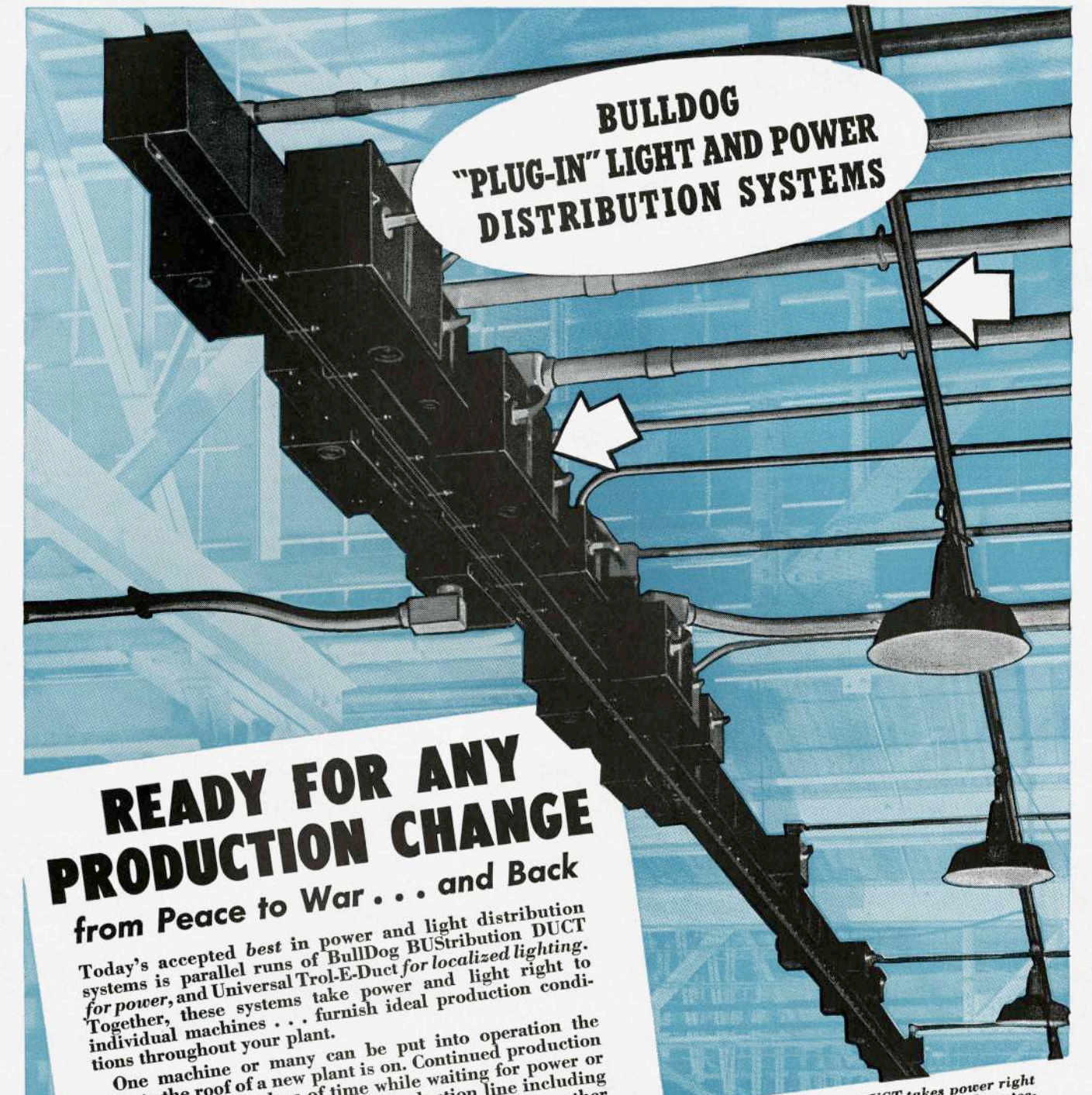
JOURNAL

ROYAL ARCHITECTURAL
INSTITUTE OF CANADA



BRAVE NEW WORLD

VOL. 19 TORONTO, SEPTEMBER, 1942 NO. 9



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IN keeping with its policy of national service, the Royal Architectural Institute of Canada devoted the May issue of the *Journal* to providing the most complete, concise and authoritative information obtainable on civil defence and air-raid precautions as applied to buildings. In view of the wide appreciation with which that effort was received by the profession and the public, the Institute has been encouraged to produce this special number on Reconstruction.

On behalf of the Institute may I take this opportunity of expressing our thanks and appreciation to those outstanding authorities on the various phases of reconstruction in Canada, who have contributed the articles appearing in this issue of the *Journal*.

In his address on "Engineering and Architecture" to the Institute of Civil Engineers at the University of Cambridge, H. S. Goodhart-Rendel, Past President of the Royal Institute of British Architects, made the following trite observation:—"In these days of war, countless admitted failures in matters of organization and administration have undermined our national superstition that Almighty God is always on the side of the man who refuses to plan."

Architecture is the only profession in which "planning" forms an essential part of its preparation and practice. It involves a stimulation of the imagination and creative sense to forecast, as it were, and prepare not only for the present but for future requirements and developments, to comprehend every phase of man's needs for living. This necessitates an appreciation of the whole gamut of the hopes and dreams of one's fellow man irrespective of the place he may occupy in the social system. An architect should be a planner and a practical philosopher.

It would therefore appear that the problem of reconstruction falls definitely within the purview of our profession and that it is at once our duty and our opportunity to make such contribution to its solution as may lie within our ability.

What is Reconstruction? To each individual and social group it represents a new and better world designed to meet their particular ideals and aspirations. Planning reconstruction is the harmonizing of these many and diverse ideals and aspirations into a practical and acceptable design for living.

In the heat of the conflict some may consider the present as inopportune and inappropriate for the consideration of a post-war programme, faced as we are with so much uncertainty as to time and conditions, but those things we are fighting for are the things we must also plan for, we must achieve both the victory and the plan.

No matter how obscure and uncertain the future may appear, there are ideals which as Canadians we hold in common, and these can appropriately and adequately form a foundation upon which to raise the structure of our future. The corner-stone of that structure must be "education".

The exigencies of war have placed many restrictions and burdens upon us, and our plan must provide that while peace will relieve us and give us back our personal freedom, opportunity and initiative, we shall not, on the other hand, in the sense of relief from the oppressions of war, be satisfied with all or any of the evils, injustices and anomalies of our pre-war system.

This is no time for the "blind leading the blind". The planning for peace and for the well-being and happiness of the people of Canada calls for the best brains the country can produce, tempered with a deep and proper appreciation of the needs and aspirations of our fellow-men.

Let us as members of a profession which has ministered to and planned for the comfort and happiness of mankind down through the centuries, apply ourselves with earnestness and sincerity to the solution of this, our greatest planning problem of all time.

Gordon McL. Pitts,
President.



THE WICKET GATE

"Do you see yonder wicket gate? The man said No. Then said the other, Do you see yonder shining light? He said, I think I do. Then said Evangelist, Keep that light in your eye, and go up directly thereto: so shalt thou see the gate."

—*Pilgrim's Progress.*

TO those who have thought carefully about the problems that Canada will confront at the end of the present war, the above quotation must seem singularly appropriate. The valley that we are now traversing, and many of the obstacles that beset our path, are more menacing than anything that the dreams of John Bunyan foreshadowed, so that, like Pilgrim, we must keep the light in our eye in order that we do not falter. Men and women fight for something much more willingly than they fight against anything, and the intensity of Canada's effort in the present struggle is due to the fact that our people realize that all their dreams of the future are at stake. The dignity of human life, the liberty of the mind, the welfare and comfort of those we love: these are the stakes for which we are fighting. There are none higher.

"Reconstruction" is not something that begins after this struggle is finished. It is the shining light that we must follow in order to reach the wicket gate of victory. It is the dreams of many millions of men and women who today sacrifice everything that makes life worth living in order that their children may tomorrow enjoy a fairer Canada and a happier world. Each of us knows that these dreams can only be purchased by sacrifice, each of us will gladly pay the price.

But we must do more than that. The better society of tomorrow will not spring suddenly into existence when the last gun falls silent. The shape of things to come is influenced by each decision that we make today. Agreements made with other nations as a part of the war will do much to determine Canada's future place in world society; the building of munition factories will affect the future pattern of Canadian economy; the housing of war workers will either facilitate or complicate town planning. These are but a few examples that might be selected out of hundreds, because the attainment of our ideals for Canada's future depends on the careful thought and persistent energy of millions of people during, and after, the war.

The Committee on Reconstruction, which was set up by the Dominion Government a year ago in order that it might advise the Cabinet, has adopted as its central goal the attainment of full employment in Canada at a reasonable standard of living for all our population. To attain that goal, we must find solutions to many subsidiary problems. Policies must be developed that will enable industry and agriculture to make a smooth transition from war conditions to those of peace. Our employment machinery must be developed to the point where any individual who is in search of a job can be brought into touch with those employers who need his skill, and our educational system improved to such an extent that every boy and girl has an opportunity to develop talents to the maximum advantage so that they may benefit themselves and the community. A programme of constructive projects must be carefully devised, our natural resources conserved, our public health improved, while on the wider stage of world society, the Dominion of Canada must co-operate with other nations in the formulation and execution of constructive policies.

All of these things cannot be accomplished by the Committee on Reconstruction alone. They cannot be accomplished by the Dominion Government alone. It is necessary that all of us should see "yonder shining light", so that we may each in our respective fields of activity and interest work toward the common goal. For that reason, as well as for many others, I hope that you may find the following pages stimulating. This volume constitutes, to the best of my knowledge, the first comprehensive discussion of reconstruction problems that has appeared in Canada since the war began. Each article deals with an important phase of the problem: I hope sincerely that each may encourage widespread discussion and constructive planning.

F. Cyril James.

*Principal and Vice-Chancellor of McGill University,
Chairman of the Committee on Reconstruction, Ottawa.*

OUT OF UNIFORM — WHAT?

By BRIGADIER-GENERAL H. F. McDONALD, C.M.G., D.S.O.

The reabsorption of naval, military and air personnel after their discharge from the forces is a practical problem and not a sentimental one. Furthermore it is a civil undertaking, not a military one, and primarily an economic adjustment. Unless it is attacked from these fundamental premises with understanding and practical forethought there will inevitably be future trouble. Financial bonuses or doles under whatever names they may be instituted are a confession of weakness and inadequacy in public consideration.

The doctrine of total employment has been widely accepted as the keynote of all post-war social and economical reconstruction and it applies most directly to the re-establishment in civil life of the ex-service man and woman generally. Emphatically the ex-service problem is but a part, albeit an important part of the general industrial and social transformation of the national economy from conditions of war to those of peace, but by its very nature it is capable of more direct and immediate attack than the wider phase. Post-discharge difficulties arise almost as soon as general mobilization is initiated. Already the number of men discharged from the Canadian active service forces have reached substantial size. Even though a man may have had a brief and uneventful service in uniform, nevertheless he has suffered, in most cases, a comparatively drastic dislocation in his way of life. The first essential is that he should be brought back to the civilian attitude of mind and the definite sense of individual social and economic responsibility. With increasing length of service and movements and operations in foreign lands this psychological readjustment becomes in many cases more difficult. At all costs there must be avoided the creation of what might be described as a class of "professional veteran" such as is exemplified by the formation of the Grand Army of the Republic after the war between the States and other similar agitations, some of them even in our own country since the last war. I do not for one moment wish to give the impression that we may expect anything like these sentiments of the great mass of ex-service people after this war, but nevertheless failure in arrangements for early and rapid civil re-establishment must inevitably produce desperate conditions with their accompanying political and social results.

Very early in the war the Federal Government upon the wise advice and initiative of the Honourable Ian Mackenzie, Minister of Pensions and National Health, commenced the study of post-war rehabilitation under the direction of a special committee of the Cabinet which immediately associated with itself a General Advisory Committee and subcommittees composed of public servants and others who were competent in the light of their experience and knowledge to recommend practical measures.

Obviously the first group to be considered were those, who by reason of wounds or disease during their service had suffered so permanently in health or physically as to reduce their ability to compete in the labour market, and those whose death had left their widows and families without the breadwinner. This is the class to whom the State owes continuing assistance and support. The pension legislation and medical and hospital organization which had been built up following the first Great War was applied, extended and modified to meet present and future conditions and commenced to function immediately. Pension is compensation. It is not reward for service or per se expression of public gratitude. Canadian pension rates compare favourably both on the grounds of basis of award and

of actual financial amount with those of any country in the world. The commission awarding and administering the payments has in the words of the Act "full and unrestricted power and authority and exclusive jurisdiction," divorcing it entirely and completely from any tinge of political or administrative domination. Pensions are graded in relation to the actual disability, assessed by medical examination from time to time, which the pensioner suffers in the "ordinary labour market" and are not influenced by his pre-war or post-war situation in life. The excellent hospital system and organization of medical representatives throughout the country maintained by the Department of Pensions and National Health provides modern and complete medical services for all pensioners and certain other types of discharged personnel.

Those qualified for disability pension, however, will form a minor part of the great group of ex-service men and women released on general demobilization; possibly not more than ten to fifteen per cent. Furthermore, the majority of these will be suffering from minor disabilities compensated in small amounts, and able to undertake remunerative work of many kinds.

We come back again as always to the question of employment. Demobilization and re-establishment are two distinct steps in the operation. Demobilization is the mechanical military operation of releasing a man from the armed forces. He is divested of his uniform and equipment, he is relieved of his responsibilities under military law, his financial accounts are settled, he is medically examined, he is given civilian clothing, a ticket to his home and all the formalities necessary for the termination of his active service are completed. He is a civilian with all the problems of maintenance, employment, family cares and social responsibilities ahead of him. The problem which the authorities face is—how best to assist him to solve his own individual problems—not to attempt to solve them for him.

First of all there must be a period when direct assistance is necessary to bridge the gap between actual discharge and, under normal circumstances, the time when civil employment should be resumed. To this end there has been instituted a rehabilitation grant of one month's pay and allowances which is paid, subject to certain qualifications of service, to the man on discharge.

Following this comes the question of suitable and congenial employment—the core of the whole structure. On each man's enlistment a detailed and exhaustive employment and educational history has been taken and embodied in his documents. The details of such professional or trade skills which he has acquired during his service are available. The services of the Employment Offices of the Federal Government, newly re-organized under the Unemployment Insurance Commission, have all this information and it is their function to place the man, assisted by the Welfare Branch of the Department of Pensions and National Health, also newly created, for the special purpose of administering and co-ordinating all the services designed to facilitate civil re-establishment.

Employment, however, depends on many factors. Jobs must be available; men must be physically fit to undertake work; they must be adequately trained vocationally to carry on satisfactorily and they must be willing to work.

If no job is available or securable for a man fit and willing to work he will be paid out-of-work benefits until such time as

he can be placed, with a maximum limit of twelve months of such payments. The amounts of \$9.00 per week for a single man and \$13.00 per week for married men are based upon the higher brackets of the benefits under the Unemployment Insurance Act.

If a man is capable and suitable for vocational training in an occupation presenting opportunities of permanent employment he may be given such training as required, and in addition to his tuition will be paid maintenance allowance equal to the out-of-work benefits described above.

Temporary physical incapacity is taken care of, when it is not pensionable, by similar maintenance grants reinforced by the provision of free hospital treatment by the Department of Pensions and National Health for a period of twelve months after discharge.

Inevitably, the comparison must arise as between those who are employed throughout the period of war in industry and those who serve in the forces. The passage of the Unemployment Insurance Act has introduced a new factor into our industrial life. In order to help towards obviating any inequality the Federal Government has assumed the financial responsibility for providing unemployment insurance benefits covering the period of their service in the forces for those who, after discharge enter insured occupations. In other words any man who works in an insured occupation for a period of fifteen weeks will have available to him without costs unemployment insurance benefits under the Act as if he had been in that employment over the whole period of his service in the forces.

Another significant situation has been created by the great demands made upon the youth of the country in the early stages of their secondary education. All services, but particularly the R.C.A.F. and the Navy, have been eager to recruit young men with matriculation standard or in their university courses. It is all too clear that the wholesale interruption of the education of so many thousands in this class would be a serious matter for the country in the future. It has been provided therefore that on discharge any such person who enters upon and satisfactorily follows an academic or professional course at a recognized institution will not only have his tuition and other fees paid, but will also receive maintenance allowance equal to the out-of-work benefits for a period required to complete his education, but not exceeding the length of his service in the forces. Similar arrangements are available under special arrangements for approved post-graduate courses.

The deplorable lack of any comprehensive youth development policy in the hard times of the nineteen thirties has been only too forcibly demonstrated in the employment and vocational histories which have been secured from men enlisting in the forces. The vocational training facilities and the academic and professional opportunities now provided are significant evidences of an enhanced vision of public responsibility and definite realization of the need in Canada for a better trained man-power than we have had in the past.

The importance of agriculture in our national economy must be recognized as well as the expressed desire of many thousands of men to enter into agricultural pursuits after discharge. Guided by experience both favourable and unfavourable of previous ventures, the present soldier settlement scheme as

approved by Parliament at this session embodies the considered thought and recommendations of the most qualified authorities in practical farming, colonization, settlement and agricultural finance in Canada. The human factor, as in all such enterprises, is what makes or breaks, but it is the view of these authorities that in so far as the human equation permits, this legislation provides a means by which qualified and properly trained men may be enabled to settle on the land without an undue burden of debt, and in a reasonable period by ordinary industry and application establish a fully owned rural home for himself and his family.

In so far as contingencies can be reasonably foreseen, the Federal Government has already gone much further than previously in opening the door and providing the facilities whereby willing and conscientious men and women discharged from the forces can face their problems of self re-establishment. Perhaps they have not been so lavish in the indiscriminate distribution of money in the immediate post-discharge period, but that type of palliative is more of a detriment than a help to permanent solution. The unemployable, either deliberate or otherwise, we will always have with us. Unfortunately our civilization has not yet succeeded in eliminating either the bum or the moron. The general reconstruction policy must find means to take care of these and not the service rehabilitation plans. What the Federal Government can do and has done so far as present conditions call for, is to provide a means whereby the normal ex-service man of goodwill and responsibility can take advantage of every opportunity offering in his community or the country that he is capable of, or can be made capable of grasping. Beyond that the responsibility rests upon local communities, public and semi-public organizations, employers and with the individual himself. Governments cannot make re-established ex-service men any more than they can make architects. They can only present the opportunity and facilitate the process.

To every man who offers his life, gives up his occupation, parts from his family and home environment in the service of the country, the state and the citizenry owe a debt of gratitude. It is a debt not to be paid in money, but in sharing of opportunity, in priority of consideration, in social helpfulness. Labour unions, ex-service men's organizations, employers' associations, and professional groups all have a very definite responsibility and a very definite duty now to formulate policies and plans to receive into their ranks men and women on their discharge from the forces on such a basis that their services in their Country's cause does not handicap them in seniority, in employment opportunity, in promotion, or in any economic social benefit which might have accrued to them by staying at home. Unless these particularly, as well as all other social and service organizations, actively and practically face their planning now and effectively act, anything that is done by governments alone must be futile.

The pride of service can all too easily blaze into a fire of resentment and die in the ashes of disappointment when the returned man or woman finds the door of opportunity closed in their face.

It is not money that he wants. It is freedom of economic opportunity and a reasonable sense of social security. Only you and I can give it to him.

LAND CONSERVATION

By PROF. A. F. COVENTRY, B.A. (Oxon.)

The Background

The continued well-being of any highly organized society depends ultimately on the soundness of its natural resources. A country bereft of these cannot support an exuberant civilization, as many once great nations have discovered in the past. A proper appreciation of the role of natural resources is an essential element of social development.

The basic resources are fertile soil and an adequate supply of water, for without these, plants, which are the ultimate support of animal life, cannot grow. In primitive Canada the ground was almost completely covered with vegetation, in the humid west and east mainly trees with associated undergrowth, in the drier centre, grasses and other small plants; in either case very little of the earth's surface was exposed directly to the weather.

Under these conditions a very delicate balance arises between water, soil and vegetation; that portion of the water falling on the surface not immediately used by the vegetation is largely held at its point of arrival by the vegetation and so gets a chance to soak into the soil and build up a vast underground reservoir, which secures the permanence of springs and is a guarantee against drought. When the soil is saturated the superfluity of water runs away slowly, since its flow is impeded by the vegetation, and only when there is a very great abundance does the flow become rapid enough to produce some degree of flooding. In no case, however, is the surface of the soil seriously attacked by the moving water.

For present purposes the discussion can be confined to agricultural areas; there perhaps the problems of conservation are more acutely pressing; there results can be more rapidly produced; there lives the greater part of the population; there, too, the social implications are more sharply defined. Our forest lands are of course of first-rate national importance, but the processes of maintenance are relatively simple since for the most part there is only one crop, trees, while the multifarious uses of agricultural lands produce a much more complex situation.

The Present Situation

The first change required to convert wild land to agricultural use is exposure of the soil by removal of the natural cover, and that single act destroys almost completely the original balance; inevitable new reactions ensue.

The fertility of most lands resides in the top half dozen inches, and if this goes useful productivity is at an end; it is this layer, exposed by clearing, which must be by all means preserved. Sun, frost, wind, rain and snow all have an impact more direct and more violent on this layer than when it was covered with vegetation, and the resultant action deteriorates its quality unless measures to maintain it are continually in operation. Wind can do immense damage to unprotected light soils, as in the dust-storms of the Prairies; in eastern Canada also, as for example in southern Ontario, considerable areas of sandy lands have been lowered in level by feet and reduced to pure desert during the last century or less.

Broadly speaking, however, the most important effect of the removal of cover is the great alteration in the behaviour of water reaching the surface. Basically it means that a greater proportion of the water tends to run off the surface as it arrives, and there is thus less chance for adequate infiltration into the earth's surface and maintenance of the all-important ground water. At the same time the larger and unretarded

run-off tends to increase the magnitude of floods, and water which should have been delivered slowly and steadily to springs and wells throughout the year is lost in a few days. In its passage over the surface of the bare earth, or earth only partly protected by crops, this water carries away some of the soil, first to streams, whose productivity may be seriously impaired, and finally to larger bodies of water, where it is permanently lost.

Floods, drought, loss of productivity through soil erosion, decrease of natural amenities, these and the social problems they create, all spring from the same cause, destruction of the natural balance; and this destruction is co-extensive with white man's exploitation. "White man should cease to boast of having conquered nature. . . . One of the major problems that now faces man throughout the world is to preserve what is left of his heritage in the soil, and to restore the broken lands that have dogged his footsteps through the forests and across the prairies for centuries." Recognition of this is slowly developing. The restoration of the Prairies was undertaken because the social and economic conditions consequent on their degradation threatened the national fabric. In other parts of Canada, however, while surveys have been made or are in progress, no comparable action has yet been taken, although their condition as urgently demands it. It is probable that in agricultural Canada east of the Great Lakes the total degradation of resources, with consequent loss of productivity and concomitant human unhappiness and waste of energy, is as terrible as it was in the Prairie Provinces; it has failed to strike the public imagination in the same way because it is less concentrated and so is less dramatic.

Necessary Action

The case is posed; all across Canada our basic natural resources have, in one way or another, been exploited to a point at which they are far below their original richness; there is no hope that they will restore themselves under existing conditions; on the contrary they will continue their downward trend towards ultimate extinction. We have then to consider the possibilities of altering present conditions so that our resources may cease to disappear and, if possible, regain some measure of their earlier fecundity. Soil once washed from the surface of the land into lakes and oceans is permanently lost, and our concern is to make the best use of what is left; the present unbalance of the water system can be remedied, since the amount of water falling on the land has not altered significantly.

The principles governing the maintenance of renewable natural resources are now well understood and they have been successfully applied to large-scale rehabilitation projects in various parts of the world. The basic needs are firstly to restore an unstable water balance to at least stability, and in some areas to increase permanently the amount of usable water (the one will often automatically ensure the other), and secondly to take every workable measure to retain what useful soil we have.

Primary restoration of a balanced water system is a biological job; it consists of growing enough permanent cover of whatever kind is appropriate to a region to safeguard important catchment areas by ensuring the water opportunity to penetrate to the underground reservoirs. This at the same time reduces the risk of extreme floods. It is not, of course, practicable to restore the complete cover of earlier days and engineering control must come to the aid of biological; all along the courses

of our little streams small dams should impound as much as possible of the spring run-off in ponds which will act as watering places for stock, or on a large scale as reservoirs or swimming pools, and which will at the same time be helping to maintain the ground water of the neighbourhood.

The methods of draining farm lands are important. Land must be cleared of water in time for cultivation in spring, but it does not follow that the water must be led as quickly as possible to the nearest stream; it should be given a chance to contribute to the ground waters on its way. It might even be worth considering the possibility of adopting the French method of creating temporary ponds as part of the normal rotation of land use.

Lost soil cannot be restored, but much can be done to keep the soil we have, though exposed land will always be subject to some loss. Some cherished traditions in methods of cultivation will have to be abandoned, for our methods, derived mainly from Europe, are not well adapted to this continent, largely through climatic differences. The straight furrow should be replaced by contour ploughing and terracing, with improved disposal of drainage water, and strip cultivation, which has saved the situation in many places elsewhere, may well be advisable in parts of Canada.

The mere statement of these basic needs for restoration and conservation of land suggests without the addition of detail that it is a far-reaching and complex subject. As a matter of practical working, unit areas of conservation must be defined; in each of them must be determined the present use and condition of the land; the extent and severity of erosion and the condition of the water supply; the amounts and sites of needed new cover; the location and size of dams; the most advantageous use of the various soils; the desirability of terracing and altering drainage; possibly the conversion of non-functional straight roads to curving roads fitted to the needs of the community; all these and much besides must be planned in such a fashion that they will fit into the whole conservational plan of the country at large.

Planning based on knowledge is the essence of conservation, of the wise use of resources; it must be the work of scientific men, experts whose life has been given to the study of one or other branch of the subjects involved. Natural resources are for the most part a provincial matter, and each Province therefore needs an advisory body of scientists charged with assembling all available knowledge, empowered to plan surveys to fill gaps in existing information, and finally instructed to make comprehensive, province-wide plans for the work needed to place the resources on a sound footing; these plans to be in terms of men, days and materials, ready to be put into operation unit by unit as required.

Further Implications

The foregoing is limited to the mechanics of restoration and conservation; there is a wider aspect, that of conservation in relation to the communities, an aspect from which it cannot be separated, and, indeed, without which it would be meaningless. This aspect must pervade the whole programme.

In the first place the planning itself will affect administrative departments. It will not be for the advisory bodies to undertake administrative duties, but they will elaborate their plans in close co-operation with existing governmental departments; and since conservation must have unified control, the various

departments among which natural resources are now usually shared will have to co-ordinate their work more closely than has so far been the practice.

Secondly, since most of the land concerned in the present discussion is under private ownership, a very high degree of appreciation of the meaning and need of conservation measures must be developed in order to create a co-operative point of view. Changes will have to be made on private lands, by the owners or with their consent, but in accordance with the controlling plan; these will make demands on the social consciousness greater than we are accustomed to associate with peaceful undertakings, but the conservation of the future can be no passive looking-on, it must be an active co-operation with nature.

This need for co-operation includes municipal bodies as well, county and township councils, for few natural units adapted to conservational planning lie within the limits of one jurisdiction, and in some places there will have to be consideration whether land now privately owned would contribute more to the communal welfare under public ownership, land, for instance, unfit for anything but trees or pasture, which might here, as elsewhere, be best managed as a community project.

Thirdly there are legal problems. The ultimate background is constitutional, but it cannot be discussed here, though it may be noted that under present interpretations the feasibility of some plans for reconstruction is open to serious question. There are, however, more intimate problems connected with the development of natural resources in the best interests of the community; questions of joint control; questions of the use of streams; of expropriation; of the use of public lands, and many similar details, all necessary to the smooth working of any plan.

In conclusion, it may be said that a successful programme of land conservation transcends in its effects the mere scientific application of a plan. Planning is essential, but unless the planning results in something new in our way of life it will fail of its purpose. Restoration and conservation involve a general conviction that resources are a trust, to be given up in no worse condition than they were received; that public interest exists alongside private gain; that unless the fabric of the land itself is kept sound, a stable and progressive social organization is impossible. On these terms conservation in its wider implications provides a basis for a fuller expression of the way of life for which we are fighting.

This may be idealism, but it is not impractical idealism; it may be thinking on a larger scale than has been much considered hitherto, but it is not too large. Great undertakings in the U.S.A. in recent years have shown not only the possibility, but the success, of conservation on the grand scale, and the progress of rehabilitation in the Prairies has shown that comparable success can be achieved here.

Ideals are in any case a necessity; we are fighting for them now, and this article is an attempt to suggest one of numerous paths to their ultimate realization; it may well end with a quotation—very slightly altered—from last New Year's issue of the *Picture Post* which was devoted to articles on restoration in Great Britain: "It is a plea that the beauty of the countryside shall be cherished and restored. That the work of ruin and destruction shall be halted—at whatever cost and in the face of any private opposition. It is a plea put forward on behalf of everybody, but particularly on behalf of men and women in our fighting forces."

PAVING THE WAY TO A POST-WAR CANADA

By R. M. SMITH, B.A.Sc., Deputy Minister of Highways, Province of Ontario

It is a fundamental trait of the Anglo-Saxon race that, when engrossed in undertakings that demand the utmost concentration and effort, they have the vision and ability to see beyond the immediate present and to make tentative plans for the post-war adjustment. A striking example of this tendency is exemplified in the Atlantic Charter, the basis of post-war civilization drafted by Prime Minister Churchill and President Roosevelt a year ago. Notwithstanding the pressing demands on their time in the prosecution of the present war effort these far-sighted leaders deemed it worthy that time be taken out to prepare for the days to come.

And their example is being followed by numerous organizations and individuals throughout Canada. Extensive study and planning is even now being carried out to prepare for the day when the roar of the guns has been stilled and the fires in the workshops of Mars have died out and the men and women, now engaged in a campaign of destruction, return to peace-time endeavours. Men of vision are these planners for the world of tomorrow but it is of the utmost importance that their program remain, not in a visionary state, but that it be completed in detail and that the necessary steps be taken to make it operative so that it may be put into effect without delay. For the rehabilitation of these men and women must on no account be delayed. There can be no excuse for another designation of "too little, too late."

And this rehabilitation problem is a complex one, one that entails not only detailed study, but, in addition, the ability to visualize conditions and trends in Canada in the post-war era. For, while the primary aim of the program is to absorb into a peace-time economy in the shortest possible time our soldiers and munitions workers, it must also deal with the further expansion of our pre-war civilization and development of our natural resources. It is easy to say that industry, geared to its present high tempo, can adjust itself to look after the bulk of re-employment and that new outlets, such as land conservation and reforestation can handle the balance. It is not as simple as all that.

Take industry in general. In the post-war period the number of employees in industry will be reduced, not increased, for the simple reason that industry will revert from its present 24 hour, 7 day a week pace to one adjusted to peace-time demands and that it will be called upon to produce goods, that require no continual replacement. In addition, many of our war plants can not be considered in the set-up at all due to the fact that they are located in areas totally unsuited to peace-time operation. Grant that many women, older men and boys will recede from the picture and thus provide openings for demobilized soldiers, industry can be counted upon, at best, to employ no more than it is presently employing.

As for the new projects, such as conservation and reforestation, while they are most worthy and should play a part in the

general program, lack of information as to procedure will slow up their application and they present the further objection that, having to be undertaken after the style of the C.C.C. Camps in the United States, those so employed will be located away from the homes they have not seen for years and be under a semi-military jurisdiction. Their appeal will therefore be quite limited.

Another suggested outlet is that of road building and with that highway officials are in entire agreement. Their only wonder is that it should be necessary to consider road building as a possible outlet in this rehabilitation programme. For, if our post-war civilization is to even equal that preceding the war, road building will be a buyer of labor, and a wholesale buyer at that. It has an extensive back-log of work that will require no artificial stimulant to release.

Before investigating the coming development in road building let us consider to what extent it is adaptable to the rehabilitation program. A very cursory study will indicate that by every standard it meets the requirements. In essence highways are the great co-ordinators of all other functions of our civilization. For highways mean transportation and transportation in the most intimate sense. It is true that, in the movement of goods, the railways hold top ranking, particularly as regards bulk goods, although in recent years this ranking has been challenged by the truck and transport operators. But when it comes to the day to day business and social relationship, the motor car and the highways it moves over rank supreme. Nor is there any other agency which, in the immediate future, offers any opposition. It is thus apparent that highways are of the utmost importance.

Or look at it another way. No one will deny that, with the ending of the present conflict, a motor-conscious public possessing over-age cars and their use of same drastically limited by the restrictions imposed to conserve gasoline and rubber, are going to demand new cars and plenty of them. And that means that there will be no let-down in the present rate of production of the motor industry, an industry that has proved, by its speedy turn over from the production of cars to tanks, that it can quickly reverse the process. And that is all to the good, for it means that so far as this industry is concerned, there will be no decrease in the number of its employees. And so that the public will be able to get full value from their new cars, the highways, over which they will travel, must be made available.

Add to that the fact that governments will approve of an expansion in both the motor industry and the highways for the reason that the resultant taxes collected will greatly affect their budgets and you have a strong case for an extensive program of road-building in any rehabilitation program. The only question that may be asked is that is not our present highway system sufficient.

The answer to that question is that our highway network is obsolete. Either obsolete or as yet undeveloped. And that condition applies, not only to Canada but to the United States as well. To the average city motorist whose driving is confined to a relatively short radius of his home and who is familiar with the well paved streets in his local town or city and the equally well paved highways leading to the neighbouring communities, that statement may seem like a gross exaggeration. But let statistics tell the story.

According to figures in the publication "The Highway And The Motor Vehicle in Canada," published by the Department of Trade and Commerce, at the end of 1940 there were registered in Canada a total of 1,500,829 motor vehicles of which 1,234,637 were passenger cars and 252,813 commercial vehicles. The mileage of highways available for their free movement totalled 560,147 miles. But of this total mileage 443,955 miles, or 79.2%, were of earth surface and a further 100,575 miles, or 18%, were of gravel surface. Only 8,370 miles, or 1.5%, were of paved surface considered permanent. Further, of this mileage of permanent paved surface 6,179 miles were located in the Provinces of Ontario and Quebec. The above figures refer only to highways outside the borders of municipalities but it is quite apparent that we are sadly deficient in our mileage of hard surfaced roads. Not only that but the greater mileage of these same paved roads was built in an earlier day and does not conform to our present standards of safety.

And that is only part of the picture. One of our leading resources is the tourist business as evinced by the fact that in 1940 a total of 3,405,537 foreign cars entered Canada for touring purposes. The revenue obtained from tourists is considerable, nor to attract it does it require expenditures that do not otherwise benefit our own economy. And it is a source of revenue that will greatly expand in the years to come. To the south of us, in the United States, is a vast potential source of tourist traffic interested and anxious to holiday in our famed playgrounds but demanding that we provide transportation facilities equal to those that apply in that country. The average American tourist absolutely refuses to motor over unpaved highways.

There can therefore be no doubt that our present highway network is obsolete. Nor can we be content to bring it only up to date. The highways of tomorrow must, as must our general economy, adapt themselves to meet new demands. In the case of highways, these demands will be for increased speeds and the ability to transport heavier vehicles, and all to a greater degree of safety.

At the outbreak of the war highway officials in Canada had inaugurated a comprehensive plan of highway improvement that embraced the construction of superhighways of the divided type, express highways from the larger centres into outlying mining areas permitting fast movement over great distances, lighting as an aid to night driving and the beautification of the

adjoining roadside so that motorists might be enabled to travel not only with safety but to travel in comfort as well. This program, interrupted by the war, will be resumed at an accelerated rate to catch up with the time lost and, in addition, the problem, so far untouched, of routing traffic speedily through the bottlenecks in our larger cities must be tackled.

What highways will be affected in this program it is too soon to say but that such a program will be carried out is evinced from the following resolution passed at the 1941 convention of the Canadian Good Roads Association.

"WHEREAS up to the present only a small proportion of the highways necessary for Canada's highway transportation system has been completed;

AND WHEREAS it is an economic necessity that greater progress be made towards the construction of this system;

AND WHEREAS highway construction provides more employment and more public remunerative value for the monies expended than any other form of construction;

AND WHEREAS it is desirable that an immediate start be made in the preparation of plans for a post-war highway construction program;

AND WHEREAS demobilization after the cessation of hostilities must be considered as much a part of Canada's war effort as mobilization;

BE IT THEREFORE RESOLVED that the Canadian Good Roads Association in Annual General Meeting assembled do hereby record their unanimous approval of the policy prescribed in the foregoing preamble to this Resolution and do hereby suggest that the Ministers of Highways for the several provinces be requested to form a special committee for the purpose of setting up and preparing for the carrying out of a program of highway development in the various provinces which will give employment during the re-adjustment period following the cessation of hostilities, and that the provincial engineering staffs be now directed to make surveys, prepare plans, estimates, specifications, study the availability of materials in order that such a program may be ready at the proper time to be put into effect without delay, and that the Committee be authorized to seek the co-operation of the Dominion Government;

AND BE IT FURTHER RESOLVED that this Association believes the expense of such provincial works during the post-war rehabilitation period is in part an obligation of the Dominion Government, and that a portion of the cost of such work should be absorbed by the Federal Government, it is therefore suggested that the Special Committee should be authorized to approach the Federal authorities on this subject."

In any post-war rehabilitation program, road-building will play an important part, and not as an expedient to re-absorb demobilized manpower but as a vital necessity to our general economy.

OUT OF THE JUNGLE

Being Some Random Observations On the Designing of Canadian Communities

By HUMPHREY CARVER, A.R.I.B.A.

This article is written only a few hundred yards from the assembly line of Canada's largest automobile plant. In this city there are several assembly lines, separated from one another by a mile or more as if to make them a less vulnerable target for hostile aircraft. Under that big roof, in the blue glare of arc lights, the night shift is taking over; it consists of French Canadians, Scotch Canadians, Greek Canadians, Yugoslav Canadians, English Canadians, Polish Canadians and half a dozen other kinds of Canadian. The floor of the plant is closely covered with processing equipment, machines, stock-rooms and conveyor lines. It is a masterpiece of organization, the arrangement of which has demanded the genius of some of the best brains in the country. That was necessary because our very lives depend upon the skill with which those plants have been planned.

Outside this neatly arranged interior and beyond its closely guarded gates is a jungle. This is known as the City of Windsor. It would be difficult to imagine a scene of more complicated disorganization, of more utterly depressing and futile muddle. This is where they live—the families of those French, Scotch, Greek, Yugoslav, English, Polish and other kinds of Canadian, who are so important an element in our bid for victory. Nobody thought of obtaining the best brains in the country to plan the places where they live. In fact no one has bothered much about these people for the last 20 years — except to protest that too many of them were on relief. When new factories were built, a few real estate sharks hurried to the scene, hastily subdivided a few dozen acres of land, scattered a few isolated houses here and there and got out of the mess as quickly as they could. That is how Windsor grew and, in this respect, Windsor is not unique among Canadian industrial centres but is only the most appalling example of the results of such poor civic management.

It is true that the Dominion Government has given belated recognition to the humiliating environment in which the industrial workers of Windsor live. "Wartime Housing" has hurriedly deposited one thousand eight hundred wooden dwellings on Windsor acreage. But these, of course, are 'demountable' and are scheduled for removal after the war, which will leave the people of Windsor much where they were before. In spite of the benefits of their temporary shelter one certainly could not wish them to remain, for the planning of those Housing Estates has contributed less than nothing to the art of Community Design. But perhaps that is not entirely true, for the most recent Wartime Housing Estate to be constructed in Windsor contains one remarkable feature. In order to relieve the severity of the street scene, the fronts of the houses are not all in a straight line but are set backward or forward without any apparent system; but, as if this was too much of a concession to the picturesque on the part of a government department, the houses have been set on the most rigid surveyors' lines in the other direction, at right angles to the street, from one street to the next. Romance is generously offered with one hand and hastily retrieved with the other.

Today the best brains in the country are being used for planning industries, armies and the machines of war. But after the war those same brains must be secured for planning peacetime communities. Well-planned industries can only produce inanimate machines but well-planned cities can produce good citizens, and during the next century we shall have a rather special demand for the very best citizens that Canadian cities can produce. We are going to need a generation of well-balanced, socially-minded, democratic and stable people, to face a new kind of world. The forces that will mould such a generation are the health services, the educational institutions and, by no means least important, the physical environments in which new Canadian families are to grow up. The plan of a community, the arrangement of its buildings and open spaces, the domestic privacy of its housing and the bounty of its recreational facilities — all these are but the physical embodiment of the plan of urban society. We need not discuss whether a good society is the reward of good town planning, or whether good town planning is the corollary of a good society, for that is a philosophical enigma comparable to the riddle about the chicken and the egg. We may, however, be sure that the two are inseparable.

It is extremely difficult to imagine any very fervent emotions of community loyalty arising out of a city planned on a continuous grid-iron system, where rows of dwellings repeat one another in inconclusive monotony. Where there is no beginning and no end there can be no community. But the local community is the very foundation on which our democratic political organization must be built. One of the principal objectives of town planning, therefore, is to organize the city into recognizable community or 'neighbourhood' units. It is essential that the form and arrangement of each such urban unit should deliberately encourage and symbolize local organization and self-expression.

The general theory of the 'neighbourhood unit' is well enough known to most architects. The principles on which such a unit can be planned are familiar to all who have been reading contemporary architectural literature. It is not the purpose of this article to offer technical instruction in the ways whereby such a plan can be composed out of the component elements of housing, recreation space and street system, together with the local school and shopping centre. Nor is it the intention here to remind architectural readers that exactly the same planning principles can be made to apply to the design of new urban areas and to the reconstruction of obsolete areas. Canadian members of the architectural profession are indeed thirsting for the opportunity to apply these principles. But it is the purpose of this article to claim that the younger generation of Canadian architects are specially qualified to conceive and administer this most fundamental pattern of national reconstruction, when the time is ripe. Here is also a

plea to that generation that, without respect for persons, they should be loud and angry in their protests when work is improperly carried out.

Unfortunately good community planning and its professional exponents cannot be made available to the Canadian people without some necessary adjustments in local and regional administration. The country is strewn with the bodies of dead Planning Commissions because the relationship between the planner and the other organs of government has never been fully understood. Although it is self-evident that no public community planning can be done until competent, specially trained personnel have been authorized so to do and have been provided with the funds necessary to carry out their work, yet Canadian cities have consistently failed to establish such personnel. The difficulty arises from the fact that the elected members of any governing body (particularly at the local government level) are reluctant to delegate any of their authority to a special planning body; they fear that the existence of a preconceived plan will restrict their freedom of decision and their opportunity for log-rolling. Departmental officials, too, being jealous of their position, are only too ready to form an alliance with the elected members in antagonism to the whole idea of town and regional planning. For this reason, in order to protect the planning staff from jealous saboteurs, it has come to be the practice to introduce an intermediary body known as a "Planning Commission" consisting of specially respectable citizens who might be expected to see fair play between the opposing sides. The Planning Commission was intended to be somewhat in the position of an umpire. In not a few cases, however, the members of such commissions exceeded their duties and proceeded to order the planning staff off the field and take part in the game themselves. Wherever a Planning Commission has assumed the technical duties of a planning staff the result has of course been fatal.

Looking back now over the experience of Planning Commissions in the United States and Canada during the years between the wars, one is forced to the conclusion that the whole conception of a Planning Commission of 'specially respectable' unelected laymen is fundamentally wrong. The suggestion that the members of the elected governing body are either not sufficiently 'respectable' or not sufficiently well educated to appreciate planning technique is not an implication that those gentlemen can be expected to accept with equanimity. However true such a suggestion may be, the whole idea is surely most undemocratic and improper. If the local legislative body is not competent to control the planning of its own territory without the assistance of some nominated laymen then we may as well admit that our political system is a failure, and that we are resorting to Fascism. The fact is, of course, that there never will be good community planning in Canada until the men and women elected to local governments are of sufficient calibre and education to appreciate the far-reaching national significance of good planning. It is the simple and plain duty of all of us to see that such persons do actually sit in the leather-covered chairs of the Council Chambers of our local governments.

Much of the difficulty that has surrounded the establishment of effective regional planning has arisen from a failure to

recognize a proper relationship between the planning function and the other functions of government. The central feature of any government, whether national or local is, of course, the elected legislature or council. On one side of this central body are those executive and administrative departments which exist to carry out the instructions, the laws and the public works authorized by that elected body. On the other side of the central body there should be its planning staff to formulate the designs and policies that are brought before the legislative body for deliberation. We may have been brought up to think of government as consisting only of legislature, judiciary and executive; but the tremendously increased public organizations of a modern governing body have shown the necessity both in war and peace for a separate and distinct planning body. The planning function should be just as distinct in government organization as it is in industry: the management of an industry turns on one hand to its research and planning department to conceive the design of its final products and, after making its decisions, turns to the production department to put its plans into execution. But hitherto our local governments, having failed to provide themselves with research and planning departments, have had no design to hand down to their production departments. And, when in difficulties, they have had to ask their department chiefs to submit their own designs. (Have you never heard it said that town planning should be done in the engineer's department?) It is rather as if the executive of an automobile industry were to ask the boys on the assembly line to make up the design of the car as it went down the line.

The fact is that the rational methods of production which are to be found in any modern industry are still entirely disregarded in the creation of our most essential national product — our Canadian cities.

This brief article concludes where it began — in Windsor. That city has perhaps been maligned in the earlier statement that its residential areas are nothing but one continuous jungle. For it contains one small community which is, in its way, a model. At the centre is a church and beside it a rectory, both venerably covered with vines and surrounded with wide green lawns and ancient trees. Beyond this quiet architectural group is a very beautiful shady park well equipped for the children of the neighbouring school, for the romantic intentions of its graduates and for the sedentary enjoyments of the old-timers. Looking in upon the church and the green enclosure beyond are some of the pleasantest and most dignified examples of domestic architecture to be found in Canada, built in the unhurried reign of King Edward. They are large, comfortable and still look exceedingly prosperous.

"And how does this green haven come to exist so incongruously in the midst of an industrial jungle?"

"It is founded, Sir, upon the estate of a famous distillery."

"And do the people of the surrounding jungle consume much alcohol?"

"Why, yes Sir. They drink, I believe, more than the people of any other Canadian city. What else would they do? The jungle is unhappy. The jungle is depressing. It is better to drink and forget."

HOUSING

By E. R. ARTHUR, M.A., B.ARCH. (Liverpool) A.R.I.B.A.

The Lieutenant-Governor's Report on Housing conditions in Toronto published in 1934 first drew the attention of the general public to the fact that a Canadian city housed a large section of its citizens in conditions not much higher than would be demanded for animals. Of 1,332 dwellings examined, 43% were without cellars, 82% had no method of heating other than stoves, 58% were damp and 20% subject to flood; 55% were verminous, 59% were without baths and 20% had outside toilets subject to freezing. The houses examined are in a great slum area which we still have. Since 1934 a committee of civic officials has condemned some houses and enforced the repairs and improvements of others. The condemnation of houses has aggravated congestion in an area where in 1934 57% averaged more than one person per room and 16% averaged two or more persons per room. "Improvement" has kept the inhabitants of some dwellings dry, but the congestion remains the same or worse, and the environment grows progressively undesirable. The Lieutenant-Governor's Report caused a mild stir and had the effect of bandaging a gangrenous sore where an operation of a major character was necessary.

I mention the case of Toronto because the Report is an excellent one and was as complete as the funds allotted would permit and time would allow. A similar investigation in Montreal, Hamilton or Winnipeg would reveal equally ghastly housing conditions and an equally callous disregard for human life. In the intervening years, government, press and public have been alike apathetic. Even labour, which, in every democratic country including Great Britain, the United States, Sweden, Holland and pre-Hitler Germany, had been the driving force in housing reform, made no serious representations to Government. Since housing for the lower income groups can only be financed by the Federal Government, the municipalities cannot be blamed for the fact that our slums still exist, and that the low wage earner cannot find a house suited to the needs of his family in a district that is not sub-standard in regard to all the decencies of life. Nor can particular blame be placed on the Federal Government which, under our democratic system, cannot proceed much faster than the public demands.

Indeed, in 1938, the Federal Government did advance legislation by which, under the N.H.A., \$30,000,000 was made available to municipalities for low rent housing schemes. We have not the space here to show why that money was not used except to say that it lacked an educational programme to illustrate its benefits, and the machinery under which it would act, was lacking.

And so we reach the period of the present war. There is ample evidence that at last something is going to be done, and that municipalities and the Federal Government are alive to the need for housing as a post-war measure. Every Government is studying reconstruction. Every economist of note warns that the dangers of unpreparedness for peace may be every bit as grave as unpreparedness for war. Housing must be well up on the list of measures to be undertaken to keep the wheels of industry moving. The need has been demonstrated; the materials are available and the workers will be waiting. In the meantime a scheme has to be prepared for the whole Dominion, and an educational programme set in motion. It will, we assume, be the intention of the Government to stimulate all manner of building, but in this article we are concerned only with low cost housing. Those who can afford it will build houses of \$15,000 and over as they always have, and below that group those who

have the capital and wish to own their own homes will build under some variation of the N.H.A. But this is not by any means the total population. At the time of the last census the wage groups in Canada were as shown below:—

Income	Amount available each month for shelter	No. of families
* Under \$400	\$ 6.50	10%
\$ 400-\$ 799	13.30	12%
800- 1,199	20.00	18%
1,200- 1,599	25.00	22%
1,600- 1,999	33.00	12%
2,000- 2,399	40.00	7%
2,400- 2,799	46.00	5%
2,800- 3,199	53.00	7%
3,200- 4,909 }	83.00	7%
Over 5,000 }		

of the total population of Canada

62% of the population of Canada earned less than \$1600 per annum and their shelter is a Canadian problem which private capital has failed to solve.

Mr. Humphrey Carver and I prepared the following programme as a possible basis on which to work out a national Housing Scheme.

GENERAL OUTLINE OF THE FUNCTIONS OF DOMINION, PROVINCIAL AND MUNICIPAL GOVERNMENTS in the NATIONAL ORGANIZATION for HOUSING

(1) DOMINION

- (a) Initiate the whole programme.
- (b) Provide Finance.
- (c) Prepare educational material.

Because the Dominion must finance the construction programme, it is directly concerned with the security of the national investment in Housing and is therefore ultimately responsible for the high standard of project planning, dwelling design and construction. The preparation of such standards is therefore a Dominion responsibility.

(2) PROVINCE

- (a) Locate projects in each region (Regional Planning).
- (b) Provide legislation for planning and slum-clearance.
- (c) Authorize necessary amendments to property-tax structure.

Housing is directly related to Public Health, Welfare and other Municipal Affairs which are within the jurisdiction of Provinces. An essential part of the preparatory work is therefore the securing of Provincial interest and active support.

*(Humphrey Carver, "Social Welfare," Summer, 1939.)
Figures taken from the census of 1931.

(3) MUNICIPALITY

- (a) Survey of Housing conditions and needs.
- (b) Securing of sites (Town Planning will be obligatory).
- (c) Administration of properties.

The fitting of a Housing project into the plan of a town requires the technical co-operation of city engineers, Town-planning departments, etc. It is desirable that projects should as far as possible be designed by local architects and that their subsequent administration should be regarded as a local responsibility. (This point of view is the outcome of much experience in England and the United States.)

Financing

This will have to be studied by our Canadian economists, but the example of the United States (largely modelled on English procedure) may indicate a general method. The U.S.H.A., which is a Federal Authority, lends the Municipalities 90% of the construction cost at 3% interest. The other 10% of these bonds is taken up by banks, insurance companies and private investors.

In addition, the U.S.H.A. pays an annual contribution to each housing project, and this varies from 2.8% to 3½% of the capital cost. This is paid for a maximum period up to sixty years. In the United States the law provides that these annual contributions shall be supplemented by municipal contributions. These are not cash contributions, but take the form of exempting the project from taxation. Only by such methods can a rent be arrived at, equal to 20% of the tenant's wages. On the average about 55% of the money needed to maintain and operate each house comes from the tenant, 30% from the U.S.H.A., and 15% from the Municipality.

Education

Post-war housing must not fail like the N.H.A. (part 2) for lack of a proper educational programme. The difficulties of starting from scratch are very great compared with Britain and the United States, the Scandinavian countries and New Zealand where national housing is accepted like a public utility. Figures can be given to show how housing on a national scale provided work in Britain for all classes and how public expenditure on construction encouraged private spending on an even greater scale. It is easily demonstrated that wherever public housing has appeared, entire surrounding neighbourhoods have improved both in houses, shopping areas and general morale.

The high cost of slums has never been estimated in Canada though in Toronto figures will soon be available. A Hartford Study showed that slum areas occupying a tenth of the area of the city, house a fourth of the city's population. From these slum areas came 51% of all tuberculosis cases, 57% of all juvenile delinquency, and 62½% of all arrests for adult delinquency.

This is what a study made in Cleveland showed:

Area	Per capita cost for fire protection	Per capita cost for police protection	Per capita cost for public health work
One large slum area ...	\$18.27	\$11.50	\$2.02
Rest of city.....	3.12	4.20	0.64

It must be clearly demonstrated that there is nothing indecent in renting a house. So successful has been the propaganda of the Realtor and the speculative builder and the loaning companies that all over North America home ownership has become synonymous with respectability. Of that Miss Catherine Bauer says in her book "Modern Housing": "The ideal of individual home-ownership, our strongest heritage from the

frontier, has been exploited so intensively that a very large proportion of the population still tends (in spite of foreclosures, evictions, and the collapse of paper 'values') to approach the housing problem in the role of petty capitalists rather than as workers and consumers. Even to many of those who have lost or never achieved their 'own' houses, the idea of holding title to a piece of land and a building remains, in spite of all the contrary facts, the vague symbol of both respectable security and sudden riches."

How often Home Ownership has meant self denial in the absolute necessities of life for the man and wife, if not for their children, it would be interesting to know. How often the possession of a cute Elizabethan bungalow has kept a man on relief from lucrative employment in another place must be known to many social workers. Within the limited range of my experience, I have heard of many.

A large section of the population must be convinced that private capital cannot provide low-cost housing. It is not enough to say that it never has and never will. Private philanthropy may build a low-cost housing community where the return on money invested may be 1 or 2% but that is not the ordinary interest demanded by private investors. Even under the N.H.A. the 10% required of the purchaser as a down payment represents a sum away beyond the possible life savings of the lowest wage earner. \$300.00, if he had it, is far better spent on insurance, education, holidays, a new hat for the wife, and the balance put away for a rainy day. We must see to it that to provide shelter for his family, he does not have to exchange so large a sum for bricks and mortar.

The Government will have to counteract the "theories" of various 19th century optimists. A favourite is that, if on the fringe of a blighted area you allow private capital to build small houses, the richer poor in the blighted area will rise above the slum, and everyone by a kind of musical chairs game will move up a peg in the social ladder. Experience has shown that there is no surer method of spreading the blight.

Then there is the capitalistic bogey that dangerous socialistic theories spread in districts housing working class people, and it has to be pointed out that we are not housing paupers or communists, but happy and contented Canadians paying the rent that they can afford. No one who has seen British or American housing projects and the proud occupants of homes in them, of playing children in sunlit parks and playgrounds can associate such a project with theories harmful to the community or the State.

And then there are the "coal in the bath" obstructionists; the kind of people who believe the poor are in the slums because they like it, and if they do not, they, in any case, deserve nothing better. English and American experience goes to show that 2% are unfitted to assume the new responsibilities of clean orderly living, and that this figure is greatly reduced in the second generation. Some may have actually had a tenant who put coal in the bath, but there is a world of difference between the rented flat in our present system and the carefully administered house or apartment under municipal administration.

I take it that, like the United States, no financing for housing in Canada will be made available to municipalities that have not prepared for housing by Town Planning. A statement to this effect cannot be made too soon because Town Planning cannot be done over night. The Government may have to remind municipalities that they must plan their cities on a new order in which the neighbourhood with its schools and parks are the key, and the city limits of today are not an iron-clad boundary. No longer can we tolerate the creeping paralysis of uncontrolled housing on our outskirts, no longer will we plan the "city beautiful" where squares and boulevards camouflaged great areas of misery through which they passed. We have been living on the tag end of the Industrial Revolution—a new world lies beyond.

WATER AND POWER

By PROF. ROBERT F. LEGGET, M.ENG. (Liverpool)

Water is now such a common feature of everyday life that it is frequently neglected when thought is given to the combination of natural resources and physical assets that make up the Canada of today. How marked a change this is in outlook from the earliest days of the development of this country is shown very strikingly by the old system of land division, still so notable in Quebec, based on direct access to a watercourse. Today, watercourses still provide important routes of communication although only infrequently so used by the average citizen. Canal systems have given Canada a leading place amongst the countries of the world in respect to inland waterways. Water supplies for domestic and industrial use are now regarded as an essential part of modern municipal development; there are over twelve hundred and fifty public water supply systems in use in Canada today, supplying more than half the total population of the country. Correspondingly, adequate supplies of flowing or lake water are imperative for the satisfactory purification and disposal of sewage from any but the very smallest type of sewerage system. At the present time, there are about five hundred and fifty municipal sewerage systems in the Dominion. That water is essential for agriculture is a truism and yet one that is perhaps better appreciated in the West of Canada than in the East for in the prairie provinces and British Columbia there are many millions of acres of agricultural land artificially irrigated by water brought under control for that purpose. And, finally, as is so well known and appreciated, it is by the harnessing of the fall of her river waters on their way to the sea that Canada obtains practically all the power distributed by means of her public utility systems, upon which the industrial activity and domestic convenience of the whole country so largely depend.

All these uses of water, with the negligible exception of navigation upon unimproved waterways, are the result of engineering works of varying degree. These works represent a part of the process spoken of as the development of Canada's natural resources. They represent an investment of many millions of dollars. Upon the success of their operation depends the well-being of the whole country, alike in matters of personal health and convenience, and of industrial efficiency and achievement. These applications of water, "for the use and convenience of man", are of such importance therefore that they must inevitably loom large in any general study of the national economy—such as is presented in this issue of the *Journal of the Royal Architectural Institute of Canada*.

It is equally certain that there is no necessity for any wide-scale "reconstruction" of the thousands of control works making possible the many uses of water already generally described. Water power plants operate efficiently; water supply systems are in general reasonably adequate; canal systems operate without delays; and irrigation systems now fit so well into many western scenes that it is easy to forget that the water so pro-

vided is artificially conveyed for use. Reconstruction, however, is a word used today in a much broader way than as indicating mere physical rebuilding. It connotes when applied to the natural resources of this country—to this writer at least—a surveying of things done in the light of modern knowledge and the social outlook of today, and the corresponding planning of an orderly development of things yet to be done, including the undoing of mistakes of the past, if this be possible, and the improvement of incomplete projects, as well as the initiation of new work—in effect a national house-cleaning in respect to the husbanding of natural resources, all considered today in relation to the special problems that the immediate post-war period will produce—problems that will present an unparalleled opportunity for making reconstruction a reality instead of merely a thing of ink and paper.

Water, and its uses, must be considered in all such considerations of reconstruction. Of prime importance, in any scheme of national planning, is the fact that water must be considered from all essential angles and not merely from one point of view. Rainfall may be thought of as the "source" of all water, and whether it is to be used for drinking or for power production will have little if any effect upon the natural cycle through which it must pass before it returns to fall again as rain upon the ground. When considered in this way, water can be seen to be the most vital of all Canada's natural resources; without it there would be no Canada. Its value is not to be reckoned in terms of dollars, even by the million. It is, indeed, a heritage that is of priceless worth so that its most careful husbanding is not only a task of national importance but also a national duty.

Professor Coventry shows the urgency of remedial measures in regard to what may be called "Little Waters". There is no boundary of any sort between the work of which he writes and the proper conservation of greater waters, the waters with which the average citizen is perhaps most familiar. A first step in this larger sphere must be the improvement of running waters now in use, back to their natural purity, by a rigid enforcement of regulations regarding the contamination of water. Regulations exist; they must have teeth put into them and they must be enforced. All who have seen fish and birds killed, not by foolish individuals but by the fouling of natural watercourses, will know that this is not merely a matter of reducing a public nuisance; it is rather removing a national menace. It will mean that the waste waters from many industrial plants will have to be treated before being discharged into watercourses. It will mean that many municipalities must build and operate sewage treatment plants, despite the clamour of parsimonious aldermen and taxpayers thinking only of saving mystical mills. Compare the number of municipal water supply systems with the number of sewerage systems—more than double—and you will see what challenge lies in this direction, challenge and oppor-

tunity for post-war planning. Look at river and lake waters in the immediate vicinity of towns and see how crystal clear streams and shimmering lakes have been bespoiled, some watercourses turned into open sewers, and lakes into garbage dumps. Small wonder that neglect of sewerage systems in Canada has been called "a blot upon humanity".

What of the rivers that run not wisely but too well, in time of spring flood, causing havoc and potential disease in their mad courses? Professor Coventry has shown how a start may be made at reducing floods by proper attention to the little waters. In many cases, more remedial work will be necessary. The Grand River of south-western Ontario is a good example. For many years now it has become swollen in turbulent flood every spring, and in more recent years has dwindled to a mere trickle in mid-summer. This spoiling of a beautiful river, the achievement of man in less than a hundred years, has been due to a very large extent to the misguided draining of the Luther Swamp in an attempt to gain ground for agricultural purposes. Nature has taken her revenge. The swamp will have to be filled up again. Meantime, towns and cities along the banks of the river have been damaged by many a spring flood and menaced by the potential dangers to health of the low summer flows. Some years ago the Grand River Conservation Commission was set up with the requisite authority and funds to deal with this problem. A few weeks ago, the Shand Dam on the Grand River was formally dedicated — major control structure of the Commission's plan. It will store up spring flood waters and ensure a reasonable flow throughout all summers. To be fully effective, it will have to be supplemented by conservation measures in the headwaters of the stream and throughout the valley, but it is a notable example of what can be done — what must yet be done to conserve the health and amenities of other fertile river valleys in the east of Canada.

Those who know something of the work of the Tennessee Valley Authority in the United States will want to know whether power is to be developed at the Shand Flood control dam, corresponding to part of the much publicised work of the T.V.A. The two cases are not parallel, varying notably in magnitude. Although the Shand Dam is a relatively large structure, the regulated flow of water that it will discharge is negligibly small when considered in relation to power development. The Commission, therefore, represents no embryonic Canadian T.V. A.; similar social planning on a major scale will have to take a somewhat different form in the Dominion. A further difference is that the immediate impetus to T.V.A. development (and the

silencer of much opposition!) is the present demand for power, a demand that will almost certainly not exist in Canada when post-war social planning can be envisaged in action. At present, as is well known, this country is faced with a shortage of power but this is due to sudden increases in demand from war industries. At the end of the war, some at least of this special demand will disappear and Canada will, for a time at least, be well provided with public power. It is difficult, therefore, to see where power development can be fitted in to post-war planning; rather will the problem be to devise ways and means for utilising much of the excess power that may then be available.

What of irrigation, similarly so striking a part of federal governmental activity in the United States, through the agency of the Bureau of Reclamation, builders of the Boulder Dam and of many other notable structures? Here again the Canadian problem differs to such an extent from that across the border that no direct comparison of methods of attack is possible. Canada needs no Boulder Dam, but she does need, and need badly, an integrated policy with regard to water and land conservation for her western provinces. The need was shown by the emergency powers granted under the Prairie Farm Rehabilitation Act. Pioneer work of great value was achieved but even those responsible for this work would probably agree that only a start was made. Much remains to be done, and it is work that will fit in admirably with any general scheme of post-war reconstruction.

Possibly the most significant feature of the P.F.R.A. work, as it has naturally been called, is that it represented apparently the first treatment of natural resources in this country without respect to provincial boundary lines, fixed politically but geographically artificial. This natural and logical treatment of a water problem was possible only because a widely recognised emergency existed, natural resources having been legally adjudged to be a provincial responsibility, under the terms of the British North America Act. It requires very little consideration to show that concurrently with such measures as have here been sketched, reconstruction of the legal basis of the administration of Canada's natural resources is essential to the future well-being of this country. The Rowell-Sirois Report failed completely to deal with this problem in Dominion-Provincial relations, possibly because of its complexity. Complex though it may be, it is a problem that must be tackled. It is a problem that must be solved if Canada is to husband as she should, and as she must, the natural resources that are her God-given heritage.

THE PLACE OF THE ARCHITECT IN SOCIETY

By A. S. MATHERS, B.A.Sc., F.R.A.I.C., R.C.A.

"Architecture Establishes a Nation"—Sir Christopher Wren

As a citizen and before the law, the architect is no different from other men. He votes and pays his taxes, earns his living as a designer of buildings, eats, drinks, goes fishing and to church and finally like other men dies and is buried. But unlike other men he leaves behind a record of his times that will endure and tell a story of his generation long years after words and printed books have passed away. That story, written deep in the fabric of his architecture, forms a link in the long story of the race, it is part of the great tradition of architecture whose beginning is lost in the mists of the past and whose end is in eternity.

The architect is the unappointed but true historian, for what men build cannot conceal what men are. The buildings of a nation proclaim at once the base or noble character of its people. Perhaps it is a kind decree of providence that history soon forgets the small and trivial men for their constructions soon decay and only those which tell the story of the great survive. But architecture is not alone a history book and architects have other tasks to do. The thing which makes men differ from the beasts is their capacity to change the acts and habits of their species by taking thought, and to pass on from generation to generation the accumulations of their minds. Men are not tied to their ancestors by heredity alone but by a permanent tradition constantly and continually enriched by each succeeding generation. And if a generation fails to make some tribute to the chain of knowledge or if its tribute be not recorded and set down, then in the great tide of civilization there will be a blank, a void and man will lose a step he might have gained.

As Christian Barman wrote "Architecture now as later, is the visible accompaniment of civilization. Civilization is its cause no doubt, but civilization is still more its effects. It is true that civilization is a motion, a driving force, without which architecture cannot exist. But architecture is an agent without which civilization cannot propagate itself and set up a social polity. It is the most stable of those things that constitute a permanent tradition. And what is man without a permanent tradition? 'A rather inferior sort of ape—whose thoughts and actions have no repercussions beyond the grave.' It is not to be wondered at that writers of every kind have regarded architecture and civilization as synonymous terms!"

The architect as the human agency through which architecture is created is therefore responsible for all that architecture means. He must create the "visible accompaniment of civilization" and he must be "an agent by which civilization propagates itself." He is not merely the unconscious and unofficial recorder of his times but he must in his own generation take some step farther forward architecturally not standing still lest he fall back, for he must ever strive against a tide of prejudice and ignorance in order that he gain his end.

Today when all the world hangs on the brink of an abyss, when all that we have gained these thousand years hangs in the balance, the architect can see a vision of a world to come worth fighting for, a world of decent housing for the poor, of towns or cities cleansed of dirt and grime, of beauty, permanence and order where such did not exist before. These are the things for which he must speak out and battle for. He must anticipate ever growing needs of towns and cities in matters of design, laying his plans in time lest he be forestalled by those who will attempt to make all things work to their own advantage.

He as the authority on all things concerning the design, form and environs of buildings, must not abdicate his proud position but rather by his own aggressive and well considered acts brave the anger of all stupid and self seeking opposition, and press home the arguments for all good proposals by whomsoever submitted.

In any civilized society the architect is the indispensable creator of its architecture, the advocate of ordered and urbane design, the apostle of good living and the enemy of all mean and shoddy building. Of necessity he must be a dreamer but one who can and does make his dreams come true. His art is not a science nor is it engineering. He does not pin his faith upon the plotted graph and complex calculation. His curves disclose no secret fibre stress nor probable deflections but in their full sweep catch up and hold some fleeting vision and lay the pattern for its execution. The great dome that floats serene above the roofs of London was not a slide rule's child but born of Wren's superb imagination, a dream that he transfixed in stone three hundred years ago for all the world since then to see and wonder at. Let no man despise the architect because he must in the scheme of things remain a dreamer. He is a member of an honourable and old profession in whose keeping are all the great traditions and the art of fine and noble building. He has been and will be always the agent by which civilized way of life is established in any generation and upon his performance depends the glory of his age.

He cannot and he dare not prostitute his art for on him depends a future world, a world which may at last give place to order, and to beauty. These were the sole prerequisites of wealth and aristocracy a short two hundred years ago, and for this class of men the architects produced the Louvre, Versailles, and towns like Bath and Boston's Beacon Hill. No change of ownership or occupancy can ever change the fundamental purpose of their architecture which was to create a place and a background where civilized men could live. Today the architect must accept the task of building for the common man a thousand other places designed upon the principle that architecture and all the arts are legacies of the race bequeathed to all mankind.

LABOUR'S CONTRIBUTION TO RECONSTRUCTION

By ALFRED WARD, President of the Toronto Building Trades Council

For use in this article, we should perhaps briefly define what we have in mind when speaking of labour. It will help, I believe, if we say we are referring to that section of society who, by their physical effort and also by their brain, acquire the sustenance for the maintaining of a place in the social structure for themselves and their families.

We will not deal at length on this definition, as we may get into difficulties between the status of those who are generally classified as wage earners and those who receive a salary. Each may reasonably be included in that great body we term labour. So we will leave this to the more generally accepted term — the workers.

We are in the midst of a terrible conflict, and hear a good deal about a New Order. This evidently suggests that the war is being fought to rectify something. A multitude of ideas could be given as to what that something is, but this much I think we can all agree upon and that is that labour's place in society must be reviewed and given that position commensurate with the part it is playing in this great struggle.

What Have Been Labour's Chief Problems and Desires Hitherto?

The opportunity to work under conditions that will lend themselves to the protection of his physical and mental welfare. To receive wages that will permit of a basic standard of living, and always with the possibility of raising that standard, and receiving the awards his contribution to the particular industry he is engaged in warrant. His desire for security against unemployment brought about by circumstances over which he has no control. For security in his old age.

What Are Labour's Responsibilities?

The hearty acceptance of the opportunities to work. To put forward that honest effort necessary for the development and expansion of the industry in which he labours. As a section of society holding within themselves great collective power, they must use that power to the best interest of labour as a whole and the Country at large. They must, by active, firm effort, pursue, develop and improve the principles for which labour has striven, fought and suffered for in past times. Collective Security must be their goal.

What will the Post-War or Reconstruction period be like? It is hard to forecast, because the present time does not disclose an early end to the world struggle, nor does it give any real indication of the complete pattern or demands of our full war conditions. Therefore the only way in which we can indicate what the position of any group in society will be at the time of reconstruction is by considering them in relation to the evident historical fundamental post-war problems, modified or extended by the difference in scale between this and previous wars.

Canada's Problem, like many other countries, will be:

1. Demobilizing the armed forces and the war-workers.
2. Transferring from war- to peace-time endeavour.
3. Adequately adjusting our economy to the tremendous debt with which the country will be saddled.
4. Adjusting our production to the demands created by desolate, starving countries.
5. Adjusting our foreign trade policies to the unbalanced World Markets, brought about by war emergencies in defeated and allied countries, both of which will be completely swamped by tremendous debts as ourselves.

6. Providing our part to the machine necessary to ensure a world order that will, with Divine Guidance and the very best of man's ability, prevent a recurrence of this disaster ever visiting the world again.

In dealing with labour's general problems, as they are affected by or affect the Post-War difficulties. We appreciate the fact that labour will need the co-operative support of other sections in our social set-up, if we are to successfully have our Post-War Planning prepared, ready to operate so that the demand for labour's services will be there when the change-over commences to take place.

Here, then, we have labour's first responsibility to Post-War economy and their first contribution. By watchful, persistent effort, creating a determination among their ranks and the people in general, so that we deal with our Post-War problems quickly, energetically, and with a view to avoiding depression.

Number one and two of the problems mentioned, dealing with demobilization and transferring from war- to peace-time endeavour, can very well be dealt with now and our plans all drawn ready for that grand day when fighting shall cease. In this regard I would suggest that we have boards and commissions set up to study and prepare large scale Town Planning Schemes, Garden Cities, and great Housing Projects. Linked with them would be Health Departments, Transportation Commissions, Educational Bodies, so that nothing need be left undone towards making Canada a rare jewel among the nations.

In times past the great stumbling block to all matters of reform and upbuilding has been the cost and the difficulty of obtaining the funds. This no doubt will be raised again, but I rather incline to the view that never again will that "stop all" be employed as it was in the past.

Since the last Great War, labour has experienced a great depression with much deprivation and want. They have seen their men and youths wandering the country feeling that hopelessness brought about by long periods of unemployment and its consequent distress in times of peace and plenty.

In this war we have before us a country that reminds us of the bee-hive with a glass front we see at the Country Fair, showing us the thousands of bees all very busily engaged. Now it is only natural to expect the worker to think that if it is possible to keep everybody so busily employed during times of war it would be equally possible to do so in times of peace.

In our Empire, labour has been called in to contribute their part to the direction of the war, and have proved their worth. Therefore, notwithstanding the old enigma of finance, labour feels that the industry of Peace is as important as the industry of War, and that given that opportunity of playing the part in Peace as it has in War, the old problem of finance holding back the industrial efforts of the workers would soon be overcome.

Labour is doing a wonderful job in this time of great need, contributing from their ranks great forces in the three Armed Services, the Merchant Marine and a vast army of workers in the War Industries. All are making great sacrifice that right shall prevail. They do this gladly. They will be just as ready to play their part in helping solve the many problems that will be confronting the nations in the period we have called Reconstruction.

POST-WAR PLANNING OF SCHOOLS

By JOHN BURNET PARKIN, B.ARCH., A.R.I.B.A.



WORLD WAR 2.

Freedom of plan and elevational treatment attained by laying aside all handicaps of tradition. (Ansonia High School: Lescaze & Sears, Architects)



WORLD WAR 1.

School planning reached a new peak in this period with freer plan clothed in antique garb.



BOER WAR.

It speaks for itself.

The school building is the result of planning in relation to our educational concepts of a free and unhindered development of man. It should, therefore, express the type of system which it houses and, above all, the child, in his constant development, step by step, towards a social life. Antiquated practices in construction and architectural tradition do much to impede the educational process. To realize a happy and healthy environment must be our ultimate aim in school design. To obtain this end one requires a deep and intelligent understanding of the child and the scale of his world.

Our way of living, our social requirements, our family life as it stands in relation to the community, all have a very vital bearing upon the conception of school building. For this reason, the design of schools must be in a continuous state of evolution if we would maintain that harmony which well ordered living demands. Neither the extent nor the type of sociological change that may result from the war, fall within the scope of this article. It is sufficient to agree that there will be a change, and the greater the change the greater the need for clean-cut and scientific approach to our post-war problems. Even in "normal times" methods of education are subject to constant change. With the unleashing of the pent-up ideas of the educationalists added to the general post-war surge, we may well expect a flood that will carry all before it and we will at long last realize that the old conception of the school-house and its related grouping is indeed obsolete. It is too much to expect that the break will be absolutely clean and free of pre-war influences and so, amidst the exciting and inspiring new influences, we should beware of the many insidious factors which will make the problem more difficult. Three of these are:

1. Lack of culture and resultant narrow outlook;
2. Inherent conservatism bred of self-satisfaction;
3. Economy, imperative in a young nation (and further necessitated by an extremely expensive war).

We can hardly expect a country as young as Canada to have much in the way of a cultural background, but to imagine precocity induced by world-wide conflict to be a substitute for such a background is unforgivable.

Self-satisfaction and the resultant conservatism is as much to be despised in nations as in individuals. It is frequently attributable to the unhappy practice of using the mediocre or even the downright bad as a yardstick for comparison. We must, therefore, seek out and make the best our only standard. If an honest attempt is made to do this, we will gradually become conscious of a broadening of our outlook and a more liberal and unhampered approach to the problems of the day.

A true sense of economic values is indeed essential to the practice of a vital architecture and conversely, a false set of values will lead to an opulence or a poverty as repulsive in the first instance as it is pitiful in the second. It is almost axiomatic

to say that all community agencies of post-war Canada must accomplish more with less. The limits within which we shall be obliged to work must be indelibly stamped upon our minds so that our every effort will be bent towards the end of producing a richer and happier community.

It is not proposed to deal exhaustively with the fundamentals of school design. We shall content ourselves with a brief outline again emphasizing the fact that changes in the educational system involve basic changes in design.

SITE—Spaciousness is a great asset.

ORIENTATION—Class rooms on the north and south axis generally most satisfactory.

CLASS-UNIT—"Activity" rather than "listening" requires project space; there is an increased tendency to link classroom with outdoors; a good principle is more area per pupil and less pupils per class.

DISPOSITION OF UNITS—Single storey has many advantages especially in elementary education; reduce number of class-units as large groups tend to overpower the child.

LIGHTING—Natural and artificial require utmost care and scientific consideration; strive for larger window areas.

VENTILATION—Mechanical ventilation permits reduction in classroom height helping to reduce room to child's scale.

FREEDOM OF PLAN—Provide for possible expansion; flexibility is desirable to accommodate changes in curriculum.

ELEVATIONAL TREATMENT—We quickly adjust ourselves to unfamiliar elevational treatment but we never get used to functional inconveniences.

GENERAL—Sound insulation, acoustics, sound equipment and visual education, all present a challenge to modern school designer.

Discussion of design fundamentals or the variations of the educational system cannot lead us to any concrete results unless we are prepared to act. The responsibility for action lies with three groups, governments and their immediate agents, architects, and the general public. The two former groups are actively concerned with the ways and means while the latter group is passively interested in results.

The Government's Part

It is first of all essential that governments preserve open minds in questions relating to school design. Educators' opinions usually vary, but it is safe to say that they will generally be far ahead of actual possibilities. For analysis of these opinions, the creation of a permanent panel with representatives from the Government Departments of Education, Public Works, Health, the Teachers Federation and the Architectural Association would be a great step forward. The number of contributions that such a panel could make is almost unlimited. Let us point out two of the most obvious activities which would lie within their scope. First, the recalling of books of suggested plans where such have been issued, and in their place the production of a book showing existing schools. This might consist of photographs and plans accompanied by an outline of the problem and a criticism of the results. Surely there is no longer any need for each individual or group to go

on learning merely by making the same mistakes that others have already made. As the information collected by this panel increased, it would become possible to make available the current practices in foreign countries where such were of practical importance. Secondly, this panel might maintain a progressive spirit by conducting competitions, the results of which would be a source of inspiration to all concerned.

The Architect's Part

The fact that practically all school boards look to the architect and place their reliance in him at once indicates his responsibility. It may be that the board have neither the inclination nor the facilities to investigate progressive educational methods, and their relation to school planning. The architect, on the other hand, has been trained to investigate scientifically and apply the results obtained to planning and designing. Architects, therefore, must shoulder this responsibility and be prepared to offer leadership. All architects have been pupils, but few indeed have been teachers. As the pupil and the teacher are the two most important cogs in the educational wheel, it is at once apparent that to complete the picture the architect must receive much valuable information that only the teacher can give. Closer co-operation between Architectural and Teaching Associations is, therefore, essential. This co-operation may take the form of exhibitions of architectural work and the free and open discussion of the problems and their solutions.

Much might be said of added responsibility devolving upon the permanent staff architects employed by school boards of large metropolitan centres. Naturally, the members of smaller school boards look to them as authorities. A progressive outlook on the part of these men can do much to properly shape the building of post-war schools. Here again we suggest the competition as a means of injecting new ideas from time to time.

The Public's Part

Results will be the criterion by which the public will judge the efforts of both governments and architects. These two groups will have to plan a campaign to acquaint the public with their aims and objectives with respect to post-war planning. For their part, the public must retain open minds and only form and pass judgments after the most careful examination of the facts. Once a consciousness has been aroused within the public mind, it then becomes the bounden duty of every citizen to stubbornly insist that no solution other than the best is acceptable for any problem.

Finally, in addition to the foregoing, this whole subject of post-war planning of schools must be co-ordinated with general pattern of post-war reconstruction. It is to be hoped that from the school nucleus will arise the community centre, embracing a library, recreational facilities, public auditorium, park and playgrounds and adequate provisions for adult education.

Truly when viewed in the broadest sense, this is a complex matter. It is, however, no mere patriotic impulse that assures us that, if we will but act at once, we in Canada have both the resourcefulness and the ability to prepare ourselves for the ample opportunities of the post-war era.

REFORESTATION AND TRANSPORTATION

By W. J. LeCLAIR, M.E.I.C., M.C.S.F.E., Managing Editor of Timber of Canada

It may be taken as axiomatic that any reconstruction programme adopted by Canada must provide for the immediate employment of large bodies of men. If possible, such employment ought to be productive of economic return. If practicable, it ought to take a form which will be somewhat intermediate between the military life to which men have been accustomed and the civilian life for which they are about to be fitted.

A really ambitious scheme of reforestation carefully planned to suit the peculiar needs of Canada's economy would seem to be a practical way of meeting these three requirements. If necessary, our whole Canadian Army could be employed in re-conditioning the forests of Canada. The men could be employed under a condition of gradual rather than precipitous relaxation of discipline. They would be in an out-door occupation in many ways similar to what they had experienced in warfare and engaged in a battle against the elements quite as rigorous, though not as prodigious of human life as the warfare they quitted. At the same time, they would have the satisfaction of seeing a gigantic project of beauty and potential wealth resulting from their labours. Their years of enforced destruction and cultivated hatred of a human enemy race would be succeeded by some years of planned construction which would result in incalculable material benefit to their own and succeeding generations. The spiritual advantages of such a scheme would be paralleled only by the economic benefits resulting. A communion with nature provides the most humanizing of influences, and the greatest hope of forgetfulness of the abnormality which is war.

Canada's economic future is predicated upon her natural resources finding acceptance on a competitive basis in the markets of the world. Chief among such resources and the deciding factor in her past favourable balances of trade is her forest wealth. Our forest resources are great and adequate for future generations if a planned cropping is practised and reasonable measures applied to encourage reforestation. Their value as a commercial asset, however, depends wholly on the cost of their conversion to merchantable products and the cost of delivery of such products to the world markets. If they cannot be converted and delivered as cheaply as similar products from other parts of the world, they have even a doubtful inventory value. Unfortunately Canada suffers a transportation handicap. All the twaddle of recent generations of would-be reformers about the vandalism of the lumberman is on a par with the spurious doctrine of pacifism which softened and rendered the democracies almost a helpless prey to the realism of totalitarianism. In the past, lumbermen could take out of the bush only such material as would grant them an economic return, and could spend on bush improvements only such amounts as would facilitate current operations. They could finance neither reforestation, permanent bush and stream improvements, nor for that matter even adequate fire protection measures. Of necessity, they had to practically ignore the ravages of insects and fungus diseases.

The Canadian forest is a great national asset capable of perpetuation for all time. It has been a source of great national revenue and can be continued as such for future generations. It should be regarded as a public asset by the Canadian public and the responsibility for its improvement, protection and perpetuation should be made a responsibility of the public purse. Since future generations would benefit by such a policy equally at least if not even more than the present generation,

the financial burden ought to be spread over a long period of time. It is neither reasonable nor practicable to consider any ambitious scheme of forest improvement or protection a responsibility of the trade.

Every year there is destroyed by fire and pests in Canada far more timber than is converted into either lumber or pulp and paper. The responsibility for preventing such ravages is a public one. It ought to be a first charge on any re-habilitation or post-war reconstruction programme. Forest fires could be practically eliminated or at least reduced to local proportions which could be readily brought under control if an adequate programme of bush cleaning and provision of fire-breaks could be undertaken. A similar control of both entomological and fungus pests is within practical attainment. Both, however, are projects which require the employment of large bodies of men and the expenditure of very considerable monies. Both are beyond the power of private financing. The undertaking of such projects by Government would be repaid a thousand fold in the future economic security of our country.

The term reforestation is used in this article in its general application rather than in the particular one of referring to the planting of young trees. In certain areas, tree planting could be undertaken to great advantage both to forest industries and to agriculture and social amenities generally. Some re-planting of White Pine forests is desirable and in a few favourable districts re-planting of such hardwoods as White Oak and Walnut could be introduced in mixed stands. On the whole, however, the general practice of bush cleaning and institution of fire and pest prevention measures would result in tremendously increased productivity which would soon provide its own reforestation.

The subject of transportation is grouped in this article with reforestation because the solution of forestry problems in Canada and the realization of a perpetual yield basis of forest cropping can be attained only through a simultaneous solution of Canada's problem of transportation.

The degree of accessibility of any block of timber is the chief factor in estimating its marketable worth. The facility with which men can be got into an area determines whether or not that area can be saved in the event of forest fire. Softwood timber is regularly logged in areas where hardwoods cannot be touched because the softwoods can be floated often hundreds of miles by stream. The recent building of truck roads into other areas have made accessible both soft and hardwood timber which a few years ago was considered inaccessible. A gigantic programme of road construction and permanent stream improvement is a necessary preliminary to any comprehensive scheme of reforestation.

It is in the solution of this problem of transportation that Canadian engineers and architects can play a practical part. A network of roads ought to be built with two purposes in view. First, to cheapen lumber and pulp and paper production and facilitate reforestation, and secondly to provide a permanent road system for the country in future years when its population will be ten or twenty times the present figure. The present makeshift arrangement of temporary stream improvements should be replaced with a system of permanent improvements which ought not to be a charge on lumbering operations. In the planning and supervision of these schemes all returning civil engineers and a great many mechanical and electrical

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THE BACK LOG OF POST-WAR CONSTRUCTION PROJECTS

By A. S. MATHERS, B.A.Sc., F.R.A.I.C., R.C.A.

In the so-called reconstruction period following the end of the war, the first difficulty facing us all in making a right about turn toward a peace time economy, will be the lack of any kind of definite plan for that return. True the government has set up a Reconstruction Committee to formulate plans but this committee and its sub-committee, one of which is on construction, is nevertheless a committee composed of men who have other jobs to do. Regardless of what any other sub-committee may be able to do it is certain that the detailed planning necessary to implement any programme of construction after the war cannot be done before the war is over without seriously interfering with the war effort, and also that it cannot be done by a committee at all, able and competent as the personnel of that committee may be.

The amount of planning that will be required for any effective construction programme is so great that it would in ordinary peace time have taxed the resources of the whole architectural profession of the country. Unfortunately the architectural profession has been virtually destroyed by the stupid bureaucratic handling of the war purpose building programme as far as planning is concerned and with the present restrictions on private building necessarily in force, it will likely have ceased to exist by the end of next year. To face the peace and a hoped for construction programme in the immediate post-war years, without a functioning private architectural profession in existence in the country is the certain condition in which the country will find itself when the war is over, unless some very immediate steps are taken to avert this calamity.

Between the time when hostilities cease and architectural and other planning technicians can prepare any definite plans, at least a year will elapse, and in this year the employment of labour in the construction industry will be impossible unless definite plans are prepared for some building projects either before or promptly after the war is over by some competent designers.

The situation is looked upon seriously by the National Construction Council since the promptness with which peace time industry will be able to re-establish itself will depend in no small measure on the speed with which plans for construction projects can be issued for tender.

Certainly the first projects to be ready should be those which were planned and ready when the war broke out and which were postponed, and the council is attempting to find out just how much of this kind of thing there will be by means of the questionnaire sent to all architects with the July issue of the Journal. Should the volume of this backlog be found to be substantial it is proposed to make representations to the government, asking that the owners of these suspended projects have their architects complete all unfinished plans and specifications in readiness for an immediate start on construction as soon as the war is over. Such a procedure would serve the dual purpose of first providing a backlog of *planned projects ready*, and second of assuring the existence of architectural organization for the post-war period.

For this reason the National Construction Council earnestly requests every architect to complete and return the questionnaire to the office of the R.A.I.C. before the end of October this year.

REFORESTATION AND TRANSPORTATION

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engineers could be employed. Returning architects could be advantageously employed in designing permanent forestry buildings, tourist rests and the development of a Canadian type of rural architecture which would encourage coming generations of visitors to bring revenue into our woodland districts. A large part of the annual income of several European countries is derived from the tourist trade and judicious planning could make a similar source of income an important factor in Canadian economy. To the rustic beauty of the ages could be added the attraction of twentieth century comfort and the amenities made possible by modern science.

The hope of Canada's future does not lie in a building up of huge centres of population in imitation of the mistakes of the United States and of European countries, but rather in a distribution of population over the wide spaces which are ours to populate. The easiest way to attain that end is to provide ample transportation facilities, and attractive amenities of existence. It is sufficiently proved by our past experience that more than scenic beauty and three square meals a day is necessary to keep men and women away from our large cities. A dispassionate consideration of the matter will disclose that there is no logical excuse for a perpetuation of the conditions of isolation and hardship which in the past has been inseparable from most forest residence in Canada. A very small proportion of the amount Canada is spending in war today, if spent in the reconstruction period on improving forest living

conditions, would make living much more congenial for a portion of our population which produces a goodly part of our wealth.

So much for consideration of what is desirable. A moment's thought will show that it is equally necessary. The marketing of Canada's forest resources in the past has been a chief source of her wealth. There is no indication that her forests will be superseded in importance by any other source of wealth at least in ours or our children's generation. There is, however, a real threat to Canada's continued ability to find markets for her forest products unless the handicap of distance is removed and the costs of conversion lowered. We may expect a complete re-orientation of world trade after the war and Canada cannot hope to compete with countries of far lower standards of living unless one of two alternatives is followed:

- (1) An acceptance of a reduced standard of living, or
- (2) An acceptance of a public responsibility for a policy which will cheapen costs of production of our natural resources.

The undertaking of a comprehensive, well-planned scheme of reforestation and transportation development would be adopting the second alternative. Its financing would be a legitimate charge against posterity. To wilfully force the first alternative upon a generation which has already incurred so heavy a burden for humanity is just inadmissible.

TRAINING MECHANICS IN CONSTRUCTION INDUSTRY

By E. INGLES, First Vice-President, International Brotherhood of Electrical Workers

Properly constructed buildings need properly trained mechanics. There is nothing new about properly planned training. In Europe for a great many years there have existed systems of apprenticeship training. There is no record of government agencies for the direction or management of such systems, but there is evidence that arranged systems do exist and for many years in all parts of America there was quick demand for European trained artisans.

However, this offered scanty supply and in the construction field there was a growing demand for mechanics. We also had to find some outlet for our own children. Therefore we were faced with the problem of developing our own mechanics. Because of a number of characteristics which had grown up with the industry and the climatic character of the country, a system of apprenticeship totally within the industry did not seem possible or feasible and finally a group of General Contractors studied the question. A group of Trade Union Officials were invited to participate in this study, the result of which was that in 1926 or 1927 a joint committee was set up and with the co-operation of a couple of technical schools an apprenticeship system was set up as an experiment. This experiment served to show that a system of apprenticeship training could be operated within the industry with advantage, but only when assisted by the Government.

The whole matter was then brought before the Government which, after representations by those affected, agreed to assist and the Ontario Apprenticeship of Ontario came into existence.

After a series of developments, the details of which need not be emphasized here, a committee or Board of three representing Government, Employer and Employee was set up and continued in operation until December, 1935. At that time the administration of the Act was placed under the direction of an interdepartment Board whose activities were not confined to the administration of this Act and consequently the purpose began to deteriorate. However, it must be added that the falling off in constructional activity had some effect in the work of the Board. During the life of the Joint Board a fair amount of constructional activity took place and there was opportunity to give the scheme a fair try out and the results more than justify the effort and expense. The cost was borne by the industry and the Government jointly.

At the moment there is a decided lull in the activity of apprenticeship training in the construction industry. The reason is obvious. Military service has, of course, first call and opportunity for greater returns to the youth is another.

There is, however, a period between the time of leaving school and entering military service which could be used to good advantage and which could provide a measure of training which would serve a very useful purpose when the lad is discharged from the service. The schools could co-operate and here there is much material for argument. We all have been giving a lot of attention to academic training and in far too many cases we have been trying to give children academic training when the children simply will not absorb it. There has been an overcrowding of that field. In a great many cases a thorough training in some mechanical pursuit will offer greater advantage than other forms of service. This angle must have

study and children who show tendencies to mechanics should be channelled in that direction. While military service and immediate opportunity are formidable obstacles in the way of encouraging youths to enter the construction trades via an apprenticeship system, they are not insurmountable. A considerable degree of education will be necessary and some sort of publicity will have to be devised. There can be no successful argument against the contention that a boy with a trade will be far better off in the long run than will a boy with good wages in a temporary industry. The Technical School can be of assistance in this regard, but care must be taken to assure that such schools do not assume the control of the system. Under no circumstances should the control of the system leave the industry.

That the old set-up was destroyed is to be regretted. However, the work of re-organizing is now under way and the Government is to be congratulated in taking a part in that re-organization.

It is unfortunate that the old set-up was destroyed. Had it remained as a functioning unit, it would not be near as difficult to jump into operation when the opportunity presented itself. However, better late than never. Before this gets into print the new committee, which is now appointed, will have held its initial meeting and it is hoped the work will speedily go forward.

It will be difficult to lay down principles and details at the moment. We are living in a rapidly changing atmosphere. We are in an era of constant change. The question demands much thought and must be approached with an open mind. However, we have a tremendous wealth of experience and in that regard we are most fortunate.

Outside of Ontario very little has been done in the Dominion along these lines and therefore all through this argument we have been dealing with the problem in Ontario. British Columbia has an Act similar to that of the Province of Ontario. In Nova Scotia a little has been done in connection with the Dominion-Provincial Youth Training Regulations. Generally speaking nothing has been done in the way of developing an apprenticeship training system on a Dominion wide basis and while this may not be of importance at this time, such a possibility must be seriously considered at some time in the future. In all this great care must be exercised that the system does not become the subject of bureaucratic control.

At the moment a revival of interest in apprenticeship training is of the utmost importance. If this is so, then all the elements interested in the construction industry must give the problem all the support they can possibly muster.

If an adequate supply of competent mechanics is assured for the future both during the war and the post-war period the construction industry, which is undoubtedly the second largest single industry in the country and therefore an industry with great ability in absorbing unemployment, can offer wonderful opportunity in the solution of post-war unemployment problems and in the ability to serve the public in the construction problems of that period. Otherwise we will definitely be handicapped in any post-war activity looking toward an orderly return to our normal way of life.

PARKS FOR POST-WAR RECONSTRUCTION

By H. B. DUNINGTON-GRUBB, B.S.A. (Cornell)

National Parks and Highways

Success in this war means more than the military defeat of the enemy. Unless victory is to mean a better world than the one we have known our prospect is another period of mass unemployment and crisis, with World War Number Three as the climax. People are beginning to realize that a vast post-war reconstruction programme with government spending on a scale comparable to war can be achieved, not only without bankruptcy, but with an enormous increase in the national wealth, as a result of full employment. Never again will it be possible to say that there is no money.

Engineers, architects, and landscape architects, will be the people called upon to provide the necessary vision and imagination for such a programme. Transportation, regional planning, new towns and cities, as well as reconstruction of old ones, together with an immense housing programme, will form the basis of the post-war effort. As the Federal Government is the only public authority capable of spending money on so vast a scale, legislation enabling Federal funds to be used in financing local and provincial programmes will be essential.

In the past an immense amount of time, effort and energy has been wasted by public spirited people preparing excellent schemes for improvement, trying to get them accepted and the funds raised to carry them out. This time there is a danger that the sudden necessity for spending immense sums of money quickly will give rise to wasted effort on hasty and ill-considered projects. The details of the reconstruction programme should be well advanced before the emergency arises. Although the problem is vast, enough energy ought to be raised to tackle it even in the middle of the war effort before we are confronted with the armistice.

A programme for parks can only be studied as a branch of the much larger problem of transportation. Park development outside the cities ought to be a part of the country's system of great highways.

Federal Park Reservations

Although Canada has twelve thousand square miles of Federal Park Reservations, apart from the somewhat similar Provincial Parks, the distribution is not so arranged as to make these areas readily accessible to the mass of the population. As far as area is concerned, Alberta, with a very low density of population, has the lion's share with seven large reservations as compared with three very small areas for Ontario, four for British Columbia, and one each for Nova Scotia, New Brunswick, Manitoba and Saskatchewan. Quebec not appearing on the list, except for the Battlefields Park on the Heights of Abraham.

Regional National Parks of many square miles in extent ought to be within the reach of everybody for week-end driving. They ought to be so located as to serve the most densely populated parts of the country. One tract of country in the

Highlands of Ontario, near Caledon for instance, would serve a number of cities and towns.

These parks are provided for the following reasons: (A) To promote the health of all citizens by means of rest, recreation, fresh air, and relaxation from city life. (B) Preservation of natural scenic beauty, mountains, forests, rivers and lakes. (C) Preservation of indigenous flora and fauna. (D) Preservation of historic sites such as battlefields. Such parks ought to be made accessible by bridle paths, walks and trails. Everything possible ought to be done to encourage walking and horseback riding as opposed to motoring. Motor roads should be merely access roads to well placed parking places and tourist camps. Development ought to provide for picnic and games facilities, government owned and operated restaurants, as at Brock's Monument, Niagara, and hostels as in New Zealand.

Highway Parks and Highways

In addition to Federal Parks Reservations served by the highway system, our great trunk highways ought to be furnished with small parks at well distributed distances for picnicking en route. These should be chosen at points of scenic beauty such as rivers, lakes and ravines with adequate facilities for parking, camping, canoeing, swimming and skiing.

Although the possible outlay on such parks is negligible in terms of national spending there are certain points in the country's highway system where a more intensive development would be excusable. In conjunction with the St. Lawrence Waterway, for instance, where, for thirty-five miles between Morrisburg and Cornwall, an entirely new highway with re-located villages is to be built, a splendid park system on the banks of the St. Lawrence ought to be built.

In order to promote the pleasure of motoring, and give every encouragement to tourist traffic, particularly from U.S., our great trunk highways ought, themselves, to be parks. The original proposals for the Queen Elizabeth Way, between Toronto and Niagara Falls, called for a right of way 500 feet wide. The existing width of 200 feet is totally inadequate. As fifty feet beyond each pavement is needed for the deposit of snow, no planting operations can commence inside a total width of 180 feet. For an effective planting belt a minimum width of 150 feet each side of the road is essential if unsightly views are to be screened out and the highway scenery-broken up into planting masses. Planting should be arranged in masses and belts, using a zone of dwarf shrubs in front with groups of taller shrubs behind, building up to a third zone of trees as a background.

If highways are to be parks, the whole problem of highway and park must be studied as one project before any work is put in hand. When the park feature of the undertaking is treated as an after thought, by way of beautifying an existing highway, it is then too late to arrange for the necessary grades and planting conditions necessary for success.

CITY AND SUBURBAN PARKS

By GORDON CULHAM, M.L.A. (Harvard)

The underlying motive in all our reconstruction efforts must be the general welfare of the people whether in housing, parks or other public works if we are to secure any permanent values from them. There is a very grave danger that any lesser ideal such as work and pay envelopes which are after all the normal expectancy in life may fail to carry us on towards that new conception of democracy we have been thinking about. We must add two things to work and pay. First, we must stop the human wastage which permeates life in our cities and second, we must insist on more of the amenities in the environment of our homes and places of work.

We have long known that the wastage occurs in youth up to the age of 16 and that if we produce healthy minds and bodies in these young people the future will take care of itself.

But we have not fully realized the powerful influence of the whole field of outdoor recreation as the chief conditioning agent in their lives. One look at the ruddy vibrant health of the men returned from camps as compared with the youth one sees about the city tells the whole story.

Obviously we may not move youth in mass to camps nor introduce enough open space to take care of them in the city. We may, however, insist on camp life as on school attendance for a few weeks and completely revise our ideas for an adequate supply and proper distribution of city open space.

There is an immense health and disciplinary value in camps for the ages above 12 years and an able corps of leaders will be found in every city who have been struggling to meet this need for years. Camp life is not an isolated activity, it must be considered as a necessary supplement to the recreation system of our overbuilt cities.

Every city in taking stock of its open space will find that no consistent and thorough policy of distribution has ever been followed and while the first job is to correct this situation, the second is equally important namely, to insure that all new development shall be forced to comply with regulations which will override the selfish demands of the land developer.

Someone has established a rule of thumb procedure that the desirable percentage of gross city acreage in public open space is ten per cent. An analysis of a number of cities with this percentage showed up three fallacies. First, that while this might be sufficient under other circumstances the open space was found to be poorly distributed. Very frequently they were located on the boundaries and were therefore not available to the people. School children would need escorts of older people and would not have sufficient time to make the return journey in any case. The expense of a car ride was also a deterrent. Second, that the density of population varied from the crowded condition of 250 to 81 per acre. Obviously the only fair method of measurement is by density and then not by blanket coverage but by districts. Third, that the emphasis has been placed on certain kinds of open space at the expense of others.

Most Canadian cities for example have a sufficient acreage of the large country park, as it is called, from its resemblance

to open country, and a great scarcity of the smaller neighbourhood park which should serve each population district.

There is also a limited supply and poor distribution of local playgrounds. One of the most distressing sights about our cities is the milling throng of children released for a few minutes from the huge school building into a tiny yard seeking play and exercise. The school has been carefully located in the centre of a district to shorten the child's journey. Here also are the facilities for supervision. Obviously this is the place for the local playground with apparatus and room for organized games, and yet with few exceptions is this the case.

The local park similarly should be as carefully placed to be central, safe from traffic hazards and preferably not adjacent to the playground.

Our conception of more open development must be an integral part of all slum clearance schemes. Tremendous gains in space are recovered as all the little waste side and back yards become pooled in the one central open space. The larger the area the more efficiently it serves its purpose for recreation so that it is frequently advisable to add another storey to the building and thus gain more space on the ground. Often the interior of the old block is occupied by garage, lumber or other yards which by their removal not only adds a sizable area but eliminates one of the contributing causes of the slum condition.

On the outskirts of the city where the land is not yet covered with buildings, a comprehensive and balanced plan for development may be imposed and no costly condemnation proceedings will be necessary. Strangely enough these areas in the past have been allowed to expand with little or no regulation of the builders so far as open space is concerned.

In the future no private interests must be allowed to stand in the way of the community's primary rights for an organized, efficient and spacious plan.

Whatever form the new communities will take as a result of sound planning, the proper distribution of the larger units of park and playground is of vital consequence. They will serve as a buffer between towns and if they follow a radial pattern running in long fingers out and between the built-up sections they not only serve these most efficiently but prevent housing from assuming its most awful form—an endless sea of roof tops. No other feature of our city building in modern times is so expressive of our failure to meet the daily needs of the people for outdoor exercise, relaxation and pleasant environment.

Our gravest error in the past has been due to the casual manner in which we have acquired our open space. They have been the "leftovers", the waste and the tax-avoiding gift. As a result they are misfits and too often in their dejected appearance they are a silent witness of our apologetic attitude. More leisure time and more attention to the needs of the people which they may not satisfy themselves will force governing bodies to adopt a more positive policy where the general welfare of the people is so much involved.

ENGLAND AFTER THE WAR

By BARBARA CADBURY

It seems strange that in serious English minds and talk today housing and reconstruction should be second only to winning the war. This might at first seem unrealistic, with the Germans only twenty-five miles away. But it is the minds most realistic and determined about winning the war that are the most enthusiastic. And the war itself is clearing some of the ground for us; physically, as in Coventry, where the Nazis knocked down in a night property which the City Architect had striven for years to be allowed to clear away, and politically by putting public good before private rights in such matters as community control of the land. In the space between the wars, three and three-quarter million houses were built in England, and we did not build enough. We are already short, therefore, by three years' normal construction. We are short by the homes the Nazis have demolished and by those which are obsolete because they were designed for a class of great wealth and many servants or for a class of poverty and scant decencies. One class has already ceased to exist and the other is fiercely determined to do the same. So that when peace comes there will be a great scramble for somewhere to live. Next to shortage of food, shortage of shelter is the most irritating a man can be asked to endure, and a government which failed to provide returning soldiers with a reasonably adequate solution would be asking for unpleasantness. It will be a big national problem, and must be tackled in a national way, by the Government, and they will have to retain their full war-time control of priorities of materials, and if they are to plan the land they must obviously control it; not necessarily nationalise it, but control its use, as the War Office, the County Agricultural Committees and other instruments of the Government do in war-time. It will not of course be possible for all this building to be undertaken by private speculative builders. In England it has long been realised that it is not possible for private builders and landlords to make a profit out of our lower-income groups' housing. These have either been housed shamefully in slums, or by the municipal authorities. The building industry in England, a reactionary and inefficient one of many small units, has fortunately been dispersed by the war and it is hoped that after the war it will be reorganised as a public service and that much of the reconstruction programme will be carried out by "direct labour". Private builders usually build to sell, and therefore like to build only readily marketable types, without regard for the varying needs of individuals. Home-ownership is not considered in England an efficient nor desirable way of solving the nation's housing.

I have just received a copy of the evidence submitted by the Stepney Reconstruction Group to the Ministry of Health Central Housing Advisory Committee Subcommittee on Design of Dwellings. It is typical of the work and thought that is

being devoted to housing by serious people of all classes all over England. Stepney is a large East End London Borough, the most densely crowded of all the slums, near the docks, industrialised, and a heavy sufferer in the Blitz. The general miseries of war are greatly concentrated there. The members of the Group begin by explaining that they have all lived and worked in the East End for a number of years. They are not academically interested in "housing", but know how they, their friends and relations would like (and expect) to live after the war. Starting from the human being and his needs, rather than from a plan in an office into which human beings must fit, they say that they would like the following types of accommodation, to cover what they call "The Seven Ages of Man":—One-roomed dwellings, with bathroom, toilet and kitchen alcove for bachelor girl or boy workers, at present living in lodgings and rooming houses; small two-bedroomed homes for newly-weds until just after the arrival of the first baby; married homes for those with growing families, with three or more bedrooms, play-space, pram-space, light washing accommodation (they have communal laundries for the family wash in Stepney already); a slightly different type of dwelling, with emphasis on the needs of adolescents rather than young children for those whose children have left school and gone to work. When the children finally leave home they imagine the active parents returning to a home similar to that suggested for the newly-marrieds. Then they want homes for old-aged couples (and these will be an increasing proportion of the population in countries with a falling birth-rate). These should not be segregated from the community as that is one of the terrors of old age, but should be ground floor, with no steps, and all shelves and appliances waist high; and finally the independent dwelling unit, even though in a hostel for convenience of service, for the single aged person.

In their fifteen page report the Group give careful attention to the services which each Age needs outside the walls of his house, but which are only a projection of housing, such as nursery schools, youth centre, laundry and open spaces. They have thought each type of house out in detail and have suggestions for letting in the sunshine and keeping out the bed-bugs, both important points in ancient Stepney. They mean to live in these houses themselves. They look forward to running the community services themselves, and after the way they managed their communal shelters in the Blitz, and communally rescued and fed and cheered themselves up they feel well able to do so.

They know what they want, and they and hundreds of other groups have sent up requirements to the Ministry of Health, in the expectation that when the war is over the architects will be told to deliver the goods.

CONTRIBUTORS TO THIS ISSUE

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BARBARA CADBURY is the wife of George W. Cadbury, who is a member of the Bournville Village Trust and the Midland Reconstruction Group. Mrs. Cadbury has been a member of the British Labour Party for sixteen years, and for three years of a London Metropolitan Borough Council. She has always been interested in housing in England, and abroad, and spent some months studying conditions in Russia.

HUMPHREY CARVER is at present a Personnel Selection officer in the Army. He was born in 1902 on the borders of the industrial jungles of Birmingham (England) and the Shakespearian landscape of Warwickshire. He was educated at Rugby School where he was better at cricket than the classics. He studied Political Science at Oxford which, in the search for practical solutions, led him to live in the slums of Bermondsey while studying Architecture at London's famous 'A. A.' School. In still further pursuit of a Utopia he immigrated to Canada in 1930 with only one letter of introduction, which he was too shy to use. (It was to a certain Professor Arthur.) Since then he has worked for a Town Planner, designed some gardens for the bourgeois and some parks for the proletariat, has written a good many articles on Housing and Town Planning, has voted C.C.F. and (ever on the down-hill path) has been on the staff of the University of Toronto School of Architecture. In 1933 he married a daughter of Rev. Dr. C. W. Gordon (known as "Ralph Connor").

A. F. COVENTRY, born in England 1888, B. A. Oxon. 1910. To the staff of the University of Toronto, Department of Biology (now Department of Zoology); there ever since. Member of the Advisory Board of the Survey of the Natural Resources of King Township, 1937. Member of the Guelph Conference of the Conservation of the Natural Resources of Ontario, 1941. Author of various articles on conservation.

GORDON CULHAM, M.L.A., a graduate of Harvard University, Cambridge, Mass., in Landscape Design and Town-Planning is a Past President of the Canadian Society of Landscape Architects. He was engaged for one year in working out the Regional Plan for New York and its Environs. Since returning to Canada, Mr. Culham has been engaged in private practice in Toronto.

H. B. DUNINGTON-GRUBB is a Past President of the Canadian Society of Landscape Architects, graduate of Cornell University. At present he is lecturer on Landscape Design in the University of Toronto School of Architecture. He worked with the Niagara Parks Commission in the development of the Harry Oakes Garden at Niagara Falls, Ontario and also with the Niagara Bridge Commission in the working-out of a modern setting for the new Rainbow Bridge.

ERNEST INGLES is a Canadian by birth having been born in London, Ont., June 1886. He entered the electrical construction industry as a helper and became what is known as a wireman. He became a member of the International Brotherhood of Electrical Workers in 1905 and first accepted local office in 1910 and in 1917 was selected as International Vice-President in charge of what is known as District No. 1 which comprises the Dominion of Canada, Newfoundland and Alaska. In 1916-17 he was local organizer for the American Federation of Labor in the London area. He was a member of the Joint Apprenticeship Committee formed by the General Contractors in 1926 and later was a member of the Ontario Apprenticeship Committee and still later the Ontario Apprenticeship Board which administered the Ontario Apprenticeship Act from 1928 until the dissolution of the Board in 1935. In 1935 he went to England as representative of the Canadian Trades Union Movement to the British Trade Union Movement. He is a member of the National Joint Conference Board in the Construction Industry, which is set up to advise the National War Labor Board and the Minister of Labor on employer-employee relations in the construction industry. He is also a member of the Executive of the National Construction Council of Canada and is 2nd Vice-President of that body. He is also Secretary of the Labor Educational Association of Ontario. He is a member of the Board of Directors of Wartime Housing.

DR. F. CYRIL JAMES, Ph.D., D.C.L., Principal and Vice-Chancellor of McGill University, was born in London, England, on the 8th of October, 1903, the son of Frank and Mary Lucy (Brown) James. He was educated at the Grocers' Company's School and at the London School of Economics, receiving the degree of Bachelor of Commerce from the University of London in 1923. From 1921 to 1923 he was a clerk in Barclay's Bank. Under a Sir Ernest Cassel Fellowship, Dr. James came to this continent in 1923, to investigate economic conditions in North America. He received the degree of Master of Arts from the University of Pennsylvania in 1924, and became an Instructor in Finance and Transportation in the Wharton School of Finance and Commerce of that University in 1924. He obtained the degree of Doctor of Philosophy in 1926, and in 1927 was promoted to be Assistant Professor of Finance. He became an Associate Professor in 1933, and a full Professor in 1935. In 1935, also, he was made Chairman of the Graduate Faculty in Social Sciences, and in 1938, Professor of Finance and Economic History. In September, 1939, Dr. James came to McGill University as Director of the School of Commerce to carry out a reorganization of the school. On January 1st, 1940, he became Principal and Vice-Chancellor of the University. He received the LL.D. from Queen's University, and from Ursinus College, and the D.C.L. from the University of Bishop's College. Dr. James was Adviser on Financial Research to the Association of Reserve City Bankers, 1936; Economist of the First National Bank of Chicago from 1937-1938; Executive Vice-President of the Economists' National Committee on Monetary Policy from

1935-37; Chairman of the Executive Committee of the Foreign Policy Association from 1938-39. He is a member of the Economic Advisory Council of the National Industrial Conference Board, New York; a member of the Committee on Financial Research, and Secretary of the Advisory Council on Financial Research of the National Bureau of Economic Research, New York; a member of the American Economic Association, and of the Institute of Marine Engineers, London; of the Canadian Institute of International Affairs, and of the Historical Society of Pennsylvania. He is a Fellow of the Royal Economic Society, London, and a Director of the American Academy of Political and Social Sciences, Philadelphia. He is a member of The Newcomen Society, London and New York; of the Boards of Governors of Financial Federation, Montreal; of Trafalgar School for Girls, Montreal; of McKay Institute, Montreal; of the Royal Victoria Hospital, Montreal; of the Board of Management of the Montreal General Hospital, Montreal; and of the Council on Education of the Province of Quebec. He is Chairman of the Committee on Reconstruction, appointed under Order-in-Council to advise the Dominion Cabinet on post-war problems.

W. J. LeCLAIR is a member of the Engineering Institute of Canada, a member of the Canadian Society of Forest Engineers, a member of the National Advisory Committee on Forestry, a member of the National Construction Council and a member of the Canadian Engineering Standards Association. He is also a member of five Timber Control Advisory Committees. Secretary-Manager of federation of Canadian Lumbermen's Association; White Pine Bureau; Canadian Hardwood Bureau; Canadian Spruce Bureau; Lumber and Timber Association and Managing Editor of Timber of Canada.

ROBERT F. LEGGET, Assistant Professor of Civil Engineering, The University of Toronto; British born, graduate in civil engineering, The University of Liverpool, Master of Engineering 1927; practical experience in Westminster, (London), Scotland, and Canada. Came to Canada early in 1929; now ventures to call himself a Canadian.

ALVAN SHERLOCK MATHERS, B.A.Sc., F.R.A.I.C., R.C.A., born July 16th, 1895 at the Parsonage Aberfoyle, Ontario. Educated at Hagersville Public School, Thorold High School, Chesley High School and the University of Toronto receiving the degree of B.A.Sc. in 1917. After graduation he worked in various offices in New York and in other parts of the U.S. and was with John M. Lyle and Wickson & Gregg in Toronto. Formed two abortive partnerships with Banigan, Mathers & Thompson and Eden Smith & Mathers respectively before forming the present partnership with Eric Haldenby in 1922. He was elected an Associate of the Royal Canadian Academy in 1928 and an Academician in 1937 and in 1938 was elected a Fellow of the Royal Architectural Institute of Canada. From 1935 to 1940 he was a member of the Council of the O.A.A. being its president in 1937 and 1938. At present he is a member of the Council of the R.A.I.C. and the president of the National Construction Council of Canada.

HAROLD F. McDONALD, C.M.G., D.S.O., descendant of a long line of pioneers of the Great North West and Hudson Bay was born at Fort Qu'Appelle, Saskatchewan, and educated at Upper Canada College and McGill University where he received the degree of B.Sc. in Civil Engineering in 1907. After practising his profession in Western Canada he went overseas as a Lieutenant from Winnipeg in August, 1914. Wounded at the second Battle of Ypres he returned to France in September, 1915 on the staff of the Second Canadian Division and lost his left arm on the Somme when Brigade Major of the first Canadian Brigade. Thereafter until the armistice he served in England in charge of the General Staff of the Canadian Forces there,

returning to Canada in 1919 with the rank of Brigadier-General. He holds the D.S.O. (1916); C.M.G. (1917), the order of Ste. Anne of Russia and was mentioned in dispatches. After some years in private business he joined the public service and for the past six years has been Chairman of the Canadian Pension Commission. Following the outbreak of this war he was appointed Chairman of the General Advisory Committee on Demobilization and Rehabilitation which has been instrumental in devising and recommending the practical measures which the Government has adopted for the re-establishment of discharged service personnel. Brigadier-General McDonald is also a member of the General Committee on Reconstruction and a number of other governmental committees concerned with the prosecution of the war and the post-war problems.

JOHN BURNET PARKIN, B. Arch., A.R.I.B.A., honour graduate University of Toronto, 1935. Travelled and worked in Europe, 1935-7; Architectural Department Miners' Welfare Committee (Welfare Buildings); H. M. Office of Works (Post Offices and Telephone Exchanges); Messrs. Howard and Souster (Industrial and Commercial); 1937, Private Practice, Toronto.

GORDON McL. PITTS, M.Sc., B.Arch., F.R.A.I.C., F.R.I.B.A., President, Royal Architectural Institute of Canada. Gordon McL. Pitts was born in Fredericton, N.B., where he received his early education. He graduated from McGill University in 1908, B.Sc., with honours in the Theory of Structure. He served under John Pearson at Ottawa during the construction of the Parliament Buildings and later entered the firm of W. S. Maxwell. For many years he has been a partner in the firm of Maxwell and Pitts. Mr. Pitts is a member of the Council of the E.I.C., Governor of McGill University, and President of the graduate society.

R. M. SMITH, B.A.Sc., is Deputy Minister of Highways for the Province of Ontario. Born in Kingston, Ontario, he attended the Kingston Collegiate and Queen's University, where he obtained his degree in Civil Engineering. Mr. Smith joined the staff of the Ontario Department of Mines in 1911 and spent three years on geological survey work in Northern Ontario. He was transferred to the Department of Public Works in 1914 and in 1916, when branches were separated, to the newly formed Department of Highways. He was appointed Chief Engineer of Highways in 1925 and Deputy Minister in 1927. When the Department of Northern Development was amalgamated with the Department of Highways in 1935, Mr. Smith became Deputy Minister of the combined departments.

ALFRED WARD was born in London, England, but not within the sound of Bow Bells. After finishing Public School was apprenticed to the carpentry trade with perhaps the largest firm in the British Empire; attended Technical School evenings, and came to Canada in 1911, settling in Toronto. Attended Workers' Educational Association Classes, studying Economics for two seasons under Professors McIver then later Kemp and Cassidy. Has been continuously a member of his Trade Union, and is at present Business Agent and Secretary Toronto and District Council of Carpenters; President of the Toronto Building Trades Council, and a delegate to the Toronto Trades and Labour Council. More recently was appointed by the United Brotherhood of Carpenters and Joiners of America as a Head Office delegate to the Trades and Labour Congress of Canada Convention held this year in Winnipeg, Manitoba. Has always been interested in the welfare of the people, years ago being on Committee that was instrumental in having a Branch Public Library established in Earls Court, Toronto.

PROVINCIAL PAGE

ALBERTA

There has recently been erected at the Edmonton airport an administration building housing the management and control of both the Trans-Canada and the Canadian Pacific Airways. The building, designed by the city architect, Mr. John Martland, is of two storeys about 200 feet long by 36 feet deep. It is of straightforward, business-like and unpretentious design, built of wood frame, stuccoed on the exterior. For the arrival and despatch of the many commercial airplanes, space and equipment are provided for meteorological observation and forecasting. The regional control room with its power room rises in the centre above the general height. This comparatively modest building serves the most important airport in Canada with probably no rival on the American continent for the amount and variety of traffic handled. The passenger traffic, though secondary, is very considerable and is well provided for. Continuous traffic is maintained with many distant points in the United States. It serves also a region extending for 1,500 miles northward to the mouth of the Mackenzie River. Vast quantities of furs and fish from the northern lakes are brought in as well as radium-bearing ores and other minerals. To the mining and other industries many essential supplies are sent out by air including often very heavy machinery. Incidentally, the planes do a considerable amount of ambulance service. The port has a record as regards freedom from accident which speaks well for the skill of its airmen and the competence of its management.

As elsewhere throughout the Dominion, the pinch of shortage of materials and labour is being more and more felt in this province. As regards materials the chief shortages at present are in iron pipe and sheet metal. In the cities of Alberta the majority of buildings are heated by natural gas. Government has forbidden laying gas pipe to a house from the main in the lane in rear. Most of the buildings outside the central districts of cities are of frame, and therefore sheet metal is in considerable demand for protection from fire around heating installations. A shortage of nails is also threatened. About 500 lbs. of nails go into the construction of a \$5,000 residence of frame construction.

Through the Chambers of Commerce enquiry is being made into the quantity of stocks of building materials held by building contractors. The call for extra help on farms for a prospectively abundant harvest is likely still farther to reduce the labour market.

—Cecil S. Burgess.

ONTARIO

The general outlook for the architect and builder is anything but encouraging, with a serious slump in permits making itself felt over the whole province, in spite of the projected palace for the Dionne family and the entry of Wartime Housing Ltd. into the field of permanent building. Nor is there anything particularly encouraging in the sum set aside for the National Housing Act, when it is considered that it represents a total of 1,600 houses spread over the entire country — a number which would do no more than meet the immediate needs of Toronto alone. Here and there, however, an office is busy, while at the same time the younger assistants drift off into the forces, leaving their seniors to discover afresh that rubbing out can be a real chore and telephone calls a pest. The building trades themselves have also, in spite of the slump, been feeling the drain upon personnel; and have set up a committee, representative of contractors and employees, to frame proposals for the revival of apprentice training.

Ottawa, of course, bristles with temporary office buildings in various stages of construction; even the grounds of the Dominion Experimental Farm having been invaded by them, with disastrous results to its rural peace and quiet and to the comfort of those who live within hearing of the blasting and hammering. (It is to be hoped that in the building codes of the future wooden buildings will be limited by some formula expressing a noise-level: distance ratio, on the principle that it is better to risk having a few hundred people burned alive than to drive several thousand into the mad-house). These buildings are neat enough externally, but anything but lavish inside; although one does hear of such things as 3,000-watt heaters in executive offices—notwithstanding our much-publicized power shortage. But then, one must be fair; Ottawa is by no means itself just now. It is crowded to bursting-point with people from all over the country, and throbbing with a high-pressure activity which — dare one say it — is entirely foreign to its real nature, and quite likely to be productive of surprises from time to time. One thing, however, remains unchanged and reassuring — the hospitality of the Ottawa architects.

It is seldom indeed that the press regards architecture as "news"; which makes those rare occasions when it does so all the more welcome. One of these is an editorial in the Brockville Times-Recorder on the centenary of the Court House there. The building was designed by John G. Howard, but "was not improved in appearance by subsequent additions, the planning of which seems to have been entrusted to inferior architects." There is a good deal of interesting material in the editorial; but its real importance lies in the fact that the writer's sense of values is a genuine asset to the community he serves.

—Gladstone Evans.

NOTICE

Under date of September 10th, the members of the profession throughout Canada will have received a letter from the President explaining further proposals to make the "refresher courses" in structural engineering available to those who are qualified and in a position to take advantage of the opportunity offered by the Dominion Government.

In order that arrangements may be made that will accommodate the largest possible number of our members, a questionnaire has been issued with the letter. All architects interested in such a refresher course are requested to fill in and return their questionnaire as soon as possible and not later than October 7th. If you have any suggestions to offer, please send them in on the back of your questionnaire.

THE NICHOLAS SPARKS HOUSE, OTTAWA

All architects interested in our early architecture and in the development of Ottawa will learn with pleasure that the Prime Minister intervened when the destruction of the old Sparks House was threatened. The house is saved, and, while it will not be restored for some time, there is much satisfaction in knowing that it starts off a new century of existence under the happiest auspices.

E. R. A.