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Special Articles

- The Minimum Wage.
By W. W. SWANSON.
- National Research.
By W. B. CAMPBELL.
- Conditions in the West.
By E. CORA HIND.

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The Contribution of the Colleges

WITHIN a few weeks' time the colleges of the country will re-open. For the most part they are but a shadow of their former selves, due to the fact that our centres of learning have made splendid contributions to the cause of freedom.

In the early days of the war, when the call went forth for recruits, the readiest response came from the college men, the lads whose patriotism and sense of responsibility made them go out like young Crusaders. Even since conscription went into force the average college man being of military age has joined the colors in large numbers.

From the University of Toronto over 4,000 graduates and undergraduates have gone overseas, from Old McGill some 2,500 have gone to swell the ranks of the "Princess Pats," the Flying Forces, the Tank Battalions, the Heavy Siege Batteries and other military organizations; from Queens, Dalhousie and the other colleges throughout the country similar responses have been made. In addition to that, the faculties of the various colleges have been seriously depleted. The Allies have demanded the best, with a result that many of our doctors, dentists, chemists, scientists and other leaders in college activities have gone overseas to do their bit.

Canada owes an inestimable debt to her college men. While not depreciating in any sense the splendid response of the laboring men, the artisan, the clerk, or the farm lad it is generally assumed that our colleges contain the flower of our young manhood, and they have given themselves with out let or hindrance. We who remain behind should at least see that the colleges receive adequate support, while the bulk of the students are overseas doing their bit.

In the days to come it is to the colleges that we must look for leadership if the Hun is to be ousted from his former place in the scientific world. In college laboratories and research work, must come the solution of the economic and scientific problems now associated with German domination. All honor to the college men for the part they have played in the titanic struggle.

The Thrift Campaign

THE Dominion Government is now conducting a campaign for the encouragement of thrift among the people of the country. It is somewhat late in the day to start such a campaign, but doubtless the Government have gone on the assumption that "it is better late than never." Certainly there is need of the exercise of thrift among the Canadian people.

The war has brought prosperity to a great many people, but, at the same time has enhanced prices to a very marked extent. In a very large measure the increased prosperity is an artificial one, much as if a grave digger and an undertaker were to come together in the midst of a pestilence, rub their hands and exclaim, that "business is good." Munition workers, textile operators and others catering to the war needs of the nation have prospered exceedingly, but in a measure it is through the flesh and blood of our own people.

This war prosperity cannot last. It is very probable that manufacturers will profit by the experience they have gained through the years of war and will turn to new markets and to new activities, but there must come a period of re-adjustment which will try the resources of the ordinary worker. It is therefore most imperative that the people of the country should be educated in the principles of thrift. A dollar saved and profitably invested is a silver bullet to help defeat the Hun, while a dollar wasted is that much of a contribution to the cause of the Huns.

Thrift has not always been a popular doctrine to preach in Canada. A few years before the war, when we were all living in a fool's paradise and wasting our substance like prodigal sons, a fearless and progressive newspaper in a certain city in Canada started a series of articles on thrift. The series had only got properly started when the advertising manager of a rival paper went around to all the merchants and pointed out the dangerous propaganda being preached by its contemporary; telling the merchants that the people were being educated to hoard their money in the banks, and not spend it. The opposition to the thrift campaign was so pronounced that the newspaper was reluctantly forced to discontinue it. We would wonder if that paper who decried the thrift propaganda of a few years ago will take the Government's thrift advertising in the present campaign?

We wish the thrift campaign every success. It is something that needed preaching and practising in Canada, but at no time more than during the present titanic struggle.

Roosevelt on Peace Terms

COLONEL Theodore Roosevelt is determined that Germany shall pay the extreme penalty for her crimes against civilization. In a recent speech in New York he reiterated his former assertions that Germany must be forced to make good the losses she has caused to the nations of Europe.

Among the many things demanded of Germany by the former United States' president were, the restoration of Belgium, the return of Alsace-Lorraine to France, the re-building

of Serbia and Roumania, the giving back of the Italian provinces along the Adriatic to Italy and the return of Poland to the Poles. In addition to that, he demands that the colonies taken from Germany by Great Britain and Japan shall be retained by those two countries.

Roosevelt is nothing, if not thorough, and his whole-hearted denunciation of Germany and her methods, together with a plea that she should pay to the last farthing, will have a tremendous weight, not only in the United States, but in the other allied countries.

There has always been a fear, especially in the minds of those who know Great Britain best, that when the final peace terms are laid on the table she will be easy. Already, there is a section in Great Britain who demand that Germany shall not be forced to submit to a humiliating peace, but think that she should receive generous treatment when hostilities cease. It will be unfortunate if this false humanitarian view receives wide acceptance. It would be just as reasonable to allow the burglar who breaks into a home, kills the inhabitants and carries off the goods to be let go and told that "He is naughty, and that he must not do it again."

Germany must be made to suffer for the terrible wrongs which she has caused during the past four years. She must be made to realize that warfare does not pay. In the past half century she waged a successful war against Austria. She also engaged in a conflict and took from little Denmark two of her richest provinces. Finally, the Franco-Prussian war of 1870-71, resulted in Germany obtaining Alsace-Lorraine, the best mining area of France, and a huge indemnity. Up to the present time war has paid Germany, this must be the exception to the general rule, or else the world will never be made safe for democracy.

John Barleycorn

JOHN BARLEYCORN is on the defensive, and in a few months' time "booze" will be a curiosity north of the Rio Grande. According to the latest proclamation in the United States no more beer can be brewed after the first of December, while movements are on foot in Congress by which the entire United States will be bone dry by July 1st. In Canada, Quebec Province becomes dry on May 1st, this being the last stronghold of the demon-
rum. The apparent ease with which prohibition has been brought about on this continent is due almost entirely to the world war. It is, of course, true that a great educational campaign was waged for many years by the W.C.T.U. and various other temperance organizations, so that the public were being prepared for the total prohibition of the liquor traffic. It remained, however, for the upheaval caused by the war to bring about quick and decisive action. In brief, it was a survival of the fittest. The question arose as to the relative importance of bread or booze; the United States had not grain enough to continue to use it for both alcoholic liquors and for the feeding of their own country and the allied nations. They decided that bread was more valuable than booze, and acted accordingly. Further, the railroads found that the coal carried to the breweries and distilleries was occupying valuable space, while the coal mines themselves were unable to produce sufficient. In brief, from an economic standpoint, it was found that John Barleycorn was non-essential and so he is being ruled out. It is doubtful if he will ever come back.

Mr. Hughes

MR. W. M. HUGHES, the Premier of the Commonwealth of Australia, has been taking a part in the public affairs of the mother country which has brought out much commendation in some quarters, and much severe criticism on the other side. Perhaps the fact that such division of opinion exists is in itself evidence that he has not been quite discreet. Mr. Hughes is a man of marked ability and an eloquent speaker. He has spoken with much vigor on the importance of Great Britain retaining possession of the German colonies captured during the war. There is no doubt that his persistent presentation of his contention in that respect has had much effect in moulding British public opinion. British statesmen who a little while ago felt bound to treat the question with much reserve, have of late been moved to speak much more freely and decisively. British public opinion on that subject has been educated by Mr. Hughes chiefly, and there is now a pretty general acceptance of a view which was at an earlier stage regarded with doubt.

On some other questions, Mr. Hughes has had the misfortune to advance views which are hostile to a large part of the British people. In the discussion of Empire affairs he has made himself the champion of a Protectionist policy which, while it may be in harmony with opinion in his Commonwealth—though this is a disputed point—is distinctly at variance with the principles held by the great majority of the people of the United Kingdom in times past, and as to which there is no evidence that the people have changed their minds. How far Mr. Hughes' opinions are justifiable, in their place, may be a question on which there will be difference of opinion. The strongest adverse criticism that appears does not enter into the merits of the policy advocated by Mr. Hughes, but takes the ground that it is unseemly that a colonial visitor should undertake to instruct the people of the United Kingdom in a matter on which most of them are known to hold very decided opinions against him. The Canadian Premier may hold opinions on trade questions not materially different from those of the Australian, but it is noted to the credit of Sir Robert Borden that he refrained from following the example set by Mr. Hughes in discussing this very controversial question.

Tax Free Bonds

LIKE the ghost in the banquet scene in "Hamlet" the bogey of tax free bonds will not down. Despite many protests on the part of the press of the country, from industrial corporations, labor organizations and in general from the small business man, Sir Thomas White, Minister of Finance, persists in making the forthcoming Victory Loan tax free.

This will be the fifth loan in Canada free of federal taxes, and if it amounts to \$500,000,000 as reports say, it will mean that there will be in the neighbourhood of \$1,250,000,000 of securities issued in the country on which the government collects no taxes. It is a very large sum of money to be free of taxation, and will not only mean loss of revenue to the government, but will also prove a source of trouble in many other ways.

The Victory Bonds are more and more finding their way into the hands of wealthy individuals, who regard them not only as a good investment, but also as a haven of refuge from the omnivorous tax collector. It is manifestly unfair to the small investor who can only sub-

scribe for a few hundred dollars' worth of bonds to allow the huge holdings of our wealthy citizens to go tax free. It is also unfair to industrial corporations who are forced to go into the markets and borrow money to have to compete with tax exempt bonds. There are many other objections to the principle of issuing tax free bonds, but doubtless the Minister of Finance has had these enumerated to him in great detail. It will be better if he were to do the courageous thing, even at this late date, and tax the bonds of the forthcoming issue. We have no fear that the people of the country will fail to subscribe. They have shown themselves to be patriotic, and it would be well if Sir Thomas White were to trust them more.

For Americans Only

AMERICANS between the ages of eighteen and forty-five who have not already registered under the original draft conditions come under the provision of the new draft. With the exception of those who have previously registered these men must register on the 12th September or within thirty days after that date, otherwise they will come under the Military Service Act of Canada. The time limit of registration for men up to 31 years of age, coming under the previous order, is September 28th, after which they are subject to the M. S. A. It is necessary for such Americans as come under the Draft Law to appear before an American consular officer to register. No other provision for registration has been made, as it is necessary for a United States consular official to examine and approve the registrant's proof of citizenship. Every requirement from beginning to end can be met in Canada, except obtaining a uniform by those who may later be called. Exemption claims may be sworn to and medical examination can be had by arrangement with a Consular officer. One may register as from any place in the United States that he wishes to name as his permanent residence there.

Bring your birth certificate or other evidence of American citizenship with you.

A dispatch from Washington states that men above 18 and up to 36 years of age will be drafted first.

The Day of Small Things

DURING the present year there were over 5,000,000 lots cultivated in the United States and produce to the value of over \$25,000,000 was harvested. In Canada it is estimated that \$50,000,000 worth of produce was grown in garden lots in this country. On the island of Montreal alone 20,000 lots produced \$1,000,000 worth of vegetables. In England, Hon. Mr. Prothero, President of the Board of Agriculture, stated a few days ago that were it not for the garden crops of Great Britain, that country would have been starved into submission long ago.

This is the day of small things. The cultivation of a single lot may not mean a great increase in the wealth of the nation, but the cultivation of tens-of-thousands of plots means a big increase in our national wealth. The consumption of large quantities of vegetables is not only good for the health of the people, but it enables them to do without meat, and thereby assist the allied cause in another sense. It is to be hoped that when peace comes, the people who found profit and pleasure in the cultivation of a garden lot will continue the practice. It is one of the best ways of encouraging thrift.

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The Minimum Wage

Leading economists of this continent and Great Britain are unfriendly to the principle underlying the minimum wage

By W. W. SWANSON.

Symptoms of labor unrest appear everywhere in the industrial life of Canada and the United States, as well as in Europe. This is due in part to prevalent high prices, and in part to the monopoly position in which labor fortuitously finds itself. Everyone will admit, both capitalists and laborers alike, that the strike is wasteful and rarely permanently settles the question at issue. After the war the stabilization of industry and the prevention of unemployment will be the two big outstanding problems that the community must face. It is important, therefore, that the closest and keenest study be given to the industrial problems of Canada here and now.

Too frequently in the past business men, backed by the economists of the day, have defended practices that have long since been thrown upon the rust heap. Most of us know that child and women labor, carried almost to the point of slavery, was justified by the capitalist class a few generations since. After legislation had been pushed through parliament controlling working conditions for the weaker element in the community, employers generally acquiesced in the changes effected and accepted the result secured. Beyond peradventure, such legislation has made for the betterment of both parties to the wages contract. To-day the economic life of the nations is in a state of flux, and the war has compelled employer and employee alike to accept a settlement of hours of work and wages that would not have been tolerated in days of peace. The State, for example, has thrown aside the conception so long held by economists that, to effect the best results, labor must be left mobile and free to move where it pleases. Not only is labor in the United Kingdom allocated to certain types of work, but the hours of work, the profits on the capital employed and many other phases of the nation's industrial life have come under strict supervision. Notably, one of the most degraded classes of labor in Great Britain, agricultural workers, has been suddenly lifted to a relatively high standard of living by the instituting of a minimum wage. It is safe to say that labor will not accept the old economic theory of all things work together for good in the best possible of all economic worlds, as long as free competition obtains. We have learned that free competition may mean much or little according to the way it is applied; and that it affords poorest results in determining the relation of labor and capital.

As already stated, the strike is an outworn instrument, wasteful and vicious in its operation in industry. The use of the strike during these hard and bitter days of war when our soldiers are giving all that they have that the economic and cultural content of Anglo-Saxon civilization may be protected, is little short of treachery. Other methods are imperatively essential for co-ordinating the economic activities of the Dominion. After the war, when there will be grave danger of unemployments in any event, unless the most careful consideration is given to methods of prevention now, there is likely to be much economic distress and misery. Less than ever can the strike be accepted then as a way of escape from hard industrial conditions.

The strike has been used as a means of raising the standard of living from time immemorial, although many imagine that it is characteristic only of our generation. The relations of labor and capital have always been difficult to adjust; but, however great be the progress achieved in politics and in the extension of democracy, the war will have been fought in vain unless it brings real solidarity to our country. There is no room in the Dominion for the individual who, in this hour of peril and of trial, or in the days of peace to come, will batten upon the prejudices of the ignorant and seek to make profit by turning class against class. Once more let it be said: Unity and solidarity are fundamental in realizing true nationhood and an enlightened citizenship.

The minimum wage has been so largely made use of, both in the United States and Canada, as well as in the United Kingdom, Australasia and elsewhere, during the course of the war, that it merits more than passing scrutiny as a means of achieving industrial peace. True, the leading economists of this continent and Great Britain are unfriendly to the principle underlying the minimum wage; and declare the theory upon which it is based an economic heresy. This is a day, however, in which heresies most remarkably

are becoming sound doctrine, and heterodoxies accepted guides of conduct.

While the standard of living, notwithstanding the great increase in prices, has been materially raised during the war there yet remain industries in which the level of living is such that the primary deficiencies of life—food, clothing, shelter, and essential social expenditures—are not provided for. This was more characteristic, to be sure, of pre-war days, when women and children as well as men were frequently exploited by parasitic employers. Now the orthodox economist justified less-than-living wages on the ground that it was better for women and girls to receive little than nothing at all. Professor Taussig, perhaps the most distinguished economist in the United States, and head of the department of economics in Harvard University, for example, a year or two since defended low wages for women and girls on the ground that if these low wages were not accepted, labor would be unemployed; and that in any event only one in five of such workers had to make her way on her own resources. The other four were members of the family economic unit and thus received part of their support from the home. He argued that an increase in wages would cut off employment from four out of five such workers; and that it was better that one should suffer rather than that unemployment should spread through the whole field of industry. Admitting that conditions were bad, the minimum wage, by causing unemployment, would make them very much worse.

The assumption underlying this reasoning is that free competition and perfect mobility apply to labor just as much as to gold, wheat, cotton and other commodities. Further, in the long run, free competition and flexibility of supply and demand reduce prices to the cost of production, thus protecting the consumer; and at the same time furnish most employment to labor. But as everyone knows the war has made it imperatively necessary to fix the prices of wheat and other commodities in order that a supply commensurate with the demand might be forthcoming, and that the costs of production might be met. We are not so certain of the virtue of free competition as in pre-war days. And if it is essential to determine prices without respect to market conditions for such commodities as wheat and steel, how much more essential it should be to assure such a return to labor as — to put it on the lowest material basis — will cover its cost of production. Carlyle it was who laid sardonic emphasis upon the fact that a horse is often far more valuable to society than a human being — the former ultimately going to the glue factory while the latter is frequently scrapped in the height of his powers.

To a new country such as is Canada, manhood is the most precious commodity. Capital is essential to our economic development, but without population a pioneer country can make no progress. So truly was this recognized in the days before the war that no effort was spared to bring immigrants from Europe, especially to the West. And after the war it will be found that an expanding West, made possible by a growing population, will be the best assurance for industrial stability and the profitable employment of capital. Strange to say, however, although the need of population was keenly felt, there was little or no attempt before the outbreak of hostilities to make that population self-reliant, virile

and efficient, by a concerted effort to maintain the standard of living at a high level.

Labor, of course, unlike most other commodities, is perishable; and is lost daily forever to the worker unless it can be daily sold. Moreover, labor is not mobile, moving rapidly from place to place to follow the lure of high wages. Experience proves that most women and girls, and the majority of men, prefer to stay in the community in which they have established themselves and made friends, and to maintain the family connection, rather than strike out elsewhere for better living conditions. But even if that were not true, if wages in the several trades and employments were standardized by perfect mobility of labor and free competition, the problem of providing a minimum standard of living sufficient to cover a reasonable measure of comfort as well as the deficiencies of life would not have been solved. Even now, with an artificial monopoly of labor in certain of the industrial occupations the standard of living for many workers, both in the United States and Canada, is too low.

It is argued that if the practice became general, as it has become general in certain of the American States and in Australia, of providing a minimum wage for workers, men as well as women, unemployment would result. It is assumed that under free competition prices of commodities, in the long run, must sink to the level of the cost of production; and that if some employers were forced by law or otherwise to pay their employees more, they would be driven out of business. But it is evident that such industries as the Standard Oil Company do not necessarily determine selling prices by the costs of production. Rather, they apply the principle of charging what the traffic will bear, for the commodities they sell, and of paying the market price for labor. It is equally obvious that if, through negotiation or legal enactment or some other method, the wages of labor were raised, prices of commodities to consumers might well remain as before. The added labor cost would be shared between manufacturer, wholesaler and retailer. If industries are charging what the traffic will bear, it is fairly certain that an increase in the cost of production will not, because it cannot, be passed on to the consumer. A slight increase in price of products, in these particular industries, would be more than offset by the curtailment of the demand.

In many instances a 2 per cent increase in wages may mean an increase of only 5 per cent in manufacturing costs. That increase, as already remarked, may be shared by the various distributors through whose hands the commodity passes, without effecting any great change in profit. In any event higher wages mean higher purchasing power, as well as increased efficiency of the labor employed. In this way increased costs of production would be neutralized, partly by their absorption by a community better able to pay high prices, and partly by the elimination of cost through increased labor efficiency.

Whatever the solution of the labor problem may be — and there is not one but many solutions — it is safe to say that Canada cannot make the progress that ought to be made if there is constant appeal on the part of labor to sabotage, malingering and the general strike. Labor has an imperative duty to itself and the State; but capital has obligations no less essential to the permanent welfare of our social life. If employers would give one half the attention to the labor question they at present pay to overhead costs, prices of materials, machinery and equipment, it is certain they would gain much thereby. The labor turnover — hiring and firing — is not only wasteful but exceedingly expensive to any industry. A contented labor force, efficient and alert, is industry's biggest asset.

TO SETTLE FISHERY DISPUTES.

Disputes in connection with the fishing industry affecting the United States and Canada are being settled at the meetings of the American-Canadian Fisheries Conference being held at Lake Champlain. The principal matters under discussion are the requirements of Canadian fishing vessels passing through territorial waters of Alaska, fishing by United States lobster smacks off the Canadian coasts, protection of Lake Champlain fisheries, the protection of the Pacific halibut industries, the rehabilitation of the sock-eye salmon fisheries of the Fraser River, and the privilege accorded fishing vessels of each country in the ports of the other. Some of the questions have been pending since the time of the American

revolution. As far as possible meetings have been held where the controversies have arisen and where witnesses could be secured most readily. Sessions have been held in Boston, Gloucester, St. John, N.B., Seattle, Prince Rupert, B.C., Ketchikan, Alaska, Vancouver and New Westminster.

The members of the conference are Sir Douglas Hazen, Chief Justice of New Brunswick; George J. Desbarats, Deputy Minister of Fisheries, and William A. Found, Superintendent of Fisheries of Canada, representing the interests of this country, while the American members are Secretary of Commerce W. C. Redfield, Assistant Secretary of Commerce Edwin F. Sweet and Commissioner of Fisheries Dr. Hugh M. Smith. The conference has been marked by extreme frankness on both sides.

Conditions in the West

By E. CORA HIND.

The weather for the past week has been rather uncertain. The 5th, 6th and 7th were delightful days of almost summer heat. On the night of the 7th, the weather turned very cold and wet with heavy frosts on the nights of the 8th, 9th and 10th, and quite heavy rains on the 10th at many points throughout the West which stopped threshing. The weather is now clear and bright and threshing will be resumed today. It is not thought that the frost would lessen the yield of wheat, though in some districts, it will reduce the grade of some fields, but late oats and late barley have suffered considerably from these frosts, but to what extent will not be known until these grains are threshed. Threshing returns from wheat are exceptionally gratifying. In almost every case reports of yields are higher than had been anticipated. During the week a statement of acreage seeded was issued by the Provincial and Dominion governments jointly, and in this new statement, the acreage in wheat for the Province of Manitoba is materially increased, so much so that it would indicate nearly an additional 6,000,000 bushels over and above the recent estimate. In Saskatchewan, however, the wheat acreage is 102,000 acres less than originally reported. The Provincial Government of Saskatchewan are now estimating the yield at 10.8, which on the new acreage would give them 98,000,000. No fresh figures have so far been published for Alberta, but the publicity commissioner of that province is claiming very much higher yields than anybody else has been able to discover, and everyone will sincerely hope that his estimate is the correct one.

During the week the Winnipeg Grain Exchange held its annual meeting, and the retiring president, W. R. Bawlf took the opportunity to set before the public the condition in which the grain trade has suffered during the past year. Everything has been practically controlled by the Wheat Export Company and as this whole question of grain handling is of such vital importance to Canada, I am quoting a couple of paragraphs from the address of Mr. Bawlf.

"The marketing of wheat during the past year was controlled to some extent by the Canadian Government through the board of grain supervisors. I wish particularly to remind you that the power given to the board of grain supervisors was a limited power. The board could fix the price of wheat, and, in order to make the price effective, it could commandeer wheat. It could also provide for carrying charges, but it could do very little more. If you compare the powers of the board with those vested in the corresponding body in the United States, you will appreciate what I mean. The United States authorities could negotiate with the representatives of the allied governments; could specify the place at which the allied governments should accept delivery of the wheat; could purchase wheat and sell it to the agents of the allied governments, or to the mills, and could determine all the conditions of such delivery. In other words, when the allied governments decided to create an agency for the purchase of grain in the United States, the United States Government decided to reply by creating an agency supported by the United States Government to negotiate with the agents for the allies. They took this step on the simple ground that if the allied peoples were to buy through a government body, the American producers and dealers should be able to sell through a government body, and in this way, they could properly protect and safeguard American interests. An individual is at a disadvantage in negotiating with a government. Individuals in the United States would have been at a disadvantage in negotiating with a body that represented Great Britain, France and Italy. Consequently, the United States Government interposed a grain corporation and the representatives of the Allied Governments had to deal or negotiate with the representatives of the American Government, and they had to negotiate not merely about the price of the grain, but about everything connected with the marketing of the grain.

"In the United States, therefore, there was an United States Government body which controlled the marketing of all grains and grain products in the United States. That corporation can buy grain if necessary, but one of its main objects is undoubtedly to negotiate with the Wheat Export Company and thereby arrange for the export of grain and grain products. In the United States

therefore, dealers, millers and all connected with the marketing of grain are not compelled to accept the control of any commission or board sitting in London. In Canada, on the other hand, apart from the fixing of the price by the board of grain supervisors and from such arrangements as are made necessary by the fixing of the price, there was, during the past year, no body competent to perform the functions performed by the United States corporation. The result is that apart from the fixing of the price, the control of the marketing of Canadian grain was not in Canadian hands. It was in the hands of the Wheat Export Company, acting under instructions received from either the British royal commission or some other body in England.

"This led to some rather developments during the past year. Through the winter months, it became practically impossible for any shipper other than the Wheat Export Company, to get a car for the hauling of wheat east, all-rail. Just how this situation arose, it is difficult to say, but the result of it was not hard to understand. The result was the Canadian firms, who had been in the business of shipping and forwarding grain for many years, could no longer ship a carload of Canadian wheat to a Canadian mill, east of the Great Lakes, and this domestic business fell into the hands of the company representing the Allied Governments."

The recent order-in-council turning over the handling of the grain to the Board of Grain Supervisors appeared to put the whole matter on a more satisfactory basis, but apparently the Wheat Export Company and the shipping interests are violently opposed to the new control, and some members of the Grain Exchange and the chairman of the Board of Grain Supervisors have been hurriedly summoned to Ottawa for further discussion, and are in session at Ottawa at the present writing. One thing stands out very clearly and that is, that if any industry in the East had been interfered with to the same extent as the grain trade has been interfered with in the West, there would have been something to do long before this. It is beginning to dawn upon many people that Canada is not acting wisely at the present time. The desire to do their part in the war and to be patriotic has been allowed to run, in some directions at least, to extremes. Great Britain herself, and the United States are both carefully safeguard-

ing their industries, in order to be prepared to meet conditions following the war. Canada alone, of all the allied nations, has really done nothing along this line. Of course, a very serious mistake was made in the early days of the war in allowing enormous amounts of Canadian money to go into the United States to establish various war industries. Now, when Canada wants money, she has to borrow it from the United States, and our credit balance is on the wrong side. It is the old story of the borrower being servant to the lender, and to-day Canada is in a very undesirable position with regard to her industries, and in none is she worse placed than in the handling of her grain. It is to be hoped that the conference at Ottawa will not lead to the entire grain trade being handed over once more to the Wheat Export Company. Surely if the United States can control her domestic distribution of grain, Canada should be allowed to do so also.

The West is at last beginning to be stirred up to action in the matter of undesirable immigration from the United States, and protests are coming thick and fast on the subject. Most of this class have been told in the United States that they must either go to war or get out. During the past six months hundreds of these people have been admitted to Canada, and in the case of at least one colony, have been granted military exemption. It seems incredible that this could happen, but it has happened, and the colony is located quite close to Winnipeg. They are not Mennonites, but are French people holding somewhat similar views on the subject of war. A very large percentage of these immigrants are not only undesirable from the standpoint of their peculiar beliefs, but are undesirable from a standpoint of physical condition. Whatever is done now will be largely in the nature of "locking the door after the horse has been stolen," but it will be better to put up the bars than not to put them up at all.

Another matter which will be exceedingly difficult to deal with, but nevertheless, should receive immediate attention is that of the people from alien enemy countries being allowed to buy large pieces of land in the Canadian West. These men are nearly all naturalized, but they are also the men whom the government felt justified in depriving of their vote during last election, yet they are buying enormous areas of land while our own men are fighting in the trenches. The prices paid for some of this land would indicate some other desire beyond that of the mere growing of wheat. At one of the sales of school land in Saskatchewan this year as high as \$80.00 an acre was paid for raw prairie. Surely the legal talent of Canada should be able to devise some means whereby men of alien enemy descent could be prevented from securing such an enormous hold on the lands of Canada.

LAST WEEK'S RECORD OF ACTIVE MONTREAL STOCKS.

Sales.	Stocks.	Open.	High.	Low.	Last sale	Net ch'ge	YEAR.	
							High.	Low.
530	Ames-Holden pfd.	68	68	67	67	-2	72½	47
121	Asbestos	28	28	26	26	+1	28	15
251	do. pfd.	56	58	56	58	+2	58	45
1,705	Brazilian	43¾	43¾	42¾	43¾	-½	46½	32
1,578	Brompton	60	60	59	59½	-½	60	41¾
580	Can. Car. pfd.	87	87	83½	84	-4	92	49½
366	Can. Cement	67	67	66¼	66¾	-1¼	69½	57
144	do. pfd.	94	94	94	94	unch.	94	90
916	Can. Forgings	205	213	205	208	+3	213	150
605	Can. Steamship	45	45½	44¾	44¾	-¾	46¾	39
1,584	do. pfd.	78	78	76¾	77	-1¼	78½	76
222	Con. Smelting	25	25	*25	*25	+½	26	25
826	Dom. Bridge	126	128	126	127½	+2½	128	123
410	Dom. Iron, pfd.	97	97	97	97	unch.	97	83
1,440	Dom. Steel Corp.	*62¾	*63¾	*61	61½	-¼	65	53
1,011	Dom. Textile	98½	98½	*95¾	*96	unch.	99	80¾
100	Lake of Woods	151	151	151	151	-½	152½	120½
329	Laurentide	179	179	175	175	-5	183½	152
471	Maple Leaf	118½	120	117¼	120	+½	120	94
1,325	Mont. Power	86¾	86¾	85½	85½	-1½	88½	68½
393	N. S. Steel	68	68	66	66	-2	71½	66
185	Ontario Steel	32¾	32¾	31¾	31¾	-1¼	35	22½
410	Quebec Ry.	19	19	17½	17½	-2¼	22½	15
797	Shawinigan	116	116	115¼	116	+¼	116½	107
3,300	Steel of Canada	72¾	73¾	71	71¾	-1	74	49¾
125	Wayagamack	50	50	50	50	unch.	52¾	50
—BONDS—								
\$10,000	Can. Cottons	80	80	80	80	unch.	80½	80
8,700	Can. War Loan, 1925	96¾	96¾	96¼	96¼	+¾	96¼	93
12,700	do. do. (1931)	95½	95½	95½	95½	-¼	95¾	92
227,600	do. do. (1937)	94	94¾	94	94¾	+¼	94¾	91½
—UNLISTED SHARES—								
985	Laurentide Power	59	59¾	57	57	-2	59¾	50
575	N. A. Pulp	3½	3½	3	3	-¼	4¾	3

*Ex-dividend.

National Research

Special Contribution by W. B. CAMPBELL,
Assistant Superintendent, Forest Products Laboratories of Canada.

In spite of the many statements, learned and otherwise, that have appeared of late, there is still a very considerable lack of appreciation of what "Research" or "Scientific Research" really means. Perhaps the greatest factor in producing this state of affairs is the confusion resulting from the fact that those writing on the subject are too prone to think of research from their own immediate point of view without explaining or realizing how narrow that point of view really is. The college professor thinks of research mainly as the discovering of new laws of nature or of new properties of matter. The manufacturer is likely to think of research as the discovering of old ones. Possibly a still greater number of people, including many of our financiers and law-givers, have very little conception of it at all except that it is something mysterious and expensive, and is carried on by bespectacled scientists in the midst of test-tubes and microscopes. There is more or less of truth in all these ideas for research does discover new laws of nature and new properties of matter; it does bring about new manufacturing processes and improve old ones; and to anyone not acquainted with science—even to some who are not entirely strangers to it—the tools and language of a laboratory are mysterious.

But if we stop to consider a bit and don't try too quickly to picture things in our mind when the word "Research" is mentioned, perhaps we can get a better idea of what it really is. First of all, what does research mean when put into ordinary language? Practically, it means only "finding out," or, as the dictionary has it: "Studious inquiry." It follows then that all our research man is doing is finding out things, be they laws of nature or manufacturing processes. In this sense, any bright boy is an active researcher, and a rather good one too, for he is finding out something new and useful to him almost every waking minute of his life. Most of us lose this capacity for "finding out" as we grow older, but the research man must cultivate and develop the faculty as much as he can. That is one of the main reasons why research men must be caught young, while they still retain the disposition to question everything and to try out things for themselves.

This research or "finding out" may proceed in several ways. A fundamental precept of teaching says, "Proceed from the known to the unknown" and the same holds good in research. The college professor knowing much of the laws of nature and the properties of materials naturally bases his efforts on this knowledge, and his research is for the purpose of extending this field. He calls his work "Scientific Research." The manufacturer, knowing his processes, tries to improve them. If he were to name this phase of his work at all he would call it "Industrial Research." It is well within the bounds of possibility that the work of the manufacturer would be quite as scientific as that of the professor or even more so. The word "scientific" merely implies that the knowledge is gained by "exact observation and correct thinking." A more correct distinction would be to name them "research in pure science" and "research in industry" leaving it to be understood that both are conducted by scientific methods. The terms first used have, however, attained a certain standing by usage and convenience and will probably continue to be used. That is immaterial so long as they are understood as indicating a difference in the field of work or in motive rather than in the quality of the work.

To recapitulate, we have the following rough and ready but workable definitions:

Research—Finding out.

Scientific research—Research in the field of science.

Industrial research—Research in the field of industry.

It is presumed that all our research or finding out is to be done by "exact observation (and experiment) and correct thinking"—that is to say it will all be scientific.

VALUE OF RESEARCH.

Having clarified our ideas as to the meaning of the word research, and come to the conclusion that it simply means finding out, it is almost needless to question the value of research. To do so would be to question the value of all knowledge. The professor

in his laboratory is continually unearthing new truths of science and shedding new light on old ideas. The new data secured in this way is seized upon by the inventor and manufacturer and by further research is made use of in many ways for the eventual benefit of all mankind and for the immediate benefit of the manufacturer and his workmen. This is not the end of the advantage, however, for every advance in our knowledge leads to many others, and the accumulation goes on more and more rapidly. This accumulation is very similar to the accumulation of money at compound interest, but there is no point at which the process need stop, short of the absolutely perfect knowledge of all things.

The cycle has been going on almost without being realized ever since man existed with power to reason. The poor savage who, warming himself by his little fire, chanced to observe that certain kinds of stone heated with charcoal melted and became metal (tin or copper) was one of the earliest researchers, though of course not the very earliest, else he would have had fire. Doubtless his curiosity was excited, and he proceeded by the primitive method of trying all the rocks he knew to find out which of them gave this strange result. Had he stopped his investigations at this point his work would correspond rather well with that of many a modern researcher in pure science. Probably he did stop at this and merely recounted his experience to his fellows when opportunity arose. They very likely refused to believe him until he showed his samples, and then either hailed him as a great philosopher or burned him at the stake for holding communion with the devil. The next stage would be for someone to find out what useful thing could be made from the strange metal, and thus perform an early example of industrial research.

In those early times things moved but slowly, and it is quite likely that many years intervened between the first discovery of metal produced in this way, and the time when it was made into something useful or ornamental. But from just such discoveries has our vast civilization been built up, and from the scientific and industrial research of today there will arise a wondrous civilization such as we cannot conceive. In those days a man learned only from his own experience and from the experiences of his immediate fellows. Now, thanks to paper, printing presses, telegraphs, railroads, photography and other advantages, the knowledge of all the world is at the disposal of any one who can make use of it, and is provided with funds to pay for it. True, researches of today are much more intricate than in those times, but we have much finer tools and apparatus and knowledge to work with. To take a parallel example of present day research, let us consider the metal tungsten. This metal was first known and recognized in 1782, but had been useful to man long before through he did not know it. Damascus steel, which held a very high reputation in the middle ages, owed many of its good qualities to the tungsten it contained. But tungsten itself was not known until it was produced by the brothers D'Elhuyart in 1782, and was then only a laboratory curiosity. That constitutes the first stage, and the contribution of pure science. Then, in 1859, seventy years after, Mushet by industrial research made use of it as an alloy of steel and laid the foundation of high speed tool steels upon which we rely so much today. What the monetary value of tool steels may be to the world is impossible to estimate; probably it is in the billions of dollars. But that is not all the value of tungsten, for once more science and industry combined to make use of it. The research laboratories of the General Electric Company make a point of finding out all the properties they can of substance after substance on the general principle that their knowledge of materials cannot be too great. Among other materials they investigated was tungsten. They found its specific gravity, its melting point, its boiling point, its electrical conductivity and all its other properties, thereby performing more research in pure science. Then in the same laboratory they turned to industrial research. They investigated the incandescent electric lamp and found out the properties which materials used in making it should have to produce the best results. This done they looked up the properties of all known substances and found that tungsten, whose properties they themselves had found out, was easily the most suitable, so they proceeded

to use it. In the census of Mineral Resources of the United States, 1910, it is estimated that although the total amount of tungsten used in lamps is only a few hundred weight per year, the annual saving in power due to its use is in the neighborhood of \$250,000,000 in that country alone. And the saving due to its use in tool steel is certainly many times this amount.

In view of such figures for an isolated instance, there can be no longer any question as to whether research is worth while. The question then becomes: "How much can we, as a nation, spend efficiently in research?" So long as research is conducted efficiently the more money put into it, the more valuable will it be. Efficiency in this case will mean the greatest increase in knowledge for the least expenditure of time and money.

REQUIREMENTS FOR EFFICIENT RESEARCH.

In order that research should be efficient, there are three main requisites. We will discuss these first, and later on we can discuss how they are to be obtained.

One of these is an adequate library. In our day men all over the world are investigating this, that, and the other thing and are continually creating new knowledge of all kinds. Sooner or later, and generally very soon indeed, this knowledge is transferred to paper and through the agency of the printer is spread broadcast and made available to all. Scientists everywhere tend to publish their work as soon as they can do so without prejudice to themselves or their employers. Such a broad-minded custom is of great advantage all round for each then has the help of many others. In fact, it is largely this characteristic of scientists that has made possible the great advances in science that have come in recent years, and it is a very encouraging sign of the times that business men generally are coming more and more to follow their example and cast secrecy aside, realizing that for every secret they disclose they learn a hundred others. This vast accumulation of knowledge represents the starting point of any research that is to be properly conducted. Without it everything must be found out anew by each worker. A will be spending a large part of his time finding out something that B already knows, and is quite willing to tell him, and at the same time B may be spending his time on something that C already knows. All of which would be very inefficient and wasteful. Wherefore we must have a library, and a good one. It is impossible to have it too good for its work is to save the labor of valuable men. This library we aim at having will contain as nearly as possible all information published anywhere in the world which may conceivably be of any use to our research workers. More than that, it will be so arranged that the information contained will be quickly available. This will involve having on its staff a corp of scientists with very broad training who will be able to adequately cross reference each and every article or book that is filed, so that the information will be found with certainty when wanted. Such a result will be obtained only by a very close scrutiny of every book or article by men competent to appreciate what information it really contains. There must be no chance of data being filed away so carefully that it can never be found again. Another branch of the library work will be the preparation of bibliographies and sets of abstracts covering various important subjects, so that our research men can, as far as possible, obtain a complete outline of the state of the art or science on short notice. In short, our library will consist of three departments each supervised by suitable men of scientific training. The first department will be charged with the gathering of the data, the second will classify and file it, while the third will be steadily engaged in summarizing it for the use of the laboratory workers and others.

The second essential for an efficient research laboratory is apparatus. The good workman never quarrels with his tools, but the better his tools the better and more efficient will his work be. The tools of the research worker include all the array of apparatus of the laboratory, from the humble jack knife to the most delicate balance; in short, everything needful to conduct any experiment under conditions of exact observation. What apparatus will be needed in any particular research can only roughly be foretold at the beginning of the work; the tools must fit the work. If the worker is to utilize his time efficiently he must not be held up for want of apparatus nor must he content himself with approximate results obtained with makeshift appliances if it is at all possible to obtain better. We must then start our research laboratory with all the apparatus for which we can foresee any possible use and must expect to be in a position to obtain more and better as the need

arises or improvements are made. We must also have at hand skilled mechanics who can repair or, if necessary, construct delicate mechanisms.

When industrial research is to be conducted, there must also be provision for carrying on processes on a semi-commercial scale.

It is a fact often overlooked that conditions which obtain in the "test tube stage" of a new process frequently cannot be duplicated when the scale of operation is enlarged to that of commercial manufacture, and it is always wise to make a trial on a scale approaching the commercial, but still not so big as to make experiments too costly. When the process is developed enough to pass this stage it is then ready for the full exploitation by the manufacturer, and is no longer a research problem in itself, though doubtless there will be many problems still to be solved in connection with it.

Having arranged for an adequate supply of equipment, the next and greatest need is men. Given good men valuable research can be carried on, though with a loss of efficiency, even when the equipment is very meager; but no research can be successful without good men. Good research men are not plentiful in any country, and are certainly scarce in this one, where for so long a time it has been almost impossible for any one not possessing independent means to indulge in research. Our manufacturers have taken as a matter of course the discoveries made in our colleges and elsewhere and have seldom realized that such work is at the foundation of our national prosperity. Our legislators are equally at fault. For the most part, they are of the legal profession and are often unblushingly ignorant of even the rudiments of science. Without a direct call from the country at large, which is even more ignorant, such governments as we have had could not be expected to appreciate the value of scientific training or to spend the money of the people in developing it. The war has caused a great awakening in this respect, and things are changing rapidly for the better. For the purposes of this paper it suffices to recognize the fact that research men are scarce. From the point of view of the young man about to take up a life's work, research in some line or other is very attractive, but in the past he has been deterred from going into it on account of the extremely poor financial outlook. He simply could not afford the luxury of being a research man. We must then expect to pay our research men much more liberally in the future than we have in the past, if we are to put research on a permanent basis. No longer can the country be allowed to consider its research men of less value than bricklayers, as it officially does at present. Research men must be paid, and paid well. They are entitled to good rewards not only on account of the necessity of increasing the supply of such men, but also from the view point of efficiency. What man can do creative scientific work while worrying as to the price of baby's shoes or the latest increase in rent?

The prime requisites of a good research man are keen observation and an inquiring mind. These are attributes of youth which are all too easily lost by most of us unless continually stimulated and exercised. He must also have a broad education, particularly, but not entirely, along scientific lines, and be able to appreciate and understand discoveries and advances in fields other than his own. He should have a thorough training in his own field, particularly as regards the fundamental principles, and should be well acquainted with all the scientific literature of the day. He should have sufficient acquaintance with the processes in industrial use to appreciate their value, but this should not be so extensive as to blind him to the possibility of advantageous alterations. Too much familiarity with one way of doing things tends to block the mind and prevent progress. He must ever be open to learn from anyone, the obscure laborer as well as the eminent scientist. He must not be discouraged by set-backs for these are bound to come, and frequently. The failure of one scheme may be the starting point of something else that is bigger and better if he can only appreciate the lesson it teaches.

ORGANIZATION AND OPERATION OF A RESEARCH LABORATORY.

From the above considerations it will be realized that an ideal research laboratory is bound to be a rather large and extensive undertaking. If a laboratory is to have a really comprehensive library and an extensive supply of apparatus, it must be on a big scale, a scale too big to be considered by any except the largest of corporations. Certainly this scale can be reduced considerably without very much loss of efficiency, if the activities are limited to a narrow field, but some loss of efficiency is inevitable, even

then. If we, as a nation, have our research conducted piecemeal, as it were, by corporations individually or even by associations of manufacturers in particular lines, we will be wasteful of effort and of money, for none of the institutions will provide the advantages of our ideal or if they do it will mean that there is a lot of useless duplication of equipment, of library facilities, and of effort. If it be possible to formulate a scheme, therefore, by which this work can be centralized without other loss, it should be done. This is well realized by nearly all our research men, but every scheme so far proposed brings with it difficulties which, to a greater or less extent, counteract its advantages.

The scheme of the Research Council of Great Britain contemplates the establishment of a number of research laboratories, each on a fairly extensive scale and each interested in a particular industry and governed by a Research Association composed of the corporations interested in that industry, the government assisting by financial help and being represented on the executive. This scheme has several good points. It is particularly designed to interest the manufacturers in research by bringing them into close touch with the work. Since it is intended that the government assistance will be gradually withdrawn as the strength of the Research Association increases, the chance of too much paternalism is avoided. By concentrating the whole of each laboratory on one field there is a possibility of more intensive work in that field. On the other hand, there are some disadvantages. The executive of any such association is more than likely to be composed of the executives of the firms comprising the association, and in the majority of cases the interests and training of these men are financial rather than technical. They would naturally tend to consider too closely the possible dollars and cents value of an investigation to the detriment of the scientific value. Certainly this point of view must be considered, but the time to consider it is when the research is passing from the laboratory to the commercial stage, rather than when the whole thing is dimly conceived as a thing to be investigated. At this stage the possible value of a research can only be appreciated by a mind trained to know the value of scientific knowledge. The immediate difficulty of an industry must not be allowed to interfere with the laying of a sound foundation of scientific knowledge, on which may be reared a great structure of permanent value. This difficulty in the way of the Research Association scheme has been well discussed by a writer in "The Engineer," from which article the following paragraph is quoted:

"It must be recognized at the outset that these associations have an extremely difficult task before them. The difficulties lie both in the human elements involved, and in the technical and scientific problems which they will be called upon to solve. And these two types of difficulty interact with one another in a manner which may easily bring to nought the entire results of such an effort. To appreciate this point, we must bear in mind that one is too apt to think of "Research" in a vague way as the royal road to success; so it may be and often is, if properly directed and utilized. But if, in the direction of research, short views are taken, with the result that efforts become concentrated on the really minor problems of the moment instead of being guided into, and permitted to follow the great lines of natural development, then the whole stream of research becomes sterilized, and nothing but minor results can follow. This is perhaps the chief danger which faces the whole scheme of Research Association."

In addition to this difficulty, there is also the objection which we have mentioned above, viz., that of working on too small a scale. Even if some industries are sufficiently extensive to furnish the funds necessary to equip their laboratories with library and apparatus to a degree approaching the ideal, it would be a waste of money for them all to do so, if it could be avoided by co-operation with each other. If the different associations' laboratories were all established in one place with library and moveable apparatus in common, this objection would disappear to some extent, though not altogether. Such co-operation would also remove the objection of too much specialization, which tends naturally to narrowness of view. There is no industry to-day which cannot with advantage to itself learn from other industries, and bringing research laboratories together in this way would certainly help a great deal to bring to each the best ideas which have been developed in other fields, which are, perhaps, only very remotely related.

This scheme of Research Association Laboratories is intended very largely to cover only one phase of

the Research field—that of industrial research. Coupled with it the Research Council purpose the subsidizing of scientific research by workers at the Universities. Research scholarships and fellowships are to be instituted so that promising research work may be continued. At first glance this part of the scheme may appear attractive. Without doubt the greater part of our present scientific knowledge has been developed in a way almost identical with that which it is purposed to perpetuate. Scientists of great ability and enthusiasm for their various fields of work have devoted their lives to the development of scientific knowledge, and have discovered for us the fundamental laws of nature on which modern industry has been built. These men were enabled to pursue their chosen work, either through the happy chance of having independent means of their own or through the philanthropic aid of wealthy patrons. Occasionally, but not often, government aid has been granted, usually as a mark of appreciation of the discoveries rather than as a help while the work was in progress. All too frequently work of the greatest promise has had to be dropped on the very eve of success on account of the lack of financial support at the critical moment. One of the latest instances of this is the case of Langley and the aeroplane. For years Langley had made a scientific study of flight in a heavier than air machine. He secured through public subscription sufficient capital to allow of a demonstration with a small-sized model. At the launching of this on the trial flight a slight accident occurred—a very minor thing—and, instead of flying as expected, the machine dived into the river. Public interest turned to ridicule, no money was left for a repetition of the experiment, and Langley died of a broken heart. Only a short time ago his experiment was repeated, and a model identical with his made very successful flights at Hammondsport, demonstrating beyond a doubt that it was only lack of public appreciation of Langley's work that had retarded the birth of the aeroplane as we now know it.

Reasoning from past experience, then, it would seem that subsidizing research at universities would be a good scheme. One advantage is that the research reacts to the benefit of the university in that it provides a stimulant to the mental attitudes of the science teachers and prevents their falling behind the march of the times. Post graduate work in science is almost synonymous with research, and as an educational activity should be encouraged. But the question arises: "Is this an adequate appreciation of research in pure science? Is it the best way to encourage scientific research?" Universities are primarily teaching institutions, and however desirable scientific research may be it should not be allowed to take precedence over teaching as a university activity. As Dr. Mees* has pointed out, research on fundamental problems requires the continuous application of the same investigators over long periods, and this cannot be obtained at a university without detriment to the interests of teaching. Moreover, such devotion to one problem is undesirable as tending to one-sidedness. We may conclude then that though encouragement of scientific research at universities is advisable that in the interests of teaching it should be limited, and that there should be additional help given to research in pure science, but by some other method.

Dr. Mees suggests that a National Research Laboratory be formed on the lines followed by the Eastman Kodak Company, or the General Electric Company, but on a greatly enlarged scale. As he conceives it, such a laboratory would have a staff of at least two thousand men and other facilities in proportion. A laboratory of this kind, if well directed, would be able to do as the laboratories mentioned have done, follow their problems straight back to fundamentals with results far-reaching in their importance. Such a laboratory would serve, as do the Eastman and the General Electric laboratories, both for industrial and scientific research. However, the character and quality of work of an institution organized along these lines will depend very largely on the characteristics of the director. In the case of the laboratories mentioned, this is quite a satisfactory condition, since each of the laboratories has a field of activity which is not too extensive to receive adequate supervision by one director. But if the field be enlarged to include all the industries of the country, then, if the director is anything short of a superman, a lack of balance is bound to occur. Some industries will receive greater attention than others, some sciences will be better represented than others, and a host of jealousies and unhealthy rivalries will follow. If, for instance, the director has had

*"The Engineer," June 28, 1914.

*Science, June 2, 1916.

practical experience in metallurgical work he will, whether by intention or no, be bound to pay more attention to that kind of work to the inevitable detriment of other lines in which he has but an ex-officio interest. If he be an organic chemist he will probably have little more than a perfunctory interest in the physical problems of, say, aviation.

Another drawback to the scheme is that the co-operation and interest of manufacturers would not be fully enlisted. A laboratory of this description must needs be National in scope and be controlled and financed by the nation. Experience has shown that although the nation has in the past maintained some excellent scientific branches, the work of these branches has not been made use of by manufacturers as it should. It is the old story of the thing which costs nothing not being appreciated. Reports published by the government have either a nominal cost or none at all, and as a consequence, only too often soon find their way to the waste paper basket. If a research laboratory is to have the co-operation and appreciation of the industry, then the industry must be financially interested in the first place. When the money of the industry is involved there will be a very definite incentive to scrutinize the value of the returns. After all, when the industries are to reap the direct benefits of at least the more strictly industrial research they should be required to pay for it.

THE SOLUTION OF THE PROBLEM.

From what has been said, we may take it that one central institution, other things being equal, is a better scheme than any which will involve the establishment of a number of small units. This being granted, the first thing to do is to commence the gathering together of a comprehensive technical library. This is, in itself, a work of very considerable magnitude and should be organized and supervised by an official of some considerable experience in research work. As this department is to be rather more than a mere library, let us call it the Intelligence Department, borrowing the name from the army organization. The duty of the department is to have available all possible information regarding the technical work which is being done, or which has been done, anywhere in the world, and to keep this information so thoroughly classified and cross-referenced that complete information on any subject can be obtained on short notice. An incidental part of this duty will be the compiling and publishing of reviews covering the work done on subjects of particular interest, such reviews generally consisting of complete bibliographies with abstracts of the principal articles on the subject. All current technical literature will be thoroughly examined and abstracted in a way similar to that in which chemical literature is now covered by the American Chemical Society in "Chemical Abstracts." These current abstracts will be classified into suitable groups and published periodically and sold at cost to those interested as will also the more specialized reviews on particular subjects. The department will hold itself ready to supply either gratis or at a low cost complete bibliographies on any technical subject. It will as rapidly as possible accumulate in its files originals of all technical publications, holding them available for reference and will supply copies of these (photostat or similar reproduction) at cost on application.

The cost of operation of this department should be borne entirely by the government as it is of nation wide value. For the first few years this will probably amount to a considerable sum, but the returns from publications sent out will eventually cut this down to a very considerable extent if charges are made so as to produce a small profit on those going to foreign countries.

If we go no farther than this first step of the Intelligence Department, much will have been achieved, but it is really only a preliminary to the establishment of the laboratory proper. To establish this we should first take all the existing government laboratories and combine them into one large laboratory. This has been suggested before now, but the suggestion has met with opposition from the departments concerned. The opposition is based chiefly on the rather intense jealousy which exists between some of the departments, particularly those whose work is liable to overlap. They reason that if all laboratories are combined, the work of some will be credited to others, and that there will be a danger of more money being granted for some work than is given for other equally important work. If the laboratory be established under, say, the Mines Branch, then other branches like the Forestry Branch feel that their work might not receive adequate support, and vice versa. This difficulty will be avoided if the decision as to the extent of any investigation and

the money expended for it be left as it is at present under the supervision of the Department concerned. In short, the National Laboratory will follow the example of the Mellon Institute on a large scale. Each government branch or department which feels that research should be conducted on some subject under its jurisdiction will allot a suitable sum for the work. This will be expended by the Laboratory to the best advantage, and the results will be the property of the department or branch to be used as it thinks fit. Progress reports will go to the department at frequent intervals, so that it may keep in touch with the work. The personnel employed will be under the sole supervision of the laboratory, and will to this extent be removed from political patronage. As their employment on a particular research depends on the funds available for that work, however, they may be dismissed or transferred to other work if the department providing the funds should decide to discontinue the research, or the investigation is completed.

The Mellon Institute was founded particularly for the purpose of providing research facilities for manufacturers, but there is no reason why it or any similar institution should not be utilized for government research; in fact, the Mellon Institute itself has already handled investigations for one Canadian Government Branch.

The organization of the laboratory should be accomplished with fair ease if the government laboratories are first brought in. It would simply require that the director and overhead staff be appointed, and the site chosen as a first step. The next would be the placing of the existing laboratories under this body. As opportunity presented (buildings erected, etc.) the various laboratories could be moved to the central institution which would establish at the same time laboratories and workshops to perform such work as might be common to all, such as chemical analysis laboratories, physical laboratories, photographic laboratories, shops for the repair and construction of apparatus, etc. Instead of the various branches making appropriations to cover the work of

their own laboratories, they would make appropriations to the central laboratory for specific researches. In this way the National Laboratory would come into being as a going concern, and there would be no possibility of question as to whether each department was getting its share of attention.

With this step accomplished, the next would be the extension of the facilities to the industries or to trade association. These should be allowed and encouraged to subsidize research at the National Laboratory on problems of interest to them on the same footing as the government departments, regardless of the degree of national importance of the problem presented. One rule should be insisted on, viz., that the results obtained belong to the party paying for the work, but that the workers employed should share in the benefits arising therefrom and that after a definite period of two or three years the results should be made public. This rule is simply copying that of the Mellon Institute and experience has demonstrated its fairness and workability.

This scheme has the advantage of making for a large central laboratory without losing the advantages of the other suggestions. Any kind of research, for which funds are provided, may be conducted from the most involved work in pure science to the most empirical problem of the smallest manufacturer, and all will be conducted in the most efficient and economical manner. There will be no loss through the discontinuance of existing laboratories for both their apparatus and their work can be merged into the larger one with only slight temporary delay. The cost of the investigations will fall where they belong, the individual paying for what is of use to him as an individual, the association of manufacturers paying for what is of value to their particular industry, and the country paying for the research in pure science, and any other work of value to the country as a whole. No jealousy will arise between different government branches or different manufacturers, for each will get returns in exact proportion as it is willing and able to pay for them.

Mentioned in Despatches

MR. G. F. BENSON, who had charge of the Khaki League Club House Fund is a former president of the Montreal Board of Trade, president of the Edwardsburg Starch Company and one of our best known business men. Since the outbreak of the war Mr. Benson has been particularly active in relief work among the soldiers.

WILL THORNE, M.P., one of the leaders of the Labor Party in Great Britain, has been foremost in the welcome tendered to Samuel Gompers by British labor men. Thorne who has represented West Ham since 1906 began his business career as a barber, later taking a keen interest in labor movements, he founded the National Union of General Workers, and became their general secretary. He has given his wholehearted support to the Government in their conduct of the war.

MR. FERNAND RINFRET who addressed the Montreal Reform Club a few days ago on his experience overseas is editor of "Le Canada," and one of the ablest of the younger journalists in this Province. Mr. Rinfret was one of the twenty odd Canadian journalists who visited England and the battlefields of France at the invitation of the British Government. This young journalist not only wields a trenchant pen, but is also a very able speaker. At the banquet tendered the visiting journalists in Paris Rinfret replied for the Canadians and created a most favorable impression.

GENERAL PERSHING.—The recent American offensive which is the first major operation carried on by the Americans calls fresh attention to General Pershing. Like the President of the United States Pershing was originally a school master, but evidently the training he received in the little Red School House has not unfitted him to command a huge body of men and to strike a telling blow. Pershing has seen service in various minor wars, particularly in Mexico, and was appointed to command the American overseas army when Uncle Sam declared war on the Huns. Pershing has been in France for nearly a year and a half and has now over a million and a half men under his command. He is regarded as a particularly efficient officer and under his leadership the Americans will undoubtedly give a good account of themselves.

LIEUT. G. A. MCGIFFEN, who has made the supreme sacrifice was a well known Toronto newspaper man before the war commenced. Lieut. McGiffen was a graduate from the University of Toronto of the year 1903, then immediately took up newspaper work in which he made a big name for himself. He went overseas with one of the first contingents, was wounded some months ago but returned to the front as soon as possible.

LIEUT.-COL. CLARENCE F. SMITH, who heads the Knights of Columbus Campaign was formerly the active head of the Red Cross activities in this city. At the outbreak of the war he took a prominent part in the organization and activities of the Home Guard and has continued his interest in welfare work among the soldiers. Col. Smith was formerly Managing Director of the Ames-Holden McCready Shoe Company and is now a Director of the Canada Forgings Company, and of various other financial and industrial institutions.

EUGENE DEBS who has been arrested in Cleveland and is on trial for seditious utterances was, on four occasions, a candidate for the Presidency of the United States. He seems, however, to be an irreconcilable individual and has come out so strongly in favor of the I. W. W. and the Bolsheviks that the United States Government arrested him and are now having him tried. Debs is head of the socialists in the United States and, while sound in some respects, preaches a lot of seditious doctrines. The probabilities are that he will receive a sentence somewhat in line to those handed out to I. W. W. leaders.

FREDERICK G. KELLAWAY.—Another newspaper man has attained a prominent post in Great Britain, namely, Frederick G. Kellaway, Parliamentary Secretary to the British Ministry of Munitions. Kellaway has just come out with the statement that "Germany must receive a 'knock-out' blow before she can be admitted to any league of the nations or even permitted to discuss peace terms." Kellaway has been in Parliament for the past seven years. Previous to that time he edited a series of local newspapers at Lewisham. He attained his present post two years ago.

Public Opinion

THEIR GIFT TO US.

In the judgment of The Buffalo Express, nothing finer has come out of the war than this line from an epitaph in a British graveyard in France: "For your to-morrow they gave their to-day."

THE KAISER'S GREATEST FOE.

(Toronto Globe.)

The truth is that the people of the United States, now that they are aroused, are the most implacable of all the foes of Hohenzollernism, and will never rest until they have destroyed the autocracy which has the Crown Prince as its most brilliant ornament. The passion of America is not an evanescent thing. It burns deep in the national consciousness. Kaiserism may well fear the aroused democracy of this continent. It is deadly.

HIGH GRADE SOLDIERS.

(Mail and Empire.)

More than 3,800 Canadians have left the Canadian service to take commissions in the British army, which goes to show that there are many more Canadian privates with the ability and desire to be officers than there are opportunities for commissions in the Canadian corps. One reason why the Canadian corps has performed so magnificently is that its average grade of private is high, and ambition for promotion keen.

MODERN CRUSADERS.

The Daily Chronicle of London had the following note in its "office window" at the time of Foch's big offensive: "The Americans have gone singing into battle like our own splendid fellows. The thought brings back to memory an English scene described by an eye-witness when the great rush of Yanks across the Channel began. Hour after hour, thousands upon thousands, far into the night, the Americans marched to embark in the darkness. They went like Crusaders. And what do you think their bands played, so near the battlefield? They played 'Onward Christian Soldiers' and 'O Come All Ye Faithful.' The men who sang those hymns are in the present fighting."

THE OLD CONTEMPTIBLES.

(Christian Science Monitor.)

It is just about four years since the Kaiser gave the British army the name it at once adopted for its own of the "Contemptibles." On this Sedan Day the Kaiser must have been engaged in some mental reconstruction, and the Potsdam vehmgericht must be wondering if, after all, the decision was a sound one to simply "risk it," whether the British Empire joined France or not. The "Old Contemptibles," the little army which made the retreat from Mons to the Marne, played its part long ago, but the "New Contemptibles," the Kitchener mob, have come, and come, and come to take their place. "A stubborn people, the English," was the Kaiser's reflection, when the British declaration of war reached him; "their entrance will cause the war to be prolonged." The reflection has proved true. It is over four years since the German troops crossed the border with the promise that they would be home again for Christmas, with the loot of Paris in their knapsacks. The fifth Christmas in the field is approaching, and it is perfectly safe to say that though they are not home, they are on the way home.

THE UGLY DUCKLING OF INDUSTRY.

(Kansas City Times.)

After all it's the homeliest, the most poorly organized and the least showy of all the American industries that makes good with the most amazing and dependable frequency. Compare the effect of the weather on the ice business and on the farming business. Farming is made largely by weather. Hot, dry weather, droughts in other words, ought to kill farming and ought to be a bonanza to the ice business, but it doesn't work that way at all. Instead, the ice business breaks down under the unusual demand made by hot weather, and the farming business merely pockets its losses, moves its cattle and starts into its job in another way. Somehow it always manages to deliver the goods, despite droughts, floods and other conditions that put ice plants, railroads and steel mills out of commission.

A CONTRAST.

(Toronto Globe.)

"Theodore wounded; Archibald wounded; Quentin killed; Kermit decorated for bravery in battle — the Roosevelt family is doing its part," remarks The Syracuse Post-Standard. And the patriotic, red-blooded American has reason to thrill with pride when he contrasts the young Roosevelts with the young Hohenzollerns.

ENGLISH ONLY IN GRADE SCHOOLS.

(Duluth Herald.)

The Wisconsin Loyalty Legion has adopted a resolution declaring that school children should be taught only the English language until they leave the eighth grade. That should be the irreducible minimum, in Wisconsin and in every state. Pupils below the high school do not require foreign languages. The principal European tongues—Spanish, French, Italian or even German—should be elective courses in high schools, but that is enough. Where foreign languages are taught to children in the grade schools, the only purpose is to promote alien propaganda; and that America will not submit to any longer.

NATURALIZED ALIENS.

(London Daily Mail.)

How little some of the naturalized aliens can be trusted the case of Sir Joseph Jonas, which was concluded yesterday, shows. This man came to England 51 years ago. He was naturalized 42 years ago. He was knighted 13 years ago. In the year before the war he was sending to Germany information as to how many rifles a day Vickers was making—information which was of commercial and military importance. He was giving this to a German who competed with Vickers—on the most favorable interpretation of his conduct—for the benefit of German trade, and this at a time, when Germany, as we know, was arming to attack us. In our opinion he ought to be denaturalized and deprived of his knighthood at once.

GERMANY'S DEAD.

(George Harvey's War Weekly.)

We have no desire to be inhuman or to gloat over the destruction of our fellow men. We sincerely wish that it were never necessary for anyone to die save according to the benignant order of Nature, at a patriarchal age. But, circumstances being as they are, we must confess a cheerful degree of philosophic fortitude and resignation at the estimate made by M. Marcel Hutin, the eminent French military expert that 1,520,000 Germans have been killed in this war. It is not that we want Germans to die, but that we want Democracy and freedom and humanity to live. And the tragic truth is that if these are to live, many Germans must be slain. The war must be won, and it is to be won only by killing Huns. It is a terrible thought that more than a million and a half men, on that side, have already been killed, and that probably as many more will be killed before the war ends.

FEDERAL EDUCATION PLAN.

(Vancouver Sun.)

The Canadian Club yesterday had the pleasure of hearing a more than usually thought-provoking address from Major Grant, the principal of Upper Canada College.

According to his view, the solution of industrial problems must be sought along two lines. In the first place, there must be a vastly larger expenditure for purposes of education. The funds, as he intimated, will have to come to a great extent from federal sources.

The major is probably right in his idea that education is destined to become more of a Dominion, as distinguished from a provincial, charge. The provinces now have use for all the money they are able to raise. The best way to handle the matter would seem to be an extension of the system of Dominion grants, to be expended under provincial direction.

The major suggests also that labor and capital be both encouraged to organize, and that commercial enterprises be fostered by lending them the credit of the state. This last notion was made in Germany, but it may have good features for all of that.

It would necessitate our Governments being conducted more as business concerns and with less regard to what is called politics. Everybody will agree that this would be an improvement, if it can be done.

A UNIVERSITY AT JERUSALEM.

(Manchester Guardian.)

One may hope that the laying of the foundation-stone of the Hebrew University at Jerusalem, which we are enabled to announce to-day, will not pass unheeded even amid this most tremendous clash of arms, for the Hebrew University is destined to play a memorable part in the annals of the Jewish people and of civilization. Universities have been the nurses of national culture with many peoples, but the place of the Hebrew University will be a very special one.

PEACE TERMS RESTATED.

(North American Review.)

There is nothing new in Senator Lodge's statement of what he felicitously calls the "irreducible minimum" of peace terms. Neither is there anything new in the ten commandments, or in the Declaration of Independence. It is often profitable, however, to have old facts restated; especially when this is done by indubitable authority, and most especially when there is danger that those facts will be forgotten, ignored, or concealed by some insidious and unscrupulous propaganda of treason.

AN ENGLISH-SPEAKING NATION.

(Daily Oklahoman.)

German Lutherans of Lockhart, Tex., objected to orders of the Council of Defense that they cease to hold services in the German language, and offered as an argument in support of their position that a large percentage of the membership wouldn't understand the gospel if preached in English, nor pleas for war work which were made before them. The Council of Defense was properly unconvinced. If those in America don't understand English, now is a fine time for them to learn, particularly if it is their habit to speak in the Teutonic tongue. The council stood by its orders.

ANOTHER GERMAN GONE.

(Boston News Bureau.)

The number of "German" things in use is still decreasing rapidly. German-fried potatoes are "American" now, and German measles is "Liberty measles," which was doubtless what Madame Roland had in mind when she said, "O liberty! liberty! how many crimes are committed in thy name!" The latest enemy adjective to sustain a well-directed attack is "German silver," which, we are told by The Engineering and Mining Journal, is already called "nickel silver" by the American Brass Company, one of its largest producers. But while we are changing the name, why not drop the "silver," since this alloy is only a variety of bronze, containing no silver at all?

GERMAN WINNERS.

(Ottawa Citizen.)

Captain von Salzmann, the noted German critic, says that the western front has been made impregnable by German machine guns, which have been produced in such numbers as to offset the decline in man power. This makes the list of Teuton life savers somewhat more lengthy. First Zeppelins were to win the war, then came submarines, and now we have machine guns. In between were sprinkled poison gas, flame projectors and seventy mile guns. But nothing seems destined to avert the impending doom, although the oft repeated promises of ultimate victory have a temporary effect on the Teuton people. It will be interesting to speculate on the next "winner" to be selected by German propagandists.

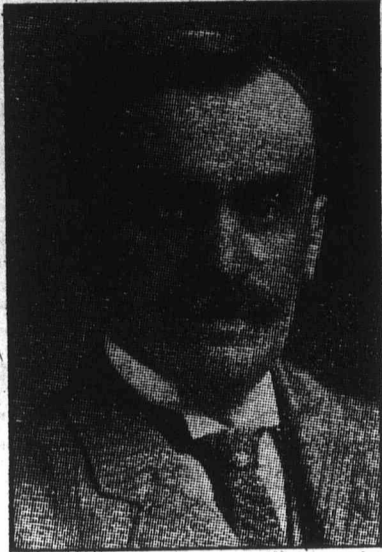
DO YOUR CHRISTMAS SHOPPING EARLIER.

(Chicago Tribune.)

The Tribune has emphasized for many years the necessity for early Christmas shopping. This emphasis was based on the need for ordinary business efficiency and expediency. It has always seemed important to distribute over a convenient period the transactions regularly expected and habitually increased far beyond the normal movement of traffic. The Christmas traffic affects all lines of endeavor, pushing them to the limit of their capacity. The government has asked co-operation. With its usual alacrity the public will comply. And as all governmental regulations in wartime have had the effect of inducing educational reforms, so now appears an opportunity to enjoy the real advantages of doing the Christmas shopping early in this and each succeeding year.

AMONG THE COMPANIES

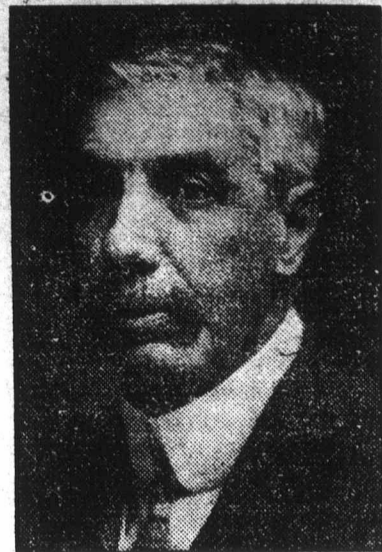
THE TRINIDAD ELECTRIC CO.



SIR RODOLPHE FORGET,
President Quebec Railway, Light, Heat and Power
Company.

The earnings for July, 1918, of the Trinidad Electric Co. amounted to:

	Gross.	Net.
Railroad	\$10,483.02	\$2,561.31
Light and Power	10,222.32	3,552.92
Ice and Refrigeration	3,333.19	701.32
		\$6,815.55



MR. D. B. HANNA,
Who has been appointed temporary head of the
C. N. R.

THE CHEMICAL DIRECTORY.

The Annual Chemical Directory of the United States, 1918 edition, is ready and is on sale by Messrs. Williams & Wilkins Co., publishers, of Baltimore.

The material in the book has been carefully assembled, and many of the features are not to be found readily elsewhere. The book is a strong indication of the substantial gain made by the American chemical industry since 1914, and is intended to serve the many varied purposes of both technical and non-technical men. The pages have been increased from 305 in the 1917 edition to 534 in the 1918 edition. The 1918 edition contains approximately 70 per cent more information than the previous edition.

CANADA LOCOMOTIVE.

The seventh annual meeting of the stockholders of the Can. Locomotive Co. Ltd., held in Kingston last week was very brief, lasting only a few minutes. The directors' report to stockholders was discussed and favorably commented on. The following directors were re-elected: Amelius Jarvis Toronto; J. J. Hart, Kingston; Robert Hobson, Hamilton; Warren Y. Soper, Ottawa; John L. Whiting, Kingston; Hon. H. W. Richardson, Kingston; Frank G. Wallace, Pittsburgh.

The board of directors re-elected the following officers; Amelius Jarvis, chairman of the board; J. J. Hart, vice-president; Frank G. Wallace, vice-president; J. H. Birkett, secretary-treasurer.

RAILWAY EARNINGS.

Grand Trunk Railway earnings for the first week of September amounted to \$1,346,536, an increase of \$353,923, or 35.6 per cent.

Canadian Northern earnings for the same period were \$901,000, a gain of \$185,200, or 25.9 per cent.

Earnings for the week ended September 7 of the Canadian Pacific Railway were \$3,503,000, as compared with \$2,666,000 in the same period in 1917. The increase amounted to \$837,000, or 31.3 per cent.

C. P. R. EARNINGS.

Week.	1918.	Increase.	P.C.
Sept 7	\$3,503,000	\$837,000	31.3

GRAND TRUNK RAILWAY.

	1918.	Increase.	P.C.
Sept. 7	\$1,346,536	\$353,923	35.6

CANADIAN NORTHERN.

	1918.	Increase.	P.C.
Sept. 7	\$ 901,000	\$185,200	25.9

THE G. T. R. IN JULY.

Other Canadian railways showed a large decrease in net earnings for the month of July as compared with the corresponding month of the previous year, but the Grand Trunk net revenue was greater to the extent of 21.68 per cent.

The Grand Trunk is now carrying a larger traffic than at any period in its history, and its gross earnings for the month of August showed an increase of \$1,523,000,000, or 33 per cent over August, 1917.

Officers of the road believe that the increases both in gross and net revenue will continue until the end of the year, and at the present rate the gross earnings for the year, including the Grand Trunk Pacific, should not be far short of \$100,000,000.

The large increases in operating expenses have heretofore more than offset the roads considerable gains in gross earnings, but under the policies of the new president, Howard G. Kelley, who has just completed his first year in office, more favorable results are being produced as evidenced by the July improvement.

TEMPORARY BOARD TO CONTROL C. N. R.

It is officially announced that a temporary board of directors, working in conjunction with the government, will administer the Canadian Northern, probably for some time. Negotiations for the purchase by the government of the Grand Trunk are being continued and, till some conclusion is reached, it is unlikely that a permanent board will be appointed. At present, the C. N. R. is being administered by D. B. Hanna, A. J. Mitchell and Major Bell, deputy minister of railways.

The main difficulty in regard to the Grand Trunk, it is understood, is the Grand Trunk Pacific, but hope is expressed that a solution will eventually be found.

Eventually, should the government succeed in acquiring the Grand Trunk, it is proposed to appoint one board to control under corporate management the whole system of government railways from coast to coast.

In this connection, it will be recalled, the Drayton-Acworth report recommended the incorporation of a new public authority, known as the Dominion Railway Company and that the Canadian Northern, Grand Trunk, and Grand Trunk Pacific be transferred to this body.

PAY FOR COMMON STOCK.

Payment will be made by the government within the next day or two for the common stock of the Canadian Northern Railway under the legislation of 1917. By that legislation the government, which already held \$40,000,000 of the stock provided for the purchase of the remaining \$60,000,000 upon a valuation to be fixed by arbitration.

Subsequently the government entered into an agreement with Mackenzie and Mann and the Canadian Bank of Commerce, owners and pledgers respectively of \$51,000,000 of the stock that payment for their equity should be made upon a valuation not exceeding \$10,000,000 for the whole of the outstanding 600,000 shares. To these interests, accordingly, the government will pay \$8,500,000 within the next few days. That is to say, payment will be made for the 510,000 shares of which they are the owners and pledgers, on the basis of a valuation of ten millions for the whole outstanding block of 600,000 shares. The minority shareholders who among them own 90,000 shares, were not parties to the agreement limiting the valuation to \$10,000,000. They will, doubtless, claim payment on the basis of the legislation and the award of \$10,800,000 given by the board of arbitrators. On this basis, they would receive \$1,620,000, making the total payment for the \$60,000,000 of stock \$10,120,000.

Under the terms of the legislation of 1917 the stock of the minority shareholders was to be taken over at the price fixed by the arbitration. The arbitrators having given their award and the holdings of the majority shareholders, having been acquired, the next step of the government will be the passing of an order-in-council declaring the outstanding 90,000 shares of stock to be vested in the government and providing for their redemption at the specified rate.

THE DEMERARA ELECTRIC CO.

The earnings for July, 1918, of the Demerara Electric Co., Ltd., were:

	Gross.	Net.
Railroad	\$7,051.34	\$ 703.39
Light and Power	8,118.73	4,163.81
Miscellaneous		187.31
		\$5,054.51

NORTH AMERICAN LIFE.

The North American Life Assurance Co. received business for August, 1918, amounting to \$1,240,620, being the largest amount received during any August since the inception of the Company. A special effort is being made by the agency force to canvass old policyholders during September.

The three leading personal producers of the North American Life for August were Miss M. L. Blake, Michigan; J. A. L. Robinson, Regina; and A. C. Lawrence, of Nelson, B.C.

BANK MERGER RATIFIED.

The agreement for the purchase of the Bank of British North America by the Bank of Montreal was unanimous approved at the special meeting of the shareholders of the Bank of Montreal held on Tuesday.

In submitting the resolution to the shareholders, the president, Sir Vincent Meredith, said:

"Your directors decided, after very full and careful consideration over an extended period, that it was in the best interests of the bank to acquire the Bank of British North America. Our action would also correct an anomalous situation in the Canadian banking field by eliminating the only bank operating in the Dominion not governed by the Canadian Bank Act.

"Negotiations were opened and brought to a successful conclusion recently, with the result that the directors of both banks entered into a provisional agreement, subject to their shareholders' ratification. A copy of the agreement is before you, and your Directors feel that you will consider the terms advantageous to us and equitable to both.

"Briefly: The Bank of Montreal purchases all the assets wherever situated and assumes all the liabilities of the Bank of British North America for the consideration of £75 cash payable in London for each share of the Bank of British North America of par value of £50.

"The Shareholders of the Bank of British North America have the option of exchanging their holdings of Bank of British North America stock of the par value of £50 for two shares of Bank of Montreal stock of the par value of \$100 each.

"A preliminary examination of the business of the Bank has justified our opinion of its soundness and the terms on which your Directors have agreed, with your approval, to take it over."

QUEBEC RAILWAY, LIGHT, HEAT & POWER CO.

The annual report of the Quebec Railway Light, Heat and Power Co., Limited, submitted to the shareholders at the annual meeting held a few days ago, shows a considerable falling off in gross earnings and a good sized increase in operating and maintenance expenses, causing a sharp reduction in the year's surplus.

Gross earnings together with a miscellaneous income of \$230,088 resulted in a total revenue of \$2,027,941, which is a decrease of \$34,951 from last year. Operating and maintenance expenses were \$1,235,724, as compared with \$1,155,969, in 1917, being an increase of \$79,755.

After fixed charges the surplus for the year was \$95,307, against \$200,586 last year. After making provision for obsolete cars and the portion of storage battery installed in Queen street substation there remains a total at the credit of surplus account of \$753,019, against \$684,571 last year.

There was expended during the year an amount of \$243,225.48 on maintenance account which was charged to operation in order to maintain in a high state of efficiency the physical condition of the properties and plant of the Company and its various subsidiary companies.


Asked regarding payment from the Government for the Quebec and Saguenay, Sir Rodolphe Forget, president, replied that already \$247,000 had been received from the Government and the balance was expected in a few days.

He added that the company was now "practically out of the woods," and trains were now running between Bale St. Paul and Quebec.

The outgoing board of directors was re-elected.

ESTABLISHED 1832

Paid-Up Capital
\$6,500,000



Reserve Fund
\$12,000,000

TOTAL ASSETS OVER \$130,000,000

The strong position of the Bank of Nova Scotia not only assures the safety of funds left on deposit with the Bank but also places it in a position where it can readily care for any legitimate business needs of its customers. We invite banking business of every description.

THE BANK OF NOVA SCOTIA

UNCLAIMED VICTORY BONDS.

Many of the people who bought Victory Bonds last autumn have not yet troubled themselves to exchange their interim certificates for the definite bonds which are still in the hands of the banks. A banker points out that if the owners of these bonds do not come forward and secure them on presentation of their certificates endless confusion will be created when the next Victory Loan issue comes on the market in a comparatively short time.

Nearly all the banks have considerable numbers of bonds awaiting delivery and it is highly desirable that these should be claimed at once by their owners so that the decks may be cleared for the big task of handling the forthcoming loan.

INTERCOLONIAL RATES.

Sir Henry Drayton's Comments in Judgment Raising Rates on Sugar.

Ottawa, Sept. 9.

Were freight rates on the Intercolonial Railway equivalent to the average rate on all the Canadian Railways, the revenue of the Government-operated road, on the basis of the traffic of 1917, would have been \$2,154,600, or 19 per cent more than it was. That is the significant conclusion drawn by Sir Henry Drayton, Chairman of the Railway Commission, in a judgment recently handed out by the Railway Board ordering an increase in the commodity rates on sugar, affecting principally the Maritime Province refineries. In the course of the judgment Sir Henry goes at some length into the Intercolonial rates generally, comparing them with the rates charged on the other railway systems of Canada. "It is perfectly apparent," he concludes, "that the Intercolonial returns are abnormally low. Under the circumstances there is no question but that any rate reductions on the Intercolonial are really not made at the expense of that system, but are made at the expense of the Canadian taxpayers generally."

In view of the prospective nationalization of the Grand Trunk and Canadian Northern and their incorporation with the Intercolonial into one great Government-operated transcontinental system, it would seem that unless the taxpayers of one part of the country are to continue paying taxes to meet the deficits on the low rates accorded the people of the Maritime Provinces, there will have to be a general revision upward on the Intercolonial system.

HOW I. C. R. COMPARES WITH OTHERS.

Sir Henry finds from the railway statistics of 1917 that the ton miles on the Intercolonial amounted to 1,900,097,294 at an average rate per ton mile of 0.576, with a resultant total earnings of \$10,946,071. Had the Intercolonial carried freight at the average C. N. R. rate of 0.688, the earnings would have been \$13,072,669. At the average C. P. R. rate of 0.676 per ton mile the earnings would have been \$12,844,657. At the average Grand Trunk rate of 0.738 per ton mile the earnings would have been \$14,022,718.

On the basis of its operating ratios in comparison with those of other lines, Sir Henry finds that the Intercolonial again suffers by comparison. The Intercolonial's operating ratio to revenue is 90.9, the Canadian Northern's is 71.7, the Canadian Pacific 65.7, and the Grand Trunk 71.9. The net freight operating receipts per mile of line are \$637. At the Canadian Northern ratio they would be \$2,051, at the Canadian Pacific \$2,402, and at the Grand Trunk \$2,037.

NEED OF RENEWAL RESERVE.

The Chairman of the Railway Commission declares that with interest on only a 4 per cent basis, at least 2 per cent on the actual investment ought to be set aside by railways for renewal.

"Eliminating all question of interest charges and payment of past deficits," he says, "the necessity of such a reserve is easily shown by taking the cost per mile of the Intercolonial to the country. In 1899 the cost per mile was \$37,957, in 1911 the cost per mile amounted to \$57,419, and the cost per mile today on the mileage actually owned is over \$79,000 the cost of the road to March 31st 1917 being returned as \$120,275,032.

"A percentage of this increase can undoubtedly be justified, but it is equally certain that a very large percentage of it cannot be justified on any basis of normal values and business accounting."

CANADA'S TRADE BALANCE FOR JULY.

The Dominion's adverse balance with the United States for the first seven months of the present year stands about \$61,000,000 less than in the corresponding period of 1917, according to Washington's foreign trade in July.

United States' purchases from Canada in that period increased \$26,215,830, while United States' sales to Canada fell off \$34,720,178.

The details of the July return, just made public, show a balance against Canada somewhat less than in any month since February. Our sales to the United States scored a small gain, while our purchases from that country fell off quite sharply. The net improvement as compared with July, 1917, was more than \$15,000,000, but accomplished rather through restricted buying than through any large increase in Canadian exports. July, 1918, and 1917, figures of American-Canadian summaries offer the following comparisons:

	U.S. im-ports from Canada.	U.S. ex-ports to Canada.	Balance against Canada.
July.			
1918	\$37,253,927	\$69,031,081	\$31,777,154
1917	36,517,340	52,051,503	16,534,163
Increase	\$736,587	*\$15,979,578	*\$15,242,991

*—Decrease.

Seven months' figures of American imports from Canada and exports to Canada, with the balance against Canada, follow:

	U.S. im-ports from Canada.	U.S. ex-ports to Canada.	Balance against Canada.
7 months.			
1918	\$238,724,476	\$469,317,988	\$230,593,512
1917	212,508,646	504,038,166	291,529,520
Increase	\$26,215,830	*\$34,720,178	*\$60,936,008

*—Decrease.

The record of trade between the two countries by months since the beginning of the year is given in the following table:

	U.S. im-ports from Canada.	U.S. ex-ports to Canada.	Balance against Canada.
1918.			
January	\$38,127,057	\$50,346,242	\$12,219,185
February	22,759,868	42,641,214	19,881,346
March	28,511,745	69,596,521	41,084,776
April	34,248,000	75,033,000	40,835,000
May	39,862,481	85,584,899	45,722,418
June	37,961,398	77,035,031	39,073,633
July	37,253,927	69,031,081	31,777,154
Total	\$238,724,476	\$469,317,988	\$230,593,512

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(Published Annually)

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SIR JOHN AIRD, General Manager.

H. V. F. JONES, Assistant General Manager.

Capital Paid Up \$15,000,000
Reserve Fund \$18,500,000

BANKING SERVICE

This Bank provides every facility for the prompt and efficient transaction of all kinds of banking business.

REVENUE INCREASE FOR THE DOMINION.

Gain of Over \$12,500,000 During the First Five Months.

Ottawa, Sept. 9. An increase of over twelve and a half million dollars in the revenue of the Dominion for the first five months of the current fiscal year ending August 31 is shown by the financial statement for the month of August, issued to-day by the Department of Finance. The increase is encouraging because of the fact that customs collections have fallen off by approximately seven million dollars.

A jump in miscellaneous receipts, including a number of the new war taxes, from \$6,803,937 for the April-August period, 1917, to \$16,877,679, for the same period this year makes up for the loss in customs revenue, and provides three millions of the twelve and a half millions increase. Despite the enforcement of the prohibition measures excise revenues have increased by over one million dollars and Government railway receipts are higher.

The total revenue for the five months' period is \$118,350,020, as compared with \$105,785,600 for the same period last year.

War expenditures for the five months have totalled \$63,580,275, as compared with \$51,427,162 last year. For the month of August alone Canada spent \$19,571,723 on the war.

The net debt now stands at \$1,196,239,346, as compared with \$864,143,590 on August 31, 1917.

NEW COMPANIES.

The following new companies are announced in the various gazettes:

FEDERAL CHARTERS.

- Cle Chatelet, Ltd., Montreal, \$50,000.
- Reid East Coast Salvage Co., Ltd., Halifax, \$1,000,000.
- Canadian Duplexalite Co., Ltd., Montreal, \$150,000.
- Rosedale Coal Co., Ltd., Toronto, \$1,500,000.
- Henriette Ship Co., Ltd., Vancouver, \$100,000.
- James M. Aird, Ltd., Montreal, \$750,000.
- Airo Rubber, Ltd., Montreal, \$100,000.

QUEBEC CHARTERS.

- Goulet & Belanger, Ltee., Quebec, \$20,000.
- Riverside Mfg. Co., Ltd., Three Rivers, \$450,000.
- Baptist, Clouthier & Pothier, Ltee., Three Rivers, \$49,900.

ONTARIO CHARTERS.

- Atic Lake Mines, Ltd., Toronto, \$40,000.
- Boys' Wear, Ltd., Toronto, \$40,000.
- Denby Motor Truck Co. of Canada, Ltd., Windsor, \$200,000.
- Farmers' Fertilizer Co., Ltd., Wingham, \$50,000.
- Hamilton Mousions, Ltd., Hamilton, \$100,000.
- Selak Orth, Ltd., London, \$20,000.
- Sutherland Press, Ltd., St. Thomas, \$40,000.

ALBERTA CHARTERS.

- Campbell & Hillier, Ltd., Calgary, \$20,000.
- Western Tractor Sales Co., Ltd., Calgary, \$50,000.
- Caledonian Collieries, Ltd., Taber, \$20,000.
- Peace River Can. Oil Co., Ltd., Edmonton, \$99,000.
- Alexandra Hog Ranch Co., Ltd., Edmonton, \$20,000.
- Humberstone Coal Co., Ltd., Edmonton, \$300,000.
- Will Werner, Ltd., Edmonton, \$20,000.
- High River Times, Ltd., High River, \$20,000.
- Ross Clay Products Co., Ltd., Medicine Hat, \$100,000.

BRITISH COLUMBIA CHARTERS.

- Pacific Smelting Co., Ltd., Vancouver, \$10,000.
- Dom. Transportation Co., Ltd., Victoria, \$10,000.
- Gosse-Millerd (Alberni) Packing Co., Ltd., Vancouver, \$24,000.
- Brown & Mahoney, Ltd., Vancouver, \$25,000.
- Dom. Carton & Printing Works, Ltd., Victoria, \$35,000.

FAILURES LAST WEEK.

Commercial failures last week, as reported by R. G. Dun & Co., in Canada numbered 27, against 8 the previous week, 22 the preceding week, and 26 last year. Of failures last week in the United States, 57 were in the East, 37 South, 44 West, and 14 in the Pacific States and 60 reported liabilities of \$5,000 or more against 42 last week.

THE MONTREAL STOCK EXCHANGE.

There was a decided drop in the volume of business transacted on the local exchange last week while prices also developed a sagging tendency.

Steel Company of Canada was the most active with sales of over 3,300 shares. Other active issues were Brazilian, Brompton, Steamships, Dominion Steel, Textile and Montreal Power.

Considering the pronounced weakness in Wall Street the local market held up extremely well. For the most part the losses were only fractional and in a number of cases were offset by gains in other stocks.

The undertone of the market was at no time weak, and the evidence thus far available would point to stocks having passed into strong hands on the recent advance. Totals of last week's business, with comparisons, follow:

	Week ending		
	Sept. 14, 1918.	Sept. 7, 1918.	Sept. 15, 1917.
Shares	26,759	\$39,672	9,807
Do. unlisted	1,685	1,993	182
Bonds	\$279,075	\$80,525	\$407,400

CANAL TRAFFIC IN AUGUST.

Freight traffic handled through the American and Canadian canals for August aggregated 12,789,801 tons, which is the smallest total for any month since August, 1915, and falls short also of the shipments of 13,362,344 tons handled through the canals in July this year.

The statistical report shows eastbound movement of freight was 9,743,473 tons and westbound movement 3,046,328 tons. Of the total freight movement, 11,480,600 tons passed through the American canal and 1,309,201 tons through the Canadian route. Lumber shipments, aggregating 52,823,000 board feet, show a slight increase over the 51,737,000 feet in July, and gain the distinction of being the only eastbound commodity handled in greater bulk than in July.

Shipments of both bituminous and anthracite coal westward were heavier in August than in July, the movement of the former being 2,517,603 tons, as compared with 2,121,603 tons in July, and hard coal shipments of 299,555 tons, as compared with 233,764 tons in July.

Vessel passages during the month were 8,092, the ships making 8,888,153 registered net tons, as compared with 3,246 passages in July of vessels aggregating 9,873,183 registered net tons.

FREDERIC C. HOWE, who has been Commissioner of Immigration for the port of New York for the past four or five years has lately been expressing opinions on the trend of immigration after the war. Mr. Howe concludes that "The immigrant will go on the land if he can own it." Howe is the author of numerous books on theories and practice of democracy and has also made a special study of the immigration question in the United States and Europe. He is regarded as an authority on municipal ownership. For some years he was a lecturer on municipal demonstration and politics at the University of Wisconsin.

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Reserve Fund - \$4,800,000

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Incorporated 1869

Capital Authorized - \$25,000,000
Capital Paid-up - \$14,000,000
Reserve Funds - \$15,000,000
Total Assets - \$386,000,000

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Reserve Fund - \$7,000,000

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Montreal Branch - 160 St. James Street
M. S. BOGERT, Manager

U. S. BANK CLEARINGS.

Record payments through the banks for this period continued to be reflected in clearing house transactions at the principal cities of the United States, total exchanges last week, according to Dun's Review, amounting to \$5,472,380,152, an increase of 8.4 per cent, as compared with last year and of 26.3 per cent, as contrasted with the corresponding period in 1916. New York City reports a gain over last year of 5.4 per cent, and over two years ago of 14.9 per cent. The aggregate of the cities outside that metropolis showed increases of 14.2 and 52.1 per cent, respectively, over this week in the two immediately preceding years, and practically every centre makes gratifying favorable comparisons with all corresponding former periods. Average daily bank exchanges for the year to date are given below for three years:

	1918.	1917.	1916.
September	\$957,562,000	\$891,476,000	\$773,110,000
August	893,637,000	817,097,000	640,292,000
July	943,497,000	926,432,000	662,427,000
June	951,834,000	903,833,000	700,366,000
May	942,078,000	892,272,000	725,281,000
April	873,208,000	904,421,000	693,182,000
1st. Quarter	867,782,000	827,235,000	691,292,000

WEEKLY CLEARINGS.

The bank clearances in Eastern Canada for the week ending Thursday were generally higher in comparison with the same period a year ago but in the West, out of eleven cities reporting, four places—namely, Winnipeg, Regina, Lethbridge and Medicine Hat—showed decreases. In the matter of increases Halifax was again the leader, with a percentage of gain at 60.4 per cent. Halifax clearings were \$4,751,849, or \$1,787,553 more than a year ago. The next largest increase was made by New Westminster, with clearings for the week at \$564,062, a gain of \$171,140, or 43.7 per cent. Toronto bank clearings were \$66,945,859, or \$11,048,039 better than a year ago. The percentage of gain was 19.7 per cent. Montreal clearings at \$107,399,186 represented an advance over the same seven-day period in 1917 of \$21,345,743, or 24.8 per cent.

Winnipeg has now for some weeks past reported recessions in its bank clearances in comparison with last year. This past week Winnipeg clearings again fell off. The total for the seven days at \$26,525,575 was \$5,248,154 behind the corresponding period in 1917. The percentage of decline was 16.5 per cent. Vancouver's total at \$12,834,418 represented an increase of \$3,393,344, or 35.9 per cent.

The following compilation shows clearances for the week at the principal clearing house points, with comparisons:—

	1918.	1917.
Montreal	\$107,399,186	\$86,044,443
Toronto	66,945,859	55,897,820
Winnipeg	26,525,575	31,773,729
Vancouver	12,834,418	9,441,074
Ottawa	6,601,282	5,748,611
Calgary	5,313,837	4,980,376
Hamilton	5,109,457	4,305,063
Quebec	4,842,252	3,491,329
Halifax	4,731,849	2,964,296
Edmonton	3,212,165	2,505,690
Regina	3,017,773	3,071,021
London	2,516,420	2,256,115
St. John	2,352,445	1,883,129
Victoria	2,031,606	1,801,302
Moose Jaw	1,191,937	963,777
Lethbridge	750,945	751,872
Peterboro	695,288	652,681
Fort William	669,172	562,995
Brandon	568,151	562,284
Totals	\$253,098,705	\$215,639,491

QUEBEC'S RECEIPTS.

Hon. W. G. Mitchell announced at the Government offices a few days ago that the ordinary receipts of the province for the fiscal year ending the 30th June, 1918, amounted to \$13,806,390.97, and the ordinary and extraordinary expenditure to \$11,671,852.69, so that the surplus of ordinary receipts over ordinary and extraordinary expenditure last year is \$2,134,538.28.

Out of this was paid the sum of \$625,000, being the balance of the payments made by the Government of the Province of Quebec to the Canadian Patriotic Fund on account of the subscription of \$1,000,000, which leaves a surplus, over and above all ordinary and extraordinary expenditure and payments to the Canadian Patriotic Fund, of \$1,509,538.28.

The ordinary receipts were particularly large, due to the Government having received the sum of \$3,336,547.84 over the estimate in succession duties.

BANK OF FRANCE STATEMENT.

Paris, Sept. 12.

To-day's Bank of France statement will show a diminution of 114,000 francs in advances to the State, which have been reduced 18,000,000,000 francs, leaving intact after three months the advance of the 3,000,000,000 authorized by law on June 7. A semi-official note published to-day draws attention to the fact that this is the first time since the war, except when a loan was raised, that the State has been able to diminish its debt to the bank solely by the resources of the treasury.

BANK OF ENGLAND STATEMENT.

London.

The weekly statement of the Bank of England shows the following changes:—

Reserve	£912,000
Circulation	438,000
Bullion	770,584
Other securities	494,000
Public deposits	885,000
Other deposits	7,199,000
Notes reserve	325,000
Gov. securities	6,477,060

The proportion of the bank's reserve to liability this week is 17.20 p.c., last week it was 17.65 p.c.

Bank of Nova Scotia

DIVIDEND NO. 195.

Notice is hereby given that a Dividend at the rate of fourteen per cent. per annum on the paid-up Capital Stock of this Bank has been declared for the quarter ending September 30th and that the same will be payable on and after Tuesday, the first day of October next, at any of the offices of the Bank.

The Stock Transfer Book will be closed from the 16th to the 30th proximo, inclusive.

By order of the Board,

H. A. RICHARDSON,

General Manager.

Halifax, N.S., August 23rd, 1918.

The Montreal City & District Savings Bank

Notice is hereby given that a Dividend of Two Dollars and fifty cents per share has been declared on the capital stock, called and paid-up of this Bank, and will be payable at its Head Office, in this City, on and after Tuesday, the first of October next, to Shareholders of record the fourteenth of September, at twelve o'clock noon.

By order of the Board,

A. P. LESPERANCE,

Manager.

Montreal, August 27th, 1918.

IF YOU ARE INTERESTED IN AN INVESTMENT which, in return for an outlay of £100 per annum for five years, will thereafter return you an income of from £500 to £1,000 per annum, write for full particulars to AFRICAN REALTY TRUST, LTD. (Capital £400,000, fully subscribed), 36 New Broad Street, London, E.C.2, England.

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Capital - - - \$1,000,000.00
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Head Office: HAMILTON

CAPITAL AUTHORIZED . . . 5,000,000
CAPITAL PAID UP 3,000,000
SURPLUS 3,500,000

GERMANY'S IMPENDING FINANCIAL COLLAPSE

It has been assumed from the first that the end of the war might come, in advance of a military decision, through the economic and financial collapse of Germany. But so far the hope has never been quite abandoned by Germans themselves that they could in some fashion make the war pay for itself, and on that hope has been built the top-heavy edifice of German credit — of fiduciary bank notes with no assets behind them, and a war debt whose interest is being paid out of borrowed money. With the disappearance of the last vestige of German confidence, and that cannot be much longer delayed, will come the crash of the internal credit of Germany, its external credit having gone already. Germany staked everything on the serene belief that the war would be short, triumphant and profitable. Not only were her war costs to be paid by the crushed and helpless enemy, but her new career of commercial conquest was to be financed from the same source. Very early in the war Dr. Helfferich, when Secretary of the Imperial Treasury, said: "We do not desire to increase by taxation the heavy burden which war throws upon our people; Germany's enemies deserve to drag the leaden weight through the centuries to come." Germany's rulers continued, up to last year, to speculate upon victory and to plan the levy of heavy indemnities upon the people she was about to conquer. The indemnity to be imposed upon France was fixed at \$7,000,000,000 and in the annexionist petition of 352 German university professors in the beginning of 1917 there was a protest against hesitation, "from any false humanity," about burdening France as heavily as possible. It was cynically declared that to ease the burden imposed upon her she might call upon her ally across the Channel, and that if the latter refused to fulfill her duties as an ally financially, a secondary political result might be attained with which Germans could well be content. So, alike for the financiers, the merchants, the professors and the common people, there was but one slogan and that was the Emperor's proclamation of June, 1915: "The triumph of the greater Germany, which some day must dominate all Europe, is the single end for which we are fighting."

At the present date, the war debt of Germany considerably exceeds \$25,000,000,000, without reckoning the mass of inconvertible paper whose sole value consists in the official stamp. Nor does that take account of future expenditure, or the bill that will have to be paid for reparation. The "laden weight of billions" will have to be dragged about by the German people themselves, and with every day the war is prolonged the weight must keep on growing. Allowing only for interest and sinking fund on the various war loans, and the amount to be paid in pensions to the dependents of fallen soldiers and to disabled men, there is an extra annual charge already in sight for the German taxpayer of \$3,000,000,000. Before the war, the total annual revenue of the Imperial Government amounted to about \$850,000,000, and up to 1916 there was no new taxation at all. Then there was a feeble effort to contribute something to the colossal annual charges by putting on increased taxation to the extent of \$75,000,000. It was decided last year that this was not enough and an additional \$300,000,000 was imposed, making a total of \$375,000,000. It was intimated early this year that the Government was about to make a capital levy which was expected to bring in \$500,000,000. There has been no authentic news of any such collection, but even if it were made the total revenue would still be a long way below the interest obligations on the public debt. When, in 1913, the tax on capital to the extent of \$250,000,000 was imposed for strengthening the army, it was generally felt in Germany that the nation was taxed to the utmost limit. But unless she is to default to her own people and thus disable many of them from paying any taxes at all, a very different standard of measurement will have to be applied to the strength and endurance of the taxpayer. Now that Germany is coming face to face not only with a terrible burden of taxation, but also with a smash-up of her national credit, her outlook is black indeed.

The opinion has been expressed by Mr. Thomas W. Lamont and others that it is the business men of Germany who will force her rulers to sue for peace because of their final conviction that Germany, with her international trade gone, will be a bloodless, lifeless Germany. It was evident that in the matter of foreign trade Germany had to choose between two alternatives, neither of which was fruitful of much promise: She must either defeat the Allies and bend them to her will or, if defeated herself, must placate them so that they would presently resume commercial relations with her. The former

AUGUST FIRE LOSSES.

The losses by fire in Canada and the United States during the month of August, as compiled from the records of The New York Journal of Commerce, reach a total of \$31,476,650, again showing a very marked increase over the figures of last year which were \$21,751,100. The August record this year is one of the worst in the history of the country and brings the losses for the first eight months of 1918 up to the excessive total of \$200,036,285, as compared with \$180,515,875 for the same months in 1917 and \$159,535,220 in 1916.

STOP THE FIRE WASTE.

The fire loss of 217 cities, aggregating more than \$72,000,000 in 1917, according to a recent report of the United States census bureau, is food for serious thought.

Fire losses have a particular and vital interest to the industry and commerce of the nation in so far as they are actual destruction of wealth and wealth-production machinery. A firm may fail in business with heavy loss, but, in general, its loss has been somebody else's gain, even if only that of the small consumer of infinitesimal units. When a man loses on the stock market, somebody else has gained. The amount of wealth in the nation is not affected thereby. A certain portion of that wealth merely has changed hands. It still remains an asset to somebody.

But who gains when a building goes up in smoke? So much material organized for wealth production simply has ceased to exist. It leaves a void behind. It must be filled either by a tax on the owner, if he is not insured, or, if he is insured, by taxes on the insuring public generally in the form of premiums. The loss due to interrupted production, also is a loss which can never be made up.

Seventy-two millions does not seem much in these days, when we have become accustomed to measure national effort in terms of billions. But when it represents a total loss of producing power much greater than this, at a time when the producing power of the nation is being called on to the limit, it would appear worth while, merely as a war effort, to take some definite steps to reduce the fire waste.

In this respect the fire insurance companies might well learn a lesson from their brothers, the liability companies, which seem to have been quite successful not only in enforcing safety-first restrictions but in inducing policy holders to united efforts in promoting the safety-first idea through publicity methods.

If the fire insurance companies were to undertake a national campaign, based on the conservation of war production power, there is no doubt that a large proportion of the seventy-two-million-dollar loss could be prevented.—Philadelphia Public Ledger.

alternative is plainly out of the question and the other is already being contemplated with manifest disturbance of mind. There is no doubt that the vast majority of the Allied populations are all for punishing the disturbers of the world's peace in the way that will most effectually damage them. Nowhere is there recognized more clearly than in Germany the strength of the Allied sentiment which favors a trade boycott for a period of years, until suffering has brought about repentance, as just and fitting treatment to be meted out to the Central Powers. Under the most favorable auspices, even if the war stopped to-morrow, it would take Germany years to recover her lost trading position. For copper, cotton, wool and rubber she will have to go to countries with which she is now engaged in deadly struggle, and her stocks of these and other essentials of production have been depleted during the last three and one-half years to the point of exhaustion. In addition to this handicap in the matter of raw materials, which at the best can be but slowly overcome, there has been an absolute disorganization of all the mechanism of finance and of distribution which formed the instrument of her foreign trade. And yet, it is conceded that this trade will be more essential to the life of Germany after the war than it ever was before; it is the only life-belt that can save her from drowning. Thus, with the collapse of the military power of Germany on the western front there is impending an economical and financial collapse more ruinous still.—The New York Journal of Commerce.

U. S. EXPORT TRADE.

Exports of war materials from the United States during the fiscal year ended June 30 last, according to a compilation made by the N.Y. Journal of Commerce from Government figures available, reached a value of \$1,233,097,000, compared with \$2,127,940,000 during 1916-17 and \$1,329,458,000 during preceding fiscal year. The total value of such shipments during the four years ended June 30, embracing the war period, appears as \$5,125,493,000.

RAT FOOD COSTS \$200,000,000.

When Ellis Parker Butler wrote "Pigs Is Pigs," he had an idea that guinea pigs are prolific breeders. On the contrary, this little animal is so poor a breeder that the guinea pig market is decidedly bullish, and all sorts of experimental work cannot be done because the necessary guinea pigs cannot be had.

What the celebrated "detective" should have named his story was "Rats Is Rats." The common brown rat has six to ten litters a year and there are about ten rats to the litter. The females begin breeding when three to four months old.

The ordinary brown rat got into this country just about 150 years ago, and now they radiate from the Chicago stockyards to Maine on the east and to California on the west, and as far north and south as the land extends. The Chicago stockyards is the rat hub of America.

Bell says in the Year Book of the Department of Agriculture there are more rats than people in the United States and that the animal food bill for the rats is not less than \$200,000,000. Two hundred thousand farmers would be required to make food for the rats. They consume as much food as 5,000,000 acres of ground produces. Think of 200,000 men working 5,000,000 acres of ground to produce rat food.

On top of this rats spread infectious jaundice, a disease quite prevalent among soldiers in the trenches, and in all probability still more prevalent among civilians in this country. No doubt most of the cases of jaundice, catarrhal jaundice, mild fever with jaundice, and some cases of so-called bilious fever are due to rat-borne infection.

Rats are responsible for plague, both ordinary bubonic plague and pneumonic plague. They also cause a disease that is more prevalent than we think—namely: rat bit fever.

Both New Orleans and San Francisco have proven that rats can be eradicated. They are a danger, a nuisance, and a source of great waste, and yet we do not have to put up with them.

The best rat trap is the ordinary inexpensive snap or guillotine trap. The kind with metal bases is not efficient, since rats avoid it. The traps should be set on rat runs and at rat burrows. Dry oatmeal is a good bait. Place a few grains on the trigger and a few nearby. At least fifty snap traps should be set all the time on a badly infested farm.

A wire cage trap is good if properly baited and managed, but it does not compare with snap traps in efficiency. Rat terriers are effective. Cats are not. Strychnine is the safest rat poison, according to Bell. But the only satisfactory method in the long run is ratproofing.

Concrete and cement are the keys to the situation. When the federal and state governments co-operated to make sections of San Francisco and New Orleans ratproof, they did not waste much time with other methods. They caught as many rats as they could, but the great bulk of their effort consisted in tearing out rat infested basements and foundations and replacing woodwork with concrete. Concrete floors, concrete walls, and concrete pillars were built. Rat holes and cracks were filled up with concrete. Wooden walks were torn up and replaced with concrete. Provisions and grain were kept in wire covered cages. Tin barriers and tin collars were made use of in places.

In the fight on rats the natural enemies of the pest should be fostered. Snakes, hawks, owls, skunks, and weasels are great ratters, and, instead of being shot at, should be welcomed around the barn and should be unmolested in the field.

"As usual, I'm undecided about my vacation."

"Hesitating between mountains and seashore, eh?"

"No, between munition factory and farm."—Kansas City Journal.

A Colorado paper prints this bit of intelligence—George Bacon and Frank Eggs of Pine have started a restaurant at Shaffer's Crossing in the Platte Canon district. The firm is Bacon and Eggs.

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Total Annual Income Exceeds	57,000,000
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Total Fire Losses Paid	204,667,570
Deposit with Dominion Government	1,323,333

(As at 31st December, 1917.)

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CANADA LIFE
TORONTO

"A Little Nonsense Now and Then"

First German Soldier—Who was the officer that kicked you in the face? Second German Soldier—That was my professor of ethics at the university.

Mrs. Noel—My husband has had dyspepsia dreadfully lately.

Mrs. Nock—I am so sorry, but I had no idea you were without a cook.

She—Some people don't know what's good for them in this world.

He—And some people do know, but haven't the price to get it.

"Pa, I learned four new French words to-day."

"Did you, my son? What were they?"

"Grenade, village, envelope, and locomotive."

"And what are they in French?"

"The same."—Boston Transcript.

"My wife has taken up singing. And she can't sing," complained the Louisville man, according to the Courier-Journal. "Don't come to me with your trivial troubles. My wife has taken up barefoot dancing."

A certain admiral whose addiction to strong language is well known in the navy was one day inspecting one of the ships under his command, relates Life. When he came to the brig (ship's jail) his piercing eye travelled from one to another of the prisoners, who were evidently ill at ease under his scrutiny. "What the — are you in for?" he demanded of one. "For using profanity, sir," was the meek reply.

The country boarder from Boston had risen early and taken a stroll. Returning an hour later he met the farmer.

"Well, young man," remarked the latter, "been out to hear the haycock crow, I suppose." And the sly old farmer winked at the hired man.

The Boston man smiled. "No," he said suavely, "I've merely been out tying a knot in a cord of wood."—Nelson News.

The funny side of the service regularly appears in the letters of Private H. W. Chapman, Company D, 101st Engineers, who writes to his parents: "I'll admit the war is a joke and it's all on the Kaiser, but it's no joke when Fritz knocks down the wire you have put up only two hours before. Still each shell he uses would buy a good-sized Liberty Bond and we put the wire up for \$1.10 a day, so I guess the laugh is on him at that."

The Irishman came home beaming.

"Bridget," he said, "I've got a job."

"Glory be!" said Bridget, who was tired of supporting the family.

"I shall want a new suit," said Murphy then. "An' yez can pawn me nightshirts to get it."

"Your nightshirts!" gasped Bridget.

"Sure," said Pat. "An' what for should I be wanting them when I've got a job as night watchman and can only sleep in the daytime?"

A certain Canadian battalion was under orders to proceed overseas, and one of its members, whom we will call Private Jones, had committed an offense—refused to obey an order given by an N. C. O., relates Judge. He was brought before the officer commanding and the punishment given him was that he be marched before the whole battalion carrying his full pack. After being marched up and down and between the files for about half an hour, the O. C. stopped him and said: "Well, Jones, what do you think about it?" Jones replied: "Well, sir, they are the rottenest bunch I ever inspected."

"I have here," began the hawk, "a patent electric hair brush—"

"Can't you see I'm bald?"

"Your wife, perhaps, might—"

"My wife wears a wig."

"Possibly you have a child who—"

"I have. Two months old, and still bald."

"Ah—but maybe you have a dog. I can recommend this brush for man and beast."

"Look here, my good man, ours is a Mexican hairless dog. Good day."

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"I Wish I had Taken Twice as Much"

Nothing is more often repeated in letters received at our office than the expression, "I wish I had taken twice as much insurance while I was about it." When endowments, dividends or cash settlements are paid, the assured very often acknowledges the remittance with that remark. The truth is very few men take as much life insurance as they can reasonably carry—and repentance often comes when additional insurance is not procurable. Probably every reader of this paper believes in life insurance and carries more or less of it, but one should ask himself the question, "Am I carrying as much insurance as I can afford?" If the policyholders, who are now entering the company could read the evidence of gratified policyholders and beneficiaries, they would make a great effort to increase the amount applied for—and existing policyholders would double the amount of their protection. "One word more"—What income would your present insurance yield the beneficiary at, say, 6%.

**THE MUTUAL LIFE ASSURANCE
Company of Canada**

WATERLOO

ONTARIO

COMMODITY MARKETS

Week's Wholesale Review

Dun's Bulletin, says of last week's Montreal trade: "The recent frosty nights are evidently making people think of their winter needs. Dry goods men report a lively demand for goods, and both travellers' and house orders are being booked in goodly volume. New price lists for spring prints are out, showing an advance of from 2c to 3c a yard. New quotations for general lines of cottons are still being held back, but are expected at any time. Some of the shoe manufacturing concerns are fairly busy, more particularly those having orders in hand for military footwear, but, owing to the advanced prices for spring lines, jobbers and retailers are backward in placing orders.

In the leather market there is nothing specially new, the local demand being moderate, but all prices are firmly held.

The sugar situation is becoming more serious, and as the International Sugar Commission has evidently decided to still further curtail the allotment of raws for the balance of the year, some of the refineries have been shut down for lack of stock. One of the local companies has advanced its quotation for standard granulated to \$9.50, figures which have been adopted by an outside concern, but the other local refineries maintain their quotations at \$8.75 and \$9, respectively. Stocks of molasses are still very light, and bobbing prices are held to from \$1 to \$1.02 a gallon. A further advance has been advised in soap of 25c a box. Coffee prices have also been advanced. Cattle, hogs and butter show a firmer tendency.

General payments are well maintained, and the money market presents no new features. Bankers report ample funds for all regular commercial purposes, at unchanged rates. For all funds the regular rate remains at 6 per cent."

Bradstreet's Montreal Weekly Trade Report says: "Manufacturers of different lines of dry goods, especially the cotton mills, state that it will be many months before they can catch up with the orders now on their books. The Government requirements are so large that manufacturers find it difficult to get their looms working on trade orders. Prices continue upward, and wholesale jobbers find they cannot place any more orders with the mills for some time, and are what stock the jobbers have on hand, rapidly being picked up. Manufacturers of window shades find it difficult to get adequate supplies of fabric for their industry. Tweeds and worsteds are almost impossible to buy, and what can be had are commanding very high prices. Linoleums and floor oilcloths are not quoted, these lines being off the market, as manufacturers cannot secure the raw material.

"There is a scarcity of molasses, and prices have again been advanced. No more supplies will come on to the market until the next new crop. Leather and hide market is unchanged with fair supplies offering. Some large orders for machinery were placed during the week, one house booking an order for over \$200,000.

"Most of the flour mills are again in operation, while those who have not started yet, expect to do so in a few days. One of the sugar refineries advanced prices this week 40 cents per hundred pounds on all grades.

"There have been a number of estimates given on the wheat crop of the West, varying from \$125,000,000 bushels to 290,000,000. Authorities in this city are still of the opinion, however, that the crop will be around 200,000,000 bushels.

"The retail trade has shown quite an improvement during the week. Remittances are coming in well, and city collections continue to improve.

COUNTRY PRODUCE.

BUTTER.

The butter market developed a strong tone last week, and wholesale jobbing prices showed an advance of 1 cent per lb. over those of the previous week. On Saturday at the Board of Trade auction sale, competitive buying forced prices from 1c to 1 1/4c per pound above those of the previous week. Saturday's wholesale jobbing quotations were marked up to 47c to 48c per lb.

We quote wholesale prices as follows:

Finest creamery	0.43 1/2	0.44 1/2
Fine creamery	0.43 1/4	0.43 3/4
Finest dairy	0.36	0.37
Fine dairy	0.36	0.37

CHEESE.

There were no changes last week in the cheese market. Local trade was comparatively active at 23c to 24c per lb. for small lots in a wholesale jobbing way.

The Dairy Produce Commission is paying the following prices:

No. 1 cheese	0.23
No. 2 cheese	0.22 1/2
No. 3 cheese	0.22

EGGS.

Receipts for the week were 5,004 cases, against 6,226 cases a year ago, and for the period from May 1st, 1918, to September 14th, 1918, receipts were 199,072 cases, against 218,035 in the corresponding period a year ago. A good demand for immediate consumption with arrivals just sufficient to meet demands kept the local market very firm.

We quote wholesales jobbing prices as follows:

Strictly new laid	0.56
Selected new laid eggs	0.52
No. 1 stock	0.47
No. 2 stock	0.45

Ontario country shippers report a much improved demand, sales are reported at 44c to 46c to gatherers f.o.b. cases returnable and 43c to 44c to stores and circles getting up to 49c. Receipts are falling off rapidly and it will not be long before the bulk of the trade will have to depend upon storage stock. Montreal is getting a quantity of Western eggs which help out the shortage.

There has been some inquiry at Toronto from British Columbia for storage eggs for October and November shipment. So far only one car is reported sold.

The Western situation has firmed up slightly during the past week. There is a shortage of current receipts, and in nearly all large market centres short held storage eggs are making their appearance on the market and being used in place of new-laid. Harvesting and moulting has caused a heavy falling off in fresh gathered. The present feed situation and the prospects for winter feed are not conducive to large flocks being carried over the fall and winter, and as a result conditions at the present time in some western sections point to a continued shortage of eggs throughout the balance of the season. This seems to apply particularly to northern Alberta. The carlot movement from Manitoba to the East continues, and last week two cars were reported rolling to Montreal. A car of fresh firsts was sold to Vancouver at 44c f.o.b. Winnipeg.

From Prince Edward Island come reports of good trading. Receipts are light, though they seem heavier in proportion than in other parts of Canada. There is a brisk inter-provincial movement of P.E.I. eggs costing 45c-47c f.o.b., Charlottetown, these moving to Nova Scotia, New Brunswick and Quebec points.

The United States markets are firmer, and the outlook is healthy for the firmer grades of fresh gathered. Storage stocks are beginning to move into consumption freely.

No further information is to hand with regard to the offers made by the British Ministry of Food reported last week.

A report from Chicago states that the British Ministry of Food through the Allied Buying Commission at New York have stated that they are open to buy seven hundred cars of United States eggs on a basis of 49c delivered at ships side, New York. So far, it is said few sales have been consummated as many dealers are afraid of the official inspection and the conditions of sale.

The following appears in the August 28th issue of the "New York Produce Review & American Creamery":

"Evidence that the British Government would take a considerable quantity of storage eggs from this country during the fall, has become more positive during the past week by the submission to a number of New York merchants by a prominent export house, of blank forms of contract upon which offers of storage eggs may be made under the specifications stated.

The contract is to be made between the seller and his Britanic Majesty's Government through the British Ministry of Food in U.S.A.

The grade specified is 'New York storage packed firsts or Chicago storage packed extras, laid during the months of March, April or early in the month of May, 1918, according to section.' The net weight is to be at least 4 1/2 lbs.

The seller must guarantee the grade and weight and the exclusion of all rots, spots, leakers, dirties and heavy floaters.

The packing is to be in the Continental cases (1-440 eggs to the case) or in heavy 30 dozen export cases with new, heavy fillers and flats, excelsior pads top and bottom. The cases must be clearly marked according to buyers' instructions.

The buyer reserves the right to have one or more inspectors at the works of the seller at all times prior to the shipment of the eggs to storage (repacked) for inspecting and observing the sorting and packing and to ascertain compliance with the specifications. The eggs shall also be subject to final inspection at point of shipment by candling not less than 2 1/2 per cent of each entire shipment."

POULTRY.

Poultry has come along much more freely in Eastern Canada during the past week, some dealers reporting having found it necessary to put down their quotations as they claim present prices are too high for storing. On the other hands, shippers at country points say the demand is brisk, and they have been able to make sales at an advance over general quotations received by circular. Buffalo is taking considerable live poultry from Western Ontario points. Dealers say they netted as high as 28c for live ducks on the Buffalo market. The United States poultry markets are reported firm with a good demand, notwithstanding receipts have been very heavy.

POTATOES.

Although prices of potatoes remain unchanged, the market is slightly easier, as the demand was steady and supplies were good, a steady trade was done at \$1.55 to \$1.65 per 80 lb. bag, wholesale, to jobbers.

LOCAL FLOUR.

An active trade in spring wheat flour is reported with the demand somewhat ahead of the supply at the recent advance of 40c per bbl. A fair trade was done in Government standard grade spring wheat at \$11.35 per bbl. in bags in car lots f.o.b. Montreal, and at \$11.45 delivered to bakers. A fairly active business passed in winter wheat flour at \$11.60 per bbl. in small jobbing lots in new cotton bags and at \$11.30 in second hand jute bags, ex-store.

SUBSTITUTES.

Government standard corn flour was lower last week, sales being made in broken lots, at \$10.50 to \$10.55 per bbl. in bags. Supplies of barley flour were more abundant and prices were 50c per bbl. lower with sales at \$11.50 to \$11.60 per bbl. in bags delivered. Rye-flour was steady at \$12.00 to \$12.25 per bbl. Sales of oat and white corn flour were reported at \$12.00.

BUTTER AND CHEESE RECEIPTS.

Receipts of butter and cheese at Montreal for the day, week and season, with comparisons, follow:

	Butter, pkgs.	Cheese boxes.
Week ending Sept. 14, 1918	10,352	59,065
Week ending Sept. 7, 1918	15,160	63,308
Week ending Sept. 15, 1917	9,580	72,594
Total receipts May 1 to September 14, 1918	301,066	1,268,663
Total receipts May 1 to September 15, 1917	244,519	1,302,919

GRAIN AND FLOUR STOCKS.

Stocks of grain and flour at Montreal on the following dates were:

	Sept. 14, 1918.	Sept. 7, 1918.	Sept. 15, 1917.
Wheat, bush.	2,315,572	1,975,916	872,600
Corn, bush.	376,197	122,271	23,201
Peas, bush.	41,420	41,420
Oats, bush.	3,272,967	3,591,253	730,175
Barley, bush.	376,027	387,489	4,986
Flour, bbls.	3,563	17,395	55,164
Meal	165	165

RECEIPTS OF EGGS.

Montreal receipts 1916-1917-1918.			
	1916.	1917.	1918.
January	11,949	2,708	6,032
February	15,742	12,120	8,043
March	28,669	35,489	31,390
April	72,440	50,896	50,570
May	80,886	82,441	61,668
June	93,046	70,829	59,676
July	76,233	22,764	38,057
August	13,372	4,824	6,128
August	8,790	6,191	7,026
August	8,648	6,597	7,689
August	8,710	7,297	7,833
Total to August 31st.	418,485	309,534	292,322

EGGS IN STORAGE.

Montreal Storage	Aug. 31,	July 31,	Aug. 31,
	1917.	1918.	1918.
Stocks	6,379	3,884	3,933
Fresh	114,549	83,198	93,753
Cold Storage	Nil	4,500	Nil
Pickled	Nil	4,500	Nil

LOCAL GRAIN.

Favorable weather reports throughout the country as well as from the United States led buyers to hold off hoping for lower prices. The future market for oats at Winnipeg closed fractionally higher.

Fluctuations in grain on Saturday at Winnipeg were:

Oats:	
No. 2 C. W.	0.85½
No. 3 C. W.	0.81½
Extra No. 1 feed	0.81½
No. 1 feed	0.80
No. 2 feed	0.76
Barley:	
No. 3 C. W.	1.05
No. 4 C. W.	1.02
Rejected	0.95
Feed	0.95
Flax No. 1 N. W. C.	3.97½

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Apply to Local Agents or
THE ROBERT REFORD CO. LIMITED
General Agents
20 Hospital Street and 23-25 St. Sacrament Street,
Montreal.

PUBLIC NOTICE

"LE PLACEMENT NATIONAL, LIMITEE."

Public notice is hereby given that, under the Quebec Companies' Act, letters patent have been issued by the Lieutenant-Governor of the Province of Quebec, bearing date the twenty second day of August, 1918, incorporating Messrs. Arthur William Brodeur, accountant, Alice Brodeur, stenographer, Charles Brodeur, electrician, Joseph Napoleon Cabana, agent, and Joseph Amadee Thoin, advocate, of Montreal, for the following purposes:

To buy, sell, exchange or otherwise deal in all kinds of bonds, debentures, property, lands, mortgages, hypothecs and securities;

To take, hold, give and renew mortgages, hypothecs, liens and charges, to secure payment of the purchase or sale price of any property sold to or bought by the company or any money due or advanced to or by the company to purchasers or vendors of properties or dependencies;

To issue and allot fully paid shares, bonds or debentures of the company in payment or part payment for any property, mortgage, hypothec, business, rights, privilege, lease, license, contract, which this company may deem advisable to acquire;

To sell, exchange, or otherwise dispose of the shares of the company for such consideration as the company may see fit, in particular for immovables, moveables, hypothecs, bonds, debentures, shares, claims, rights, licenses and powers;

To carry on wholesale and retail any kind of business except the building and operating of railways;

To acquire by purchase, exchange or otherwise shares, stocks, bonds, debentures and securities of any other companies, firms or corporations, and to dispose of the whole or part thereof by way of sale, exchange or otherwise, on such terms and conditions as may be agreed upon, including the guaranteeing of the principal, interest and dividends attached thereto or any part of such securities and to enter into any agreements respecting such shares and other securities which may be deemed fit;

To act as agent and broker, to exploit real estate and anything subsidiarily connected therewith, to negotiate loans and invest capital, insurance matters, exploit the stocks in trade of any industrial or commercial company, to always carry on as such the business of bonds, debentures or other securities of any industrial and commercial company, firm, person, corporation or government;

To apply the funds of the company for the purchase of shares or stocks, bonds, debentures or other securities of any other companies or corporations;

To acquire by purchase or otherwise, take on lease any moveable or immovable property, rights and immunities which the company may think necessary or useful for the purposes of its businesses, or which may be pledged with the company or on which it may hold a lien or hypothec, and to give in payment of such property, rights and privileges, or for work done or for services rendered to the company, cash or bonds or shares of the company;

To undertake construction work of every kind and description and generally carry on the business, work and enterprises of contractors and builders; to supply tenders, plans, estimates and specifications and any other details and data relative to work and buildings of every description;

To acquire, hold and own any moveable and immovable property that may be necessary or incidental to the carrying out of any of the powers granted to the company and sell, lease or otherwise dispose of the said properties;

To acquire the property, rights, undertaking and assets of every description of any and all persons, incorporated companies or otherwise and carrying on businesses and undertakings whose purpose shall be the same as that of the company and within the limits of its powers and for any consideration including even paid up shares of the company;

To acquire under any title whatever mines, mining rights, timber limits, patents or invention of every kind and deal in same under every form, to acquire under any title whatever and establish lighting systems of any nature whatsoever, employ the funds of the company in whole or in part for the purchase of shares of other companies or for the acquisition of the assets and goodwill of any firm or person;

To promote, organize, manage or develop the business or assist in the promotion, organization, management or development of the business of any persons, corporations, companies, syndicates or undertakings;

To act as agent for the purposes of registering, issuing, countersigning and certifying the transfers and certificates of shares, stocks, bonds, debentures or other obligations of any other associations, corporations or companies;

To borrow money on the credit of the company, issue bonds, debentures or other securities of the company and to pledge or sell the same for such price and amount deemed appropriate provided each such bond, debenture or other security be not for a less sum than one hundred dollars;

To hypothecate or pledge the immovables or pledge the moveables of the company, or give both the above kind of securities to guarantee the payment of the bonds, debentures or other securities and of any loans made for the purposes of the company;

To give through its officers to one or more trustees, to secure the payment of the bonds, or debentures, a hypothec on the immovables of the company, mentioning therein the issue and amount of the bonds or debentures thus guaranteed;

To do all such other matters and things not here specified but that may be incidentally done for the purposes of the company, or that may be useful to more perfectly and completely exercise all the powers granted to the company;

To sell, exchange or dispose of the whole or part of the aforesaid properties, securities or rights, on

CONTROL OF THE SALMON INDUSTRY.

One of the latest articles of food to be affected by Government control is the British Columbia salmon output, and the civilian trade of the Dominion will have to be content with about 30 per cent of her usual requirements. The pack of sockeye salmon on the Fraser River, and in the northern part of B.C. was disappointing this year, and only a fraction of the domestic orders could have been filled if all the catch had been available.

Last year the needs of the trade were satisfied to some extent by shipments of Alaska salmon, but this will not be available this year, as it has been commandeered by the U.S. Government for shipment overseas. The situation seems likely to be continent-wide, as there is every indication of a salmon famine in the United States, where the food administration has communicated with packers advising them to reserve their entire pack of pound red and pound tall reds, medium reds, Cohoes and pinks.

Approximately one and a half million cases of salmon will be packed in British Columbia this season, according to a statement issued by the canning interests. The Government requirements are not yet known, but it is taken for granted that only a small number of civilian orders will be filled.

SALMON NEEDED IN EUROPE.

The embargo as originally drawn up prevented the distribution of salmon in the Dominion, but as modified at the close of last week, one-quarter of the pink salmon will be released for consumption within the Dominion. The representatives of the Imperial Ministry of Food on the Pacific Coast gave as the reason for the embargo that the Food Board considers that the public in Canada has a sufficient variety of other foods to be able to forego the use of canned salmon, so that this product will be available for consumption in Europe.

Permits for transportation have not yet been granted for thousands of cases of salmon of the 1917 pack that were sold to wholesalers in the United Kingdom through the usual trade channels. These goods have been stored in warehouses and have created a rather complicated situation for the canning industry, as storage room is likely to prove inadequate.

Railways have received instructions not to move canned salmon, except as provided for by the Government. The 1918 pack is estimated at 1,500,000 cases of all varieties, by the B.C. Salmon Cannery Association.

The latest information to reach the East is that the Government will release twenty-five per cent of the pink "talls" for Canadian trade. This salmon has not met extreme favor in the past, but this is practically all that will be available, except for the slim stocks of sockeye left over from last year. A few cars of sockeye were shipped from British Columbia before the restrictions were imposed by the Government. The commandeering of vessels to carry salmon to Europe made it evident that the Imperial Government was in earnest about securing British Columbia salmon for the army.

the terms and conditions that the company may deem fit; to distribute among the members of the company in kind, any shares, bonds, debentures, securities or property belonging to the company;

The directors may defray out of the funds of the company any expenses incurred in forming, registering and advertising the company, and remunerate any person or company for services rendered or to be rendered in the placing of the shares of its capital stock, debentures or other securities;

To do all such acts as may be necessary for the undertaking and carrying out all the business which the said company is empowered to carry on, and for all services or labor performed to charge, collect and receive any appropriate, legal or ordinary remuneration, and the costs and expenses incurred;

To pay for any expenses in connection with the organization of the company or for services rendered by the promoters or others, either in money or paid up shares of the company or with both as ordered by the directors;

The powers granted in any paragraph hereof shall not be restricted or limited by reference to or inference from the terms of any other powers granted to the company, under the name of "Le Placement National, Limitee," with a capital stock of forty nine thousand five hundred dollars (\$49,500.00), divided into nine hundred and ninety (990) shares of fifty dollars (\$50.00) each.

The principal place of business of the corporation, will be at Montreal.

Dated from the office of the Provincial Secretary, this twenty second day of August, 1918.

ALEX. DESMEULES,
3316-35-2 Acting Assistant Provincial Secretary.