THIRD ANNUAL REPORT

OF THE

DEPARTMENT OF INDUSTRIES

OF THE

PROVINCE OF BRITISH COLUMBIA

FOR THE

YEAR ENDING DECEMBER 31ST

1921

PRINTED BY
AUTHORITY OF THE LEGISLATIVE ASSEMBLY.

VICTORIA, B.C.:
Printed by WILLIAM H. CULLIN, Printer to the King's Most Excellent Majesty.
1922.

To His Honour WALTER CAMERON NICHOL,

Lieutenant-Governor of the Province of British Columbia.

MAY IT PLEASE YOUR HONOUR:

The Third Annual Report of the Department of Industries of this Province is herewith respectfully submitted.

JOHN OLIVER,

Premier.

Premier's Office,

February 4th, 1922.

DEPARTMENT OF INDUSTRIES,

VICTORIA, B.C., February 4th, 1922.

The Honourable John Oliver,

Minister of Industries, Victoria, B.C.

DEAR SIR,—In pursuance of section 9 of the "Department of Industries Act," I enclose herewith Annual Report.

Yours truly,

D. B. MARTYN,

Industrial Commissioner.

Report of the Department of Industries.

To the Lieutenant-Governor in Council,
Victoria, B.C.

SIR,—In accordance with the "Department of Industries Act," I have the honour to submit the following report. It contains:—

(1.) General Review.
(2.) New Industrial Development during the Year 1921.
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  (*b.*) Automobile Tire and Tube Factory.
  (*c.*) British Columbia Magnesite.
  (*d.*) Abrasive Papers.
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(3.) Industries possible of Immediate Development in British Columbia.
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(8.) Directory of British Columbia Products.

(1.) GENERAL REVIEW.

Applications for loans exceeding 1,000 in number were made to the Advisory Council to the Department of Industries to the end of 1921. Loans to seventy-six industries were recommended. Of this number, ten were not in a position to comply with the conditions laid down by the Advisory Council, and have consequently been unable to take advantage of the assistance recommended. Six enterprises assisted by the Department of Industries have repaid the amount of their advance in full and the Department is now interested in sixty industries.

During 1921 the total sales of these industries amounted to $1,560,584; number of employees numbered approximately 800 to 900 persons. This shows a decrease of 20 per cent. from the previous year. Very few industries operated at a profit during the year. The industries assisted by the Department were in arrears at the end of 1921 as follows:—

Principal	$73,498 37
Interest	22,100 57
Total	$95,598 94

The Advisory Council for the year 1921 was composed of Major Donald B. Martyn, Deputy Minister of Industries, Chairman; Major R. J. Burde, M.C., M.L.A., Port Alberni; F. G. Dawson, Prince Rupert; Joshua Kingham, Victoria; James H. McVety, Vancouver; J. E. W. Thompson, Vancouver; Nichol Thompson, Vancouver.

During the year the Advisory Council to the Department of Industries held two meetings to consider the work and applications submitted to the Industrial Board. In view of the general industrial depression the Board curtailed the granting of financial assistance to industries, the opinion being that the time was not opportune to establish new enterprises when assisted ones were experiencing difficulty in obtaining orders, and at the second meeting of the Advisory Council the granting of further loans was suspended, except to industries in which the Department was already interested or those previously under advisement by the Board.

In the month of August the Advisory Council carefully reviewed the various enterprises assisted, and was of the opinion that in many cases previous recommendations as to the time of repayment of principal and interest on various loans came at too soon a period after the launching of the enterprise to admit of proper development of the industry. These repayments were made additionally difficult on account of the present industrial depression, and the Advisory Council recommended to the Minister of Industries that he grant extensions of time in respect to the repayment of principal and interest in all undertakings where the persons connected with the business were showing a determined effort to fairly develop their enterprise without seriously impairing the security held by the Department.

During 1921 the basic industries—lumbering, mining, fishing, and pulp and paper—have experienced a period of depression never before so generally known in the Province. The low mark of activity was reached in August. Since that time a steady improvement has taken place. Recovery of business conditions no doubt will be very gradual, but the present favourable upward tendency of the shingle and lumbering industries is creating a favourable reaction in other lines. Lumbering being the chief industry of the Province, continued orders will make for a general improvement.

The large pack carried by the canneries in British Columbia made it impossible for the packers to operate extensively during the year 1921. The fishing industry was consequently hard hit, but in this respect there is reason for more optimism for future prospects, in that towards the end of 1921 a great proportion of the surplus fish-pack had been disposed of and the outlook for 1922 in the fishing industry promises much more activity than in the past year.

The growing feeling of optimism, while possibly based to some extent on a desire for better conditions, is founded on a general improvement in the fishing, mining, lumbering, pulp and paper, and other industries of the Province. This improvement is not as yet sufficiently pronounced to affect weak and struggling industries, but the improvement is steadily taking place and should be sufficient towards the middle of the coming year to produce much better conditions.

In spite of general depression, the year 1921 was marked by a distinct enlargement of the industrial horizon of British Columbia that augurs well for the future, and many new enterprises for the manufacture of articles and materials not previously made in British Columbia were inaugurated last year. Some of them, being basic industries, admit of further development in allied enterprises.

(2.) NEW INDUSTRIAL DEVELOPMENT DURING 1921.

(*a.*) DEVELOPMENT IN THE COPPER INDUSTRY.

The outstanding development of the year has been the installing of a copper-rod mill at Trail by the Consolidated Mining & Smelting Company of Canada, Limited. For many years the copper production of British Columbia has ranged high in the total of the Dominion, but no effort to further manufacture copper products has been made in British Columbia until the present installation at Trail. The products of British Columbia in reference to copper have in the past consisted of blister-copper from Anyox, copper concentrates from Britannia, and blister and refined copper from Trail.

The construction of the copper-rod mill to further manufacture the refined copper was started by the Consolidated Mining & Smelting Company of Canada, Limited, in 1920 and completed in July of this year. The main building is a substantial structure of steel and concrete, built and equipped at a cost of $250,000. The mill is of the Hoagland type and set according to the usual practice, with roughing-rolls near the bar-heating furnace and intermediate and fine rolls in a straight line. On either side of the rolling-mill the concrete floor slopes into two pits to facilitate the handling of the wire.

The copper ingots are cast to the required size in the old plant and fed into the rear end of an oil-fired bar-heating furnace by an electrically operated feeder. The heated bar is withdrawn from the furnace and transferred to the roughing-rolls, where it receives the requisite number of passes to reduce it to the size of the finished rod required. The intermediate and finishing rolls reduce the product to rods varying from ⅝ to ¼ inch, in steps of $^1/_{16}$ inch. In addition to this, the company has finishing-rolls for figure 8 rods of $^5/_{16}$ and $^7/_{16}$ inch. Up to the present the mill is not equipped for the production of flats or squares, nor copper plate. These will no doubt be the logical development of the future, together with wire-drawing equipment.

The machinery itself comprises the roughing-rolls, intermediate and finishing rolls, bar-heating furnace, coiler, roll-lathe, and scrap-cutter, together with the auxiliary plant necessary to conduct the operations and handle the product.

A plant of this nature will add an employment of from twenty to thirty men to the pay-roll of this company and provide for a hitherto untouched market in copper products in British Columbia. The ultimate results should be almost as far-reaching in the copper industries as the establishing of a steel-rolling mill would be in the steel industry.

By providing copper rods of the various specifications above the wire and nail works in the Province of British Columbia could at any time commence the further drawing-out of these rods to manufacture copper wire for local or export use. The further development in this line should produce immediate results, as British Columbia possesses the necessary equipment to manufacture the wire. The addition of equipment for rolling copper plates, flats, squares, etc., would make it possible for companies manufacturing electrical equipment in British Columbia to compete and sell their products in the world markets. It is a comparatively easy and inexpensive matter for present electric firms in British Columbia to put in the necessary insulating equipment for the handling of wire in the manufacture of electrical appliances.

The commendable enterprise and confidence in the future shown by the Consolidated Mining & Smelting Company of Canada, Limited, in initiating this new line of work should be a source of inspiration to other manufacturers in British Columbia to grasp the importance of this local source of supply that will enable them to go far afield with British Columbia electrical and copper products, and branch out with further comparatively inexpensive equipment to further complete and manufacture this available natural resource.

(*b.*) Automobile Tire and Tube Factory.

This industry, while not involving the manufacture of the natural resources of British Columbia, supplies a big local demand for materials purchased outside of the Province and in many cases outside of Canada. The Gregory Tire & Rubber Company, Limited, started building operations in 1920 at Port Coquitlam and commenced operations in March of 1921. The company is capitalized at $1,500,000 and has expended up to the present an amount in excess of $500,000 on the first unit of the plant. The company has an industrial site of 11 acres near the Canadian Pacific Railway Depot at Port Coquitlam, and has erected a three-story, solid ferro-concrete building, 180 by 70 feet. This building has been fitted with new and up-to-date machinery procured from the largest rubber centres in the world.

No industry of this nature existed heretofore in Western Canada, and the management of this plant was fortunate in securing the services of experts from other plants in the United States who at that time were experiencing the depression following the boom. It was necessary for these people to train and develop an organization in British Columbia, and so they commenced operations with an output of ten tires per day. This they have gradually increased until at the present time the company produces an average of 125 tires and 200 tubes daily. The company anticipates that by the middle of 1922 it will more than double its output. This plant gives employment to 100 workmen, with a monthly pay-roll in excess of $10,000.

The Department of Industries, in checking over the production of this plant, has in every case received a very favourable commendation on the tire turned out. They are made entirely by hand and each contains an extra ply of fabric. Nothing but the highest grades of raw materials are employed and the best selected Egyptian fabrics used in the manufacture of Gregory tires.

During the latter part of 1921 the company started working on cord tires and has turned out an initial lot of 100. These cord tires have also shown satisfactory results.

The prospects for the future of this company are exceedingly bright. It is the only tire and rubber company west of the Great Lakes, and it is claimed that in that area an amount of over $20,000,000 is expended in tires and tubes annually.

The establishment of this factory in British Columbia has been based on the fact that the raw materials going into the manufacture of tires to a great extent enter Canada and the United States at western ports, and heretofore went East as raw material and returned as manufactured goods. The Gregory people hope by eliminating the double haul to reach a market as far East as any of their competitors.

There are many industries of a like nature that could be started successfully in British Columbia. The future of this company should be reasonably certain, in that lower power rates

are obtained for the operation of the factory than in most cities of Canada, also climatic conditions make for greater labour efficiency of almost 20 per cent., as most of the operations in tire-manufacture are done by hand, and the equitable climate allows the maximum amount of labour efficiency being obtained from employees, both winter and summer.

The product of this plant has been proven by practical tests to be up to the standard, and it is in the interest of British Columbia and Western Canada to patronize and use this tire and so ensure the success in British Columbia of a company that had sufficient energy and resource behind it to start an enterprise of this nature at a time when business generally was experiencing difficulties.

(c.) DEVELOPMENT OF BRITISH COLUMBIA MAGNESITE.

It is claimed that the only deposits of hydromagnesite in the world possessing commercial possibilities exist in British Columbia, and the year 1921 witnessed the first developments in the treatment of this material to produce commercial magnesite. The main deposits of this material are in Cariboo District, along the Pacific Great Eastern Railway, also in Atlin, and for a number of years Mr. Nichol Thompson and Mr. Carew-Gibson, prominent in the mining industry of the Province, have endeavoured to have these deposits opened up and developed. Working samples of the material were sent to the Old Country and other places for treatment, but further development was not carried on owing to the difficulty of burning the material in a commercial manner; hydromagnesite, being in such a finely divided state, blows away when disturbed in the ordinary calcination.

The world's supply of magnesite is mainly from Greece and Austria-Hungary, the large and long-developed deposits of these countries having supplied the world until recent years, for low ocean freights made it possible to ship even crude material as far as North America and Australia. In addition to the European deposits—those of Greece, Austria-Hungary (now mainly Czechoslovakia), and also in Italy, Turkey, Spain, and Russia—other deposits occur near Salem in Madras, Manchuria, New Caledonia, Australia, and South Africa. Deposits in Quebec furnish about 35,000 tons a year—52,688 in 1917—and in recent years there has been greatly increased production in the United States, mainly by California and Washington. Formerly the equivalent of 300,000 short tons of crude European magnesite was shipped annually to the United States. In 1918 only about 40,000 tons of foreign magnesite was imported. Production in the United States, which amounted to about 9,000 tons eight or nine years ago, increased to over 280,000 tons.

At these places the material occurs in rock and earthy formations and is calcined in long rotating cylindrical calcining-furnaces centrally fired with gas or powdered coal. When the material is calcined, in addition to the elimination of the water of crystallization, it is changed chemically by the elimination of the carbon-dioxide gas (CO_2), leaving MgO varying in purity according to the original ore.

If it is desired to produce what is known in the trade as "caustic-burned magnesia," calcination is stopped at a temperature of 800° C. If it is desired to produce what is known as "dead-burned magnesite," the calcination is continued for some time and the heat raised to between 1,500° and 1,600° C., the product being the stable or unchanging form of crystalline magnesia, or "sintered magnesite." This is the form in which it has most commercial possibilities, and in this form is used as a refractory material for the manufacture of magnesite bricks for the lining of steel and electric furnaces; for the making of tile; for the manufacture of artificial stone; for sorrel cement; for tooth-paste and face-powder; or magnesium chloride; for metallic magnesium, an adulterant in the rubber industry; for whitening in paper, pulp, and wool manufacture; and as a paint. It is also used in the preparation of magnesium salts. There is a large and growing market for this material in Canada and the States in the manufacture of flooring and the exterior stucco finish on houses.

Hydromagnesite occurs in an extremely fine powder resembling talcum powder when dried. An average analysis of the British Columbia material shows:—

	Per Cent.
Clay materials, impurities	3
Iron	Trace.
Lime	"
Carbon oxide	30
Magnesia	35
Water	32

When treated in the usual form, as stated before, the material in calcination blows away in fine powder. Another feature of the calcining of this material is that the material turns almost black when partially calcined. This is due to some extent to a small amount of organic matter and serves as an indication to the operators as to the completeness of calcination. The colour of the finished material obtained from hydromagnesite is pure white. This is a decided advantage over the dull grey-coloured material produced from United States calcined rock magnesite.

Early in the year 1921 B. D. White, of the Pacific Roofing Company, became interested in the possibilities of calcining this raw material in the Province, and purchased the claim known as the "White Empress" in Cariboo Mining Division, near Tatton Station, on the Pacific Great Eastern Railway. He engaged the services of Charles E. Oliver, chemical engineer, to design and build a furnace capable of treating this material without the constant loss by present methods. After working for several months a successful experimental furnace was constructed on Granville Island, Vancouver, and from it one of commercial size, which was really a new design of the Godfrey type. It consists of a single annular tunnel with a movable floor. The dimensions of this tunnel are: Inside walls, 19½ feet; outside, 32½ feet; the width of the movable floor is 6 feet.

The hydromagnesite is fed in by a special feed on to this floor and distributed evenly over the area to a depth of not more than ½ inch. This floor is slowly rotating, making a complete revolution in forty-five minutes; both feed and discharge are automatic and continuous and the calcination is complete in one revolution of the floor.

The calcining area is 490 square feet and calcination is effected almost entirely by radiation of heat from the walls and roof of the tunnel. The tunnel is heated from two furnaces (Fuel Conservation Company patent) burning hogged fuel from the lumber-mills. These furnaces are spaced about one-third the outside circumference of the tunnel. A temperature of 1,600° C. is obtained and the material used furnishes very cheap fuel for operation.

The capacity of the calciner is 15 tons of raw material per twenty-four hours, yielding 5 tons of finished product, and the burning is carried on in such a manner that there is not more than 5 per cent. further ignition loss.

The furnace produces material of absolute uniform calcination, and after air-separation the finished product runs constantly under the 5 per cent. loss. By regulation of the feed it is claimed that they can produce material with less than 1 per cent. ignition loss. The operation of this furnace proved very successful and produced a finished product more finely divided than that on the market.

It is claimed by the inventor of the furnace that it is so designed that carbon dioxide (CO_2) can be recovered from the flue-gases of greater purity than from present existing types. He has plans under way by which the company can refine the present raw material to produce chemically pure magnesium carbonate and calcined oxide.

The deposit of the White Empress Mine, which is being worked by the Cariboo Mining Company, is estimated to contain 50,000 tons of pure hydromagnesite. In addition to this, there is a large tonnage carrying a percentage of lime and other impurities. This company is being financed and developed by the Pacific Roofing Company, Limited, of Vancouver. It has the special features of the furnace and process protected by patents and is now equipped to produce and market 5 tons of calcined magnesite per day.

Magnesium cement is from three to five times stronger than Portland cement and considerably lighter. It does not expand or contract when set; it is absolutely fire-proof. It is the best-known non-conductor of heat or cold and when made into wall-board is a fairly sound-proof material. When used for exterior stucco-work it sets like rock and is water-proof and frost-proof. It is used for flooring and covering on the decks of most vessels, also for public buildings, bath-rooms, and kitchens. Handled by an expert, it makes a magnificent imitation marble that can rarely be detected from the real article. It has been used for plastic work in ornamenting public buildings, theatres, etc., in Canada and the United States for some time.

(*d.*) Abrasive Papers.

The fact that Canada imports annually $500,000 worth of sandpaper induced J. L. Near, of Victoria, to investigate the possibilities of manufacturing this product in British Columbia. He started in a small way, manufacturing experimental batches of sandpaper in his own home. At first the abrasive material which he used was broken glass bottles, which he had crushed and sifted to the various sizes. The graded grains of glass were then taken and applied to the

sandpaper by hand and a fairly successful material turned out. There was much to learn in the experimental stages of this industry.

The Department of Industries became interested in the possibilities of this industry, and the Government Mineralogist gave assistance in examining various kinds of quartz and other abrasive materials.

A syndicate in Victoria expended an amount of $9,000 in further experimental work to determine by practical experiment the grades of paper best suited for the various flint, sand, and garnet paper, the quality of the glue required, and the cutting quality of the various materials. These requirements were all finally determined to the satisfaction of Mr. Near, and he succeeded in turning out a sandpaper that would stand up to any on the market; also a garnet-paper that the mills thoroughly tested out on their drum-sanders and found it had an average wearing quality with any on the market.

A company was then organized, known as the Western Abrasive Paper Company, Limited, and in 1921 commenced the installation of the present plant at 913 Mason Street, Victoria. J. L. Near is managing-director of this company, which has installed an up-to-date sandpaper plant at a cost of $25,000. The manufacture of the sandpaper consists of three operations and the plant accordingly is arranged in three departments. The first department consists of the crushing and grading of the abrasive materials, the second department the actual making and drying of the sandpaper, and the third department the cutting-up and packing of the materials.

It was found, on preliminary investigation of this industry, that there were no machinery-manufacturers in North America specializing in the making of sandpaper machinery and equipment. Each plant in this industry has been specially designed, and on this account it was difficult to get this industry under way, in that they had to embody the ideas in their machines that were worked out by practical experiment.

With the exception of the big manganese crushing-rolls, all other machines used in this plant were made in Victoria from designs prepared by Mr. Near.

The abrasive material used for sandpaper is a very hard crystalline quartz obtained from the Prince Rupert District, and when tested out has proven to be of the hardest quality. The company has a lease on eleven garnet claims at the mouth of the Stikine River. The company in the summer has a number of men working these claims, and the material is taken out and shipped to Victoria, where it is crushed and graded to the various sizes required.

The making-machine prints, glues, and sands the paper at a rate of 100 lineal feet per minute. The widest paper used is 40 inches. As the paper leaves the machine it is carried up an inclined plane on rods and a festoon is formed which moves slowly forward. This process is continued until the drying-rack is filled with closely festooned paper, so arranged that none of the abrasive surface touches on anything. The making-machine moves back and forward in the plant, filling the various racks in the drying-room.

After the paper is thoroughly dried it is rerolled and taken to a winding-machine in the packing department, where it is split and cut up into sheets the required width and size. The splitting and cutting-up is done by a machine specially designed by the manager. The paper used in the industry is a heavy-touch kraft paper, made at Ocean Falls.

The mills of British Columbia and the building trade annually use a large quantity of sandpaper, approximately $75,000 worth. This company has just started to break in on the market and its product has been carefully tested by an initial outlay of over $9,000 to build it up to the best grades in existence. The users of sand and garnet paper can confidently rely on the material turned out from this plant as being the equal of any on the market.

In addition to the British Columbia requirements, this company is looking forward to export and Eastern Canada markets.

(*e.*) STARCH AND POTATO-FLOUR.

A new industry established in British Columbia in 1921 of considerable interest to the farmers of the Fraser Valley is the Dominion Starch & Dextrine Company, Limited, with a plant on the water-front at New Westminster. This company manufactures starch and potato-flour.

For many years potato-flour has been in use in Europe and is fast becoming a staple food in Canada. The chief producer of this material in the past has been Germany. During the war several plants commenced operations in the United States and are now successfully supplying considerable of the requirements of that country.

During the year 1914 Canada harvested 90,000,000 bushels of potatoes, and in spite of the fact that none of this output was manufactured into starch or potato-flour, 10,000,000 lb. of starch and starch products was imported. That fact, together with local conditions in British Columbia that make for a big acreage yield of potatoes, pointed out to various financial men in Vancouver and New Westminster the possibility of this industry in the Fraser Valley. The raw material used is culled potatoes, which enables the farmers to dispose of this hitherto waste product at a fair rate. At the commencement this company paid an amount of $12 per ton for culled potatoes. In this way the grower is able to obtain a fair price and thereby dispose of the higher grades at a more reasonable figure. The operations of this industry would tend to stabilize the growing of potatoes in the Fraser Valley and make it a little less of a gamble than it is at the present time.

The process employed in this plant consists of first putting the potatoes through a thorough cleansing process, and in the case of those required for flour they are taken to a peeler and all skin removed. From the peeler the potatoes go to the steam-cooker and from there to a mashing-machine, which feeds them to the flaking-machine. This operation requires careful attention, as too much heat or improper adjustment of the rollers will produce an inferior product. The potatoes are discharged from the rollers in thin white flakes, dry and ready to be ground, and bolted through silk cloth, so the finished product is similar in consistency and fineness to the best wheat-flour.

The manufacture of starch is an entire cold process, except the drying. After the potatoes are washed they are put through a disintegrating-machine; then again washed through revolving screens until free from pulp and impurities, and graded by flotation through long tanks. After the starch has settled out the water is drained out and the starch put through a centrifugal or filter press, where all the surplus water is removed before going to the dryer. The starch is now snow white, partly powder, partly lumps. It is therefore necessary to powder it and put it through a sifting-machine before it is ready for the market. For special purposes it is pressed in blocks and broken up and sold as lump starch.

From this starch, by a roasting process, dextrine is made, of which Canada imports between 4,000,000 and 5,000,000 lb. per year. Dextrine is used by the textile-manufacturers as a dressing and by calico-printers as a vehicle for colours, also used in the manufacture of gum-paste, sizing, paper and paper boxes, wall-paper, etc.

At the present time one complete unit is in operation with a capacity of 15 tons of potatoes per day. The company has space available for five additional units and will give employment to ten persons per unit.

The raw material for this industry is grown extensively in British Columbia, while all the machinery installed by the company was manufactured in New Westminster.

The brand under which the product is marketed is Stardex Brand, labelled "Snow White Prepared Starch for Culinary Use" and "Snow White Potato Flour."

(*f.*) Specialty Work in Wood-working Plants.

In closing this section of my report of the new and non-competitive industries established during the year of 1921, I wish to mention a kind of development that is taking place in some of the wood-working plants of the Province. British Columbia had many trying times in respect to the wood-working business. It is claimed by some that there are more failures in this line than other industries and that in some respects it is overdone. Others claim that the fault is one of lack of organization; the market requires at certain seasons a large pay-roll and at others the plants are practically idle for want of orders. To offset this it is suggested that these plants manufacture some special article required by the public all the year round. The difficulty has been to determine something of this nature that can be manufactured at a profit.

The enterprise of the T. H. Waters Company, Limited, of Nelson, along this line is worthy of commendation. This company, at an outlay of approximately $15,000, has commenced to manufacture spring clothes-pins from British Columbia birch and alder. It was necessary for the company to build three special machines and remodel others to engage in this line; one special machine being the automatic wire-spring-winding machine, which cost the company $3,500. By this side-line the company expects to give constant employment to ten people, and by making use of local wood heretofore not worked up expects to place its wood-working plant on a stable all-year-round paying basis.

(3.) INDUSTRIES POSSIBLE OF IMMEDIATE DEVELOPMENT IN BRITISH COLUMBIA.

The immediate future should further fill out the many present opportunities that exist for further industrial enterprises. The lack of all-year-round industries in British Columbia is severely felt, and if one were to mention what could be started here the list would be a very long one. However, based on strong local market demands and the possibilities of development for the Eastern Canadian and export markets, there are several industries which warrant the immediate attention of capital.

(*a.*) IRON AND STEEL.

First among these would be the development of the iron and steel industry. So much has been written on this industry that beyond stating the opportunities for it in British Columbia, it is not the intention of this report to deal further with the matter at the present time. There are several interests working at present towards establishing it, and the future will see something definite accomplished.

There are several minor industries, however, that require less capital and have proportionate possibilities that would be of conslderable benefit to the Province and to other enterprises, industries which by the judicious employment of capital should yield a good return to the investor who has sufficient foresight to take advantage of them.

(*b.*) MANUFACTURE OF GLASS BOTTLES.

Chief among these I would place the manufacture of glass bottles and containers. In the past some effort has been made to start this industry and several years ago a company commenced in New Westminster. This company, however, was more interested in the sale of stock than in the development of the industry, and the company finally went into liquidation and the plant was moved to Anacortes, Wash., where it has operated continuously for the past number of years to the benefit of that district and more particularly to the City of Seattle.

In 1916 a small attempt was made in Victoria to manufacture glass bottles and a hand-blowing plant was established on the Carey Road. This gave employment to six or eight men for a number of months and bottles were shipped to Calgary, Vancouver, and other places. Through failure to have a satisfactory supply of raw material this enterprise did not succeed. It is also claimed that it did not provide for the up-to-date requirements of the bottle trade. The materials used were cullet and sand from Mount Tolmie.

Sand.—In the past the trouble in starting this industry has been a proper local supply of raw material. The chief material required is a sand free from impurities, and at present the chief sources of this material are Belgium; China; Ottawa, Illinois; and Monterey, California. The nearest supply, at Monterey, is suitable for making a blue bottle-glass. The sand at Ottawa, Illinois, is suitable for making flint-glass and other clear bottles.

To date no satisfactory deposit of sand has been located in British Columbia. This, in some respects, has no doubt been due to the fact that prospectors and others have not realized the commercial value of sand-deposits, more particularly in that the development of these sand-deposits would not provide for any great return for the discoverer. They would, however, be of great benefit to the Province.

To overcome this local condition it has been represented by persons familiar with the industry that the same plan could be followed here as at Anacortes; that is, of bringing in the sand from Ottawa, Illinois. The cost of the sand delivered at Anacortes from Ottawa, Illinois, is $12.50 per ton to lay down the material in their factory, and a local industry could be started along these lines, importing sand from Ottawa, Illinois, and Monterey, California. After the industry is developed local sands could be tried out until satisfactory deposits are discovered.

There are also further possibilities with respect to the utilization of quartz, which occurs in British Columbia almost 100 per cent. pure silica, and which is suitable by crushing for the highest grades of bottles and products in the glass industry. Deposits of this quartz occur on Douglas Channel, Banks Island, Dorothy Mine near Fanny Bay, North Bend, Kamloops, and Armstrong District. People familiar with some of these deposits claim that this quartz can be mined, crushed, and delivered at a plant in New Westminster, Vancouver, or Victoria for about $9 a ton, and in this way an excellent local material supplied for a glass-works. Persons starting in this industry could well have this in view as a future development to reduce their costs.

Soda-ash.—This material also could be at present obtained, as at the Anacortes plant, from the United States and England. It is of particular interest to the glass industry to know that

there are extensive deposits of carbonate of soda in British Columbia near Chasm, on the Pacific Great Eastern Railway. A company has acquired these deposits and is contemplating their immediate development. These deposits are of special purity and a conservative estimate of the visible supply is 237,000 tons. This material requires to be dehydrated to obtain soda-ash. The unique nature of these deposits, occurring as they do in the pure soda, should make it possible to develop them at a lower cost per ton than present deposits in California, Egypt, and elsewhere, which require an initial separation from other impurities and salts before dehydration can be carried on.

As an offset to the handicap of sand, this local supply of soda-ash should furnish an added advantage to a company operating in British Columbia.

Limestone.—This material is obtained in any quantity locally.

Cullet (Broken Glass).—This material is introduced to make a quicker melting, but is not absolutely essential in the manufacture of bottles. Large amounts of this material are available in every settled district.

The utilization of the above-set-out materials essential for the glass-making industry produces a clear glass. The different colours are obtained by the introduction of coal, sulphur, and other materials.

Markets.—The breweries, dairy industries, fruit-canneries, and pickle industries would furnish an enormous market for glass bottles in British Columbia, and the further development of the chemical-manufacturing industry of liquid pastes and prescription wares would require a bottle-factory to be in existence in British Columbia turning out their requirements. These various industries generally start in a small way and at present are handicapped in having to order bottles in car-load lots from Eastern Canada. The present supply for Canada is controlled by the Dominion Glass Company, with factories at Montreal, Toronto, Hamilton, Winnipeg, and Redcliffe, Alberta. British Columbia requirements are chiefly supplied from Montreal and the freight on one car-load of bottles to British Columbia would approximate $500.

There is sufficient demand in British Columbia for soda-water and beer bottles to take care of the output of a one-unit plant, and it is considered advisable for persons interested in this enterprise to put in to start a unit to handle this line of business. There are various types of up-to-date glass plants, and the equipment required would consist of a regenerative furnace, 15 to 20 tons, of the Semins-Martin type, oil-fired or heated by gas from gas-producing equipment. A funace of this nature would require one annealing lehr of a size of 10 to 16 by 70 feet in length; this lehr fired in the same manner as the furnace. Two types of bottle-making machinery are the Lynch Noboy machine or the Amsler-O'Neill bottle-making machine. A furnace of the size set out above would take care of about three bottle-blowing machines. The automatic operation of the blowing of these machines requires the installation of an air-compressor and fan-cooling system. These, together with the motors, storage and mixing tanks, and machine-shop equipment, go to make up the smallest unit of a glass-bottle factory, and at the present time in British Columbia there is ample business offering to keep one unit such as the above working on brown bottles alone.

The demand for clear-glass bottles, such as milk-bottles, fruit-containers, tumblers, prescription wares, glass tops, etc., would be sufficient to keep one other unit of a like size and a 20-ton furnace operating on a clear-glass mixture.

The chief item of expense in a glass plant would be the furnace and lehr, and in this connection it is interesting to note that the Anacortes plant obtains its supply of brick for the furnace from a British Columbia plant, and by the use of local material the cost and upkeep of these two items of the factory equipment should be reasonably low.

The cost of putting in one unit of a plant of this nature has been estimated to be from $45,000 to $60,000. This does not include an outlay for site or buildings or working capital. Persons commencing a glass-making industry in British Columbia should, to ensure success, arrange for a capital of $100,000.

The Industrial Commissioner visited the plant of the Pacific Coast Glass Works in San Francisco and that at Anacortes, Washington. In checking up the possibilities of this industry it is found that there is a reasonable prospect of success for this industry with an adequate return for capital invested. Its importance to other enterprises is fairly big, in that the establishing of a glass-manufacturing plant in British Columbia would assist a large number of smaller enterprises requiring glass containers.

(c.) Development of Carbonate of Soda Deposits.

The requirements of the glass industry in respect to raw material points out one anticipated local market for soda-ash. This anticipated demand is only a fractional part of the present world-wide demand for this product, listed on all trade reports as a stable article of commerce. The deposits that occur near Chasm, on the Pacific Great Eastern Railway, about 200 miles from Squamish, possess possibilities that would warrant their further development. These deposits are owned by a Vancouver syndicate, which is endeavouring to raise the necessary capital to undertake the development of them, and to this end it has formed the Lillooet Soda Company, Limited. It is not the intention of this report to in any way encourage any individual person to invest in this undertaking, but from the standpoint of the development of the natural resources of British Columbia the possibilities of this industry should warrant the people interested in it in having sufficient confidence in the enterprise to raise the moneys necessary for its development in the near future.

All the essentials for a good and new industry, as far as British Columbia is concerned, exist in these deposits, and it is hoped that the public-spirited people interested in these claims will see to it that an opportunity is given to capital to engage in this enterprise that would further widen the industrial horizon of British Columbia, and provide a natural resource that enters into the manufacture of glass and soap and is used in many other lines of industry, such as the woollen trade.

(d.) Manufacture of Paper Bags.

It is several years now since the first pulp and paper plant was established in British Columbia, and the possibilities of further enterprises of this nature engaging in this Province are well known and are at present attracting the attention of several syndicates interested in this line of development, so that there are new pulp and paper plants planned for the near future in British Columbia. These new plants will be a natural development of a proven field. There is, in addition to this, great possibilities in the further completion and manufacture of paper products in their more finished forms. It was the original intention of one of the large companies operating in British Columbia to have its different plants specialize and develop along the lines of further manufacturing the paper products in its most completed form. These plans up to the present time have not materialized, so that in British Columbia at the present time, in spite of the fact that the Province is a large producer of paper, many of the finished requirements have to be brought into the Province from Eastern Canada and elsewhere, and the Province is annually losing the benefit of a large pay-roll in the further manufacture of this line of industry.

The immediate demands of British Columbia and the Prairie Provinces indicate that the time is opportune now for the establishing of a paper-bag factory in this Province. British Columbia requires for its own use approximately six car-loads or 6,000,000 bags per month and the requirements for the Prairie Provinces would each amount to seven or eight car-loads per month. In so far as the Prairie market for paper is concerned, the establishment of an enterprise of this nature would be a great boon to the sale of British Columbia paper, in that it would provide for the shipment, to even small towns, of mixed car-loads of bags and wrapping-paper.

Various estimates of the plant necessary to turn out the requirements for Western Canada vary from $75,000 to $150,000, according to the machines installed. There are certain machines that are adjustable to the various sizes of bags, and once adjusted operate in an automatic manner. Other machines, claimed to be more efficient and economical in the use of material, are not adjustable, and the plant would require a complete installation of machines for each size of bag to be turned out.

Capital interested in the development of this enterprise would no doubt secure the co-operation of the paper-manufacturers of the Province. The question of an adequate market would be a vital one at the present time and could be overcome by the above co-operation and the development of an export market along the lines of that already opened up by the paper-mills.

The Department of Industries has an extensive file on the possibilities of this industry and would be glad to give any information required to persons interested, with a view to starting this industry in British Columbia. As a guide to the capital required, we would say that, in our opinion, approximately $125,000 would be required to engage in this business.

(*e.*) COPRA OIL-CRUSHING PLANT FOR BRITISH COLUMBIA.

The Dominion Government Commercial Agent at Sydney, Australia, suggests the possibilities of a new industry for British Columbia, and bases his conclusions on the successful development in Sydney, Australia, of the treatment of copra for the production of cocoanut-oil, stearine, oil-cake, meal, and fertilizer. The possibilities of this industry as set out in his report are as follows:—

"South Sea Island producers of copra and interested Sydney exporters of that product have frequently expressed surprise that Canadian commercial enterprise has not, up to this date, recognized the importance of establishing a plant at Vancouver to treat this valuable product, and so develop an encouraging trading connection with the South Pacific, and more especially with the group of islands under British sovereignty.

"To copra-dealers it appears an anomaly that (particularly since 1914) while a very large and increasing market has been established at San Francisco, there is no plant in Western Canada to treat copra for such valuable products as cocoanut-oil, stearine, oilcake, meal (for animal foods), and fertilizers. San Francisco supplies a considerable portion of the United States (and possibly Canadian) requirements. On expert advice it is stated that the plant necessary to crush copra is not costly; hence the liberty is now taken of commending to the consideration of the various Boards of Trade and branches of the Canadian Manufacturers' Association in British Columbia the benefit to be derived by that Province in erecting a crushing plant to treat this product on an extensive scale.

"It may be observed that cocoanut-fibre is used in making coir-rope, which probably already finds a ready market in British Columbia and other Canadian centres, and a considerable sale is made to the fishing-fleets, etc., on the Pacific and Atlantic seaboards.

"It is clear that the vessels engaged in conveying copra from the various groups in the South Pacific to San Francisco are building up a reciprocal trade in supplying canned meats, flour, biscuits, and island requirements generally, which trade is now entirely lost to Canada. The steamers of the Canadian Government Merchant Marine in the transpacific trade would find copra (being easily and quickly loaded) an attractive and remunerative cargo, and—in the case of several groups of islands—there would be little diversion from the direct (returning) trade route.

"The data in subsequent paragraphs have been obtained from reliable sources, and are submitted with the hope that the Western Canadian commercial enterprise will thoroughly investigate the position and, after doing so, recognize the trading benefits to be derived by the erection of a crushing plant in British Columbia for the treatment of copra.

"*The Cocoanut.*

"The cocoanut is the fruit of the coco-palm (*Cocos mucifera*) and is generally recognized to be the most important product of the tropics. The thick meat or endosperm of the seed is used for food, both ripe and unripe, and the milky food in the fresh nut furnishes a refreshing drink.

"*Copra, the Kernel of the Cocoanut, and its Uses.*

"Copra is the commercial name applied to the dried and broken kernel of the cocoanut after it is split and prepared for shipment. Copra is exceedingly rich in oil, averaging from 65 to 70 per cent. of its bulk. It is nearly colourless when pure and is of the consistency of butter at ordinary temperatures. After the stearine is taken away it has many physical properties similar to butter, and it is largely used in the composition of margarine. It is made up by Sydney manufacturers in very attractive form and is in much demand for cooking purposes, more particularly on account of its good keeping qualities. Large quantities of the oil extracted from copra are used in Australia for soap-making, candle-making, and for many other purposes.

"Oilcake and meal for animal food are made from the residue, and fertilizer is also made to a small extent. Copra is therefore one of those products from which there is practically no waste. The husks of the cocoanut are made into rope, called coir-rope, which is very elastic and stretches to a much greater extent than ordinary rope. As it is very light and cheap and does not rot so quickly as other ropes when kept in the water for a long time, it is in great demand. It is particularly useful in the larger sizes when used in connection with the mooring of vessels, where they are subjected to the scend of the sea, as it stretches considerably before breaking.

"Owing to its inflammable nature, due to the large percentage of oil contained, copra was seized upon by incendiaries during the war period as excellent material for their operations, and so serious were their operations that the authorities prohibited its storage on wharves. These restrictions have lately been withdrawn and the storage of copra is permitted on wharves under certain conditions.

"*Australian Exports of Cocoanut-oil and Copra.*

"So far as Australia is concerned, the entire copra trade with the islands of the South Seas passes through Sydney, and, conversely, the islands also obtain their principal supplies from Sydney. Since the termination of the war additional supplies of copra have been received in Sydney from the mandated territories; in fact, such large quantities (the result of heavy accumulations) were received as to seriously affect the price for the time being.

"Excluding Papua, the former German territory in New Guinea, and the mandated islands of the Bismarck Archipelago, cocoanut-trees are not cultivated in Australia proper; hence any trade of the Commonwealth in cocoanut-oil and copra must be attributed to the oil-crushing plants in Sydney and transhipments of the raw products to the various copra-using centres abroad. There is in Sydney an extensive soap-making industry, with headquarters in Liverpool and with subsidiary companies in Canada, which crushes the oil from copra for distribution to allied works in overseas countries. This oil enters largely into the manufacture of certain classes of soap. The company has a number of important plantations in the South Pacific.

"The appended return indicates the exports of cocoanut-oil and copra from Sydney for the fiscal year ended June 30th, 1920, from which it will be observed that Canada is importing some oil:—

"*Exports of Cocoanut-oil.*

"From Sydney to—	Tons.	Value.
United Kingdom	1,553	£105,223
Canada	150	14,138
New Zealand	327	23,952
Pacific Islands, Fiji	19	1,793
Papua	...	2
South African Union	12	1,251
Belgium	329	31,738
United States of America	100	7,089
	2,490	£185,196

"*Exports of Copra.*

United Kingdom	11,512	£470,999
France	101	4,020
United States of America	1,824	71,895
	13,427	£546,914

"The shipments of copra shown above as being shipped to the United States are merely a small proportion of the total amount shipped to that destination. Many vessels coming to Australia laden with timber, which used to take coal to South American ports as a return cargo, no longer do so, as this trade has almost entirely vanished as compared with what it was some years ago, vessels now proceeding to the islands back-loading with copra. What the quantity is it is impossible to say, but it is certainly a large one. Most of this trade has grown up since pre-war times and manufacturers in the United States have realized the potentialities of the trade.

"*Prices of Copra during the Last Thirty-five Years.*

"Few other commodities have had such ups and downs in price as copra. From the year 1885, when the records start, right up to 1905, it fluctuated between £7 ($34.07) and £15 ($73) per long ton, but this was the period when the great value of copra was not properly known and its contents used for soap-making only, the balance being turned into oilcake for animal feed. Just about that time it came into use in connection with the manufacture of margarine, and in 1907 the price reached £22 15s. ($110.72). Other copra-producers then began to show

appreciation of its value and rushed quantities to markets, which collapsed to £13 5s. ($64.48) in 1908. In 1913 it reached £27 12s. ($134.32), and when war broke out tumbled to £14 ($68.13). Containing as it did valuable glycerine contents, the outlook suddenly grew brighter, and in 1917 the market price was £27 ($131.40). With the cessation of hostilities the demand for fats in European countries was so great that copra soared to £47 ($228.73) per ton, being the highest price ever reached in Australia. As previously mentioned, at this period large quantities of copra which had accumulated in the mandated territories were suddenly thrown on the market, with the inevitable result that the price dropped to £13 ($63.26). It gradually recovered to a more normal price, and is now in the region of £19 ($92.46) per long ton.

"Freights on Copra.

"Freights for copra to New York and San Francisco have recently been reduced. The rate to New York has been lowered to £4 15s. from £6, and to San Francisco from £3 10s. to £3.

"Experimental Tropical Garden for Cocoanuts.

"While cocoanuts are constantly being planted in various groups of islands in the South Pacific, yet in the former German possessions in the Bismarck Archipelago (embracing a portion of New Guinea)—now administered under a mandate by the Commonwealth Government—was the first experimental garden, established at Rabaul, where practical tropical agriculture and horticulture was carried on by experts to the great benefit of planters and colonists generally. This experimental garden (which is also a garden of pleasure and contains many ornamental trees and shrubs) was originally mostly devoted to the different species of rubber, having been established at the time of the rubber boom. Since then not so much attention has been paid to the rubber-trees and more to the cocoanut-trees.

"When these territories were captured the German scientists were displaced and Australian experts installed in their stead, the work since the war period having been carried on with gratifying success.

"Captured Plantations to be sold.

"The Expropriation Board appointed to deal with the holdings captured in the ex-German territories has decided to sell the plantations, recognizing that it is better for the separate holdings to be in the hands of individuals rather than try to run them on the communal or departmental plan."

(*f.*) MANUFACTURE OF INDUSTRIAL ALCOHOL.

The Advisory Council for Scientific and Industrial Research at Ottawa has pointed out the possibilities of the utilization of the wood-waste of British Columbia in the manufacture of industrial alcohol. At the present time it is represented that the International Alcohol Corporation of New York operates a successful industry, treating wood-waste at Fullerton, Louisiana, and Georgetown, S.C.

During the war a departmental committee of the Imperial Government considered this question and brought out a very extensive report, published in the London *Times* of July 1st, 1919. At that time it was recognized that the future requirements of the world would very soon make it essential to have an alternative fuel to gasolene, and the possibilities of turning out a power-alcohol were thoroughly considered and gone into.

The opportunity for this industry in British Columbia is set out by the Advisory Council for Scientific and Industrial Research, as follows:—

"A number of modern lines of industries are dependent on a cheap form of alcohol known as industrial alcohol. Industrial alcohol is very largely ethyl or 'grain' alcohol mixed with some substance which will render it unpotable, but not unfit for the use to which it may be put industrially. The substances the addition of which renders ethyl alcohol unpotable, and which are therefore called 'denaturants,' are very numerous, but the uses to which 'denatured' alcohol may be put limit the number to a few, such as wood-alcohol (methyl alcohol), benzol, pyridine bases, bone-oil, etc., and of these wood-alcohol is the most common denaturant, giving with ethyl alcohol a mixture known as 'methylated spirits,' consisting approximately of 10 parts of ethyl alcohol of 95-per-cent. strength to every one part of methyl alcohol.

"This denatured alcohol is very extensively used abroad as a chemical agent, a precipitant, a solvent, a cleaner, in many industrial processes, especially in the chemical industries, and it

is also used as a motor-fuel to replace gasolene and for illumination purposes. The importance of it in these lines is seen in the fact that the quantity of industrial alcohol used in Germany is very great, amounting in the year ending August 31st, 1904, to 101,823,470 gallons, while the consumption of denatured alcohol in the United States for 1913 was 16,963,353 proof gallons and for 1918 90,644,722 proof gallons. This latter limit was reached by greatly increasing annual consumption since the first of January, 1907, when the manufacture and sale in the United States of denatured alcohol was freed from the restrictions which up to that date had been imposed on it. The consumption before 1907 had been about 500,000 gallons annually.

"Cheap alcohol is a necessity for a large number of lines of industry and the extent of the consumption of it in a country is an index of the development of its industries, especially the chemical. The large amounts annually used in Germany and the United States are therefore significant of the value of cheap alcohol.

"In Canada the consumption is a meagre one. It was only 252,000 proof gallons in 1917. If it had been in proportion to the population as compared with the United States, the amount would have been in the neighbourhood of 5,000,000 proof gallons, or about twenty times as much as it was.

"One of the reasons for this very limited consumption is the cost, a very important contributory factor, to which is added the conditions under which the denaturation is carried out by the Department of Inland Revenue. All the alcohol so used has to be shipped to Ottawa from the distillery where it is produced, and after it is denatured it is shipped to customers. The charges for transportation to and from Ottawa do not matter greatly if the distances involved are small, but when these reach 500 miles and may in some cases exceed 2,000 the charges are a serious tax and tend to discourage the use in industry of denatured alcohol.

"Another factor is the present high price of alcohol due to the bonding system, which requires that alcohol shall be kept in bonded warehouses for two years before being sold to the trade. Much of the present supply in Canada has been in bond for considerably more than two years. This involves interest on the buildings and plants used for this purpose and for that time on the original cost of the alcohol so stored. This can to a certain extent be justified for alcohol that is to be used to produce beverages therefrom, for during this storage there is a gradual alteration or disappearance of certain of the accompanying compounds which are more toxic and harmful than pure alcohol is. For industrial purposes, however, freshly distilled alcohol is as effective and serviceable as alcohol which has been allowed to age, and consequently it would be considerably cheaper than the latter.

"The current price of pure ethyl alcohol in Canada is due to the restrictions referred to—to the high cost during the last three years of corn and other raw material used to produce it. The wholesale price of alcohol of 95-per-cent. strength at the time of this writing is $7.43 per gallon, which includes the excise duty of $3.96. The distiller then receives about $3.47 per gallon, while the wholesale price of ethyl alcohol of 95-per-cent. strength in the United States is from 50 to 55 cents per wine gallon. Denatured alcohol made from the present supply of ethyl alcohol in Canada would cost at least six or seven times what it does now in the United States, but the situation is an artificial one and therefore likely to be only temporary.

"Even the wholesale price of American alcohol is higher than it was in 1914 because of the higher price of corn, from which it is made, and so long as the supply of food for the world is scarce or not abundant, as is the case to-day, the price of alcohol will remain approximately as at present. If, however, other raw materials not foodstuffs and not used for any object could be employed in the production of alcohol, the price might eventually be considerably reduced. The waste molasses of the sugar-refineries was and is employed for this purpose, but the amount available in Canada is not very large. There is one waste material which in Canada and the United States has not been so used—namely, the sulphite liquor of our numerous pulp-mills. Enormous quantities of this are produced annually in Canada and it is being and has been disposed of by pouring it into the streams and rivers, poisoning all fish and other life therein. It contains ½ per cent. of fermentable sugar, from which in the liquor of the pulp-mills in Norway and Sweden more than 1,000,000 gallons of ethyl alcohol are produced annually. It has been estimated by Professor R. F. Ruttan, who has given much attention to this subject, that the sulphite liquor of the three pulp-mills on the St. Maurice River would, if utilized for this purpose, produce annually about 640,000 gallons of alcohol of 95-per-cent. strength and at a cost of under 35 cents a gallon. It has also been estimated that the sulphite liquor of all the pulp-

mills in Canada is sufficient to produce at least 5,000,000 gallons annually; that is, enough to supply the needs of Canada for the next twenty years. Perhaps the cost per gallon may be reduced when the resinous and other non-sugar constituents of these liquors, amounting to about 8 per cent. of the same, are put to some practical use, not thrown away as now. They are to a certain extent already utilized in tanning and the resinous material 'sulphite pitch' has been suggested as binder in briquetting slacked coal, and indeed it has been used to a small extent for that purpose.

"Another kind of raw material for the production of alcohol is wood-waste in all its forms, including slabs, strips, and sawdust from sawmills. The quantity of this annually destroyed or allowed to decay is enormous, especially in British Columbia, where it is estimated between 5,000 and 15,000 tons of wood are burnt daily to get rid of it. As the sawmills of Eastern Canada operate only about five months in the year, and, further, the collection of the waste is not economically feasible as yet, the utilization of this waste for making alcohol is not practicable at present, but in British Columbia the only possible difficulty is the extent of the market for alcohol. The conversion of wood-waste into alcohol is carried on elsewhere. At Georgetown, S.C., and at Fullerton, La., are plants in which the Tomlinson process for the conversion of wood-waste into alcohol is employed. It is possible that this process might be employed in the Pacific Coast Province, especially if a portion of the waste is used to make glucose, which can be mixed with hay and other fodder to make special cattle-foods.

"The use of denatured alcohol as motor-fuel to replace gasolene is not a remote possibility. The annual consumption of gasolene is increasing and the price per gallon of it is mounting as new sources of supply do not meet the increasing demand for it. It is indeed claimed that the world's supply of gasolene will be exhausted within thirty years. Whether this is so or not, it is clear that the price is going to increase, and this will necessitate the resort to other liquid fuels as serviceable or nearly so, and amongst these is denatured alcohol. The only handicap to its use is the price. If industrial alcohol could be produced cheaply it would quickly replace gasolene, for it could with slight changes in the motor-engine be as effectively used. A pound of gasolene will give on combustion about 20,200 B.T.U., and accordingly 1 gallon of gasolene should as a source of power go as far as 1.45 gallons of alcohol, but the actual efficiency of gasolene is less than this, and therefore industrial alcohol at 30 to 35 cents a gallon, a not impossible price in the near future, should successfully compete with gasolene at 50 to 55 cents per gallon, a price that will be reached and exceeded in a few years. Alcohol was produced in Germany before 1914 at a cost of 20 to 24 cents per gallon, which could not compete with gasolene at 30 cents.

"A survey of all the facts concerning gasolene and alcohol as motor-fuels makes it almost an absolute certainty that alcohol denatured for the purpose will be the motor-fuel of the near future. It can be made from materials now considered waste and yet inexhaustible, while the supply of gasolene, unless made synthetically, will become exhausted. As the supply approaches exhaustion the price will rise and alcohol will then, if cheap, take its place as fuel.

"Cheap alcohol should be provided not only for its service as motor-fuel, but also for the development of Canadian industry. With methylated spirits to-day at 70 cents per gallon in the United States and at $1.30 in Canada, the handicap on Canadian industry is apparent. The necessity of cheap alcohol has been emphasized by the various bodies interested in Canadian chemical industries, and especially by the Canadian Branch of the Society of Chemical Industry and by the Associate Chemical Committee of the Council. As a result of the representations of these and other bodies on the question of industrial alcohol, the Research Council gave prolonged and careful consideration to it and formulated recommendations to the sub-committee of the Privy Council, which are summarized as follows:—

"(1.) That the production of denatured ordinary alcohol, such as methylated spirits, be carried out at any distillery licensed to that end and under such regulations as the Minister of Customs and Inland Revenue may prescribe, and that the denatured alcohol so manufactured be sold duty-free, delivered, and transported without any restrictions to dealers, manufacturers, and other persons.

"(2.) That the manufacture of specially denatured alcohol—that is, alcohol which is to be used for the production of some chemicals, ether, chloroform, etc., and for which a special denaturant is required—be permitted under regulations prescribed by the Minister of Customs

and Inland Revenue in distilleries licensed thereto and sold duty-free to the manufacturers of such chemical preparation.

"(3.) That pure ethyl alcohol without admixture with any denaturant shall be sold duty-free for use in the manufacture of such products as require the use of such alcohol as a solvent, precipitant, or agent, under regulations to be prescribed by the Minister of Customs and Inland Revenue.

"(4.) That pure ethyl alcohol be sold duty-free, under such regulations as the Minister of Customs and Inland Revenue may prescribe, to incorporated hospitals, to universities, and to scientific and research laboratories.

"(5.) That the recovery of alcohol by distillation after it is used be allowed in the plant in which it was used, under such regulations as may be prescribed by the Minister."

In the past the chief objection to the establishment of this industry has been the Inland Revenue restrictions. At the session of Parliament held in the spring of 1920 amendments were passed that overcame this difficulty, and it is now possible to provide for the treatment of the product of a plant of this nature in British Columbia without having to ship it to Ottawa.

Since the publication of this report the Department of Industries has interested the International Alcohol Corporation in the possibilities of commencing operations in British Columbia, and it is ready to take up the development of this industry with any lumber-mill, company, or syndicate in British Columbia interested in this business.

In addition to this company, certain English and German interests have expressed a desire to co-operate with local persons with a view to establishing an enterprise of this nature. The Department of Industries has a fairly extensive file of further details in respect to the possibilities of this industry and will be pleased to furnish information on application.

(4.) COMMERCIAL POSSIBILITIES OF SHARK-FISHING.

From the standpoint of eliminating a pest preying on the commercial fisheries of the Pacific Coast, a bounty paid on the killing of sharks for their elimination would seem to be justified. The ground or mud sharks are prolific in British Columbia waters, and in addition to the large amount of edible fish consumed by them they are responsible for the destruction of fishing-gear of considerable value every year. In some sections on the Coast it is impossible to put down halibut and dogfish gear without having it torn and cut to pieces by sharks getting the bait and tearing up the equipment. At the present time bounties exist for the killing of hair-seals in certain waters, and the Fisheries Department make determined efforts from time to time to eliminate them in the Fraser River. Of late years the rapid increase in the sea-lion herds has been a constant worry to the permanent fisheries of British Columbia. It is estimated that one sea-lion consumes 60 lb. of edible fish per day, and their rookeries have, of recent years, extended down to the northern portion of Vancouver Island.

Many fishermen and those dependent on the fishing industry in British Columbia consider that the protection of British Columbia fisheries requires the establishing of an adequate bounty on the destruction of sharks, sea-lions, and hair-seals.

Apart from the desirability of killing off these destroyers in the fishing industry, there are possibilities that even at present make their destruction come within the scope of a commercial undertaking on their own account.

Those who have made a study of the utilization of aquatic products are convinced that there are commercial possibilities in the production of fish-oil, poultry-food, fertilizer, and leather from these animals, and particularly in the shark-fishing industry. Private enterprise, however, is diffident about doing the pioneering. The Commission of Conservation for Canada in a recent report says:—

"The question arises as to who is to take the matter up—the Government or the private capitalist. The latter is not likely to enter the business owing to ignorance of market conditions, and to the fact that there are many elements connected with it beyond his control."

With respect to the business of manufacturing fish-meal and fertilizer in particular, the report says the private capitalist may meet with "the objection of the fishermen to handing over their waste at a price that the manufacturer can afford to pay. Nor can he count on the sympathy of the agricultural industry towards a food-supply to which it has not been accustomed. The private enterprise would thus be confronted by the two greatest problems of the manufacture —namely, the control of his raw material and the distribution of his manufactured product."

"It is therefore the duty of this Commission," says a paper published by it, "or some other governmental authority to undertake this pioneer work, and to show, first, the fishermen and canners that it is to their advantage to dispose of this material at a nominal figure, or, preferably, on a profit-sharing basis; and, secondly, when manufactured, to demonstrate to the farmer, through experimental work on the Government experimental farms, the value of this great food reserve lying dormant in Canada, only waiting to be extracted and made use of by the Canadian farmer and returned to Canadian soil."

These remarks referring to the utilization of fish-waste apply equally to the manufacture of fish-meal and fertilizer from shark-flesh, sea-lion and hair-seal carcasses.

During the past few years considerable development has taken place in the utilization of aquatic products, notably since the shortage in leather and other products of land-animals, for which aquatic products offer good substitutes. The United States Government during the past six years has been conducting research-work in this connection. The results obtained to date indicate that there are considerable possibilities in the development of various industries to use what the sea offers and which has heretofore been neglected or wasted. The Dominion Government has also conducted some experiments, chiefly along the line of the manufacture of fish-meal from fish-waste for cattle and poultry food and in the production of fertilizer from fish-waste.

Spasmodic attempts have been made to determine the commercial possibilities of sharks, sea-lions, and hair-seals, and during the year 1919 one of the tanneries in British Columbia secured a large number of hair-seals from Russia and successfully tanned and utilized the hides in the manufacture of shoe-uppers. During the years 1917 and 1918 a glove-factory operated in Victoria, manufacturing a heavy working-glove, using sea-lion hides. These skins were obtained by Mr. Cessford, of Victoria, who on one week's trip north secured about 700 skins. These skins when tanned are similar in pliability to horsehide and make a very good glove material. Altogether this plant handled about 1,500 skins and turned a very fair product.

During the year 1919 a company called the "Veterans' Products Company" was organized to go into the shark-fishing on a commercial scale. In a pioneer company such as theirs considerable research-work had to be done in finding suitable fishing-grounds, also gear suitable for this industry, determined by practical tests, and the method of handling the catch in various conditions of weather found out. The results obtained by them should have considerable bearing upon the future development of this branch of British Columbia's sea resources. This enterprise was started as a result of the experience of two fishermen in the Gulf of Georgia in the autumn of 1918. These two men, fishing for dogfish with the ordinary dogfish-gear, caught ninety-one sharks in six days. These fishermen utilized the livers to as good advantage as those from the smaller fish. They found that it was impossible to retain many of the larger sharks through the lightness of their gear, but were convinced that with a proper outfit they could make a commercial success of it.

The method adopted by the pioneer company in this industry proved to be fairly successful. This consisted of laying a long steel cable on a mud bottom anchored at both ends. Hooks from 6 to 12 inches in length were attached to this cable by lighter steel lines at distances of 25 feet. These hooks were baited with hair-seal flesh, sea-lion, salmon, and the flesh of condemned horses and cattle. It was found that the best results were obtained by using the bait of hair-seal and sea-lion, and that, on an average, one shark to every four hooks was obtained at a lift. This gear was set out at night and morning and lifted every twelve hours.

The report of the United States Commissioner of Fisheries for 1918 says:—

"A seine constructed for the Bureau, which has proved very successful for the capture of sharks up to 6 or 8 feet in length, is 600 yards long, 18 feet deep, with 4-inch bar-mesh of 35-thread; top and bottom lines of ½-inch, 18-thread rope, fitted with seine-corks 5 inches in diameter placed 2 feet apart on the cork-line, with 4-oz. trap-leads with the same interspace on lead-line, the entire net being tarred. With this type of apparatus from 50 to 200 sharks have been taken in a single day's fishing, and during the brief period in which two of these nets have operated, approximately 2,000 sharks ranging in length from 3½ to 15 feet have been taken. For the purpose of taking the larger sharks a heavier net of larger mesh is required. One now under construction which the Bureau believes will prove satisfactory is 300 yards long, 12 feet deep, with 10-inch bar-mesh of 6-thread tarred cotton twine hung on ⅜-inch 12-thread rope, fitted with haul seine-corks 4 inches in diameter placed 3 feet apart on cork-line and 2-oz. round leads placed 6 feet apart on lead-line."

The method employed in British Columbia has proved equally satisfactory. The setting and lifting is done with a power-clutch, which allows of the gear being handled in rough weather and while the boat is in motion.

COMMERCIAL PRODUCTS OF THE INDUSTRY.

Oil.—The oil is the most important in value of the various products of the shark. The average amount per shark taken in the operations on this Coast amounts to $2\,^{7}/_{10}$ gallons. This was sold for about $1.75. The market price at the time the company operated ranged from 70 cents to $1 per gallon. At the present time the price ranges from 35 to 75 cents. Oil is obtained from the liver of the shark, the carcass being but slightly oleaginous, about 2 per cent. Shark-liver oil ranks high among fish-oils. It has a high iodine value and the refined product is fairly free from the usual disagreeable fishy odour. It is in constant demand as a body for paints for exterior surfaces, and when deodorized it can be used as a paint vehicle in place of linseed-oil with very satisfactory results. Combined with resin, shark-liver oil can be employed in making a cheap varnish, from which, with higher-grade gum, a first-class varnish product may be prepared.

Hides for Leather.—With the growing scarcity of mammal-hides used in the manufacture of leather, the United States Government a few years ago began research and experimental work in connection with the development of their aquatic resources. These experiments show that shark-hides can be successfully tanned and will produce a leather competing economically with the best of leathers made from the skins of animals. The Superintendent of Fisheries for the Dominion Government, who investigated the matter in 1919, reports that:—

"Experimenting in the tanning of the skins of certain sea-monsters, such as sharks and porpoises, has developed so that an excellent quality of leather is now being made therefrom, and a regular commercial industry is being carried on. You may also know that the Universal By-products Company has established a station at Edmonds, State of Washington, and I understand has carried on an important business there during the present summer. It has been represented to me that 350 sharks per day were taken during June and July on the coasts of Washington and Alaska, the skins of which were handled at Edmonds. It has been further stated that in capturing these animals, gear, approximately halibut-gear, was used, and the expenses of the operations were covered by the number of halibut taken.

"Another company operating on the east coast is now prepared to pay 10 cents per pound, f.o.b. at its tannery, for all the skins of such animals delivered there which are properly prepared.

"There is no serious difficulty in the skinning or preparation of the skins to ship to the tannery. The flesh adheres very closely to the skin, particularly on the back, and can only be removed by the use of a sharp knife, cutting the flesh close to the skin, great care being taken not to touch the skin, yet not to leave too much flesh. The skins should be split along the back, so that the sides and belly portion will be kept intact."

Shark-hides when tanned produce a very fine leather for the manufacture of suit-cases, club-bags, and other leather goods of this character. The hides have a tensile strength of from 3.905 to 4.742 lb. per square inch. The Veterans' Products Company realized from 10 to 15 cents a pound for the skins taken. The method of tanning shark-hides is that employed in the usual tanning, except that it has been found extremely difficult to remove the shagreen from the outside of the hide. This shagreen gives the hide an appearance of sandpaper and at one time was used for this purpose in the wood-working trade. The first method tried for removing shagreen was to have the hide first tanned and when dried the outer surface coated with oil and paraffin. It was then smooth-plated and shaved and gone over lightly on a rapidly revolving carborundum-wheel. This, however, did not produce a very good outer leather and two secret processes were evolved for removing it by chemical processes; one of these processes, given by the Bureau of Standards, Washington, is as follows:—

"Upon arrival the skins were cut into sides, in order to overcome the difficulty encountered in handling the whole skins, due to the two fin-holes in the middle of the body. The sides were soaked for twenty-four hours and then washed thoroughly. The washed skins were next transferred to a two-tenth of 1 per cent. solution of caustic soda in a paddle, where they were allowed

to remain for two days with occasional stirring. After treatment with caustic soda the skins were washed well and fleshed on a machine or by hand. The grain side, still very harsh, was beamed by hand with a blunt knife to remove as much of the shagreen as possible. Great difficulty has been encountered in removing the outer layer, which in appearance is very much like a rough sandpaper. By the caustic-soda treatment, however, it can be partly eliminated and the stock rendered suitable for certain grades of leather.

"The fleshed and beamed stock was next bated with ammonium chloride, using 3 per cent. on the weight of the stock at a temperature of 100° F. Following bating, the skins were washed and were then ready for the actual tanning operation. Several methods of tanning were employed, but the one giving the best results was as follows: The bated skins were placed in a drum with a solution containing 5 per cent. of sodium dichromate and 2½ per cent. of sulphuric acid, with 5 gallons of water to each 100 lb. of stock. When thoroughly penetrated the skins are horsed up overnight in order to allow the chrome to set. The following day the skins are returned to the drum and treated with a solution of 6 lb. of sodium bisulphite, using 4 gallons of solution to each 100 lb. of stock. The skins are run in the solution until the chrome is entirely reduced and then horsed up again overnight to complete dehydration.

"If desired, the skins, after the above chrome tanning, can be finished as is common practice for chrome-tanned stock. Better results, however, are obtained by giving the stock a retan as follows: The chrome-tanned stock is set out, shaved on the flesh, washed slightly, and then run in a solution of quebracho extract at 10° Bk. for one hour. The strength of the liquor is then increased to 30° Bk. and the stock run in this stronger liquor until struck through. When well struck through, the skins are put in a layer for five days, containing a 40° Bk. quebracho extract liquor.

"The tanned skins may be either fat-liquored or stuffed, according to the grade of leather desired. If it is to be finished on the grain, the stock is washed and coloured as desired and then fat-liquored with a heavy fat liquor, using soluble oil as the carrying agent. The fat-liquored skins are then dried out, sammied back, staked, tacked, and finished. The final finish should be of a nature that will lend itself to brushing.

"Very good results were obtained by hand-buffing the flesh and applying a cordovan finish. In doing this, however, it is necessary to stuff the leather rather than fat-liquor it. The stuffing which gave the best results consisted of a mixture of 3 lb. of tallow and 7 lb. of cod-oil on each 100 lb. wet weight, and was finally driven in with 3 lb. of sulphonated cod-oil in a small quantity of warm water. On drying out the leather should be sammied, staked, and hand-buffed. The buffed leather is then coloured by hand and a cordovan finish applied.

"Wearing tests were made on shoes made from shark-skins and showed exceptional durability."

More recent experiments have shown that the shagreen can be removed with a weak solution of hydrochloric acid. This, it is claimed, when properly handled does not injure the hide. This method has not been tried on the Pacific Coast as yet, but is under experiment. After proper tanning the shark-hides can be finished up in any manner desired. It makes a water-proof leather and the peculiar network construction of the hides makes it suitable for lace-leather possessing a very great strength.

Fish-meal for Stock and Poultry.—In addition to the oil and leather, sharks produce a further variety of product in the form of fish-meal and fertilizer manufactured from the carcasses, the protein contents of the fish being particularly high, and on this account can be used with other materials to produce a very desirable poultry and stock food. The business of making fish-meal for cattle and poultry food is a comparatively modern industry and at present there are only a few companies operating in British Columbia. This material produces 1 ton of finished meal to every 5 tons of fish used and can be treated under any one of the several different processes now in commercial use.

Shark-fins.—The Chinese consider shark-fins a great delicacy and there is a large demand. At present about 5 tons per month of dried shark-fins are imported at San Francisco, centre of the business on the Pacific Coast. The larger portion is supplied from Mexico, the balance from the Californian Coast, although a few small shipments are received from the East. The Chinese, who are the largest buyers, sell about one-tenth to the local trade and ship about

nine-tenths to China. There are considerable fluctuations in prices; the demand being constant, fluctuations are caused by the impossibility at times of obtaining adequate supplies. The market could absorb now at least three times the supply. Little, if any, distinction is made by the Chinese as to the species of shark from which the fins are taken, provided only that they are large enough to supply good-sized fins and that the fins are properly trimmed and cured. The fins should be cut off at the joint connecting them with the body, and, to be at its best, must have all the fleshy parts trimmed off, leaving only the true fin with its rays. It is these latter, the cartilaginous-like rays that compose the shark's fins, that are wanted and nothing else, so that all extraneous matter must be cut away. The only desirable fins are the dorsal. the pectoral, and the anal, the first being considered the best, while the caudal fins are worthless. These fins must be not less than 6 inches in length from tip to bottom, as otherwise the cartilaginous-like rays that compose the shark's fins are too short and small to be worth while, having no substance. The sizes most favoured are those running from 8 to 12 or 14 inches. To cure the fins all that is required is to dry them thoroughly in the sun, without salt or other treatment. When thoroughly dry they should be packed in cases or barrels containing about 250 lb., or in gunny-sacks to weigh 150 or 200 lb. Cases are most favoured, as they can be easily handled and there is less danger of breakage and loss of contents. The market price to-day—1921—is from 65 to 75 cents per pound for choice, but ranges much lower when the fins are carelessly trimmed or badly cured.

The Chinese in the Pacific Coast cities use the term "Yu Chee" for shark-fins. To prepare them for use they are soaked in water for two or three days, when the gelatinous rays separate out, and are then prepared and served in chicken broth, making a dish much relished by the Orientals.

At Chinese ports the imports of shark-fins are large. At Singapore, in the Straits Settlements, considerable amounts are imported to supply the 200,000 local Chinese, the supply coming from Borneo, Penang, Sarawak, Madras, Ceylon, Celebes, and the Coromandel Coast. The Malay shark, a man-eater, attains large size. Seventeen species inhabit the Far Eastern seas, some attaining a length of 25 feet. The basking shark, which ranges from the Cape of Good Hope to Ceylon, often exceeds 50 feet. It has small teeth and is not considered as dangerous as the monsters of the Malayan Archipelago.

The pioneer company in this industry spent considerable money in determining the possibilities of the industry and building up a market for each of the various products. It succeeded in definitely establishing the possibilities of the undertaking, but did not get the various details co-ordinated before its supply of capital was exhausted.

In 1920 the Department of Industries arranged for an experimental try-out of this equipment to produce results that would be definite and would show whether it could be made a success. It arranged for a crew of four men under Captain Pike to fish for one month. This crew had one boat employed and only one set of gear in use during this time. They fished for twenty-four days between October 20th and November 23rd. They caught 357 sharks, yielding 965½ gallons of oil, and marketed 225 hides, this being the number that were over 4½ feet long; 111 hides being thrown away owing to a misunderstanding that no shark under 4½ feet was to be skinned, whereas it should have been under 4 square feet. The oil was sold for $616.40 and the hides for $407, a total of $1,023.40. The company did not have facilities for handling the carcasses. If a plant was available for this purpose a further amount of $600 could have been realized, and, except for the mistake in respect to the hides, a further sum of $174 obtained on these hides. This would make a total of $1,797.40. The company at this time did not take into account the possibilities in respect to the fins. These were found to be in considerable demand at a later period and a good market exists, yielding from 50 cents to $1 per shark.

The running expenses during this period were $312, leaving a profit of $711, or $29.63 per day. Had the carcasses been treated and all the hides and fins marketed the profit would have been in excess of $1,500.

The following are the details in respect to this operation:—

Statement showing Number of Sharks caught (with Various Products of same) for Two Fishing Periods—October 21st to November 2nd and November 10th to 23rd, 1920, all inclusive.

Date.	No. of Sharks.		Total Sharks.	Gallons of Oil.	Hides, 4′ 6″ and over.
	Large.	Small.			
October 21	11	3	14	.....	...
„ 23	11	7	18	.....	...
„ 24	28	9	37	.....	...
„ 25	11	1	12	.....	...
„ 26	17	4	21	.....	...
„ 27	9	4	13	.....	...
„ 28	9	7	16	.....	...
„ 29	4	3	7	.....	...
„ 30	19	...	19	.....	...
„ 31	7	5	12	.....	...
November 1	13	8	21	.....	...
„ 2	1	8	9	.....	...
Totals, first period	140	59	199	470½	140
November 10	15	6	21	.....	...
„ 12	10	6	16	.....	...
„ 13	11	7	18	.....	...
„ 14	11	4	15	.....	...
„ 15	15	11	26	.....	...
„ 16	14	5	19	.....	...
„ 17	7	5	12	.....	...
„ 18	7	2	9	.....	...
„ 19	4	3	7*	.....	...
„ 20	1	3	4*	.....	...
„ 22	7	...	7*	.....	...
„ 23	4	...	4*	.....	...
Totals, second period	106	52	158	495	85
Grand totals	246	111	357	965½	225

* Prospecting-sets off Gossip Island.

NOTE.—These 357 shark-bodies (with heads) would in my estimation average 225 lb.; e.g., or a total of 40 tons in all. Figuring one-fifth of this as fertilizer would give 8 tons at, say, $75 per ton, a total of $600. This, of course, was all dumped into the sea. The money realized for oil was $616.40, the money realized for hides and exchange $407, making $1,023.40. Adding the $600 above would give $1,623.40 for twenty-four actual lifts (during this period there were only three days on which the boat could not pick up owing to weather—there is always the possibility of parting the gear in a rough sea). For the twenty-four days' fishing it would average sixty-eight per day. Appended is the running expenses and repairs to the C. & C. during this period. From this statement it would appear that the average liver-oil per shark is 2 7/10 gallons and the average weight of a hide 10⅜ lb. Might mention that when we shipped the 225 hides the net weight at C.P.R. platform was 2,960 lb. I have figured the average on the Seattle figure. There is a varying range in the size of sharks, running anywhere from 4 feet 6 inches to 12 feet 6 inches and one 13 feet 8 inches. Owing to a misunderstanding or other of last summer no shark under 4 feet 6 inches was skinned, whereas it should have been not under 4 square feet. Owing to this mistake 111 hides were thrown away, representing, at 10⅜ lb., $174.90, conservative estimate, say, of $140, which would bring the daily earnings of one boat to $73.80 for above period.

C. & C. Account.

Running Account—	Dr.	Cr.
Shark-liver oil	.....	$ 616 40
Hides and exchange	.....	407 00
Gasolene	$ 188 83	
Lubricating-oil	12 75	
Bait	68 50	
Repairs and wharfage	42 20	
Balance	711 12	
	$1,023 40	$1,023 40

During 1921 the A.B.C. Fisheries Company, Limited, attempted to carry on the shark-fishing industry. It operated successfully for several months, but did not get a fish-meal plant in operation. It marketed all its oil and established a good market for shark-fins, but found difficulty in respect to shipment of hides. The company did not have sufficient money to put in a fish-meal plant to handle the carcasses, with the result that its limited capital only provided for a very small operation.

All persons connected with this industry are convinced that there is a big future ahead of any company engaging in shark-fishing utilizing all the products in the production of oil, fish-meal, hides, and fins.

A good and successful industry can be built up in shark-fishing in conjunction with the destruction of sea-lions and hair-seals and the utilization of their flesh as bait for sharks. Markets exist for organic fertilizer that could be manufactured out of the surplus carcasses and stock-food made from the carcasses of the shark. A further market exists for the hides of hair-seals, sea-lions, and sharks. The establishing of an enterprise of this nature would, in the opinion of many fishermen, warrant it being bonused by way of bounties by the Government in its initial stage to ensure success, as the killing of hair-seals, sea-lions, and sharks will tend to conserve the fish-supply and eliminate pests that destroy, in addition to edible fish, valuable fishing-gear.

The experimental work that has been done so far has been sufficient to convince the people prominent in the whaling and fishing industry that there is a great future before a company engaging in this business with the proper technical assistance. For some time past the market for oil and fish-meal has been steadily rising, and the Department of Industries will be pleased to place at the disposal of any persons interested in an enterprise of this nature all the information in its possession.

(5.) STATEMENT SHOWING ALL LOANS APPROVED BY THE DEPARTMENT TO DATE.

Name.	Industry.	Location.	Loan.
Canada Western Cordage Co., Ltd.	Cordage	New Westminster	$250,000 00
Western Toy & Furniture Co., Ltd.	Toy and furniture factory	Vancouver	34,000 00
Barclay Sound Fisheries	Salting and curing fish	Barclay Sound and Vancouver	10,000 00
Sunset Woodworkers	Wood-workers	Vancouver	3,000 00
Frank Beatson	Piston-rings	"	1,000 00
T. Bennett & Son	Furniture	"	5,000 00
Kerr Manufacturing Co.	Neckwear	"	4,000 00
Peerless Products, Ltd.	Ink and mucilage	"	1,000 00
Cut-to-Fit Building Co., Ltd.	Homes	New Westminster	50,000 00
Sidney Roofing & Paper Co., Ltd.	Building-felt, building-paper, roofing, beaver-board, and box-board	Victoria	100,000 00
Canada Western Woodworkers, Ltd.	Furniture and woodwork	"	15,000 00
H. L. Finlayson	Ladies' waists	Vancouver	2,000 00
Frank Vinall & Son	Furniture	Victoria	1,000 00
Automobile Body Builders	Truck and auto bodies	Vancouver	1,500 00
Tait Pipe & Foundry Co., Ltd. (formerly Vancouver Pipe & Foundry Co.)	Cast-iron pipe, soil-pipe, school-desks, etc.	"	30,000 00
Brin du Chatelet	Model-maker	Tofino	500 00
Alfred and Harold Eckley, Pacific Standard Motor Works	Marine engines	Vancouver	7,700 00
E. J. Wakefield	Willow holt	"	1,500 00
Vancouver Island Fish & Cold Storage Co., Ltd.	Fish-curing	Nanaimo	7,500 00
Wholesale Fish Co.	"	Victoria	2,500 00
H. Thompson *et al.*, operating as the Green River Lumber Co.	Sawmill	Rethel	12,000 00
Veterans' Products Co., Ltd.	Fish-fertilizer	Victoria	17,000 00
Vivian Gas Engine Works	Gas-engines	Vancouver	20,000 00
Ordano Bros.	Boat-building	Cowichan Bay	1,400 00
Henson & Dyson	Concrete blocks	Victoria	4,000 00
Acme Box Co.	Small wooden boxes	Vancouver	6,000 00
Aetna Saw Works, Ltd.	Saws	"	15,000 00

Statement showing all Loans approved by the Department to Date—*Continued.*

Name.	Industry.	Location.	Loan.
Great West Manufacturing Co., Ltd.	Cut-to-fit houses	Vancouver	$ 20,000 00
Pacific Guano Co., Ltd.	Fish oil and meal	,,	5,000 00
N.M. & R. Fish Co.	Fish company	Prince Rupert	25,000 00
Canadian Western Woollen Mills, Ltd.	Blankets and tweeds	Vancouver	30,000 00
Stettler Cigar Factory, Ltd.	Cigar-factory	,,	25,000 00
Pacific Crating & Manufacturing Co.	Box-shooks and crating	Sidney Island	10,000 00
Canada Dolls, Ltd.	Toys	Vancouver	7,500 00
Laidlaw Shingle Co., Ltd.	Shingles	Squawtits Island	4,900 00
Alberni Shingle Co., Ltd.	,,	Port Alberni	11,000 00
Ceramic Industries, Ltd.	Bricks	Vancouver	15,000 00
Erskine & May	Sawmill	Merville	6,500 00
Heaton Machine Works	Machinery	Vancouver	5,000 00
McLeod & Movitz	Sawmill	Courtenay	2,500 00
Merritt Industries, Ltd.		Merritt	7,500 00
Jorgensen & Anthony	Canned goods	Vancouver	500 00
Maddaugh, Huggard & Nichols	Sawmill	Langley Prairie	26,658 48
Electrical Manufacturing Co.	Electrical appliances	Vancouver	5,700 00
B.C. Yacht & Boat Builders Co., Ltd.	Boat-building	Victoria	15,000 00
Wonder Pump & Engine Co.	Pumps and engines	Vancouver	10,000 00
Hiker Manufacturing Co., Ltd.	Children's mechanical vehicles	Victoria	8,000 00
McBride-Wells Co.	Labelling and reconditioning of canned goods	Vancouver	1,000 00
Quigley Knitting Co., Ltd. (formerly the Vancouver Knitting Co.)	Woollen garments	,,	19,000 00
P. E. George	Gramaphones	Victoria	2,000 00
John Arnot & Sons	Wood-workers	Vancouver	2,500 00
J. R. Tracy & Son	Auto plates and names	,,	15,000 00
Reynolds & Coote	Shingle-mill	Mission	10,000 00
T. H. Waters & Co., Ltd.	Wood-workers and clothes-pin manufacturing	Nelson	15,000 00
Standard Shoe Manufacturing Co., Ltd.	Boots and shoes	Vancouver	15,000 00
H. L. Johnson	Antique furniture	Victoria	300 00
San Juan Box Co., Ltd.	Boxes	Port Renfrew	35,000 00
Vancouver Pickle Co., Ltd.	Pickles	Vancouver	5,000 00
Victory Attachable Rubber Soles & Heels Co.	Rubber soles and heels	Victoria	2,000 00
Raemaekers & Stephen Bros.	Ventilating appliances	Vancouver	1,500 00
T. J. Shore Bolt & Nut Manufacturing Co., Ltd.	Bolts, nuts, spikes, and rivets	,,	45,000 00
Henshall Fish Products, Ltd.	Fish products	Sooke	3,000 00
Schaake Co., Ltd.	Sawmill and shingle-mill machinery	Vancouver	50,000 00
Kelley-Johnson Lumber Co., Ltd.	Sawmill	Sooke	6,500 00
Quesnel Timber & Trading Co., Ltd.	,,	Quesnel	15,500 00
Canada Silica Works, to be known as the Western Abrasive Paper Co., Ltd.	Sandpaper	Victoria	22,000 00

LIST OF LOANS APPROVED, NOT TAKEN UP THROUGH NON-COMPLIANCE WITH CONDITIONS.

Name.	Industry.	Location.	Loan.
F. H. Hill & H. C. Lancaster	Electroplated fixtures	Victoria	$ 1,500 00
B.C. Coast Fisheries	Fish company	New Westminster	15,000 00
Thomas & Julian Fisheries	,,	Vancouver	12,500 00
Dominion Woodworkers	Wood-workers	,,	1,500 00
B.C. Nurseries	Fruit-tree raising	Sardis	7,500 00
Sayward Trading Co.	Sawmill	Sayward	5,000 00
Bird & Gray	,,	Saltspring Island	3,500 00
E. R. Crumner	Broom-protectors	Vancouver	200 00
G. H. Waller	Special furniture	,,	2,000 00
Douglas Fir & Turpentine Co.	Turpentine	,,	25,000 00

(6.) RECEIPTS AND DISBURSEMENTS FROM DEVELOPMENT FUND.

RECEIPTS.		DISBURSEMENTS.	
To Balance at credit of fund, January 1st, 1921	$ 9,547 64	By Disbursements on account of loans granted	$223,899 75
Advances from Provincial Treasury	160,000 00	Balance at credit of fund, December 31st, 1921	14,687 60
Refunds of loans and interest	69,039 71		
	$238,587 35		$238,587 35

(7.) LOANS REPAID IN FULL.

	Amount of Loan.
Beatson, Frank	$ 1,000 00
Johnson, H. L.	300 00
Kelley-Johnson Lumber Co.	6,500 00
McBride, Wells & Co.	1,000 00
Vinall, F., & Sons	1,000 00
Standard Shoe Manufacturing Co., Ltd.	15,000 00
	$24,800 00

Directory of British Columbia Products.

Abrasives.

Western Abrasive Paper Company, Ltd., 913 Mason Street, Victoria.

Acetate of Lime.

Acetate Products, Ltd., New Westminster.

Acetylene.

Compressed Gas Company, Ltd., 1530 Hastings Street East, Vancouver. "Our Own C.G.C.O."
L'Air Liquide Society, Yukon and Fifth Avenue, Vancouver.

Acids.

Giant Powder Company of Canada, Ltd., Victoria.
Nichols Chemical Company of Canada, Barnet.
Victoria Chemical Company, Ltd., Victoria.

Adhesives.

Columbia Printing & Roller Company, Vancouver.
Laboratories & Manufacturing Company, Cordova and Cambie Streets, Vancouver.
Peerless Products, Ltd., 1642 Pandora Street, Vancouver. "Peerless."

Aeroplanes.

Hoffar Motor Boat Company, Vancouver.

Alcohol, Industrial.

British Columbia Distillery Company, Ltd., New Westminster.

Alcohol, Wood.

Acetate Products, Ltd., New Westminster.

Ale.

British Columbia Breweries, Ltd., Vancouver.
Enterprise Brewing Company, Revelstoke.
Fernie-Fort Steele Brewing Company, Fernie.
Phoenix Brewing Company, Phoenix.
Rainier Breweries, Ltd., Kamloops.
Victoria Phoenix Brewing Company, Ltd., Victoria.
Westminster Breweries, Ltd., New Westminster.

Ammonia.

Kelly Confection Company, Ltd., 1106 Mainland Avenue, Vancouver.
W. J. Pendray & Sons, Ltd., Victoria. "Pendray's."
W. H. Malkin Company, Ltd., Vancouver. "Tropical."

Ammonia, Sulphate of.

Granby Consolidated Mining, Smelting & Power Company, Vancouver.

Anchors.

Hendry Foundry Company, 360 Front Street West, Vancouver.
Mainland Engineering Works, 503 Powell Street, Vancouver.
Progressive Engineering Works, Ltd., 900 Powell Street, Vancouver.
Ross & Howard Iron Works, Ltd., foot of Woodland Drive, Vancouver.
Vancouver Engineering Works, Ltd., 519 Sixth Avenue West, Vancouver.
Victoria Machinery Depot, Victoria.

APPLES, EVAPORATED.

Graham Company, Ltd., Vernon.
O.U.G. Fruit Products, Ltd., Vernon.

APRONS.

Campbell, J. W., Ltd., 151 Hastings Street West, Vancouver.
Thomson & Sons, Ltd., James, Vancouver. "Twin Bute."
Turner, Beeton & Company, Ltd., Victoria. "Big Horn."

ASPHALT.

Ayres Varnish & Paint Company, Vancouver.
Barrett Company, Ltd., Vancouver.
Imperial Oil, Ltd., Ioco.
Pacific Roofing Company, Vancouver.
Sidney Roofing & Paper Company, Victoria.
Western Industrial Development Company, Vancouver.

AUTOMOBILE BODIES, TOPS, AND TRIMMINGS.

Abercrombie & Craig, 1460 Seventh Avenue West, Vancouver.
Automobile Body Builders, 1253 Howe Street, Vancouver.
B.C. Auto Top Co., 1251 Howe Street, Vancouver.
Berry, J., 135 Broadway East, Vancouver.
Black Brothers, Ltd., 1115 Homer Street, Vancouver.
Cox & Perkins, 931 View Street, Victoria.
Grimm Brothers, 650 Pembroke Street, Victoria.
Hall & Wallace Automobile & Carriage Works, 573 Beatty Street, Vancouver.
Hurren, W. M., 1369 Richards Street, Vancouver.
Meston, John, & Company, Ltd., 1407 Broad Street, Victoria.
Pioneer Auto and Carriage Works, 966 Richards Street, Vancouver.
Roote Auto Top Co., 740 Pacific Street, Vancouver.
Sanders Auto Top Company, 928 Johnson Street, Victoria.
Truck & Auto Body Builders, 1067 Richards Street, Vancouver.
Tupper & Steele, Ltd., 1669 Third Avenue West, Vancouver.
Victoria Auto Rebuilding Factory, Caledonia and Blanshard Streets, Victoria.

AUTOMOBILE NAME-PLATES.

Tacey, J. R., & Son, 550 Sixth Avenue West, Vancouver.

AUTO WINDSHIELDS.

Tonneau Windshield Company, 1272 Granville Street, Vancouver.

AWNINGS.

Davidson, L. H., Vernon.
Grant-Holden-Graham, Ltd., 1260 Hamilton Street, Vancouver.
Hoskin, John W., 41 Sixth Avenue, New Westminster.
Jones, C. H., & Son, Ltd., 28 Water Street, Vancouver.
Jeune, F., & Bro., Ltd., Victoria.
Lipsett, Cunningham & Co., Ltd., Prince Rupert.
Lipsett, Ed., 68 Water Street, Vancouver.
May, John, Nanaimo.
Nugent, H. M., & Company, 48 Water Street, Vancouver.
Rigby, George, 828 Fisgard Street, Victoria.
Victoria Tent Factory, 618 Pandora Street, Victoria.

BABBITT METAL.

Canada Metal Company, Ltd., 1428 Granville Street, Vancouver.
Great Western Smelting & Refining Company, 146 Dufferin Street East, Vancouver.

Bags, Camping and Sleeping.

F. Jeune & Bro., Ltd., Victoria.
Grant-Holden-Graham, Ltd., 1260 Hamilton Street, Vancouver.
Jones, C. H., & Son, Ltd., 28 Water Street, Vancouver.
Lipsett, Edward, 68 Water Street, Vancouver.
Nugent, H. M., & Company, 48 Water Street, Vancouver.
Turner, Beeton & Co., Victoria.

Bags, Jute and Cotton.

Canadian Bag Company, 1152 Mainland Street, Vancouver.
Woods Manufacturing Company, Ltd., 318 Homer Street, Vancouver.

Bags, Leather.

(*See* Leather Bags, Trunks, etc.)

Baits, Spoon.

Clendon Tool & Stamping Works, 135 Hastings Street West, Vancouver.
Gibbs Tool & Stamp Works, 356 Dufferin Street West, Vancouver.
Lenfesty, W. N., 1324 Government Street, Victoria.

Barrels.

Canadian Western Cooperage, Ltd., Victoria and Vancouver.

Baskets, Willow.

Wakefield, E. J., 56 Dufferin Street East, Vancouver.

Bathing-suits, Knitted.

Pride of the West Knitting Mills, Ltd., 500 Beatty Street, Vancouver. "Pride of the West."
Quigley Knitting Mills, Ltd., 78 Dufferin Street East, Vancouver. "Q."
Universal Knitting Company, 303 Pender Street West, Vancouver. "Universal."

Batteries.

Guaranteed Auto Services, 548 Georgia Street, Vancouver.

Beds.

Restmore Manufacturing Company, Ltd., Vancouver. "Restmore."
Simmons, Ltd., 2034 Eleventh Avenue West, Vancouver. "Simmons."

Bee Supplies.

Beaton, R., Matsqui.
Derrick, H. C., 4103 Pandora Street, Vancouver.
McLeod Sash & Door Company, Ltd., 1251 Charles Street, Vancouver.
Nelson Hardware Company, Nelson.

Beer, Lager.

British Columbia Breweries, Ltd., Vancouver.
Fernie-Fort Steele Brewing Company, Fernie.
Nelson Brewing Company, Nelson.
Ranier Breweries, Ltd., Kamloops.
Silver Spring Brewing Company, Victoria.
Vernon Brewery, Vernon.
Victoria-Phoenix Brewing Company, Victoria.
Westminster Brewery, New Westminster.

Benzol.

Granby Consolidated Mining, Smelting & Power Company, Vancouver.

Benzene.

Imperial Oil Company, Ioco.

BINDER-TWINE.

Canada Western Cordage Company, Ltd., New Westminster.

BISCUITS.

National Biscuit & Confection Company, Ltd., 1706 First Avenue West, Vancouver. "Red Arrow"; "National."
Ormonds, Ltd., Victoria.
Ramsay Brothers & Company, Ltd., 990 Powell Street, Vancouver. "Family"; "Best by Test."

BLANKETS.

Canada Western Woollen Mills, Ltd., 440 Clark Drive, Vancouver.

BLASTING-POWDER.

Canadian Explosives, Ltd., Vancouver.
Giant Powder Company of Canada, Ltd., Victoria.
Sabulite Explosives, Ltd., Port Coquitlam.

BLOUSES.

Batiste Costume Company, 445 Granville Street, Vancouver.
Comfort Blouse Manufacturing Company, 367 Granville Street, Vancouver.
Dall Lace Company, Ltd., 615 Granville Street, Vancouver.
Finlayson, H. L., 318 Homer Street, Vancouver.
Vanity Waist & Neckwear Company, Ltd., 136 Water Street, Vancouver.

BLUE, LAUNDRY.

B.C. Products, Ltd., 860 Cambie Street, Vancouver.
Kelly Confection Company, Vancouver.
Pendray & Sons, Ltd., W. J., Victoria. "Pendray's."
Royal Crown Soap Company, Ltd., Vancouver.

BOAT AND LAUNCH BUILDERS.

Beach Avenue Shipyards, 964 Beach Avenue, Vancouver.
B.C. Yacht & Boat Builders Company, Ltd., Point Hope, Victoria.
Bourne, Alfred, 1869 Georgia Street West, Vancouver.
City Boat House, Ladysmith.
Cates & Son, North Vancouver.
Chappell Brothers, foot of Denman Street, Vancouver.
Columbia Motor Works, Cowichan Bay.
Cranes Shipyard, Ltd., North Vancouver.
Dafoe, V. M., 1200 Powell Street, Vancouver.
Davidge, J., Maple Bay.
Dopson, S., Alberni.
Durant, C., Nahun.
Elford Boat Company, Nelson.
Easthope Brothers, 129 Georgia Street West, Vancouver.
Ericksen Brothers, North Vancouver.
Frisbee, Walter, Ewing's Landing.
Hale's Boatyard, Nelson.
Hoffar Motor Boat Company, 1969 Georgia Street West, Vancouver.
Jones, A. J., Kelowna.
Layland Brothers & Swan, Deep Cove.
Leighton, Peter, Metlakatla.
Lindsay Pleasure Boats, Ltd., 916 Powell Street, Vancouver.
Linton, A., & Company, Ltd., 1737 Georgia Street West, Vancouver.
Masters, H. A., McDonald's Landing.
Masters, H. A., Nelson.
Menchions, W. R., 1705 Georgia Street West, Vancouver.

Boat and Launch Builders—*Continued.*

Mercer Star Shipyard, Lulu Island.
Okanagan Lake Boat Company, Ltd., Naramata.
Orwig, T. M., Prince Rupert.
Pascoe & Company, Ltd., Georgia and Denman Streets, Vancouver.
Port Alberni Shipyards, Port Alberni.
Port Alberni Boat & Launch Works, Port Alberni.
Prince Rupert Boathouse, Prince Rupert.
Queensboro Shipyard, New Westminster.
Turner, William, 1963 Georgia Street West, Vancouver.
Vancouver Shipyards, Ltd., 1877 Georgia Street West, Vancouver.
Volmers, H., Nanaimo.
Wallace, S. R., North Vancouver.
Wickham, Bamfield.
Winslow, John, 441 Seymour Street, Vancouver.

Boilers.

Atlas Boiler Works, First Avenue, Prince Rupert.
B.C. Iron Works, Government and Princess Streets, Victoria.
Blain, A., 1147 Venables Street, Vancouver.
Gurney Foundry Company, Ltd., 566 Beatty Street, Vancouver.
National Machinery Company, 925 Main Street, Vancouver.
Marine Iron Works, Pembroke Street, Victoria.
Progressive Engineering Works, Ltd., 900 Powell Street, Vancouver.
Patterson Boiler Works, 750 Alexander Street, Vancouver.
Ross & Howard Iron Works Company, Ltd., Vancouver.
Vancouver Boiler Works, 456 Dufferin Street West, Vancouver.
Vancouver Engineering Works, 519 Sixth Avenue West, Vancouver.
Vancouver Machinery Depot, 1155 Sixth Avenue West, Vancouver.
Victoria Machinery Depot, Victoria.
Vulcan Iron Works, Ltd., Granville Island, Vancouver.
Wonder Pump & Engine Company, 931 Pender Street West, Vancouver.
Yarrows, Ltd., Victoria.
Wain, C. L., Kamloops.
Wallace Shipbuilding & Drydock Co., North Vancouver.

Bolts.

Canadian Northwest Steel Company, Front Street East, Vancouver.
Hafer Machine Company, 1720 Store Street, Victoria.
Ross & Howard Iron Works Company, Ltd., Vancouver.
T. J. Shore Bolt & Nut Manufacturing Co., Ltd., Vancouver.
Vancouver Engineering Works, Vancouver.
Watt Company, Ltd., The Thomas, 225 Fifth Avenue West, Vancouver.

Boots and Shoes.

Christie Boot Factory, 51 Cordova Street West, Vancouver. "Christie."
Inrig, Alfred, 319 Hastings Street West, Vancouver.
J. Leckie Company, Ltd., 220 Cambie Street, Vancouver. "Leckie"; "Skookum"; "Seal of Quality."
MacLachlan-Taylor Company, 63 Cordova Street West, Vancouver.
Paris, P., 53 Hastings Street West, Vancouver.
Standard Shoe Manufacturing Company, 319 Hastings Street West, Vancouver. "Standard."
Yates, A., 1840 Powell Street, Vancouver.

Boxes, Cigar.

Acme Box Company, 1067 Richards Street, Vancouver.

BOXES, PAPER.

Davis Paper Company, Ltd., 1670 Pandora Street, Vancouver.
Dominion Carton & Printing Works, Ltd., Vancouver.
National Paper Box & Carton Company, Ltd., 160 Lorne Street West, Vancouver.

BOXES, WOODEN.

Arbuthnot Lumber Sash & Door Company, 101 Dufferin Street West, Vancouver.
Armstrong Sawmills, Armstrong.
B.C. Box Company, Ltd., Vancouver.
B.C. Manufacturing Company, Ltd., New Westminster.
British Columbia Mills, Timber & Trading Company, Vancouver.
Brunette Sawmills, Ltd., New Westminster.
Cameron Lumber Company, Ltd., Victoria.
Crawford Brothers, Ltd., Kelowna.
Dalzel Box Company, Victoria.
Georgetown Sawmills Company, Ltd., Prince Rupert.
Kelowna Sawmills Company, Kelowna.
Kootenay Wire Works Manufacturing Company, Ltd., Nelson.
Leigh & Sons, James, Victoria.
Lemon-Gonnason Company, Ltd., Victoria.
Laminated Materials Company, Ltd., New Westminster.
Lumber Products, Ltd., Vancouver.
Norris Lumber & Box Company, Ltd., Grand Forks.
Northern B.C. Fisheries, Ltd., Vancouver.
North Vancouver Box Co., 429 Pender Street West, Vancouver.
Okanagan Wood Products Company, Chute Lake.
Pacific Box Company, Ltd., Vancouver.
San Juan Box Company, Ltd., Port Renfrew.
Sidney Mills, Ltd., Victoria.
Summerland Lumber Company, Ltd., Summerland.
Waters & Company, Ltd., T. H., Nelson.
Westminster Box & Shingle Mills, Ltd., New Westminster.
Western Box & Shingle Company, Nelson.
Wynndel Box Company, Wynndel.

BRASSFOUNDRIES.

Smith Brothers, 630 Pembroke Street, Victoria.
Star Brass Foundry, 194 Lorne Street West, Vancouver.
Sumner Brass Foundry, 610 Bidwell Street, Vancouver.
Vancouver Brass Works, 1304 Keefer Street, Vancouver.
Victoria Brass & Iron Works, Esquimalt.
Wilson Brass Foundry, 22 Dufferin Street East, Vancouver.

BRASS SIGNS.

Hewitt, G. H., & Company, Ltd., 653 Seymour Street, Vancouver.
Houghton & Evans, 516 Pender Street West, Vancouver.
Zemel Signs, 522 Pender Street West, Vancouver.

BRICK.

Bazan Bay Brick & Tile Company, Ltd., Sidney.
(New) Baker Brick & Tile Company, Ltd., Victoria.
Clayburn Company, Ltd., Clayburn and Kilgard.
Ceramic Industries, Ltd., Granville Island, Vancouver.
Enderby Brick Company, Ltd., Enderby.
Gabriola Shale Products, Ltd., Gabriola Island.
Humber Brick Company, Victoria.
Johnson & Company, Ltd., Kamloops.

Brick—*Continued.*

Lakeside Clay Products, Ltd., Okanagan Landing.
Polychrome Cement Brick & Tile Company, Ltd., Granville Island, Vancouver.
Port Haney Brick Company, Ltd., Port Haney.
Sidney Island Brick & Tile Company, Sidney Island.
Terrace Brick Company, Terrace.
Victoria Brick Company, Ltd., 3001 Douglas Street, Victoria.

Brooms.

B.C. Brush Works, Ltd., 722 Cambie Street, Vancouver. "B.C. Brush."
Crown Broom Works, Ltd., 304 Front Street East, Vancouver. "Duchess"; "Mother Goose"; "Janitor's Special"; "Province"; "Peerless"; "Ladies' Carpet"; "Princess"; "Perfection"; "Favorite"; "Warehouse"; "Little Pearl."
Western Broom Works, 631 Fifteenth Avenue East, Vancouver.

Brushes.

B.C. Brush Works, Ltd., 722 Cambie Street, Vancouver.

Building-paper.

Barrett Company, Ltd., Vancouver. "Victoria"; "Western"; "Anchor"; "Stag."
Pacific Roofing Company, Ltd., Vancouver. "Silver Tip"; "Krafelt."
Sidney Roofing & Paper Company, Ltd., Victoria. "Kraft"; "Capital"; "Esquimalt."

Calcium Carbonate.

Calcium Carbonate Company, Ltd., Merritt.

Cans, Tin.

American Can Company, Ltd., Vancouver. "Canco."

Caps.

Western Cap Company, 405 Vernon Drive, Vancouver.

Capsules.

B.C. Pharmacal Company, Ltd., Vancouver.

Carriage-builders.

Chafe & Jones, 642 Discovery Street, Victoria.
Grimm Brothers, Victoria.
Hall & Wallace, 573 Beatty Street, Vancouver.
Mable, W. J., 717 Johnson Street, Victoria.
Pioneer Auto & Carriage Works, 966 Richards Street, Vancouver.
Tupper & Steele, Ltd., 1669 Third Avenue West, Vancouver.

Carriages, Baby.

Shaw Manufacturing Company, Ltd., Telford Avenue, West Burnaby.

Caskets.

Kamloops Undertaking Company, Kamloops.
Imperial Casket Company, 425 Dufferin Street West, Vancouver.
Vancouver Casket Company, 1650 First Avenue West, Vancouver.

Catchup.

Broder Canning Company, Ltd., New Westminster. "Fraser Valley"; "Royal City."
Dominion Canners, B.C., Ltd., Vancouver. "Quaker."
Empress Manufacturing Company, 1106 Homer Street, Vancouver. "Empress"; "Climax."
Lyons, F., & Company, 1500 Main Street, Vancouver.

CATCHUP—*Continued.*

Occidental Fruit Company, Ltd., Kelowna. "Okanagan."
Vancouver Pickle Company, Ltd., Granville Island, Vancouver. "Rainbow."
Western Pickling Works, View Street, Victoria. "Camosun."

CEMENT.

British Columbia Cement Company, Ltd., 305 Belmont House, Victoria.

CHARCOAL.

Acetate Products, Ltd., New Westminster.

CIDER.

Dyson Vinegar Company, Ltd., 1365 Powell Street, Vancouver.
O.U.G. Fruit Products, Ltd., Vernon.
Syms, W. T., Salmon Arm.
Thorpe & Company, Ltd., Victoria and Vancouver.
Van Brothers, Vancouver.

CIGARS.

B.C. Cigar Factory, Seventh Avenue and Cunningham Street, New Westminster. "B.C."; "Old Sport"; "Brilliant."
Beaver Cigar Factory, 717 Carnarvon Street, New Westminster. "Beaver"; "Templar."
Buck-a-Roo Cigar Company, 610 Cormorant Street, Victoria.
Dorembecker, George, Fernie.
Gable, Philip, & Company, Nanaimo.
Mainland Cigar Factory, 2104 Hastings Street East, Vancouver.
Parsons & Reynolds, 1022 Seymour Street, Vancouver. "P. & R."
Province Cigar Factory, 576 Johnson Street, Victoria. "Province."
Stettler Cigar Factory, Ltd., 140 Water Street, Vancouver. "Van Loo"; "Van Dyck."
Solo Special Cigar Factory, 520 Columbia Street, New Westminster. "Solo Special"; "La Trenica."
Terminus Cigar Factory, 738 Fifteenth Avenue East, Vancouver.
Western Cigar Manufacturing Company, Ltd., Kamloops. "Master Duke"; "Seal of B.C."; "Daily Service."
Kurtz & Company, 1129 Haro Street, Vancouver. "Kurtz Pioneer"; "Royal Honor."

CLAMS, CANNED.

Oyster Bay Canning Company, Ladysmith.
Saanich Canning Company, Ltd., Sidney. "Saanich Brand."
Sidney Canning Company, Sidney.

CLOAKS, SUITS, AND COSTUMES, LADIES'.

Carstens, Ltd., 1206 Homer Street, Vancouver.
Western Cloak & Suit Company, 1200 Homer Street, Vancouver.

CLOTH, JERSEY.

Quigley Knitting Company, 78 Dufferin Street, Vancouver.

CLOTH, TWEED.

Canada Western Woollen Mills, Ltd., 440 Clark Drive, Vancouver.

CLOTHES-PINS, SPRING.

Waters, T. H., Nelson.

CLOTHING, MEN'S.

Campbell, George A., & Company, 500 Beatty Street, Vancouver.
Guarantee Wholesalers, Ltd., 806 Granville Street, Vancouver.

Coal.

Canadian Collieries (Dunsmuir), Ltd., Victoria.
Canadian Western Fuel Company, Nanaimo.
Chu Chua Coal Company, Kamloops.
Coalmont Collieries, Ltd., Coalmont.
Corbin Coal & Coke Company, Ltd., Corbin.
Crow's Nest Pass Mining Company, Ltd., Fernie.
East Wellington Coal Company, Nanaimo.
Fleming Coal Company, Merritt.
Granby Consolidated Mining & Smelting Company, Ltd., Cassidy.
King, A. G., & Foster, E. R., Nanaimo.
Nanoose-Wellington Collieries, Ltd., Wellington.
Pacific Coast Coal Mines, Ltd., Victoria.
Princeton Coal & Land Company, Ltd., Princeton.

Coffee Packers and Grinders.

Braid & Company, Ltd., William, Vancouver. "Braid's Best"; "Big Four"; "Ideal"; "Plantation"; "Combination."
Carey, C. J., 638 View Street, Victoria.
Dickson's Importing Tea & Coffee Company, 317 Columbia Street, Vancouver.
Empress Manufacturing Company, Ltd., Vancouver. "Empress"; "Climax."
Jameson Coffee Company, W. A., Victoria. "Jameson's"; "Turkish"; "Italiana."
Kelly, Douglas & Company, Ltd., Vancouver. "Nabob."
Malkin Company, Ltd., W. H., Vancouver. "Malkin's Best"; "Victoria Cross."

Coffins and Caskets.

Imperial Casket Company, 425 Dufferin Street West, Vancouver.
Kamloops Undertaking Company, Kamloops.
Vancouver Casket Company, 1650 First Avenue West, Vancouver.

Colours in Oil.

Ayres Varnish & Paint Company, Ltd., Raymur and Parker Streets, Vancouver.
Brandram-Henderson, Ltd., Vancouver.
British American Paint Company, Ltd., Victoria.
Crown Paint Company, Ltd., Vancouver.
Darling & Son, Henry, 28 Powell Street, Vancouver.
Martin-Senour Company, Ltd., Vancouver.
National Paint Company, Vancouver.
Staneland Company, Ltd., Victoria.
Williams, Stanner & Harte, Ltd., 1302 Wharf Street, Victoria.

Compounds, Washing.

Golden Rule Manufacturing Company, 622 Campbell Avenue, East Burnaby. "Golden Rule."
Pendray & Sons, Ltd., W. J., Victoria. "White Swan."
Radio Manufacturing Company, Vancouver.
Royal Crown Soap, Ltd., 308 Georgia Street West, Vancouver. "Royal Crown."
Wonder Manufacturing Company, Vancouver.
Woodley Manufacturing Company, Ltd., 2188 Wall Street, Vancouver.

Copper, Blister.

Consolidated Mining & Smelting Company of Canada, Ltd., Vancouver.
Granby Consolidated Mining, Smelting & Power Company, Ltd., Vancouver.

Copper, Refined.

Consolidated Mining & Smelting Company of Canada, Ltd., Vancouver.

COPPER RODS.

Consolidated Mining & Smelting Company of Canada, Ltd., Vancouver.

CORDAGE, MANILA, SISAL, AND HEMP.

Canada Western Cordage Company, Ltd., New Westminster.

COUNTERS, WOODEN, STORE.

(*See* Show-cases.)

CRATES, EGG.

Canadian Queen Manufacturing Company, foot of Smythe Street, Vancouver.

CREOSOTE.

Republic Creosoting Company, Vancouver.

CREOSOTING-WORKS.

Dominion Creosoting & Lumber, Ltd., Vancouver.
Vancouver Creosoting Company, Ltd., North Vancouver.

CRIBS, CHILDREN'S.

Red Cross Workshops, Vancouver.
Province Furniture Company, 115 Victoria Drive, Vancouver.
Dowling Manufacturing Company, 266 Dufferin Street East, Vancouver.
Restmore Manufacturing Company, Ltd., Vancouver. "Restmore."
Simmons, Ltd., 2034 Eleventh Avenue West, Vancouver. "Simmons."

DESKS, SCHOOL.

C. Marston Cabinet Works, 3764 Commercial Drive, Vancouver.
Tait Pipe & Foundry Company, Ltd., 500 Beatty Street, Vancouver.

DEXTRINE.

Dominion Starch & Dextrine Company, Ltd., New Westminster.

DIES.

Clendon Tool & Stamping Works, 135 Hastings Street West, Vancouver.
Gibbs Tool & Stamping Works, 356 Dufferin Street West, Vancouver.
Hall Machine Works, Vancouver.
Hewitt Company, Ltd., The Geo. H., 653 Seymour Street, Vancouver.
Houghton & Evans, 303 Hastings Street West, Vancouver.
Murray-Latta Machine Works, foot of Bidwell Street, Vancouver.

DISINFECTANTS.

Western Industrial Development Company, Vancouver. "Creola."
Barrett Company, Ltd., Marpole. "Carbonal"; "Pyxol."

DOLLS.

Canada Dolls, Ltd., 4349 Victoria Drive, Vancouver.

DUSTERS.

Dust Control Company, 2246 Commercial Street, Vancouver.

DYNAMITE.

Canadian Explosives, Ltd., Vancouver.
Giant Powder Company of Canada, Ltd., Victoria.
Sabulite Explosives, Ltd., Port Coquitlam.

Electrical Appliances.

Cope & Son, 100 Front Street East, Vancouver.
Electrical Manufacturing Company, Granville Island, Vancouver.
Farr, Robinson & Bird, Ltd., 546 Howe Street, Vancouver.
Lang Electrical Fixture Company, Granville Island, Vancouver.

Electrophones.

Premier Phonograph Company, Garbally Road, Victoria.

Elevators.

Westminster Iron Works, Ltd., New Westminster.

Engines, Gas and Gasolene.

Cormack & Annand, Tenth Street, New Westminster.
Easthope Brothers, 1729 Georgia Street, Vancouver.
Hafer Machine Works, Victoria.
Hall Machine Works, Vancouver.
Heaps Engineering Company, Ltd., New Westminster.
Ideal Iron Works, Ltd., 123 Powell Street, Vancouver.
Marine Iron Works, Victoria.
Pacific Standard Motor Works, Vancouver.
Pumps & Power, Ltd., 224 Abbott Street, Vancouver.
Schaake Company, Ltd., Granville Island, Vancouver.
Vivian Gas Engine Works, 1090 Sixth Avenue West, Vancouver.
Wonder Pump & Engine Co., 931 Pender Street West, Vancouver.

Envelopes.

Pioneer Envelopes, Ltd., Vancouver.

Explosives.

Canadian Explosives, Ltd., Vancouver.
Giant Powder Company of Canada. Ltd., Victoria.
Sabulite Explosives, Ltd., Port Coquitlam.

Extracts, Flavouring.

Empress Manufacturing Company, Ltd., 1106 Homer Street, Vancouver. "Empress"; "Climax."
Fruitall Company, Ltd., Vancouver.
Jameson Coffee Company, W. A., 754 Broughton Street, Victoria. "Jameson."
Kelly, Douglas & Company, Vancouver. "Nabob."
Malkin & Company, Ltd., W. H., Vancouver. "Malkin's Best"; "Tropical"; "Victoria Cross."

Feed.

Brackman-Ker Milling Company, Ltd., Victoria.
Easterbrook Milling Company, Eburne.
McLellan & McCarter, Ltd., 1605 Sixth Avenue West, Vancouver.
Vancouver Milling & Grain Company, Ltd., Vancouver.
Vernon & Buckerfield, 321 Front Street, Vancouver.
Victory Flour Mills, Ltd., 806 Beach Avenue, Vancouver.

Felts, Dry.

Sidney Roofing & Paper Company, Ltd., Victoria.

Felts, Saturated.

Pacific Roofing Company, Ltd., Granville Island, Vancouver.
Sidney Roofing & Paper Company, Ltd., Victoria.

FENCES AND GATES.

Artistic Iron Works, 116 Dufferin Street East, Vancouver.
B.C. Anchor Fence Company, Ltd., 1031 Pender Street West, Vancouver.
Pearson Wire & Iron Company, City Market, Vancouver.
Westminster Iron Works, Ltd., New Westminster.

FENCE-WIRE.

B.C. Anchor Fence Company, Ltd., 1031 Pender Street West, Vancouver.
Morrison Steel & Wire Company, Granville Island, Vancouver.
Watt Company, Ltd., Thomas, 225 Fifth Avenue West, Vancouver.

FERTILIZER.

B.C. Fertilizer, 832 Hereward Road, Victoria.
Beaty & Company, W. R., Granville Island, Vancouver.
Globe Fertilizer Company, foot of Campbell Street, Vancouver.
Henshall Fish Products, Ltd., Sooke.
Herondale Farm, Ltd., 1571 Pender Street West, Vancouver.
Pacific Guano Company, Ltd., 433 Pender Street West, Vancouver.
Rendezvous Fisheries, Ltd., Rendezvous Island.
Triangle Chemical Company, New Westminster.
Vancouver Island Whaling Company, Ltd., Victoria.
Victoria Chemical Company, Victoria.

FISH-MEAL.

Beaty & Company, W. R., Granville Island, Vancouver.
Henshall Fish Products, Ltd., Victoria.
Nanaimo Fish Meal & Oil Refinery, Nanaimo.
Pacific Guano Company, 433 Pender Street West, Vancouver.
Rendezvous Fisheries, Ltd., Rendezvous Island.

FISH-OIL.

Beaty & Company, W. R., Granville Island, Vancouver.
Canada Fish Products, Ltd., Ladner.
Consolidated Whaling Corporation, Ltd., Victoria.
Henshall Fish Products, Ltd., Victoria.
Nanaimo Fish Meal & Oil Refinery, Nanaimo.
Pacific Guano Company, 433 Pender Street West, Vancouver.
Rendezvous Fisheries, Ltd., Rendezvous Island.

FISH, PICKLED.

B.C. Fishing & Packing Company, Ltd., Vancouver.
Gosse-Millerd Company, Vancouver.
Watson Brothers, Vancouver.
Wallace Fisheries, Ltd., Vancouver.

FISH, SMOKED.

Atlin Fisheries, Ltd., Prince Rupert.
Butterfield-Mackie Company, Ltd., Vancouver. "B. & M."
Canadian Fish & Cold Storage Company, Ltd., Prince Rupert.
Pacific Coast Fish & Oyster Company, Ltd., foot of Gore Avenue, Vancouver. "Pacific."
Watson Brothers Fishing & Packing Company, Ltd., Vancouver. "Watson's."

FISHING-SPOONS.

Clendon Tool & Stamping Works, 135 Hastings Street West, Vancouver.
Gibs Tool & Stamping Works, 356 Dufferin Street West, Vancouver.
Lenfesty, W. N., 1324 Government Street, Victoria.

Fittings, Wood (Bank, Office, and Store).

Canadian Western Woodworkers, Ltd., Garbally Road, Victoria.
Chrystall & Company, Ltd., E. C., 108 Georgia Street East, Vancouver.
Johnson & Allen, 148 Lorne Street East, Vancouver.
Marston, C., Cabinet Works, 3764 Commercial Drive, Vancouver.
McLeod Sash & Door Factory, Ltd., 1251 Charles Street, Vancouver.
Dixon & Murray, Dunsmuir Street, Vancouver.

Flags and Bunting.

Grant-Holden-Graham, Ltd., Vancouver.
Jeune, F., & Bro., Ltd., Victoria.
Jones & Son, Ltd., C. H., 28 Water Street, Vancouver.

Flooring, Hardwood.

B.C. Hardwood Floor Company, Ltd., Vancouver and Victoria.
Fyfe-Smith & Company, J., Vancouver.
Inlay Hardwood Floor Company, 929 Pender Street West, Vancouver.

Flour.

Brackman-Ker Milling Company, Ltd., Victoria. "B. and K."
Easterbrook Milling Company, Ltd., Eburne. "Imperial."
Okanagan Farmers' Milling Company, Ltd., Vernon.
Soda Creek Roller Mills, Soda Creek.
Vancouver Milling & Grain Company, Ltd., Vancouver. "Wild Rose"; "Royal Standard."
Vernon & Buckerfield, 321 Front Street, Vancouver.
Victory Flour Mills, Ltd., 806 Beach Street, Vancouver. "Velvet"; "Paragon."

Fluff Rugs.

Pacific Coast Fluff Rug Company, 1061 Richards Street, Vancouver.
Vancouver Fluff Rug Company, Seventeenth Avenue West and Willow Street, Vancouver.

Foundries.

Boundary Iron Works, Ltd., Grand Forks.
Canadian Sumner Iron Works, 1214 Pender Street East, Vancouver.
Hendry Foundry Company, 360 Front Street West, Vancouver.
Letson & Burpee, Ltd., Vancouver.
Mainland Engineering Company, Ltd., 422 Railway Street, Vancouver.
Marine Iron Works, Pembroke Street, Victoria.
McLean & Powell, Vancouver.
Nanaimo Foundry, Nanaimo.
Nelson Iron Works, Ltd., Nelson.
Pacific Iron Works, 231 Prior Street, Vancouver.
Progressive Engineering Works, 900 Powell Street, Vancouver.
Ramsay & Adams Foundry Company, Garbally Road, Victoria.
Ross & Howard Iron Works, foot of Woodland Drive, Vancouver.
Schaake Company, Ltd., Granville Island, Vancouver.
Star Brass Foundry Company, Lorne and Columbia Streets, Vancouver.
Sumner Brass Works, 610 Bidwell Street, Vancouver.
Tait Pipe & Foundry Company, Vancouver.
Terminal City Iron Works, 1949 Albert Street, Vancouver.
Vancouver Brass Works, 1304 Keefer Street, Vancouver.
Vancouver Engineering Works, Ltd., 519 Sixth Avenue West, Vancouver.
Victoria Brass & Iron Works, Esquimalt.
Vulcan Iron Works, Ltd., Granville Island, Vancouver.
Wallace Foundry Company, Granville Island, Vancouver.
Westminster Foundry Company, New Westminster.

FRUITS, CANNED.

Broder Canning Company, Ltd., New Westminster. "Fraser Valley Brand"; "Royal City Brand."
Dominion Canners of B.C., Ltd., 332 Drake Street, Vancouver. "Quaker."
Kamloops Canneries, Ltd., Kamloops.
King-Beach Manufacturing Company, Ltd., Mission.
Keremeos Packing Company, Ltd., Keremeos. "Diamond K. Brand."
Occidental Fruit Company, Ltd., Kelowna. "Okanagan Brand."
Okanagan Canning Company, Kelowna. "Duncan's Best."
O.U.G. Fruit Products, Ltd., Vernon. "O.K."
Saanich Canning Company, Sidney. "Saanich Brand."
Victoria Preserving & Canning Company, 741 Johnson Street, Victoria.

FURNACES.

Albion Stove Works, Victoria.
Ralph, William, Ltd., 626 Seymour Street, Vancouver.
Vancouver Stove & Heater Works, Ltd., 2100 Eleventh Avenue West, Vancouver.

FURNITURE.

Bennett & Son, Thomas, 1256 Union Street, Vancouver.
Dowling Manufacturing Company, 266 Dufferin Street East, Vancouver.
Fine Arts Furniture Company, Ltd., 1115 Pender Street West, Vancouver.
Hardwood Chair Company, Ltd., 860 Hornby Street, Vancouver.
Morlock Company, Ltd., 1052 Homer Street, Vancouver.
Province Furniture Manufacturing Company, Ltd., foot of Victoria Drive, Vancouver.
Restmore Manufacturing Company, Ltd., Vancouver.
Weiler Brothers, Ltd., 921 Government Street, Victoria.
Westminster Furniture Manufacturing Company, New Westminster.

FURNITURE, PERIOD DESIGN.

Fine Arts Furniture Company, Ltd., 1115 Pender Street West, Vancouver.
Johnson, H. L., Fort Street, Victoria.
Timewell, D. C., Ltd., 1123 Granville Street, Vancouver.

FURNITURE, WILLOW.

Wakefield, E. J., 56 Dufferin Street West, Vancouver.

GAS, CARBONIC ACID.

Canadian Carbonate, Ltd., Eleventh Avenue and Yew Street, Vancouver.

GAS, ILLUMINATING.

City of Nelson Gas Company, Ltd., Nelson.
Granby Consolidated Mining, Smelting & Power Company, Vancouver.
New Westminster Gas Works, New Westminster.
Vancouver Gas Company, Ltd., Vancouver.
Victoria Gas Company, Ltd., Victoria.

GASOLENE.

Imperial Oil, Ltd., Ioco.
Union Oil Company, Port Moody.

GLASS-BLOWER.

Lang Electric Company, Vancouver.

Gloves, Leather.

Howard Glove Company, Vancouver.
Sandell Manufacturing Company, Ltd., 336 Cordova Street West, Vancouver.
Vancouver Glove Company, 223 Carrall Street, Vancouver.
Watson, John, 127 Dufferin Street East, Vancouver.

Glycerine.

Pendray & Sons, W. J., Ltd., Victoria.
Royal Crown Soaps, Ltd., 308 Georgia Street East, Vancouver.

Halibut.

Clayoquot Canning Company, Ltd., Clayoquot.
N.M. & R. Fish Company, Ltd., Prince Rupert.
Royal Fish Company, Prince Rupert.

Hand Cleaners.

Canadian Chemical Company, Vancouver.

Handles, Axe, Broom, Mop, etc.

B.C. Handle Company, Ltd., Vancouver.
Vancouver Handle Company, Ltd., Vancouver.
J. N. Young Company, Marine Drive and Manitoba Street, South Vancouver.

Harness.

Beer, A. J., West Summerland.
B.C. Saddlery Company, Ltd., Victoria.
Bryant, C. F., Nanaimo.
Duncan, William, Victoria.
Ferris, Walter, 1514 Fifth Avenue West, Vancouver.
Norris & Sons, F., Victoria.
McLaren, D. C., 211 Georgia Street East, Vancouver.
Okanagan Saddlery, Vernon.
Storey & Campbell, 518 Beatty Street, Vancouver.
Wilcox-Hall Company, Ltd., Kamloops.
S. Nelson Company, Ltd., Vancouver.

Hat-manufacturers.

Caledonian Hat Works, 135 Hastings Street West, Vancouver.
Linforth's Hat Manufacturing Company, 344 Abbott Street, Vancouver.
Pacific Hat & Pennant Factory, 669 Smythe Street, Vancouver.
Paris Hat Company, 307 Cordova Street West, Vancouver.
Victoria Hat Factory, Fort and Broad Streets, Victoria.
Western Hat & Frame Company, 508 Smythe Street, Vancouver.
Wilcox Hat Company, Ltd., 719–723 Courtenay Street, Victoria.

Heaters, Air-tight.

Albion Stove Works, Victoria.
Domestic Air Heater Company, Victoria.
McLean & Powell Iron Works, Dufferin Street, Vancouver.
McClary Manufacturing Company, Ltd., Vancouver.
Vancouver Stove & Heater Company, Ltd., 2100 Eleventh Avenue West, Vancouver.

Herring.

Canadian Fishing Company, Ltd., foot of Gore Avenue, Vancouver.
N.M. & R. Fish Company, Prince Rupert.

HERRING, DRY-SALTED.

Barclay Sound Fisheries, Ltd., Sarita Bay, Barclay Sound.
Maritime Fisheries, Ltd., Vancouver.
Watson Brothers Fishing & Packing Company, Ltd., Vancouver.

HOPS.

Agassiz Hop Company, Agassiz.
British Columbia Hop Company, Ltd., Vancouver.
Chilliwack Hop Company, Chilliwack.

HOUSES, READY-CUT.

Cut-to-fit Buildings Company, Ltd., Vancouver.
Fabricated Buildings Company, Ltd., Davis Chambers, Vancouver.
Great West Manufacturing Company, Ltd., foot of Commercial Drive, Vancouver.
Mill Cut Homes & Lumber, Ltd., 2606 Yew Street, Vancouver.

ICE, ARTIFICIAL.

Amiel, A. L., 1027 Main Street, Vancouver.
Casorso Brothers, Ltd., Kelowna.
Eburne Ice Company, 8866 Hudson Street, Vancouver.
Harwood, Joseph, Vernon.
Ice Delivery Company, Ltd., Homer and Smythe Streets, Vancouver.
Kaslo Transfer Company, Kaslo.
Kootenay Ice Company, Nelson.
Mainland Ice & Cold Storage Company, Nelson Street, Vancouver.
Penticton Ice & Cold Storage Company, Penticton.
St. Mungo Canning Company, Ltd., New Westminster.
Vancouver Ice & Cold Storage Company, Ltd., 11 Gore Avenue, Vancouver.
Vancouver Island Fish & Cold Storage Company, Nanaimo.
Victoria Ice Company, 2626 Rose Street, Victoria.
Westminster Ice & Creamery Company, Ltd., New Westminster.
Wilson, B., Company, Ltd., 536 Herald Street, Victoria.

ICE-CREAM.

Almonds, Ltd., 440 Pender Street East, Vancouver.
Clarke, F. S., Nanaimo.
Comox Creamery Association, Courtenay.
Crescent Ice Cream Company, 1002 Hastings Street West, Vancouver.
Curlew Creamery Company, Grand Forks.
Curlew Creamery Company, Nelson.
Fraser Valley Dairy, 1170 Hornby Street, Vancouver.
Kelowna Creamery Company, Ltd., Kelowna.
Northern Okanagan Creamery Association, Armstrong.
Northwestern Creamery, Ltd., Victoria.
Royal Dairy, 1001 Pender Street, Vancouver.
Royal Dairy, Douglas Street, Victoria.
Spencer, David, Ltd., Vancouver.
Terry, W. S., Fort Street, Victoria.
Victoria City Dairy Company, Ltd., 1111 Fort Street, Victoria.
White Lunch, Ltd., 123 Hastings Street West, Vancouver.

INCUBATORS AND BROODERS.

Canadian Queen Manufacturing Company, Ltd., foot of Smythe Street, Vancouver.
" 'Canadian Queen."
Vancouver Incubator Company, Vancouver.

Ink, Printing.

Columbia Printing Ink & Roller Company, 1063 Hamilton Street, Vancouver.

Ink, Writing.

Peerless Products, Ltd., 1642 Pandora Street, Vancouver. "Peerless."
Walmsley, Frank, 1578 Fifth Avenue West, Vancouver.

Iodine.

Nichols Chemical Company of Canada, Ltd., Barnet.

Jams and Jellies.

Broder Canning Company, Ltd., New Westminster. "Fraser Valley"; "Royal City."
Dominion Canners, B.C., Ltd., Vancouver. "Quaker"; "Totem."
Empress Manufacturing Company, Ltd., 1106 Homer Street, Vancouver. "Empress"; "Climax."
King-Beach Manufacturing Company, Ltd., Mission. "K-B."
Laurel Canners, Ltd., Lake Hill.
Mission Preserving Company, Mission. "Apex."
McDonald Jam Company, Ltd., Nelson. "Nelson."
O.U.G. Fruit Products, Ltd., Vernon. "O.K."
Pound, Mrs. George, 621 Fifteenth Avenue East, Vancouver. "Mrs. Pound's."
Victoria Preserving & Canning Company, Ltd., 741 Johnson Street, Victoria. "Cooper's."

Jerseys.

Maple Leaf Knitting Company, 135 Hastings Street West, Vancouver.
Pride of the West Knitting Mills, Ltd., 500 Beatty Street, Vancouver. "Pride of the West."
Quigley Knitting Mills, Ltd., 78 Dufferin Street East, Vancouver. "Q."
Universal Knitting Company, Ltd., 303 Pender Street West, Vancouver. "Universal."

Jewellers, Manufacturing.

Allan, O. B., Granville Street, Vancouver.
Birks & Sons, Ltd., Henry, Granville Street, Vancouver.
Flewwelling, E. R., 18 Hastings Street West, Vancouver.
Jacoby Brothers, 423 Hamilton Street, Vancouver.
Little & Taylor, 617 Fort Street, Victoria.
Mitchell & Duncan, 624 View Street, Victoria.
Peetz, B. C., 654 Yates Street, Victoria.
Trayling & Waters, 326 Hastings Street West, Vancouver.

Knitted Goods, Woollen.

Maple Leaf Knitting Company, 135 Hastings Street West, Vancouver.
Pride of the West Knitting Mills, Ltd., 500 Beatty Street, Vancouver. "Pride of the West."
Quigley Knitting Mills, Ltd., 78 Dufferin Street East, Vancouver. "Q."
Universal Knitting Company, 303 Pender Street West, Vancouver. "Universal."

Knives, Planer, etc.

Dion Knife Company, 848 Cambie Street, Vancouver.

Lace, Hand-made.

Dall Real Lace Company, 615 Granville Street, Vancouver.
Thompson Lace & Veiling Company, 543 Granville Street, Vancouver.

Laces, Leather.

Nelson, S., Company, Vancouver.

LADDERS.

Allright Ladder Company, 912 Richards Street, Vancouver.
Canadian Queen Manufacturing Company, Ltd., foot of Smythe Street, Vancouver.
Hiker Manufacturing Company, Esquimalt Road and Williams Street, Victoria.
Jones' Chicken House & Ladder Factory, 827 Fort Street, Victoria.
Waters & Company, Ltd., T. H., Nelson.

LAMPS, AUTOMOBILE.

Auto Radiator & Lamp Company, 551 Seymour Street, Vancouver.

LARD.

Burns, P., & Company, Ltd., Victoria and Vancouver. "Shamrock."
Swift Canadian, Ltd., Victoria and Vancouver. "Silver Leaf."

LEATHER BAGS, CASES, TRUNKS, ETC.

B.C. Saddlery Company, Ltd., Victoria.
B.C. Leather & Findings Company, 119 Pender Street West, Vancouver.
Burns, J. F., 519 Granville Street, Vancouver.
Duncan, William, Douglas Street, Victoria.
Imperial Trunk & Leather Goods, Ltd., 338 Hastings Street West, Vancouver.
Norris & Son, F., Government Street, Victoria.
Storey & Campbell, 518 Beatty Street, Vancouver.
Vancouver Trunk & Bag Company, Ltd., 1424 Charles Street, Vancouver.

LEATHER, UPPER AND SOLE.

Leckie, J., & Company, Ltd., New Westminster.
Nelson, S., Company, Ltd., Vancouver.

LIMBS, ARTIFICIAL.

Lundberg, A., Company, 938 Pender Street West, Vancouver.

LIME.

Alunite Mining & Products Company, Ltd., 912 Vancouver Block, Vancouver.
Hazel, E. J., Crowsnest.
Lands Lime, Ltd., Armstrong.
Northwest Supplies, Ltd., 525 Sayward Building, Victoria.
Pacific Lime Company, Ltd., 313 Pacific Building, Vancouver.
Rosebank Lime Company, Ltd., 415 Pemberton Building, Victoria.
Summit Lime & Cooperage Works, Crowsnest.
Western Canada Lime Company, Popkum.

LINES, CLOTHES.

Canada Western Cordage Company, Ltd., New Westminster.

LINGERIE.

Dall Lace Company, Ltd., 615 Granville Street, Vancouver.
Vanity Waist & Neckwear Company, Ltd., 136 Water Street, Vancouver.
Thomson, James, & Son, Ltd., Water Street, Vancouver.

LIQUID AIR.

Compressed Gas Company, 1530 Hastings Street West, Vancouver.
L'Air Liquide Society, Yukon and Fifth Avenue, Vancouver.
Tupper & Steele, Ltd., 1669 Third Avenue West, Vancouver.

LOCOMOTIVES, GASOLENE.

Westminster Iron Works, Ltd., New Westminster.

Lye.

Pendray, W. J., & Sons, Ltd., Victoria.
Royal Crown Soap Works, 308 Georgia Street East, Vancouver.

Macaroni.

Kelly-Douglas Company, Ltd., Vancouver. "Canadian."
Kelly Confection Company, Ltd., 1106 Mainland Avenue, Vancouver.
Modern Macaroni Factory, 638 Cormorant Street, Victoria. "Liberty Brand."
Ramsay Brothers & Company, Ltd., 990 Powell Street, Vancouver. "Ramsay's."

Machinery, Canning.

Heaps Engineering Company, Ltd., New Westminster.
Letson & Burpee, Ltd., Vancouver.
Schaake Company, Ltd., Vancouver.
Victoria Machinery Depot Company, Ltd., Victoria.
Murray-Latta Machine Works, Vancouver.

Machinery, Ice-making.

Linde Refrigerator Company, Vancouver.
Mitchell, George E., Vancouver.

Machinery, Logging.

Canadian Sumner Iron Works, Vancouver.
Empire Manufacturing Company, Ltd., 1200 Sixth Avenue West, Vancouver.
Gibson's, Ltd., 1 Alexander Street, Vancouver.
Hall Machine Works, 1225 Alberni Street, Vancouver.
Heaps Engineering Works, New Westminster.
Letson & Burpee, Vancouver.
Mainland Engineering Works, Vancouver.
Marine Iron Works, Victoria.
M. O. Olsen Iron Works, 309 Alexander Street, Vancouver.
Opsal Steel Company, Ltd., Vancouver.
Pacific Iron Works, 241 Prior Street, Vancouver.
Progressive Engineering Works, Vancouver.
Ross & Howard Iron Works, Ltd., Vancouver.
Terminal City Iron Works, Vancouver.
Vancouver Engineering Works, Vancouver.
Vancouver Machinery Depot, Vancouver.
Victoria Machinery Depot, Victoria.
Westminster Iron Works, New Westminster.
Yarrows, Ltd., Esquimalt.

Machinery, Mining.

Boundary Iron Works, Ltd., Grand Forks.
Ellis & Company, W. J., Kamloops.
Heaps Engineering Company, New Westminster.
Marine Iron Works, Victoria.
Nelson Iron Works, Ltd., Nelson.
Ross & Howard Iron Works, Ltd., Vancouver.
Terminal City Iron Works, Vancouver.
Vancouver Engineering Works, Ltd., Vancouver.
Victoria Machinery Depot, Victoria.
Vulcan Iron Works, Ltd., Granville Island, Vancouver.

Machinery, Pulp-wood and Pulp.

Ross & Howard Iron Works, Ltd., Vancouver.
Vancouver Engineering Works, Ltd., Vancouver.
Vulcan Iron Works, Ltd., Granville Island, Vancouver.

MACHINERY, SAWMILL AND SHINGLE-MILL.

B.C. Equipment Company, Ltd., Vancouver.
Canadian Sumner Iron Works, Ltd., 1214 Pender Street East, Vancouver.
Ellis & Company, W. J., Kamloops.
Hall Machine Works, 1225 Alberni Street, Vancouver.
Heaps Engineering Company, Ltd., New Westminster.
Letson & Burpee, Ltd., Vancouver.
Nelson Iron Works, Ltd., Nelson.
Ross & Howard Iron Works Company, Ltd., Vancouver.
Schaake Company, Ltd., Vancouver.
Victoria Machinery Depot Company, Ltd., Victoria.
Vancouver Machinery Depot, Vancouver.

MACHINERY, SMELTING.

Boundary Iron Works, Ltd., Grand Forks.
Nelson Iron Works, Ltd., Nelson.
Ross & Howard Iron Works, Ltd., foot of Woodland Drive, Vancouver.
Vancouver Engineering Works, Ltd., 519 Sixth Avenue West, Vancouver.

MACHINES, WASHING.

Beatty Brothers, Ltd., 928 Granville Street, Vancouver.
Golightly Brothers, Ltd., 753 Powell Street, Vancouver.

MAGNESITE, CALCINED.

Pacific Roofing Company, Ltd., Vancouver.

MARMALADE.

Empress Manufacturing Company, Ltd., 1106 Homer Street, Vancouver. "Empress"; "Climax."
Mrs. Haine, Ltd., 2645 Fourth Avenue West, Vancouver. "Mrs. Haine's."
Mrs. Geo. Pound, Vancouver. "Mrs. Pound's."
King-Beach Manufacturing Company, Ltd., Mission. "K-B."
Laurel Canners, Ltd., Lake Hill.
McDonald Jam Company, Ltd., Nelson. "Victory."
Stanley's Pure Preserve Company, 3370 Victory Street, Vancouver.
Victoria Preserving Company, Ltd., 731 Johnson Street, Victoria. "Cooper's."

MATTRESSES.

Heberlee Ideal Bedding Company, Ltd., 159 Granville Street, Vancouver.
Restmore Manufacturing Company, Ltd., Vancouver. "Restmore."
Simmons, Ltd., 2034 Eleventh Avenue West, Vancouver. "Simmons."
Victoria Bed & Mattress Company, Ltd., 776 Topaz Avenue, Victoria. "Getmorerest."
Kootenay Wire Works Manufacturing Company, Ltd., Nelson.
Folding Mattress Company, 300 Glen Drive, Vancouver. "Modern."

MEAL, FISH.

Beaty Company, W. R., Granville Island, Vancouver.
Henshall Fish Products, Ltd., Victoria.
Nanaimo Fish Meal & Oil Refinery, Nanaimo.
Pacific Guano Company, 433 Pender Street West, Vancouver.
Rendezvous Fisheries, Ltd., Rendezvous Island.

MEATS, CURED.

P. Burns & Company, Ltd., Vancouver and Victoria.
Swift Canadian, Ltd., Vancouver and Victoria.

Milk, Evaporated.

Pacific Milk Company, Ltd., 328 Drake Street, Vancouver. "Pacific."

Mince-meat.

P. Burns & Company, Ltd., Vancouver.
Empress Manufacturing Company, Ltd., 1106 Homer Street, Vancouver. "Empress"; "Climax."
Kelly Confection Company, Ltd., 1106 Mainland Street, Vancouver. "Kelly's."

Mirrors.

Bogardus-Wickens, Ltd., 1000 Homer Street, Vancouver.
O'Neil Company, Ltd., Wm. N., Victoria and Vancouver.
Pilkington Brothers, Vancouver.
Wm. Holt & Sons, 436 Dufferin Street West, Vancouver.

Molasses.

B.C. Sugar Refinery, Vancouver.
Kelly Confection Company, Ltd., 1106 Mainland Street, Vancouver. "Chef"; "Sugar House"; "Black Strap."
Ramsay Brothers & Company, Ltd., Vancouver. "D."

Mops.

Dust Control Company, 2246 Commercial Drive, Vancouver. "Cedar"; "Roylo."

Mucilage.

Columbia Printing Ink & Roller Company, Vancouver.
Peerless Products, Ltd., 1642 Pandora Street, Vancouver. "Peerless."

Nails.

Morrison Steel & Wire Company, Ltd., Granville Island, Vancouver.

Naphtha.

Granby Consolidated Mining & Smelting Company, Vancouver.

Neckwear, Men's.

Cravat & Regalia Company, 436 Howe Street, Vancouver.
Kerr Manufacturing Company, Vancouver. "Kerr."

Neckwear, Women's.

Finlayson, H. L., 318 Homer Street, Vancouver.
Vanity Waist & Neckwear Company, Ltd., 136 Water Street, Vancouver.

Oils, Burning.

Imperial Oil Company, Ltd., Ioco.
Union Oil Company, Port Moody.

Oils, Creosote.

Barrett Company, Ltd., Marpole.
Republic Creosoting Company, Vancouver.
Western Industrial Development Company, 1043 Hamilton Street, Vancouver.

Oil, Fish.

Beaty & Company, W. R., Granville Island, Vancouver.
Canada Fish Products, Ltd., Ladner.
Consolidated Whaling Corporation, Ltd., Victoria.
Henshall Fish Products, Ltd., Victoria.
Nanaimo Fish Meal & Oil Refinery, Nanaimo.
Pacific Guano Company, 433 Pender Street West, Vancouver.
Rendezvous Fisheries, Ltd., Rendezvous Island.

OIL, FLOOR.

British American Paint Company, Ltd., Victoria.
Dust Control Company, 2246 Commercial Drive, Vancouver.
Tillikum Manufacturing Company, Dufferin Street West, Vancouver.
Western Industrial Development Company, 1043 Hamilton Street, Vancouver.

OIL, FUEL.

Imperial Oil, Ltd., Ioco.
Union Oil Company, Port Moody.

OIL, GAS DISTILLATE.

Western Industrial Development Company, 1043 Hamilton Street, Vancouver.
Imperial Oil, Ltd., Ioco.
Sidney Roofing & Paper Company, Ltd., Victoria.
Union Oil Company, Port Moody.

OIL, LUBRICATING.

Ayres Varnish Company, Ltd., Vancouver.
Western Industrial Development Company, 1043 Hamilton Street, Vancouver.
Imperial Oil, Ltd., Ioco.
Union Oil Company, Port Moody.

OIL, POLISHING.

British American Paint Company, Ltd., Victoria.
Suprema Polish Company, 2071 First Avenue West, Vancouver.
Western Industrial Development Company, 1043 Hamilton Street, Vancouver.

OIL, WHALE.

Consolidated Whaling Corporation, Ltd., Victoria.

ORNAMENTAL-IRON WORKS.

Artistic Iron Works, 116 Dufferin Street East, Vancouver.
Morris & Company, S. M., 2120 Cedar Street, Vancouver.
Pearson Wire & Iron Works, City Market, Vancouver.
Westminster Iron Works, New Westminster.

OVERALLS.

Gault Brothers, Ltd., 361 Water Street, Vancouver. "Caribou"; "Bull Dog"; "Canuck."
Thomson & Sons, Ltd., James, 353 Water Street, Vancouver. "Twin Bute."
Turner, Beeton & Company, Ltd., Victoria. "Big Horn."

OXYGEN.

Compressed Gas Company, Ltd., 1530 Hastings Street East, Vancouver.
L'Air Liquide Society, Fifth Avenue and Yukon Street, Vancouver.

PAINTS.

Ayres Varnish & Paint Company, Ltd., Raymur & Parker Streets, Vancouver.
Brandram-Henderson, Ltd., 470 Granville Street, Vancouver.
British American Paint Company, Ltd., Victoria.
Crown Paint Company, Ltd., 24 Cordova Street East, Vancouver.
Darling & Son, Henry, 28 Powell Street, Vancouver.
Martin-Senour Company, Ltd., 1505 Powell Street, Vancouver.
National Paint Company, Ltd., Granville Island, Vancouver.
Pacific White Lead Company, Ltd., Granville Island, Vancouver.
Sherwin-Williams Company of Canada, Ltd., Vancouver.
Staneland Company, Ltd., Fort Street, Victoria.
Williams, Stanner & Harte, Ltd., 1302 Wharf Street, Victoria.

Paper, Building.

Barrett Company, Ltd., Tenth Avenue and Arbutus Street, Vancouver. "Victoria"; "Western"; "Anchor"; "Stag."
Sidney Roofing & Paper Company, Ltd., Victoria. "Kraft"; "Capital"; "Esquimalt."

Paper, Kraft.

Pacific Mills, Ltd., Ocean Falls.

Paper, Newsprint.

Pacific Mills, Ltd., Ocean Falls.
Powell River Company, Ltd., Powell River.

Paste, Label.

Columbia Printing Ink & Roller Company, 1063 Hamilton Street, Vancouver.
Laboratories & Manufacturing Company, Cordova and Cambie Streets, Vancouver.
Peerless Products, Ltd., 1642 Pandora Street, Vancouver.

Paste, Photo.

Peerless Products, Ltd., 1642 Pandora Street, Vancouver. "Peerless."

Peanut Butter.

Canada Nut Company, Ltd., 1280 Homer Street, Vancouver. "Nutro."
Kelly Confection Company, Ltd., 1106 Mainland Street, Vancouver.
Lyons & Company, F., 1500 Main Street, Vancouver.
McQueen Produce Company, Ltd., 25 Pender Street West, Vancouver.

Peel, Candied.

Robinson, W., 3636 Fourth Avenue West, Vancouver.

Phonographs.

Artcraft Phonograph Company, Vancouver. "Classic."
Premier Phonograph Company, Garbally Road, Victoria. "Premier."

Pianos.

Edward Charles, New Westminster.

Pickles.

Empress Manufacturing Company, 1106 Homer Street, Vancouver. "Empress"; "Climax."
Lyons & Company, F., 1500 Main Street, Vancouver.
Vancouver Pickle Company, Ltd., Granville Island, Vancouver. "Rainbow."
Western Pickling Works, Ltd., View Street, Victoria. "Camosun."

Pilchards.

Nootka Packing Company, Ltd., Nootka.
Wallace Fisheries, Ltd., Vancouver.

Pillows.

Heberlee's Ideal Bedding Company, 1159 Granville Street, Vancouver. "Ideal."
Restmore Manufacturing Company, Vancouver.
Simmons, Ltd., 2034 Eleventh Avenue West, Vancouver. "Ostermore"; "Ostermoor."

Pipe, Cast Iron.

McLean & Powell, Vancouver.
Ross & Howard Iron Works, Ltd., Vancouver.
Tait Pipe & Foundry Company, Ltd., 500 Beatty Street, Vancouver.
Vancouver Engineering Works, Vancouver.

PIPE, WOOD STAVE.

Canadian Pipe Company, Ltd., 550 Pacific Street, Vancouver.
Pacific Coast Pipe Company, Ltd., 1551 Granville Street, Vancouver.
Vancouver Wood Pipe & Tank Company, 850 Hastings Street West, Vancouver.

PISTON-RINGS.

Beatson, Frank, Granville Island, Vancouver.

PITCH.

Barrett Company, Ltd., Tenth Avenue and Arbutus Street, Vancouver.

PLATING.

Albion Stove Works, Victoria.
B.C. Silver Plating Company, 547 Richards Street, Vancouver.
Cascade Plating Works, 325 Howe Street, Vancouver.
Superior Plating & Galvanizing Works, 153 Cordova Street East, Vancouver.
Victoria Plating Works, 823 Pandora Street, Victoria.

POLISH, AUTO.

Golden Rule Manufacturing Company, 622 Campbell Street East, Burnaby.

POLISH, BOOT AND SHOE.

Tillikum Manufacturing Company, Vancouver.

POLISH, FLOOR, FURNITURE, ETC.

British American Paint Company, Ltd., Victoria.
Western Industrial Development Company, 1043 Hamilton Street, Vancouver.
Dust Control Company, 2246 Commercial Drive, Vancouver.
Suprema Polish Co., 2071 First Avenue West, Vancouver.
Tillikum Manufacturing Company, Vancouver.

POLISH, SILVER AND METAL.

British American Paint Company, Ltd., Victoria.
Brighten All, Victoria.

POLISH, STOVE.

Canadian Chemical Company, Ltd., 376 Lansdowne Street West, Vancouver. "Stove Tox."
Tillikum Manufacturing Company, Vancouver. "Skookum."

PORK AND BEANS.

Broder Canning Company, Ltd., New Westminster. "Fraser Valley"; "Royal City."
Dominion Canners, B.C., Limited, 332 Drake Street, Vancouver. "Quaker."

POWDER, BAKING.

Empress Manufacturing Company, Ltd., 1106 Homer Street, Vancouver. "Empress"; "Climax."
Jameson, W. A., Coffee Company, 754 Broughton Street, Victoria. "Featherlight."
Kelly, Douglas & Company, Ltd., Vancouver. "Nabob."
Malkin & Company, Ltd., W. H., Vancouver. "Malkin's Best"; "Tropical"; "Victoria Cross."

POWDER, BLASTING.

Canadian Explosives, Ltd., Vancouver.
Giant Powder Company of Canada, Ltd., Victoria.
Sabulite Explosives, Ltd., Port Coquitlam.

POWDER, FACE.

Henrietta Toilet Preparations, 649 Seymour Street, Vancouver. "Henrietta."

Powder, Jelly.

Empress Manufacturing Company, Ltd., 1106 Homer Street, Vancouver. "Empress"; "Climax."
Jameson, W. A., Coffee Company, Broughton Street, Victoria. "Jameson's."
Kelly, Douglas & Company, Ltd., Vancouver. "Nabob."
Malkin Company, Ltd., W. H., Vancouver. "Malkin's Best."

Powder, Talcum.

B.C. Pharmacal Company, Ltd., Railway Street, Vancouver. "Columbian Violet"; "Canadian Bouquet"; "Perfect."
Henrietta Toilet Preparations, 649 Seymour Street, Vancouver. "Henrietta."

Powder, Washing.

Golden Rule Manufacturing Company, 622 Campbell Avenue, East Burnaby. "Golden Rule."
Pendray & Sons, Ltd., W. J., Victoria. "White Swan."
Radio Manufacturing Company, Vancouver.
Royal Crown Soaps, Ltd., 308 Georgia Street East, Vancouver. "Royal Crown."
Woodley Manufacturing Company, Vancouver.

Pulleys, Wood.

Columbia Pulleys, Ltd., 624 Eighteenth Avenue East, Vancouver.
Letson & Burpee, Ltd., 172 Alexander Street, Vancouver.

Pulp, Kraft.

Pacific Mills, Ltd., Ocean Falls.
Western Canada Pulp & Paper Company, Ltd., Port Mellon.

Pulp, Sulphate Wood.

Beaver Cove Lumber & Pulp Company, Ltd., Beaver Cove.
Pacific Mills, Ltd., Ocean Falls.
Western Canada Pulp & Paper Company, Ltd., Port Mellon.

Pulp, Sulphite Wood.

Whalen Pulp & Paper Mills, Ltd., Vancouver.

Pumps.

Letson & Burpee, Vancouver.
Marine Iron Works, Victoria.
Pumps & Power, Ltd., Vancouver.
Terminal City Iron Works, Vancouver.
Vancouver Engineering Works, Vancouver.
Vancouver Machinery Depot, Vancouver.
Wonder Pump & Engine Company, Ltd., Vancouver.

Pumps, Ship.

Marine Iron Works, Ltd., Victoria.
Terminal City Iron Works, Vancouver.

Putty.

British American Paint Company, Ltd., Victoria.
Darling & Son, Henry, 28 Powell Street, Vancouver.

Ranges, Household.

Albion Stove Works, Ltd., Victoria.
Vancouver Stove & Heater Company, Ltd., 2100 Eleventh Avenue West, Vancouver.
McClary Manufacturing Company, Vancouver.

REFRIGERATORS.

Linde Canadian Refrigerator Company, Ltd., 500 Campbell Street, Vancouver.
Mitchell, George E., 453 Thurlow Street, Vancouver.

RETORTS.

Murray-Latta Machine Works, Vancouver.
Letson & Burpee, Ltd., Vancouver.
Ross & Howard Iron Works, Ltd., Vancouver.
Vancouver Engineering Works, Vancouver.
Vulcan Iron Works, Ltd., Granville Island, Vancouver.

RICE.

Asahi Rice Mills Company, 821 Powell Street, Vancouver.
Gim Fook Yuen, 1716 Government Street, Victoria.
Imperial Grain & Milling Company, 343 Railway Street, Vancouver.
Kozai, H., 758 Sixth Avenue West, Vancouver.
Mount Royal Milling & Manufacturing Company, 1824 Store Street, Victoria.
Sakai Tsurunosuke, 474 Alexander Street, Vancouver.
Sam Kee, 111 Pender Street East, Vancouver.
Shimizu, K., 1625 Store Street, Victoria.
Wing Chong & Company, 510 Cormorant Street, Victoria.
Wing Fung Company, 9 Canton Alley, Vancouver.

RINGS, PISTON.

Beatson, Frank, Granville Island, Vancouver.

ROLLERS, PRINTERS'.

Columbia Printing Ink & Roller Company, Vancouver.

ROOFING, FELT.

Sidney Roofing and Paper Company, Ltd., Victoria. "Sid-co"; "X"; "XX"; "XXX."

ROOFING, READY.

Barrett Company, Ltd., Vancouver. "Everlastic"; "Amazon"; "Vitex"; "Panamoid."
Pacific Roofing Company, Ltd., Granville Island, Vancouver. "Never-leak"; "Pioneer"; "Wovaloid."
Sidney Roofing & Paper Company, Ltd., Victoria. "Sid-co"; "Barbadoes"; "Premier."

ROPE, MANILA.

Canada Western Cordage Company, Ltd., New Westminster.

ROPE, WIRE.

Britannia Wire Rope Company, Ltd., Vancouver.

RUGS, AUTOMOBILE.

Canadian Western Woollen Mills, Ltd., 440 Clark Drive, Vancouver.

RUGS, FLUFF.

Pacific Coast Fluff Rug Company, 1061 Richards Street, Vancouver.
Vancouver Fluff Rug Company, Seventeenth Avenue West and Willow Street, Vancouver.

SADDLES.

Beer, A. J., West Summerland.
B.C. Saddlery Company, Ltd., Victoria.
Bryant, C. F., Nanaimo.
Duncan, William, Victoria.
Ferris, Walter, 1514 Fifth Avenue West, Vancouver.

SADDLES—*Continued.*

Norris & Sons, F., Victoria.
McLaren, D. C., 211 Georgia Street East, Vancouver.
Okanagan Saddlery, Vernon.
Storey & Campbell, 518 Beatty Street, Vancouver.
Wilcox-Hall Company, Ltd., Kamloops.
Glenn & Son, W. R., Kelowna.
Nelson Company, Ltd., S., Vancouver.

SAILS.

Grant-Holden-Graham, Ltd., Vancouver.
Jeune & Bro., Ltd., F., Victoria.
Jones, C. H., & Son, Ltd., Vancouver.
Lipsett, Edward, Vancouver.
Nugent & Company, H. M., Vancouver.

SAL SODA.

Pendray & Sons, Ltd., W. J., Victoria.
Royal Crown Soap, Ltd., 308 Georgia Street East, Vancouver.

SALAD DRESSING AND OILS.

Kelly Confection Company, Ltd., 1106 Mainland Avenue, Vancouver.
Kelly, Douglas & Company, Ltd., Vancouver. "Nabob."
Vancouver Pickle Company, Ltd., Granville Island, Vancouver.
Western Pickling Works, Victoria. "Camosun."

SALMON, CANNED.

Alert Bay Canning Company, Alert Bay.
Anglo-British Columbia Packing Company, Ltd., Vancouver.
British Columbia Canning Company, Victoria.
B.C. Fishing & Packing Company, Ltd., Vancouver.
Canadian Canning Company, Ltd., Eburne.
Canadian Fishing Company, Ltd., foot of Gore Avenue, Vancouver.
Canadian Fish & Cold Storage Company, Ltd., Prince Rupert.
Cassiar Packing Company, Ltd., Vancouver.
Glen Rose Canning Company, Ltd., New Westminster.
Clayoquot Canning Company, Ltd., Clayoquot.
C.L. Packing Company, Ltd., Vancouver.
DesBrisay Company, M., 403 Yorkshire Building, Vancouver.
Glenrose Canning Company, Ltd., New Westminster.
Gosse-Millard Canning Company, Ltd., Vancouver.
Great West Packing Company, Ltd., Steveston.
Gulf of Georgia Canning Company, Ltd., Steveston.
Hickey, Wm., Canning Company, Ltd., Vancouver.
Jervis Inlet Packing Company, Ltd., Vancouver.
Kildala Packing Company, Ltd., Vancouver.
Kincolith Packing Company, Ltd., Kincolith.
Lummi Bay Packing Company, Ltd., Lake Nitinat.
Maritime Fisheries, Ltd., Vancouver.
McPherson & Wilkinson, Vancouver.
Nootka Packing Company, Ltd., Nootka.
Northern B.C. Fishers, Ltd., Vancouver.
Quathiaski Canning Company, Ltd., Quathiaski Cove.
Redonda Canning & Cold Storage Company, Ltd., Vancouver.
Sooke Harbor Fishing & Packing Company, 505 Union Bank Building, Victoria.
Skeena River Commercial Company, Ltd., Vancouver.
St. Mungo Canning Company, Ltd., New Westminster.
Wallace Fisheries, Ltd., Vancouver.

SALMON, CANNED—*Continued.*

Western Salmon Packing Company, Ltd., Portland Inlet.
Nanaimo Canners & Packers, Ltd., Nanaimo.
Preston Packing Company, Ltd., Vancouver.
Western Packers, Ltd., Vancouver.
Saanich Canning Company, Ltd., Sidney.
Lockeport Canning Company, Ltd., Vancouver.
Sidney Canning Company, Ltd., Sidney.
Todd, J. H., & Sons, Victoria.
McTavish Fisheries, Ltd., Vancouver.

SALTS, EPSOM AND MINERAL.

Basque Chemical Production Company, Ltd., Epsom.
Nichols Chemical Company, Barnet.
Victoria Chemical Company, Ltd., Victoria.

SAND AND GRAVEL.

Champion & White, 1083 Main Street, Vancouver.
Deeks Gravel & Rock Company, Ltd., 744 Hastings Street West, Vancouver.
Eburne Gravel Company, 8935 Hudson Street, Eburne.
Fairview Sand & Gravel Company, Granville Island, Vancouver.
Harbor Sand & Gravel Company, Ltd., 626 Pender Street West, Vancouver.
Pacific Builders' Supply Company, foot of Angus, Eburne.
Producers Rock & Gravel Company, Ltd., Victoria.
Nicomen Sand & Gravel Company, Ltd., care Foundation Company, Vancouver.

SASH AND DOORS.

Arbuthnot, Mark, 101 Dufferin Street, Vancouver.
Arnot & Sons, John, Vancouver.
Becker, F. J., Armstrong.
Canada Sash & Door Company, 136 Lorne Street West, Vancouver.
Canadian Western Woodworkers, Ltd., Garbally Road, Victoria.
Cedar Cove Sash & Door Company, Ltd., 1101 Sixth Avenue West, Vancouver.
Chrystal & Company, Ltd., E., 108 Georgia Street East, Vancouver.
Cornish & Cooper, 245 Dufferin Street, Vancouver.
Drysdale, W. F., 1033 North Park Street, Victoria.
Engelland, Fred., 2525 McKinnon Street, South Vancouver.
Galbraith & Sons, New Westminster.
Fraser Mills Sash & Door Company, Fraser Mills.
Johnson, W., Sash & Door Factory, 854 Sixth Avenue West, Vancouver.
Hanbury, J., Ltd., Fourth Avenue and Granville Street, Vancouver.
Moore-Whittington Lumber Company, Victoria.
McLeod Sash & Door Company, Ltd., 1251 Charles Street, Vancouver.
Nanaimo Lumber Company, Ltd., Nanaimo.
Nelson Sash & Door Factory, Nelson.
Reid Sash & Door Factory, 1635 Third Avenue West, Vancouver.
Reynolds Sash & Door Company, 867 Park Avenue, Vancouver.
Robertson & Hackett Sash & Door Company, Ltd., Granville Street Bridge, Vancouver.
Robertson & McLaughlin, 1758 Fifteenth Avenue East, Vancouver.
Shockley, E. H., Prince Rupert.
Smith Lumber Company, Ltd., S. C., Vernon.
Waters & Company, Ltd., T. H., Nelson.
Brooks, James, Woodworking Company, Ltd., East Burnaby.
Cranbrook Sash & Door Factory, Cranbrook.
Helmer, R. D., 996 Sixth Avenue West, Vancouver.
Kamloops Sash & Door Factory, Kamloops.

Saw-sharpeners, Automatic.

Letson & Burpee, Ltd., Vancouver.

Saws.

Aetna Saw Works, Ltd., Granville Island, Vancouver.

Screens, Wire.

Artistic Iron Works, 116 Dufferin Street East, Vancouver.
B.C. Anchor & Fence Company, Ltd., Vancouver.
Pearson Wire Works, City Market, Vancouver.

Sheet-metal Products.

Ansell Sheet Metal Works, 2215 Thirteenth Avenue West, Vancouver.
Armstrong, E. L., 1329 Granville Street, Vancouver.
Atlas Steel Products, Ltd., Granville Island, Vancouver.
Barker, A. J., 516 Pender Street West, Vancouver.
British Columbia Ceiling & Roofing Company, Ltd., 823 Seventh Avenue West, Vancouver.
Campbell & Grill, 1238 Seymour Street, Vancouver.
Central Sheet Metal Works, 560 Cambie Street, Vancouver.
Grandview Sheet Metal Works, 1685 Venables Street, Vancouver.
Grafton, C. W., 153 Keefer Street, Vancouver.
Hamilton, F. N., 1618 Commercial Street, Vancouver.
H. & H. Sheet Metal Works, 735 Richards Street, Vancouver.
Hatch, James H., 63 Lansdowne Street, Vancouver.
Kirkland, J., 6244 East Boulevard, Kerrisdale.
Latimer & Sons, Ltd., 550 Main Street, Vancouver.
Lee, Johnson, 826 Dunsmuir Street, Vancouver.
Little Sheet Metal Works, Frank, 1168 Seymour Street, Vancouver.
Miller, John K., Company, Ltd., 580 Sixth Avenue West, Vancouver.
McLeod Sheet Metal Works, 1042 Richards Street, Vancouver.
Pacific Sheet Metal Works, Ltd., Yates Street, Victoria.
Pacific Sheet Metal Works (Vancouver), Ltd., Granville Island, Vancouver.
Penticton Pipe & Flume Works, Penticton.
Plunkett, D'Arcy B., 2519 Rock Bay Avenue, Victoria.
Sixth Avenue Sheet Metal Works, Prince Rupert.
Schwan, A. W., 8 Cordova Street East, Vancouver.
Steen & Longwill, Prince Rupert.
Tacey & Son, J. R., 660 Sixth Avenue West, Vancouver.
Terminal Sheet Metal Works, Ltd., 1043 Pender Street, Vancouver.
Trickey Company, S. J., 764 Cambie Street, Vancouver.
Vancouver Sheet Metal Company, Ltd., 1090 Hamilton Street, Vancouver.
Victoria Sheet Metal Works, 434 Kingston Street, Victoria.
New Idea Sheet Metal Works, Beatty Street, Vancouver.

Shirts, Cotton, Men's.

Gault Brothers, Ltd., 361 Water Street, Vancouver.
Turner, Beeton & Company, Ltd., Wharf Street, Victoria.
Thomson, James, & Sons, Ltd., Water Street, Vancouver.

Shock-absorbers.

Golightly Brothers, 753 Powell Street, Vancouver.

Show-cases.

Canadian Western Woodworkers, Ltd., Garbally Road, Victoria.
Chrystal & Company, E. C., 108 Georgia Street East, Vancouver.
Coutu, Louis, 1741 Main Street, Vancouver.
Dixon & Murray, 1065 Dunsmuir Street, Vancouver.

SHOW-CASES—*Continued.*

Johnson & Allen, 148 Lorne Street E., Vancouver.
C. Marston Cabinet Works, 3864 Commercial Drive, Vancouver.

SILICA.

B.C. Silica & Talc Company, Ltd., 470 Granville Street, Vancouver.

SILOS.

Canadian Pipe Company, Ltd., Vancouver.
Hoard Company, 421 Pemberton Building, Victoria.
Vancouver Wood Pipe & Tank Company, Ltd., Vancouver.

SMOKE-STACKS.

B.C. Iron Works, Victoria.
Blain, A. A., 1147 Venables Street, Vancouver.
Marine Iron Works, Victoria.
Miller, John K., Company, Ltd., Vancouver.
Morris, S. M., & Company, Ltd., Vancouver.
Patterson Boiler Works, 750 Alexander Street, Vancouver.
Ross & Howard, Vancouver.
Vancouver Engineering Works, Vancouver.
Victoria Machinery Depot Company, Ltd., Victoria.
Vulcan Iron Works, Vancouver.
Yarrows, Ltd., Victoria.

SOAP, LAUNDRY.

Pendray & Sons., Ltd., W. J., Victoria. "White Swan."
Royal Crown Soaps, Ltd., 308 Georgia Street East, Vancouver. "Royal Crown"; "White Wonder"; "Royal Crown Naphtha"; "Sunlight"; "Life Buoy."

SOAP, LIQUID.

Western Industrial Development Company, 1043 Hamilton Street, Vancouver.
Peerless Products, Ltd., 1642 Pandora Street, Vancouver. "Peerless."
Pendray, W. J. & Sons, Ltd., Victoria. "Pendray's."

SOAP, TOILET.

Henrietta Toilet Preparation, 649 Seymour Street, Vancouver. "Henrietta."
Royal Crown Soaps, Ltd., 308 Georgia Street East, Vancouver. "Crown Oatmeal"; "Witch Hazel"; "Crown Olive."

SODA, SAL.

Pendray, W. J., & Sons, Ltd., Victoria.
Royal Crown Soaps, Ltd., 308 Georgia Street East, Vancouver.

SODIUM CARBONATE.

Canadian Carbonate, Ltd., Eleventh Avenue and Yew Street, Vancouver.
Lillooet Soda Company, Ltd., 502 Northwest Building, Vancouver.
Pendray, W. J., & Sons, Ltd., Victoria.

SPICES, GROUND.

Empress Manufacturing Company, Ltd., 1106 Homer Street, Vancouver. "Empress"; "Climax."
Jameson & Company, Ltd., W. A., Broughton Street, Victoria. "Jameson."
Kelly, Douglas & Company, Ltd., Vancouver. "Nabob."
Malkin Company, Ltd., W. H., Vancouver. "Malkin's Best."

SPRAYERS, COMPRESSED AIR.

Tacey & Son, J. R., 550 Sixth Avenue West, Vancouver.

Spraying Material, Tree and Plant.

British America Paint Company, Victoria.
McClounie, J., & Sons, Vernon.

Springs, Automobile.

McAllister Spring Company, Ltd., 1132 Richards Street, Vancouver.
Peile, Harrison, Duncan.

Springs, Bed.

Restmore Manufacturing Company, Ltd., Vancouver.
Simmons, Ltd., 2034 Eleventh Avenue West, Vancouver.
Victoria Bed & Mattress Company, Ltd., 776 Topaz Avenue, Victoria.

Springs, Coil.

McAllister Spring Company, Ltd., 1132 Richards Street, Vancouver.

Springs, Locomotive.

McAllister Spring Company, Ltd., 1132 Richards Street, Vancouver.

Stains.

Ayres Varnish & Paint Company, Vancouver.
Brandram-Henderson Company, 470 Granville Street, Vancouver.
British America Paint Company, Ltd., Victoria.
Crown Paint Company, 24 Cordova Street East, Vancouver.
Darling & Son, Henry, 28 Powell Street, Vancouver.
Martin-Senour Company, Ltd., 1505 Powell Street, Vancouver.
National Paint Company, Granville Island, Vancouver.
Sherwin-Williams Company of Canada, Ltd., Vancouver.

Starch, Potato.

Dominion Starch & Dextrine Company, Ltd., New Westminster.

Steel Plates, Beams, etc.

Canadian Northwest Steel Company, Ltd., Vancouver.
Coughlan & Sons, J., Ltd., Front and Columbia Streets, Vancouver.

Stone, Building.

Canadian Marble & Granite Works, Ltd., Nelson.
Coast Quarries, Ltd., 911 Metropolitan Building, Vancouver.
Granite Quarries, Ltd., 315 Bower Building, Vancouver.
Keast & Allen, 880 Beach Avenue, Vancouver.
McDonald, J. A. and C. H., 157 Main Street, Vancouver.
Sechelt Granite Quarry, Ltd., Winch Building, Vancouver.
Vancouver Granite Company, Ltd., 815 Bower Building, Vancouver.

Stone, Cut and Dressed.

Art Monument Company, 602 Fifteenth Avenue East, Vancouver.
B.C. Supply Company, Vancouver.
Bertram, W. N., 4880 Fraser Avenue, Vancouver.
Canadian Marble & Granite Works, Ltd., Nelson.
Keast & Allen, 880 Beach Avenue, Vancouver.
Mortimer & Son, John, Courtney Street, Victoria.
Newell, J. B., 5085 Fraser Avenue, Vancouver.
Patterson, Chandler & Stephen, 3149 Main Street, Vancouver.
Phillips Stone Works, 1502 Fairfield Road, Victoria.
Stewart Monumental Works, Ltd., 1401 May Street, Victoria.
Stewart & Willey, 5332 Fraser Avenue, Vancouver.

STONE, CUT AND DRESSED—*Continued.*

Vernon Granite & Marble Company, Ltd., Vernon.
British Columbia Monumental Works, 339 Columbia Street, New Westminster.

STONE, ART.

Dawson Art Stone Co., 294 Front Street East, Vancouver.

STOVES, HEATING AND COOKING.

Albion Stove Works, Ltd., Victoria.
McLean & Powell Iron Works, Dufferin Street, Vancouver.
McClary Manufacturing Company, Ltd., Vancouver.
Vancouver Stove & Heater Company, Ltd., 2100 Eleventh Avenue West, Vancouver.

STUMP-PULLERS.

Hall Machine Works, Vancouver.
Olson Iron Works, M. O., 309 Alexander Street, Vancouver.
Opsal Steel Company, Vancouver.

SUGAR, REFINED.

British Columbia Sugar Refining Company, Ltd., Vancouver.

SWEATERS AND SWEATER COATS.

Maple Leaf Knitting Company, Vancouver.
Pride of the West Knitting Mills, Ltd., 500 Beatty Street, Vancouver. "Pride of the West."
Quigley Knitting Mills, Ltd., 78 Dufferin Street East, Vancouver. "Q."
Universal Knitting Company, Ltd., 303 Pender Street West, Vancouver. "Universal."

SWEEPING COMPOUNDS.

Western Industrial Development Company, Vancouver. "Rex."
Staneland Company, Ltd., Fort Street, Victoria. "Nodust."

SWITCHBOARDS.

Cope & Son, Ltd., 100 Front Street East, Vancouver.
Electrical Manufacturing Company, Granville Island, Vancouver.

SYRUP.

British Columbia Sugar Refining Company, Ltd., Vancouver.
Kelly Confection Company, Ltd., 1106 Mainland Avenue, Vancouver.
Ramsay Brothers & Company, Ltd., 990 Powell Street, Vancouver.

TANKS, METAL.

Blain, A. A., 1147 Venables Street, Vancouver.
B.C. Iron Works, Victoria.
Latimer & Sons, Ltd., 550 Main Street, Vancouver.
Marine Iron Works, Victoria.
Patterson Boiler Works, 750 Alexander Street, Vancouver.
Ross & Howard, Vancouver.
Vancouver Engineering Works, Vancouver.
Victoria Machinery Depot, Victoria.
Vulcan Iron Works, Ltd., Granville Island, Vancouver.

TANKS, WOOD.

Canadian Pipe Company, Ltd., 550 Pacific Street, Vancouver.
Pacific Coast Pipe Company, Ltd., 1551 Granville Street, Vancouver.
Vancouver Wood Pipe & Tank Company, Ltd., 850 Hastings Street West, Vancouver.

TAR, WOOD.

Acetate Products, Ltd., New Westminster.

Tents.

Jeune, F., & Bro., Ltd., 570 Johnson Street, Victoria.
Jones & Son, Ltd., C. H., 28 Water Street, Vancouver.
Lipsett, Edward, 68 Water Street, Vancouver.
Victoria Tent Factory, 618 Pandora Street, Victoria.
Nugent, H. M., & Company, 48 Water Street, Vancouver.
Rigby, George, 1821 Broad Street, Victoria.
Grant-Holden-Graham, Ltd., 1260 Hamilton Street.

Tiles.

(New) Baker Brick & Tile Company, Victoria.
Bazan Bay Brick & Tile Company, Ltd., Sidney.
Port Haney Brick Company, Ltd., Port Haney.
Polychrome Cement Brick & Tile Company, Granville Island, Vancouver.
Sidney Island Brick & Tile Company, Sidney Island.
Victoria Brick & Tile Company, Victoria.

Tires, Automobile (Pneumatic).

Gregory Tire & Rubber Company, Ltd., Port Coquitlam. "Gregory."

Toques, Knitted.

Pride of the West Knitting Mills, Ltd., 500 Beatty Street, Vancouver.
Quigley Knitting Company, 56 Dufferin Street East, Vancouver.
Universal Knitting Company, 303 Pender Street West, Vancouver.

Toys.

Canada Dolls, Ltd., Victoria Drive, Vancouver.
Columbia Pulleys, Limited, 624 Eighteenth Avenue East, Vancouver.
Doll Hospital, 419 Hastings Street West, Vancouver.
Gosling, Q. A., Murrayville.
Hiker Manufacturing Company, Esquimalt Road and Williams Street, Victoria. "Hiker."
Trubilt Toy Company, Ltd., 2760 Yew Street, Vancouver. "Trubilt."
Watson Canadian Toys, Ltd., 616 Davie Street, Vancouver.
Western Toy & Furniture Manufacturing Company, Ltd., 3537 Main Street, Vancouver.

Transmission Appliances.

All foundries with engineering plants and all engineering works.

Trays, Cement.

Henson & Dyson Company, 403 Gorge Road, Victoria.
Hunter Cement Company, Clinton and Twenty-second Avenue, Vancouver.
Ideal Cement Laundry Tray Company, 190 Lorne Street, Vancouver.
Star Cement Laundry Tray Company, 25 Lorne Street West, Vancouver.

Trunks.

B.C. Leather & Findings Company, Ltd., 117 Pender Street West, Vancouver.
B.C. Saddlery Company, Ltd., Victoria.
Burns, J. F., 519 Granville Street, Vancouver.
Imperial Trunk & Leather Goods, Ltd., 338 Hastings Street West, Vancouver.
Norris & Son, F., Government Street, Victoria.
Duncan, William, Douglas Street, Victoria.
Storey & Campbell, 518 Beatty Street, Vancouver.
Vancouver Trunk & Bag Company, Ltd., 1424 Charles Street, Vancouver.

Twine, Hemp.

Canada Western Cordage Company, Ltd., New Westminster.

UNDERWEAR, WOMEN'S.

Dall Lace Company, Ltd., 615 Granville Street, Vancouver.
Thomson & Sons, James, 353 Water Street, Vancouver.

VARNISHES.

Ayres Varnish & Paint Company, Ltd., Raymur and Parker Streets, Vancouver.
Brandram-Henderson of B.C., Ltd., 1170 Granville Street, Vancouver.
British America Paint Company, Ltd., Victoria.
Crown Paint Company, 24 Cordova Street East, Vancouver.
Darling, Henry, & Son, 28 Powell Street, Vancouver.
Martin-Senour Company, Ltd., 1505 Powell Street, Vancouver.
National Paint Company, Ltd., Granville Island, Vancouver.
Staneland Company, Ltd., Fort Street, Victoria.
Sherwin-Williams Company of Canada, Ltd., Vancouver.
Williams, Stanner & Harte, Ltd., Victoria.

VEGETABLES, CANNED.

Broder Canning Company, Ltd., New Westminster. "Fraser Valley Brand"; "Royal City Brand."
Dominion Canners, B.C., Ltd., Vancouver. "Quaker."
Kamloops Canneries, Ltd., Kamloops.
Keremeos Packing Company, Ltd., Keremeos. "Diamond K."
Occidental Fruit Company, Ltd., Kelowna. "Okanagan."
Okanagan Canning Company, Kelowna. "Duncan's Best."

VINEGAR.

Dyson Vinegar Company, Ltd., Vancouver. "Dyson's Pure Malt"; "Dyson's Pure Spirit"; "Dyson's Pure Cider"; "Sunset Brand."
Empress Manufacturing Company, Ltd., Vancouver. "Empress"; "Climax."
Malkin Company, Ltd., W. H., Vancouver. "Malkin's Best"; "Tropical."
O.U.G. Fruit Products, Ltd., Vernon. "O.K."
Syms, W. J., Salmon Arm.
Vancouver Pickle Company, Ltd., Vancouver.
Western Pickling Works, Victoria.

WASH-BOARDS.

Crown Broom Works, Ltd., Vancouver. "Crown Glass"; "Crown Globe."
Waters, T. H., & Company, Ltd., Nelson. "B.C. Brand."

WATER, AERATED.

Canadian Carbonate, Ltd., Eleventh Avenue and Yew Street, Vancouver.
Coca-Cola Company, Richards Street, Vancouver.
Cross & Company, 38 Lansdowne Avenue East, Vancouver.
Fairall's, Ltd., 420 Williams Street, Victoria.
Fernie-Fort Steele Brewing Company, Ltd., Fernie.
Halcyon Bottling Works Company, Halcyon.
Henley & Company, J., New Westminster.
Harper, James, Rossland.
Nelson Brewing Company, Ltd., Nelson.
Orange Crush Bottling Company, Ltd., 136 Water Street.
Pioneer Bottle Works, Nanaimo.
Thorpe & Company, Ltd., Victoria and Vancouver.
Vancouver Breweries, Ltd., Eleventh Avenue and Yew Street, Vancouver.
Vancouver Botanic Beverage Company, Vancouver.
Victoria Botanic Beverage Company, 2620 Cedar Hill Road, Victoria.
Acme Soda Water Works, 208 Simpson Street, New Westminster.

Waterglass.

Pendray & Sons, Ltd., W. J., Victoria. "Pendray's."

Wax. Floor.

B.C. Hardware Floor Company, Ltd., Victoria and Vancouver. "Marless."
Western Industrial Development Company, 1043 Hamilton Street, Vancouver.

Wheat-flakes.

Brackman-Ker Milling Company, Limited, Victoria.

Whisks.

Crown Broom Works, Ltd., 304 Front Street East, Vancouver.
Western Broom Works, 631 Fifteenth Avenue East, Vancouver.

Whisky.

British Columbia Distillery Company, Ltd., New Westminster.

White Lead, Ground in Oil.

Pacific White Lead Company, Ltd., Granville Island, Vancouver.

Zinc.

Consolidated Mining & Smelting Company of Canada, Ltd., Trail.

VICTORIA, B.C.:
Printed by William H. Cullin, Printer to the King's Most Excellent Majesty.
1922.