

PORTLAND CENTER OF CANDY INDUSTRY IN NORTHWEST

Wholesale Business Handled by Six Large and Many Small Factories Amounts to \$2,500,000 Annually—One Firm Uses 700,000 Pounds of Sugar and 250,000 of Chocolate Yearly

BACK in the days of Horlicks whips and jelly beans and all-day suckers the budding youth didn't worry about anything except the possibility of getting cheated out of a penny's worth by the corner grocer. Now, as soon as he is out of the romper stage, ten to one, he has cultivated a more aristocratic sweet tooth and lets the street-car conductor get dad's coppers, while he searches pockets for nickels and dimes. Instead of investing in lozenges with molasses on them and cigars neatly modeled from scrapings and flavored with chocolate this hungry youngster demands his favorite brands, his nut bars and tinfoil-enclosed special chocolates.

Highly advertised candies praised by full pages in national magazines certainly make inroads on the local trade, but the fact remains that by far the greater part of Oregon eats Oregon sweets and, for that matter, practically all of the northwest eats like them and comes back for more. Thus it is that Portland supports six large candy factories, in addition to innumerable smaller ones manufacturing for their own trade and that it holds the reputation of having the cleanest, most complete establishments of this nature on the coast.

All kinds of candy are turned out in this state, from the humblest gumdrop to the most aristocratic silver paper-wrapped fruit bar. Carloads of cough drops and fruit tablets go over the United States every year from one of Portland's factories, barrels of chocolates travel to South America, New Zealand, China, Japan and the Philippines on boat after boat sailing from this port. In eastern markets Oregon specialties such as maraschino cherry chocolates, are being advertised.

A shipment for Colombia, early this year was held up in New York by a harbor strike, got lost in the tropics and met with several other delays, arriving at last six months after leaving Portland. Was the Latin-American dealer to whom they were consigned peeved? Not at all. "Chocolates in good condition; enclosed find orders for more," or words to that effect, were what he wrote the factory.

Quality Recognized.

"Portland manufacturers make candy of quality equal to that produced anywhere, and it is so recognized in foreign territory," is the assurance of A. J. Hale, who directs the destinies of one of the pioneer candy companies.

"In shipping to China, Japan and the islands we find that the quality of our goods is reported superior to the British or to those of local manufacturers."

With the recognition of candy as an article of food, valuable for its highly concentrated nourishing and stimulating qualities, the industry took a new lease on life and in recent years has grown to mean much to Portland, contributing largely to the support of the paper box industry as well. The Pacific Coast Biscuit company is the pioneer in the field now, having added its candy department in the '90s, upon consolidation of several smaller factories.

The earliest candy factory in Portland was Alley's at 145 First street, in operation about 1860. A little later Dekum & Bickel opened one near East First and Stark streets, being succeeded in the ownership by the firm of Burheim & Manner, still later changing to Alley & Burheim. About 1870 J. N. Matchek opened a factory, which was consolidated with that of F. F. Harrold. The old Portland Cracker company, as the Pacific Coast Biscuit company was known in those days, had been bringing in candy from Seattle, but about 1893 bought out the stock and moved it to this city. All local firms joined forces with this concern under the direction of Herman Wittenberg.

The factory for a time was in an old residence adjoining the cracker factory and kept on the present site



Large Chocolates are Dipped by Hand.



This Stick of Candy Would Last any Child a Few Hours.



Packing is the Last Stage.



Battery of Mixing Drums.



Have One?

of the candy department. Its store of nuts was kept with the flour in the garret of the brick building and a portion of the office was given over as a salesroom. In 1903 the present structure was erected.

One by one others came in until the bigger firms now include Ross & Sons, Russell & Gilbert, Tru-Bu Biscuit company, Yogan Candy company, the Stearns-Hollingshead company, makers of cough and fruit candies; Thomas Bros., manufacturers of cough drops, the Portland Salted Nut company, the Beaver Nut company, Chocolate Traffic company, Crosby Candy company and two out-of-town factories, Martin's, at Marshfield, and Hoefler's, at Astoria. These all sell to the general trade throughout the northwest and do not include candies distributed by the larger confection-

eries making most of their own goods. What this industry actually means in payrolls can best be conveyed by figures. It is estimated that the wholesale candy business of this city amounts to two and a half to three million dollars annually. Two of its factories rank among the largest on the Pacific coast, if not in the entire west. One concern alone turns over three-quarters of a million dollars every year and has an output of about 1,750,000 pounds. It consumes 600,000 pounds of chocolate, 100,000 pounds of nuts and 500,000 pounds of corn syrup.

The number of people employed in making candy alone in this city is variously estimated at from 500 to 1000. Several of the plants, of course, are in connection with cake factories

and this cuts down on the number. The candy department at one company has 400 employees and another has 175.

Labor-saving machinery has done much to speed up output. Charles Van Horn, a local manufacturer, proudly exhibits to visitors a machine which makes "hand-rolled" chocolates at the rate of 200 pounds every 15 minutes. It formerly required three hours to make 40 pounds of these. Another mechanism in the same establishment wraps kisses, doing the work of 10 girls and turning out 145 finished candies to the minute. An automatic depositing machine can make 5000 pounds of candy daily, equal to the output of 50 girls by the hand method. In fact, small manufacturers now are the only

ones in Oregon to use hand methods. With the war came the 5-cent peanut or fruit bar and the individual chocolate. Portland factories sought to improve upon these fads and invented new goodies, did them up in fancy paper and sent out a product that can claim with any eastern competitor. Each has its favorites—its "Centennials" or "Victorias" or "Mickys" or "High Jinks" and a whole flock of second and third cousins.

To tell of the output of these in every place would be a colossal task. A glimpse at the interior of one factory suffices. One of the smaller plants, for instance, puts out 15 individual bar Long tables are spread with nougat or peanut brittle that is later hardened and sliced, then

dipped. In the case of the hard varieties pressure rollers are used to thin it to the proper dimensions. One entire room is given over to the making of a special chocolate, a product featuring Oregon materials as much as possible. These have loganberry in the centers and 15 gallons of the fruit are consumed daily. A squad of girls dip the centers in a thick chocolate batter into which nuts have been mixed.

Machinery Saves Time.

Improvements in machinery are fascinating to the novice in going through a plant, and even to a business man they can convey only one impression, a realization of the prodigiousness of local concerns. A visit to the busy plant department of another factory where jelly beans,

sons would come in on Saturdays and help around the shop.

There are a dozen or more well-established brands of goods these used to be but one really well known trade mark, the "First Love," used against a four-leaf clover background by the Pacific Coast Biscuit company. This was discarded when the factory changed hands in 1913 upon the death of Mr. Wittenberg, its president. The present organization then came into being, with Morris Thomsen at its head, and the candies thereafter took his name and were known under a new label.

There are many familiar Oregon trademarks that are almost by-words in homes throughout the northwest. One has broken into the national advertising field and since 1916 the name has been blazoned in the Saturday Evening Post, in newspapers and on billboards. At the present the plant is using more advertising space than any other exclusive candy manufacturer on the Pacific coast.

This particular company, which began business in Portland in 1903, employed but 20 people at the start. It covered 14,000 square feet of floor space, as compared with the 45,000 it now uses. In 1913 a new building was secured, one which is a model on the coast, for it was constructed so as to have a maximum quantity of light and air and all those sanitary features in which the local manufacturer claims superiority as compared with his competitors in other coast cities. The factory includes a cafeteria, cloak room, first aid room and other equipment especially for the convenience of employees. It is a wonderful example of the opportunities the business and its location in Portland has made possible.

Export Demand Heavy.

In addition to employing 150 persons and operating branches in Seattle, Tacoma and Spokane, it has a sales force of 25 men and conducts a foreign trade department in charge of an experienced export trade manager. It ships regularly to Costa Rica, Porto Rico, Panama, Trinidad, Peru, Bolivia, Dominican republic, Colombia and Cuba. In these regions chocolates are in demand almost exclusively, even though with duties and freights added to the cost, the consumers must pay three or four times more than they can be purchased for here. Much of the packing is done in special time, but the regulation cartons inside mean much advertising for the state.

While the bulk of the goods turned out here is along general lines, specialty firms have met with much success. One firm that has been here 14 years, making its main leader cough drops of national reputation, has recently turned its attention to supporting the popular demand for fruit tablets and has found the machinery in its big daylight factory well adapted to this. A concern that turns out nut specialties has doubled its capacity several times since opening up in June, 1915. Its equipment is done in special time, but the regulation cartons inside mean much advertising for the state.

The making of candy is classed as the sixth largest industry in the United States. It is based on such substantial and nutritive ingredients as sugar, chocolate, nuts, coconut, fruit and all colors are certified by the United States department of agriculture and this fact, added to the cleanly conditions in the Portland factories, carefully safeguards the candy against the rate of revocation. It was added to the regular army ration. This extremely valuable food product that has ceased to be regarded as a luxury is made here in every form imaginable and is shipped from Portland at the rate of several carloads a day and is annually the source of several million dollars in wealth for the city.

OREGON WATER POWER RESOURCES LEAD

One-Third of All Hydro-Electric Power That May Ever Be Developed in United States Is Found in Columbia River Basin, Say Scientists.

By Ernest C. Pettis.

APPROXIMATELY one-third of all the water-power that may ever be developed in the United States is to be found in the Columbia river basin.

The potential water-power of the Columbia river basin is nearly 10 per cent greater than the total of all the states east of the Mississippi river. It amounts to 75 per cent, as much as all the possible hydro-electric power to be found east of the Rocky mountains.

These are not deductions from the statistics of a well known expert on making a showing for the Pacific northwest. While the figures are quoted in a report of the state engineer of Oregon, they were taken by his office from government documents.

The reader may digest the exact figures at will. The total possible water-power of the United States, according to the government compilation, aggregates 1,650,000 horsepower. The total that may be developed in the Columbia river basin, embracing the state of Washington and major portions of Oregon and Idaho, is given as 21,141,000 horsepower.

For the territory west of the Rocky mountains and south of the Columbia river basin the possibilities are given as 17,715,300 horsepower. This leaves for all the vast territory east of the Rocky mountains a possible development of 37,623,700 horsepower. Of this amount \$120,000 horsepower is accredited to territory between the mountains and the Mississippi river, while the remainder, 19,543,000 horsepower, is to be found in the great domain east of the Mississippi river.

Significance Difficult to Grasp.

Full significance of what these figures mean may be hard for the average citizen to grasp. It is to be doubted whether the experts fully realize what this resource may mean for the northwest.

It is when the investigator begins to think of the fast waning fuel supplies of the United States that the greater impact of the power statistics favoring the northwest begins to drive home. Statisticians have used up a lot of figures in dealing with the fuel future of this country and the world at large. While few persons have yet taken to worrying seriously over the figures set forth to show that supplies of coal and oil

will be exhausted in 40 years or 60 years, the fact that these supplies are diminishing rather rapidly is making itself felt.

From all that the world knows today of the processes of producing power to run its machinery, once there is lack of fuel it must become necessary to call in electricity to turn the wheels of industry. This windy industry of science may unleash inviolable, inexhaustible power from the air, or the sun, or the ocean. This may happen, yet the people of the Pacific northwest have a smug, comforting feeling in placing absolute reliance on the potential millions of horsepower of electric energy in the rushing streams and waterways of Oregon and Washington. Not only are the power possibilities a safeguard against the future, but they give assurance as well that heating and lighting requirements will be met.

Eastern Magnates Interested.

Slowly but surely the far-sighted manufacturers of the east are beginning to consider the possibilities of the northwest. The hydro-electric resources constitute a magnet that may be expected to exert an ever-increasing attractive force upon them.

It has been said for Portland that no city in the world has in its territory so great hydro-electric resources. Certain it is that no city in the United States rivals Portland in this respect and there are no figures or reasons for not including the rest of the world in the claim.

The government and state reports showing the hydro-electric possibilities of the Columbia river basin to be 21,141,000 horsepower make Portland the premier water-power city. There is very little of the Columbia River basin that does not fall in the scope of Portland territory. For those interested in the specific facts and figures relating to the most feasible power sites of Portland territory the state engineer's report, bulletin No. 5, gives the data. A brief summary may be of interest here.

The Columbia river sites, known as the Cascades, The Dalles and Umatilla Rapids projects, are analyzed as having a continuous horsepower capacity of 300,000. Projects of the Deschutes river, the Metolius and Deschutes River system, as they are called, are rated at a continuous capacity of 602,000 horsepower.

Deschutes River Remarkable.

These projects, it needs be understood, are but a few of those that lie in Portland's domain. They are dealt with at length, following exhaustive investigations, because they are considered the most feasible for earliest development. There are scores of others having tremendous possibilities in the aggregate that may be taken up for development later.

The Deschutes river is referred to by engineers as the stream par excellence of the United States for future development of hydro-electric energy. It has been mapped and measured in painstaking detail, with the result that 14 specific water-power sites are dotted along its course and

capacity of 602,000 horsepower. Seven possible projects of the Snake river are rated as having 994,000 horsepower ready for development. The Devil's Elbow and Horseshoe bend sites of the Rogue river project are listed at a total of 25,000 horsepower. For a Klamath river site the capacity is given as 70,000 horsepower.

PATROLMEN IN PORTLAND BUREAU OF POLICE.			
1910	124	1916	202
1911	124	1917	202
1912	124	1918	202
1913	124	1919	202
1914	124	1920	202
1915	124		

four more may be added for its leading branch, the Metolius. It is a matter of amazement to the layman to find that the United States Geological survey has issued a book of 200 pages and a big batch of supplemental maps, under the title, "Deschutes River, Oregon, and Its Utilization," all dealing with this one stream. The Deschutes power sites and system are within very easy transmission distance of Portland.

It would not be doing justice to the projects mentioned in preceding paragraphs were it not noted that nearly every one of them is capable of developing very much more power at times than the continuous capacity indicated. For example, while the continuous capacity of the Umatilla Rapids project is listed as 120,000 horsepower,

power, the estimated energy that could be developed during the irrigation season is given as 320,000 horsepower.

Steady Flow Assured.

Here is a point, however, that engineers point out as particularly favorable to power streams of the Portland district. Almost without exception they are "spring-fed," that is, have their headquarters in mountain springs. This means that they have a much steadier and more reliable flow than streams of the east or south, where mid-summer finds the waterways with greatly decreased flows. The mountain snows also contribute very generously to keep up the volume of water coursing down the streams of Oregon and Washington during the summer months.

It is the belief of most engineers that the use of hydro-electric power for irrigation purposes is still in its infant stage. Pumping methods are yet susceptible of great improvement. As inventive genius may improve these methods the use of electricity in irrigation must increase manifold. Thus, electric energy of the northwest will very probably be an increasingly important factor in the development of idle, irrigable lands.

Electricity is rapidly being adapted to power uses in the lumber industry. The investigator will have no trouble in looking up the first electric donkey engine put to use in the woods of the northwest. Its use in the woods, for obvious reasons, is winning rapid favor. It is still an interesting announcement in the lumber industry when a mill is converted to the use of electricity. But here, too, the silent, sparkless, dependable power is fast winning favor. The next few years are certain to see very extensive electrification of the lumber industry, it is predicted.

Power Bills Aid Development.

Passage last summer of the power leasing bill by congress in to give definite and material encouragement to the development of hydro-electric resources of the country. Under provisions of the new law power sites may be leased to private interests for stated periods the maximum of which is 50 years. The terms provided are considered quite just for both lessee and government.

Heretofore leases of power sites were made only under revocable permits. The plan was so unsatisfactory that few development projects were undertaken. The new act of congress gives adequate protection to interests undertaking development work and is certain to give impetus to the business of developing power wherever a market exists.

But for one fact, it is pointed out, development of much new hydro-electric power would doubtless have been undertaken before now. The last congress, in its desire to make a showing of economy, left the newly created water-power commission, which is to supervise the matter of leases, without funds. It is confidently expected that the new congress will make an appropriation of \$100,000 or more for the commission. When this is done it may begin to function and development of new power projects through the leasing of sites on favorable terms will quickly follow.

Power Plants May Join.

Only in the past four months the hydro-electric engineers of Portland and vicinity have taken up a remarkable project that has every prospect of becoming a reality and that will go far toward popularizing the use of electric energy here. This is the proposal to link up all existing plants of the entire section in one big circuit. The advantages of the enterprise are quite obvious. Every community and every user would be assured continuous service. The cutting out or shutting down of any one plant would have no wise affect the service.

Several meetings of engineers for discussion of this proposal have been held. The experts express themselves as highly pleased with initial studies of the proposed linking up of power systems. The more they study the proposition the more they are impressed with the possibilities and advantages of the plan. They may not immediately achieve the end in mind, but as the matter now stands, there is prospect that agitation for the innovation will be kept up until something tangible eventuates.

It is due the hydro-electric engineers and interests of the section to cite the fact that they were among the first to begin agitation for the great world's fair, now quite definitely projected for Portland for the year 1925. While the plans now being framed have broadened considerably over those first suggested by the hydro-electric people it is certain that they will play a very important role in the exposition.

Even a cursory study of the hydro-electric resources and possibilities of the Pacific northwest—or of the domain of Portland, Oregon, if you please—must prove a gratifying revelation. It is admitted that only the surface of this power resource has, as yet, been scratched. Possibilities for the future are good to contemplate. They constitute both assurance and insurance of wonderful development for this section.

OREGON SCHOOLS RANK SECOND IN U. S.

Measured by Educational Standards of Russell Sage Foundation, Schools of State Stand High—40 Buildings Erected in 1920—Salaries Raised.

By J. A. Churchill, State Superintendent of Public Instruction.

OREGON schools are rapidly coming to the front along all lines of educational endeavor. Over 40 new school buildings have been constructed during the last year, notwithstanding the high cost of labor and materials. Better salaries are being paid teachers, which results in greater efficiency in the teaching force of the state.

Oregon stands second among the states of the union as measured by the educational standards, according to the department of education of the Russell Sage foundation. These standards of measurement are as follows:

Percentage of children attending school daily.

Average days attended by each child of school age.

Average number of days the schools are kept open.

Proportion of children in high schools.

Percentage of boys to girls in high schools.

The showing made by our state is due to the high standard of service performed by the teachers, notwithstanding in many cases they have been poorly paid.

Oregon's rating under the five financial standards adopted by the foundation was 26th among the several states. The financial standards are:

Expenditure per child attending.

Expenditure per child of school age.

Expenditure per teacher employed.

Expenditure per pupil for salaries.

Oregon's low rating under the financial standards is the result of low salaries paid to teachers and the relatively small amount expended for buildings and equipment.

Consolidation Proves Efficient.

Consolidation of schools is being forced upon many rural districts because of the difficulty in securing teachers. There are 30 consolidated districts in the state. In most of these districts the pupils are transported to the central school.

The people living in the rural districts are awakening to the fact that the small, one-room school is very often inefficient and always costly. They are therefore much interested in some means of improving the rural school. A number of districts have

suspended school and are transporting their children to near-by schools. This will no doubt in many cases lead to consolidation.

Regarding transportation, Superintendent Gibson of Hood River county says: "Last year two districts consolidated for grade school purposes. The consolidated district has a valuation of \$925,643 and is operating two transportation routes. The district is paying \$140 a month for carrying 40 children, and the other route is carrying about 20 children at \$100 a month."

Superintendent Lamb of Tillamook county points out the following advantages of transportation:

"Pupils being transported to school are never late and arrive at school even during the most inclement weather dry and comfortable. Providing the driver is a responsible person, the moral advantages gained by this method are not to be underestimated."

The high schools of the state are growing very rapidly. There are 250 standard four-year high schools in the state and many more are asking to be standardized. Attendance at the high schools is increasing. Many report an increase in attendance over last year of from 10 to 50 per cent. There are 37 union high schools in the state. A union high school is a union of several regular school districts for high school purposes. Such a high school has the backing of a large amount of taxable property to support it.

Thirty Districts Joined.

The largest union high school district in the state, if not in the United States, is at Crane in Harney county. It is the union of 30 districts comprising the eastern half of the county. It is 144 miles long and 40 miles wide or as large as Delaware and Connecticut combined. This district has a new school building, modern in every particular, equipped with the latest in school furniture and laboratory apparatus.

The federal vocational act, better known as the Smith-Hughes act, has now been in operation for more than three years. It provides for federal appropriations which are to be duplicated by each state for the purpose of co-operating in the promotion of vocational education.

Under the Smith-Hughes act the

activities of the Oregon vocational board have been directed along three definite lines:

1. Preparation of teachers of vocational subjects.
2. Agricultural education.
3. Trades, industries and home economics.

By an arrangement with the Oregon Agricultural college the duty of training vocational teachers has been placed in charge of that institution. The establishment of schools in the division of trades and industries was the first line of work undertaken. Such schools have been established at Salem, carpentry and machine shop; Eugene, plumbing; Pendleton, general industrial school, and Portland, trade schools.

Home Economics Practical.

There are now in operation four departments of home economics. In addition to well outlined courses in both domestic and household arts, the practical features have been emphasized by the requirement that school boards undertaking Smith-Hughes departments in home economics be required to establish and equip a complete practice house of not less than five rooms which shall be maintained and operated as a definite feature of the instruction given in the course. This requirement has given the home economics departments a distinctive character which is quite different from the ordinary course given in high schools. At the present time such departments are being conducted at Ashland, Cottage Grove, Forest Grove and Seaside.

The largest development along the lines of vocational education has been accomplished through the establishment of departments of agriculture in 17 high schools. In addition to the classroom work carried on in agricultural subjects, each pupil is required to plan and conduct on his own responsibility under the supervision of the instructor, a definite farm enterprise, known as a farm project. These projects are always of an intensely practical character, and are calculated to attract the interest of the pupil in the affairs of his farm and home life. The fact that students who were enrolled in these vocational departments last year are continuing in the courses this year is an indication of their popularity.