PRODUCTS of the FOREST

OREGON cut approximately 1,000,000,000 feet of lumber during the year just closed, and the industry in all of its branches experienced the most profitable 12 months it has ever known. The business from inland points was hampered somewhat by a shortage of cars, but in the Columbia River district, where there was plenty of water transportation at low rates, all previous records were broken. Oregon Coast ports also handled a very large traffic, the water shipments from Coos Bay, Siuslaw, Coquille, Tillamook, Nehalem and Umpqua amounting to 80,000,000 feet. Naturally the development of the business at these points is still greatly hampered by having no outlet by rail for handling the output that is more valuable for rail than for water shipment.

The Portland mills, on account of the large amount of building in the city and vicinity, cut more lumber than ever before, and enjoyed an unusually heavy local trade, but at the same time made record-breaking shipments by water to foreign and domestic ports.

Portland shipped enough lumber last year to build a plank walk three feet wide clear around the world, or, if it had been widened out, it would have made a highway more than 20 feet wide all the way from New York to Portland. A car shortage for most of the year curtailed rail shipments, but water shipments broke all former records, and close the year at high-water mark. Of the foreign lumber shipments, the Orient was the best purchaser, and Portland exporters sent nearly 50,000,000 feet across the Pacific.

Largest Cargoes in the World.

The port maintained its former record for more large lumber cargoes than were shipped from any other port in the world. The Pacific Export Lumber Company alone during the 12 months dispatched, in addition to a number of smaller cargoes, seven vessels with cargoes in excess of 2,500,000 feet each, the average for the seven being over 2,867,000 feet, and the largest carrying a cargo of 3,634,486 feet. There was a large increase in the output of the lower Columbia River mills, and many new plants were last year in operation for the first time, while other which had been neglected for a number of years were again placed in first-class order and operated to their capacity. The most prominent of these lower river mills was that at Westport, which, in addition to rail shipments, sent out over 17,000,000 feet by water. The big Hume mill at Astoria was completed too late to be much of a factor in 1903 shipments, but will be a heavy shipper in 1904. Rail shipments from Portland for the year were 200,000,000 feet, and 125,000,000 feet went out by water. These shipments, together with the large amount used for home consumption, brought the output of the Portland mills for the year up to about 400,000,000 feet.

The output by water from other Columbia River mills and from the Oregon Coast ports will increase this amount to over 550,000,000 feet. The cut of the big mills of the Willamette Valley and Southern Oregon, as well as of a large number of plants east of the Cascade Mountains, is not obtainable in detail, but is conservatively estimated at 500,000,000 feet, so that the output for the state will reach a total of over 1,000,000,000 feet easily worth $10,000,000, or a sum far in excess of that received for the total wheat crop of the state.

In the Western Oregon districts, points outside of Portland are credited with the following shipments by water: From Coos Bay, 25,000,000 feet; Siuslaw, 11,000,000 feet; Umpqua, 16,500,000 feet; Coquille, 21,000,000 feet; Tillamook, 4,000,000 feet; Nehalem, 2,500,000 feet; Westport, 17,125,000 feet; Rainier, 4,140,000 feet; Astoria, 3,657,000 feet; St. Helens, 2,022,000 feet. The details of the foreign lumber cargoes with their values are found under the article on foreign trade, printed in another column. Summarized, the cargoes clearing from Portland were as follows:

To the Orient.

Vessel.	Feet.	Value.
Indravelli	236,000	$ 2,500
Indrapura	402,822	5,490
Indrasamba	424,432	4,244
Indrapura	416,943	5,212
Indrasamba	126,376	4,075
Indravelli	489,411	7,832
Indrapura	244,908	3,500
Yeddo	2,786,845	35,000
Kobe	1,540,355	19,903
Indrasamba	4,000	100
Ellenic	2,450,000	25,000
Samar	923,477	14,240
Anita	38,411	1,354
Amarinth	1,119,013	12,234
Elm Branch	3,706,626	43,194
Pak Ling	2,105,000	28,234
Norman Isles	2,756,918	22,979
Amazon	1,320,044	21,000
Eldorado	1,044,860	13,675
Georgiana	1,170,041	18,454
Forest Home	867,191	12,710
Elm Branch	2,754,589	43,642
Drumburton	1,387,173	23,144
Alsternixie	2,440,702	26,656
Eva	2,365,388	30,644
Stanley Dollar	1,488,028	19,626
Oakley	2,076,701	26,920
Willie R. Hume	904,728	12,885
Tottenham	3,634,486	43,872
Eva	2,536,746	31,818
Samar	923,818	11,263
Prosper	821,671	9,037
J. H. Lunemann	1,351,342	17,917
Total	46,847,975	$647,356

To Africa.

Crown of India	1,720,596	$ 23,234
Glencairn	1,152,524	13,594
Agnes Oswald	1,170,254	14,044
Blythewood	1,300,437	20,043
Klek	564,537	7,340
Vermont	1,929,457	29,656
Total	7,828,145	$107,909

To South America.

Foyledale	1,448,618	$ 19,352
Cockermouth	1,052,806	13,120
Saxon	1,342,061	18,888
Cavour	1,042,463	16,158
Arthur Fitger	1,200,000	15,600
Total	6,086,878	$ 83,120

To Australia.

Almedia	1,082,127	$ 18,120
Port Patrick	1,264,338	21,322
Total	2,346,465	$ 37,562

Papeete.

Mary Winkleman	543,922	$ 8,562

To United Kingdom.

Peru	1,792,083	$ 26,000

Recapitulation.

For	Lumber feet.	Value.
Orient	46,847,975	$647,356
South America	6,086,878	83,120
Africa	7,828,145	107,309
United Kingdom	1,792,083	26,000
Australia	2,346,465	37,562
Papeete	542,922	8,562
Total	65,444,569	$911,727

Coast Trade Breaks Record.

The coasting lumber trade, while breaking all former records, fell behind the foreign trade in volume, although it amounted to nearly 60,000,000 feet. The establishment of a number of new mills along the Lower Columbia brought the record for the river outside of Portland up to nearly 40,000,000 feet. The shipments coastwise from Portland were as follows:

Vessel. Destination.	Cargo, feet.
O. M. Kellogg, San Francisco	430,000
Despatch, San Francisco	600,000
Prentiss, Redondo	125,000
Oliver J. Olsen, San Francisco	900,000
Despatch, San Francisco	600,000
Virginia, San Francisco	600,000
Sequoia, San Francisco	104,000
Despatch, San Pedro	600,000
Fulton, San Francisco	400,000
John A., San Francisco	300,000
Ruth, San Francisco	400,000
Robert Dollar, San Pedro	500,000
Despatch, San Francisco	600,000
Oliver J. Olsen, San Francisco	900,000
Aurelia, San Francisco	500,000
John Smith, San Pedro	450,000
Prentiss, San Pedro	239,000
Virginia, San Francisco	650,000
John A., San Francisco	300,000
Aurelia, San Francisco	530,000
Ruth, San Francisco	400,000
Prentiss, San Pedro	300,000
Despatch, San Francisco	600,000
Mawreema, San Diego	400,000
Aurelia, San Francisco	600,000
Aberdeen, Redondo	550,000
Homer, Alaska	550,000
John A., San Francisco	130,000
Prentiss, San Francisco	300,000
Despatch, San Francisco	425,000
Aurelia, San Francisco	600,000
Prentiss, San Francisco	150,000
Virginia, San Francisco	700,000
Fulton, San Francisco	400,000
Prentiss, San Francisco	430,000
Despatch, Redondo	600,000
Ruth, San Pedro	400,000
Arago, San Francisco	700,000
Aurelia, San Francisco	550,000
Prentiss, San Francisco	430,000
John A., San Francisco	300,000
Ruth, San Francisco	400,000
Despatch, San Francisco	600,000
Homer, Alaska	130,000
Oakland, San Francisco	500,000
Acme, San Francisco	450,000
Virginia, San Francisco	680,000
Aurelia, San Francisco	350,000
Ruth, San Francisco	400,000
Despatch, San Pedro	250,000
Prentiss, San Francisco	425,000
Chehalis, San Francisco	800,000
Aurelia, San Francisco	450,000
Prentiss, San Francisco	425,000
John A., San Francisco	300,000
John Palmer, San Francisco	1,400,000
Despatch, San Pedro	100,000
David Evans, San Francisco	1,000,000
Mabel Gale, San Francisco	900,000
Despatch, San Francisco	600,000
Ethel Zane, San Francisco	550,000
Aberdeen, San Francisco	550,000
Virginia, San Francisco	680,000
Aurelia, Los Angeles	450,000
Chas. Wilson, San Francisco	450,000
Endeavor, San Francisco	700,000
Despatch, San Francisco	600,000
G. C. Lindauer, San Francisco	600,000
Frances M. Leggett, San Francisco	800,000
Susie M. Plummer, San Francisco	850,000
Signal, Redondo	425,000
W. F. Garms, San Francisco	1,250,000
Virginia, San Francisco	700,000
Despatch, San Pedro	600,000
Irene, Redondo	975,000
Chas. Nelson, San Francisco	100,000
Prentiss, San Francisco	425,000
John C. Meyer, San Pedro	1,080,000
Despatch, San Francisco	600,000
Aberdeen, San Francisco	525,000
Seahome, San Francisco	800,000
Andy Mahony, San Francisco	750,000
Mabel Gale, San Francisco	900,000
Despatch, San Francisco	600,000
Aurelia, San Francisco	560,000
F. W. Howe, San Francisco	600,000
Aberdeen, San Francisco	500,000
Argus, San Francisco	700,000
Despatch, Redondo	300,000
St. T. Alexander, Los Angeles	815,000
Acme, San Francisco	485,000
Virginia, San Francisco	700,000
G. C. Lindauer, San Francisco	550,000
Aurelia, Monterey	540,000
Aberdeen, San Francisco	550,000
G. C. Lindauer, San Francisco	500,000
Melville Dollar, Oakland	400,000
North Bend, San Francisco	440,000
Aberdeen, San Francisco	500,000
E. B. Jackson, San Francisco	875,000
Despatch, Redondo	375,000
G. C. Lindauer, San Francisco	500,000
Aurelia, San Francisco	500,000
Navarro, San Francisco	300,000
Andy Mahoney, San Francisco	750,000
W. F. Garms, San Francisco	1,247,000
Mabel Gale, San Francisco	900,000
Alliance, San Francisco	15,000
Aberdeen, San Francisco	550,000
Virginia, San Francisco	700,000
Total	60,246,000

Water shipments coastwise from other Columbia River points were as follows:

From Westport, Or.

Vessel and Destination	Lumber, feet.
John A. Campbell, San Pedro	450,000
Robert Dollar, San Pedro	620,000
Melville Dollar, San Pedro	1,050,000
Lakme, San Pedro	100,000
Joseph Russ, San Pedro	550,000
O. M. Kellogg, San Pedro	480,000
Lakme, San Pedro	250,000
Grace Dollar, San Pedro	460,000
Robert Dollar, San Pedro	950,000
Robert Dollar, San Pedro	800,000
Alvena, Los Angeles	820,000
Iaqua, San Pedro	630,000
Robert Dollar, San Pedro	780,000
Robert Dollar, San Pedro	980,000
Katie Fluckenger, San Pedro	580,000
Robert Dollar, San Pedro	1,000,000
Alvena, San Pedro	1,000,000
Robert Dollar, San Pedro	925,000
Chas. Nelson, San Pedro	550,000
Chas. Nelson, San Pedro	715,000
Chas. Nelson, San Pedro	725,000
Hadyn Brown, San Pedro	580,000
Alvena, San Pedro	960,000
Robert Dollar, San Pedro	900,000
Total	17,125,000

From Knappton, Wash.

Vessel and Destination	Lumber, feet.
Gleaner, San Francisco	520,000
Omega, San Francisco	675,000
Chehalis San Francisco	900,000
Tam O'Shanter, San Francisco	620,000
Volunteer, San Francisco	750,000
Churchill, San Francisco	875,000
Tam O'Shanter, San Francisco	600,000
Gleaner, San Francisco	640,000
Tam O'Shanter, San Francisco	650,000
Gleaner, San Francisco	660,000
Omega, San Francisco	680,000
Arago, San Francisco	630,000
Gleaner, San Francisco	670,000
Addenda, San Francisco	850,000
Novelty, San Francisco	725,000
Omega, San Francisco	700,000
Tam o'Shanter, San Francisco	651,000
Total	11,806,000
Foreign—	
Churchill, Cape Town	905,000
Marconi, Algoa Bay	908,000
Total	1,813,000

From Rainier, Or.

F. S. Redfield, Los Angeles	500,000
Columbia, San Pedro	200,000
F. S. Redfield, Los Angeles	440,000
Taurus, San Pedro	500,000
Prentiss, Redondo	200,000
Argus, San Francisco	620,000
Tam O'Shanter, San Francisco	600,000
Grace Dollar, San Francisco	300,000
Luzon, Redondo	720,000
Total	4,140,000

From St. Helens, Or.

Ruth, San Francisco	400,000
Advent, Oakland	515,000
A. F. Coats, San Francisco	500,000
Addenda, San Francisco	667,000
Irene, Redondo	940,000
Total	2,022,000

From Vancouver, Wash.

Aberdeen, San Francisco	520,000
Aberdeen, Redondo	900,000
Quickstep, San Francisco	620,000
Grace Dollar, San Francisco	580,000
J. M. Coleman, Redondo	500,000
Zumpa, San Francisco	440,000
Melrose, Los Angeles	725,000
Two Brothers, San Francisco	800,000
Jas. A. Garfield, Redondo	250,000
W. F. Jewett, Redondo	600,000
Melrose, Redondo	700,000
Total	6,235,000

From Astoria, Or.

Aberdeen, San Francisco	580,000
Viking, San Francisco	150,000
Glendale, San Francisco	275,000
Joseph Russ, San Francisco	350,000
Homer, Alaska	115,000
Coryphene, San Francisco	350,000
C. A. Kluse, San Francisco	350,000
Compeer San Francisco	372,000
Glendale, San Francisco	375,000
Orient, San Francisco	230,000
Total	3,057,000

From Carrollton, Wash.

Jennie Stella, San Francisco	320,000
R. W. Bartlett, San Pedro	670,000
R. W. Bartlett, Redondo	630,000
Total	1,620,000

From Kalama, Wash.

Oakland, San Francisco	530,000

Grand Total Coastwise.

From	Feet.
Portland	60,246,000
Westport	17,125,000
Knappton	11,806,000
Rainier	4,140,000
Vancouver	6,235,000
St. Helens	2,022,000
Astoria	3,057,000
Carrollton	1,620,000
Kalama	530,000
Total	107,561,000
Total, foreign	65,444,569
From Knappton, foreign	1,813,000
Grand total by water	174,808,569

DEEP CHANNEL TO THE SEA

Port of Portland Has Earned National Aid by Helping Herself to Keep the River Open.

IF PORTLAND had no other claim to the title of a progressive city, the record of the Port of Portland for the past ten years would be sufficient to refute the oft-repeated charge of "mossbackism." No other city in this country has expended a million and a quarter on the work of river and harbor improvements. These are invariably left to the General Government, but Portland has done it and is cheerfully doing more each year.

If St. Louis were to undertake the improvement of the Mississippi from New Orleans to her own water front it might be a parallel case, but St. Louis has not, nor has Philadelphia undertaken the improvement of the Delaware, or Seattle, with all her boasted public spirit, attempted to pay for the digging of the Lake Washington Canal.

The Port of Portland was organized in 1892 for the purpose of securing and maintaining a 25-foot channel to the sea, and during that time has expended over $1,300,000 on dikes, dredges and dredging. In addition to this, a floating drydock second to but one in the United States in size and second to none in construction and efficiency, costing with location and equipment nearly $400,000, will soon be completed and in operation.

If Congress follows the method popularly attributed to divinity and "helps those who help themselves," Portland should be at the head of the list in the rivers and harbors bill.

Diking the Bad Places.

The first work of the Port of Portland after organization was the adoption of the plans of Major Thomas Handbury, Corps of Engineers, U. S. A., then in charge of river and harbor improvements for this district, for the deepening of the Columbia and Willamette rivers. This plan included as permanent improvements dikes at St. Johns, Postoffice Bar, near the mouth of the Willamette, Walker Island and Sand Island, and these were constructed by the commission.

It is to be regretted that the result from the construction of these dikes has hardly fulfilled the expectations of the designer and the commission. Although the sum expended reached the large total of $368,000, and has not been wasted, as the dikes have aided in holding the channel to a defined course, they have not greatly increased the depth, and much dredging at these and other points has been necessary.

The dredging operations of the commission began with an antiquated "ladder" dredge of small capacity, owned by the city. This work was continued with indifferent results until it became evident to the commission that the dikes alone would not provide the necessary depth, and in 1898 the 20-inch hydraulic dredge Portland was built under the Bowers patents. With the exception of the usual difficulties experienced with new machinery, this dredge did excellent work, and has been an important factor in the results accomplished by the commission.

During 1902 this dredge was remodeled and greatly improved at a cost exceeding $30,000, and is now equal in efficiency and digging power to any similar dredge in the country.

However, it was soon found that even this was not sufficient dredging equipment to keep pace with the growing needs of the Port and during 1902 the 30-inch hydraulic dredge Columbia was built and equipped at a cost exceeding $200,000 and is today, in the opinion of some of the best-known experts, the most complete, powerful and efficient hydraulic dredge in the United States.

For the past year this dredge has been operated by the Port of Portland Commission under contract with the United States Engineers at a stipulated price per day, the amount being paid out of the appropriation for the improvement of the Willamette and Columbia Rivers included in the last Rivers and Harbors Bill. The dredge Portland has been operated at the expense of the Port.

During the life of the Commission the amount expended on dredging plant has been $311,600, and on the dredging $288,000, a total of nearly $600,000 for plant and dredging, while other expenses and interest have amounted to nearly $200,000 more.

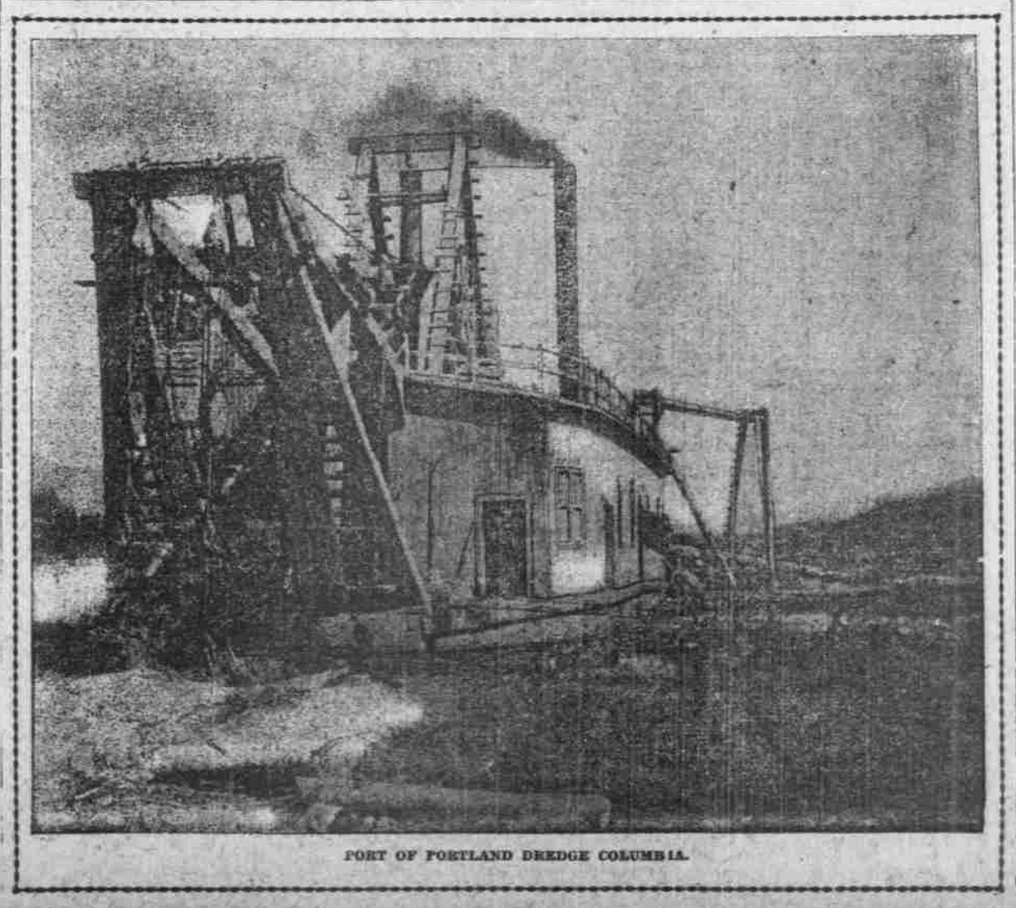
Good Results Achieved.

The question will probably be asked: "What results have been accomplished?" and the answer is that today vessels of 23 and 24 feet draft can move up and down the river without interruption at the lowest stage of water, while but seventeen or eighteen feet could be carried under the old conditions. Even 24-foot drafts could now be handled if the Columbia bar was in as good condition as the river.

The greatest difficulty experienced by the Commission, and one not understood by the general public or even shippers themselves, is that the bulk of the dredging is required immediately after the subsidence of the Spring freshet in the Columbia. This freshet brings down millions of yards of sand and gravel, not only rebuilding the old bars, but often forming new ones and not infrequently changing the entire course of the channel in some localities. A case in point is that at Willow Bar or Reeders. For several years this crossing has been very troublesome, requiring more dredging than any other point in the river and being at best crooked and difficult to navigate. This year Miss Columbia evidently listened to the prayers of the pilots and took a straight short-cut across the bar, so that, when the pilots went down on their annual sounding trip in July, they were delighted to find a depth of fourteen feet or more where two years ago a sand bar nine feet above low water had blocked the way.

Channel for Big Ships.

Some little time was required by the Engineers in making a survey and determining the feasibility of the route proposed by the pilots, but as soon as this was adopted both dredges were put to work and a channel was cut across this bar 300 feet wide, 25 feet deep and nearly one and one-half miles long in a straight line. Naturally, the dredges could not do this in a day and at the same time look after the other six miles of dredging, so that during the early part of September a total of perhaps a thousand tons was lightered past this obstruction. At almost the same time work was needed at the mouth of the Willamette Martin's Island, Hunters, Doblebowers and Slaughters. It was a case of doing a year's work in a few weeks, but since the middle of September the deepest draft vessels have been able to go up and down without any



PORT OF PORTLAND DREDGE COLUMBIA.