

### FROM PORTLAND TO THE SEA

#### How the Great Lower Columbia Waterway Has Been Improved, and Its Channel Deepened.

THE foundation for practically all of Portland's commercial greatness, past, present and future, lies in the magnificent waterway that connects this city with the high seas and the markets of the world. The metropolis of the state grew up, not by chance or by any artificial trade conditions, but by reason of her matchless location, where the waters of one of the great rivers of the world could float to her wharves commerce from the most remote corners of the globe. The final decision of trade to make this point the seaport of the Columbia Basin was not arrived at without experiment with other points along the river. There is no sentiment in business, and when there is anything to be gained by a change of location, business is quick to scent the advantage and go after it.

Over 40 years ago, the troublesome bar at St. Helens caused the Pacific Mail to abandon Portland and attempt to make St. Helens the head of navigation on the river. Later a similar attempt was made at Columbia City, and even Kalama, but it was to be the great seaport of the river. Astoria periodically made an effort at wheat exporting, but at none of these way ports along the river was it possible to halt the stream of overseas trade which surged as far inland as steam and sail could push the white-winged argosies. The bars in the river were a serious disadvantage to the business, but in spite of the obstacles it has always been found more economical to bring ship to cargo than to take cargo to ship. The experience of St. Helens, Kalama, Columbia City and other aspirants for seaport honors failed to check the growth of Portland in the slightest degree, but it served to call her attention to the obstacles in the river, and in due season the matter of removing these obstacles was begun. This work is not yet finished, but it has resulted in deepening the channel between Portland and the sea from 14 and 15 feet to 23 and 24 feet. St. Helens bar, which caused the Pacific Mail to make that point the head of navigation, has vanished and the largest ships can now pass over it without touching bottom.

A table printed in another column shows in a striking manner what has been accomplished in deepening the channel. Thirty years ago, the average net tonnage of the Portland grain fleet was 572, while the average carrying capacity of the small fleet of ships which carried wheat from Portland was but 25,000 bushels. Ten years later the size of the vessels had increased to an average net register of 1432 tons, while the average amount of cargo carried by the ten largest ships in the trade was but 75,390 bushels. About that time Portland began earnest work for the improvement of her river channel, and as the depth gradually increased the size of the vessels coming to the river increased in proportion. In 1852 the channel was sufficiently deep to admit of the passage of a ship of over 2400 tons net register, and the average net register of the 39 largest vessels in the 1902 grain fleet was 2613 tons, while the cargoes of the big 19 averaged 114,353 bushels.

The gain of 1852 over the previous 10 years was striking, and to some it seemed that the limit had been reached, but the year just closed shows that the gain in the last decade has been greater than that of the preceding decade, for the grain ships have increased in size until the 19 largest showed an average of 2613 tons net register, with an average carrying capacity of 114,353 bushels.

President W. S. Sibson, of the Portland Grain Company, the dean of all grain exporters in the Pacific Northwest, at a recent banquet at the Arlington Club made a very interesting allusion to the wonderful changes that have taken place in this river and the commerce it annually bears to the sea. In responding to the toast "Queenstown for Orders" he spoke in part as follows:

Briefly, and without tiring you with statistics and figures, I wish to bring before you the part that Portland and Oregon have in the tremendous commerce that "queenstown for orders" brings to mind. Our share of this commerce, within my own recollection, was at one time carried in small vessels whose loaded draft was only 15 to 17 or, perhaps, at the greatest, 18 feet. Even such ships then had to lighter on steamboats or barges a large portion of their cargo, for in those days 15 feet or thereabouts was a good depth of water at many places between Portland and the sea. I remember when about 1,000,000 bushels in wheat and flour and an occasional lumber and salmon cargo was considered a good showing for a season's foreign business. I can recall when a few old-fashioned dark and inconvenient docks on the west side of the Willamette, south of Couch street, accommodated the export and import business of Portland. I remember once being told by a friend, a river pilot that within a few years from the time he spoke the Columbia River from Astoria to Portland would be closed to navigation except for small coasting schooners.

Think for a moment of the changes since the time of which I speak! Look at the ships and steamers now here and visit our harbor each year! Look at the long line of modern wharves, lumber mills, flouring mills, shops, factories, railroad yards, warehouses, etc., that now line both banks of the river on both sides. Consider that during the harvest year ending last July, Portland exported in wheat and flour alone 17,000,000 bushels, besides berries, salmon, etc., and a host of other products, that about 1,000,000 tons of logs were brought by water to the sawmills at Portland. And these products were distributed to the world by vessels, some of which were the largest sailing ships afloat, and by steamers whose size and capacity would have been regarded as an impossibility three decades ago. And yet I venture to say the volume of our trade is only in its infancy, and that few among us, even the most optimistic, can grasp what the future contains for this growing city and state. Much has been done, many obstacles have been overcome, and great credit is due for the conditions which exist today, but we all know and realize that these conditions are by no means perfect, and while great progress has been made, there is still much to be done. Our surroundings are still changing, new developments are transpiring. Population is increasing, new markets are opening, neighboring ports are growing, pushing and gaining in strength, and Portland must keep pace.

Situated at the head of deep-water navigation, and with such an empire tributary to her wharves, there is practically no limit to the possibilities of the future.

It has been demonstrated, and has, in fact, become an axiom of commerce, that it is cheaper to bring the ship to the produce than to take the produce to the ship. We cannot and must not be satisfied with 22 or 23 feet of water from Portland to the sea. There must eventually be no such limit to the draft at which vessels can safely and expeditiously come and go to and from our docks. It behooves every business man, every taxpayer, legislator, voter and commercial body—every citizen interested in the growing welfare and development of our city and state and of the country on which we depend to work and to keep working to improve, open and keep open the noble river and its tributaries which we possess, not only from Portland to the sea, but also from Portland to the headwaters of river navigation in the interior.

These remarkable changes, taking place during the business career of a citizen still in the prime of life, prove beyond doubt that, as Mr. Sibson says, "there is practically no limit to the possibilities of the future." The Government has at times been slightly in its appropriations for the improvement of this great commercial highway, but the citizens of Portland have responded liberally, and the Port of Portland Commission has just completed the largest river dredge in the United States, and by the close of an-

other year will have the channel in such shape that 3000-ton vessels can go to and fro between Portland and Astoria with greater ease than the 500-tonners of 30 years ago. St. Helens bar has been wiped out of existence, and Walker's Island, which in the old days was a close second for St. Helens as a disturbing element in river navigation no longer causes trouble for the deepest-draft ships. During the past year the worst trouble has been encountered at Reeder's, about 20 miles below Portland. This trouble has been largely the result of an attempt to build a channel across the current. There has also been some minor delays to the deepening of the channel at Rainier, Slaughter's, Doubleblowers and Pillar Rock.

Even under these conditions, however, the experience of some of the largest vessels that ever came here have this season proved that the volume of water in the river is sufficient for the largest ship afloat, if it is only confined in the proper channels. Early in October, on the lowest stage of water of the season, and before the channel had been dredged out at Reeder's, the British steamship Lime Branch, carrying over 700 tons dead weight, made the run from Portland to Astoria drawing 22 feet of water. This draft on a smaller craft of narrower build would not have been so remarkable, but the Lime Branch is a vessel 400 feet long

many years before the actual improvement in the river was noticeable. As the channel began to deepen, it was quickly apparent that work at the bar was necessary, the delays below Astoria being much greater than at any point on the river. The first appropriation for this improvement was secured in 1854, the sum of \$100,000 being available that year. With this sum, preliminary work was commenced on the Columbia River jetty, a work which was so successful that in less than 10 years the depth of water on the bar had been increased more than 10 feet. The appropriation of 1854 was followed in 1856 by one of \$157,500, in 1858 by \$500,000, February, 1860, \$75,000; September, 1860, \$475,000; July, 1862, \$350,000; August, 1864, \$338,130, a total of \$2,025,630. From this appropriation \$50,000 was transferred in 1856 to the credit of the improvement of the river below Tongue Point, leaving the actual amount used for the jetty up to 1864, \$1,575,630. The jetty showed its greatest results about 1864, but the channel remained in good shape until about three years ago, when the necessity for extending it became apparent.

An emergency appropriation of \$250,000 was secured in June, 1890, and in June, 1892, a further appropriation of \$500,000 was secured. The success attendant on the original work on the jetty makes it practically a certainty that the contemplated extension will not only restore the 20-foot channel of 1864-65 but will show still greater results. As to the benefits arising from the expenditure of this money, it is probable that no other Government work ever attempted has brought larger financial returns to the producers of the country. When the work of improvement began, shipowners demanded and received a differential of 10 shillings per ton against the Columbia River, claiming this differential on account of the delays to which their vessels were subjected at the mouth of the river. At that time frequently ran up to 500,000 tons per year, so that in effect the producers were forced to pay something like \$1,500,000 per year more for getting their produce on the high seas than was paid by the Californians, who at that time were our chief trade competitors.

Within five years after the effect of the jetty began to be felt, this 10-shilling differential had shrunk to 4 shillings, then to 2s 6d, and finally disappeared altogether. In fact for the past three years ships have been chartered "to arrive," with the option of Portland, San Francisco or Puget Sound, at exactly the same rate for either port. The bar at present has shoaled up quite materially, but with liberal appropriations can easily be put in first-class condition again. Every dollar that has been expended on the Columbia River has returned to the producers of the Columbia Basin at least 35. The time is not far distant when the expenditure will be reduced to a nominal yearly sum for maintenance of the permanent improvements made, and the largest ships afloat can come and go with no delays of any kind.

#### VALUES OF LIVESTOCK.

The value of the livestock of Oregon is \$31,000,000. The sales of stock and wool for 1902 amounted to \$9,000,000, or nearly 30 per cent of the value of the stock carried over for working, breeding and dairying purposes for the coming year. In this mild climate there is very little loss of young stock, and the per cent of increase is relatively large.

The eastern portion of the state is particularly adapted to stockraising, where cheap range is necessary, but the industry is also very profitable in the Willamette Valley, where there is no public range, and in the Coast region, where pasturage conditions are unexcelled. The small valleys in the mountainous districts are especially adapted to stockraising, for no fencing is required.

and over 50 feet wide across her flat bottom. She is a turret steamer, square built, and in taking her through to Astoria, it was much the same as passing a vast square box 400 feet long, 53 feet wide and 22 feet deep, over the 100-mile course.

While the most effective work now being done on the river is by the Port of Portland, acting in a measure under instructions from the Government engineers, the Government dredge W. S. Ladd has been of material assistance in deepening the channel at some of the high spots. Much has been said by the owners of the Columbia River improvements against the expenditures that have been made for bringing this channel up from its old 15 feet scant to 23 to 24 feet depth, and from the amount of protest that is made by some of the Puget Sound papers, the inference might be drawn that these expenditures amounted to millions annually. As a matter of fact, the Government appropriations for the improvement of the Columbia and Willamette Rivers between Portland and the sea, exclusive of the jetty work at Fort Stevens, for over 34 years have amounted in the aggregate to but \$1,535,386. The appropriations in detail for that period were as follows:

Lower Willamette—	
Act of June 22, 1855.....	\$ 15,000
March 2, 1867.....	30,000
July 15, 1867.....	21,000
April 10, 1869.....	13,500
July 11, 1870.....	31,000
June 10, 1872.....	50,000
Total.....	\$ 160,500

Lower Willamette from Portland to the sea—	
March 2, 1873.....	\$ 20,000
June 22, 1873.....	20,000
March 3, 1875.....	20,000
August 15, 1875.....	20,000
June 15, 1875.....	20,000
March 3, 1877.....	45,000
Total.....	\$ 155,000

Lower Willamette and Columbia from Portland to the sea, including bar at mouth of Columbia—	
June 14, 1880.....	\$ 45,000
March 5, 1881.....	45,000
August 2, 1882.....	100,000
Total.....	\$ 190,000

Columbia and Lower Willamette below Portland, Or.—	
July 5, 1884.....	\$ 100,000
August 2, 1888.....	75,000
August 15, 1888.....	100,000
September 15, 1890.....	100,000
July 23, 1892.....	150,000
August 15, 1894.....	50,000
June 3, 1895.....	100,000
March 3, 1899.....	150,000
June 15, 1892.....	25,000
Total.....	\$1,535,386

The early appropriations were so small, and the equipment for handling them to the best advantage so limited, that it was

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