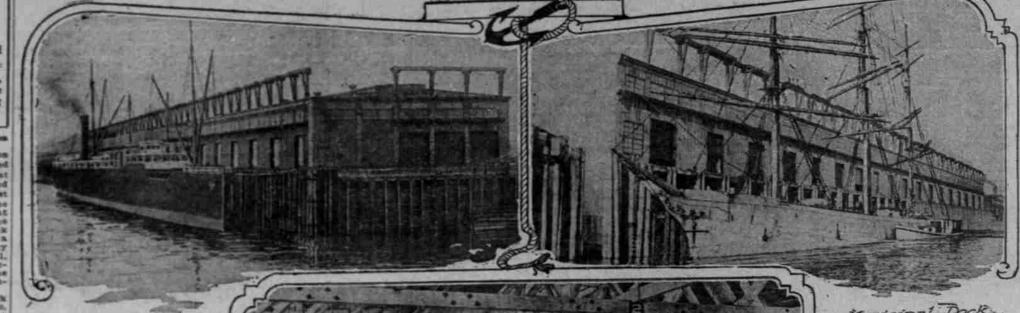
Improvements by Portland Municipal Dock Commission Are Big

Two New Wharves Modern Throughout Now in Operation

West Side Dock, 955 Feet Long, and Has Deep Slips—East Side Dock Is 526 Feet in Length—Big Elevators Installed.

the cines of 1916 the Commission of Public Docks had completed and in operation the motorboat anding at the foot of Stark street, and





Methods Used for Handling Cargo in Safety Is Feature

Type of Construction Adapted to Local Conditions — Warehouses Fully Equipped With Fire-Protection Facilities.

on creosoted timbers—a practically permanent construction, so far as the life of the dock itself is concerned.

In Warehouse "A" a heavy wooden floor is placed on sills directly on the solid fill, while in warehouse "B" the floor is of reinforced concrete finished off with special surface hardcase and the central driveway a creosoted wooden block pavement on concrete base. The dock floors are designed for a live lead of 500 pounds per square foot, and in the warehouses of 2000 pounds per square foot.

For the economical and expeditious handling of cargo at the docks, the Commission has installed along the face of the dock sheds cargo masts, which are used in connection with the ship's gear or the ship's gear and portable electric winches, of which four have been provided for Dock No. 1, each of a rated capacity of 31 horsepower. By the use of the door opening, regardless of whether the ship's hatches are opposite the door openings.

Channel Improvement Work Puts Portland on Map

Struggle of City's Early Builders to Open River to Deep-Sea Shipping, Taken Up on Gigantic Scale Later, Results in Great Achievement for Port.

The early Tox saw the heginning of the grain trade, a trade that was the cornerstance from which all of Purtland's maritime prestige was builded. And it was a narrow, shallow and tertisous channel, through which the ships wringled their way to Portland and hack to the sea. The obstacles were so estimus that in 1974 another attempt was made in divert the shipsing from Portland. Extensive docks ware built at Asteria and lower-river capitalists built a boat and barge line to carry wheat from the Willamette Valley to Astoria. But the Portlanders showed to more inclination to move 11.15 The early Tos axe the beginning of the grain trade, a trade that was the cornersons from which all of Year And it was a narrow, challow and tertimose channel, through which the ships wringsled their way to Fortland and hank to the near The obstacles were built at Astoria and lower-rive capitalists built a boat and barre it in the Carterian was usual to divert the shipsing from Pertiand. Extensive decks were built at Astoria and lower-rive capitalists built a boat and barre it instead when were built at Astoria and lower-rive capitalists built a boat and barre it instead to lighter their cargo down to the lighter their cargo down to the lighter their cargo down to the season the shipping business to Astoria than they had previously displayed when were without the assignment was taken up with an went than better was but the season, the big reseasor Strinds, and that time, but by green and shape he was such as the committed to wans. Suction dredges were not available at that time, but by dragging harves across the bars and other crude methods. Furtiand soon setured a channel of automatic hands and since crude methods. Furtiand soon setured a channel of automatic has been across the bars and other crude methods. Furtiand soon setured is channel of automatic hands and since crude methods. Furtiand so and since the many since been seriously committed to wans. Suction dredges and other crude methods. Furtiand soon setured is channel of an and since the control of the committed in a little of the committed

STATISTICS COVERING FORTY-FIVE YEARS OF PORTLAND'S WHEAT EXPORTS.

In 1870 five vessels cleared from Portland for foreign ports, carry-g a total of 116,936 bushels of wheat. The average shipload was 193 bushels In 1915 16 vessels carried from Portland a total of 3,394,516 bushels of wheat to foreign ports. The average shiplead was 213,111 bushels.

*Average 141,670.

*Average 140,681.

Br. bark Inneriyon... Br. bark Inneriyon... Br. bark Golgate... Br. atr. Wiscombe... *Average 212,111.

Development of Inland Navigation Necessary Step

Establishing of River-Boat Service, Erection of Docks and Warehouses and Construction of Electric Lines and Highways Among Projects Needed to Build Up Interior Trade.

Struggle of City's Excit Achievement for Port.

Scale Later, Results in Great Achievement for Port.

The Excit Later, Results in Great Achievement for Port.

The Excit Later, The Achievement of Port Indianal Scale of the Excit Later, The Excit would serve not only the proposed steamer and barge line, but the railroads as well, as all the traffic borne by such highways, in order to reach the river, would be compelled to cross the tracks of the rail lines operating in the territory. This plan appeals the most strongly, as it is deemed to be the most practicable and easy of accomplishment. These highways would serve the additional purpose of supplying the entire communities through which they are located with firstclass facilities for local use. Undoubtedity this plan will be adopted. It will contemplate the formation of port or shipping districts which will have the power of levying taxes, the same as school and road districts; or, possibly, such construction will be undertaken by districts already in existence. The details are yet to be worked out. Either plan, however, would result in distributing the cost of construction and maintenance throughout the territory directly affected, and not bear heavily on any one industry or com-In orders business, in the final analysis of moders business, in the final analysis of the fin