

to build such a line, and that portion of it between Astoria and Seaside will, no doubt, be built at an early day.

Centering in Astoria, is a large lumbering industry. There are three mills in the city, and a number at points on both sides of the river, which are tributary to this place, such as Knappton, Westport and Skamokawa. The supply of logs is abundant and of the best quality. Besides receiving logs cut along the river and brought down in rafts, the mills have the opportunity of tapping the huge forests to the south and southeast. On the Nehalem are many square miles of the choicest timber, which would be opened up by the proposed road from Forest Grove, and by the line down the coast. There is already a logging railway constructed into the timber by J. C. Trullinger, proprietor of the West Shore mills. The road is standard gauge, two miles in length, and penetrates a magnificent body of timber. The mills are turning out fifty thousand feet per day, and are now engaged on a cargo for Rio, consisting of nine hundred thousand feet. The mills are provided with electric lights for night work. The capacity of the road is two hundred thousand feet of logs daily. In the camp are ox teams and a steam logger. The mills have large wharfing facilities, and can dock a vessel drawing twenty-two feet of water. Mr. Trullinger has a steamer for towing logs and delivering lumber. Attached to the mill is a large box factory, with a daily capacity of four thousand salmon cases or six thousand box shoaks. He also makes thousands of pickets and laths. This is one of the best equipped mills on the coast. There are two other mills and a planing mill and sash factory in the city, besides the outside mills previously mentioned. Closely connected with the lumbering industry, is that of ship building. Astoria has a singularly favorable

location for that industry. With an abundance of the best material at hand, with splendid locations for ship yards, and with complete exemption from the voracious toredo, which creates such havoc with wooden piling on Puget sound, her advantages are great. A large number of river steamers, tug boats, schooners and barges have been constructed here, and from two hundred to three hundred fishing boats are constructed annually. When the American merchant marine begins again to be seen on the ocean, this city will contribute her share in the work of construction.

Astoria is built partly on a foundation of piling, partly on a narrow bench near the water, and partly on the hills rising up to the southward. It is divided into two towns by a high ridge which comes down to the edge of the water, the two divisions being connected by a long plank road way built on piling. The chief business houses, public buildings and residences are located in the lower town, but Upper Astoria is expanding rapidly along the river, and back upon the hill, a number of the largest canneries being located in that portion of the city. The population of the two towns was given by the census of 1880 as five thousand eight hundred and forty, including two thousand Chinese. It approximates ten thousand now during the fishing season. Many of the fishermen depart for other places at the end of the season, while a large number of them have families and are permanent residents and property owners. The city has a complete system of water works, costing nearly \$100,000.00. The reservoir has a capacity of three million gallons, and gives a pressure of two hundred and forty feet at tidewater, through a large iron pipe eleven miles in length. Gas works, costing \$75,000, and having a capacity of twenty thousand cubic feet, were built a few years