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THE COAL BUNKERS AT NEW TACOMA, W. T.

The illustration on this page represents the great coal bunkers recently erected at New Tacoma, Washington Territory, for the storage and shipment of the product of the Wilkeson and Carbonado coalfields, that lie up against the western face of the Cascade Mountains, about 30 miles from tide water, at the head of Puget Sound. These fields are tapped by a branch of the Northern Pacific Railroad. The Carbonado is the largest yet developed, and belongs to the Central Pacific Railroad of California. This company also owns a line of large iron steam colliers which ply between New Tacoma and San Francisco, a distance of about 600 miles by water. The coal is a high grade of lignite, of good steam generating power, but not equal to the bituminous coals of the East. The great coal and iron mines, practically inexhaustible, and the vast forests of this region, make its future as a prominent industrial point certain.

The coal bunker is built at an angle to the shore, the trestle leading to it being curved. A single track is laid to a point a short distance from the shore end of the bunker, where it branches into three tracks running parallel over the top. The bunker is 300 feet long and 80 feet above high water. The bunker and the trestle leading to it are built entirely of wood, so distributed and proportioned as to give ample strength to bear the great weight to which it is subjected. The depth of water alongside the wharf is from 32 to 42 feet at low tide. The structure rests upon a foundation of 850 piles, driven to refusal. The cars are pushed

down upon either track to the end, where the coal is dumped directly into bins occupying the upper portion of the bunker and having a storage capacity of 4,000 tons. From the bins the coal is guided by chutes into the hold of the collier moored alongside. The heights are so proportioned that gravity does the work of stowing and also of loading the vessel. The bunker cost about \$65,000. Although of immense size, it is not sufficient to handle the output of the coal field.

In the right of the engraving is shown an elevated pier with two tracks, from which the coal is loaded directly into the vessel, no storage bins being provided.

The Mines of France.

Two-thirds of the total yearly production of coal in France comes from the northern coal districts of Nord and Pas de Calais, and from the basin running southward through the Departments of the Loire, Rhone, Ardeche, and Gard to the Gulf of Lyons. The production amounted to 21,000,000 tons in 1882, which is over one-quarter that of this country, less than one-seventh that of Great Britain, and less than half the product of Germany. As early as the eleventh century the coal mines of St. Etienne were known, but were not worked to any great extent until the revolution. The northern coal fields were discovered in 1847. The consumption of coal in France last year was about 10,000,000 more tons than she produced.

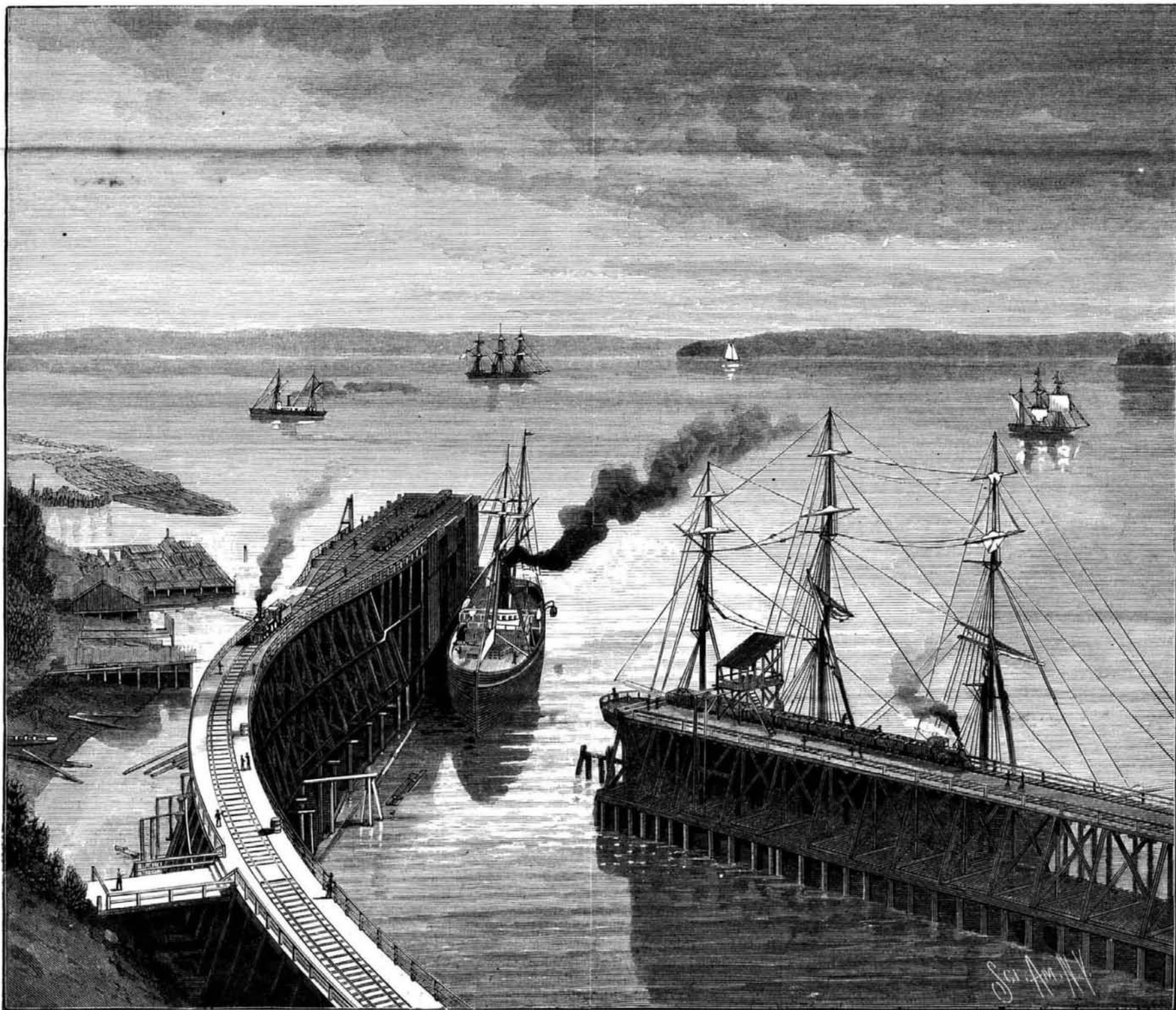
France is rich in iron mines. Brown hematites are found

tolerably pure and free from phosphates. The oolitic ores are the most abundant, the main mines being in the Department of Meurthe et Moselle. According to R. P. Porter in the *Tribune*, there were 4,820,000 tons of iron ore consumed in 1882, of which 40 per cent was imported from Spain, Belgium, Germany, Italy, and Algeria. The principal iron manufacturing districts are the Nord group, the Loire and Rhone group, and the Moselle group. The Loire and Rhone district is the most extensive in France, containing the finest iron and steel works in the country—that of Creusot. Forty years ago Creusot was almost unknown, but now it is a live place, containing 30,000 people, all employed in one establishment. The works are the largest in the world carried on by one proprietor, with the exception of those of Herr Krupp. In 1882 France produced 2,033,000 tons of pig iron, 1,074,054 tons of wrought iron, and 454,053 tons of steel.

Copper, lead, tin, and zinc are found in France, but in small quantities, while it is rich in salt. It is estimated that there are 25,000 quarries employing about 100,000 men.

We Beat the World on Doctors.

The proportion of doctors to the population in different countries is given as follows by the *Siglo Medico*: France, 2.91 per 10,000; Germany, 3.21 per 10,000; Austria, 3.41 per 10,000; England, 6 per 10,000; Hungary, 6.10 per 10,000; Italy, 6.10 per 10,000; Switzerland, 7.06 per 10,000; United States, 16.24 per 10,000.



THE COAL BUNKERS AT NEW TACOMA W. T. ON THE NORTHERN PACIFIC RAILROAD.