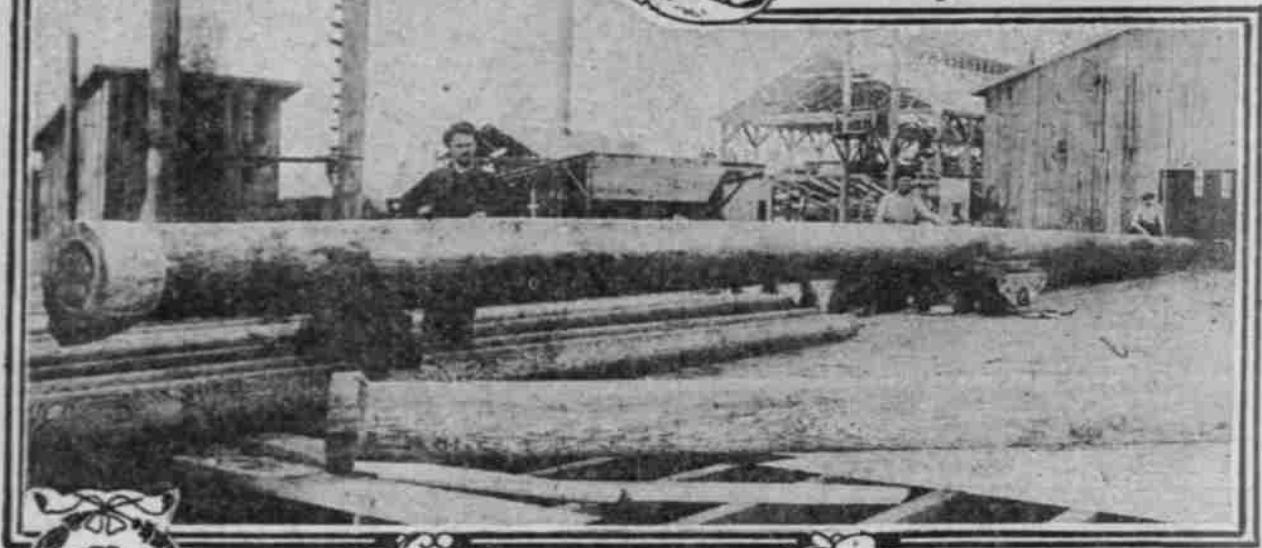


DOUGLAS FIR IS HELD BEST SHIP TIMBER

Species Is Strong for Its Weight—Product Is Asset in the Construction of Freight Cars

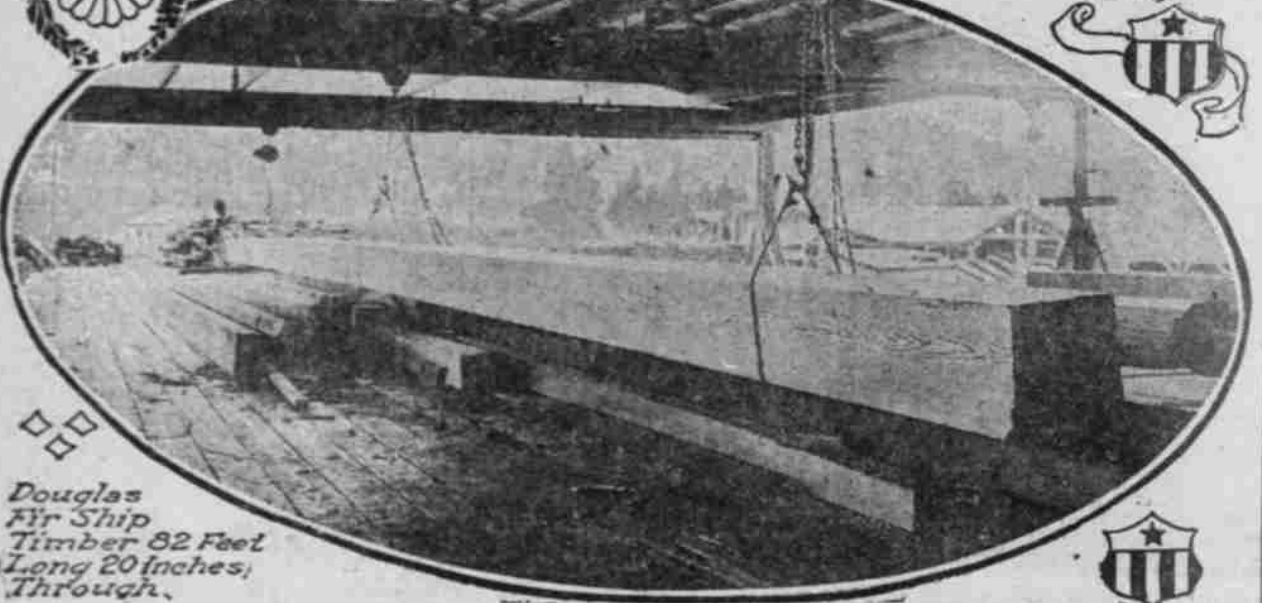


Timbers Shaped for First Wooden Vessel of Present Shipbuilding Program.



Turned Mast 80 Feet Long.

Grego.



Douglas Fir Ship Timber 82 Feet Long 20 inches Through.

THAT Douglas fir is the best timber available for the manufacture of wooden vessels now is generally admitted. In a recent treatise on the subject, Howard R. Oakleaf, of the United States Forest Service, had the following to say:

"In the western timbered area of the states of Oregon and Washington there are now standing about 400,000,000,000 feet of Douglas fir (Oregon pine) trees, representing an almost unlimited supply of wood admirably adapted to the construction of wooden vessels. It is this remarkable supply of suitable raw material which is attracting and will continue to attract shipbuilders to this region. In addition to the abundance of raw material which insures a reasonable price for the wood for years to come, the trees grow to such an unusual size, commonly three to five feet in diameter and 175 to 250 feet high, that the shipyards always can obtain on short notice huge sticks of almost unheard-of dimensions at comparatively low cost. This means that even the largest of wooden boats can be constructed of Douglas fir with minimum splitting, which not only reduces labor costs, but materially increases the strength or seaworthiness of the vessel, since man cannot fabricate the material as successfully as nature."

"The large supply of raw material

not only assures almost indefinite availability at a reasonable price, but it enables the boatbuilder to purchase his timbers from those operators who are cutting a class of trees the wood from which is especially suited to the construction of vessels. This is not possible to the same extent anywhere else in the world."

Fir Strong for Its Weight.

"Douglas fir is exceptionally strong for its weight, a factor more important in the shipbuilding industry than in almost any other business that requires large quantities of this species, although it is a great asset in the construction of railway freight cars. In both of these wooden structures it is important that the material used be as light as the desired strength will permit, since all surplus weight greatly reduces the speed and increases the cost of transporting commodities in them. Douglas fir is one of the few woods whose strength is above the values set by the well-established law of weight vs. strength."

Douglas Fir Ship Knees Best.

"In addition to the large timbers and planks obtainable from Douglas fir trees, the stumps yield the finest and largest ship knees in the world. These knees are an important item to the shipbuilder, for as many as 200

to 300 are used in a single boat. Most of the knees have an angle of 90 degrees, although a few are used for special purposes that require angles greater or less than this. Stumps on level ground yield knees having right angles, while the roots of those on a hill produce knees with acute angles on the uphill side and obtuse knees on the downhill side."

"For many years the large masts and spars for vessels built in various shipyards of the world have been supplied from the Douglas fir forests of Washington and Oregon. Here as in the other parts of the boats the strength, weight and size of the sticks have been of incalculable value to shipbuilders in getting out these essential parts of both sailing and power vessels. Masters of vessels flying all flags have taken the opportunity when calling at Oregon and Washington ports of picking up an extra mast or spar."

"The trees carry their form well up into the top and masts can be obtained from young, thrifty trees without sacrificing the top diameter to get young, healthy trees suitable for such use."

"Probably nowhere else in the world are such thick, wide, long and high-grade pieces of timber available in such large quantities as in the fir lumber-producing centers of Oregon and Washington."

STRAHORN RAILWAY SYSTEM ADVANCES

Completion of Twenty-Mile Stretch From Klamath Falls Assures Success of Important Project

KLAMATH FALLS, Or., Dec. 31. (Special.)—Probably the most important development of 1917, in Oregon, or even on the Pacific Coast, is the practical completion of the Klamath Falls Railway, generally understood as the first unit of the Oregon, California & Eastern Railway. This is from Klamath Falls northward to Dairy, a distance of 20 miles.

This initial construction is a part of the 400-mile system projected by Robert E. Strahorn to bridge the gaps now existing between the ends of the five railway lines which have reached the edges of our great interior from four different directions. It is on the route from Klamath Falls to Bend, the connection of the Southern Pacific here with the Hill and Harriman lines at Bend being considered the most important link of the system. This is owing to its affording a short rail line to Portland, which is the crying need of all Central and Southern Oregon. Also it will afford an outlet to all points east and south for our lumber and other products seeking a market in those directions. It also will be of especial value because of its location through the interior valleys.

Productive District Tapped.

At Silver Lake this Portland line will afford much-needed transportation facilities to all the territory between there and Lakeview, and at Fort Rock it will tap the Christmas Lake Valley country, extending eastward for 60 miles, while a little further north it will be very helpful to all the country eastward to Harney Valley. It also will tap more than 100 miles of the finest pine forests en route to Bend, and will be a great stock-shipping line for the thousands of square miles of fine grazing country tributary.

Mr. Strahorn's plan is ultimately to build a branch from Silver Lake to Lakeview to connect with the Nevada-California-Oregon line, and another branch from a point 20 miles southeast of Bend to Crane, at the eastern edge

of Harney Valley, there connecting with the Oregon Short Line. Final surveys have been completed on all these lines, as well as on an extension of the Lakeview line southward through Surprise Valley, California, to a connection with the Southern Pacific and Western Pacific at Flanigan, Nev. A large proportion of the right-of-way on all the lines have been obtained, terminals at all important points arranged for, and considerable subscriptions to the construction funds.

The result has been the best year, from a business standpoint and the greatest progress along all material lines, since the boom days of five or six years ago. Many new irrigation and drainage projects have been inaugurated, many thousands of acres of new lands have been placed under cultivation, great activity has prevailed in lumbering operations and more new buildings have been erected in Klamath Falls than in the four previous years combined. This gratifying activity promises to continue for a long time to come, as plans are already matured for general expansion in business and many important building and other development projects.

Even the present railroad unit of 20 miles will have a much greater effect

on production than can be realized by those not thoroughly familiar with the lay of our country and the admirable location of the line to serve it. For the first 10 miles it goes straight across the richest section of Klamath Valley and en route about seven miles out affords shipping facilities for the extensive timber country a few miles north, known as the Meadow Lake territory.

Langell Valley Is Rich.

At the 15-mile point—Olene—it affords like facilities to the Stuckel Mountain timber country and reaches the lower end of Poe Valley, a very productive section stretching eastward about 10 miles. Fifteen miles out it skirts the great Swan Lake timber country, although still proceeding through good farming and grazing territory. At Dairy it is in the lower end of Yonna Valley and only six miles from Langell Valley, which stretches on 30 miles eastward. This is one of the best valleys in Southern Oregon, and it is also flanked by very extensive pine forests. From Dairy a branch line is projected to run over eastward to Bonanza, the principal town in Langell Valley, and to be pushed eventually on eastward to Lakeview.

The next 20-mile unit of the Bend

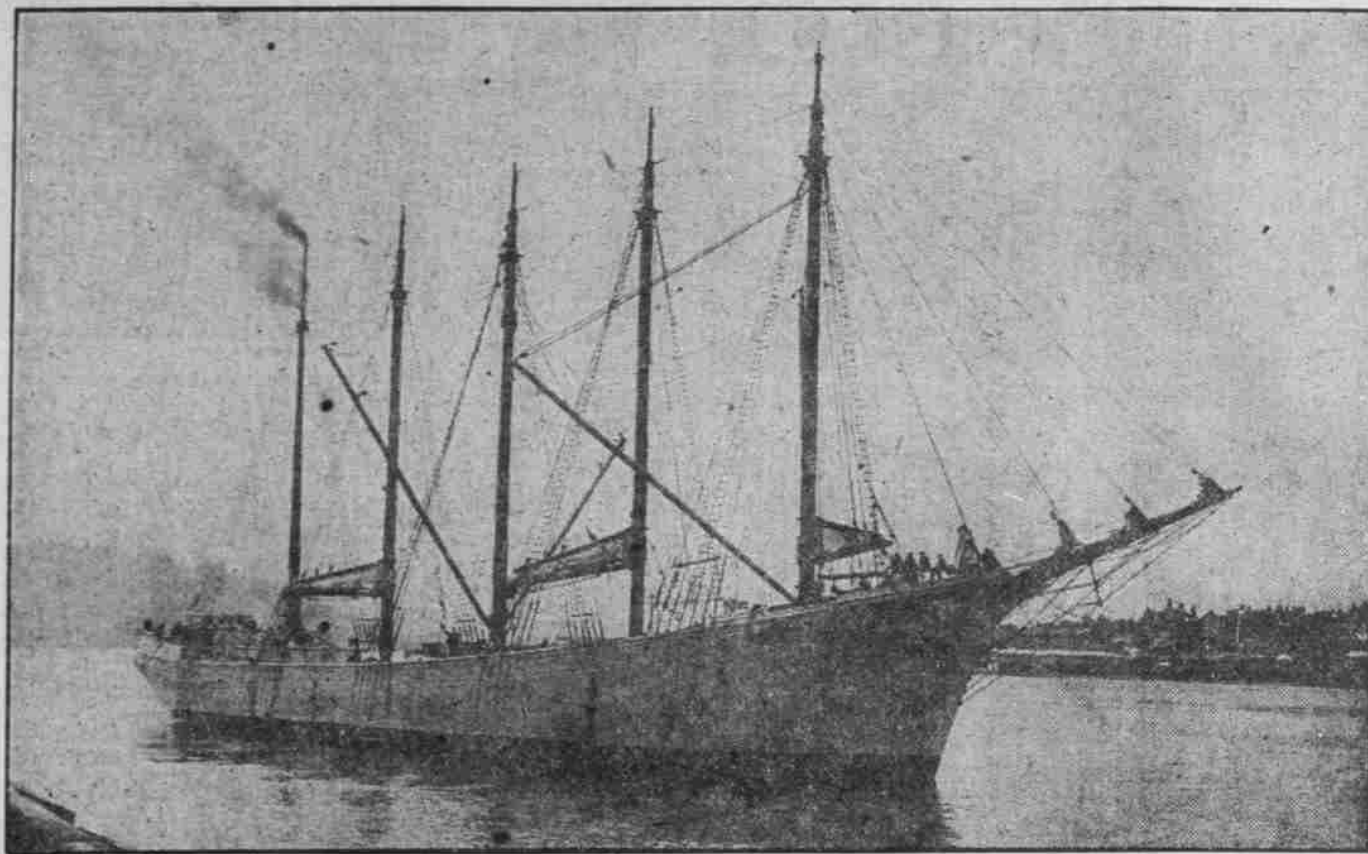
ELECTRIC STEEL FOUNDRY

Manufacturers of high-grade steel castings to requirements of Lloyds Register and American Bureau of Shipping.

PORTLAND - OREGON

St. Helens Shipbuilding Co.

ST. HELENS, OR.



"City of Portland"

The M.S. "CITY OF PORTLAND" is 278 feet in length, 48-foot beam and 19 feet 6 inches depth of hold, single deck, built for the lumber trade. She is equipped with two 320 H. P. Bolinders, and averaged on her initial trip to Port Pirie, Australia, 7 1/4 knots. Her carrying capacity was a little over two million feet of rough Douglas Fir, and her average loading was 400,000 feet per day. She is considered a success in every particular.

HIGHEST CLASS WOODEN VESSELS DESIGNED AND CONSTRUCTED

Chas. R. McCormick Co.

800 Fife Building

* San Francisco

and Portland line proceeds northward from Dairy through the wide and fertile Yonna Valley for eight miles, and on through heavy forests to Sprague River Valley, the center of great agricultural, stock-raising and forest resources. There are five lumber mills in operation along the line between Klamath Falls and Dairy and several others to be built during 1918, which, with the large agricultural production, insure a heavy tonnage from the start.

Portland's Help Needed.

Having thus tasted of the sweets of prosperity, brought about in large measure by a comparatively modest beginning on the railroad enterprise, the Klamath country is thoroughly alive to the importance of its completion. Before war conditions became so acute there was general confidence in Mr. Strahorn's ability to go right ahead with succeeding units, although he has carefully refrained from making any promises, except that he would build on to Sprague River Valley, 40 miles north of Klamath Falls. Under present conditions this seems almost impossible, unless Portland helps substantially, but Mr. Strahorn is still

hopeful. Our greatest expectation of this new railroad system lies in the direction of an ultimate extension southward through the Lower Klamath and Pitt River valleys to a connection with the Southern & Western Pacific in the vicinity of Susanville, thus forming an independent through line from Portland via Klamath Falls to California and the East. It would give this whole interior country the wonderful advantage of competing service from the Hill and Harriman systems and their many connections, at the north, and from the Southern and Western Pacific, with all their network of feeders, at the south, besides opening up to thorough development the last great railroadless West.

The value to our state and Nation of such a new Portland-San Francisco route east of the Cascade Mountains can hardly be overestimated. With its low grades and easy curvatures, cheapness of construction and operation and not extreme length, it would prove of incalculable value in times like these, when our present single existing line is straining to the utmost to meet the impossible demands.

Machine Shop—Hawthorne Ave. and East Third St. Phones: East 29; B 1145.

Foundry and Pattern Shop—Union Ave. and East Stevens St. Phones: East 13; B 1151.

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CASTINGS

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Operating three bands. Installing fourth band. Produces about one hundred million feet Western White Pine. Payroll, October, \$72,000. Operating Box Factory producing three carloads box shooks per day. Operating Sash Factory which makes 3000 openings per day, 400 frames per day, and mouldings, cut-door stock, etc., etc.

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