

RAILROADS LAY NEW TRACKS

Harriman Lines in Oregon Build to Undeveloped Sections of State Besides Improving Present Roads.

By G. W. Boschee, Chief Engineer Harriman Lines in Pacific Northwest.

THE Riparian-Lewisville line, which is 75 miles in length and which follows the north bank of the Snake River from Riparian to Lewisville, a distance of 75 miles, was completed and put in operation in July, 1908. There was expended during the year 1908 on this construction \$385,500. The line, exclusive of equipment, ballasted and ready for operation, was \$3,963,943. Maximum grades on the line are two-tenths of 1 per cent, and maximum curve is 1 degree, and from an operating standpoint is practically as good as though it were straight and level track.

The Iliwaco extension was completed during the year 1908 and put in operation on the 1st day of June. The total length of this extension, which is 14 miles, was constructed at a cost of \$115,000. There was expended during the year 1908 \$172,000. This line was constructed to accommodate the beach travel and was made necessary on account of the short water at the original old landing point, Iliwaco, which prevented steamers from making landing except between half and full tide. At the new dock, which was constructed at Meglers, it is possible to land at any stage of the tide, therefore allowing the water lines to make close connections with the main line, which reduces the time between Portland and North Beach points about two hours and 20 minutes.

The Rigby extension, which is 53 miles in length, was practically completed to the end of the line at Joseph, on November 21, 1908, at a total cost of \$1,474,320. There was expended during the year 1908 on this construction \$656,935. The new line that was constructed, beginning at Elgin, 21 miles east of La Grande, follows down the north bank of the Grande Ronde River to the junction of the Grand Ronde and Wallowa Rivers; thence up the north bank of the Wallowa River to the junction of the Mullan and Wallowa Rivers, thence on the south bank of the Wallowa River where it enters the very fertile Wallowa Valley. The scenery along the line between Elgin and Joseph is exceptionally picturesque. One mile from the station at Joseph is located Wallowa Lake, a beautiful body of water, five miles long and a mile and a half wide, varying in depth from 100 to 300 feet. The surface of this lake is at an elevation of 4500 feet above sea level and the shores are heavily wooded and will no doubt become a very popular summer resort.

Line changes between Troutdale and Bonhomme were completed in 1908 at a total cost of \$294,000. There was expended during the year 1908 \$466,000. This line change has cut out all of the adverse grade between these two points and taken out 170 degrees of curvature. The track has been laid with new 75-pound steel and ballasted throughout. The maximum curves have been reduced from 18 degrees to 12 degrees.

The Beaverton & Willburg Railroad Company is to connect Beaverton with the main line of the Southern Pacific Company lines in Oregon at Willburg. Work was started on this line in 1907, but owing to the financial flurry work was stopped in November, 1907, and was started again on November 1, 1908. Total expended to date on this line, \$293,000, of which \$65,000 has been expended in 1908. All the steel for the high bridge crossing the Willamette River at 12th Street is on hand, and it is the intention to push this along to completion as rapidly as the water conditions in the river will allow.

The Oregon & Washington Railroad Company has constructed 1.13 miles from a point on the Oregon Railroad & Navigation Company's line at McKenna Junction

tion to Swift & Company's packing plant. Total expended to date, \$196,702. Expended during 1908, \$23,000.

There were fifteen steel bridges on concrete masonry abutments constructed on the Oregon Railroad & Navigation

tracks remodeled at a total cost of \$40,000. At Albany a concrete block depot, together with remodeling tracks and filling around station grounds, was completed at a cost of \$29,000.

At La Grande a coal storage plant

KALE FURNISHES GREEN FEED FOR STOCK THROUGHOUT ENTIRE YEAR.



The accompanying illustration shows a field of kale near Eugene. Although a comparatively new crop in the Willamette Valley, kale is being extensively cultivated as dairy feed. It grows outdoors all the year, and leaves can be taken from the main stalk to furnish green feed for cattle throughout the winter.

Company's line, replacing wooden bridges during the year 1908 at a total cost of \$428,000. These bridges were all constructed on the main line between Portland and Huntington.

Total miles of automatic signals on the Oregon Railroad & Navigation Company and Southern Pacific Company lines in Oregon, 556 miles. Total cost for this 556 miles of automatic block signals was \$284,000. Expended during 1908, \$32,000.

A new freight and passenger depot was constructed at Winona at a cost of \$7000. At Eugene a bulk brick passenger station was constructed and the yard

with a capacity of 25,000 tons was erected during 1908 at a cost of \$33,000.

136 miles of 75-pound steel, with tie plates and laying, at a cost of \$316,000. Eleven miles of 30-pound steel, with tie plates and laying, at a cost of \$29,000.

Total expended during 1908 for new rail, \$968,000. Total new line put in operation during 1908, 150.12 miles; total change of line, 22 miles; total amount expended during 1908, \$3,688,585, most of which was spent during the last six months, very little work having been done during the first six months on account of financial trouble.

be used in the construction of a saw-mill and other buildings at San Diego. The raft reached its destination without mishap, and the following year three more were built.

Last year five were built, making a total of nine and averaging 4,000,000 feet each, and reaching the company's plant at San Diego without accident.

Striving for greater results, plans have been completed, in fact, the cradle is already being laid, for the biggest log raft ever constructed. The dimensions of this giant craft will be 1900 feet in length, 52 feet in width, 37 feet in depth, and it will contain 7,000,000 feet of logs. To properly harness this floating monster it will be necessary to use 150 tons of chain, which will cost \$17,000. Three months will be consumed in its construction.

The logs are brought out of the forest and the rafts built during both Winter and Summer months, in order that they may be ready for towing in Summer.

In addition to the cost of getting out the logs, the cost of building the raft is about \$1.25 per thousand. The cost of towing will in addition average

STREET WORK IN PORTLAND.
Street improvements in Portland during the past year have involved an expenditure of \$1,781,253, or nearly twice that of 1907, when the total outlay was \$897,485. Two hundred and thirty-one streets were improved during 1908, betterments covering 52 miles. During the same time 52 sewers, with aggregate length of 34 miles, were constructed, involving an expenditure of about \$200,000, including the Brooklyn district sewer, now almost completed. Excavation work for street improvements amounted to 646,022 cubic yards, and cement sidewalk was laid covering 1,405,645 square feet. All of these improvements were made under ordinance and the exclusive use of pavement and sidewalks laid under special permits.

Local Guild Ends Year's Work

Portland Branch of National Charity Is Doing Useful Service.

By Ellen Temple.

THE Portland branch of the Needlework Guild of America publishes an official report showing that considerable progress has been made during the past year, not only in regard to the number of garments contributed, the number of institutions and private cases assisted, but also in the formation of new sections. At the annual tea, 1929 garments, given by Guild members and others, were displayed. Parcels of clothing and household linen were distributed among 16 of the charitable institutions in the city, according to the special needs of each; 23 private cases received donations, and 128 garments were kept in reserve for emergencies. Already, however, the reserve supply has been exhausted. Indeed, four or five times the number of garments the needs which the Guild investigates and endeavors to supply.

In most instances this is the only source of new garments and then for those institutions that receive help from the Guild. The private cases, however, have almost the first claim, and the assistance given is kept private in fact as well as in name, for those most deserving of help are usually most sensitive in receiving it.

It is hard to overestimate the value of the work done by the Needlework Guild and it is hoped that during the coming year many new sections will be formed in the outlying districts of the city. Anyone interested in the organization of a new section should write to any of the officers whose names are given below, who will gladly supply information and help.

This is emphatically an organization

for busy people and is one that enables the poorer as well as the richer members of society to give aid to those less fortunate than themselves. Many merchants, too, realize that while they benefit indirectly by the purchase of the garments, they are also offered an opportunity, through the Guild, of benefiting the city institutions and lessening the amount of general begging by donations of goods, instead of of money. Merchants who contribute have the right, if they wish, of designating the institution to which their things are to be sent; they are also invited to name a director to attend the meetings of the Guild. The following are the names of the officers and section presidents of this kindly and yet eminently business-like charity:

Honorable president, Mrs. H. W. Corbett; president, Mrs. J. S. Reed; sec-

HOME OF RED STRAWBERRY

Luscious Fruit Reaches Perfection in This State—Methods of Culture That Bring About Best Results.

By E. H. Shepard, Editor of Better Fruit.

THE Hood River method of growing strawberries is somewhat different from the methods generally used throughout the East. The ground in Hood River is put in a perfect state of tilth. Before starting the physical condition of the soil must be good. The ground is first plowed, then harrowed and in soils where there is considerable clay if the ground comes up lumpy a clod-masher is run over the field to pulverize the soil and to level it after. Next a mark, which can be made of wood, is run across the field to lay off the ground so the plants can be set in straight rows. The mark is placed after the principle of a sled with runners. These runners are 30 inches apart and usually have from four to six runners so as to lay off four to six rows at a time. Before setting the plants it is customary to trim the roots.

Planting is usually done by two men. One man drops and the other sets the ordinary hoe, the handle being cut off to about 10 or 12 inches in length. The hoe is used for the purpose of digging the hole. Great care should be taken in setting plants so that the crown should be level. The plants should be set in the soil at about the same depth as they were before being taken up from the plant patch. The hills are usually from 12 to 18 inches apart. The plants are usually set out in the Spring or early in the Fall. There is no special preference. Growers usually set in the Fall if the ground is ready and convenient, if not, in the Spring. It is not advisable to set in the Fall unless very early. The ground has to be in order to get the required amount of moisture in the soil to set the plants growing, which is somewhat difficult.

The cultivation of the berry plants is simple. Growers usually cultivate with a five-tooth implement during the Fall season, running through the field afterwards with a 12-tooth in order to level off the roughness, following with a good hoeing. This is done every two or three weeks during the Fall. After the cultivation of the berries are hoed. The object of the grower is to keep the patch clean and keep the soil level around the berry plants. In the Spring the cultivation is different from the Fall. Instead of cultivating deep, the grower aims to cultivate as lightly as possible, usually with a 12-tooth cultivator in use which is pulled through the rows with one horse. The lighter the hoeing the better the result. The reason for this is that the roots of the berry plants are near the surface and deep cultivation in the Spring will destroy a great many of these roots consequently cutting short the crop.

In the Fall the cultivation after the berry plants have finished bearing, the tops are mowed off. In small patches the tops are cut with a hoe, but in large patches where the ground is

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ROSEBURG - - OREGON

LOGGING IS BIG INDUSTRY

Billion Feet of Timber Annual Output of Country Tributary to Portland—Rafts Floated to California

By John West, of Benson Logging & Lumber Company.

IT HAS been said that figures are interesting to newspaper readers; and it has been further said that the general public is little concerned in the presentation of stupendous figures, no matter what subject the figures may be used to illustrate.

But to comply with your request to furnish a brief article pertaining to the logging industry in the Pacific Northwest it will be necessary to use figures not only to convey an idea of the vastness of that industry, but to express even the most abbreviated description of the Pacific Northwest's greatest asset.

In the Columbia River, near the Benson Company's plant at the mouth of the Clatskanie River, and then towing them to San Diego. Again he was characterized as a visionary, and predictions were numerous that the scheme would end disastrously, as most all attempts to lay rafts on the ocean had been unsuccessful. None had ever been built staunch enough to withstand the strain of wind and waves of the sea.

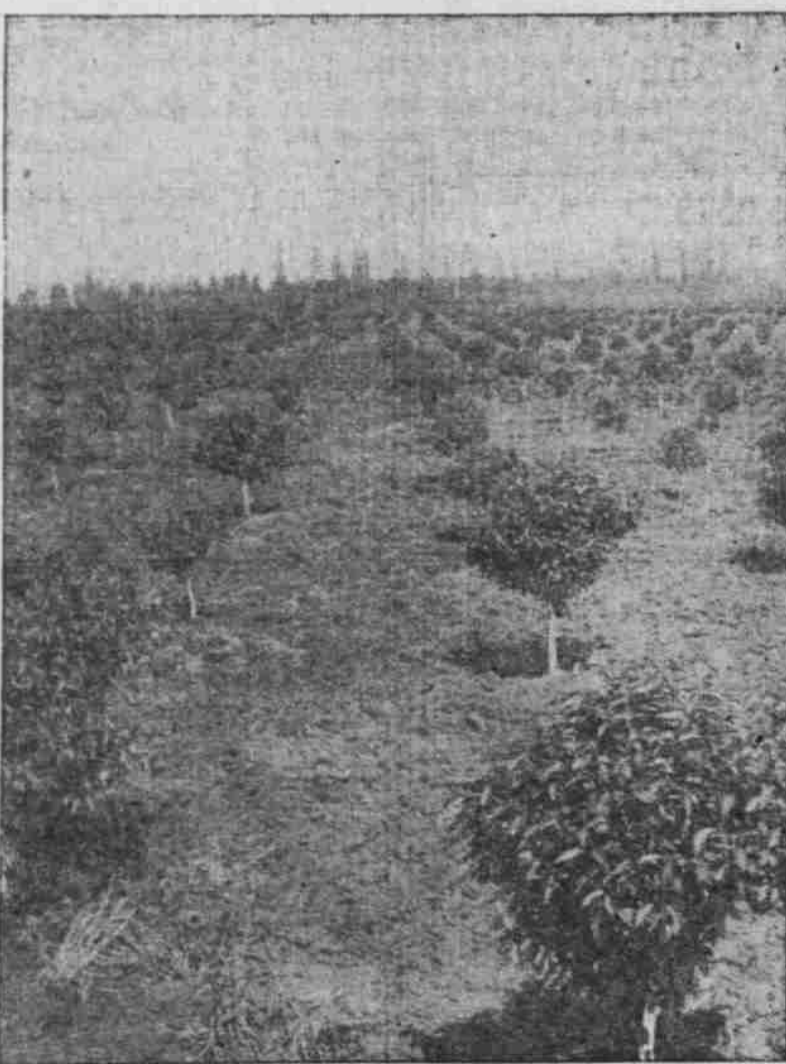
The late Captain Robertson was the first person to embark in the hazardous enterprise of building and towing piling rafts, but unfortunately he was unsuccessful, several of his rafts going to pieces while being towed to San Francisco. His successors, the Oregon Lumbering Company, however, landed sev-

eral rafts of piling successfully in San Francisco.

Mr. Benson, however, was convinced that the plan was feasible and, profiting by the mistakes of the past, proceeded to build a raft on improved lines. For this purpose a cradle 720 feet long, 52 feet wide and 34 feet deep, pointed at the ends to preserve the contour of the intended raft, was built. As the raft was building it was bound securely by huge chains, specially ordered and manufactured for the purpose. One hundred and twenty tons of chain alone was used in this way.

The first of these rafts contained 2,000,000 feet of logs, board measure, besides 400,000 feet of sawed lumber to

HUNDREDS OF ACRES BECOME PROFITABLE THROUGH YOUNG ORCHARDS.



Hundreds of acres of land in the Willamette Valley, Hood River Valley and other parts of the state are beginning to pay big dividends through their young orchards. The accompanying illustration shows a young prune orchard just coming into bearing. Prunes are one of Oregon's staple products, and the output is becoming larger and more valuable each year. Much care is given not only to cultivation, but also to picking and packing the product.

An idea of the importance of the logging industry may be gained from the fact that the output of only that territory directly tributary to the Columbia River, and particularly to Portland, averages 1,000,000,000 feet, board measure, annually. An approximate value of this immense output is \$5,000,000. Between 6000 and 7000 men are employed in connection with the industry, whose wages range from \$3 to \$6 per day.

To establish a modern logging camp, with proper equipment, requires an investment of between \$30,000 and \$50,000, dependent, of course, upon local conditions. The annual pay roll of such a camp will average from \$75,000 to \$150,000. The average cost of putting logs in the river in rafts, ready for towing, is from \$5 to \$6 per thousand.

Stumpage commands prices according to quality and availability, usually from \$1.50 to \$2 per thousand.

Strange as it may sound, until 15 years ago the methods employed in the forests of the world, so far as the logging industry was concerned, were as primitive as when King Solomon sent forth his choicest into the forests of Lebanon to hew cedars for his temple. The crudest of medieval methods prevailed until that time as to the manner and means of felling trees and hauling them to a convenient place, where they could be transported to market.

The motive power was the sturdy and reliable ox—the same old ox that came down through the centuries from the most remote times. And a percentage of no mean importance was the driver of this ox, for his stentorian "yow" and "haw" have sounded through the forests of every nation and of him poets have sung through all ages.

But his method was slow, expensive and unsatisfactory. Mr. S. Benson, of the Benson Logging Company, who has spent the greater part of his life in the logging industry, determined to try to better conditions and facilities for handling the output of his camps on the Columbia River. He decided to try the efficacy of the donkey engine. The loggers themselves were quite dubious regarding the experiment, but Mr. Benson persisted, with the result that the entire system of logging has been revolutionized and the implements and devices used by him have been adopted in every camp on the Coast.

With the intention of opening new markets for the company's output and enlarging its field of operations, Mr. Benson secured a site at San Diego, Cal., for the purpose of erecting a saw-mill and box factory and a complete plant for the manufacture of commercial lumber. He also carried out the idea of constructing cigar-shaped log rafts

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