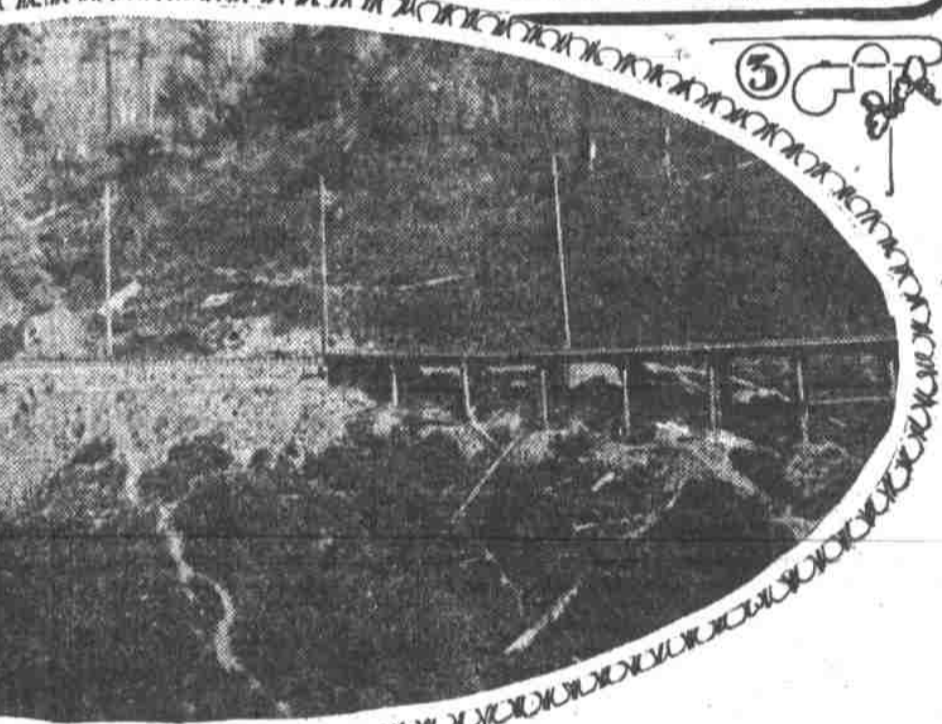
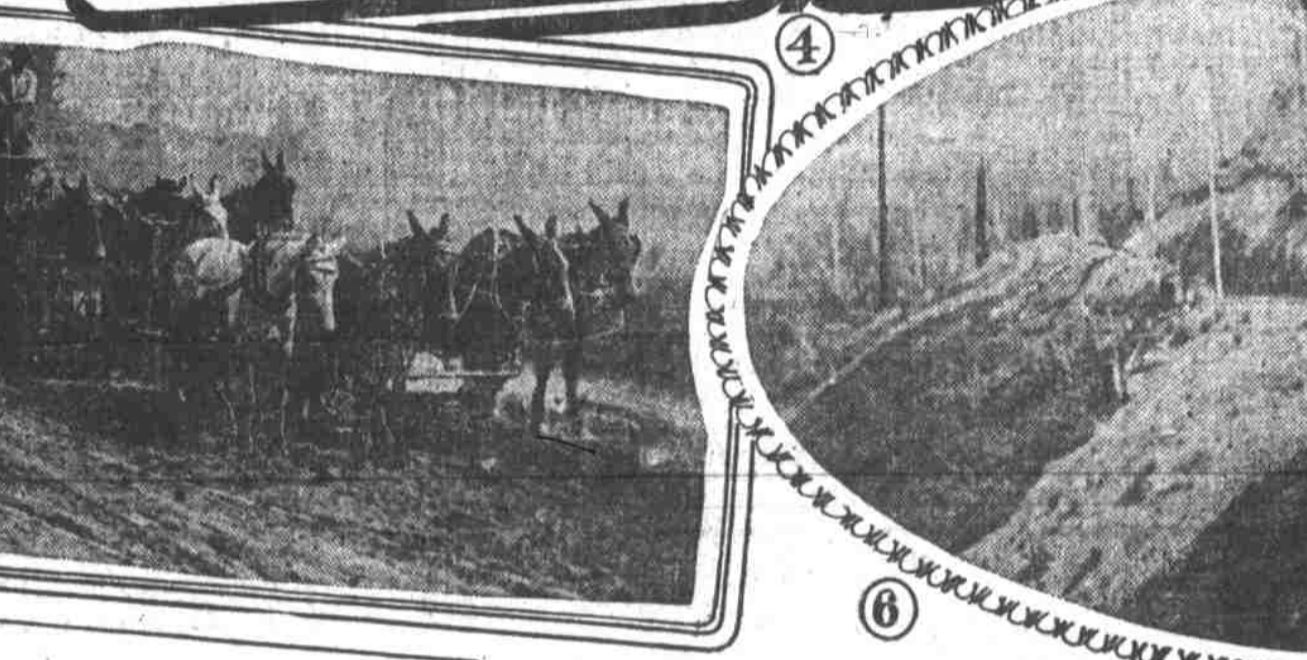
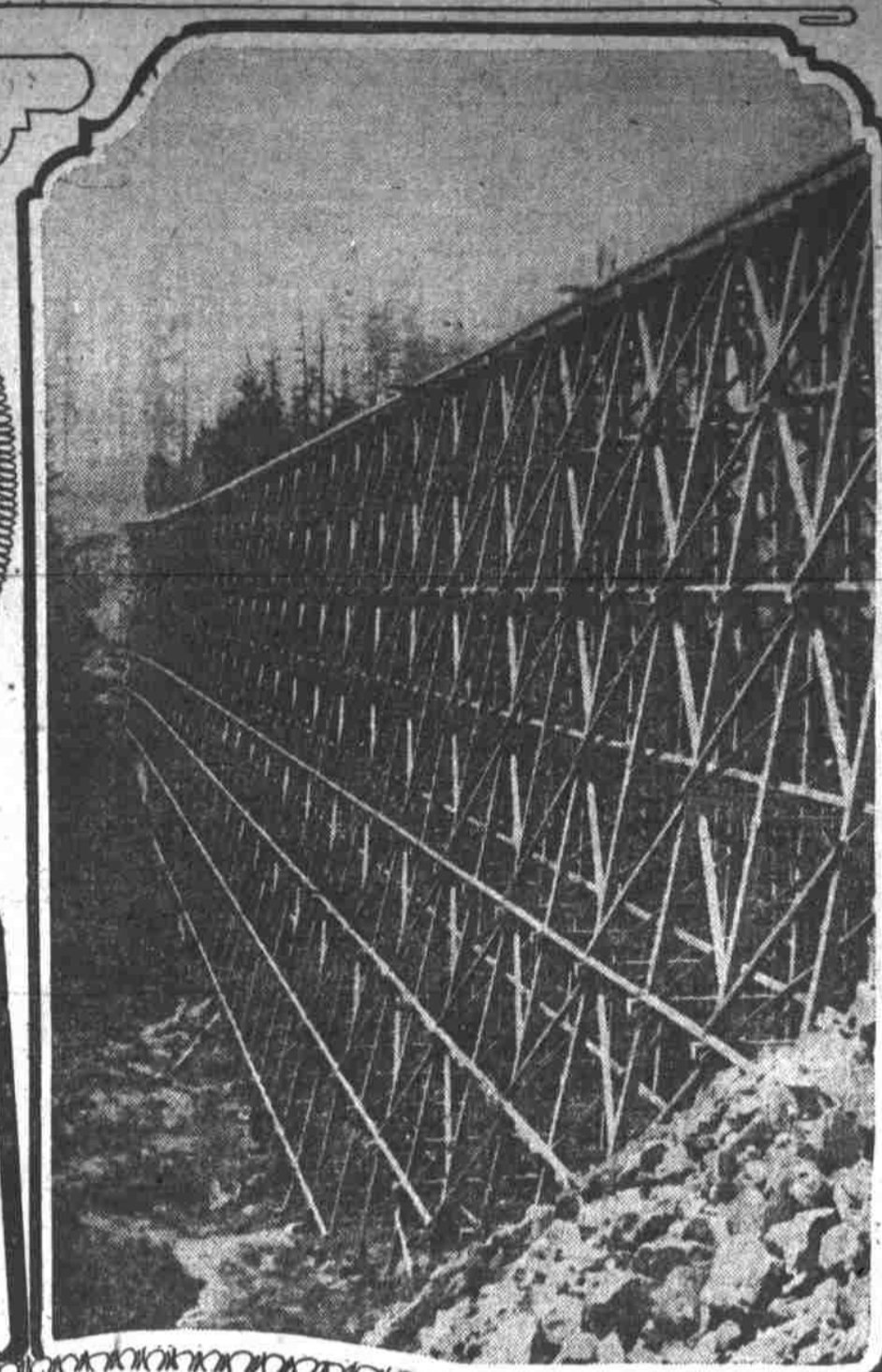
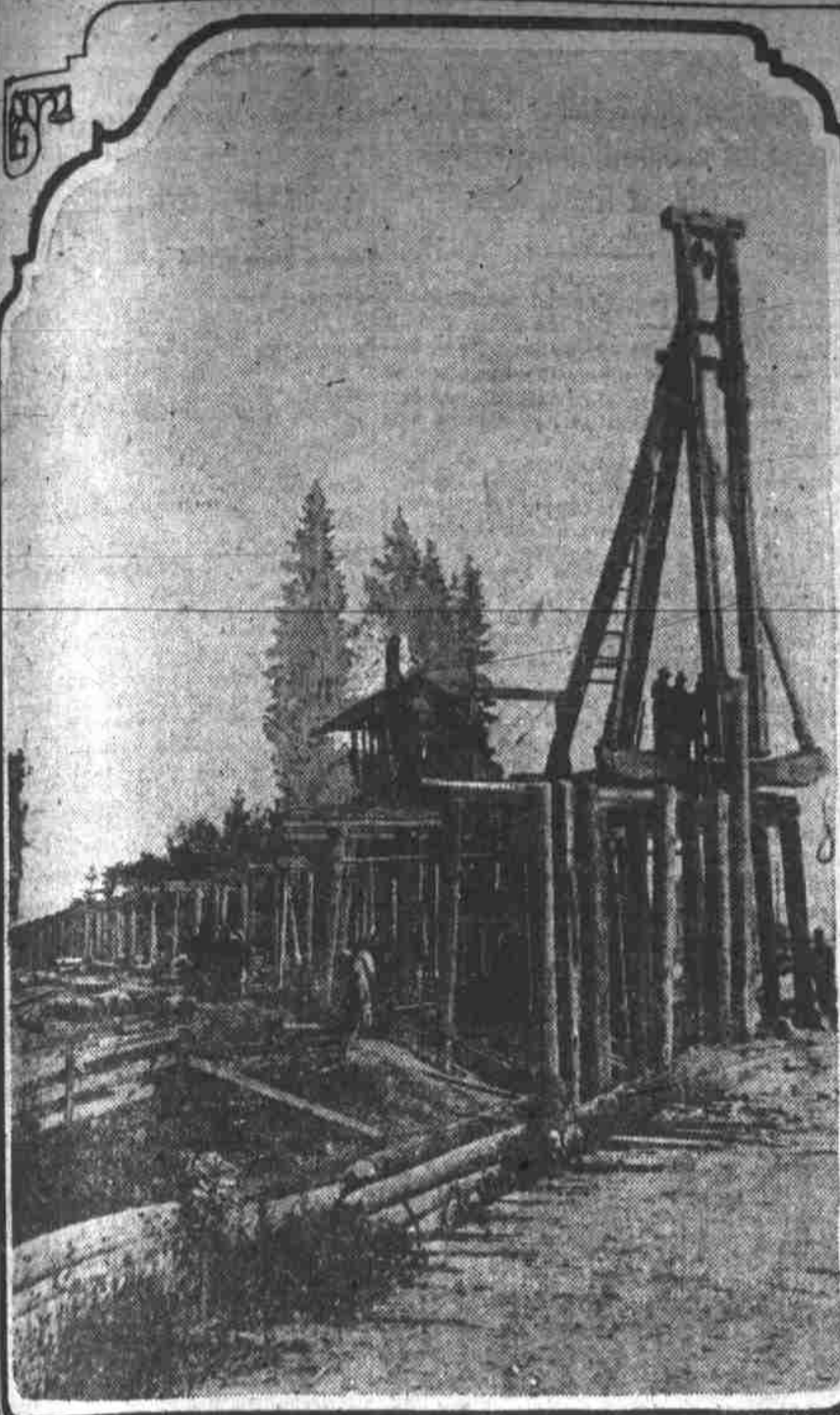


ARMY BORES HILLS, FILLS VALLEYS FOR RAILROADS

Vast Energy and Immense Fund Are Being Expended on City's Edge to Make Big Center of Transportation of Portland



1—Pile trestle at Glencoe. 2—East entrance to Cornelius pass tunnel. 3—High trestle crossing Rock creek, a short distance beyond west end of tunnel. 4—Power and compressed air plant at west end of tunnel. 5—Grading teams at work between Glencoe and Banks. 6—Shoofly line in Holbrook canyon. Trestle will cross this canyon to east end of Cornelius gap tunnel.

By J. L. Wallin.
HILL the newspaper reading public is well-acquainted with the fact that Oregon is in the midst of an active railroad construction era. It may safely be said that few, indeed, in Portland really aware of the immense amount of energy expended and capital expended in this field of development at the city's very doors.

Back of and in the hills that parallel the Willamette river, within 15 miles of the heart of the metropolis, one may find in any day all the scenes that enter into the construction of a modern railroad. From the running of lines by men to the boring of a tunnel through solid rock 150 feet below the surface of the soil.

Between 1000 and 1200 men at work on the United railroads, at first independent projects, but now part of the big Hill system, is rapidly pushing miles of steel towards the Tillamook county with the intention of opening up and tapping the wealth of thousands of acres of rich agricultural lands and virgin timber. With the flight of another year it is believed, this line in its entirety will be established, and a realization of the dreams of settlers who have been isolated from city life because of lack of transportation facilities.

been sublet to other contractors who specialize in certain classes of construction.

Wickersham Heads Engineers.
 To carry on this work and other projects the United Railways employs a large corps of engineers, with L. B. Wickersham as general manager and T. T. King, engineer in charge of construction and F. G. McCallum, assistant in charge of the work beyond the tunnel. Engineer William Meyer, who oversees the tunnel work, says that when the two gangs meet, the hole through the hill will not vary a fraction of an inch, and says if it does he will take to the woods and abandon all claim to having Camp Meyerville named in his honor. Meyerville is a cluster of comfortable cabins, in which dwell the engineers in the field and their families. It is located a short distance from the big messhouse of the camp at the west entrance to the tunnel, and the houses have all the comforts of city dwellings, including clear mountain water piped from nearby springs.

The west end of the tunnel is the most important scene of activity at present, and that part of the work is being done by Porter & Clark. Mr. Porter of this firm being Johnson P. Porter of the firm of Porter Bros. Here every known modern invention for tunneling is brought into use, and everything is operated by electricity and compressed air. In this work a large compressed air digger has just been installed to take the place of shovelmen, and it scoops out broken rock with such rapidity that on the average eight feet of rock is dislodged and removed every 24 hours.

that arises after each explosion. The big pump sucks the smoke from the head of the tunnel with tremendous force through a metal pipe two feet in diameter, blowing it out through an exhaust pipe at a safe distance from the mouth of the tunnel. So poisonous are these gases that a man standing in front of the exhaust pipe would soon be overcome.

Price Generator Costly Item.
 Machinery furnishing electric power for the tunnel plant is a large item itself, representing a cost of about \$15,000. Its capacity is 500 horsepower, but, divided into three units, there need be no waste of energy when operations require less than the combined amount.

Operations at the east end of the tunnel are carried on by Subcontractors Norgren, Swan & Berg, but compressed air for the drills and electric power is led across the hill from the plant of Porter Bros. At the east end the work has progressed about 550 feet and to a depth of about 150 feet below the surface. Here, as well as at the west end,

work goes on uninterruptedly day and night, including Sundays.

Dimensions of the Tunnel.
 The tunnel will be 17 feet wide in the clear and about 25 feet high. It will have a single track but at each end will be a large open space for side tracks where trains may meet. Eventually, as the timbers lose their life, the tunnel will be lined with concrete. The longer part of the tunnel will be driven from the west end, that part of the contract calling for 2900 feet of excavation.

At each entrance is a tool shop where sturdy blacksmiths, bared to the waist, keep well occupied sharpening drills and repairing tools. Drills from three to twelve feet are used, and the bits are of the hardest steel. To sharpen these by hand was too tedious a process for Porter Bros., and they installed machines that perform this work about as quickly as it can be told. Heated to a brilliant red, the bit is placed in the automatic sharpener, and upon the touch of a lever the hammers get busy at once giving the steel its desired shape. Mr. Porter explained

that ten drills are sharpened by the machine in the time it required to sharpen one by hand.

Many Bridges Built.
 Before reaching the plains of the upper Tualatin valley the road will cross several large and expensive bridges. Most of these are now nearly completed. They are of the famous Great Northern type, exceptionally strong and built to stand the heaviest strain.

Highest of the bridges between Burlington and Banks, the part of the road now contracted for, is that which spans Rock creek, a few hundred feet beyond Cornelius pass tunnel. It is 1020 feet long and 120 feet high and is of frame construction. But for a slight curve at the tunnel end it is practically straight. Rock creek is a live body of water during the rainy season, but in summer is more of a meadow where cattle find rich grazing.

About a mile beyond the Rock creek bridge Schmidt's bridge crosses another deep dell carrying a small stream of water. This, too, is of the

frame type; being 1300 feet long, it surpasses the Rock creek structure in length, but rises only 90 feet above the creek bed. Two miles west of the tunnel is the Walbel bridge, a pile trestle 1300 feet long, but not so high as the preceding bridge. This part of the road covers a stretch of land in high state of cultivation for garden truck and grains.

The Road to Glencoe.
 Leaving Walbel's bridge the road takes a straight shoot over practically level open land to the town of Glencoe, where a low pile type of trestle brings it over McKay creek, which winds lazily through the town and, at the same time affords the safety of an overhead crossing. The grade to Glencoe is being completed rapidly by subcontractors, Hayden Bros., and beyond that even the same contractors have in operation a large grading machine drawn by 18 mules. This machine cuts the soil and dumps it into wagons which are being completed immediately upon completion of the tunnel. Connection from the main line to the tunnel will be made by bridging Holbrook canyon, which is followed by the road to the elevation of the tunnel. This bridge will be 550 feet long and 110 feet high.

John F. Stevens, president of the United Railways and head of the Hill properties in this territory, states that the road will be pushed through with all possible dispatch, and that the contract for the construction beyond Banks will be let without unnecessary delay.

shovel is now being set up to work back toward Glencoe.

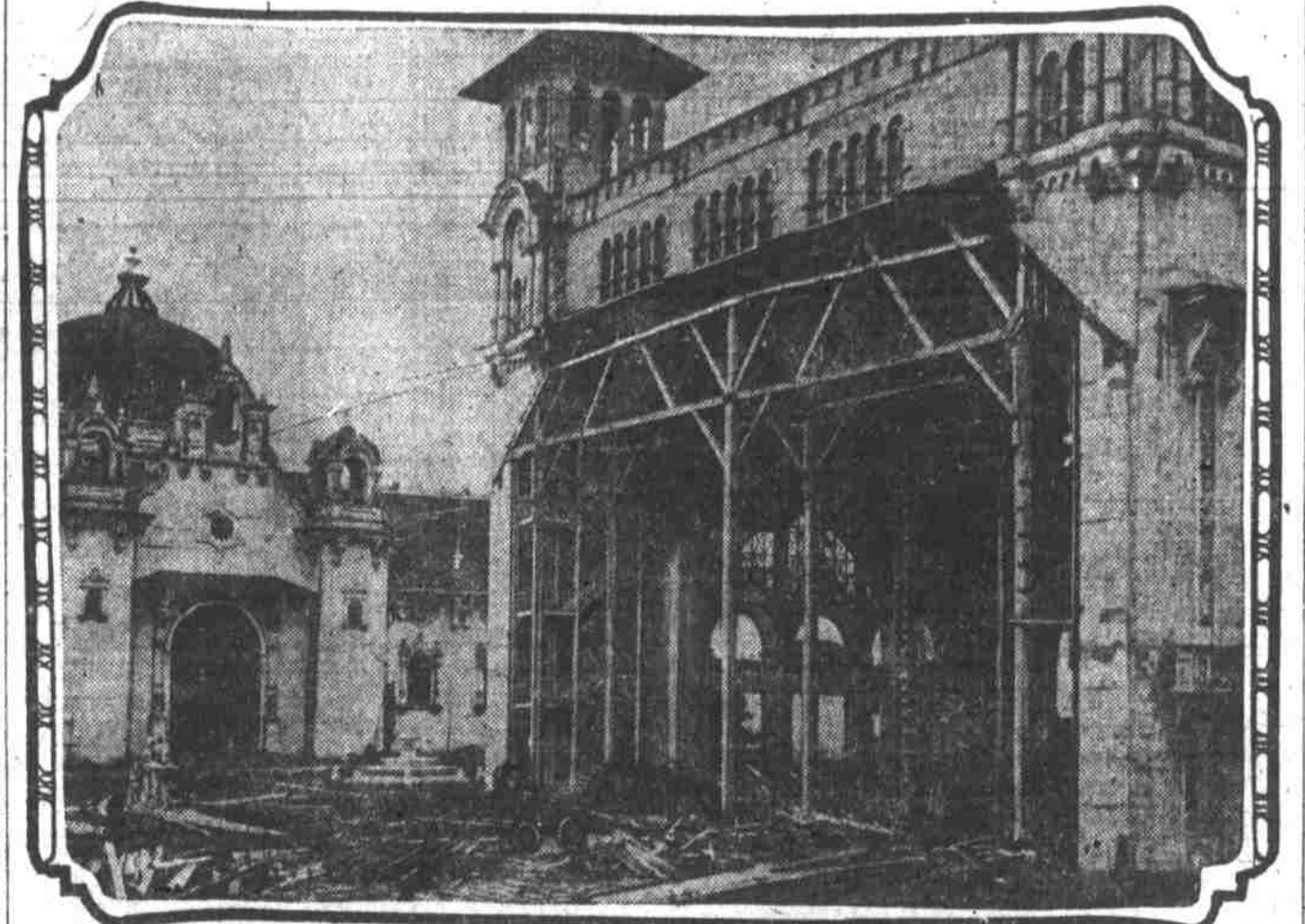
Beyond Banks the road will cross another long stretch of level farming lands until it strikes the headwaters of Gales creek. To get over into the headwaters of Wilson river, the course of which it is to follow into Tillamook, the big Summit tunnel will have to be built with more bridges beyond. That part of the road will have a profuse wealth of scenic wonders.

Before reaching Bay City, the tentative terminal, the road will have about 50 trestles and 16 tunnels, largest of which will be the one over the Summit, 8200 feet from mouth to mouth.

At present steam construction trains are being run to the farther end of the tunnel crossing the hills two and a half miles from Burlington, over a shoofly line, on a heavy grade, but this line will be abandoned immediately upon completion of the tunnel. Connection from the main line to the tunnel will be made by bridging Holbrook canyon, which is followed by the road to the elevation of the tunnel. This bridge will be 550 feet long and 110 feet high.

John F. Stevens, president of the United Railways and head of the Hill properties in this territory, states that the road will be pushed through with all possible dispatch, and that the contract for the construction beyond Banks will be let without unnecessary delay.

WRECKING HISTORIC FAIR BUILDINGS



Work of wrecking the old buildings at the Lewis & Clark fair ground is under way by the Portland Wrecking company. The transportation building has been entirely demolished and the tearing down of the agricultural, manufacturers and European buildings is to follow. The property belongs to the heirs of the Mead estate and is being cleared for the purpose of converting the land into sites for manufacturing purposes. Spur tracks from the Northern Pacific and North Bank lines will be extended through the property, making it available for manufacturing and warehouse purposes.

WRITER SEES HIS LIGHT WANING

Henry Beach Needham Makes Little Money Since Roosevelt Left Office.

New York, Aug. 20.—Ability to pay alimony on the part of one who has been the friend of the truly great depends upon whether the prominent friend clings to his official capacity or not, according to the attorney for Henry Beach Needham, magazine writer, who told Justice Putnam in the supreme court in Brooklyn that Needham could not afford to pay \$40 alimony because his income was nothing like what it was when Colonel Roosevelt was president of the United States. The tangible value of being a member of the tennis cabinet that once held a leading place in public chat was explained in terms of dollars and cents to the court.

The writer was one of the members of the famous tennis cabinet, in which James R. Garfield held a high place. He lived in the sunshine of the former president's presence, and found no trouble in scraping up enough coin to frighten the wolf from the door. A year ago his wife got a divorce with an order from the supreme court for alimony of \$40 a week for herself and

child. She alleged in court that none of the alimony had been paid.

Needham's attorneys said that with Roosevelt out of the White House, and forced to make his own living, the funds of magazine writing for him had been so poor that the best he could do was \$15 a week. The argument followed an order requiring the writer to show cause why he should not be punished for contempt for failing to pay.

MAN BUYS VILLAGE FOR SUM OF \$5000

Chicago, Aug. 20.—Auctioneers are willing to tackle anything. They'll sell any kind of property, from second hand carpet tacks up to ocean liners and now one has sold a village.

"What am I bid for the village of Clyde?" Five thousand dollars I hear. Going—going—gone, sold to the gentleman who bid \$5000."

Thus were the buildings of an old Chicago suburb, the entire real estate of which was purchased recently by the Burlington railroad, sold under the hammer. The structures auctioned off included a town hall, the headquarters of the police and fire department, several business blocks and 40 residences.

Escaped Prisoner Captured.

(Special Dispatch to The Journal.)
 The Dalles, Aug. 20.—M. E. Taylor, one of the men who escaped from the Wasco county jail last Saturday night, was recaptured Thursday afternoon at the farm of H. H. Smith, 15 miles southwest of The Dalles, and was again lodged in jail that night.

An automobile was driven at twice the speed of a horse-drawn vehicle and stopped in one-half the distance in a test before New Jersey automobile authorities.