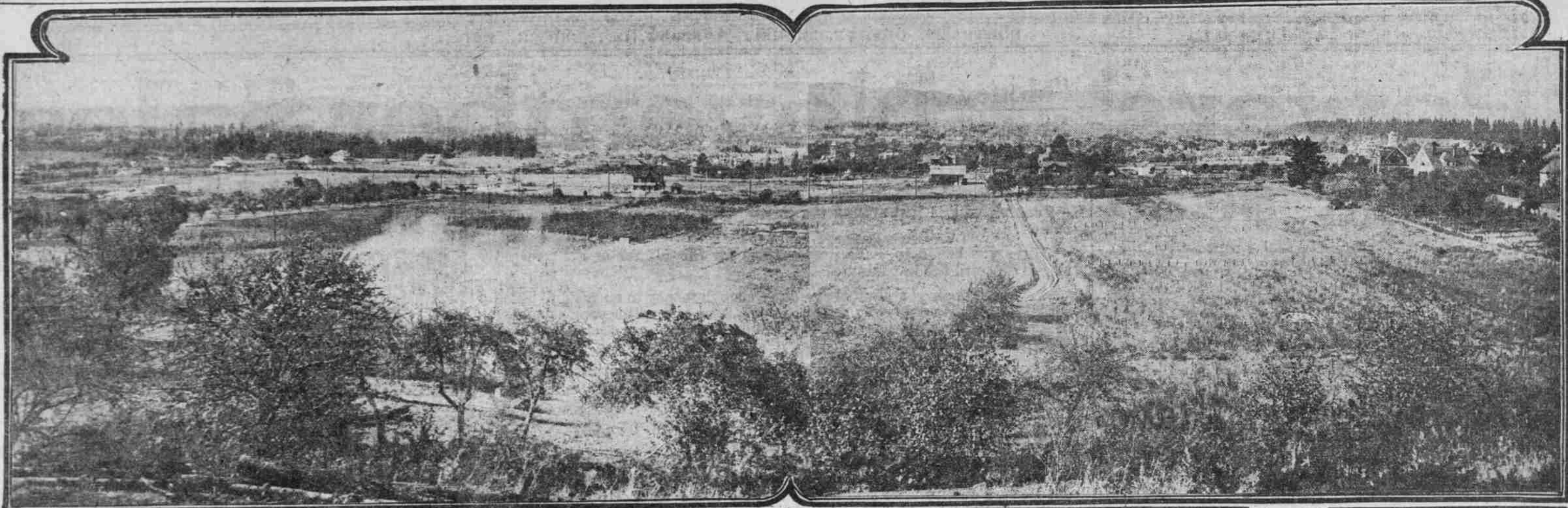


DIRT FLIES ON CITY'S NEW RESERVOIR SYSTEM

Men and Teams and Steam Shovels Begin Race Against Time to Give Portland More Water.



LOOKING OUT OVER SITE OF LOWER RESERVOIR NO. 6.

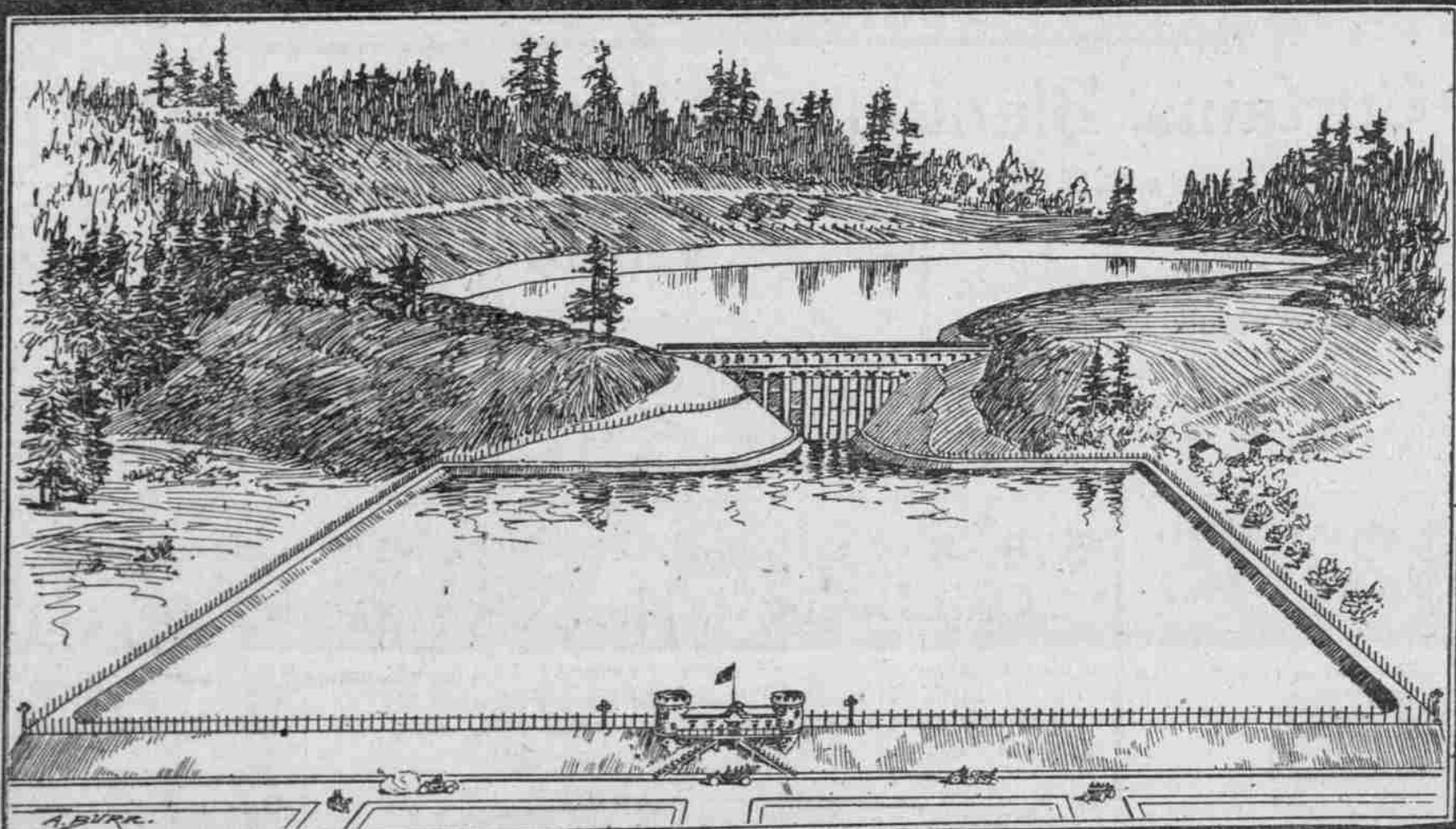
DIRT is flying up on Mount Tabor, and a wonderful reservoir system is coming into being south of Tabor Heights at Mount Tabor Park. Men and teams and steam shovels will race against time all this winter and spring and part of next summer, scooping out yawning holes in the ground and building strong earth and concrete embankments around them, so that Portland may have more water.

Bonds have been sold by the city to pay for two gigantic new storage reservoirs to hold one 50,000,000 gallons, the other 25,000,000 gallons. When this work is done, Portland will have nearly double the water in storage there is now, and will be able to supply a city of 300,000 for a week and more in case of accident to the Bull Run pipeline.

Portland's water supply is adequate now. In fact, there is being wasted every day some 4,000,000 gallons that goes into the sewer over the weir of the old reservoir on Mount Tabor. But there is not enough storage capacity to take care of the city's needs much more than three days in an emergency, and in summer time parts of the East Side suffer because the supply in the mains is not enough for every-day use. And Portland is growing at a rapid rate and will need more and more water. When the new project is completed, however, the city can live a week without a drop of water coming from the mountains.

Four Reservoirs at Present.

At present there are four reservoirs, the total capacity of which is about 60,000,000 gallons. Of these No. 1 is on Mount Tabor, near where the new ones will be built; No. 2 is in South Mount

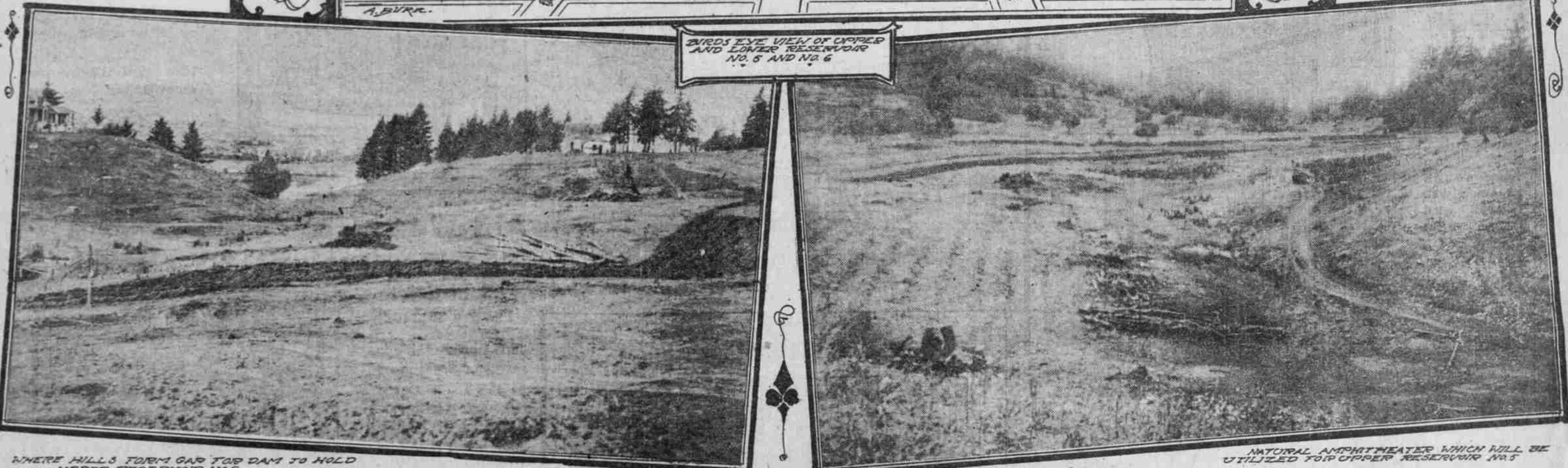


took house" which stood on a hill at the left as one looks up the gorge where the dam will be, is to be torn down. Two other houses on the other side will be moved. One of these has been occupied by E. T. Peterson, a son-in-law of Rev. C. O. Hooford, who owned part of the land the reservoirs will occupy, and who built the "old Pittock house." Several barns and smaller buildings have had to go to make way for the contractor. A wonderful storage system this will be when it is completed. Water will flow from each higher reservoir to the one lower, but each will be independent of the others, so that in an emergency it can be disconnected, as it were, and be used by itself. From Bull Run the water is taken through ten miles of 42-inch pipe, eight miles of 36-inch and six miles of 24-inch pipe into reservoir No. 1, which holds 12,000,000 gallons. With about 16,000,000 gallons coming in every day, this basin is continually overflowing, so that 4,000,000 gallons go every day into the sewers.

Plenty of Water Sure.

From No. 1 a tunnel will be built 600 feet long and three feet wide, leading northwest into No. 5. After No. 2 is filled, with its 50,000,000 gallons, the flow will pass through pipe laid in a conduit ten feet wide under the dam into No. 5, which will hold 30,000,000 gallons. This tank also has a pipe leading from No. 2, which lies to the south, so it may be filled from that also, which, in turn, is filled from No. 1. No. 5 will have outlet into the large main in West avenue, which supplies the high-pressure system on the East Side, taking in the belt of the Mount Tabor district, Rose City Park, the Montavilla district, Barr road, East Thirty-third street of Highland, part of

BIRD'S EYE VIEW OF UPPER AND LOWER RESERVOIR NO. 5 AND NO. 6



WHERE HILLS FORM GAP FOR DAM TO HOLD UPPER RESERVOIR NOS

NATURAL AMPHITHEATER WHICH WILL BE UTILIZED FOR UPPER RESERVOIR NO. 5

Tabor, at the intersection of the Section Line road and West avenue, or East Sixteenth street; Nos. 3 and 4 are in the City Park. Nos. 5 and 6 are to be built near No. 1, forming with Nos. 1 and 2 a system equal to any on the Coast, at a cost to the city of \$47,000.

Nature has aided in the work of constructing the upper of these new storage tanks. In the hills of what was at one time the Prettyman donation land claim, later called the Hooford tract, and still later in part the Pittock tract, she has hollowed out a huge basin. This will be still further scooped out, lined with concrete, stopped up with a 50-foot dam at the lower end, and when it is all done, the oval tank will be the new No. 5 reservoir, 70 feet long and 40 feet across. The rim of this bowl is to be 40 feet above Portland's base, which is approximately sea level. The bottom will be 30 feet above the base. To scoop out the hole for the water, about 20,000 cubic yards of earth will have to be removed, enough to make a mound on a city block 100 feet high.

Then something like 250 cubic yards of concrete masonry must be put in—an amount which would build sidewalks six inches thick on both sides of Hawthorne avenue from the river to Fifteenth street.

Park to Be Made on Hills.

When this reservoir is all finished, it will be one of the show places of Portland, for the city owns land on the hills around the basin, and it is understood the intention is to make a park of this property. At the top of the containing wall will be a driveway, or berm, around the oval, 35 feet wide, with a coping two feet high on the inside, and from the outer edge of this drive a rolled embankment will rise to the top of the hills. The lower reservoir, No. 6, is to be in

the form of a rectangle, and in this, as in the other, nature has helped the contractor. The site for this basin is a flat space, now given over to berry patches and orchards. To hold the 25,000,000 gallons of water which will flow into it from No. 5, the upper reservoir, a wall varying from 125 feet in thickness at the bottom to ten feet at the top will be built of earth and lined with concrete. This embankment will be 35 feet high, probably, but it has been proposed to lower this basin ten feet, in which case a large amount of excavating will be necessary. This point will be settled by the Water Board.

On the back wall of this lower reservoir will be a 20-foot roadway, narrowing to ten feet on the sides and on top of the front wall. Steps will lead to the top of the wall from the center of the West-avenue side, which is the front. More digging and building will be necessary here than on the upper basin even, for 200,000 cubic yards of earth must come out, and 12,000 cubic yards of concrete masonry will be needed.

Vast Amount of Excavation Needed.

If the Oregonian building and the Meier & Frank building were placed across the street from each other, the earth taken from this reservoir would fill the space between them five times, even with the tops of the buildings, and there would still be enough left more than to fill the tower of the Oregonian building from the street to the top. The concrete would make a solid mass nine feet high if placed on a city block, or a single stone larger than the Arlington Club building.

No. 6 reservoir is to be 104 feet long by 62 feet wide, inside measurements, so that if one walked clear around the top of the wall, he would have to go more than half a mile. The surface of the



MEN AND TEAMS AT WORK ON SITE OF DAM

water will form a lake of 12 1/2 acres, or two square miles. Walking along West avenue, or East Sixteenth street, at the foot of the retaining wall, one will have a journey of 570 feet.

Last week Robert Wakefield & Co. and the Pacific Bridge Company, which have the contract to construct these reservoirs, started on their race against time to get them done, for by the terms of the contract the upper reservoir, or No. 5, must be finished by July 1, 1910, and No. 6 must be ready for the water to be turned in by October 31, 1910. Hurry is an essential feature in this work, for if delays occur, so that No. 5 is not completed by July 1, the contractor must pay a penalty of \$50 each day up to July 15, when this amount will be increased to \$50 a day.

Bonus for Speedy Work.

If No. 6 is not done by October 31, a penalty of \$50 a day is exact. On the other hand, if the work is finished ahead of time, for every day before July 1 that No. 5 is ready for water, the contractor is to get \$50, and if the remarkable speed is attained to complete this basin before June 15, an additional bonus of \$50 a day is to be allowed. The specifications for this big work were prepared under the supervision of D. D. Clarke, City Engineer.

So early last week men and teams began the work of clearing the ground on the site of No. 5. Soon the steam shovels will gouge out the dirt. All the trees and brush have been removed, and some buildings have been torn down. Others that happened to be in the way will be moved to locations beyond the walls. Portland's onward march will brook no interference from her citizens, and those that happen to be in the way must get out. The house known as the "old Pit-

Irvington and Holladay Park, then northwest to Upper Alton and the Peninsula. Reservoir No. 2 supplies the low-pressure service of the East Side, but if No. 2 should give out, this can be filled from No. 5. A by-pass arrangement also is made from No. 5 if an accident should befall No. 6.

And what does all this mean to Portland? Simply that no city on the Coast will have a better water system. Seattle is building reservoirs that will afford a supply nearly equal to that of Portland, while Los Angeles and San Francisco have yet to construct their gravity systems from the mountains. The present reservoir capacity of the city is 60,000,000 gallons, while the two new basins add nearly double this amount. When all is completed, Portland will have something like 200,000,000 gallons of water in storage. Just now every person in the city is using about 30 gallons a day, or a total of about 18,000,000 gallons in normal weather. With only 60,000,000 gallons on hand, a break in the supply pipe would mean a water famine in less than four days.

So the dirt is flying up on Mount Tabor, and a wonderful reservoir system is coming into being.

Sentenced.
New York Times.
"What ya up fer?" Squire says her.
"Marriage," says Hank Lee.
"Bustin' red es he e'd be."
"Stand up closer!" Squire says her.
"Fine horse tight, an' look at me!"
"Sary Wilkins, what's yer plea?"
"Speak up louder!" Squire says her.
"Lifts imprisonment!"
Sentence passed on both o' 'em."
"At hard labor!" Squire, says her.
"Ballin' let 'em prisoners be held, swatin' shivaree!"
"An' ten times!" Squire, says her.
"For the court that sentenced ya."
Next offender! Who'll it be?"