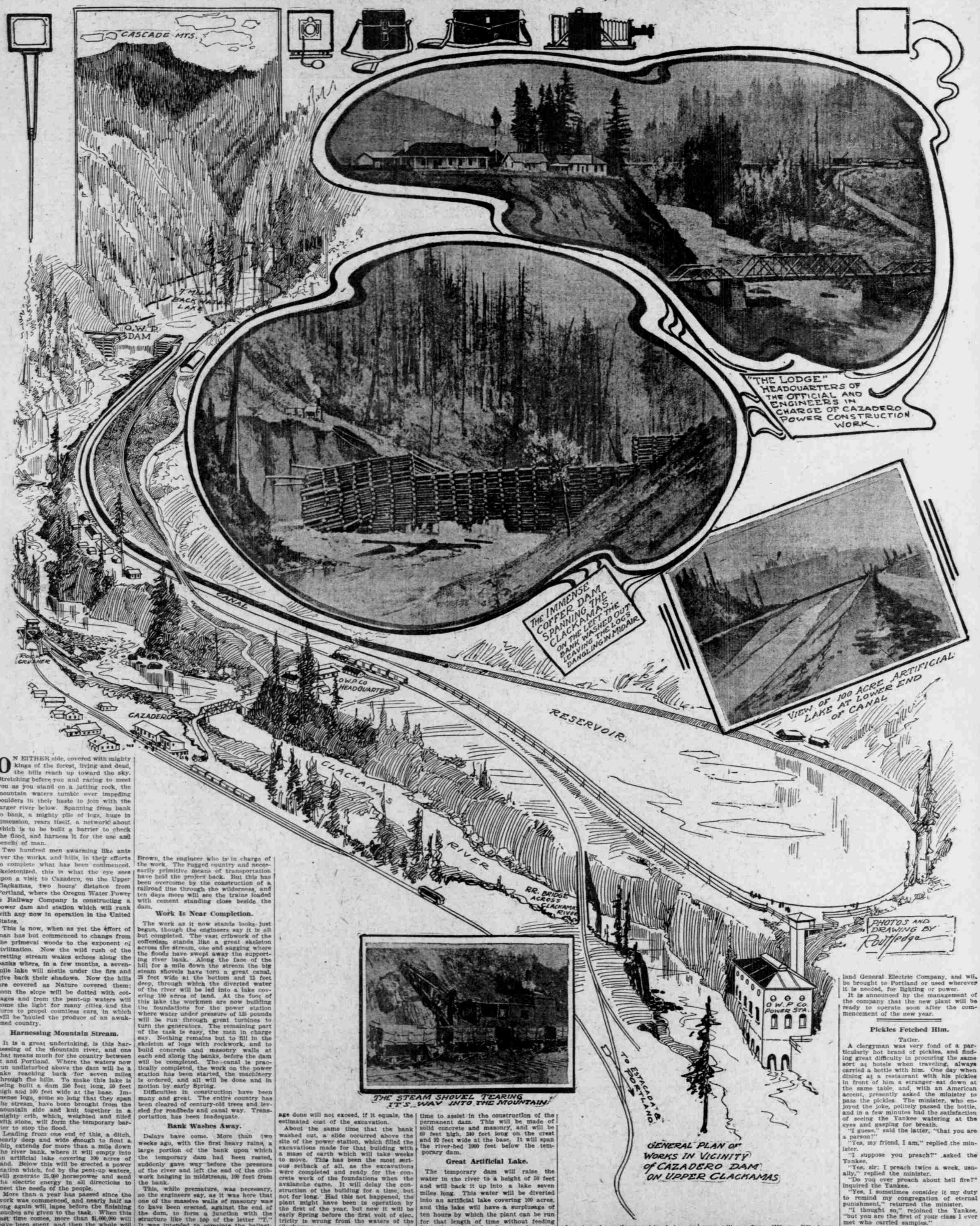
POWER PLANT AT CAZADERO WILL HARNESS CLACKAMAS



ON EITHER side, covered with mighty kings of the forest, living and dead, the hills reach up toward the sky. Stretching before you and racing to meet you as you stand on a jutting rock, the mountain waters tumble over impeding boulders in their haste to join with the larger river below. Spanning from bank to bank, a mighty pile of logs, huge in dimension, rears itself, a network about which is to be built a barrier to check the flood, and harness it for the use and benefit of man.

Two hundred men swarming like ants over the works, and hills, in their efforts to complete what has been commenced. Skeletonized, this is what the eye sees upon a visit to Cazadero, on the Upper Clackamas, two hours' distance from Portland, where the Oregon Water Power & Railway Company is constructing a power dam and station which will rank with any now in operation in the United States.

This is now, when as yet the effort of man has but commenced to change from the primeval woods to the exponent of civilization. Now the wild rush of the fretting stream wakes echoes along the banks where, in a few months, a seven-mile lake will nestle under the firs and give back their shadows. Now the hills are covered as Nature covered them; soon the slope will be dotted with cottages and from the pent-up waters will come the light for many cities and the force to propel countless cars, in which will be hauled the produce of an awakened country.

Harnessing Mountain Stream.

It is a great undertaking, is this harnessing of the mountain river, and one that means much for the country between it and Portland. Where the waters now run undisturbed above the dam will be a lake reaching back for seven miles through the hills. To make this lake is being built a dam 250 feet long, 50 feet high and 100 feet wide at the base. Immense logs, some so long that they span the stream, have been brought from the mountain side and knit together in a mighty crib, which, weighted and filled with stone, will form the temporary barrier to stop the flood.

Leading from one end of this, a ditch, nearly deep and wide enough to float a ship, extends for more than a mile down the river bank, where it will empty into an artificial lake covering 100 acres of land. Below this will be erected a power station which, fed by the pent-up waters, will generate 25,000 horsepower and send the electric energy in all directions to meet the needs of the people.

More than a year has passed since the work was commenced, and nearly half as long again will lapse before the finishing touches are given to the task. When this last time comes, more than $1,000,000 will have been spent, and then the whole will not have been completed.

Many difficulties and some delays have been and are being overcome by G. L. Brown, the engineer who is in charge of the work. The rugged country and necessarily primitive means of transportation have held the project back. But this has been overcome by the construction of a railroad line through the wilderness, and ten days more will see the trains loaded with cement standing close beside the dam.

Work Is Near Completion.

The work as it now stands looks just begun, though the engineers say it is all but completed. The vast cribwork of the coffendam stands like a great skeleton across the stream, one end sagging where the floods have swept away the supporting river bank. Along the face of the hill for a mile down the stream the big steam shovels have torn a great canal, 28 feet wide at the bottom and 12 feet deep, through which the diverted water of the river will be led into a lake covering 100 acres of land. At the foot of this lake the workmen are now building the foundations for the power station where water under pressure of 125 pounds will be run through great turbines to turn the generators. The remaining part of the task is easy, the men in charge say. Nothing remains but to fill in the skeleton of logs with rockwork, and to build concrete and masonry walls at each end along the banks, before the dam will be completed. The canal is practically completed, the work on the power station has been started, the machinery is ordered, and all will be done and in motion by early Spring.

Difficulties in construction have been many and great. The entire country has been cleared of century-old trees and levelled for roadbeds and canal way. Transportation has been inadequate.

Bank Washes Away.

Delays have come. More than two weeks ago, with the first heavy rains, a large portion of the bank upon which the temporary dam had been rested, suddenly gave way before the pressure of the river and left the end of the cribwork hanging in midstream, 100 feet from the bank.

This, while premature, was necessary, so the engineers say, as it was here that one of the massive walls of masonry was to have been erected, against the end of the dam, to form a junction with the structure like the top of the letter "T." It was intended to complete the ballasting of the cofferdam before excavating for this wall, but nature forestalled man and washed away the barrier. The damage done will not exceed, if it equals, the estimated cost of the excavation.

About the same time that the bank washed out, a slide occurred above the site of the power station, which filled the excavations made for that building with a mass of earth which will take weeks to move. This has been the most serious setback of all, as the excavations were completed and ready for the concrete work of the foundations when the avalanche came. It will delay the construction of the building for a time, but not for long. Had this not happened, the plant might have been in operation by the first of the year, but now it will be early Spring before the first volt of electricity is wrung from the waters of the Clackamas.

The dam that is now under way is but a temporary affair, built to allow the early use of the project and at the same time to assist in the construction of the permanent dam. This will be made of solid concrete and masonry, and will be 60 feet high, 240 feet long on the crest and 22 feet wide at the base. It will span the river-bed 1000 feet below the temporary dam.

Great Artificial Lake.

The temporary dam will raise the water in the river to a height of 50 feet and will back it up into a lake seven miles long. This water will be diverted into an artificial lake covering 100 acres, and this lake will have a surplusage of ten hours by which the plant can be run for that length of time without feeding from the main body of water above the dam. By opening the gates and thus drawing the water from the main reservoir, there will be sufficient surplusage of water above the canal-level to run the power station for 36 hours.

Of the entire output of the plant, the Oregon Water Power & Railway Company will use from 1500 to 2000 horsepower in the operation of its electric lines. The remainder of the 25,000-horsepower has been contracted to the Portland General Electric Company, and will be brought to Portland or used wherever it is needed, for lighting or power.

It is announced by the management of the company that the new plant will be ready to operate soon after the commencement of the new year.

Pickles Fetched Him.

Tatler.

A clergyman was very fond of a particularly hot brand of pickles, and finding great difficulty in procuring the same sort at hotels when traveling, always carried a bottle with him. One day when dining at a restaurant with his pickles in front of him a stranger sat down at the same table, and, with an American accent, presently asked the minister to pass the pickles. The minister, who enjoyed the joke, politely passed the bottle, and in a few minutes had the satisfaction of seeing the Yankee watering at the eyes and gasping for breath.

"I guess," said the latter, "that you are a parson?"

"Yes, my friend, I am," replied the minister.

"I suppose you preach?" asked the Yankee.

"Yes, sir; I preach twice a week, usually," replied the minister.

"Do you ever preach about hell fire?" inquired the Yankee.

"Yes, I sometimes consider it my duty to remind my congregation of eternal punishment," returned the minister.

"I thought so," rejoined the Yankee, "but you are the first of your class I ever met who carried samples."

A recent weighing of dandelion down has shown that 1,000,000 of the dainty parachutes are needed to make a pound.