

GREATEST RESERVOIR IN AMERICA

Government Dam in Arizona Will Make a Vast Lake Holding 400,000,000 Gallons

OREGONIAN NEWS BUREAU, Washington, May 15.—The most gigantic of the Government irrigation construction work in progress is the Salt River, or "Roosevelt," dam, in Arizona, and considerable criticism has been made of the course of the Secretary of the Interior in setting aside between \$3,000,000 and \$4,000,000 for this project, which will irrigate no public lands, but only those already in private ownership, vastly increasing, of course, their value. The work which the Government will do under this project will double and quadruple land values, and in fact make much land that is now practically useless worth from \$30 to \$100 an acre. Some 250,000 acres will be irrigated under these works, and the artificial reservoir to be formed by the Roosevelt dam will be by far the largest in the United States, with the incredible capacity of nearly 400,000,000 gallons. This is three times the capacity of the great Wachusett reservoir, which is to supply Boston, and twice that of the famous Croton dam of New York's new water works.

The criticism referred to of building Government works to supply water to such a section as the Salt River Valley, where the lands are all in private ownership, instead of going out onto the desert and reclaiming public lands, is one which will not hold upon second thought. The Salt River Valley has been a famous section of the arid West. Twenty years ago it was a vast, flat plain, skirted by mountains reflecting the wonderful colors and tints of the southwest, but nourishing only the cactus and other desert plants. The Salt River cut its center, a sparkling, life-giving stream, and private capital undertook to utilize its waters for irrigation and build up a great community. Dams were built, canals were constructed, and thousands of acres were planted to oranges, lemons, figs, dates, raisins and wine grapes, almonds, pomegranates and all the fruits and flowers of the semi-tropics.



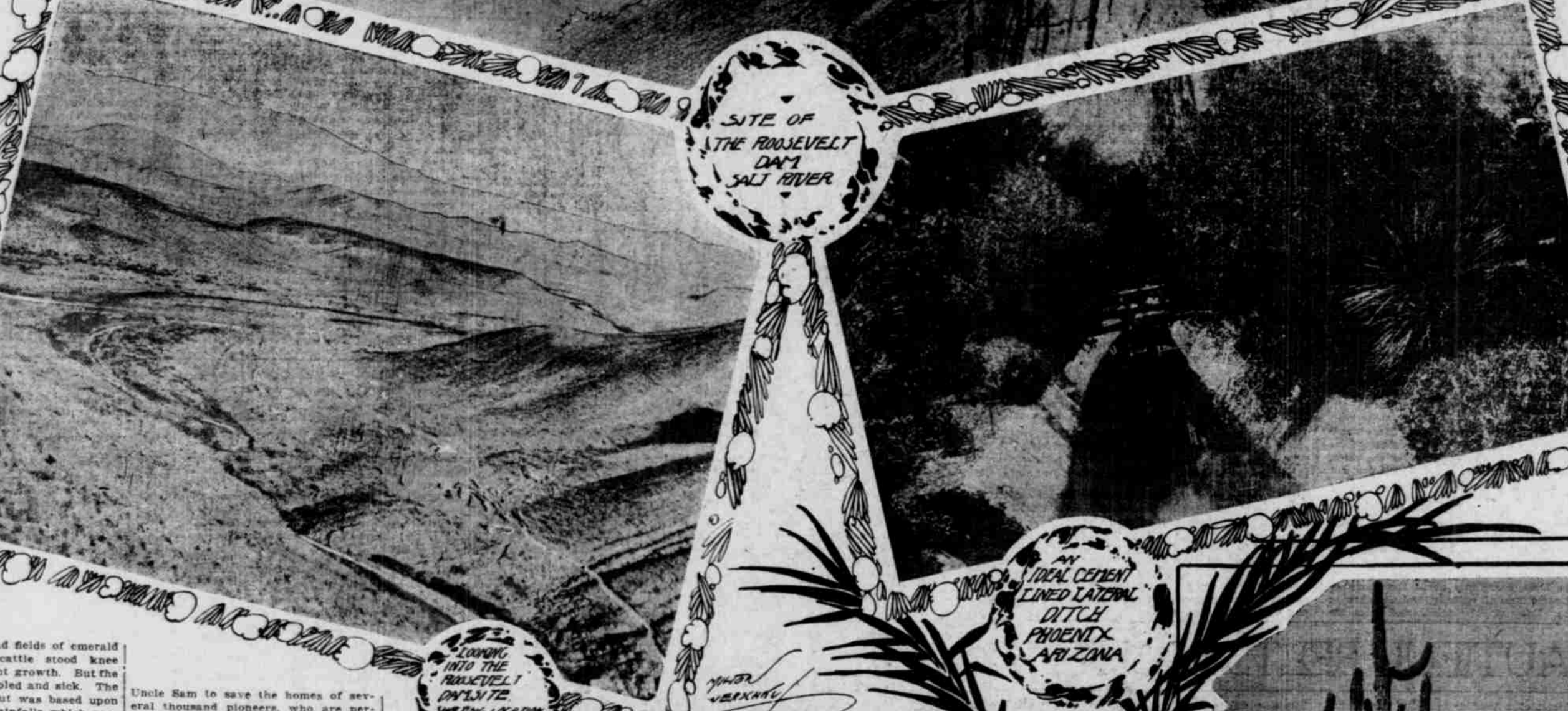
the payments of the irrigators, the Government constructed an immense cement mill, and will itself manufacture the 200,000 or more barrels of cement needed for the dam. A splendid roadway, rivaling the mountain roads of the Incas, has been built from Phoenix to the dam, at a cost of over \$100,000. The cost of the entire construction, \$3,500,000, will be apportioned among the lands receiving the water, to be paid back to the Government in 18 annual installments, and no water-user can hold more than 144 acres.

The River to Build Its Own Dam.

An interesting feature of the construction work is the power canal, which has already been built. The regular flow of the river has been diverted above the dam site, and at that point is tumbled over the rocks, generating some 10,000 electrical horsepower to be utilized in building the dam. It will be required day and night for drilling, moving great rocks, pumping, grinding rocks and clinkers, mixing and handling cement and handling machinery. The river is thus being forced to erect its own dam. After the construction this power, added to large additional power to be extracted from the heavy fall of the river below the dam site, will be electrically transmitted to lands not covered by the gravity canal for pumping purposes, and by this means fully 50,000 acres additional will be watered from the underground supply found throughout the Salt River Valley.

An ample spillway will provide an escape for excessive flood waters, and a tunnel driven through solid rock will enter the reservoir directly on its bottom to supplement the spillway and also to allow for the discharge of sediment from the reservoir.

The valley is already well provided with transportation by the Santa Fe and the Southern Pacific railroads, and the exceptional climatic conditions insure an early market and high prices



not to mention broad fields of emerald alfalfa where fat cattle stood knee deep in the luxuriant growth. But the valley is today crippled and sick. The canal system laid out was based upon the heavy annual rainfalls which prevailed at that time, and sufficient data had not been gathered to show that the period was one of fat years, and that the lean years of drought would surely follow. They came, however, over the whole Southwest, as can be seen by a study of the rainfall charts of that region, and the result has been that thousands of acres of orchard and farm have returned to aridity. The Old Man of the Desert came in and claimed back his own. It is simply a question, then, in the Salt River Valley, and in some other sections, as to whether it is not as good or better policy for

Uncle Sam to save the homes of several thousand pioneers, who are perishing for want of water, as it is to reclaim new raw lands and put new settlers upon them.

From a Brook to a Torrent.

The flow of the Salt River Valley is variable in the extreme. At low-water periods it runs something like 100 cubic feet per second. In one great flood the river swept down the valley at the rate of 300,000 cubic feet per second. The twelfth annual report of the Geological Survey describes the flood of 1891 as follows, all of which ran uselessly to the sea for lack of storage: "On February

"LITTLE SERMONS" by Elbert Hubbard

EVERY truth is a paradox, and every strong man supplies the argument for his own undoing; each truth is only a half-truth—and the statement of truth always involves a contradiction. Wise men realize these things, and so they cease to quibble. They know you can explain nothing to any one. If the man does not already know it, your anxious efforts to make him see will all be vain and futile.

No student of pedagogics now believes that the free use of the rod ever made a child "good," but all agree that it has often served as a safety valve for pent-up emotion in parent and teacher.

God only calculates on each man being himself, and the presumption originally was that he would be honest. The universe is not planned for duplicity.

Statute laws, to a degree, are contrivances for revenge, but principally for making the many pay taxes and taxes to the few. Are the politicians you know men who love their fellow-men?

I am fully convinced that the world is growing better; but I am also fully convinced that the progress has not been made that many think. Any man

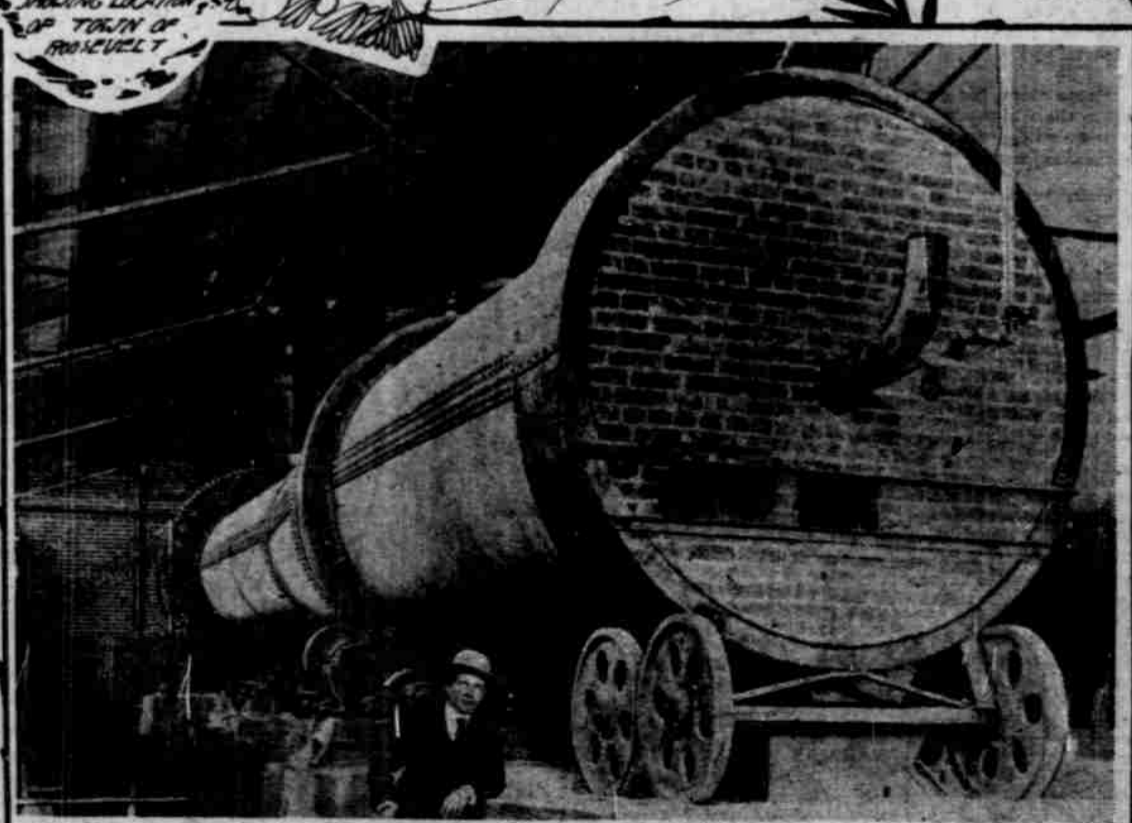
who believes that God is everywhere, that a certain divinity is in all men, and that Deity manifests himself today as much as ever he did, is still hailed by many as an infidel. Too much faith receives the same punishment at the hands of the mob as none at all.

Sin is its own punishment. God never punishes men for their sins; a self-lubricating and automatic law looks out for that. Men are not punished for their sins, but by them.

As a cold business proposition, let me give you this: I would not trust an amateur gambler as far as you could fling Taurus by the tail.

Life is a bank account, with so much divine energy at your disposal. What are you going to do with it? If you draw your checks for this, you cannot for that—take your choice. And, above all, do not draw on the Bank of Futurity by breathing bad air, keeping bad hours and bad company.

That was a foolish wish of Bobby Burns. Let a man once see himself as others see him and all enthusiasm vanishes from his heart; and when that is gone, he might as well die at once, for enthusiasm is the one necessary ingredient in the recipe for doing good work.



CEMENT GRINDER THIS GOVERNMENT SPONSOR IS RUN IN OPPOSITION TO THE CEMENT TRUST

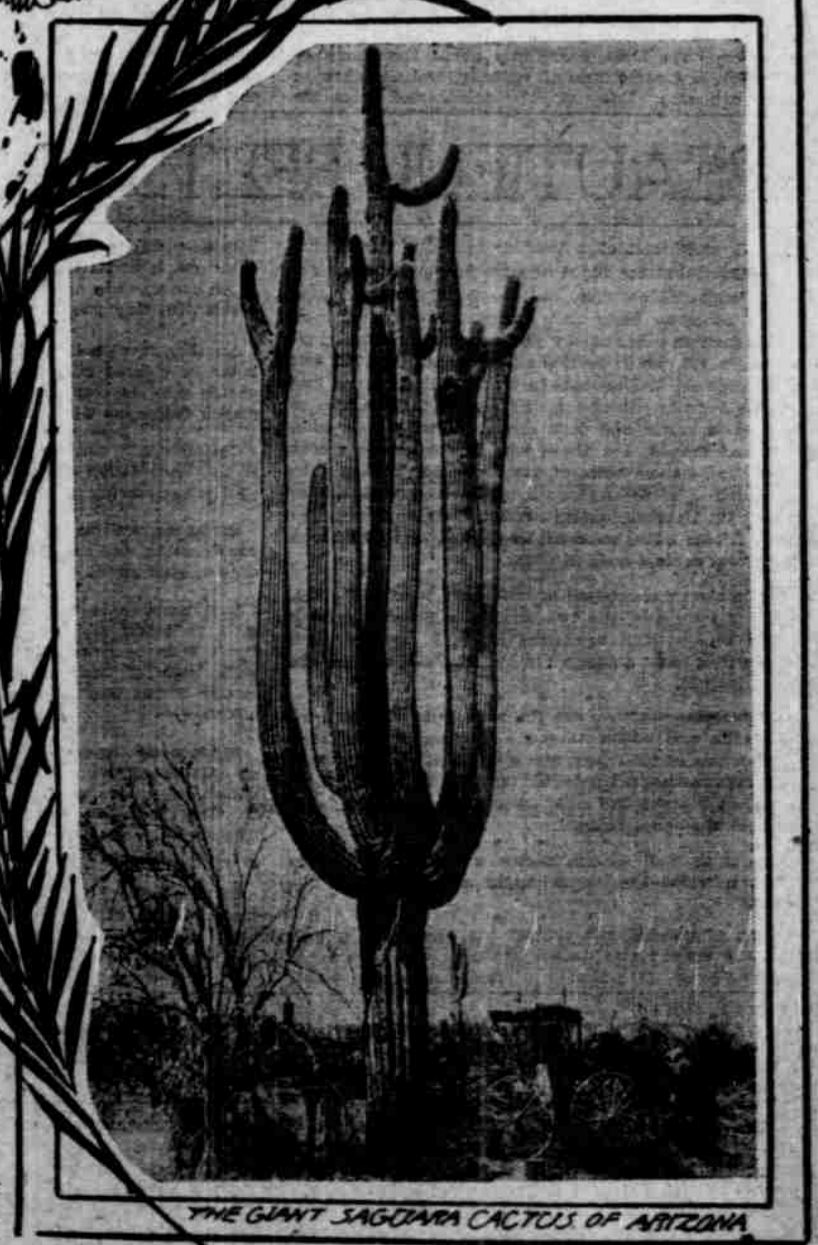
17 the discharge was \$35 cubic feet per second. Increasing the next day to 154,000 cubic feet, and on the 19th to 276,000 cubic feet. This was followed by a second greater swell, until on the 24th a maximum of 300,000 cubic feet was reached."

The Roosevelt dam is to control and store such floods. About 50 miles from Phoenix the Salt River enters a profound canyon, with lofty, precipitous walls and a narrow floor, in which is located the dam site. Above the dam the canyon opens into wide valleys, providing the most capacious reservoir in the West.

"It would probably be impossible to find anywhere in the arid region," said Government Engineer Arthur F. Davis, the projector of this magnificent enterprise, "a storage project in which all conditions are as favorable as in this

one. The capacity of the reservoir in proportion to the dimensions of the dam is enormous, and the lands to be watered are of remarkable fertility, with a climate which may be classed as almost semi-tropic."

Mr. Davis also made the important discovery that material for making good Portland cement and bricks lies immediately by the dam site. He states that the masonry dam now under con-



THE GIANT SAGUARO CACTUS OF ARIZONA

struction will be absolutely permanent—safe, solid and secure for all ages to come, a part of the everlasting hills of which it will become an integral part."

Finding that the prices bid by the cement manufacturers would add an increased burden of 250,000 or more to

for the various products of agriculture and horticulture.

The drainage area of the Salt and its tributaries aggregate some 15,000 square miles, and some of the mountain peaks near the source pierce the sky at an altitude of 10,000 feet.