No. 710,813. Patented Oct. 7, 1902.

J. W. STANEART.

APPARATUS FOR EXPOSING THE BEDS OF WATER COURSES AND CONVEYING MATERIAL THEREFROM.

(Application filed July 31, 1901.)

(No Model.)

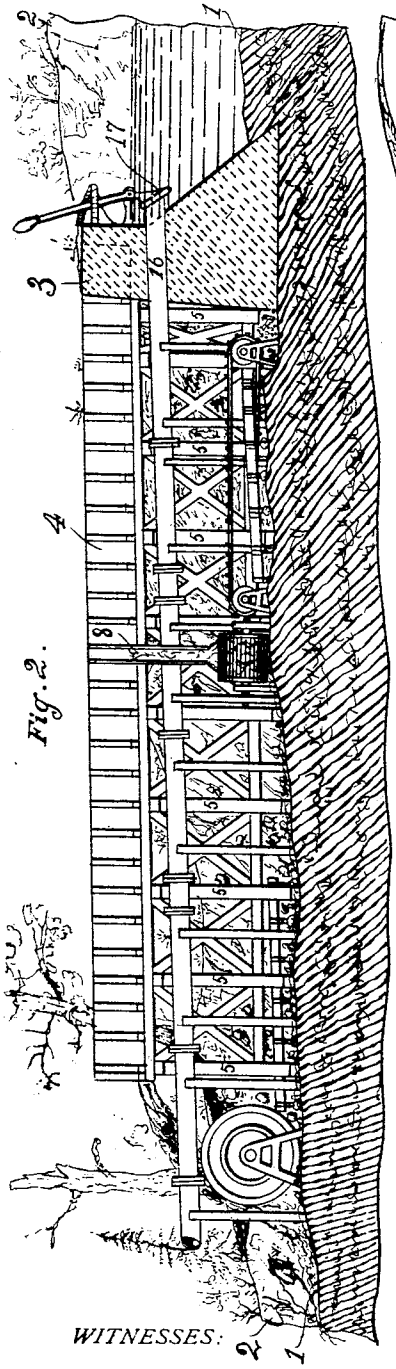


Fig. 2.

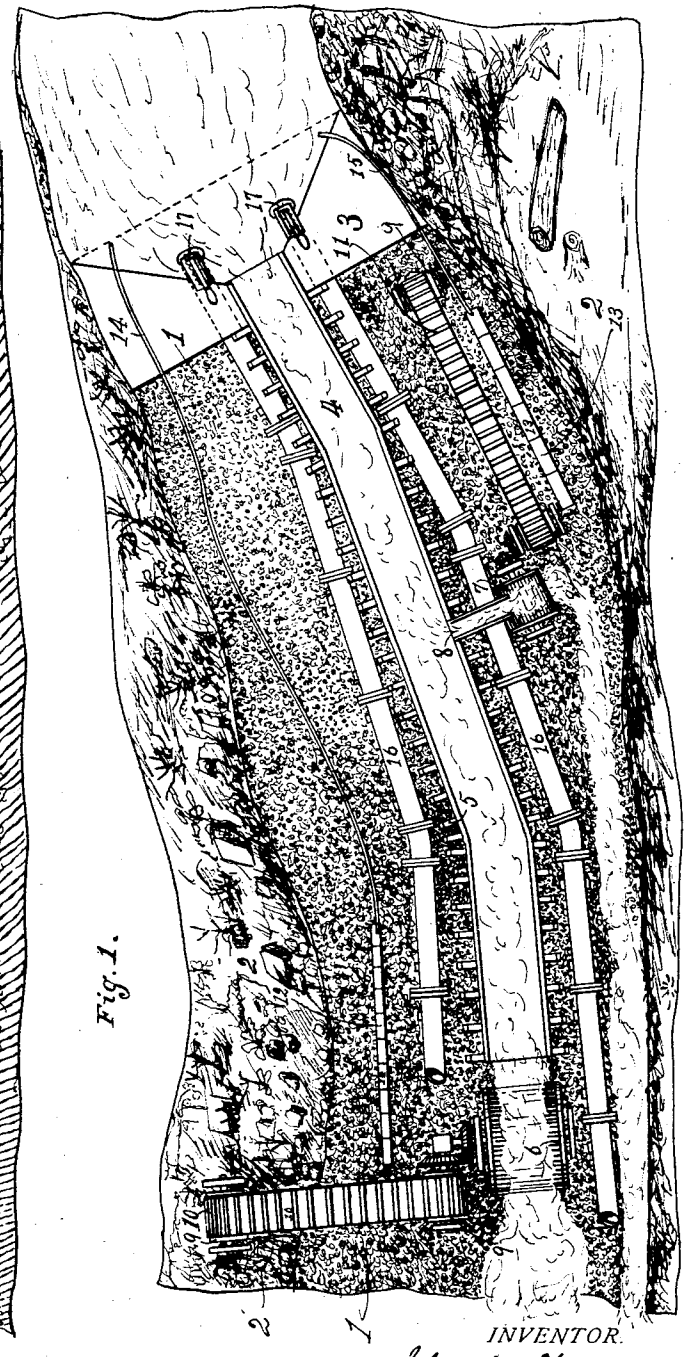


Fig. 1.

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UNITED STATES PATENT OFFICE.

JOHN W. STANEART, OF SAN FRANCISCO, CALIFORNIA.

APPARATUS FOR EXPOSING THE BEDS OF WATER-COURSES AND CONVEYING MATERIAL THEREFROM.

SPECIFICATION forming part of Letters Patent No. 710,813, dated October 7, 1902.

Application filed July 31, 1901. Serial No. 70,425. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. STANEART, a citizen of the United States, residing at and whose post-office address is 930A Howard street, San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Apparatus for Exposing the Beds of Water-Courses and Conveying Material Therefrom, of which the following is a specification.

My invention relates to improved apparatus for exposing the beds of rivers, the object of my invention being to provide means whereby when thus exposed the whole of the gold deposited in the beds of rivers may be recovered therefrom and also the river-beds may be worked in successive sections, the operation being extended down the course of the river-bed, as may be necessary or desirable.

Many river-beds in the State of California and in other gold-producing regions are rich in gold, and various means have been applied for obtaining the same. One method now practiced is to employ a dredging-machine for dredging the bottom of the rivers and carrying the contents to sluices, where the gold is extracted from the sand or silt. This method is profitable in many localities; but it is defective in that the dredging-machine is not able to reach the crevices, recesses, holes, or pockets in the bed of the river. In these spots are generally found the richest supplies of gold by reason of the tendency of the gold to find the lowest point on account of its great specific gravity. Another method of extracting the gold has been to lay bare the bed of the river by building wing-dams, thus diverting the water of the river from a portion of the bed. This method gives satisfaction so far as it goes; but it is imperfect in that only a portion of the bed is thus exposed to working, and, moreover, it is difficult to extend the operation down to the lower portion of the river when the upper portion has been thoroughly worked and gold extracted from the pockets, crevices, or recesses, while at the same time the process can be continued on the lower portion of the river when the upper portion has been thoroughly worked.

In the accompanying drawings, Figure 1 is a plan view of a river to which my apparatus is applied for extracting the gold therefrom. Fig. 2 is a longitudinal vertical section of the same.

Referring to the drawings, 1 represents a river-bed, and 2 the bank of the river. Between said banks is constructed a concrete dam 3, and from the middle portion of said dam extends a flume 4 of such dimensions as to carry off the whole of the water of the river under ordinary conditions. Said flume is supported upon trestle-work 5 and extends longitudinally down to the bed of the river, discharging again into said bed at such a point that a sufficient portion of the river-bed will be exposed to view. At any convenient point in said flume is provided a water-wheel, which is operated by the current of water in said flume. I have herein shown two such water-wheels 6 7, one of which is located at the end of the flume and the other is located at an intermediate point thereof and is operated by a branch flume 8, extending from the main flume. Said water-wheels 6 7 actuate wheels 9, which operate conveyers 10 and 11, the conveyer 10 extending transversely to the bed of the river to a point on the banks thereof and terminating in a suitable place for dumping the tailings, while the conveyer 11 extends back along the bed of the river to the place from which the spoils are taken, so that the tailings are dumped back in the bed of the river at substantially their original location.

When a river-bed is laid bare, the auriferous deposits are thrown into sluices 12 and 13, extending down along the river-bed, and are washed by means of water supplied by flexible pipes 14 and 15, and the gold is then extracted, the tailings being then deposited upon the conveyers 10 and 11, by which they are carried to a distant point and disposed of in the manner already described.

In order to provide for an excessive or unusual amount of water in the river, there are constructed two pipes 16 of large diameter passing through the dam closed by gates 17, said pipes extending to any suitable point of the river-bed. In case of excessive rainfall or any unusual supply of water from other causes the gates may be opened, permitting the surplus water to flow through said pipes.

An important feature of my invention re-

sides in the fact that I am enabled to continue the operation of extracting the gold to an indefinite length of the river-bed.

When the upper parts of the bed near the dam have been thoroughly worked, the lower river-bed may be laid bare by adding on another section of the flume and carrying the water down to a lower point of the river before returning it to said river-bed. This operation may be carried on indefinitely with little expense.

I claim—

1. In means for exposing river-beds and conveying material therefrom, the combination of a dam extending entirely across the river, a flume independent of the river-bed extending from the lower side of the dam along and above the bed of the river and discharging into said river-bed at a lower point in its course, said dam having an opening discharging into said flume, and said flume being contracted in width relatively to the width of the river but being of sufficient dimensions to carry off the normal flow of the river, substantially as described.

2. In means for exposing river-beds and conveying material therefrom, the combination of a dam across the river, a flume extending along and above the bed of the river and discharging into said river-bed at a lower point in its course, said flume being of sufficient dimensions to take the whole normal flow of the river, an auxiliary conduit for carrying off an excess of water in the river, and means for closing and opening said conduit when desired, substantially as described.

3. In means for exposing river-beds and conveying material therefrom, the combination of a dam across the river, a flume extending along and above the bed of the river and discharging into said river-bed at a lower point in its course, said flume being of sufficient dimensions to take the whole normal flow of the river, a conveyer for carrying away the tailings, and means operated by the passage of water in the flume for actuating said conveyer, substantially as described.

4. In means for exposing river-beds and conveying material therefrom, the combination of a dam across the river, a flume extending along and above the bed of the river and discharging into said river-bed at a lower point in its course, said flume being of sufficient dimensions to take the whole normal flow of the river, a conveyer for carrying away the tailings extending upward in the bed of the river, and means operated by the passage of water in the flume for actuating said conveyer, substantially as described.

In witness whereof I have hereunto set my hand in the presence of two subscribing witnesses.

J. W. STANEART.

Witnesses:
F. M. WRIGHT,
CECELIA POWNING.