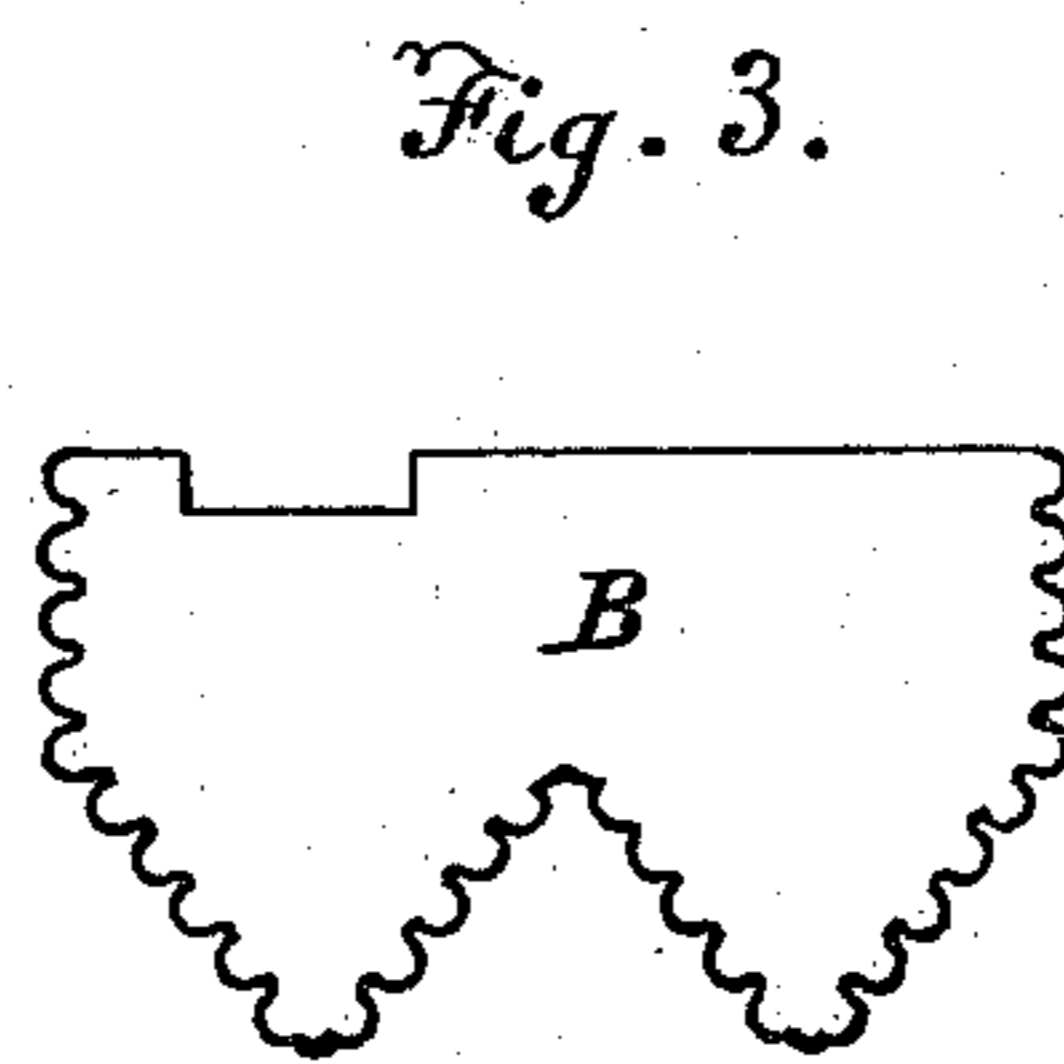
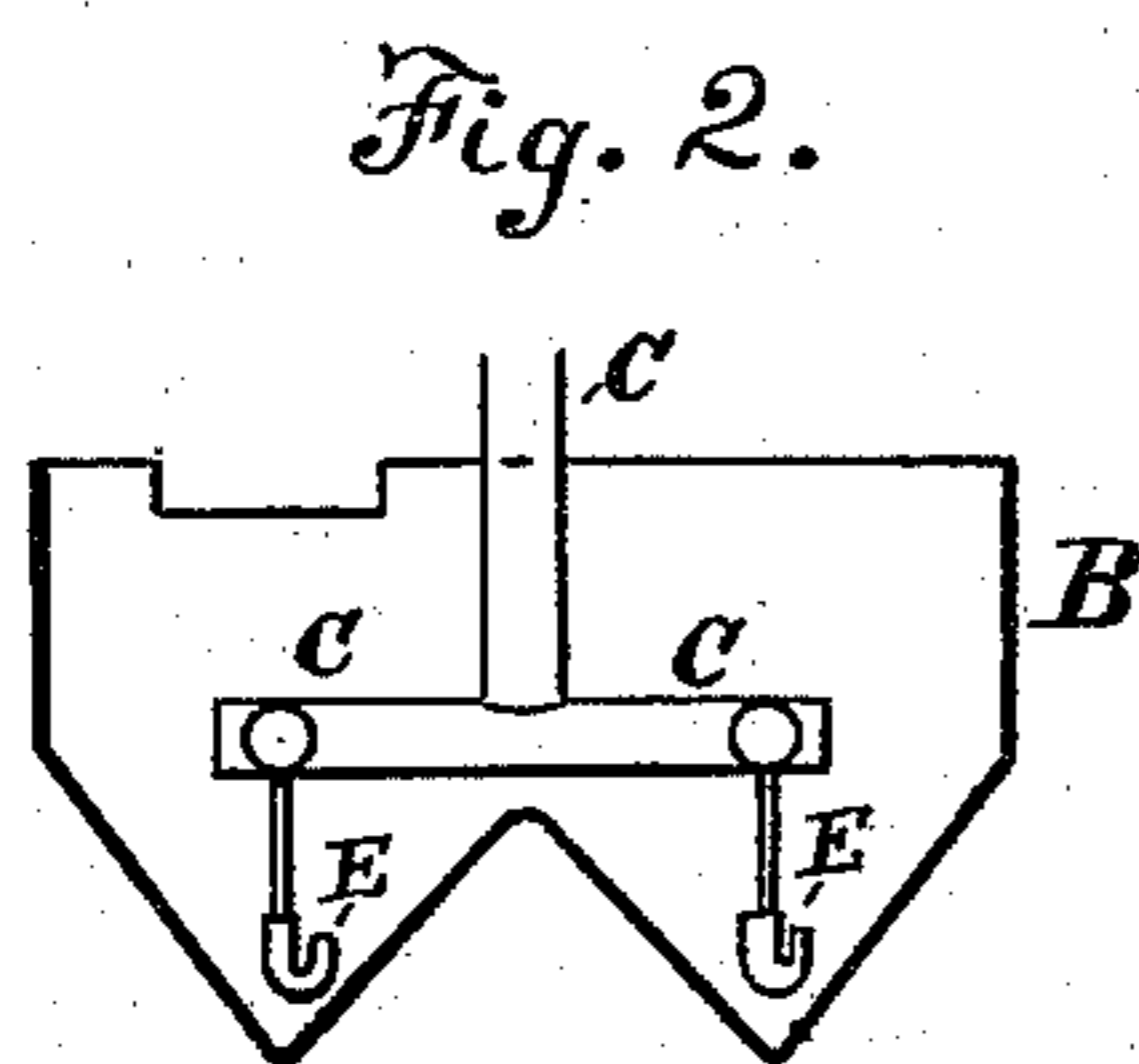
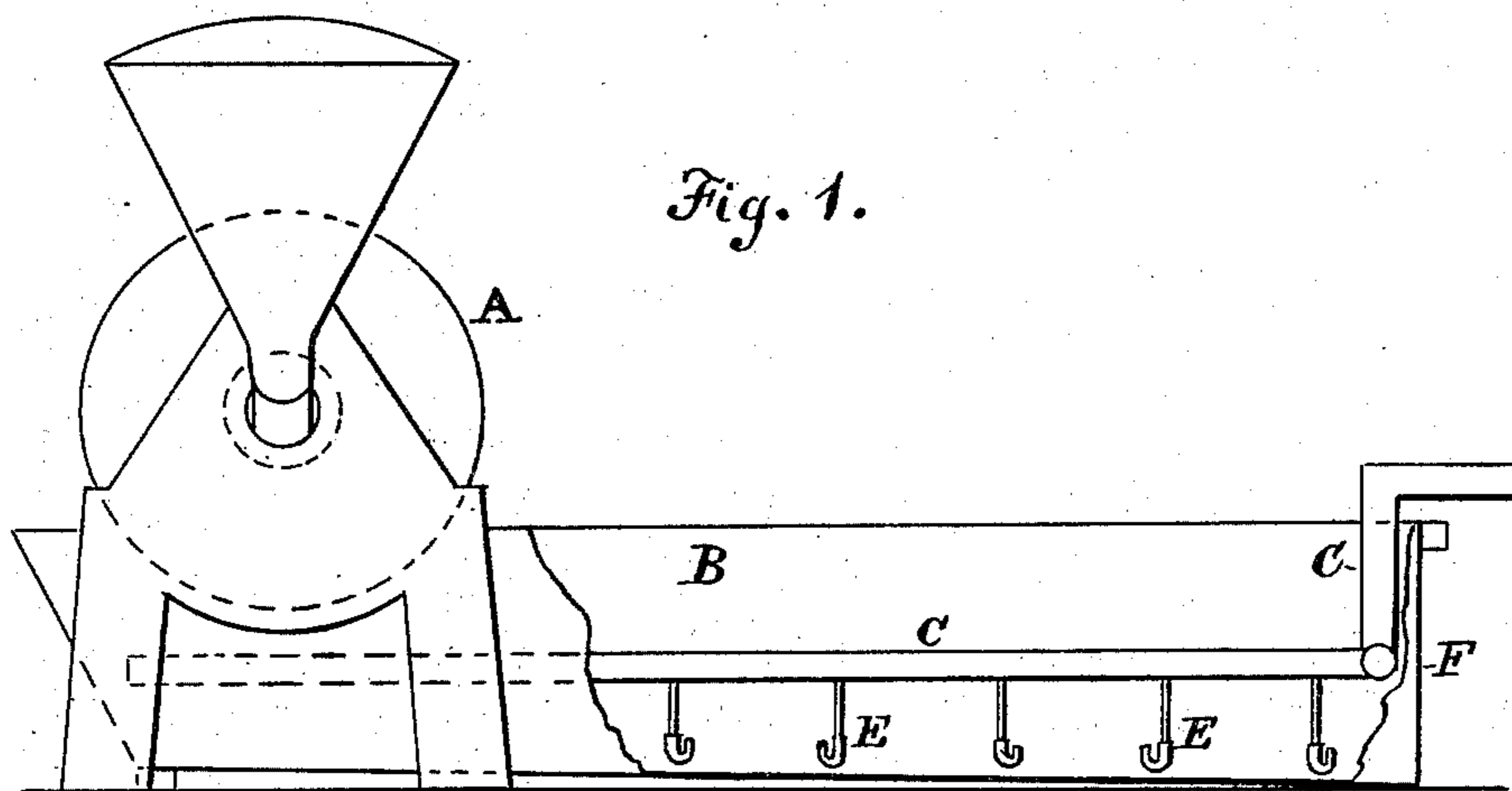


E. S. BENNETT.  
Machine for Extracting Gold from Auriferous Deposits  
No. 221,905.                      Patented Nov. 25, 1879.



Witnesses :  
H. A. Daniels.  
John O'Donnoghue.

Inventor :  
E. S. Bennett.  
By H. J. Ennis,  
Atty.

# UNITED STATES PATENT OFFICE.

ERASTUS S. BENNETT, OF DENVER, COLORADO.

IMPROVEMENT IN MACHINES FOR EXTRACTING GOLD FROM AURIFEROUS DEPOSITS.

Specification forming part of Letters Patent No. **221,905**, dated November 25, 1879; application filed February 1, 1878.

*To all whom it may concern:*

Be it known that I, ERASTUS S. BENNETT, of the city of Denver, county of Arapahoe, and State of Colorado, have invented a new and useful Machine for Washing the Dirt of Auriferous Deposits and Extracting the Gold therefrom; and I do hereby declare that the following is a full and exact description of the machine, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure No. 1 represents a side view of my machine. Fig. No. 2 represents a section of the tank thereof, showing the position of the pipes and curved pipes. Fig. 3 shows the tank corrugated.

The chief objects of the invention are to provide a machine which will save fine as well as coarse gold, and will require less water than is required for the same purpose by the sluice, so that the auriferous earth, in places where sufficient water for the sluice cannot be had, may be worked by the machine.

A represents a revolving cylindrical grate, which is partially submerged in the tank B. The tank B is supplied with water through the pipes C C and curved pipes E E, and has an overflow near the top, so that it is kept nearly full of water.

The water is forced, by pump or other means, through the pipes and curved pipes, and may overflow into tanks (not shown) provided for the purpose, and from these tanks may be taken again and be forced through as before, so that the water may be used over and over.

The tank B may be of copper amalgamated, or may be of any other material, and lined with amalgam plates, or may be of wood (for coarse gold) without amalgam plates or lining.

The amalgam plates may be plain or corrugated, as shown in Fig. No. 3.

The auriferous dirt is thrown into the revolving cylindrical grate A. The inside of this grate may be provided with flights, screws, scrolls, or any other device by which the dirt

is pushed from the receiving to the discharging end, and there lifted and thrown out as tailings, having in its passage been washed of its finer parts, which have passed through the openings into the main tank B. Here it falls through water to the bottom of the said tank and in contact with the amalgam plates. Most of the gold is caught at this first falling, but not all. The material piles up around the first curved pipes, and by them is thrown upward and forward toward the tailing end F. Each time that it is thus thrown it falls on a new portion of the surface of the lining or amalgam plates, and thence falls to the bottom, to be again thrown upward and forward. When it arrives at the tailing end it passes through the openings to another tank, called the "tailing-tank," from which it is removed by any suitable device.

The cylinder may be operated by any suitable power, so long as it receives a steady rotary motion.

The pump is not shown, and may be dispensed with where other force is handy.

The tanks to receive and retain the overflow are not shown, and, where water is plentiful, may be dispensed with.

The cylinder A may be supported in its position in any suitable manner, so long as it is partially submerged in the tank B, as shown, so that in revolving the water has free ingress and egress.

What I claim as my own individual invention is—

1. The curved pipes E E and supply-pipes C C, in combination with a tank, B, having an inclined or angular bottom, substantially as and for the purpose set forth.

2. The combination of the grate A, tank B, and water-pipes C C and E E, for the purpose set forth.

ERASTUS S. BENNETT.

Witnesses:

LORIN A. STALEY,  
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