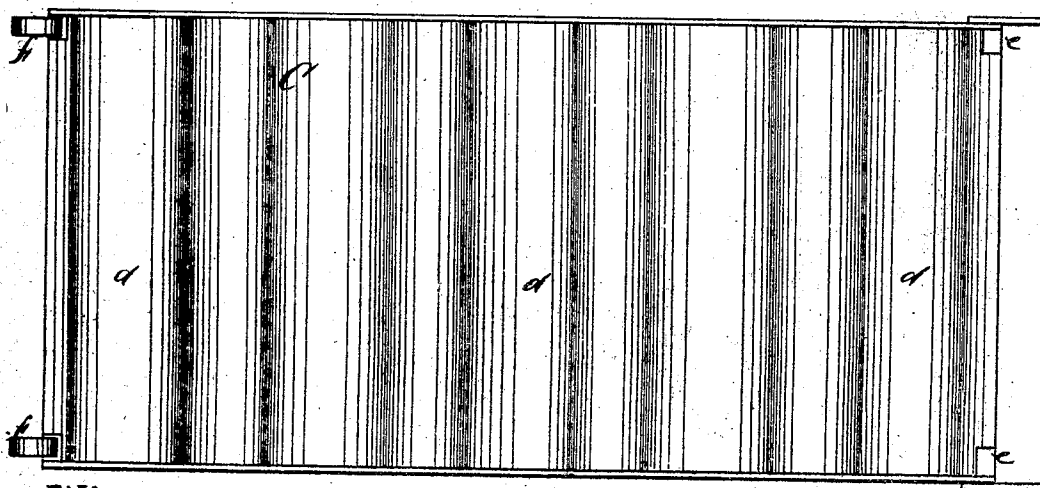
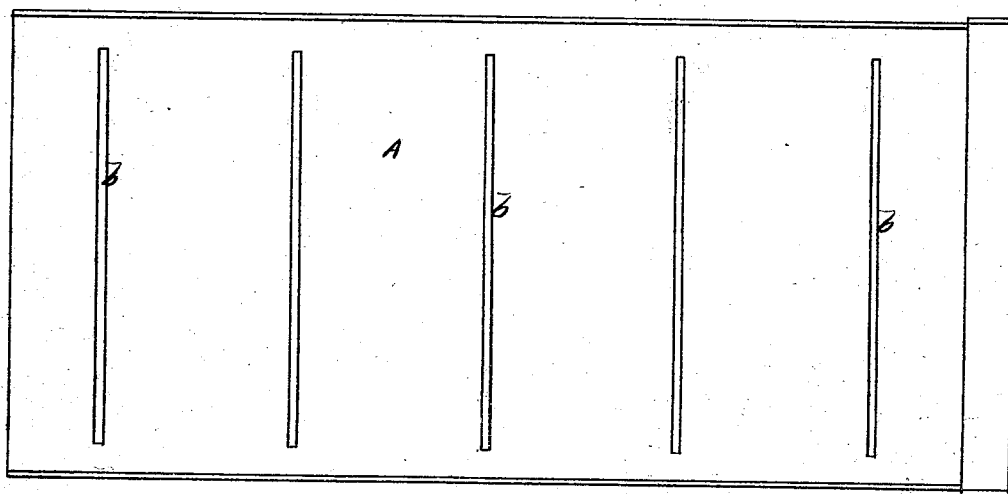
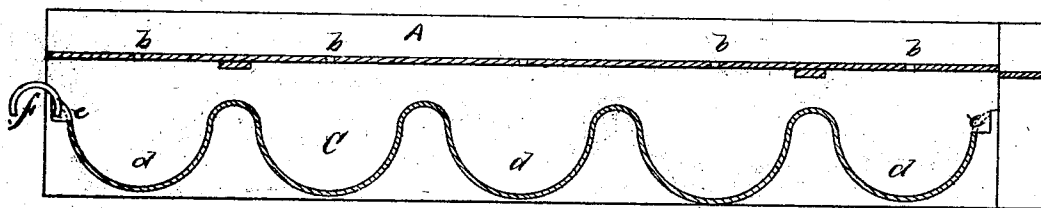


GREvans Saving Amalgam etc

117162

PATENTED JUL 18 1871



Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE R. EVANS, OF VIRGINIA CITY, NEVADA.

IMPROVEMENT IN APPARATUS FOR SAVING GOLD, AMALGAM, &c.

Specification forming part of Letters Patent No. 117,162, dated July 18, 1871.

To all whom it may concern:

Be it known that I, GEORGE R. EVANS, of Virginia City, State of Nevada, have invented an Improved Gold-Saving Apparatus; and I do hereby declare the following description and accompanying drawing are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention or improvements without further invention or experiment.

My invention relates to an improved apparatus for saving gold, amalgam, and quicksilver, and is an improvement on Letters Patent No. 86,379, which were granted to me on the 2d day of February, A. D. 1869. My improvements consist in inserting in an ordinary sluice, at some convenient point along its length, a section having a flat bottom, which is provided with transverse slots. Immediately below this section is placed another sluice, which has alternate semicircular depressions, which are filled with quicksilver. This lower sluice is placed under the slotted upper one, so that one of the slots comes directly over the center of the depression, thus allowing the heavy particles in the upper sluice to fall into the quicksilver in the lower one, from which the metal cannot escape. My invention also relates to a device for securing two or more of the sections together in order to give a regular and even surface.

In order to more fully illustrate and describe my invention, reference is had to the accompanying drawing forming a part of this specification, in which—

A represents a section of a sluice having a flat bottom. This bottom is provided with narrow transverse slots *b*, which extend almost across the entire width of the sluice. This section of sluice is to be connected with an ordinary sluice, and two or more of them can be connected together, if desired, so as to pass the tailings over a greater length of the perforated bottom. Below this slotted sluice I place another sluice, C, the bottom of which is fluted so as to form half-round or semicircular transverse channels *d*, extending across the sluice, as shown. When two or more of these sections are to be connected together the corners of the fluted bottom are each provided with a square recess, *e*, and after the two ends are placed so as to abut against each

other a semicircular spring-clasp, *f*, is employed to lock them together and retain the curved bottoms in their true positions. By the use of these corner spring-clasps the bottoms are united without interfering materially with the regularity of the curves, and without obstructing the free passage of the tailings. This lower sluice is placed under the upper one, so that the central line of each channel will be directly under one of the transverse slots. The channels of the sluice C are then filled or partially filled with quicksilver. As the tailings pass down the sluice the heavy portions settle to the bottom, and are precipitated through the slots *b* into the quicksilver in the lower channels, where the valuable metal is retained, while the worthless portions pass off down the lower sluice to be again precipitated through slots in a similar device and in the same manner. The weight of the falling matter keeps the quicksilver in the circular channels in a state of motion from side to side, which prevents the same from packing or forming a cake over its surface, and thus insures the action of the quicksilver upon the metals.

By thus constructing a sluice I claim to be able to save the light particles of gold, amalgam, and free quicksilver which ordinarily pass away and are lost, and at a very small additional expense to that required to construct an ordinary sluice.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The upper-sluice section A, provided with transverse slots *b*, in combination with the section *c* having a fluted bottom, substantially as and for the purpose above described.
2. The corner spring-clasps *f*, substantially as and for the purpose above described.
3. A sluice, constructed in the manner above described—that is, having one or more perforated sections through which the heavier portions are precipitated, substantially as and for the purpose above described.

In witness that the above-described invention is claimed by me I have hereunto set my hand and seal.

GEORGE R. EVANS. [L. s.]

Witnesses:

GEO. H. STRONG,
BENJN. C. FABRE.