(No Model.)

J. MILLER.

ALLUVIAL GOLD WASHER.

No. 569,113. Patented Oct. 6, 1896.

Fig. 1.

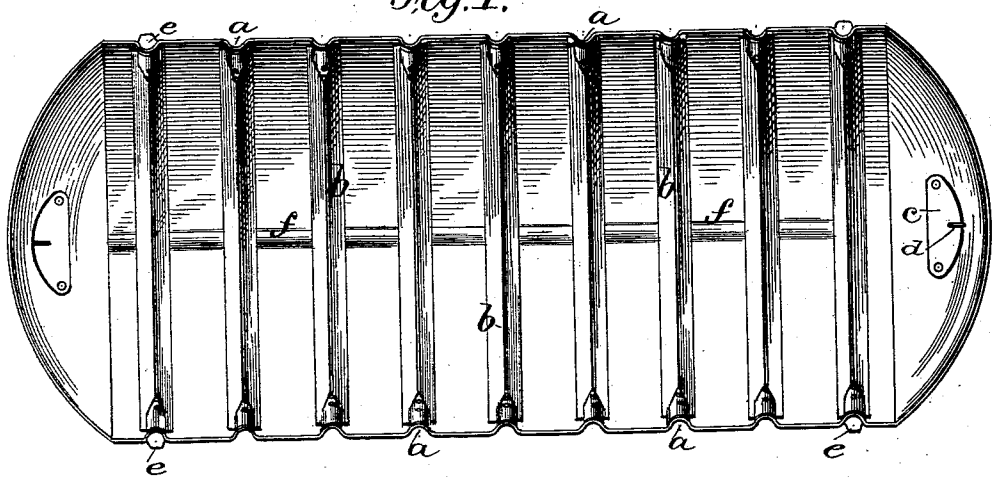


Fig. 2.

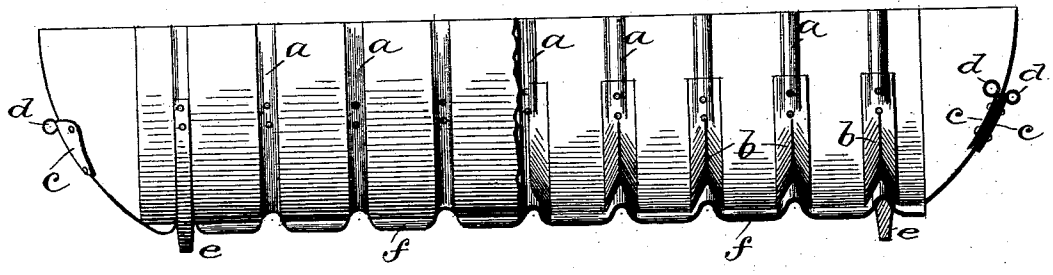


Fig. 3

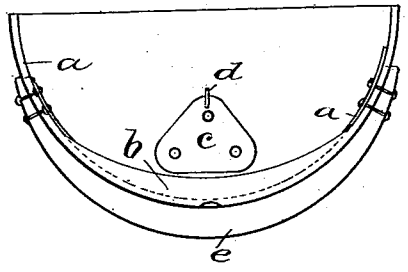
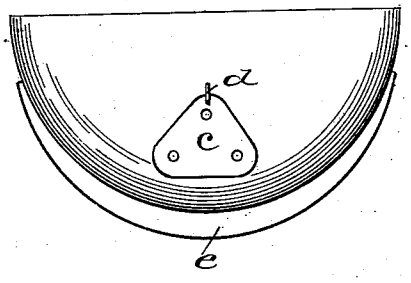


Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

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ALLUVIAL-GOLD WASHER.

SPECIFICATION forming part of Letters Patent No. 569,113, dated October 6, 1896.

Application filed March 24, 1896. Serial No. 584,707. (No model.)

To all whom it may concern:

Be it known that I, JAMES MILLER, a British subject, residing at Sault Ste. Marie, in the District of Algoma, in the Province of Ontario, in the Dominion of Canada, have invented a new and useful Alluvial-Gold Washer, of which the following is a specification.

My invention is a light, yet rigid, strong, and durable gold-washer, which can be easily carried long distances into the country and requires but a small quantity of water when used.

To this end I construct the washer as hereinafter described, and illustrated in the accompanying drawings, in which—

Figure 1 is a plan or top view. Fig. 2 is a half longitudinal elevation and a half longitudinal vertical section. Fig. 3 is a cross-section. Fig. 4 is an end elevation.

Similar letters refer to similar parts throughout the several views.

The alluvial-gold washer consists, essentially, of a pressed metal trough of any convenient size, and it may be made out of any convenient metal, such as copper, zinc, aluminium, or galvanized iron, or out of wood or other material. It is corrugated transversely and longitudinally to add to its strength. There is but one longitudinal corrugation *f*, the same extending as a depression through the middle of the trough and being in practice about one inch in depth. There is a series of transverse parallel corrugations or ribs *a*, which project inwardly, as shown.

On the inside of the washer are fastened riffles *b*, made, preferably, of sheet-steel, and which are so securely riveted to the sides that it is unnecessary to further fasten them at the bottom. Such riffles have the form of an inverted **V** in cross-section, whereby they are adapted to fit upon the transverse corrugations or ribs *a*, and the latter aid in holding them in place, and space is economized. The riffles also brace the sides of the trough and contribute to its rigidity as a whole. These riffles are so spaced that the edge of an ordinary square shovel may rest upon three of them at a time, and they would therefore require to be spaced about four inches apart, center to center.

To each end of the washer is riveted a plate *c*, one inside and another outside, to which are fastened two lugs or rings *d*, so that the gold-washer may be suspended from either the inside or the outside. The inside rings are so located that the washer may be rocked or shaken while being so suspended.

To the bottom are fastened two crescent-shaped ribs *e* of steel, one at each end. Each such rib is arranged and fitted in one of the exterior grooves or depressions corresponding to and forming the interior ribs *a* and is riveted at its ends, whereby it is held firmly in place and prevented from lateral movement. The ribs *e* also add strength and stability to the whole, as well as to assist in rocking the washer by keeping it in place on supporting logs or timber when it is not desirable to suspend the washer by the rings. The method of using the washer is as follows: The material to be treated is thrown into the washer. Then the necessary water is added. The washer is then rocked or shaken sufficiently to allow the gold contained therein to drop to the bottom. Then all the material that lies above the tops of the riffles is shoveled out, care being taken that the shovel does not dip down below the top edge of the riffles. Then more new material is thrown in and more water added, this process being repeated a number of times until it is thought that enough gold has collected in the bottom to save as amalgam in the usual way. By this means but a small fraction of the usual amount of water used in sluicing gold will be used.

What I claim is—

1. The improved gold-washer consisting of a metal trough having transverse interior corrugations or ribs, riffle-plates which are of inverted-**V** shape in cross-section and arranged over and upon said ribs, and secured at their ends to the upwardly-extended sides of the trough proper, substantially as shown and described.

2. The improved gold-washer consisting of the sheet-metal trough, having a series of transverse, parallel corrugations, or inwardly-projecting ribs, formed by corresponding exterior grooves or depressions, a series of riffles coinciding with said ribs, and the rockers *e*, arranged and secured in the exterior grooves or depressions, as shown and described.

JAMES MILLER.

Witnesses:

EDWARD TROWBRIDGE,

JOHN MCKAY.