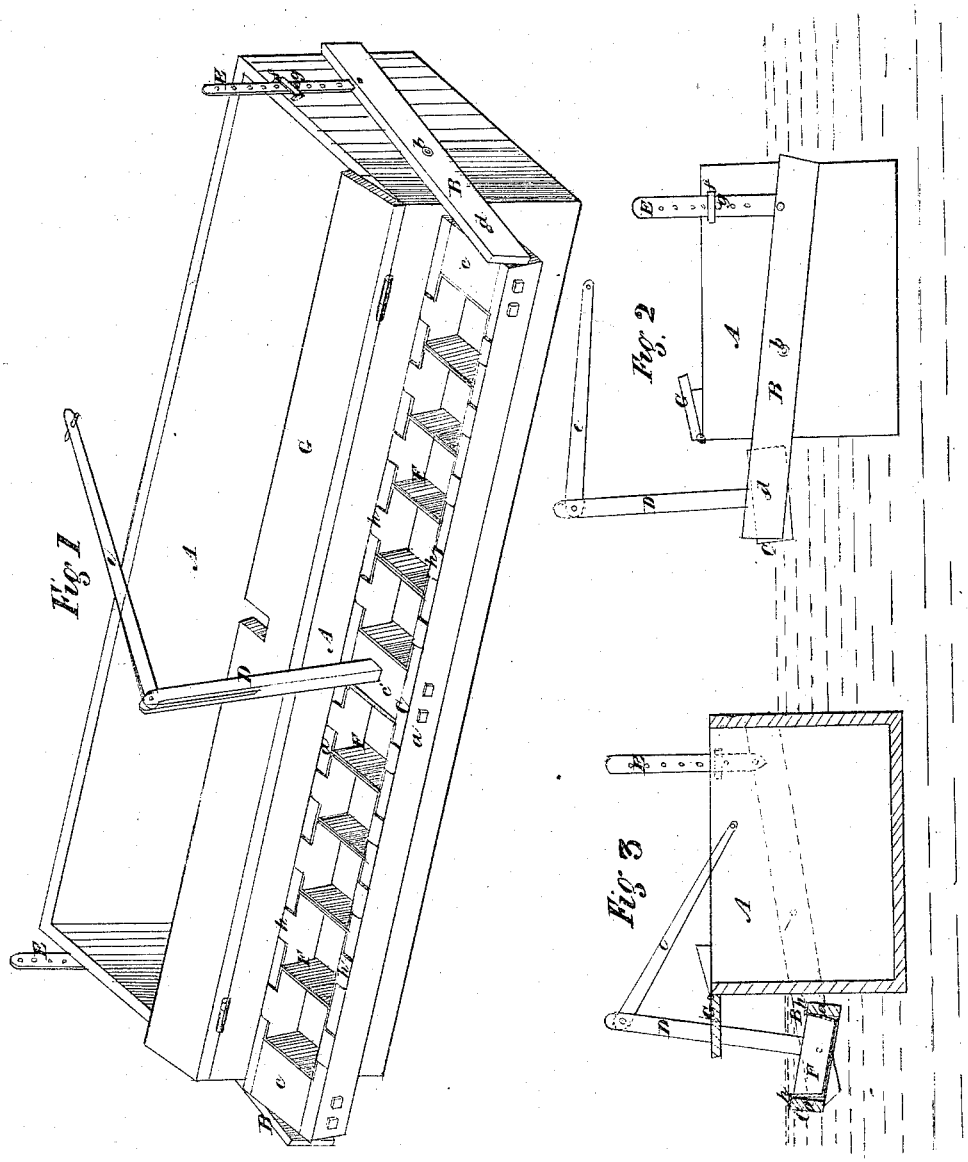
O. EDES.

GOLD WASHING MACHINE.

No. 7,302. Patented Apr. 23, 1850.



UNITED STATES PATENT OFFICE.

OLIVER EDES, OF PLYMOUTH, MASSACHUSETTS.

SUBMERGED ROCKER FOR SEPARATING ORES.

Specification of Letters Patent No. 7,302, dated April 23, 1850.

To all whom it may concern:

Be it known that I, OLIVER EDES, of Plymouth, in the county of Plymouth and State of Massachusetts, have invented a new and useful Improvement in Machines for Washing the Earth and other Extraneous Matter from Gold and other Ores; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1, is a perspective view. Fig. 2, is an end elevation. Fig. 3, is a transverse section.

The same letters of reference indicate corresponding parts in each of the several figures.

The nature of my invention consists in a frame into which is fitted any required number of pans which can be removed and replaced at the pleasure of the operator. This frame is provided with pivots or journals which have bearings in the ends of levers or arms attached to a box, boat, or platform, in such a manner that the frame carrying the pans can be lowered into or raised from the water; the earth to be washed is placed in the pans and lowered below the surface of the water and the frame carrying the pans is rocked by means of a lever operated by a person in the box, or boat, or upon the platform to which the frame may be attached.

To enable others skilled in the art to make and use my invention I will proceed to describe its construction and operation.

A, is a water tight wooden box which may be made of any required form or dimension and braced and strengthened in any convenient manner.

B, B, are levers formed of hard wood planks secured to the ends of the box A, by the bolts *b*, *b*, which form centers upon which the levers work.

C, is the frame or rocker, it is constructed of two longitudinal planks *a*, *a*, having cross pieces *c*, *c*, *c'*, bolted between them at their ends and centers; it is provided at each end with a journal or pivot *d*, which has a bearing in one the levers B; it is also provided with a lever D, which is firmly secured in the center cross piece *c'* and has a rod *e*, attached to it.

E, E, are flat bars of iron jointed to the back ends of the levers B, B, and passing through guides *f f*, attached to the ends of the box A. The bars E, E, are provided with a series of holes through any one of which and under one of the guides *f*, a pin *g*, is inserted for the purpose of securing the frame *c*, at any required elevation.

F, F, F, are pans constructed of sheet iron or other suitable metal, of square or other form, fitting between the longitudinal planks *a*, *a*, of the frame C, they are made slightly tapering toward the bottom so as to fit tightly down in the frame, and are supported by overlapping pieces *h*, *h*, which serves also as handles whereby they may be removed. G is a shelf or flap attached by hinges to the front side of the box; when opened outward it serves as a breakwater to prevent the water splashing into the box while the frame C, is being rocked; when closed inward it serves as a shelf upon which to rest the pans F F, F, in Fig. 2 in the accompanying drawing the flap (G) is represented in both its positions.

The operation is as follows: The box A is moored securely at any convenient location in the bed of the stream or river; if the water be deep it may be allowed to float, but if the water be shallow it may rest on the bottom. The earth containing the gold or other metal to be washed is then placed in the pans F F, F and the frame or rocker C, lowered into the water to such a depth that the upper edges of the pans are about an inch below the surface of the water; in this position it is secured by the pins *g*, *g*, inserted through the holes in the bars E E, a rocking motion is then given to the frame or rocker by means of the rod *l*, and lever D, operated by a person in the boat, and the earth will be washed rapidly away, leaving the gold or other ore at the bottom of the pans when it will always sink in consequence of its greater specific gravity.

It is ascertained by practical experiment that the most efficient method yet tried of separating the earth from gold is by washing in a pan under water but this I believe has always been operated by hand and con-

sequently the person operating is greatly exposed, frequently standing in the water for many hours.

A rocker has been used on land but in consequence of the difficulty of supplying it with sufficient water, forms a tedious process.

By my machine I combine the advantages of washing in pans under water and also of the separation of the parts by rocking, obviating the disadvantages of both processes and by it one man may rock ten (10) or twelve (12) pans performing as much or more work as the same number of men using single pans by hand. The rocker, lever etc might be attached to a platform constructed and placed at the edge of or in the water or to a boat and an awning may be spread over to protect the operators.

What I claim as new in my invention and desire to secure by Letters Patent is—

The combination of the rocking frame C, the pans F, F, F, the levers B B, and the bars E, E, attached, secured, and adjusted to the box A, or to a platform or boat in the manner and for the purposes substantially as herein described.

OLIVER EDES.

Witnesses:
ALLEN DANFORTH,
JAMES A. DANFORTH.