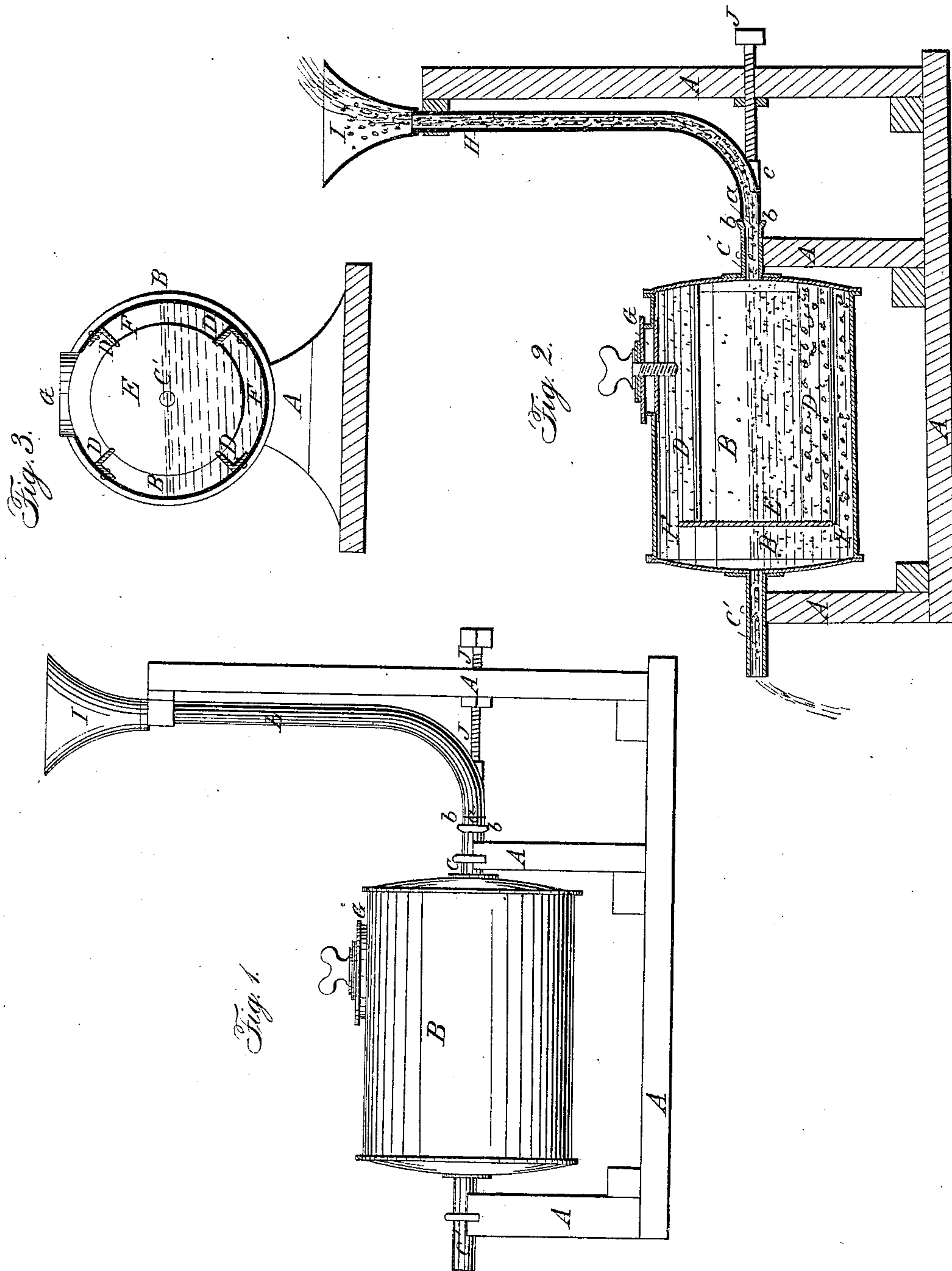


A. BARCLAY.  
Ore Amalgamator.

No. 9,045.

Patented June 22, 1852.





# UNITED STATES PATENT OFFICE.

ALEXANDER BARCLAY, OF NEWARK, NEW JERSEY.

WASHING AND AMALGAMATING GOLD, &c.

Specification of Letters Patent No. 9,045, dated June 22, 1852.

*To all whom it may concern:*

Be it known that I, ALEXANDER BARCLAY, of Newark, in the county of Essex and State of New Jersey, have invented a new and useful Improvement in Machines for Separating, Washing, and Amalgamating Gold; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1, is a side elevation. Fig. 2, is a vertical longitudinal section. Fig. 3, is a vertical transverse section.

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

The nature of my invention consists in the employment of a hollow cylinder with brackets placed longitudinally around its inner periphery, said brackets extending from the feed end of the cylinder to within one fourth of its length from the discharge end, and connecting with an inner head or partition, between the outer periphery of which and the inner periphery of the cylinder an annular space is left; through which the water and earthy matter passes to the discharge pipe while a fresh supply is being poured into the cylinder through a feed pipe having a funnel at its top.

The objects effected by constructing the cylinder with brackets along its inner periphery and an inner head or partition, are these: the brackets serving to thoroughly stir up the mass and separate the gold from the same, and thereby prepare it for washing and amalgamation: and the inner partition or head serving to stop any central current there might be passing from the feed to the discharge pipe; for it will be seen that all the particles, as the cylinder revolves, are compelled to pass to the surface of the inner periphery of the cylinder; where the gold by centrifugal power, and its specific gravity, is kept, while the lighter and earthy matter rises and passes off with the water through the annular space between the periphery of the cylinder and inner head or partition to the discharge end. This operation is also promoted by not having the brackets to extend between the inner partition and discharge end.

To enable others skilled in the art to

make and use my invention I will proceed to describe more minutely its construction and operation.

A, represents a frame upon which the machine may rest, in the manner represented in the drawing.

B, is the revolving hollow cylinder, which has two hollow journals C, C', which rest on the standards of the frame A; the journal C, serving as the feed pipe and that C', the discharge.

D, D, D, D, represent the horizontal brackets for separating and stirring up the mass of gold and earthy matter. These brackets are secured fast to the inner periphery of the cylinder and to the inner head or partition E; this partition as represented in the drawing is of less diameter than the cylinder head: the object in making it of smaller diameter than the cylinder is to form an annular space F, for the passage of the earthy matter and water to the discharge pipe C'.

G, is a manhole or door through which the gold, &c., is removed from the cylinder after being washed.

H, is the feed pipe, and I, the funnel into which the gold, &c., is first fed accompanied by a stream of water. This feed pipe, at the end which connects with the feed hollow journal C, is made of an elbow or other suitable shape and the end *a*, of this elbow is made tapering or conical and fits snugly (but loosely) in the socket *b*, of the hollow journal, in the manner represented, and is kept in its place while the cylinder revolves by a set screw J. A stream of water must always accompany the ore to be operated upon.

This machine can be used to a great advantage in separating, washing and amalgamating fine or quartz gold: for it will be seen, that, (after the machine has been set in motion and quicksilver placed into the cylinder, and the pulverized ore fed into the cylinder through the feed pipe accompanied by a constant stream of water,) the beaters or brackets throw the quicksilver so minutely and forcibly among all the particles of the ore that they cause the fine gold to unite with it and to be held in the cylinder while the earthy matter passes off with the water.

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

The manner herein described of constructing the hollow revolving cylinder B; to wit: with brackets D, along its periphery, and an inner partition E, near its discharge end C'; for separating, washing,

and causing gold to amalgamate in the manner herein described.

ALEX. BARCLAY.

Witnesses:

R. W. FENWICK,  
O. D. MUNN.