

(No Model.)

E. DERBEC.

PULVERIZER AND AMALGAMATOR.

No. 395,957.

Patented Jan. 8, 1889.

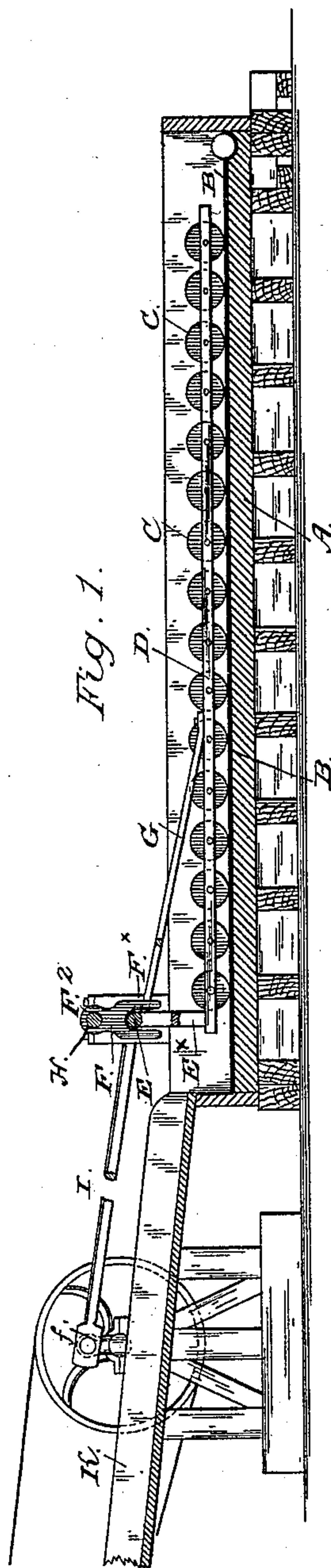


Fig. 1.

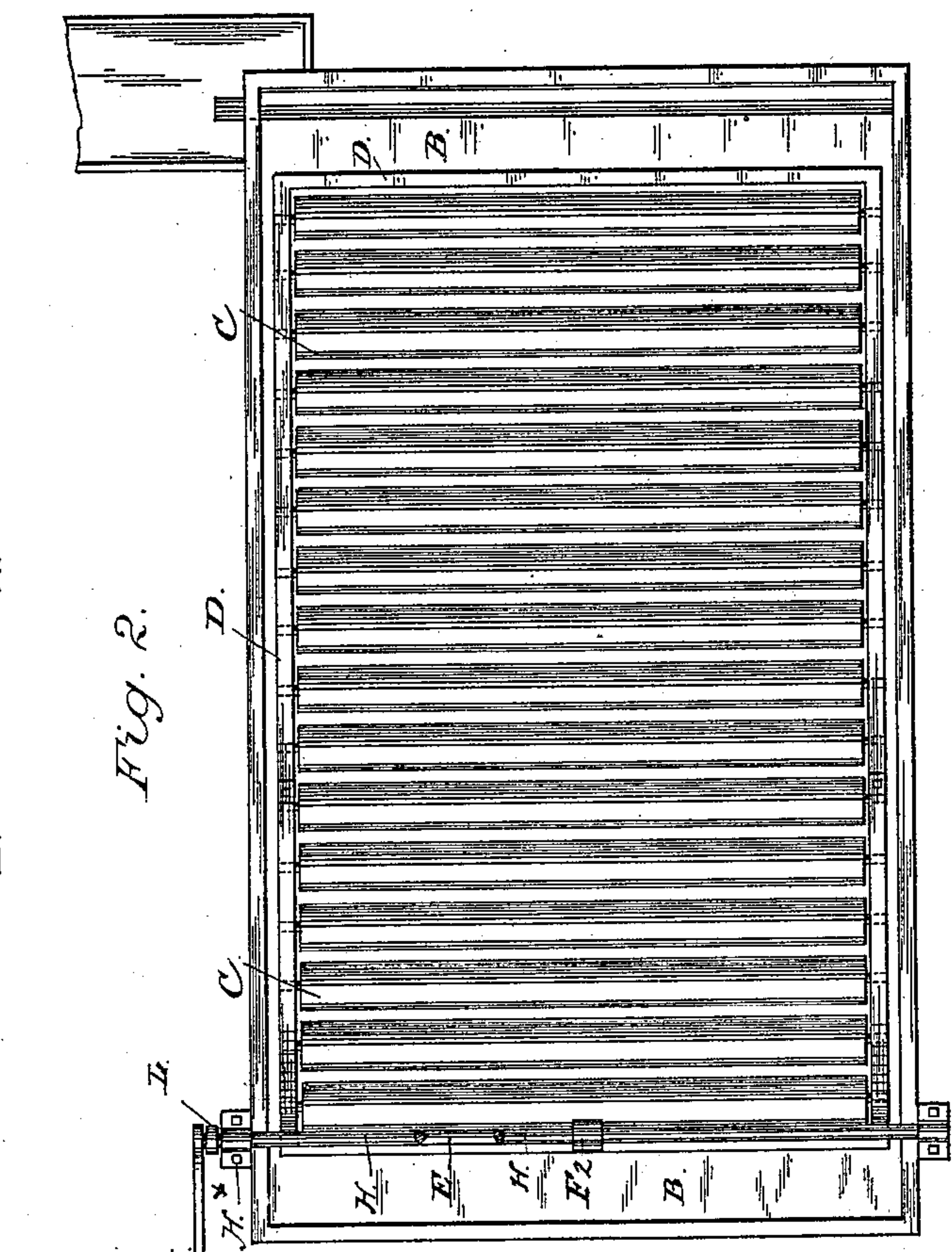


Fig. 2.

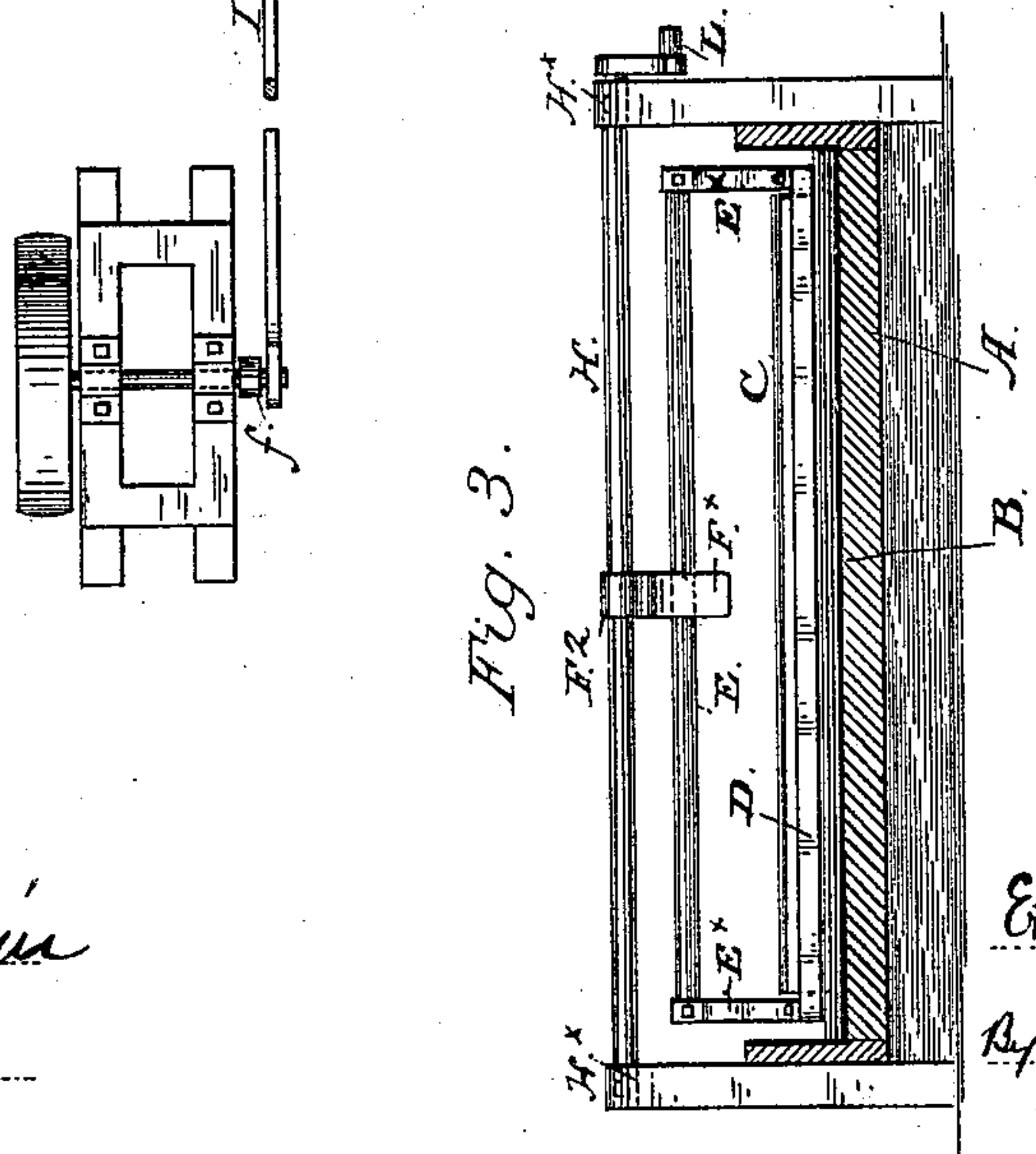


Fig. 3.

Witnesses:

H. C. Swain  
R. H. Peat,

Inventor:

E. Derbec

By Smith & Brown  
his attorney.

# UNITED STATES PATENT OFFICE.

ETIENNE DERBEC, OF SAN FRANCISCO, CALIFORNIA.

## PULVERIZER AND AMALGAMATOR.

SPECIFICATION forming part of Letters Patent No. 395,957, dated January 8, 1889.

Application filed January 31, 1888. Serial No. 262,574. (No model.)

*To all whom it may concern:*

Be it known that I, ETIENNE DERBEC, of San Francisco, in the county of San Francisco and State of California, have invented certain  
5 new and useful Improvements in Combined Ore Pulverizers and Amalgamators, of which the following is a specification.

My invention relates especially to ore grinders and amalgamators for pulverizing ores and  
10 amalgamating the precious metals.

In the accompanying drawings, forming part of this specification, Figure 1 is a side elevation, partly in section, of my ore crusher and amalgamator. Fig. 2 is a plan or top  
15 view. Fig. 3 is a cross-section.

Like figures and letters indicate corresponding parts in all the places where they occur.

A is the bed of the tank, which may be made of masonry or concrete and suitably  
20 supported upon longitudinal and cross timbers. The face of the bed is lined with metal plate or plates B, with smooth plane upper surface, and when formed in sections the edges of the plates abut one against each  
25 other, forming a tight joint.

The rollers C are solid or hollow cylinders with plane smooth surfaces, and are arranged at suitable distances apart in the rectangular frame D, having their journals in bearings  
30 within the side rails thereof.

A shaft, E, extends across the upper end of the roller-frame, suitably supported by the uprights E<sup>x</sup> E<sup>x</sup>, and a saddle, F, having forked arms F<sup>x</sup>, straddles this shaft E midway between the ends thereof, the shaft being suitably braced by the rods G G at each side of the roller-frame, as shown.

Over the shaft E is placed a rock-shaft, H, having suitable end bearings in boxes H<sup>x</sup>.  
40 This shaft passes through a boss, F<sup>2</sup>, in the top of the saddle F, to which it is keyed. A

crank, L, is attached to the end of the rock-shaft H, and a connecting-rod, I, from the crank L connects it with the wrist-pin f, so that when power is imparted to the wrist-  
45 wheel a reciprocating motion will be given to the rollers on the bed of the machine.

In the lower end of the bed is constructed a transverse groove or channel, in which the heavier particles of ore and quicksilver settle  
50 for cleaning up, and the débris and water pass off through an overflow-pipe. (Not shown.)

In practice the ore is received from the flume or sluice K and passes down upon the  
55 bed-plate, which has previously received a suitable supply of quicksilver. Then the heavy system or series of rollers is set in motion, passing slowly to and fro or backward and forward over the ore, crushing and pul-  
60 verizing by the weight of the rollers and amalgamating the precious metals without grinding or flouring the quicksilver.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, 65 is—

The combination, with a solid bed with inclosed sides and overlaid plates, of the system or series of pressure-rollers, a frame within which they are mounted, said frame being  
70 provided with a transverse bar at the upper end thereof, a rock-shaft with forked arms engaging said bar, and means, substantially as described, for operating the rock-shaft, as set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal.

ETIENNE DERBEC. [L. S.]

Witnesses:

C. W. M. SMITH,  
CHAS. E. KELLY.