

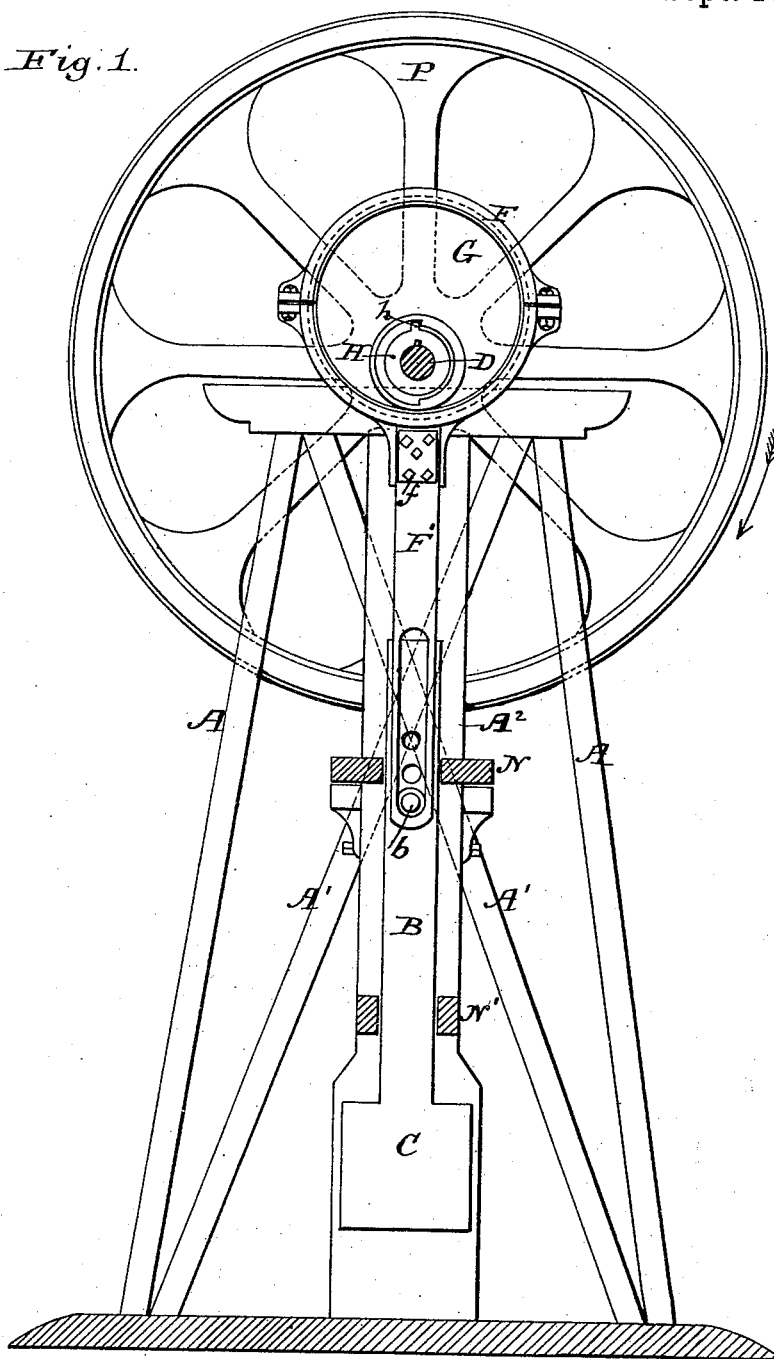
J. SYMONS.

ORE STAMP.

No. 264,792.

Patented Sept. 19, 1882.

Fig. 1.



Witnesses:

W. B. Masson

C. C. Shepherd

Inventor

James Symons

by E. E. Masson
att'y.

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Fig. 2.

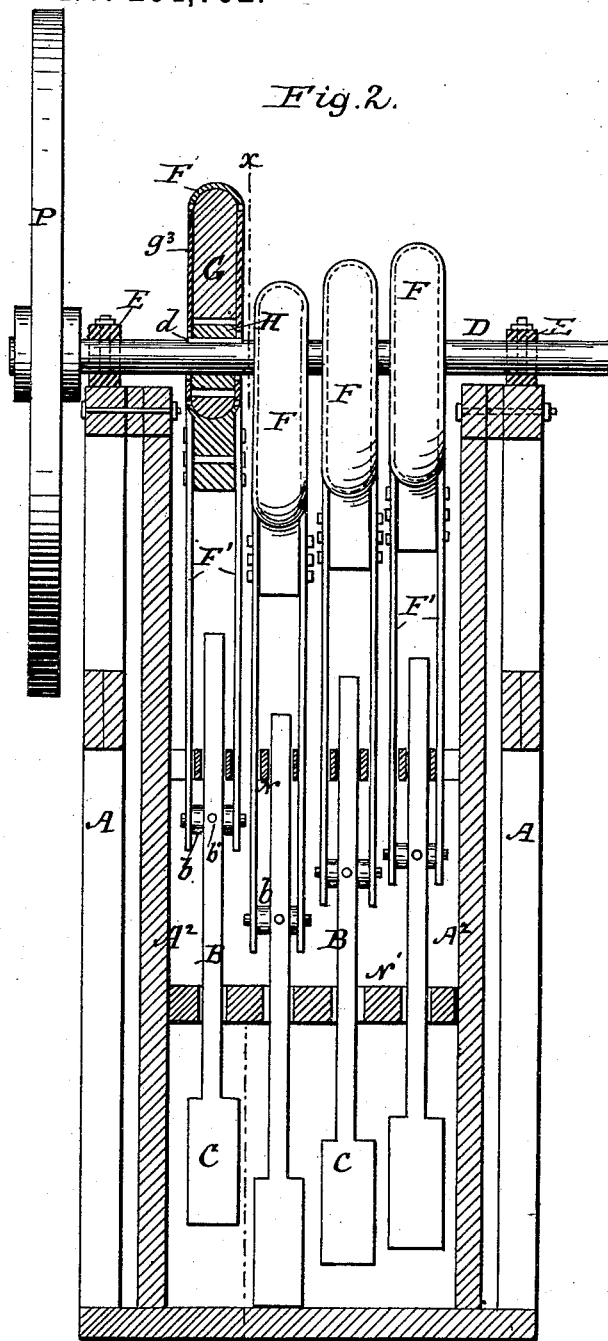


Fig. 3.

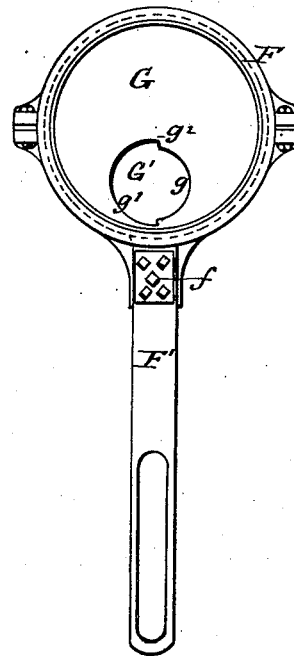
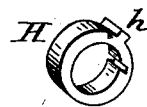


Fig. 4.



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UNITED STATES PATENT OFFICE.

JAMES SYMONS, OF NEWARK, OHIO, ASSIGNOR OF TWO-THIRDS TO DANIEL R. MURPHY, OF SAME PLACE, AND GURDON D. JOHNSON, OF GRANVILLE, OHIO.

ORE-STAMP.

SPECIFICATION forming part of Letters Patent No. 264,792, dated September 19, 1882.

Application filed July 3, 1882. (No model.)

To all whom it may concern:

Be it known that I, JAMES SYMONS, a citizen of the United States, residing at Newark, in the county of Licking and State of Ohio, have invented certain new and useful Improvements in Ore-Stamps, of which the following is a specification.

My invention relates to improvements in ore-stamps in which the hammers are elevated by suitable mechanism and allowed to fall by their own weight; and the object of my improvements is to provide a continuous revolving-shaft with shouldered bosses adapted to revolve peculiarly perforated eccentrics connected with the hammers. I attain this end by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a vertical section of the machine, taken on line *xx* of Fig. 2. Fig. 2 is a transverse vertical section of the machine. Fig. 3 is a side view of one of the eccentrics, its strap, and rods. Fig. 4 is a perspective view of one of the operating-bosses.

Similar letters refer to similar parts throughout the several views.

The outer frame, A, of the machine is made of beams united together at the top and bottom and provided with cross-braces A'. Within the frame are secured standards A², united by transverse braces N and N', the latter forming guides for the stems B of the stamps or hammers C.

The main shaft D of the machine is adapted to revolve in boxes E, secured to the top of the frame. Upon the shaft D are secured four bosses, H, by means of keys *d*, or otherwise. These bosses are cylindrical, and have projecting from their surface a shoulder, *h*, running parallel with the axis of each boss and extending its whole width to operate upon the surface of the opening G' made in the interior of the eccentrics G. The opening G' is made eccentrically to the center of the eccentric, and is formed of two half-circles, *g g'*, of different diameters, to produce an internal shoulder, *g*², for engagement with the shoulder *h* upon the boss H. The exterior surface of each eccentric G is preferably convex, and is surrounded by the straps F, and to the lower portions of said straps are secured, by means of bolts *f*, two eccentric-rods, F'. These rods are provided with slots *f'* for the passage of the cross-heads

b projecting from the sides of the hammer-stems B. The cross-heads can be secured at any desired height upon the stems B by means of slots and bolts *b'*, or in any other suitable manner. To the sides of the eccentrics G are secured light metal plates *g*³, extending over the ends of each boss, to retain them in true line therewith. Upon the shaft D is mounted the fly-wheel P, by means of which motion is given to said shaft. Motion being given to the shaft in the direction of the arrow shown in Fig. 1, each boss H rotates with it, and its shoulder *h*, coming into engagement with the shoulder *g*², rotates the eccentric, and by means of its straps and eccentric-rods elevates the stamp C until it reaches the position shown in Fig. 1, where its weight rests upon the shoulder *h* of the boss. The shaft and its boss, continuing to rotate slowly, soon carry the eccentric to a point where the heavy weight of the stamp begins to draw upon it, and the inner surface of its larger circle *g'*, sliding over the projecting shoulder *h* of the boss, (shown in Fig. 4,) rotates the eccentric in advance of its boss and allows its stamp to fall by its own gravity and produce a dead blow upon any material that may be placed upon the bed of the machine.

I am aware that the stamps of mills have been elevated by various means and allowed to drop by their own weight, but they all differ from mine in construction.

Having now fully described my invention, I claim—

1. The combination of the main shaft and its boss H, provided with a shoulder, *h*, upon its periphery, with eccentric G, constructed with an internal opening, G', made of two half-circles having a shoulder, *g*², between them, slotted eccentric-rods, and a stamp, substantially as and for the purpose described.

2. The combination of the main shaft and its boss H, provided with a shoulder, *h*, with an eccentric constructed with an internal opening made of two half-circles of different diameters, side plates, *g*³, eccentric-straps, slotted eccentric-rods, and a stamp, substantially as and for the purpose described.

JAMES SYMONS.

Witnesses:

G. B. JOHNSON,
WM. LYON.