

(No Model.)

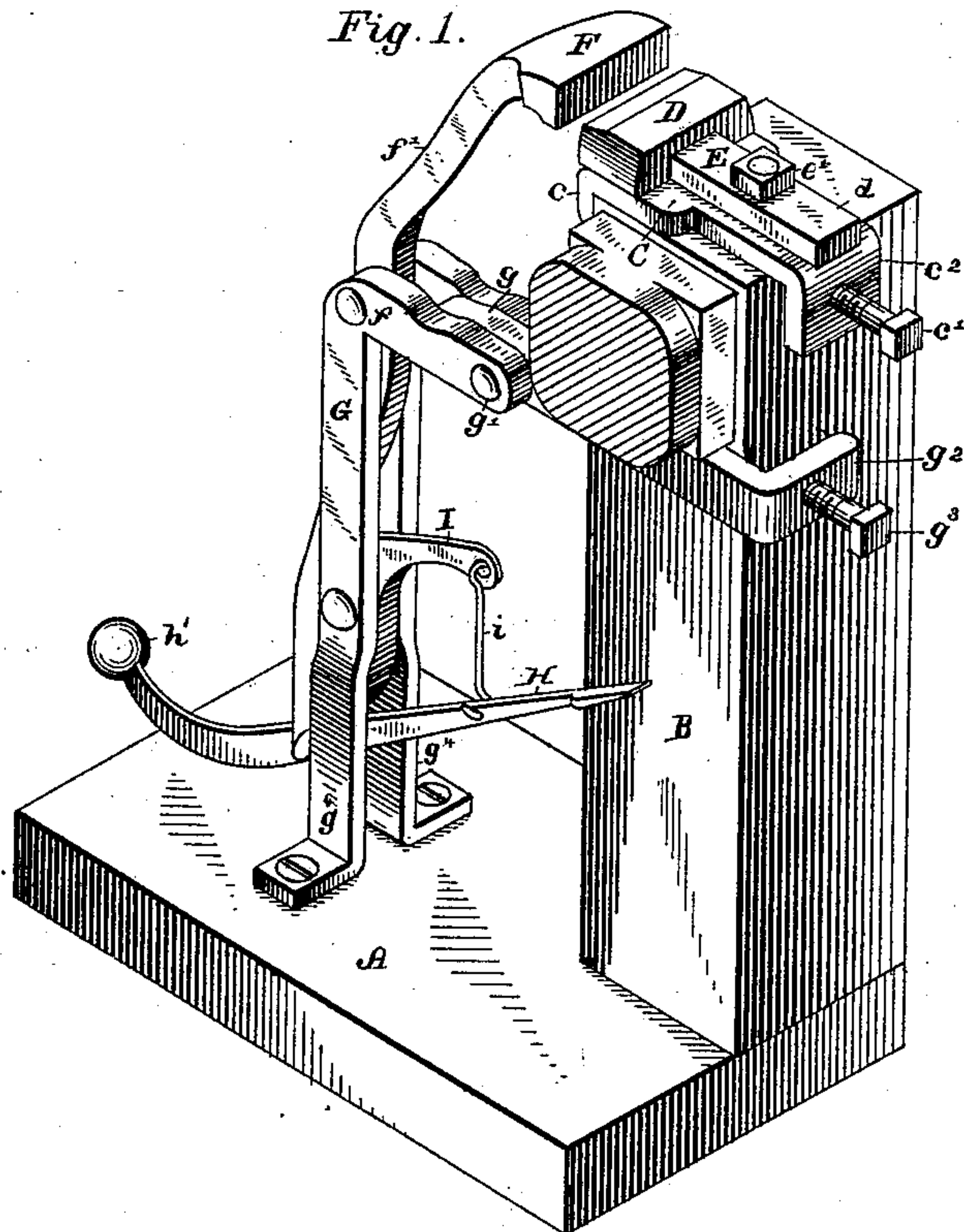
M. R. MURRAY.

## HORSESHOE CALK MACHINE.

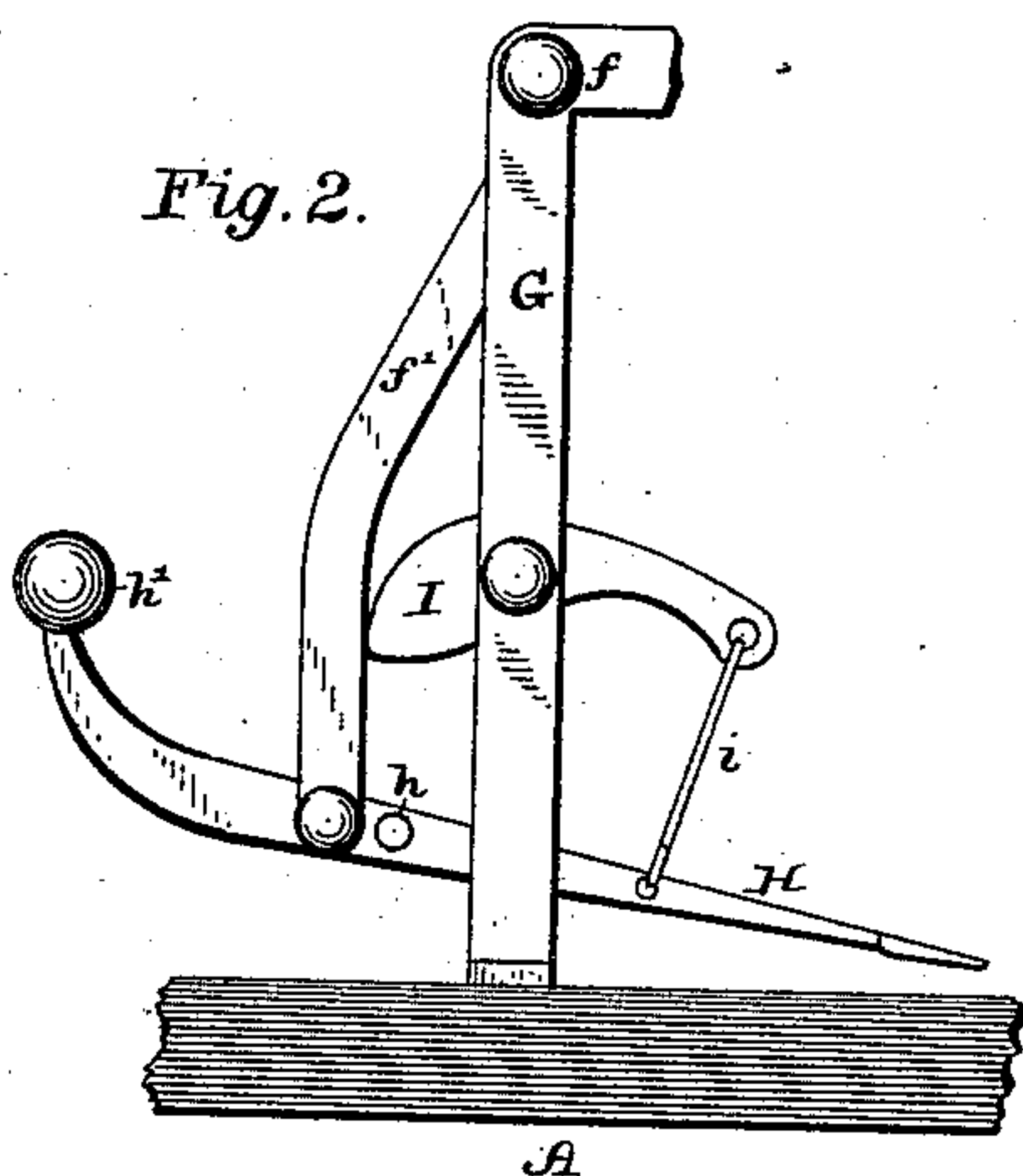
No. 370,745.

Patented Sept. 27, 1887.

*Fig. 1.*



*Fig. 2.*



*Fig. 3.*

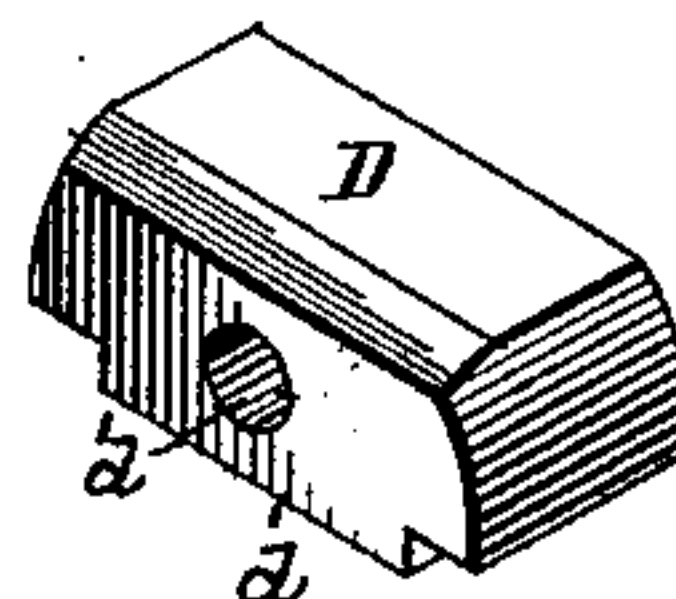
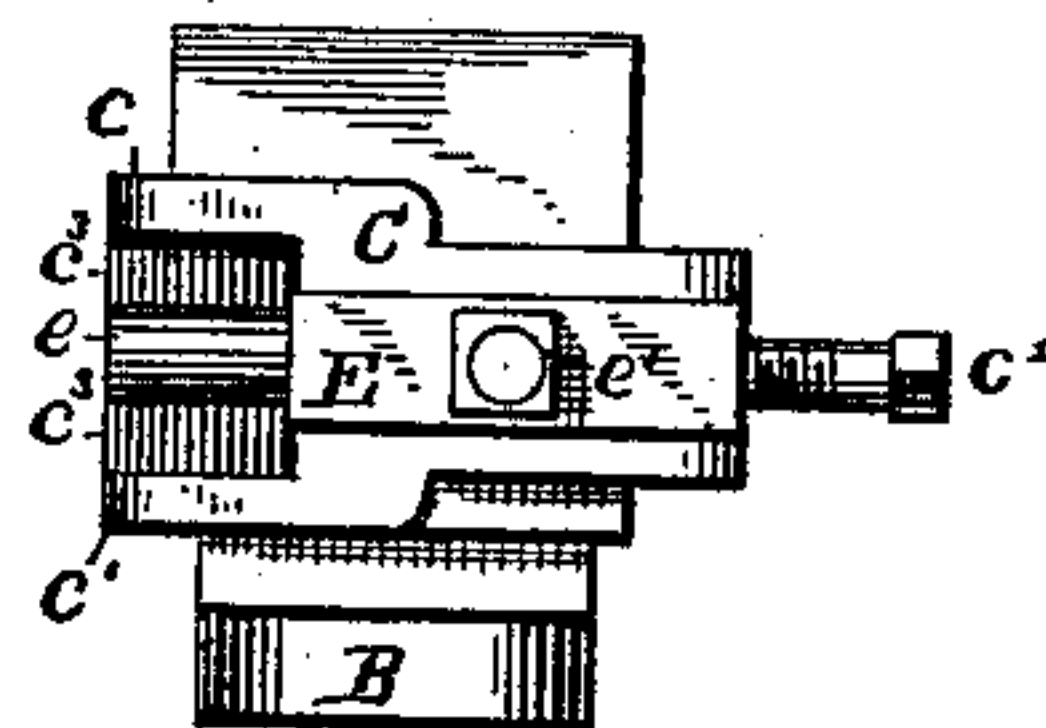
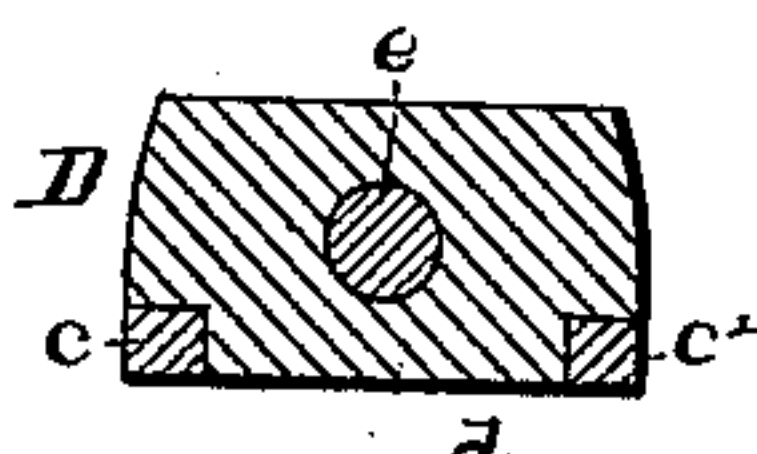


Fig. 4.



*Fig. 5.*



*Witnesses*

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*Inventor*

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By his Attorney L. Deane.



# UNITED STATES PATENT OFFICE.

MICHAEL ROBERT MURRAY, OF CAMBRIDGE, NEW YORK, ASSIGNOR OF  
ONE-HALF TO JAMES E. CRANDELL, OF SAME PLACE.

## HORSESHOE-CALK MACHINE.

SPECIFICATION forming part of Letters Patent No. 370,745, dated September 27, 1887.

Application filed January 8, 1887. Serial No. 223,754. (No model.)

*To all whom it may concern:*

Be it known that I, MICHAEL ROBERT MURRAY, a citizen of the United States, residing at Cambridge, in the county of Washington and State of New York, have invented certain new and useful Improvements in Horseshoe-Calk Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Figure 1 is a perspective view of this device; Fig. 2, a detail in side elevation, showing the arm of the movable jaw thrown into the position it has when this jaw is pressed toward the die; Fig. 3, a detail view of the die; Fig. 4, a plan view of the head of the machine, the die removed; Fig. 5, a detail in section of the die and its seat.

This invention belongs to that class of devices called "horseshoe-calk machines;" and the novelty consists in the construction and adaptation of the die; in the construction of the movable jaw and its arm and the means of operating the same; in the means for attaching the die-seat to the upright or anvil, and in the construction and combination of the several parts, all as will be more fully described, reference being had to the accompanying drawings.

In the drawings, A denotes the floor, ground, or any suitable base, and B any suitable upright or anvil. Upon the head of this upright is secured the die-holder C by means of its front lip, *c*, which comes over the front edge of the upright, and the set-screw *c'*, which passes through the lip *c* on the rear of the die-holder. This lip comes down over the rear of the part of the upright, and thus the set-screw *c'*, passing through it, binds upon this part. The die D, by means of the rib *d* on its under side, fits into the recesses *c*<sup>3</sup> in the front end of the die-holder, and can be thus easily adapted to its position. The small end *e* of the part E, which enters the central hole, *d'*, of the die, passes nearly through the die, and is chiefly relied on to maintain the die securely in position. This part is fastened at its other end to the upper face of the die-holder by means of the screw-bolt *e'*. The recess *c*<sup>3</sup> in the die-holder is usually open at the bottom, so that the bot-

tom of the rib of the die rests directly on the anvil or upright. The movable jaw F is pivoted near its upper end at *f* in the metallic brace G, which is fastened at its lower end to the base A, and its upper bent end is pivoted at *g'* to the piece *g*, which in turn is clamped upon the rear of the part B by means of the set-screw *g*<sup>3</sup>, which passes through its flanged end *g*<sup>2</sup> and binds against the said part. At its lower end the arm *f'* of the jaw F is pivoted to the lever H, just out of its center, and this in turn is connected by the rod or link *i* to the cam I, pivoted between the two metal bars *g*<sup>4</sup>, which form the brace G.

The operation of the device will be readily understood from the foregoing description. The die-holder having been secured in position to an anvil or any other device, and the movable jaw having been secured properly in relation to the same, as has been above described, the workman places the horseshoe between the movable jaw and the die, so that the calk is brought in proper position over the die, and then by placing his foot upon the end of the lever H thus operates the cam I, and throwing the lower end of the arm back, forces the jaw F down upon the shoe and holds it in position securely upon the die while the calk is being finished. When the workman's foot is removed from the lever, the weight *h'* at the opposite end of the lever draws it down, and thus withdraws the jaw from the die and the shoe is removed.

By the construction above shown and described the die can be very readily placed in position and securely held there while the device is being used. There is no need of screws, or other directly-applied fastenings to secure the die to the upper end of the upright. The structure of the die and its holder are simple and inexpensive. Not only can the die be readily placed in position, but it can also be as readily removed when occasion demands. This last operation is performed by releasing the screw that confines the part E to the guide-holder.

The thrust of the lever can be regulated by fixing the ends of the lever in the holes *h* in the lever nearer to or farther from the center.

As thus made, the device is very strong and very durable, and very well adapted to its uses.



Having now described my invention, what I consider new, and desire to secure by Letters Patent, is—

5 1. In a horseshoe-calk machine, the perforated die D, having a rib, *d*, on its under side, substantially as described.

2. In combination with the perforated and ribbed die D, the die-holder C, having lips *c c'*, and the recess *c<sup>3</sup>*, substantially as described.

10 3. In combination with the die D and die-holder C, made as described, the movable jaw F, pivoted on the brace G, and operated as set forth.

15 4. In a horseshoe-calk machine, the movable jaw F, pivoted near its upper end in the brace G, and at its lower end pivoted to the lever H, combined with said lever and the link *i*, and the cam I, pivoted in the brace G, all substantially as described.

20 5. The brace G, secured to the base and hav-

ing the arm *g* near its upper end, said arm being attached to the anvil or upright, combined with the movable jaw F and its pivoted arm *f'*, substantially as set forth.

6. In combination with the movable jaw F, 25 pivoted in brace G, and the lever H, having pivot-holes *h* and weighted end *h'*, the die D, the die-holder C, and the cam I and link *i*, all substantially as described.

7. In combination with the die-holder C, 30 having recess *c*, and the part E, having small end *e*, the perforated die D, having a rib, *d*, on its under side, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

MICHAEL ROBERT MURRAY.

Witnesses:

DARWIN E. WHITCOMB,

DANIEL M. WESTFALL.