Sheet 1.

Sheet 1- 2 Sheets.

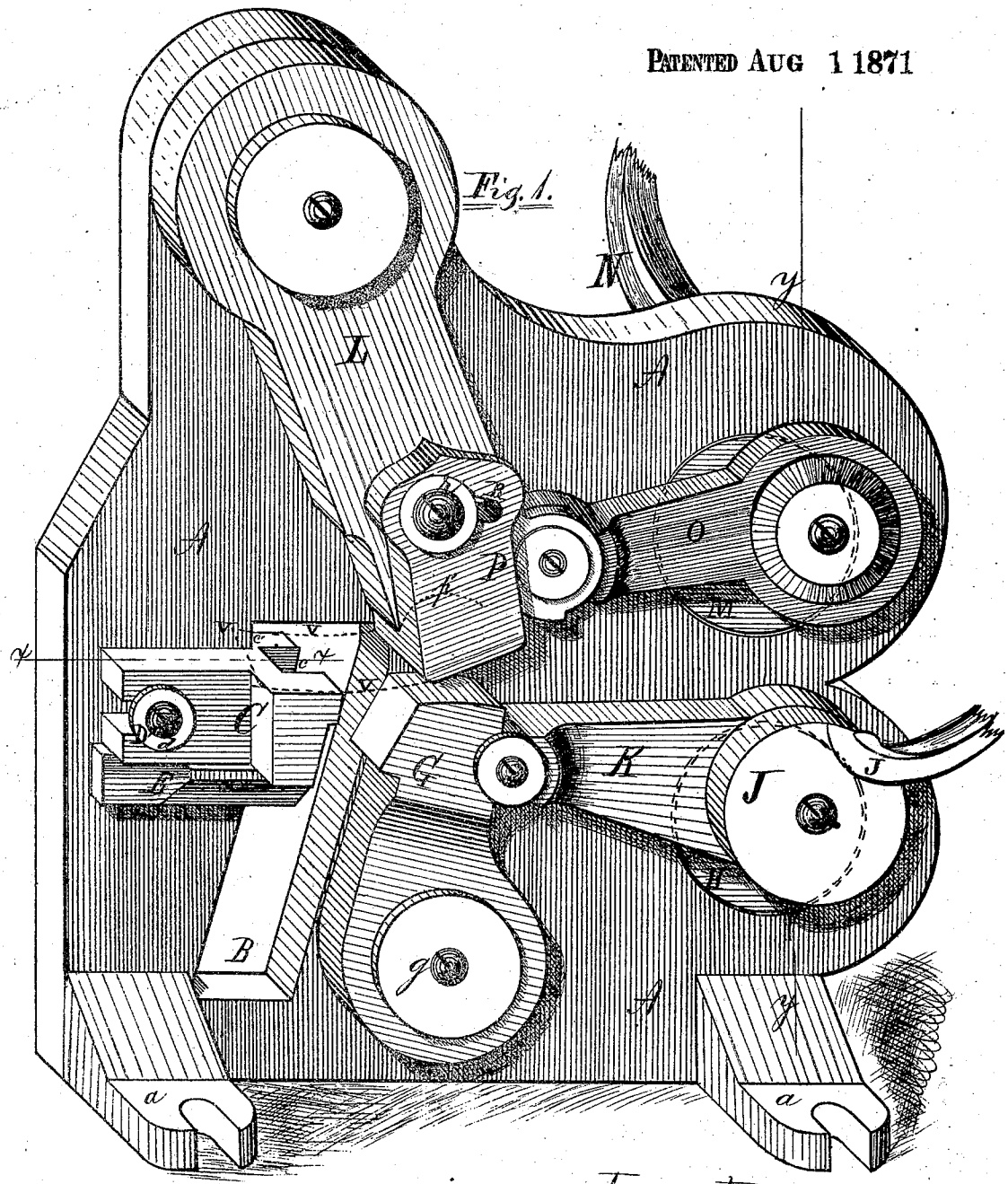
Alonzo T. Boon, David M. Osborn & George Geer.

117508

Machine for turning Heel-calks to Horse Shoes.

PATENTED AUG 1 1871

Fig. 1.



Witnesses:
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AM. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS.)

Sheet 2. Sheet 2. 2 Sheets.

Alonzo T. Boon, David M. Orsborn and George Geer—

Machine for turning heel-calks to Horse-Shoes.

117508

Fig. 4.

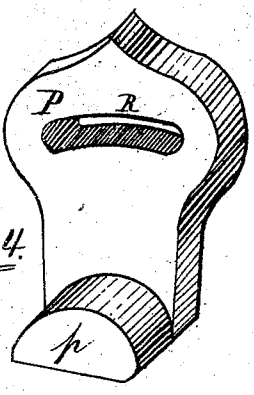


Fig. 5.

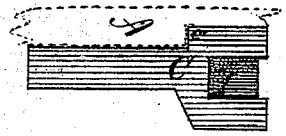


Fig. 2.

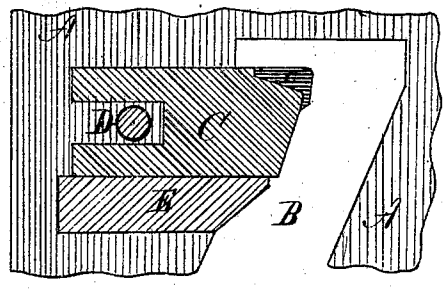
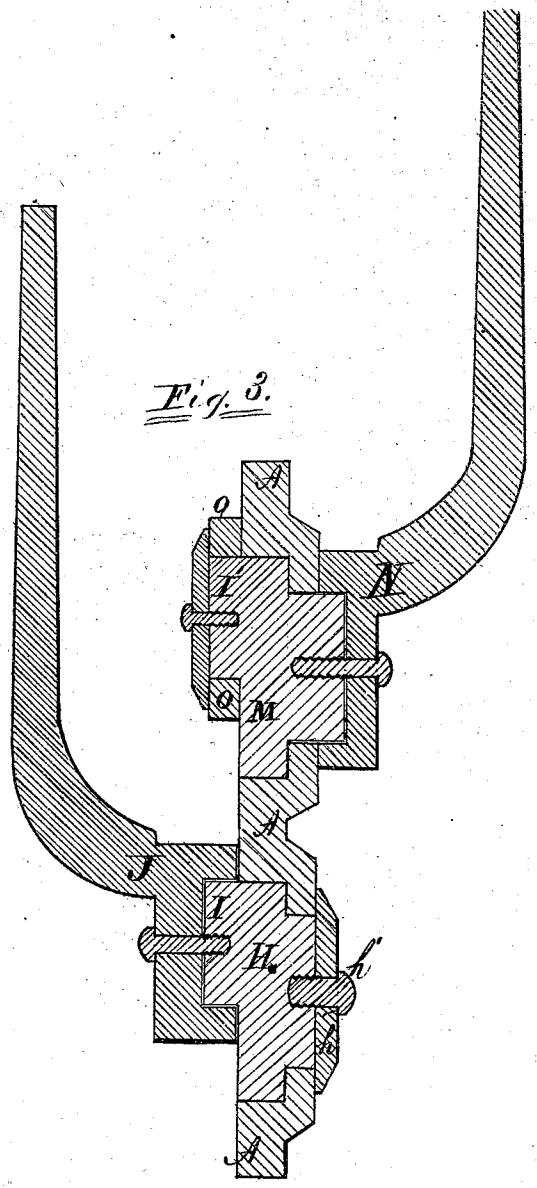


Fig. 3.



Witnesses—
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UNITED STATES PATENT OFFICE.

ALONZO T. BOON, DAVID M. ORSBORN, AND GEORGE GEER, OF GALESBURG, ILL.

IMPROVEMENT IN MACHINES FOR TURNING CALKS OF HORSESHOES.

Specification forming part of Letters Patent No. 117,508, dated August 1, 1871; antedated July 29, 1871.

To all whom it may concern:

Be it known that we, ALONZO T. BOON, DAVID M. ORSBORN, and GEORGE GEER, of Galesburg, in the county of Knox and State of Illinois, have invented certain Improvements in Machine for Turning Calks to Horseshoes, of which the following is a specification:

The nature of our invention relates to a machine for turning heel-calks to horseshoes; and the invention consists: First, in the peculiar construction of the calk-die, as hereinafter fully described, whereby at the same time that it may give the desired form to the calk it may, in combination with other devices, cut or shear off the surplus metal from the end of the shoe. Secondly, it consists in the combination of a jaw with the calk-die, for the purpose of holding the shoe while being operated upon. Thirdly, it consists in the combination of a device with the calk-die, for the purpose of pressing the metal into the die, and at the same time shearing off the surplus, all as hereinafter fully described. Fourthly, it consists in the combination of the aforesaid devices with a suitable supporting-frame.

Figure 1 is a perspective view of a machine embodying our invention. Fig. 2 is a vertical central sectional view of the calk-die on the line *x x*, Fig. 1. Fig. 3 is a vertical sectional view of parts of Fig. 1 on the line *y y*. Fig. 4 is a detached view. Fig. 5 is a top view of the die.

A is the frame for supporting the working parts of the machine. It is made of metal and supported in an upright position on any desired stand by bolts passing through slots in feet *a a* and through the stand. B is a slot or opening in the frame A. C is the calk-die, and has a recess, *c*, in one corner, the shape and size desired to be given the calk. D is a bolt passing through a slot in the shank of the die C and into the frame A. *d* is a washer. E is a ledge on the frame A, on which the die C rests. One side of the head of the die C rests against the side of slot B, as shown plainly at *c'*, Figs. 1 and 5. G is a jaw, pivoted at its lower end to the frame A by a screw-bolt, *g*. H is a short shaft, seated and having bearing in a circular recess and hole in the frame A, and held therein by means of a washer, *h*, and screw-bolt *h'*, as shown plainly at Fig. 3. I is a crank-pin on the shaft H. J is a lever secured at one end to the crank-pin I. K is a pitman or connecting-rod between the crank-pin I and the free end of the oscillating jaw G. L is an oscillating arm, pivoted at its upper end to the frame A. M is a short shaft seated in the frame A in the same manner as the shaft H. N is a lever attached to the projecting axle of the shaft M on the opposite side of the frame A from the lever J. O is a pitman connecting the free end of the arm L with the crank-pin I' on the shaft M. P is a head, its front side shown in perspective at Fig. 1, and its rear side in perspective at Fig. 4. The semicircular projection *p* on the rear side of the head P is seated in a semicircular recess, shown by dotted lines *p'* on the lower end of arm L, at Fig. 1. The plate P has a segmental slot, R, near its upper end, through which a screw-bolt, *r*, passes, to secure it to the arm L, and by means of which the angle of its lower face with the arm L may be adjusted, as desired.

The operation of our invention is as follows: The levers J and N both being thrown back to near the position shown at Fig. 1, the shoe may be inserted, as shown by the dotted lines S. Now, by bringing the lever J forward, the shoe will be held firmly between the jaw G and the adjacent face of the die C. The lever N is now brought forward, sweeping the head P over the upper face of the die C in the direction of the dotted lines *v v*, at the same time pressing the metal of the shoe into the recess *c* and shearing off the surplus metal at the end of the shoe. Of course, dies can be furnished with each machine having recesses *c* with different sizes and shapes, as may be desired for different shoes or by different manufacturers.

It will be plainly seen that as the lower face of the head P is worn away by use or by grinding it may be adjusted and brought down to the working position, thereby compensating for the wear by simply loosening the screw-bolt *r* and swinging the upper end of the head P forward, which will bring its lower forward corner down to the original working position.

Our machine may be used, also, for sharpening the calks on worn shoes.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination of the adjustable head P and vibrating arm L, arranged to operate in conjunction with holding-dies, substantially as set forth.

2. The combination of oscillating arm L, adjustable head P, jaw G, and die C, operated as and for the purpose substantially as set forth.

3. The arrangement of frame A, constructed as described, calk-die C, jaws G, arm L, and actuating devices K J H and O M N, as and for the purpose set forth.

ALONZO T. BOON.
DAVID his × mark. M. ORSBORN.
GEORGE GEER.

Witnesses:
PLATT R. RICHARDS,
FORREST F. COOKE.
Witnesses to DAVID M. ORSBORN'S mark:
T. O. JONES,
D. H. CLARKE.