

(No Model.)

2 Sheets—Sheet 1.

F. F. RAYMOND, 2d.  
JACK FOR HEEL NAILING MACHINES.

No. 480,741.

Patented Aug. 16, 1892.

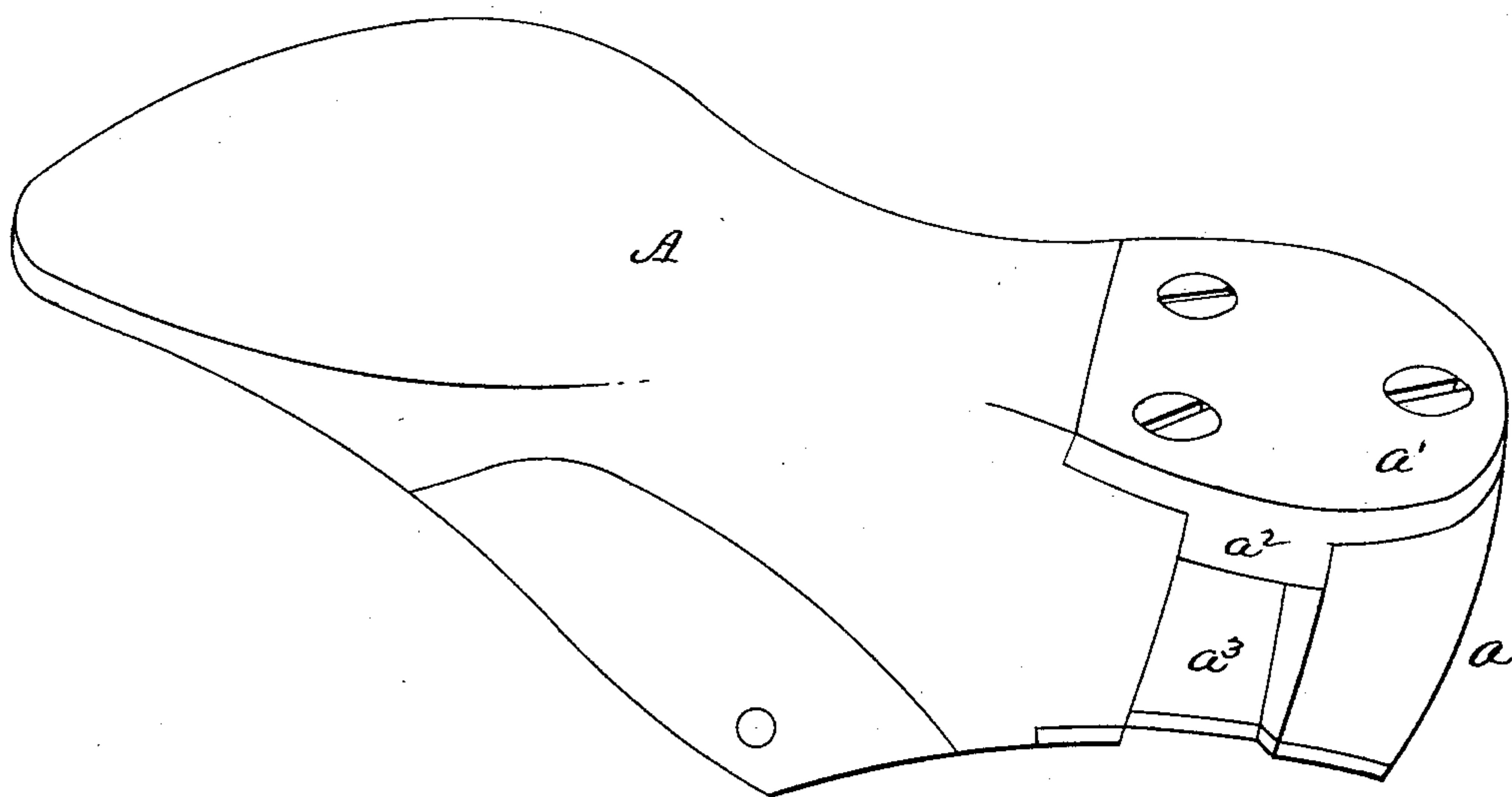


Fig- 1-

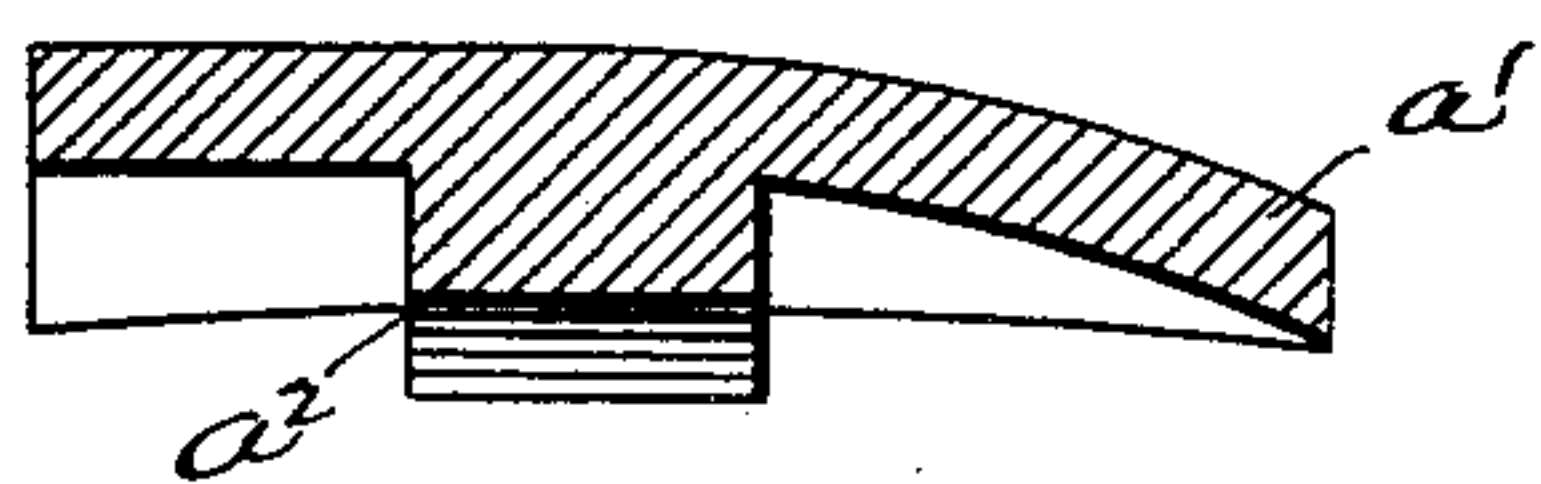


Fig- 2-

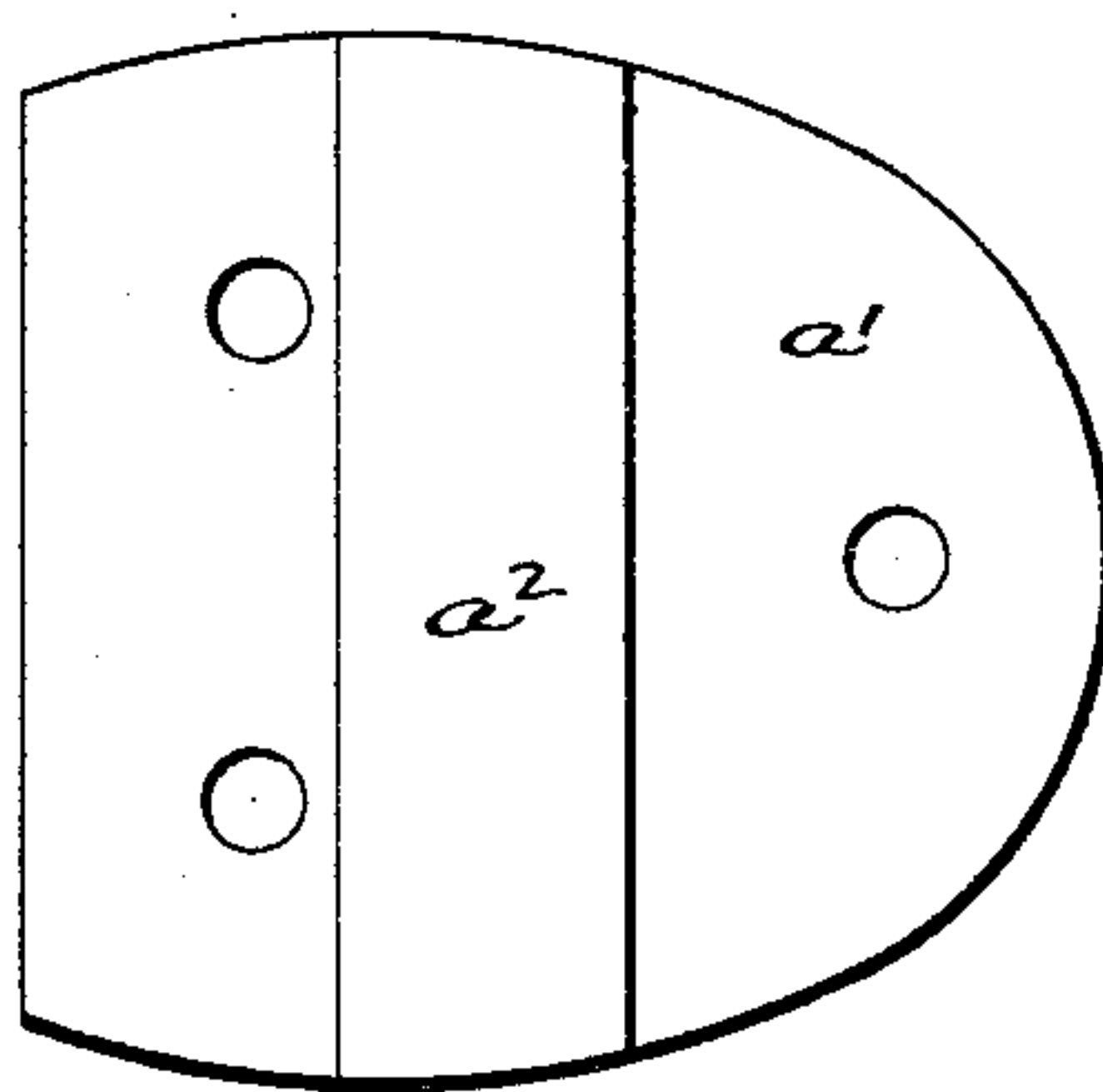


Fig- 3-

WITNESSES.

*J. W. Denson.*

*A. D. Merrill.*

INVENTOR.

*F. F. Raymond.*

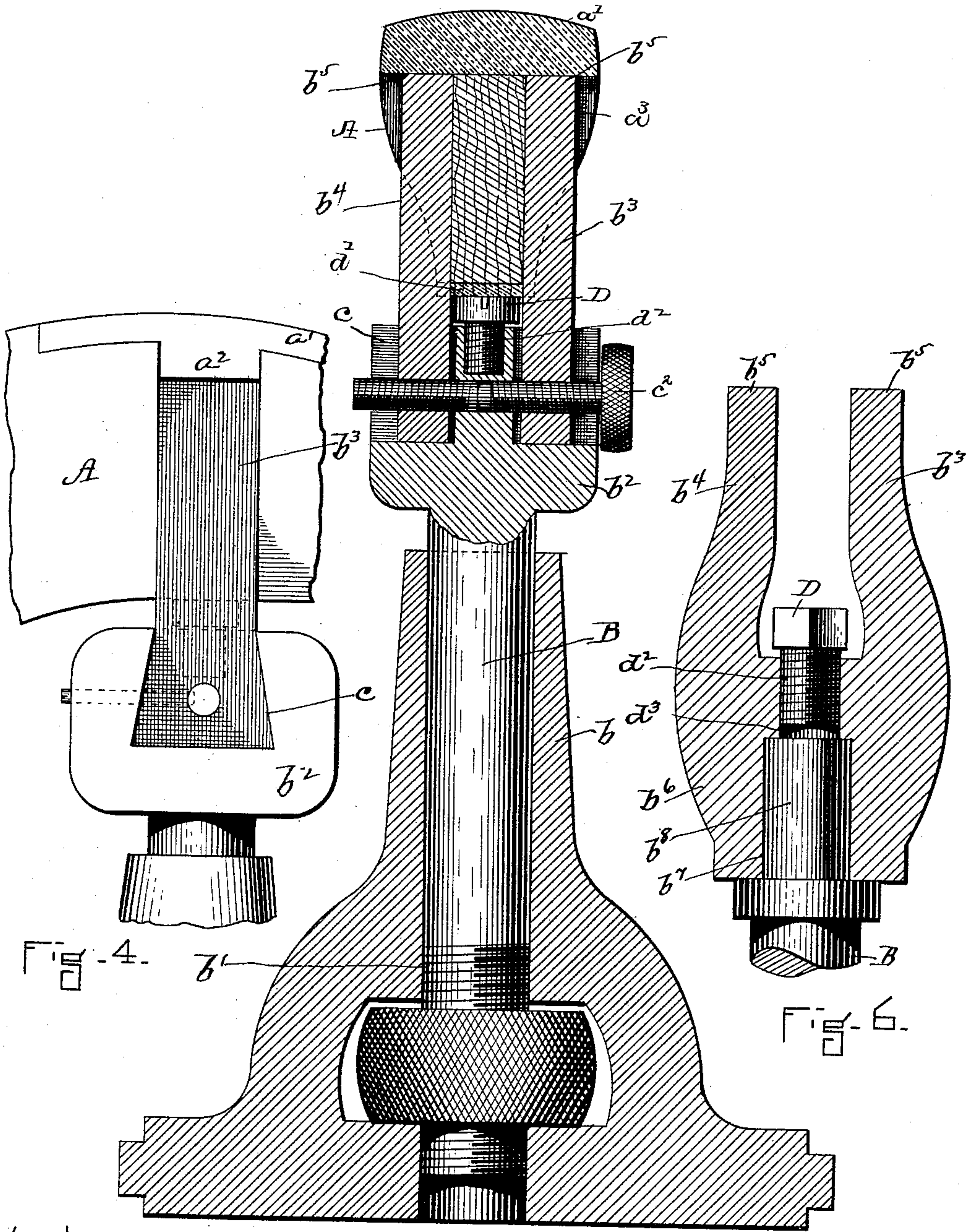
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WITNESSES.

L. W. Dolan.

A. J. Merrill

Fig. 5.

INVENTOR.

INVENTOR-  
H. H. Raymond



# UNITED STATES PATENT OFFICE.

FREEBORN F. RAYMOND, 2D, OF NEWTON, MASSACHUSETTS.

## JACK FOR HEEL-NAILING MACHINES.

SPECIFICATION forming part of Letters Patent No. 480,741, dated August 16, 1892.

Application filed June 15, 1889. Serial No. 314,483. (No model.)

*To all whom it may concern:*

Be it known that I, FREEBORN F. RAYMOND, 2d, a citizen of the United States, and a resident of Newton, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Jacks for Heel-Nailing Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in explaining its nature.

It is desirable for certain classes of work, especially for work known as "turned work," that the heel-seat be nailed and the heel attached upon the wooden last upon which the upper is lasted. The ordinary wooden last cannot well be used because the pintle-hole is not always bored straight or in proper position to receive the pin of the supporting-jack, and also because the wood employed—generally maple—is not of sufficient strength to stand the pressure to which it is subjected in the nailing operation.

My invention relates to a wooden last fitted at the heel end to adapt it for the nailing of it and to the jack necessary for co-operating therewith.

Referring to the drawings, Figure 1 is a view in perspective of the last. Figs. 2 and 3 are views of the heel-plate. Fig. 4 is a view in side elevation of the upper part of the jack and the rear part of the last mounted thereon. Fig. 5 is a view in vertical section of the jack and last mounted thereon. Fig. 6 is a view of the form of jack which I prefer to use.

The last A is preferably made of wood and is what is known as the "fitting-last"—that is, it is the last upon which the upper is lasted. It has at its heel end a the bottom metal plate  $a'$ , which is of the size of the bottom of the heel end of the last and which is preferably of considerable thickness, and which also has the cross rib or piece  $a^2$  to strengthen it. This cross rib or bar  $a^2$  is of course set into a recess of corresponding shape in the heel end of the last. The last also has extending inward from its top upon each side to the plate  $a^2$  a recess  $a^3$ , there being, of course, one recess on each side. These recesses are placed far enough from the back to not interfere with the proper support and

shaping of the back of the upper by the back of the last. The last as a whole therefore comprises the wooden body having a metal plate  $a'$  at the heel and the side recesses  $a^3$ .

The jack comprises a spindle, rod, or support B, which has vertical adjustment in the post  $b$  by means of the screw  $b'$  or in any other desired way, and it has formed upon its upper end  $b^2$  or attached thereto the arms  $b^3$   $b^4$ . These arms are of a size and length to fit the recesses  $a^3$  of the last in such a manner that the under surface of the plate  $a'$  at the end of the recesses shall rest upon the top  $b^5$  of each arm. (See Fig. 5.) These arms may be integral with a base  $b^6$ , as represented in Fig. 6, which is the construction I prefer to employ, or they may be separate and provided with a horizontal adjustment, as represented in Fig. 5, in which case the lower end of each is shaped to slide in a dovetail recess  $c$  in the piece  $b^2$ , and they are made horizontally adjustable to and from each other in said base-piece by means of right and left screws  $c^2$ . When the construction represented in Fig. 6 is employed, I prefer that the base-piece  $b^6$  have a hole  $b^7$  to fit the upper end  $b^8$  of the jack-spindle B. I prefer, also, that the jack have an adjustable bearing block or piece D, located, preferably, between the two tops, although not necessarily so, and adapted to be lifted or depressed in relation to the end  $b^5$  and to form an additional support for the upper surface of the last, and I prefer that this upper surface be armed with a metal plate  $d'$ , secured by screws or otherwise to the last.

I have represented the support D as made adjustable by providing it with a threaded shank  $d^2$ , which screws into the threaded hole  $d^3$  of the base  $b^6$ . (See Fig. 6.)

Having thus fully described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The improved last for use in connection with a jack having the construction specified and in combination with said jack, comprising a body having its bottom at the heel end formed by the metal plate  $a'$  and also having the side recesses  $a^3$ , substantially as and for the purposes described.

2. The last A, the metal bottom plate  $a'$  for the heel end thereof, having the cross-bar  $a^2$  upon its inner side, and the side recesses  $a^3$ ,



in combination with a supporting-jack, substantially as described.

3. The jack for use in connection with a last having the construction specified having arms  $b^3 b^4$ , adapted to enter the side recesses  $a^3$  of the last and to provide supports for the heel-plate  $a'$  thereof, combined with a vertically-adjustable support B, substantially as described.

10 4. The jack for use in connection with a last of the character specified, having arms  $b^3 b^4$ , and the support D, substantially as described.

15 5. A jack for use in connection with the last specified, having the arms  $b^3 b^4$ , the adjustable support D, and the adjustable support B, substantially as described.

6. The jack for use in connection with the

last of the character specified, having the arms  $b^3 b^4$ , horizontally adjustable to and from each other, substantially as described. 20

7. The jack for use in connection with a last of the character specified, having the arms  $b^3 b^4$ , the base  $b^6$ , and the spindle-hole  $b^7$ , combined with the support D, substantially as described. 25

8. The combination of a jack having the arms  $b^3 b^4$ , with a last having the metal nailing-plate  $a'$  at the heel end, and the side recesses  $a^3$  to receive the said arms  $b^3 b^4$ , and the support B, substantially as described. 30

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Witnesses:

J. M. DOLAN,

A. B. MERRILL.