

J. & J. A. HUGGETT.

Improvement in Machines for Finishing Horseshoe Nails.

No. 132,082.

Patented Oct. 8, 1872.

Fig: 3.

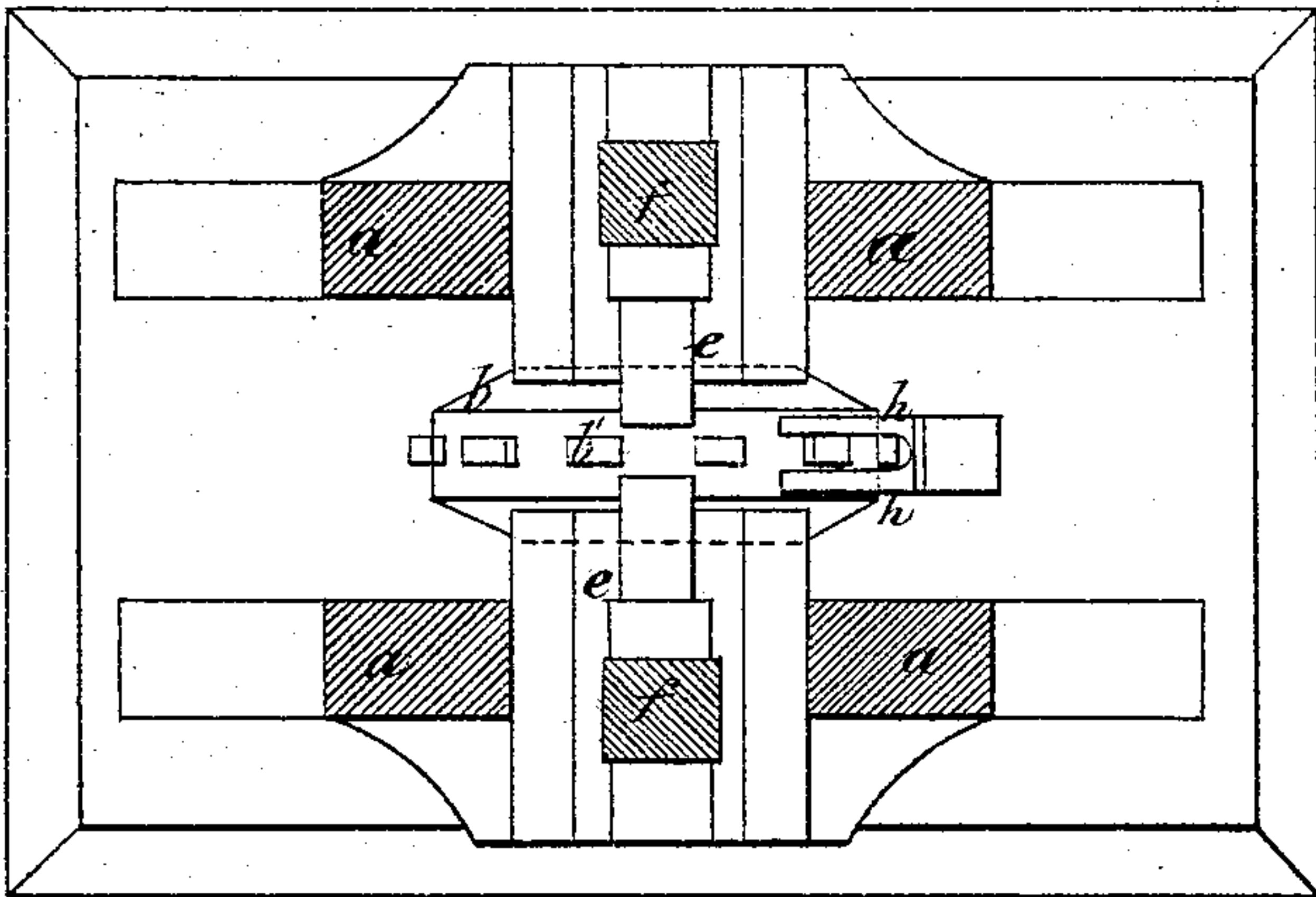


Fig: 4.

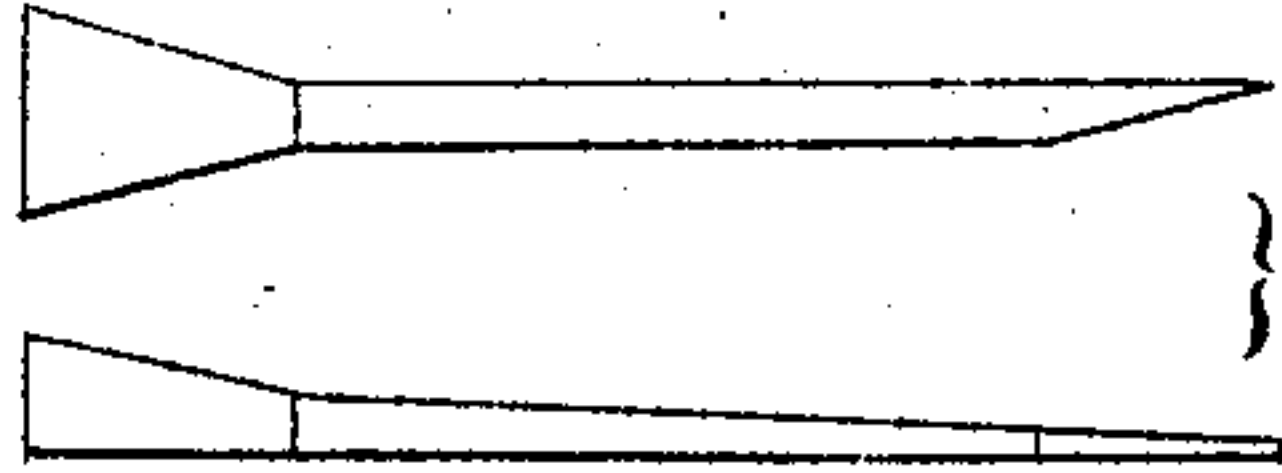


Fig: 5.

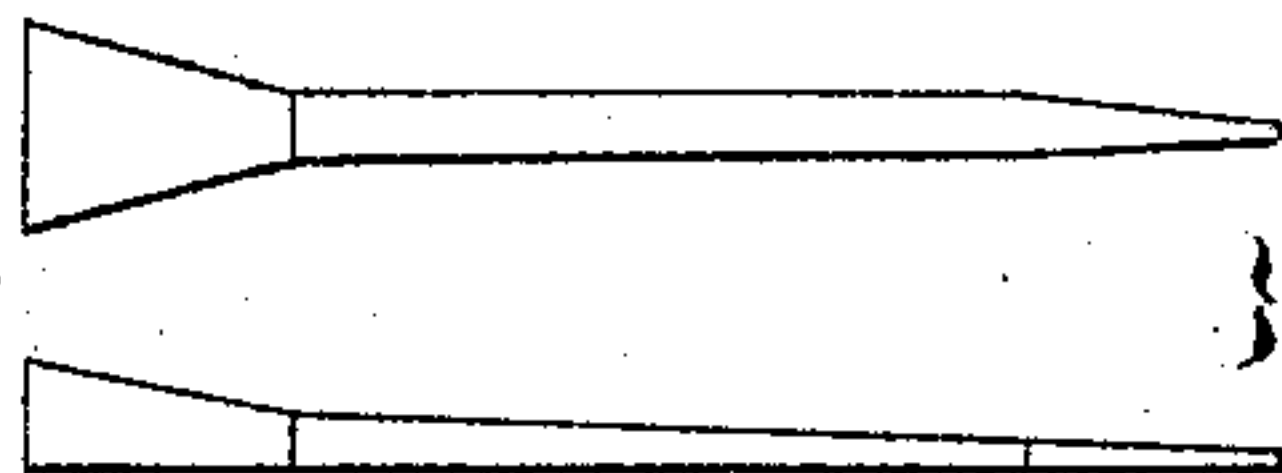


Fig: 1.

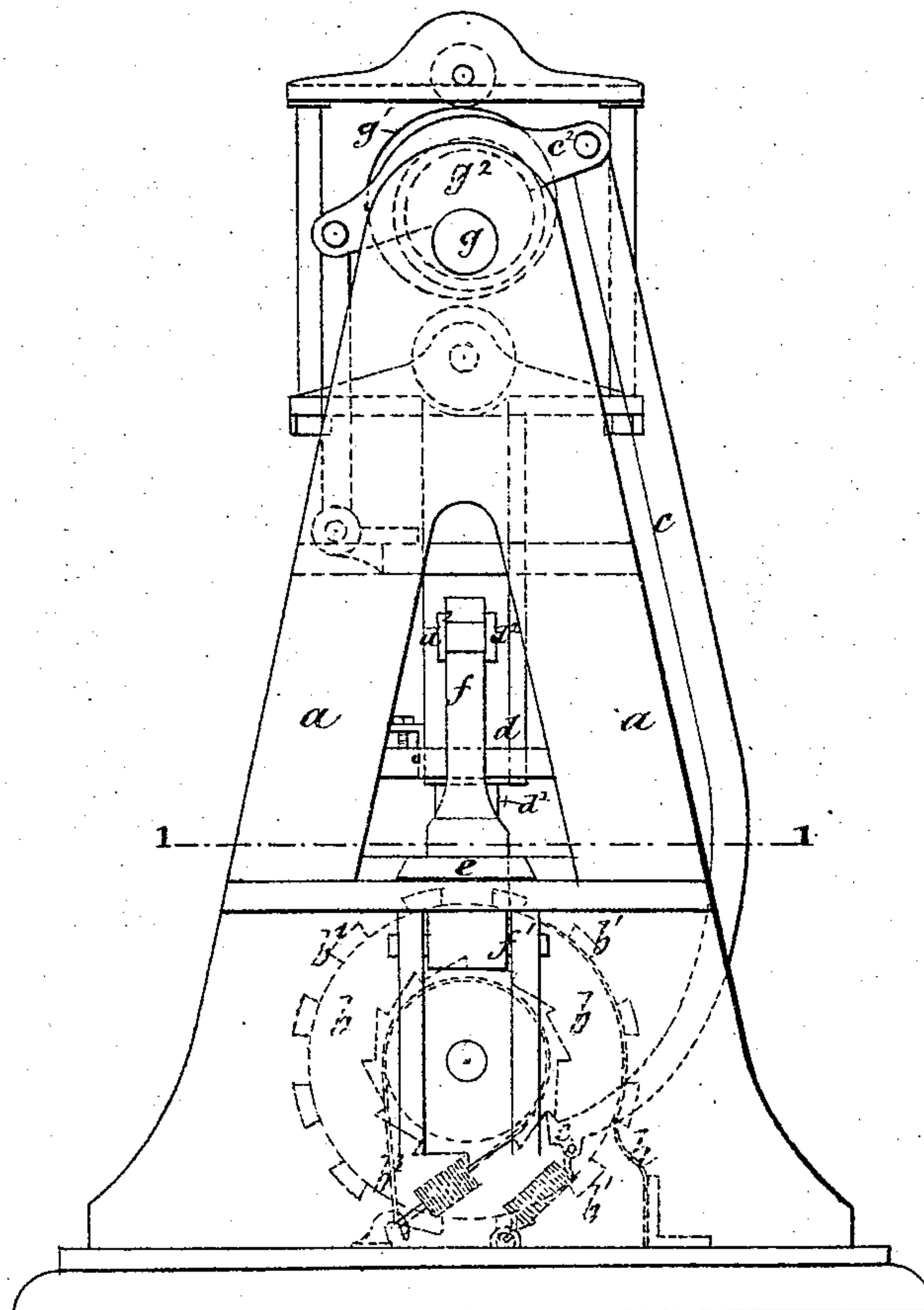
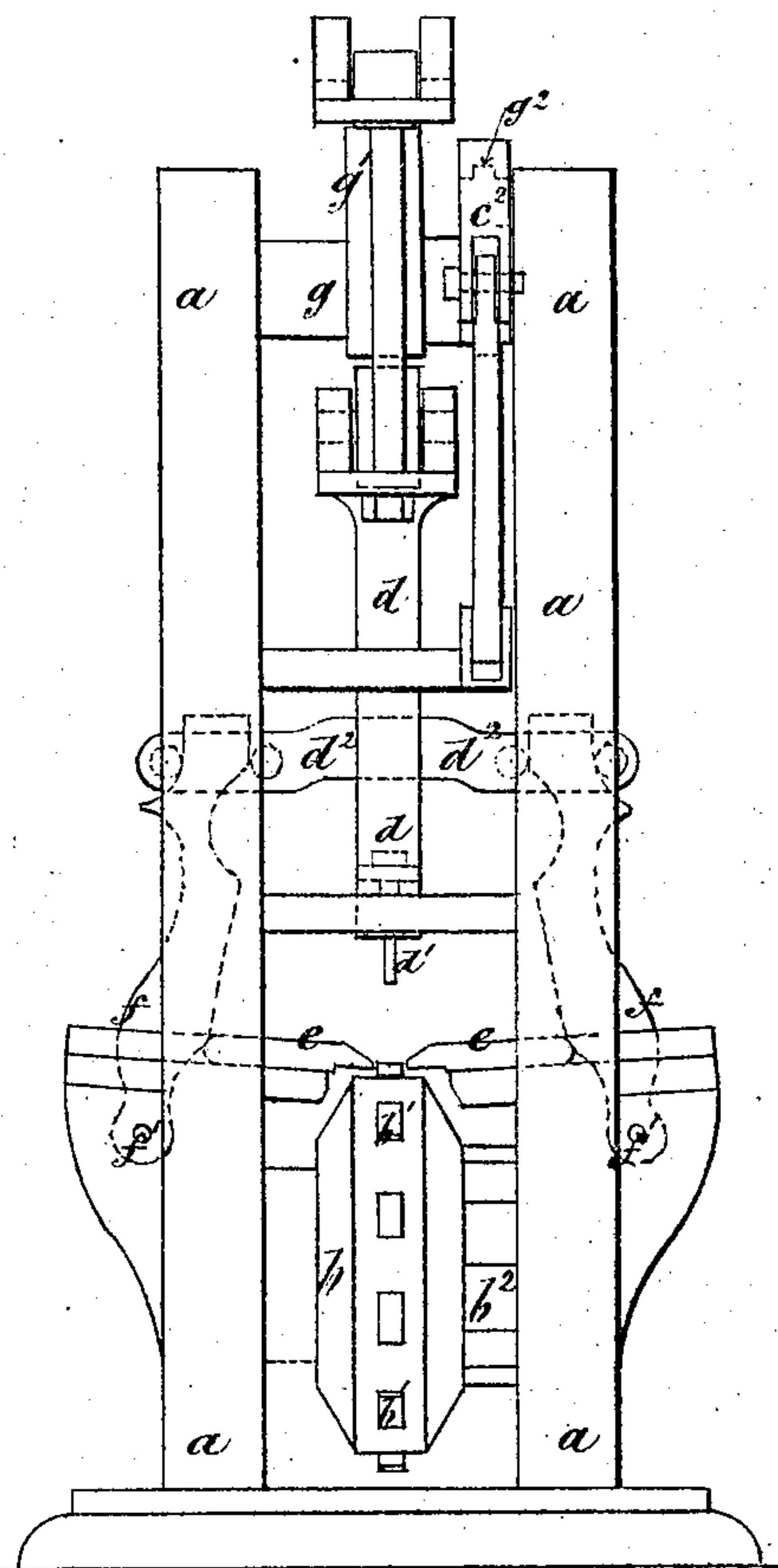


Fig: 2.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN HUGGETT, OF EASTBOURNE, AND JOHN A. HUGGETT, OF CLAPHAM,
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IMPROVEMENT IN MACHINES FOR FINISHING HORSESHOE-NAILS.

Specification forming part of Letters Patent No. 132,082, dated October 8, 1872.

To all whom it may concern:

Be it known that we, JOHN HUGGETT, of 36 Terminus Road, Eastbourne, in the county of Sussex, England, and JOHN ALBERT HUGGETT, of 21 Union Grove, Clapham, in the county of Surrey, England, subjects of the Queen of Great Britain, have invented or discovered new and useful Improvements in Machinery for the Manufacture of Horse-Nails; and we, the said JOHN HUGGETT and JOHN ALBERT HUGGETT, do hereby declare the nature of the said invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement thereof—that is to say:

This invention has for its object improvements in machinery for the manufacture of horse-nails. For this purpose we first roll an iron rod in such manner as to produce bulbs upon it at intervals, and this rod we divide into short pieces. The rod is cut through the middle of each bulb, and also at points half way between the bulbs. The pieces thus cut are put into a heading-machine and so nail-blanks are produced.

In order to make the nail-blanks into nails we employ a machine in which the blanks are squeezed on the sides and top by dies of such a shape as to give the finished form to the nail.

In order that our said invention may be most fully understood and readily carried into effect, we will proceed to describe the drawing hereunto annexed.

Description of the Drawing.

Figure 1 shows a side view; Fig. 2, an end view; and Fig. 3, a horizontal section through the line 1 1, Fig. 1.

a a is the frame of the machine. *b* is a rotating anvil with stops *b*¹ upon it. *b*² is a ring of ratchet-teeth, formed on the anvil, and a lever-claw, *c*, takes into these teeth and rotates the anvil step by step. Over the anvil is a slide, *d*, which is caused by a cam to descend at the time the anvil is stationary. It is armed with a steel tool, *d*¹, the face of which corresponds in form with the surface of the nail to be formed. *e e* are two trans-

verse slides, which are also armed with steel tools. Their faces correspond in form to the sides of the nail. *f f* are levers, which actuate the slides *e*. They are jointed to the frame at their lower ends at *f'* *f'*, and their upper ends are cam-shaped, and are acted on by rollers fixed on a cross-head, *d*², on the slide *d*, so that the descent of the slide *d* moves the slides *e* inward toward each other. The slide *d* takes its motion from the cam *g*¹ on the shaft *g*, on which are belt-pulleys to receive the belt by which the machine is driven. *g*² is another cam on the shaft *g*, giving motion to the lever *c'*, to which the lever-claw *c* is jointed.

The machine is worked in the following manner: The attendant places the nail-blanks one at a time on the anvil *b*, the head of each blank resting against one of the stops *b*¹ and with the point directed upward. The forked guide *h* prevents the blanks falling off. The claw *c* turns the anvil so as to bring the blanks in succession accurately between the tools. A brake-strap, *b*³, holds the anvil still when the claw ceases to act upon it. The tools then act upon the blank and it is molded by the pressure which they exert upon it.

Fig. 4 shows one of the blanks as it is brought to the machine, and Fig. 5 shows the finished nail.

What we claim is—

1. The combination of the rotary anvil and its stops with the top slide, and two transverse slides arranged to move transversely to the direction in which the anvil moves so that the nail-blank may be moved between the molding-tools by the rotation of the said stops, substantially as before set forth.

2. The combination of the rotary anvil with the stops *b*¹ and the forked guide, substantially as before set forth.

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Witnesses:

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