J. R. WILLIAMS.

DIES FOR FORMING HORSESHOES.

No. 182,731. Patented Sept. 26, 1876.

FIG. 1.

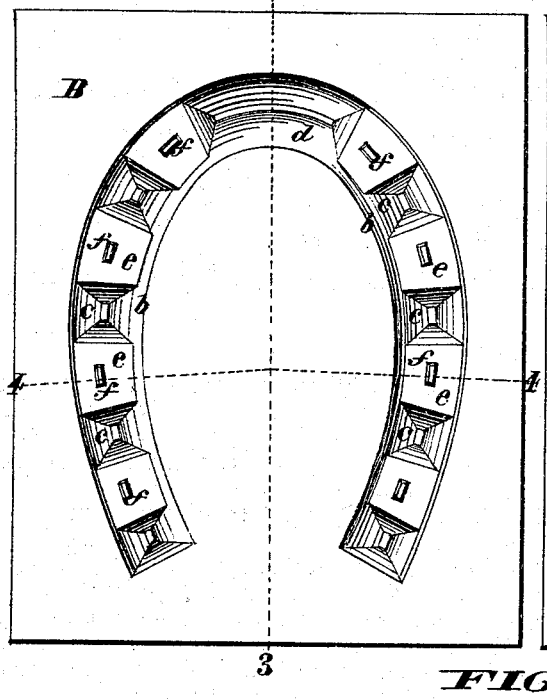


FIG. 2.

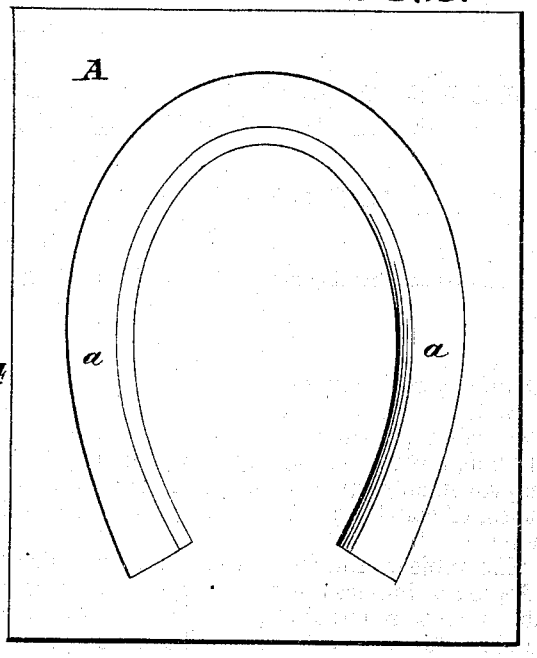


FIG. 3.

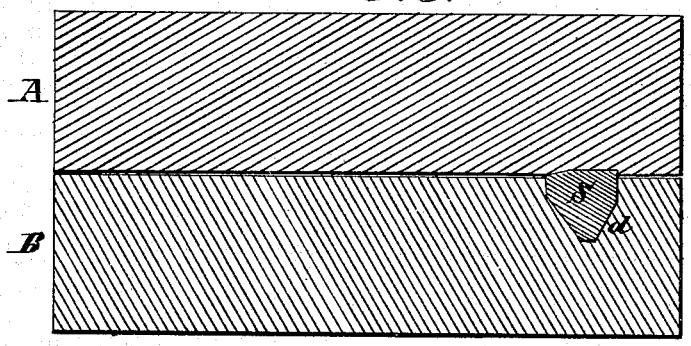
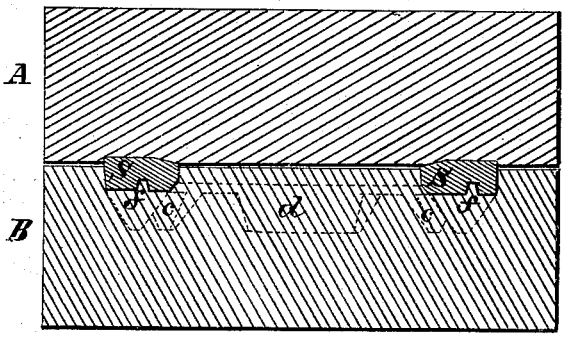


FIG. 4.



WITNESSES

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IMPROVEMENT IN DIES FOR FORMING HORSESHOES.

Specification forming part of Letters Patent No. **182,731**, dated September 26, 1876; application filed March 6, 1876.

To all whom it may concern:

Be it known that I, JOHN R. WILLIAMS, of Portsmouth, in the county of Scioto and State of Ohio, have invented certain new and useful Improvements in Dies for Forming Horseshoes, of which the following is a specification:

The subject of my invention is a pair of dies adapted to impart the final shape and external finish to a horseshoe, and form the countersinks for the nail-heads at the same operation, as hereinafter described.

In the accompanying drawing, Figure 1 is a face view of one of the dies. Fig. 2 is a face view of the other die. Fig. 3 is a longitudinal section of the connected dies on the line 3 3, Fig. 1. Fig. 4 is a transverse section of the same on the lines 4 4, Fig. 1.

The horseshoe is shown in each of the sectional views.

A B represent a pair of dies which, for convenience of description, I term, respectively, the upper and lower die. The upper die A is formed with a cavity, *a*, of the general contour of the horseshoe as shown in Fig. 2, and with one vertical or nearly vertical side and one chamfered or oblique side, as indicated in the sectional views, Figs. 3 and 4. The die thus formed is adapted to impart the proper shape to the upper surface of the horseshoe. The vertical wall of the cavity *a* forms the outer upper corner or edge of the shoe, while the oblique inner side forms the chamfer which is required beneath the hoof.

The lower die B is formed with a much deeper cavity, *b*, with a number of pyramidal or other tapering pits, *c*, to receive and shape the calks on the face of the shoe S. One of the said calks appears in section in Fig. 3, and four of them are shown in dotted outlines in Fig. 4. *d* is a cavity for forming the toe-calk, which is also shown in dotted outlines in Fig. 4. From the central parts of the spaces *e*, between the calk-cavities *c*, rise studs or spurs *f*, of the proper size and shape to form countersinks for the nail-heads.

Operation: The mode of producing the blanks for my improved shoes I have described and claimed in another application for Letters Patent. In carrying out the present invention I take a blank formed as described in my other application above referred to, and bend it, by common means, into the general form required for a horseshoe. The approximately-formed shoe is then placed in or upon the lower die B, and the upper die A is placed over it, its cavity *a* receiving the upper surface of the shoe. Pressure is then applied by a drop or screw-press, or by a cam-eccentric, or any other suitable means, so as to impart the final external finish to the shoe, and, at the same operation, produce the countersinks therein for the nail-heads. All that remains to be done to finish the shoe after it is removed from the die is to complete the punching of the nail-holes.

The shoes are made with any number of calks which may be found most desirable, and of any preferred width and weight. For large shoes the bars are made of greater width, so as to extend inward from the base of the calk.

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

The dies A B, for imparting the final shape or external finish to horseshoes, substantially as herein described.

JOHN R. WILLIAMS.

Witnesses:

OCTAVIUS KNIGHT,

LE BLOND BURDETT.