J. R. WILLIAMS.

MANUFACTURE OF HORSESHOE BLANKS.

No. 182,732. Patented Sept. 26, 1876.

FIG. 1.

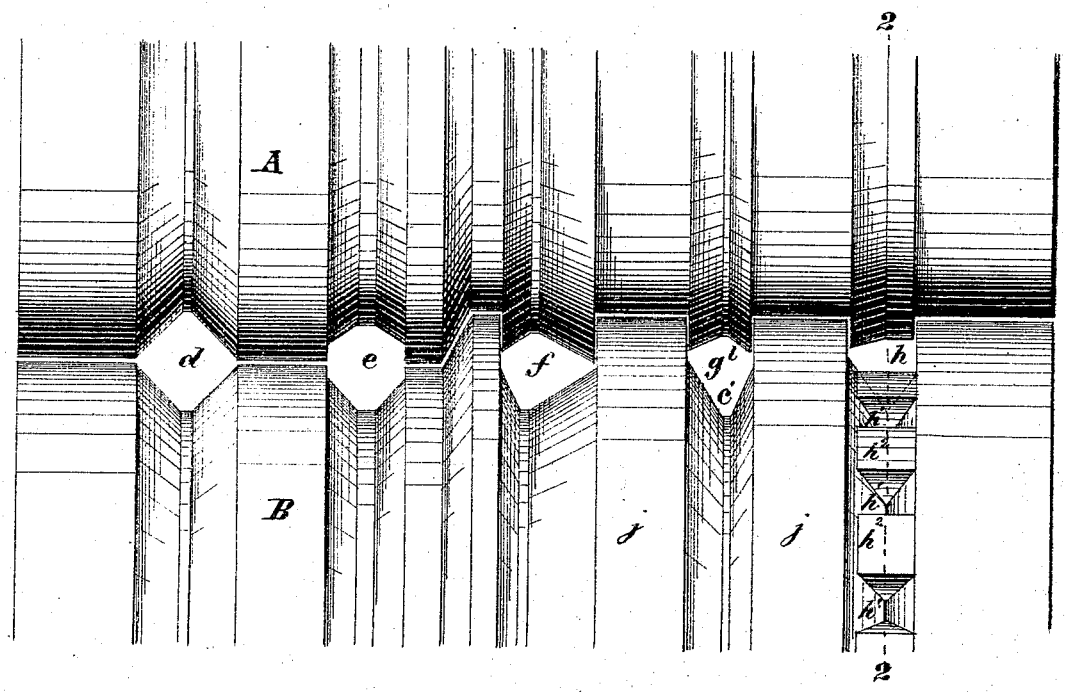

FIG. 2.

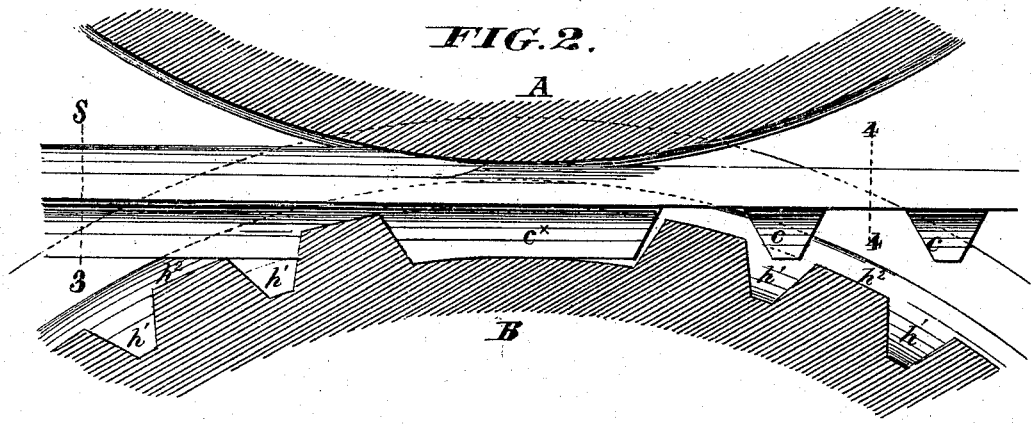

FIG. 3.

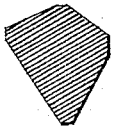

FIG. 5.

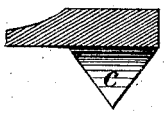

FIG. 4.

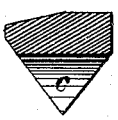

FIG. 6.

WITNESSES

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IMPROVEMENT IN THE MANUFACTURE OF HORSESHOE-BLANKS.

Specification forming part of Letters Patent No. **182,732**, 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 the Manufacture of Blanks for Horseshoes, of which the following is a specification:

My invention consists, first, in forming calked blanks for horseshoes by rolling, in the manner hereinafter described. The invention further consists in a calked blank for horseshoes, constructed by rolling, as hereinafter described.

In the accompanying drawing, Figure 1 is a front elevation of the adjacent parts of a pair of rolls adapted to carry out my invention. Fig. 2 is a transverse section of the same on the line 2 2, Fig. 1. Fig. 3 is a transverse section of the blank previous to its last pass, on the line 3 3, Fig. 2. Fig. 4 is a transverse section of the completed blank on the line 4 4, Fig. 2. Fig. 5 is a transverse section illustrating a modification especially adapted to large and heavy shoes. Fig. 6 is an elevation of the completed blank.

A B represent a pair of rolls, which, in practice, are geared together, so as to rotate in unison in customary manner. The said rolls are constructed with grooves, substantially as shown at *d e f g h*, adapted by successive passes to produce the calked blank shown in Fig. 6.

The bar comes from the groove *d* with an approximately-rectangular section, which is modified by the groove *e*, and still further by the successive grooves *f* and *g*, so that it acquires the section shown in Fig. 3 with an angular ridge, *c'*, out of which the calks *c* are to be formed, and a convexity at *i*, which insures the complete filling out of the rectangular upper corner in passing through the last groove *h*. The final groove *h*, by means of pockets h^1 and intervening prominences h^2, produces on the bar the desired number of calks *c c*, and wider ridges $c^\times$, which form the toe-calks of the finished shoe.

The rolls may have a circumference and an adequate number of depressions to run the length of two or more blanks at each revolution, and the bars are, of course, rolled of a length to be cut up into any number of blanks.

The last two or three grooves of the rolls are formed, as shown, between collars on the upper roll and depressions in the periphery of the lower roll, so that the blanks are turned out with little or no fins.

The catch-plates are made to bear on two or more collars, *j j*, of the lower roll, or else, if adapted to single grooves, they are made to fit around the periphery of the lower roll to a sufficient distance to prevent their dropping into the pockets h^1.

The rolls shown in Fig. 1 are adapted to produce the bar illustrated in Fig. 4, which shows so much of the bar as goes to make a complete blank. The modification in the form of grooves necessary to produce the blank for larger shoes, (illustrated in Fig. 5,) will be readily understood by the skilled manufacturer.

The blanks are finally formed into horseshoes by bending them in the required shape, stamping between dies, which I have described in another application, and subsequently punching the nail-holes.

I am aware that straight blanks, with calks of various forms, prepared for bending into the shape of a horseshoe, have before been made. This, therefore, I do not broadly claim. My rolled bars for the manufacture of horseshoes are peculiar, in that they are constructed in continuous lengths with pyramidal projections *c*, arranged in sets or series of any desirable number in each, with longitudinal ridges $c^\times$ intervening between the sets of pyramidal projections, for the purpose of forming the toe-calk of the finished shoes, the bar thus formed being adapted to be cut into blanks, as before described.

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

1. The rolls A B, constructed and adapted as herein described, for the production of calked horseshoe-blanks.

2. The rolled bar, having two or more sets or series of pyramidal projections, *c*, and interposed longitudinal ridges $c^\times$, substantially as herein described, and adapted to be cut up into blanks for horseshoes.

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Witnesses:

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