

J. H. SNYDER.

MACHINES FOR ROLLING HORSESHOE-BLANKS.

No. 194,934.

Patented Sept. 4, 1877.

Fig. 1.

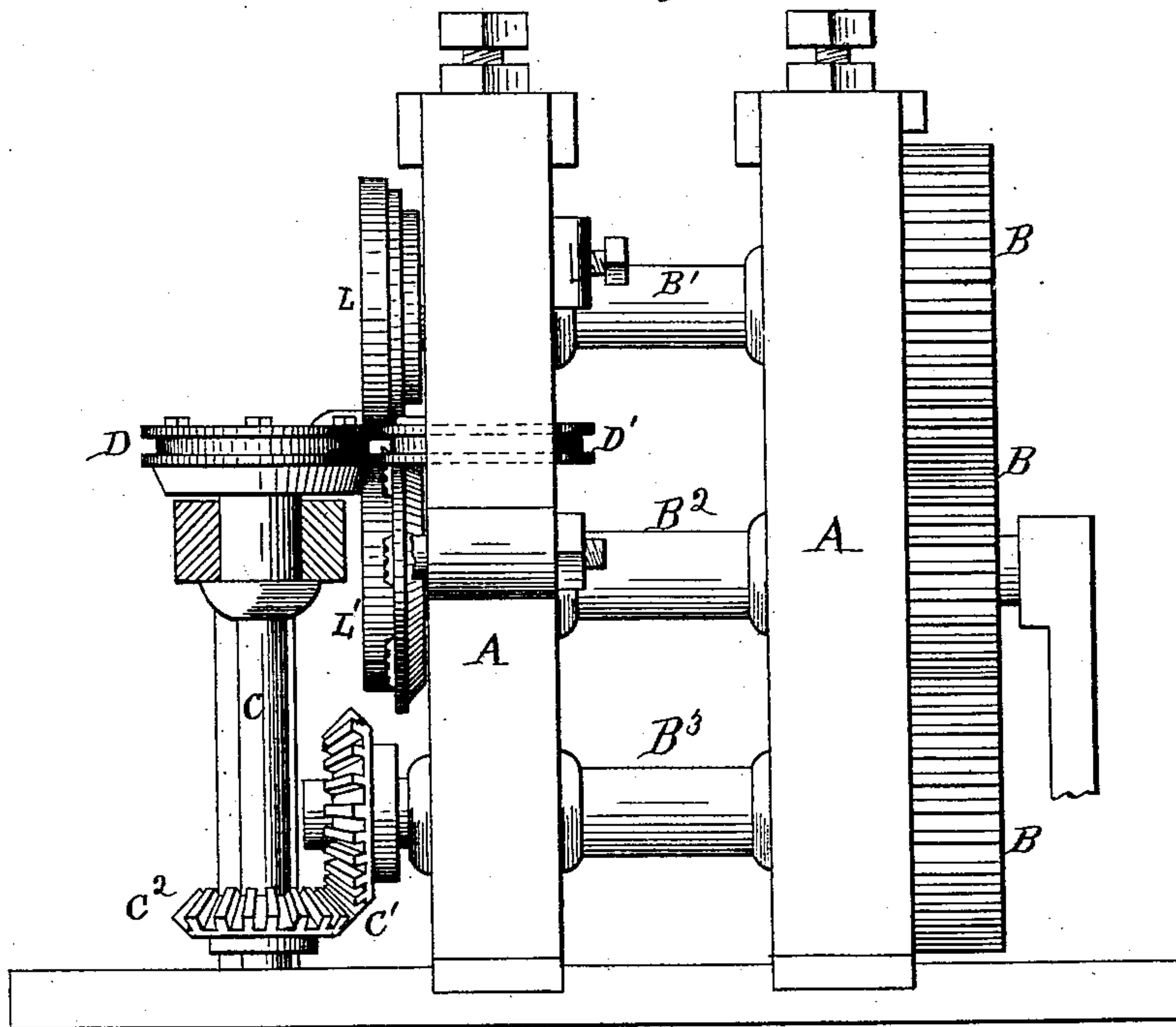


Fig. 2.

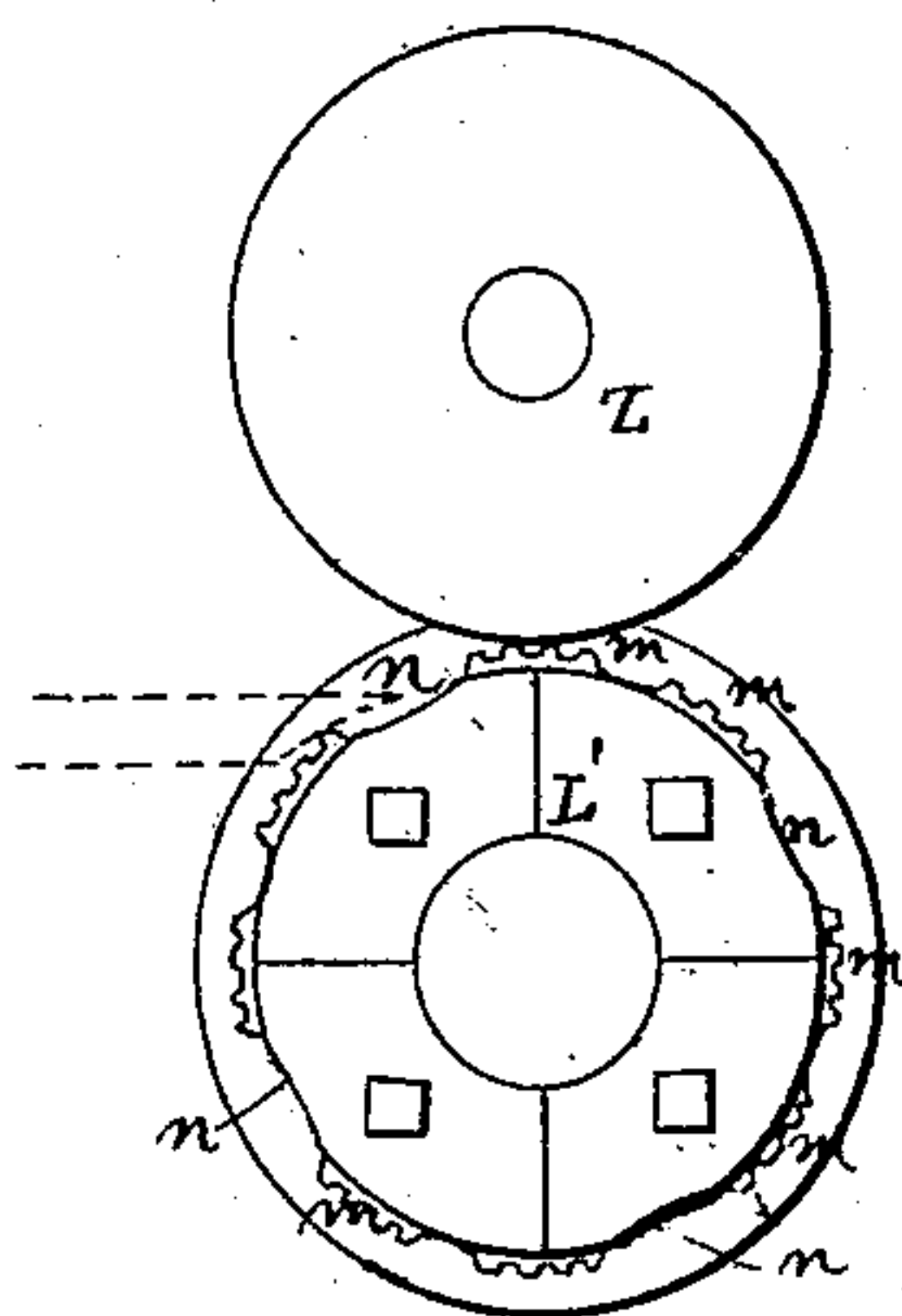


Fig. 3.

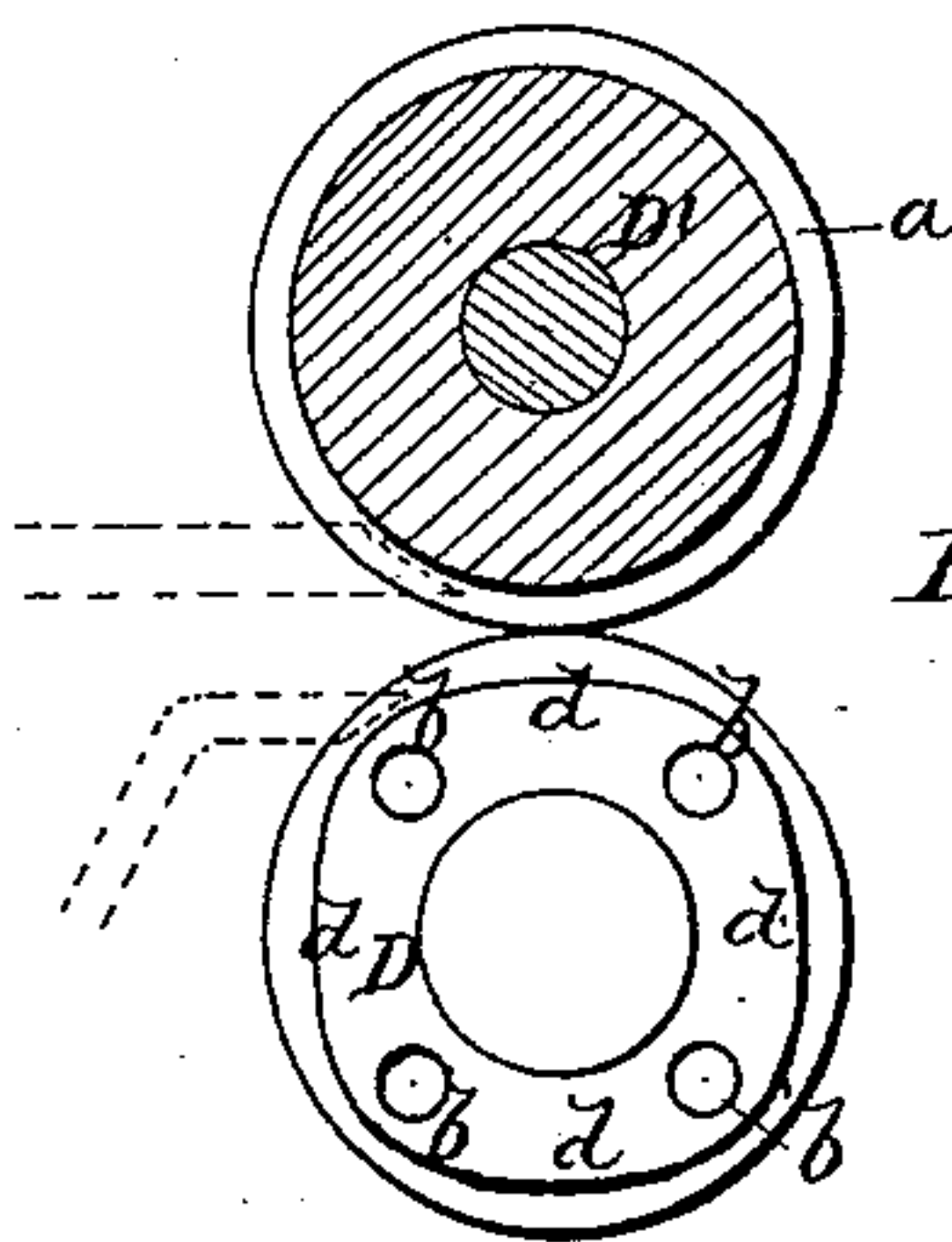
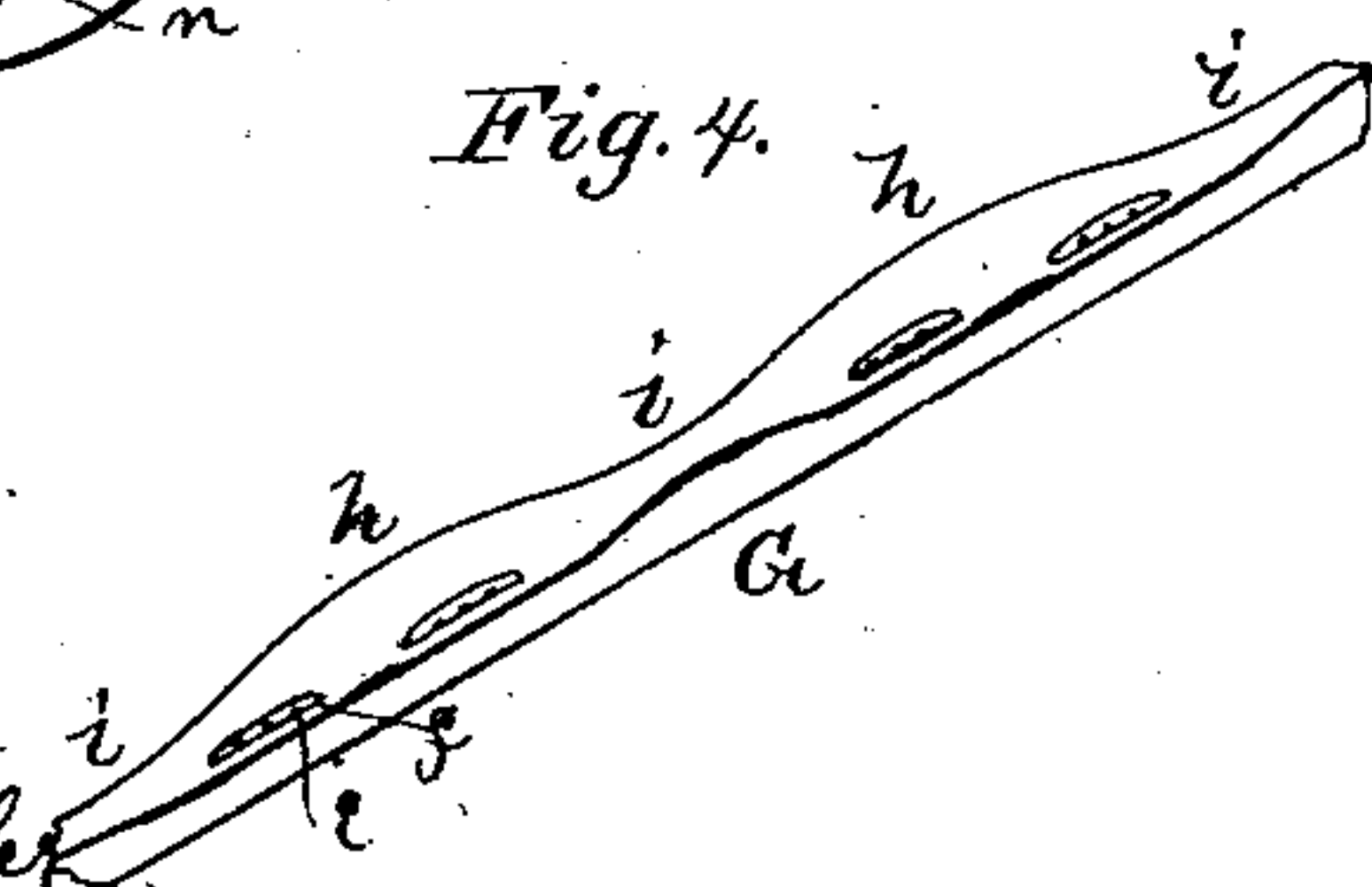


Fig. 4.



WITNESSES

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IMPROVEMENT IN MACHINES FOR ROLLING HORSESHOE-BLANKS.

Specification forming part of Letters Patent No. **194,934**, dated September 4, 1877; application filed June 29, 1877.

To all whom it may concern:

Be it known that I, JOHN H. SNYDER, of Richmond, in the county of Henrico and in the State of Virginia, have invented certain new and useful Improvements in Machine for Rolling Horseshoe-Blanks; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction of horseshoe bar-iron, and in a machine for rolling the same, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a front elevation of my rolling-mill. Figs. 2 and 3 are detailed views of the rolls, and Fig. 4 represents the bar after it has passed through the rolling-mill.

A A represent the frames or housings of the rolling-mill, in which are placed three shafts, $B^1 B^2 B^3$, geared together at one end by cog-wheels B B. The bottom shaft B^3 has at its other end a miter-gear wheel, O^1 , meshing with a similar wheel, O^2 , on a vertical shaft, C, which carries upon its upper end a roller, D. Directly opposite this roller is another roll, D' , operating against the same, and this roll, D' , may be rotated simply by friction from the roll D, or the two rolls may be geared together in any suitable manner, if deemed more advantageous. The roll D' has simply a circumferential groove, a , of uniform depth and width throughout, as shown in Fig. 3; while the roll D is formed with a circumferential groove of peculiar shape, the bottom of said groove being made eccentric, forming four convex points, b , nearer the circumference, and the intervening portions d being farther from the circumference. The bar of iron G being passed and rolled between these rolls leaves one edge perfectly straight, while the other edge forms alternate convexities h and concavities i , as shown in Fig. 4. Im-

mediately beyond the rolls D D' are two vertical rolls, L L' , fastened, respectively, on the ends of the shafts B^1 and B^2 . The upper roll L is made perfectly smooth, while the lower roll L' is formed with a series of toothed flanges, $m m$, arranged in pairs, as shown in Fig. 2, and between each pair of these flanges a concavity, n , is formed in the roll. The iron bar G passes immediately from the rolls D D' to the rolls L L' , and through the same, which completes the blank, forming the creases f and indentations e for the nail-holes.

By this construction I form the bar in such a manner that it is the widest at the points h , which will form the toe of the shoe. This is of great importance, as the toe of the shoe is the part that first wears out, or where the greatest wear comes; the bar being cut in the center of the concavities i , which part forms the heel of the shoe. The bar is thus rolled by one operation, the edges first and then the top and bottom, and by a proper formation of the rolls the bar may be made part round or oval and part square, as may be desired, or part flat and part square, or other various forms.

It will be seen that the two sets of rolls are very close together, and yet one set in advance of the other, which is absolutely necessary in the practical working of the machine, and that the bar may be made perfect without any fins at the edges.

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

In a machine for rolling horseshoe-blanks, the combination, substantially as described, of the horizontal rolls D D' and the vertical rolls L L' , all arranged and constructed substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 29th day of June, 1877.

JOHN H. SNYDER.

Witnesses:

FRANK GALT,
H. A. TOULMIN.