

L. G. CLAUDE.

Rolls for Horseshoe Bars and Blanks.

No. 219,621.

Patented Sept. 16, 1879.

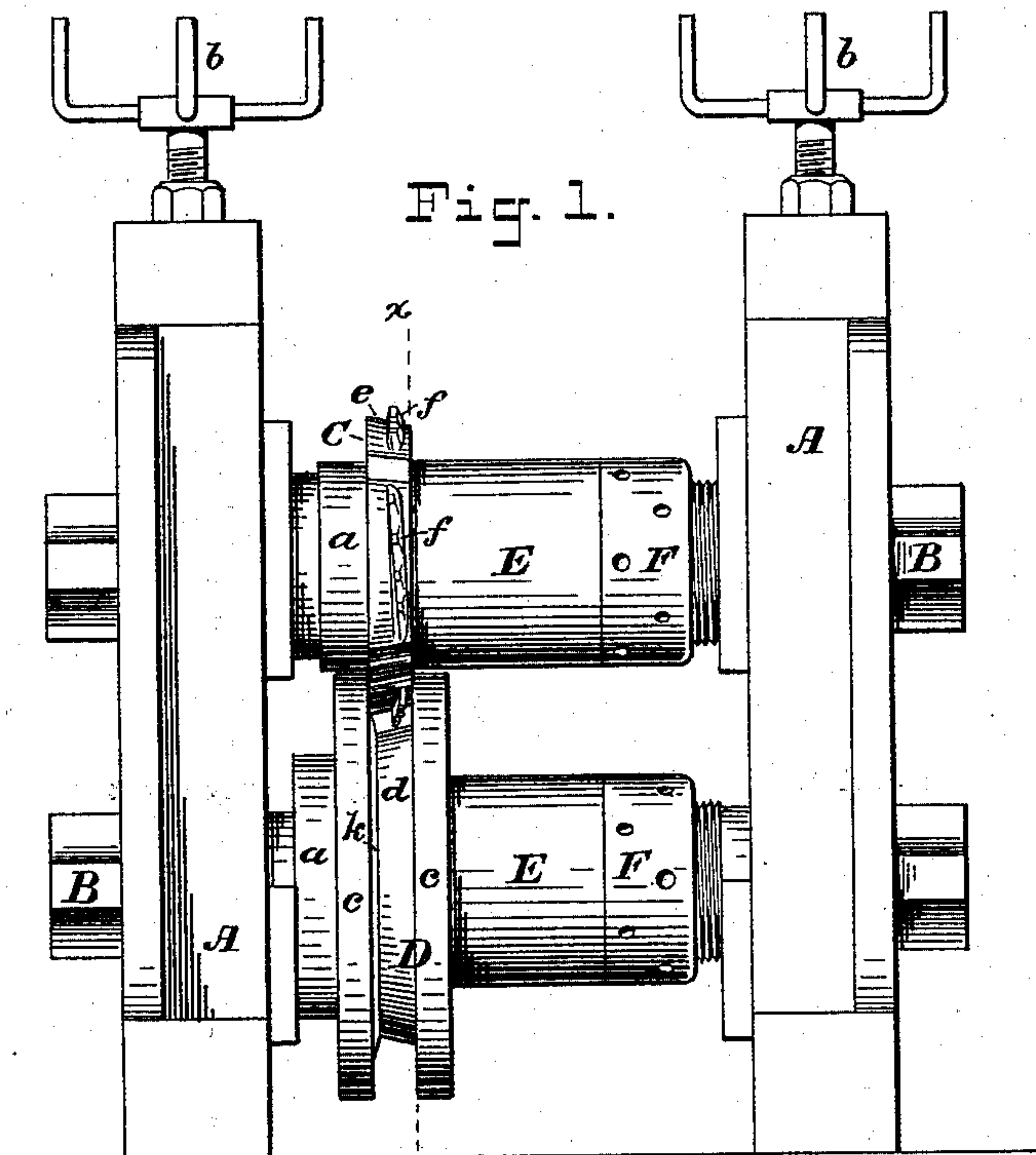


Fig. 1.

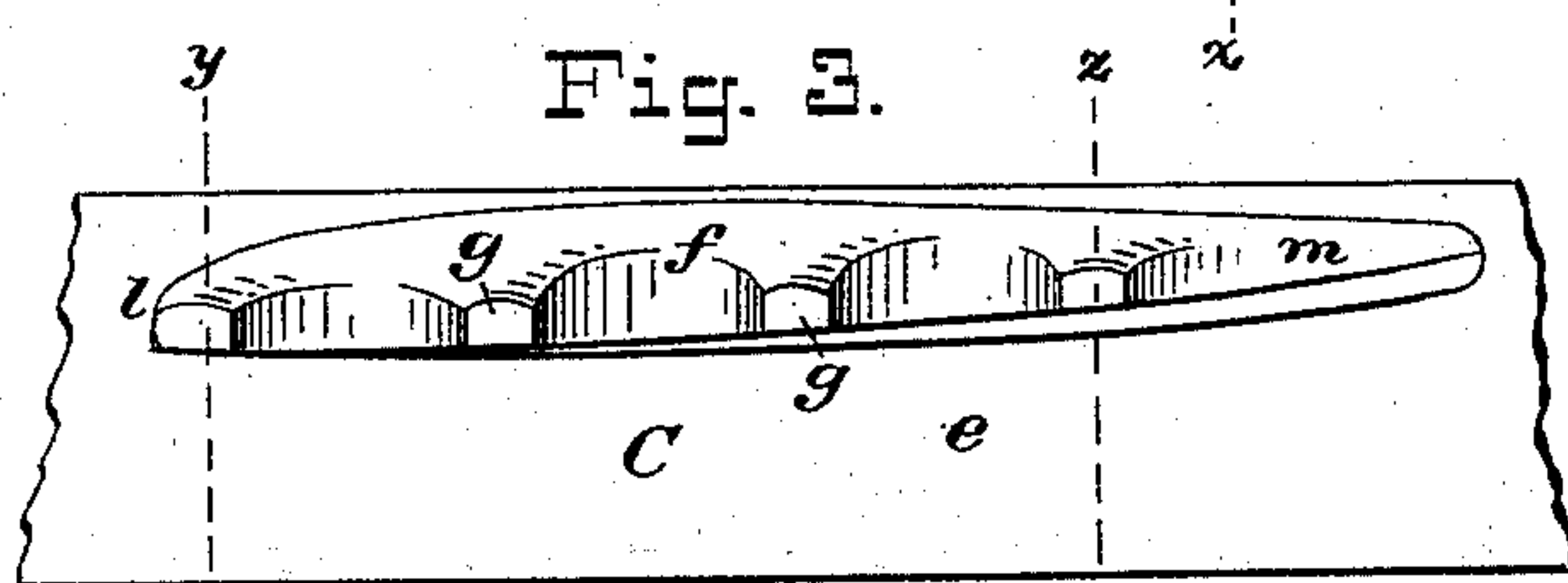


Fig. 3.

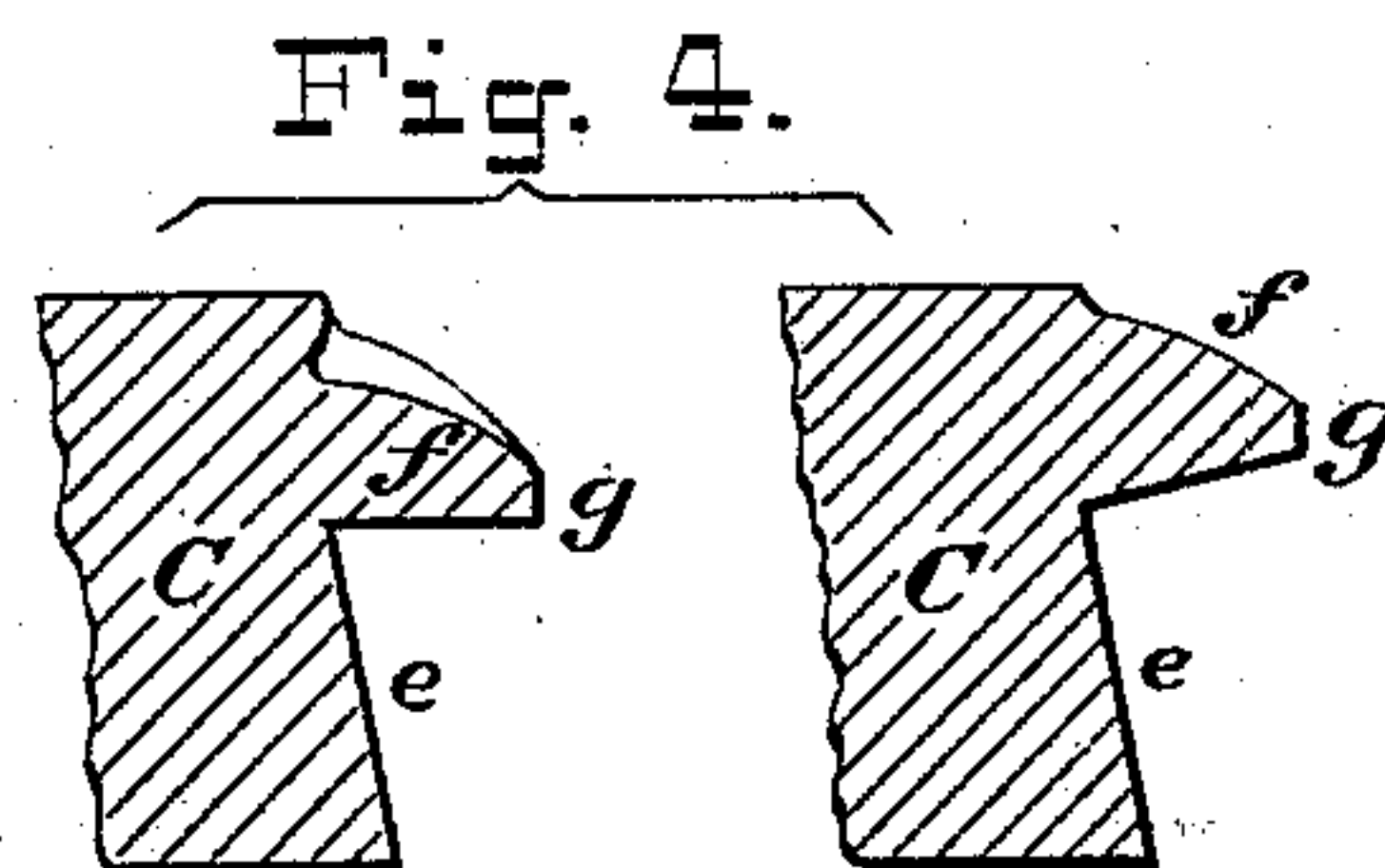


Fig. 4.

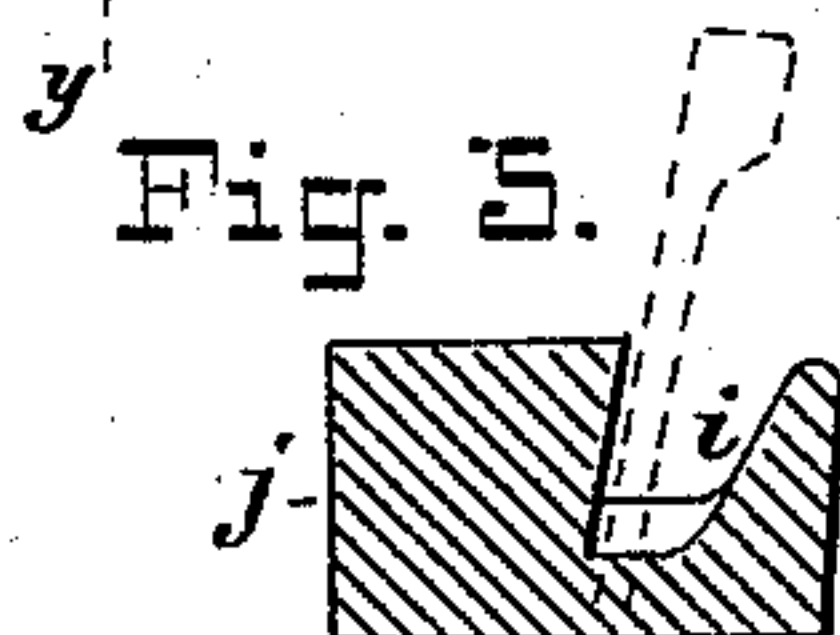


Fig. 5.

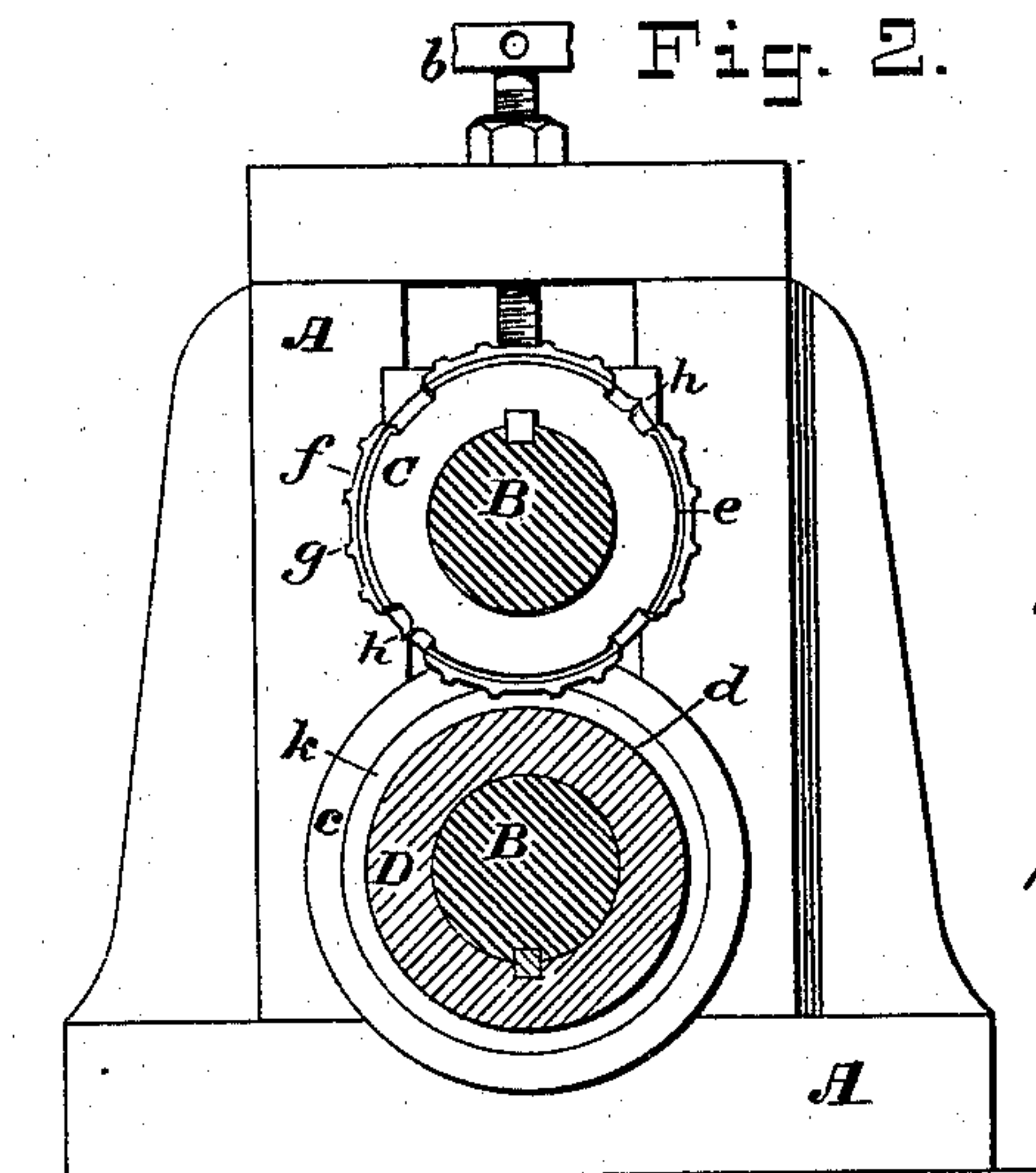


Fig. 2.

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UNITED STATES PATENT OFFICE

LOUIS G. CLAUDE, OF NEW YORK, N. Y., ASSIGNOR TO GEORGE H. RUSSELL,
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IMPROVEMENT IN ROLLS FOR HORSESHOE BARS AND BLANKS.

Specification forming part of Letters Patent No. **219,621**, dated September 16, 1879; application filed
May 14, 1879.

To all whom it may concern:

Be it known that I, LOUIS G. CLAUDE, of the city, county, and State of New York, have invented certain new and useful Improvements in Rolls for Horseshoe Bars and Blanks, of which the following is a specification.

This invention relates to rolls for "fullering" or creasing the blanks for horseshoes, and for producing the indentations at the points in the creases where the nail-holes are to be punched, and these rolls may be employed in producing plain blanks or those having solid calks.

Bars and blanks have heretofore been creased and provided with calks by rolling, and I make no claim to this, broadly, or to the employment of simple rolls for this purpose; but, by means of my improved rolls, the creases may be sunk obliquely into the face of the web, and with a varying obliquity, so as to give the proper direction to the nails at different parts of the hoof, all as will be more particularly hereinafter set forth.

In the drawings which serve to illustrate my invention, Figure 1 is a front elevation of a pair of my improved rolls; and Fig. 2 is a transverse section of the same on a smaller scale, taken in the plane of the line *xx* in Fig. 1. Fig. 3 is a detached plan, full size, showing the creaser; and Fig. 4 shows sections taken through the same at the points indicated by the lines *yy* and *zz*. Fig. 5 shows a section of the blank, taken through the crease in the web.

A represents a suitable frame or support for the rolls, and B B are the roll-mandrels, provided with fixed collars *aa*. The upper roll has bearings in boxes adapted to be adjusted vertically by means of screws *bb*, in the usual way.

C is the upper and D the lower roll. These slide on splines on the roll-mandrels, and are pressed firmly up to their respective fixed collars by means of tubular sleeves E E and nuts F F. The lower roll, D, has two fixed side flanges, *cc*, arranged perpendicular to the axis, and so as to embrace the upper die and the blank or bar, and an oblique conical face, *d*, on which the bar or blank rests while it is undergoing the rolling operation. The upper

roll, C, has a coned or beveled face, *e*, arranged substantially parallel to the similarly-coned face of the roll D when both are in position. On this conical face *e* are raised the creasers *ff*, provided with elevations *g g*, to produce indentations for the nail-holes. The axes of rotation of the two rolls are substantially parallel with each other.

Owing to the obliquity of the faces of the rolls, the bar to be creased is passed between them, with its upper and lower faces inclined, as will be readily understood; but the creases are sunk in the face of the web obliquely with the same for the whole or a portion of their length, as will be seen at *i* in Fig. 5.

The plane of the inner face, *j*, (see Fig. 5,) of the bar or blank is kept at right angles to the plane of the upper and lower faces of the same by means of a fillet, *k*, Fig. 1, arranged at the re-entering angle made by the junction of one of the flanges *c* of the lower roll with the face *d* of the said die.

In Figs. 3 and 4 I have shown, on a large scale, the peculiar construction and form of the creaser *f*. The inner face of this creaser is warped or variably inclined. At the toe end *l* of the creaser the face is perpendicular to the axis of the rolls, as shown in the section to the left in Fig. 4. At the heel end *m* it is more nearly perpendicular to the face *e* of the roll, and between these extremes it varies in inclination, as will be seen. This has the effect of throwing the heel-nails nearer to the outer edge of the blank than those at the toe, and also gives the nails at this point a more nearly perpendicular direction into the hoof. The object of this is to give the nails, in shoeing, a depth of hold and a direction corresponding to the peculiar shape of the hoof.

It is well known that the hoof-wall is thicker at the toe than at the heel, and makes a more acute angle with the plane of the sole. Indeed, the walls where the heel-nails are driven are nearly vertical. This makes it important that the angles at which the nails are driven should vary in accordance with the slope of the hoof.

In addition to the creasers, the roll C may be provided with suitable recesses to form the toe and heel calks, and one or more ribs or

blades, *h*, to indicate the dividing-lines between the shoe-blanks in the bar. These may, however, be omitted in some cases.

In the drawings I have shown the roll C provided with two sets of creasers; but it is obvious that by increasing or reducing its diameter one or more sets may be provided thereon, as desired.

These rolls may be driven by connecting them with the bar-rolls or independently, as found most convenient.

Having thus described my invention, what I claim as new is—

1. The combination of the roll C, provided with a conical or oblique face, *e*, and creaser *f*, with the roll D, provided with flanges *c c*, a

conical or oblique face, *d*, and a fillet, *k*, all substantially as and for the purposes set forth.

2. The creasing-die *f*, mounted on or forming a part of the oblique or conical face of the roll C, its inner face being in a warped plane varying in its inclination or angle with the axis of rotation from *l* to *m*, substantially as shown in Figs. 3 and 4, and for the purposes set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

LOUIS G. CLAUDE.

Witnesses:

HENRY CONNETT,
ARTHUR C. FRASER.