

No. 630,776.

Patented Aug. 8, 1899.

T. CORSCADEN, Dec'd.
A. J. CORSCADEN, Administratrix.
DIE FOR SHAPING PULLEY RIM CLAMPS.

(Application filed Oct. 26, 1898.)

(No Model.)

2 Sheets—Sheet 1.

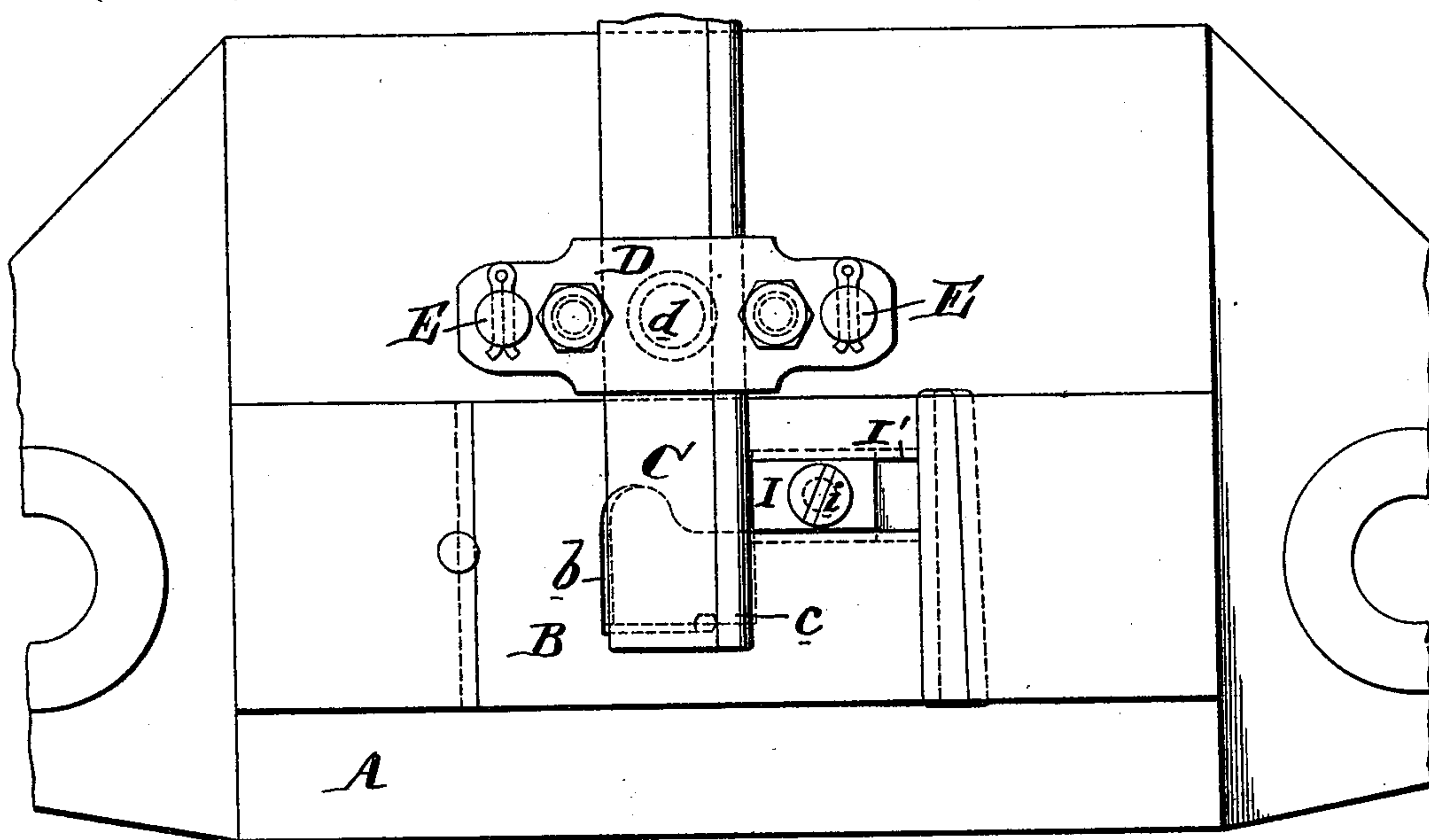


FIG. 2

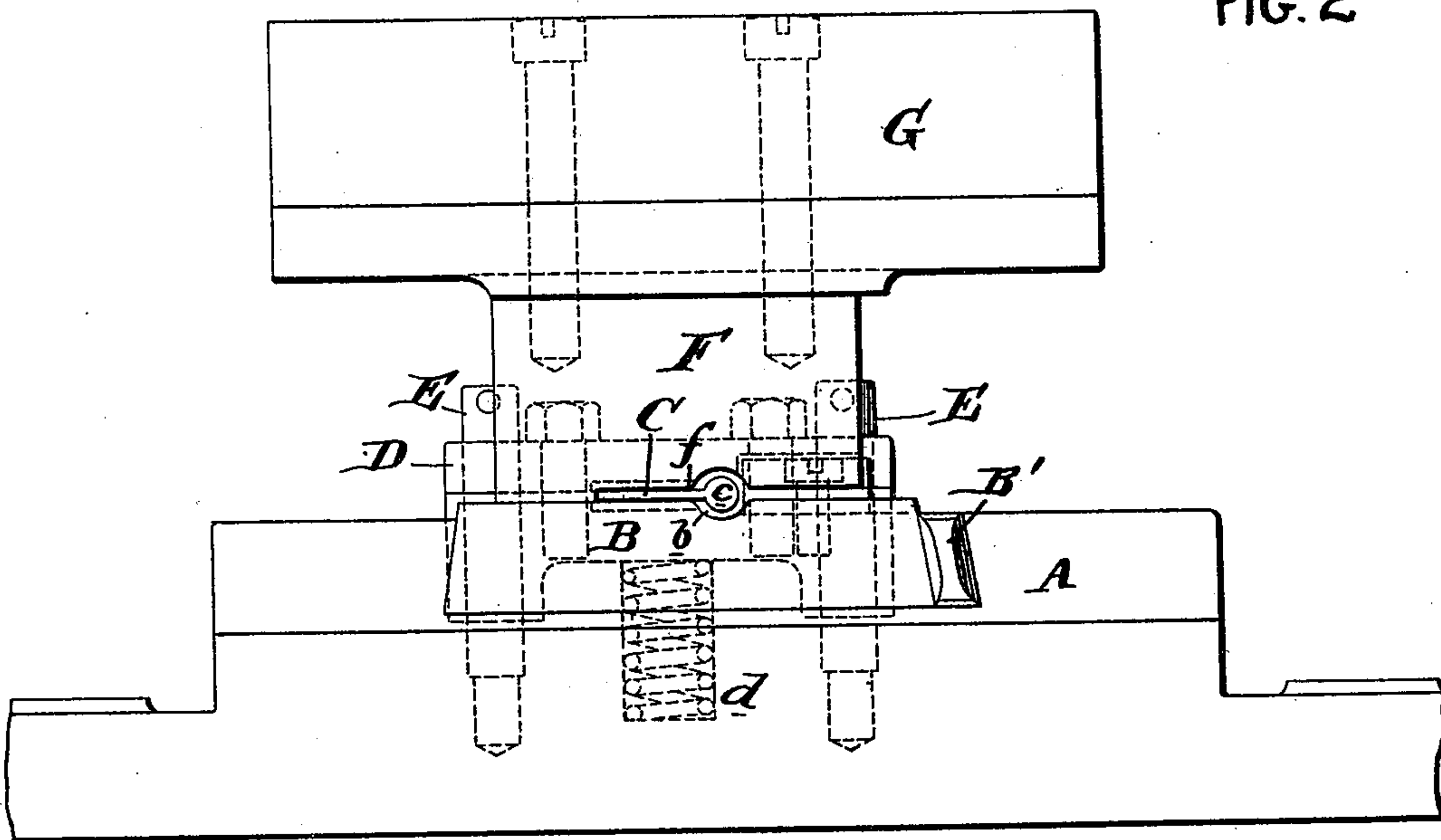


FIG. 1

Witnesses:
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Inventor:
Adelene J. Corscaden
Admin'g of Thos Corscaden
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By her atty *[Signature]*

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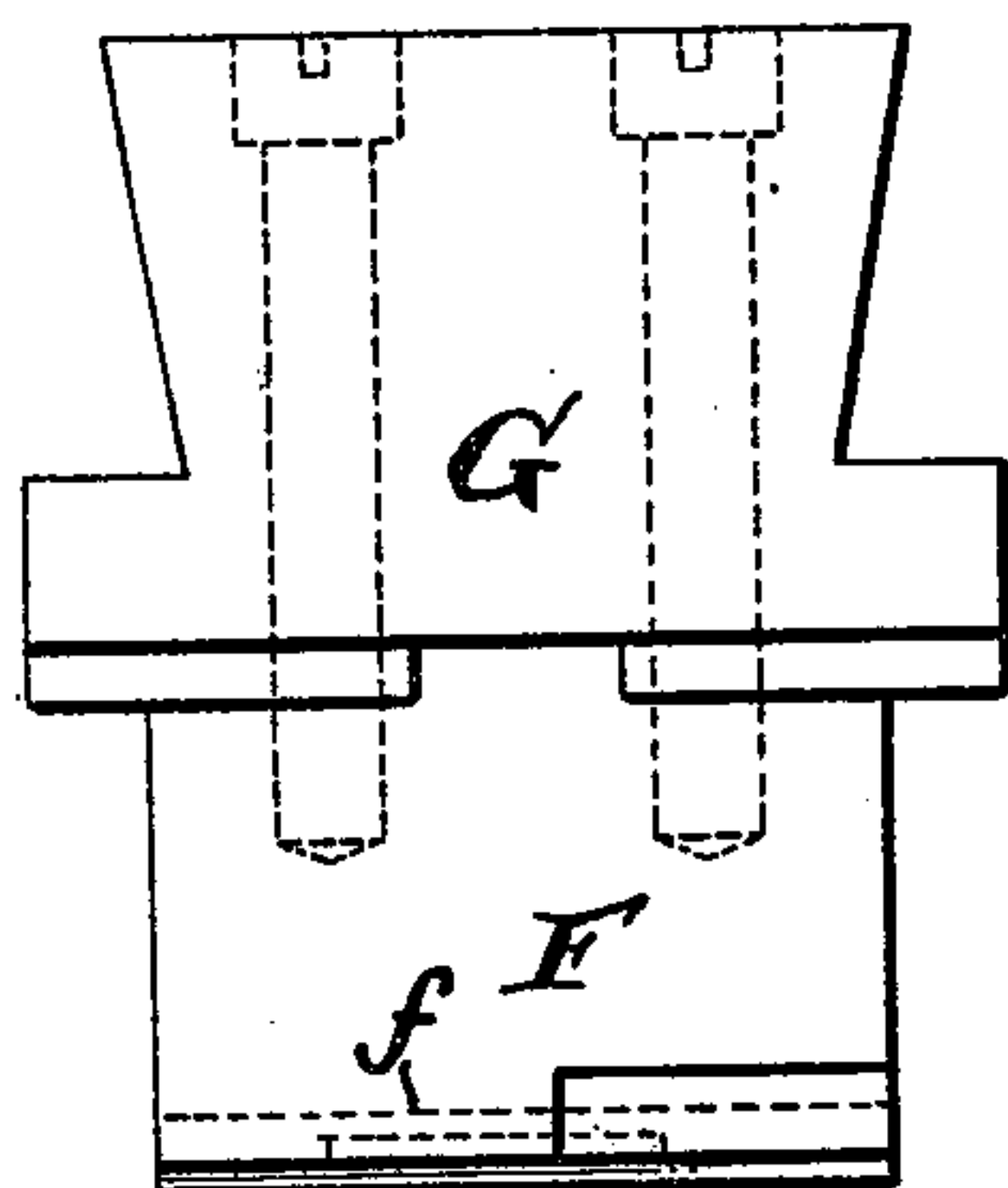


FIG. 3

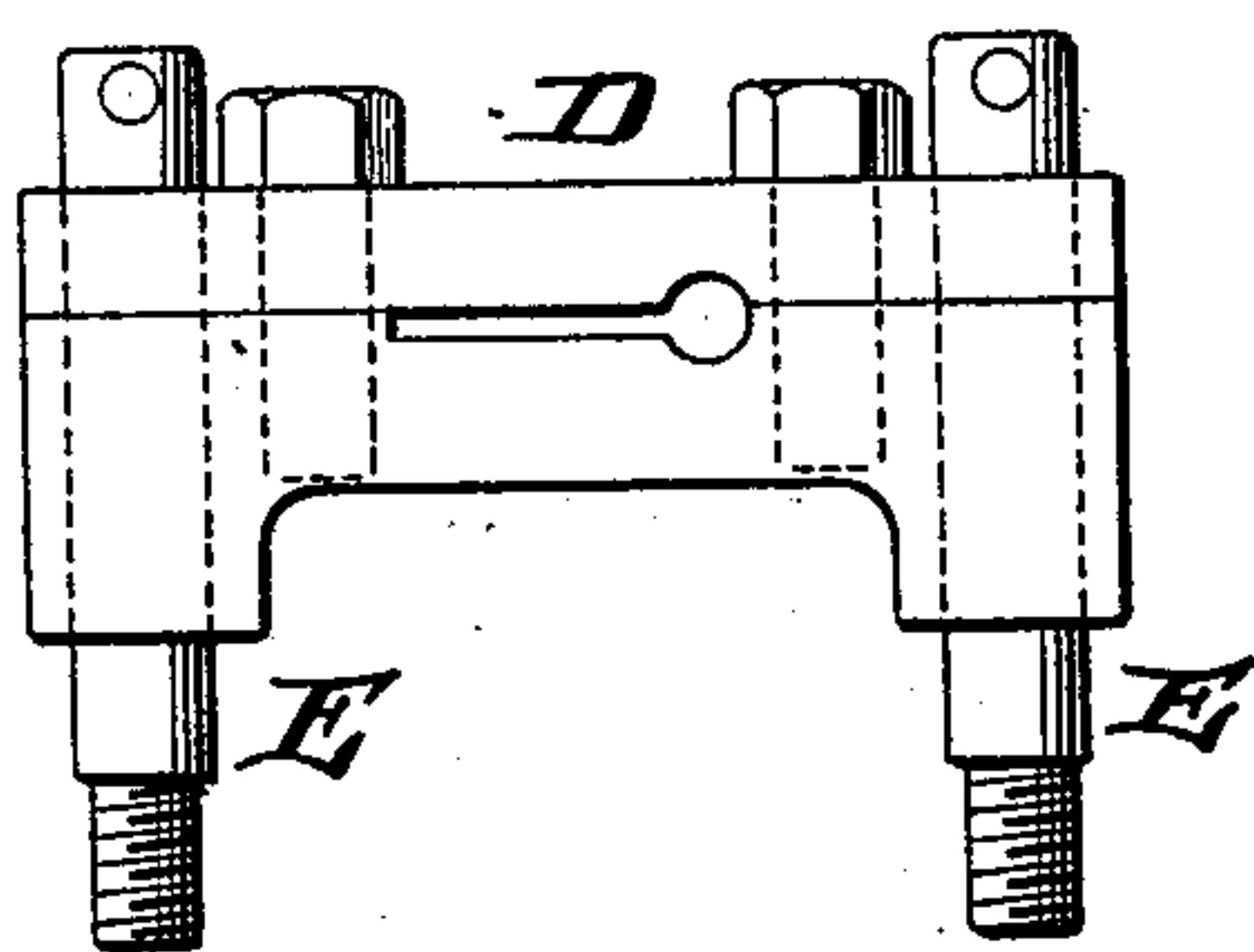
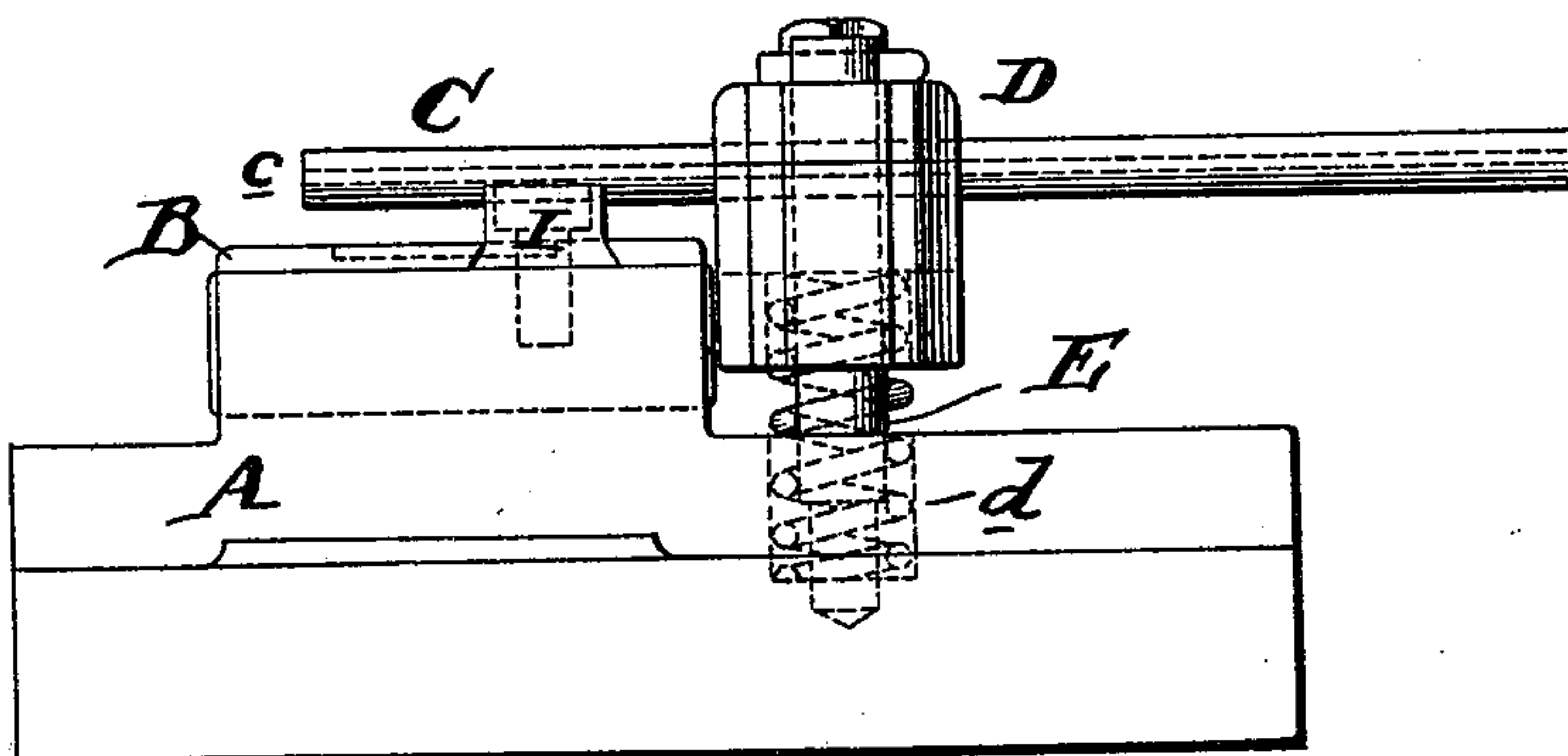


FIG. 4

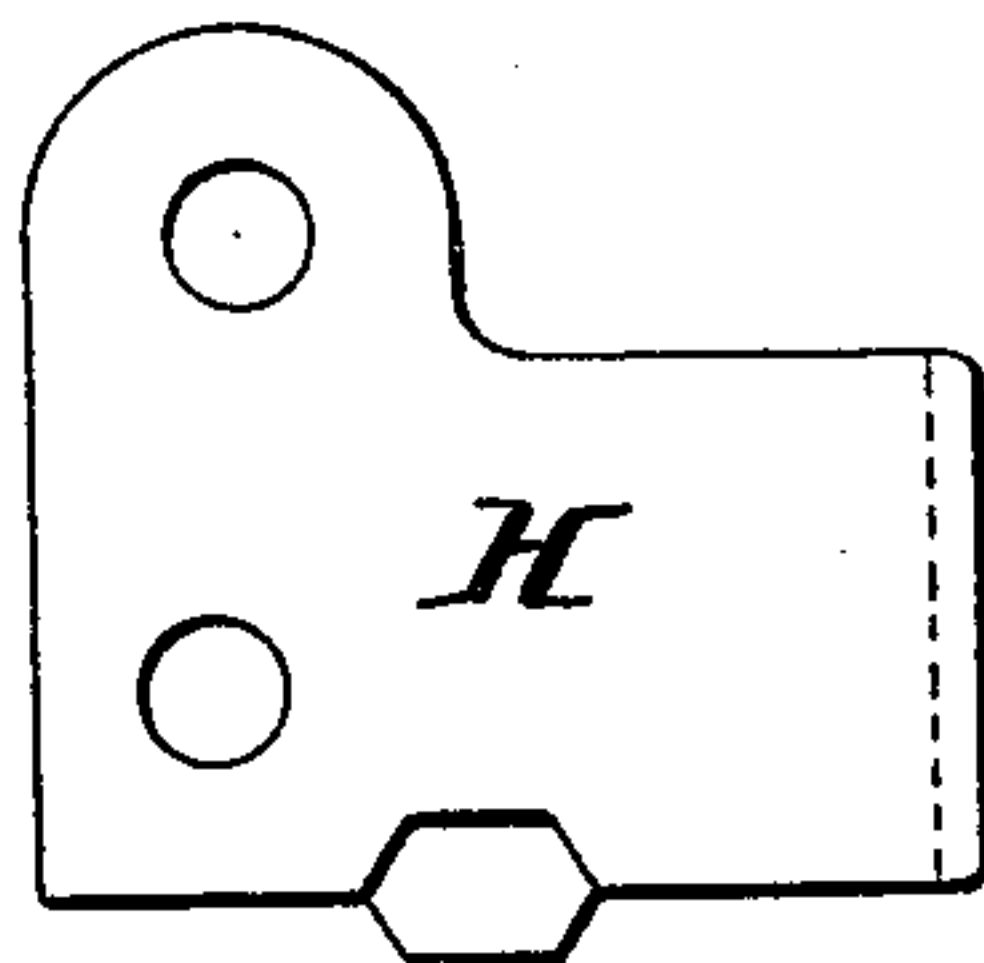


FIG. 5

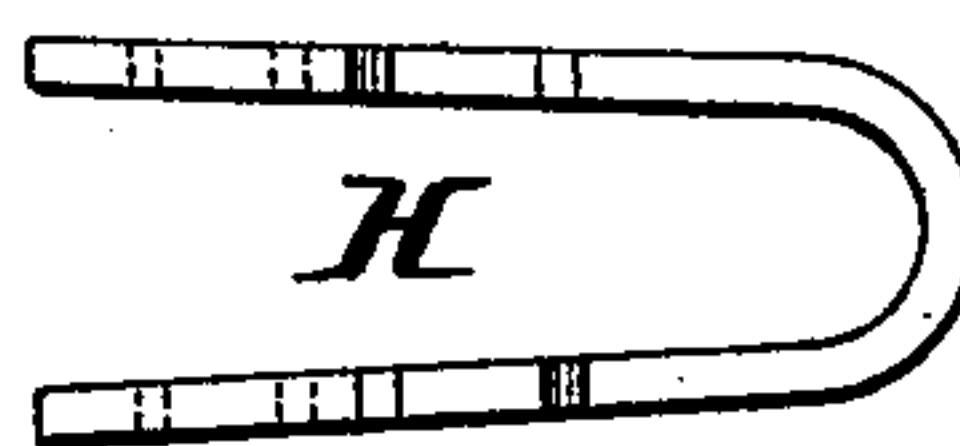


FIG. 6

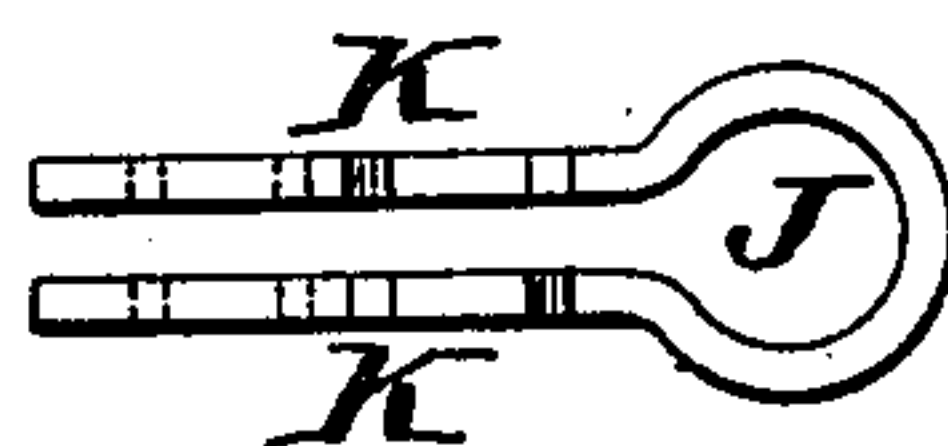


FIG. 7

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UNITED STATES PATENT OFFICE.

ADELINE J. CORSCADEN, OF PHILADELPHIA, PENNSYLVANIA, ADMINISTRATRIX OF THOMAS CORSCADEN, DECEASED.

DIE FOR SHAPING PULLEY-RIM CLAMPS.

SPECIFICATION forming part of Letters Patent No. 630,776, dated August 8, 1899.

Application filed October 26, 1898. Serial No. 694,598. (No model.)

To all whom it may concern:

Be it known that THOMAS CORSCADEN, deceased, formerly of the city and county of Philadelphia, State of Pennsylvania, did invent an Improvement in Dies for Shaping Pulley-Rim Clamps, of which the following is a specification.

This invention has reference to dies for shaping pulley-rim clamps; and it consists of certain improvements which are fully set forth in the following specification and shown in the accompanying drawings, which form a part thereof.

The invention comprehends certain improvements in the dies especially adapted for shaping or forming arm-rim clamps adapted for use in connection with the manufacture of sheet-metal pulleys, such, for example, as set out in Patent No. 595,559, dated December 14, 1897.

In carrying out the invention two dies, movable relatively to and from each other, are provided, one of the die structures being furnished with a suitable spring-supported mandrel, over which the blank is placed and upon which it is bent to the approximate shape desired. The action of the dies is such that as the upper die descends it forces the blank, together with the mandrel, downward, whereby the blank is subjected to pressure between the two dies, with the interposed mandrel between them and within the upper and lower plates of the blank.

The improvements will be better understood by reference to the accompanying drawings, in which—

Figure 1 is a front elevation of dies embodying the improvements. Fig. 2 is a plan view of the lower die. Fig. 3 is a side elevation of the improved dies separated. Fig. 4 is a front elevation of the support for the mandrel. Fig. 5 is a plan view, and Fig. 6 is an end view, of the blank to be treated in the dies; and Fig. 7 is an end view of the blank after being treated.

A is the main frame of the lower die and has detachably secured to its upper surface the die B by suitable dovetails and the key or wedge B'. The upper surface of this die is provided with a depressed or recessed por-

tion *b*, of a shape corresponding to that of the blank.

C is a mandrel consisting of a long flat blade provided with a cylindrical part *c* at one of its edges, having a diameter approximately equal to that of the bolt which is to pass through the rim-clamp when applied to the wheel. This mandrel C is clamped in a block D, which rides vertically upon two upright studs E E, screwed to the bed-plate A and immediately to the rear of the die B. A spring *d* operates to raise the block D and with it the mandrel C. By making the mandrel long it may be adjusted forward and the worn end cut off from time to time. It is also evident that other sizes and forms of mandrels may be substituted for that here shown, in which case the dies are also changed to suit the modification in the shape or form of the rim-clamp.

I is a guide and is fitted transversely in a dovetailed groove I' in the die B and clamped therein by means of a set-screw *i*. This guide I approximately fits up to the mandrel C, so that the blank H may be pushed over the mandrel until it reaches the stop I, in which position it is in proper adjustment over the recessed portion *b* in the die B.

F is the upper die and is secured to the movable frame G, the two together constituting the upper die structure. The lower part of the die F is provided with a transverse groove *f*, corresponding to the finished blank, so that when the upper die F descends upon the lower die B the two together properly transform the blank from the shape shown in Fig. 6 to the shape shown in Fig. 7. When the dies are in the position shown in Fig. 3, the blank H is placed over the mandrel C, and the rounded end *h* is moved up to the guide I, as indicated in dotted lines in Fig. 2. When the upper die descends, it forces the blank, together with the mandrel, downward, and the free ends of the blank are bent around the cylindrical part *c* of the mandrel and pressed upon the faces of the flat portion C, so that the blank in its finished condition is reduced to the shape shown in Fig. 7, in which J corresponds to the cylindrical part *c* of the mandrel, and the spaces between the wings K K correspond to the thickness of the flat

portion C of the mandrel. It is evident that the particular shape of the recess *b* in the lower die is immaterial, except so far as it is grooved to permit the looped end of the blank to be forced downward under the action of the mandrel.

It is evident that the manner of supporting the mandrel may be modified, if so desired, as various equivalent structures might be designed for raising the mandrel without displacing it relatively to the dies. Consequently the invention is not limited to the mere details herein set out.

Having now described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. The combination of two frames relatively movable to and from each other, shaping-dies respectively secured to the said frames, and a longitudinally-adjustable spring-supported mandrel interposed between the dies and movable in the direction of their movement.

2. The combination of two frames relatively movable to and from each other, shaping-dies respectively secured to the said frames, a mandrel interposed between the dies and movable in the direction of their movement, a support for said mandrel guided upon upright guides and formed with clamping means for permitting longitudinal adjustment of the mandrel therein, and a spring to force said support upward.

3. The combination of two frames relatively movable to and from each other, shaping-dies respectively secured to the said frames, a mandrel interposed between the dies and movable in the direction of their movement, a support for said mandrel guided upon upright guides, a spring to force said support upward, means to limit the upward move-

ment of the mandrel and its support, and a guide secured to the die adjacent to the mandrel for guiding the blank to be treated in proper position upon the mandrel and relatively in proper position to be received in the dies.

4. The combination of two frames relatively movable to and from each other, suitable dies attached to said frames and having their opposing faces shaped to correspond to the blank to be treated, an interposed mandrel consisting of a flat blade having a cylindrical portion adjacent to one edge, a vertically-movable block upon which the mandrel is adjustably clamped, vertical guides upon which the block is movable, and means for forcing the block upward for moving the mandrel away from the die.

5. The combination of two frames relatively movable to and from each other, suitable dies attached to said frames and having their opposing faces suitably shaped to correspond to the blank to be treated, an interposed mandrel consisting of a flat blade having a cylindrical portion adjacent to one edge, a vertically-movable block upon which the mandrel is adjustably clamped, vertical guides upon which the block is movable, means for forcing the block upward for moving the mandrel away from the die, and a guide adjustably secured upon the die to properly locate the blank upon the mandrel and in relative position upon the die.

In testimony of which invention I have hereunto set my hand.

ADELINE J. CORSCADEN,
Administratrix of the estate of Thomas Corscaden, deceased.

Witnesses:

JERE J. CROWLEY,
S. WARREN HALL.