

(No Model.)

J. H. WELLS.

MACHINE FOR BENDING AND STRAIGHTENING BARS.

No. 279,618.

Patented June 19, 1883.

Fig. 1.

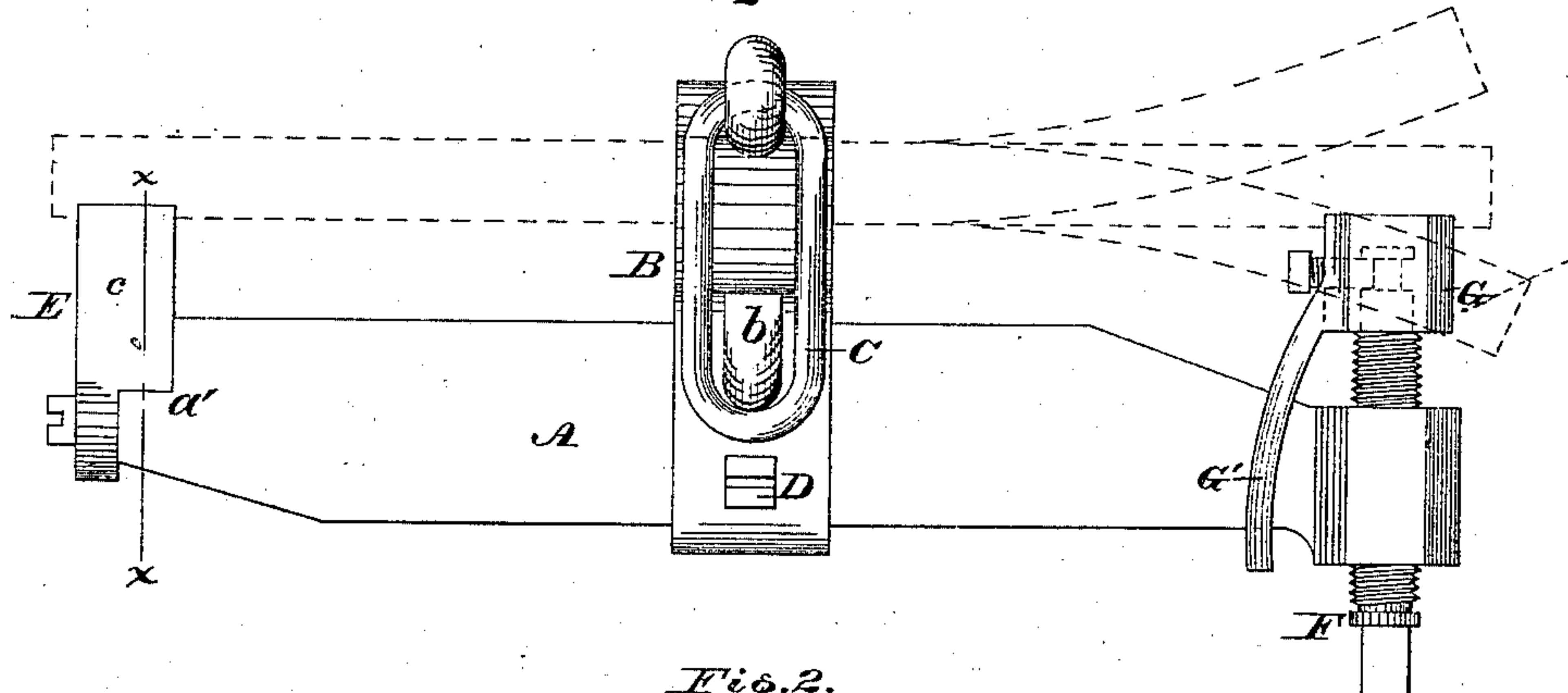


Fig. 2.

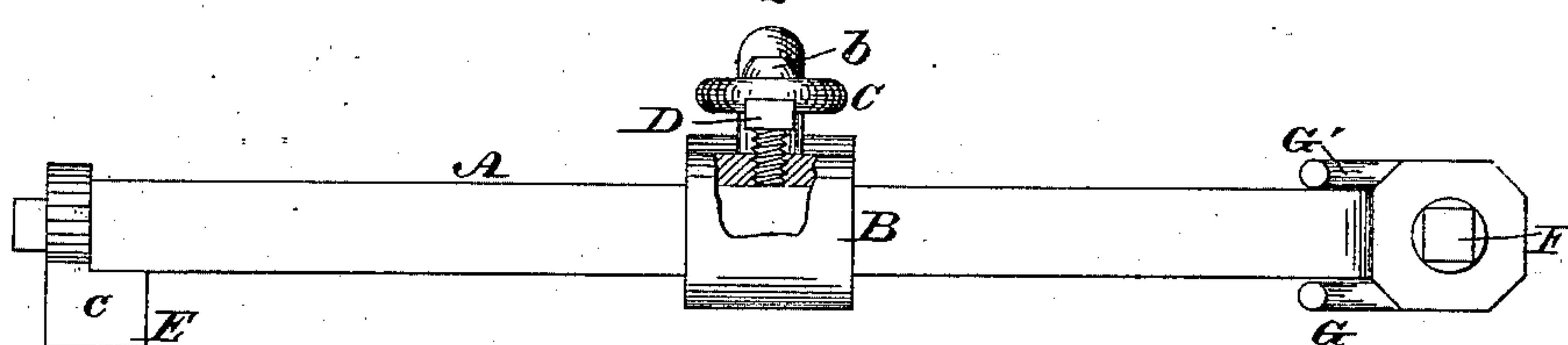


Fig. 3.

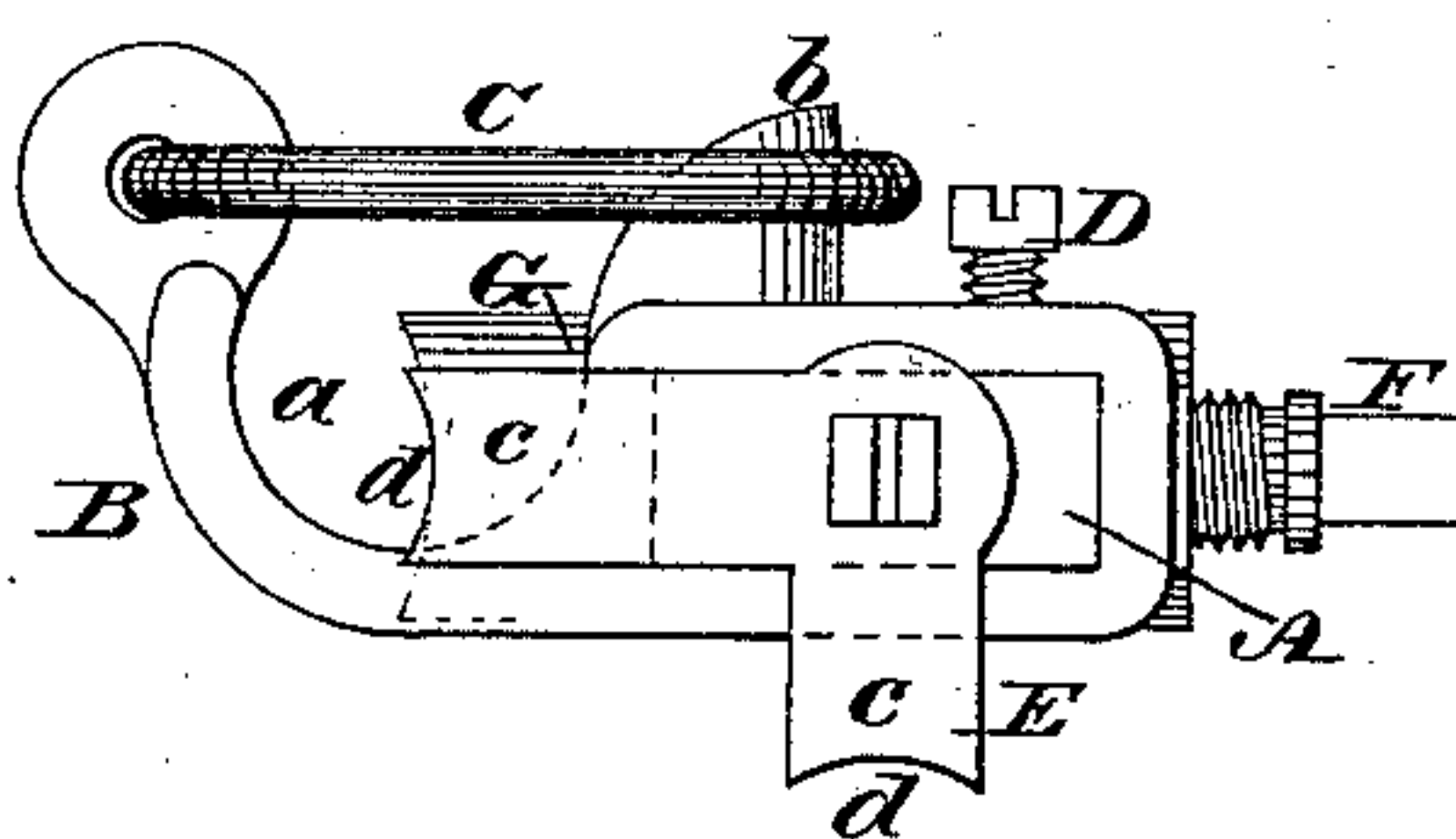


Fig. 4.

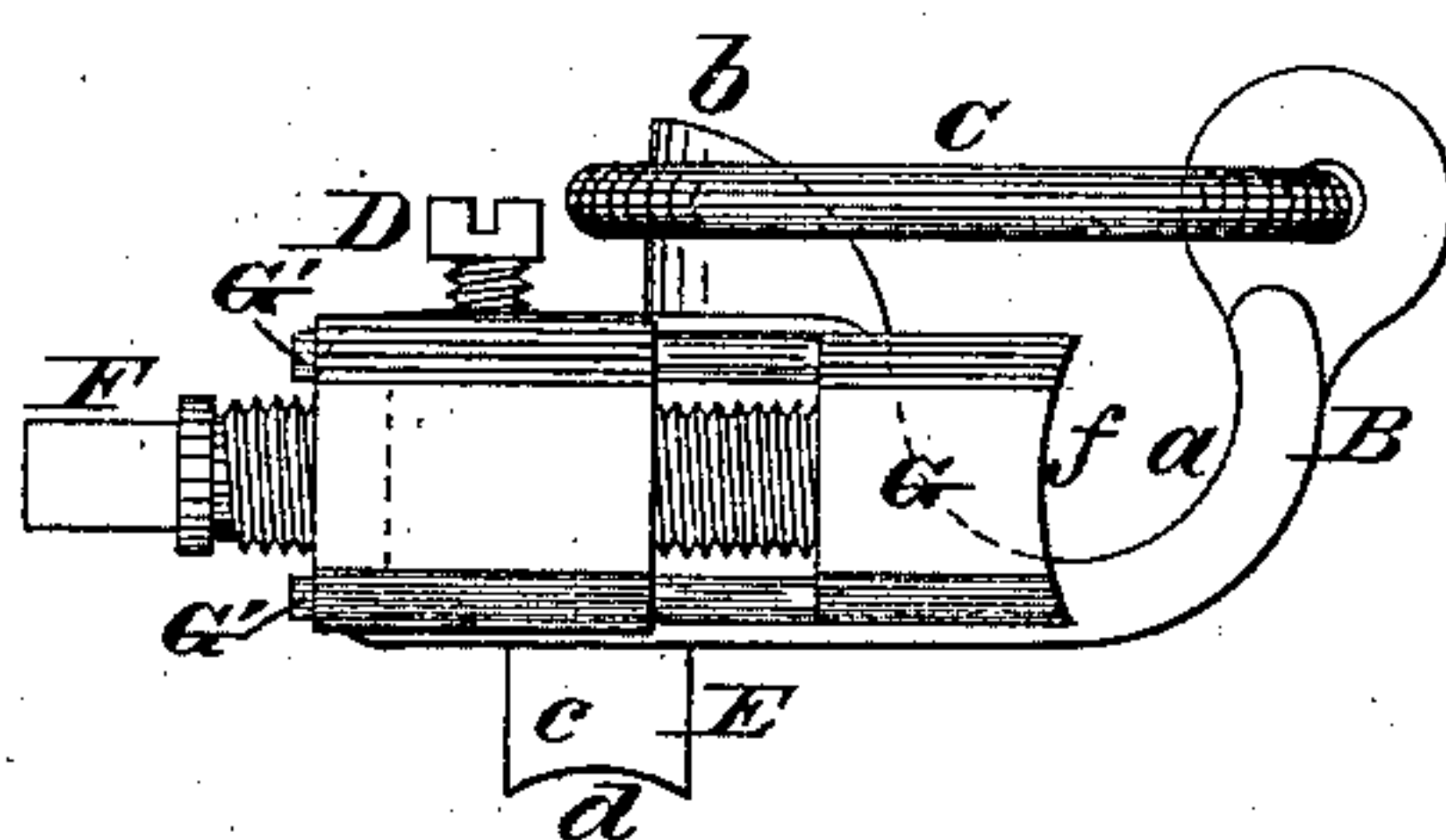
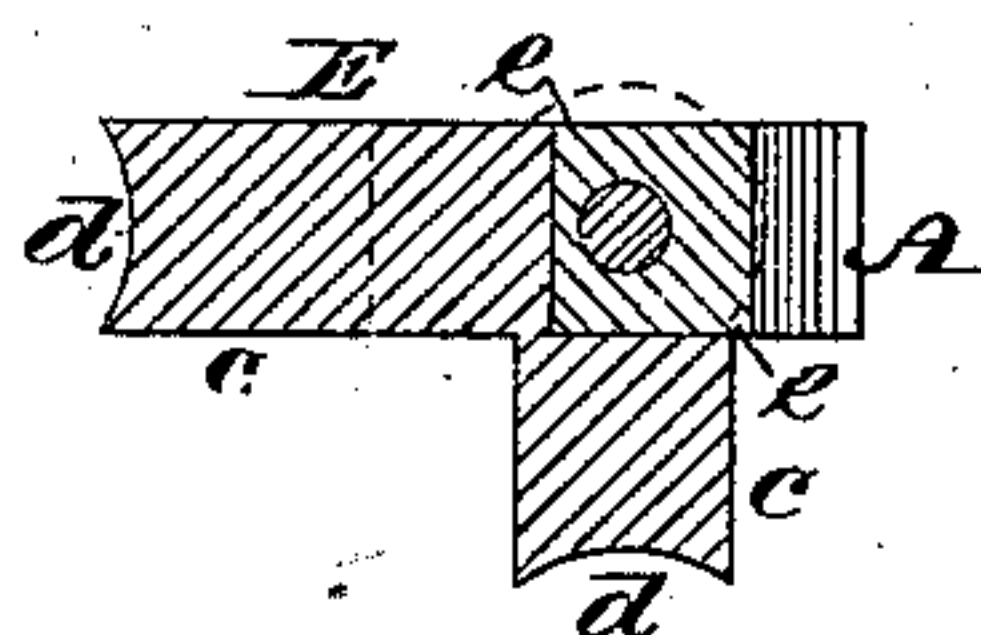


Fig. 5.



WITNESSES:

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MACHINE FOR BENDING AND STRAIGHTENING BARS.

SPECIFICATION forming part of Letters Patent No. 279,618, dated June 19, 1883.

Application filed July 26, 1882. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. WELLS, a citizen of the United States, residing at Vineland, in the county of Cumberland, State of New Jersey, have invented a new and useful Improvement in Machines for Straightening or Bending Shafting, Tubes, Bars, &c., which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a top or plan view of the straightening or bending machine embodying my invention. Fig. 2 is a side elevation thereof, partly broken away. Figs. 3 and 4 are views of opposite ends thereof. Fig. 5 is a section in line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists of a machine for straightening or bending shafting, tubes, bars, &c., which is strong and durable, simple, inexpensive, easily operated, and rendered adjustable, and possesses other advantages, as will be hereinafter fully set forth.

Referring to the drawings, A represents a bar or stock to which is adjustably fitted a sliding bearing-piece or holder, B, which is hook-shaped or depressed, as at *a*, and provided with a link, C, one end of which is pivotally connected with the outer end of the holder, and its other end is adapted to engage with a lug, *b*, rising from the holder, so that the depression *a* may be closed by said link.

D represents a screw which is fitted to the holder B, and adapted to tighten against the bar A for retaining the holder in its adjusted position.

To one end of the bar A is pivoted a chock, E, and to the opposite end is fitted a screw, F, the latter being swiveled to a head, G, and by the rotation of the screw the head may be moved to and from the bar. The chock E is of angular form, so as to present two limbs, *c c*, each of which has a channeled face, *d*, and is also angularly cut away, as at *e*, (see Fig. 5,) so as to abut against two sides of the bar A, whereby improper rotation of the chock is prevented.

The swiveled head G is formed with arms G', which embrace the upper and lower sides of the bar A, whereby the head is prevented from rotation, said head also having a channeled face, *f*, it being noticed that the several

parts are so disposed that the piece to be straightened or bent may be placed in the depressed portion of the holder, and its ends in contact with or adjacent to the channeled faces of the head and one of the limbs of the chock.

The operation is as follows: The piece to be straightened or bent is placed on the holder B, and one end rested against the face of the presented limb *c* of the chock, the other end of the piece coming in front of the head G. The screw F is now rotated, and thus causes the head G to advance against the piece and force it to the desired shape, either straight or bent.

The holder B and chock E securely retain the piece in position during the action of the screw F, and prevent the same from slipping or shifting. The holder is adjustable in respect to either end of the bar A, so as to adapt the machine to different conditions of the piece to be acted on. The limbs of the chock are of different lengths, so that by loosening the screw of the chock either limb may be presented to the front, whereby pieces of different diameters or thicknesses may be fitted to the chock, the width of the depression *a* of the holder being sufficient for any piece applicable to the chock.

The link C serves to support the hook-shaped portion of the holder during the outward pressure thereon, and is removable in order to allow the ready application of the piece in position and subsequent removal of the same. The strain received by the chock is transmitted to the bar A, which is well enabled to endure the same. The arms G', which guide the head G and prevent rotation thereof, embrace the bar A, so as to obviate piercing and weakening of said bar. The end of the bar adjacent to the chock presents an angle, *a'*, which, when the chock is removed, provides a recess for the entrance of the angular end or flange of a piece having such feature.

The several parts, formed of suitable metal, will be found to be strong and durable, compact, simple, and inexpensive.

The device may be conveniently set up, and, if broken, the necessary part may be replaced, the remaining parts rendering continued service.

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

1. The bar of a straightening or bending machine, provided with a chock formed with limbs for adjustment of the same to pieces of different diameters or thicknesses, substantially as and for the purpose set forth.
2. The bar A, in combination with the chock E, cut away, as at *e*, the sides of the cut-away portion abutting against the sides of said bar, substantially as and for the purpose set forth.
3. The bar of a straightening or bending machine, provided with a movable head, G, having guiding-arms attached to said head and extending on each side of said bar, substantially as and for the purpose set forth.
4. The bar A and movable head G, in combination with the arms G', connected with said head and embracing the bar, substantially as and for the purpose set forth.
5. The chock, in combination with the bar having a recess, *a'*, at the end adjacent to said chock, substantially as and for the purpose set forth.
6. The bar A, holder B, doubly-limbed chock E, screw F, and armed head G, combined and operating substantially as and for the purpose set forth.

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Witnesses:

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