(No Model.)

G. W. BOWEN.

MACHINE FOR BENDING HORSESHOE BLANKS.

No. 329,998. Patented Nov. 10, 1885.

Fig. 1

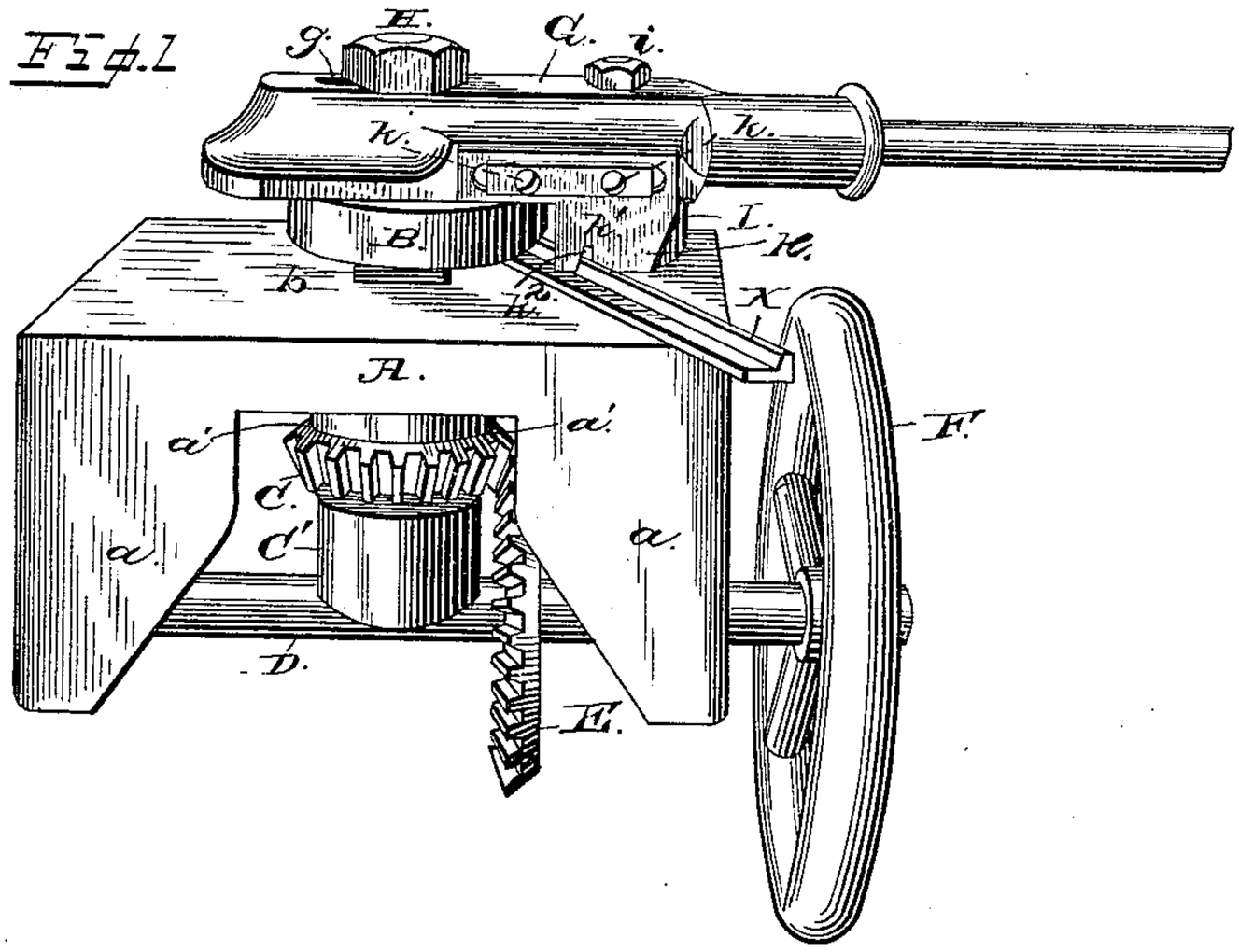


Fig. 2.

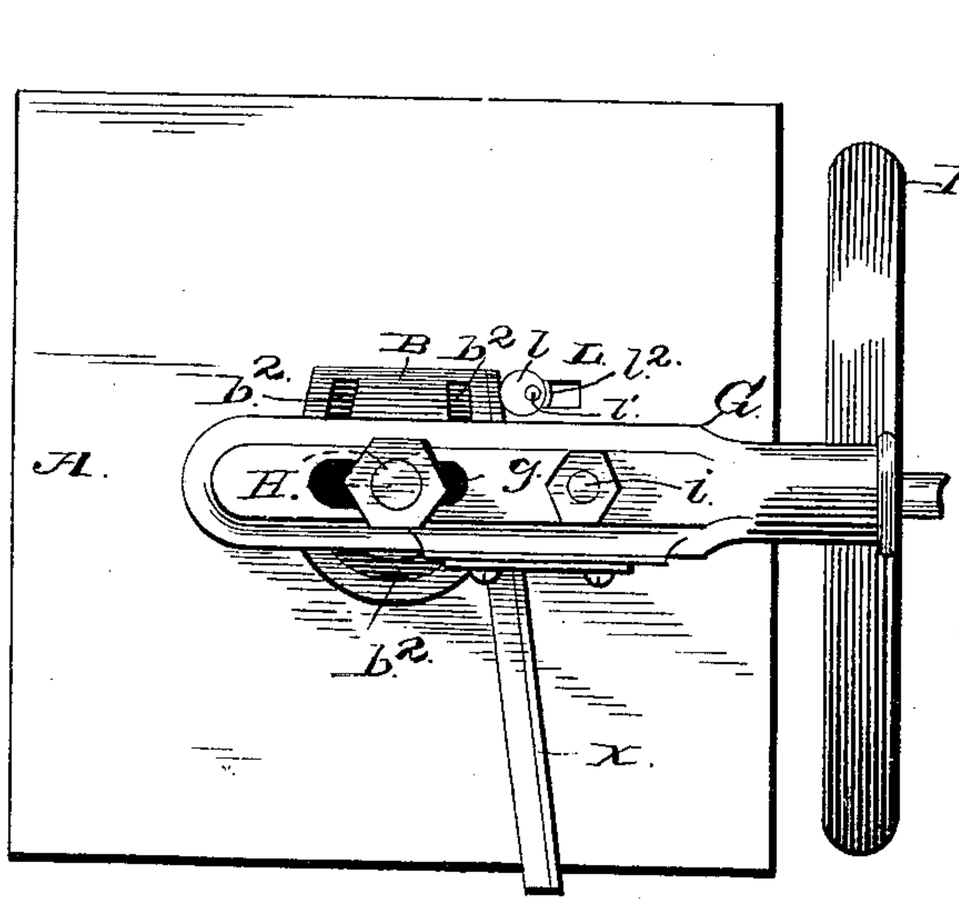
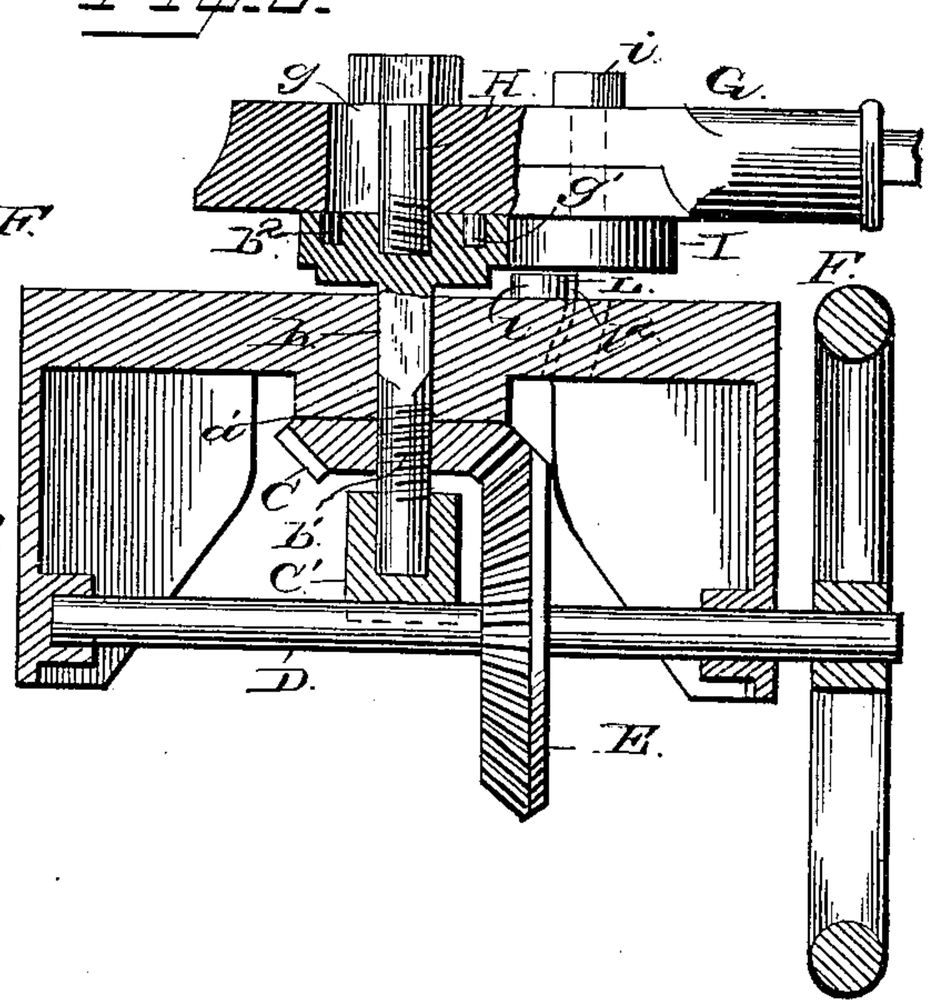


Fig. 3.



WITNESSES
M. E. Fowler.
E. G. Siggers.

G. W. Bowen.
INVENTOR
by C. A. Snow & Co
Attorneys

UNITED STATES PATENT OFFICE.

GEORGE W. BOWEN, OF FORT WAYNE, INDIANA.

MACHINE FOR BENDING HORSESHOE-BLANKS.

SPECIFICATION forming part of Letters Patent No. 329,998, dated November 10, 1885.

Application filed February 7, 1885. Serial No. 155,229. (No model.)

To all whom it may concern:

Be it known that I, G. W. BOWEN, a citizen of the United States, residing at Fort Wayne, in the county of Allen and State of Indiana, have invented new and useful Improvements in Machines for Bending Horseshoe-Blanks, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to an improvement in machines for bending horseshoe-blanks; and it consists in the peculiar construction and combination of devices, that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective of my invention. Fig. 2 is a top plan view of the same. Fig. 3 is a vertical central section.

A represents a bed-plate, which is provided at opposite ends with supporting flanges or legs *a*. A square hole is formed in the center of the bed-plate, through which passes the square portion *b* of the shank of the horseshoe-shaped die-head B. Below the square portion *b* of the shank the shank is made round, and is screw-threaded, as at *b'*. A gear-pinion, C, is interiorly threaded to fit the threaded end of the shank, and is secured thereon, and bears between the under side of the bed-plate, as at *a'*, and the upper side of a sleeve, C', that is balanced on the horizontal shaft D, that has its bearings under the bed-plate. A gear-wheel, E, is fixed to the shaft, and meshes with the screw-pinion C, and to the outer end of the shaft is secured a hand-wheel, F. By this construction it will be readily understood that the die-head may be raised or lowered with respect to the bed-plate. In the upper face of the die-head is made a groove, b^2, which corresponds to the contour of the die-head, and is a suitable distance from the outer edge thereof. A lever, G, which has a vertical slot, *g*, cut in its rear end, is secured on the upper side of the die-head by a bolt, H, which passes through the slot and enters the die-head. A projection, *g'*, extends from the lower face of the lever G and enters the groove b^2. The lever is adapted to sweep around the die-head, which remains stationary by reason of its square shank, which enters the square hole that is made in the bed-plate. A roller, I, is secured on the under side of the lever by a bolt, *i*, and bears near the curved side of the die-head. A plate, K, is secured by screws *k* on the front side of the lever, adjacent to the die-head, and has a downwardly-extending portion, *k'*, in the inner lower corner of which is cut an angular notch, k^2, that is adapted to receive the flanged side of the L-shaped bars from which the blanks for the horseshoes are bended. I have shown one of these bars at *x* in position in the machine.

L represents a stop that is secured to the bed-plate adjacent to the die-head. This stop is composed of an eccentric, *l*, which is journaled on an upwardly-projecting stud, *l'*. A spring, l^2, has one end fixed in the bed-plate, and its free end bears against the eccentric and keeps it from slipping.

The operation of my invention is as follows: The bar to be bent is inserted, after being heated, between the die-head and the eccentric stop, the flat side of the bar being under the die-head, and the flange of the bar being between the eccentric stop and the die-head, the roller bearing against the outer edge of the bar, and its flange being in the notched guide-plate. The hand-wheel is turned and the die-head lowered upon the flat side of the bar, and the hand-lever is pulled around, which bends the bar into the shape of the die-head, as will be very readily understood. The die-head is then raised, the blank removed, and the operation proceeded with as before.

Having thus described my invention, I claim—

1. The bed-plate, in combination, with the die-head, the spring-pressed eccentric stop for holding the blank against the head, and a pivoted lever for bending the blank, as set forth.

2. The bed-plate, in combination with the die-head, a stop for holding the blank, the pivoted lever, and a guide-plate carried by the lever, and formed with a notch or groove to receive the flanged side of the blank, for the purpose set forth.

3. The bed-plate, in combination with the die-head grooved on its upper face, the piv-

oted lever for bending the blank, and pins or studs carried by the lever, to work in the grooves of the die-head, as set forth.

4. The combination of the bed-plate, the grooved die-head, the slotted lever that is pivoted thereto and that has a stud for entering the groove in the die-head, the bearing-roller, the guiding-plate, and the stop, substantially as described.

5. The combination of the bed-plate, the vertically-movable die-head having a screw-threaded shank, the internally-threaded wheel for raising and lowering the die-head, the pivoted lever for bending the blank, and the stop, substantially as described.

6. The combination of the bed-plate, the die-head having the depending threaded shank, the gear-wheel screwed on the shank, the horizontal shaft having the hand-wheel, and a gear-wheel that meshes with the gear-wheel on the shank, the pivoted lever having the bearing-roller and guiding-plate, and the stop that is secured on the bed-plate adjacent to the die-head, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

GEORGE W. BOWEN.

Witnesses:
WM. MILLER,
HENRY H. BOSSLER.