

(No Model.)

W. F. DURFEE.  
METAL CUTTING MACHINE.

No. 260,173.

Patented June 27, 1882.

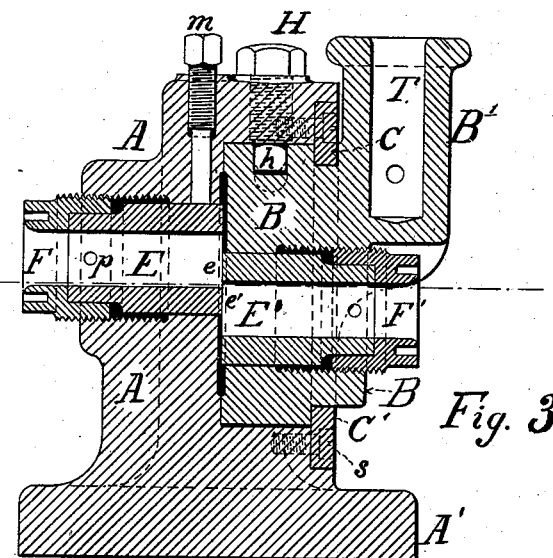


Fig. 3

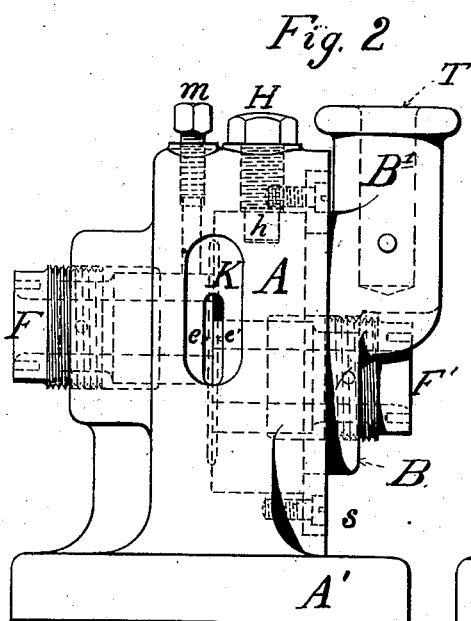


Fig. 2

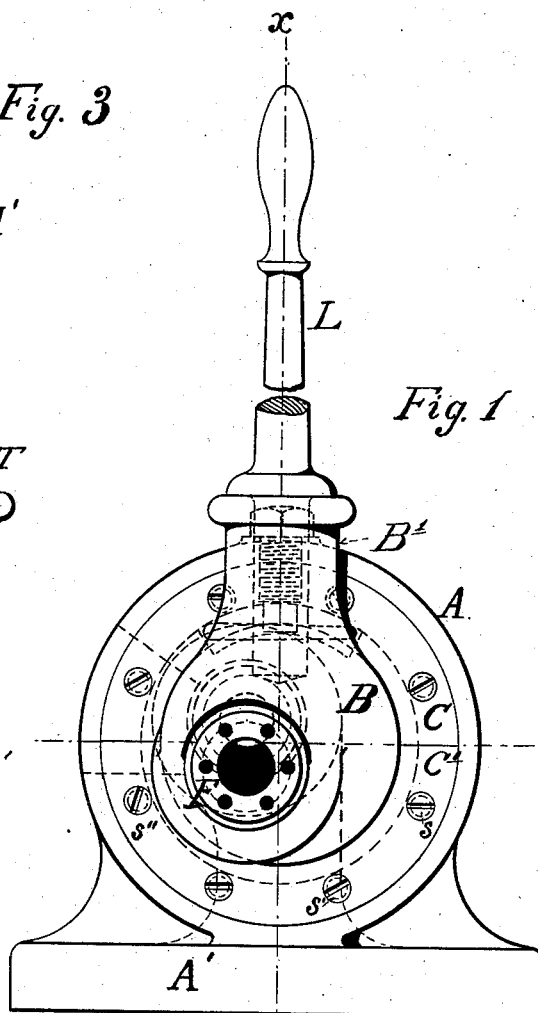


Fig. 1

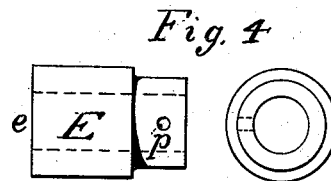


Fig. 4

Witnesses:  
Albert R. Lacey  
George Curry

Inventor,  
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# UNITED STATES PATENT OFFICE.

WILLIAM F. DUFEE, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO THE  
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## METAL-CUTTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 260,173, dated June 27, 1882.

Application filed November 17, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM F. DUFEE, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Metal-Cutting Machinery, of which the following is a specification.

My improved machine is intended to facilitate the cutting of rods and bars of iron or other metal; and the invention consists in the construction and arrangement of parts, as hereinafter more fully set forth, reference being made to the accompanying drawings, in which—

Figure 1 represents a front elevation, and Fig. 2 a side elevation, of the apparatus. Fig. 3 is a cross-section of Fig. 1, taken irregularly on the line *x x* of said figure. Fig. 4 represents two views of one of the cutting-cylinders.

Similar letters of reference refer to similar parts throughout the several views.

A *A'* is the frame or base-piece, wherein is fitted the circular block B, provided with the projection B' on its outer face, which projection has a cylindrical hole, T, for the reception of the lever L, by which or its equivalent motion is communicated to the block B. The block B is held in proper relation to the frame A by means of the half-rings C and C', which are secured to said frame by the several screws *s s' s''*, &c. It will be seen therefore that the circular block B is so enveloped by the frame A and half-rings C C' that it is only capable of a rotary or partial rotary motion, and as only a small amount of motion is required for my purposes, I have provided a stop-bolt, H, which passes through the top of the frame A and into the slot *h*, (see Figs. 2 and 3,) formed in the periphery of the circular block B, the length of which slot governs the amount of oscillation which the block B may have relative to the frame A.

In an opening in the frame A is placed the hollow cutting-cylinder E, and in a similar opening in the circular block B is placed a similar hollow cutting-cylinder, E'. These hollow cutting-cylinders E and E' are so situated

relative to the center of the frame A and the center of the moving block B and to each other that when the lever L is in its extreme thitherward position the axes of said cylinders E and E' coincide with each other, and at the extreme hitherward position of the aforesaid lever L the axes of the cylinders E and E' will lie in different but parallel planes to an extent not less than the diameters of the openings through said cylinders, so that a rod or bar of metal which is passed through the two cylinders when the lever L is in its thitherward position must be severed in bringing said lever and moving block B to their hitherward position.

The hollow cutting-cylinder E has a concentric sleeve, F, attached to one of its ends by means of a pin at *p*, said sleeve being screwed into the frame A, thereby taking the thrust of the cylinder E aforesaid. When it is desired to present a new cutting-edge to the metals to be severed the cutting-cylinders E E' are turned and adjusted to proper relations to each other by means of the sleeves F F', and are secured in their new position by set-screws abutting against the exterior surfaces, as shown at *m*, Fig. 3.

The cutting-cylinder E' and its sleeve F' of the moving block B are of similar construction to that of the cylinder and sleeve already described. When either of said cylinders are so dulled as to require regrinding, the thickness of metal removed from their cutting-faces *e e'* is compensated for by screwing the sleeves F and F' in an equivalent distance.

For conveniently observing the adjustment of the cutting-cylinders a spy-hole, K, is provided in the hitherward side of the frame A.

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

1. In a metal-cutting machine, the combination, with the frame A, block B, and the hollow cutting-cylinders E E', of the adjustable sleeves F F' for receiving the thrust of the cylinders, and whereby the same may be adjusted longitudinally to compensate for wear of their cutting-edges, substantially as shown and described.

2. In a metal-cutting machine, the combination of the frame A, having opening K, movable block B, having slot or recess *h*, and lever L, half-rings O O' for holding said block  
5 in position, stop-bolt H, adapted to engage with the recess *h* and limit the movement of the block, the hollow cutting-cylinders E E', supported in said frame and block, respectively, and the sleeves F F' for imparting a longitudi-

nal adjustment to the cylinders, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM F. DUFFEE.

Witnesses:

ALBERT R. LACEY,

GEORGE TERRY.