J. WALSH & J. DUTOT.

Machine for Shearing Metal.

No. 160,858. Patented March 16, 1875.

Fig. 1.

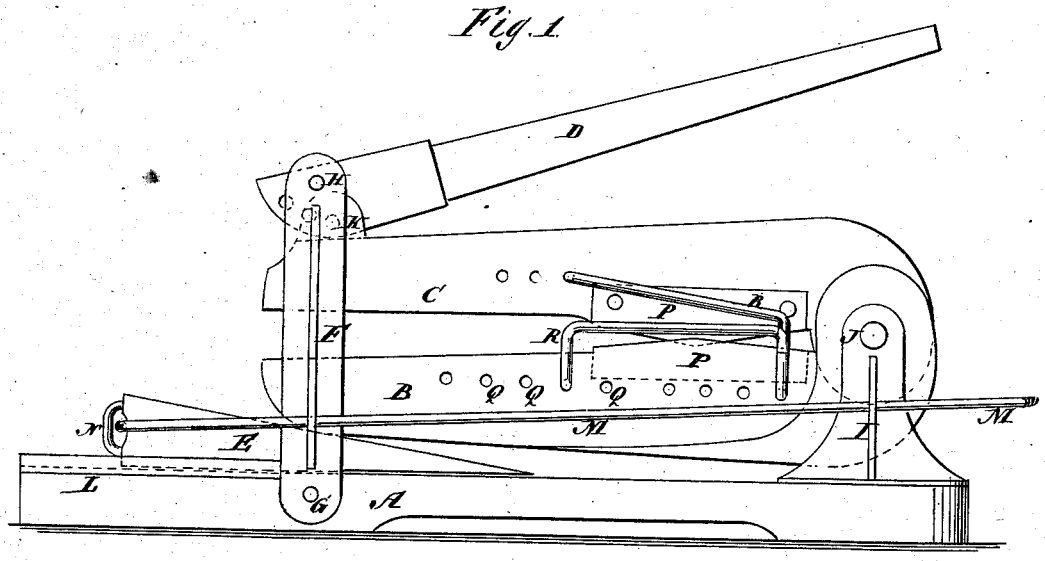
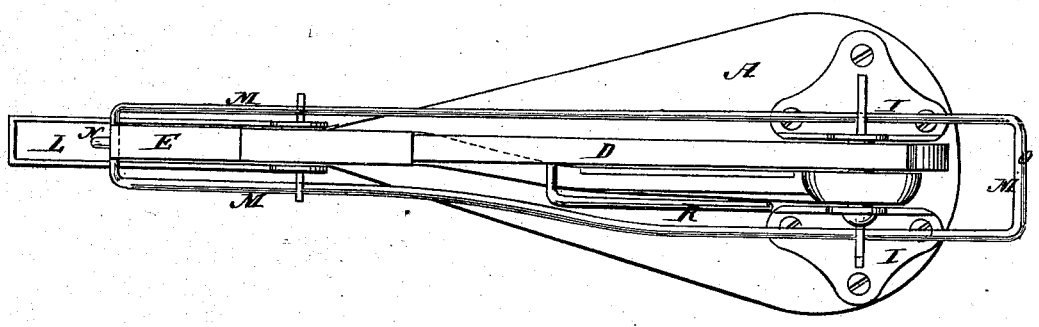


Fig. 2.



WITNESSES:

E. Wolff

A. F. Terry

INVENTOR:

BY J. Walsh and J. Dutot

Munn & Co

ATTORNEYS.

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

JOHN WALSH AND JAMES DUTOT, OF NEWTON, IOWA.

IMPROVEMENT IN MACHINES FOR SHEARING METAL.

Specification forming part of Letters Patent No. **160,858**, dated March 16, 1875; application filed December 12, 1874.

To all whom it may concern:

Be it known that we, JOHN WALSH and JAMES DUTOT, of Newton, in the county of Jasper and State of Iowa, have invented a new and useful Improvement in Shears for Cutting Metal, of which the following is a specification:

The invention will first be fully described, and then pointed out in the claims.

In the accompanying drawing, Figure 1 is a side elevation, showing the construction of the shears. Fig. 2 is a top view of the same.

Similar letters of reference indicate corresponding parts.

A represents the bed of the shears. B is the lower, and C is the upper, jaw. D is the operating-lever. E is the wedge, for opening and closing the shears independently of the lever D. F is the stirrup, which is pivoted to the bed, as seen at G, and to the lever D at the point H. The jaws are attached to the ears I of the bed by pin J, which is the fulcrum-pin of the shears. The lever D is connected with the top of the upper jaw C, by means of two ears on the opposite side of the jaw, by an adjustable pin, K.

It will be noticed that there are a series of holes in the lever, by means of which the pin may be shifted, to increase or diminish the leverage. As arranged in the drawing it will be seen that by a down pressure the lever will exert a constantly-increasing force upon the jaw, and act upon the principle of the "knuckle-joint."

The lower jaw hangs loosely on the fulcrum-pin J, with the outer end resting on the wedge E. This wedge is moved back and forth, to open and close the shears, and act only on the lower jaw. It is held in position when drawn back by the flanged guide L, which is a simple channel made of sheet-iron, and fastened to the top of the bed. M is a double rod, attached to the butt of the wedge by the staple N. This bar extends forward on each side of the lower jaw and in front of the shears, as seen at O, by means of which the wedge may be moved back and forth for raising and lowering the jaw B with rapidity. P P are the cutting-edges of the jaws. These edges are made inclined instead of straight, to facilitate the introduction of bars or pieces of iron.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. In combination with a shears for cutting metal, the wedge E, substantially as and for the purposes described.

2. The guide-piece L, in combination with the lower jaw B and wedge E, for the purposes described.

3. The combination, with levers B C, of knives P P inclined upwardly from the heel, as shown and described, so as to bring the thickest bolts, rods, or bars nearest to the fulcrum of levers.

JOHN WALSH.
JAMES DUTOT.

Witnesses:
I. B. CARNS,
S. J. MOYER.