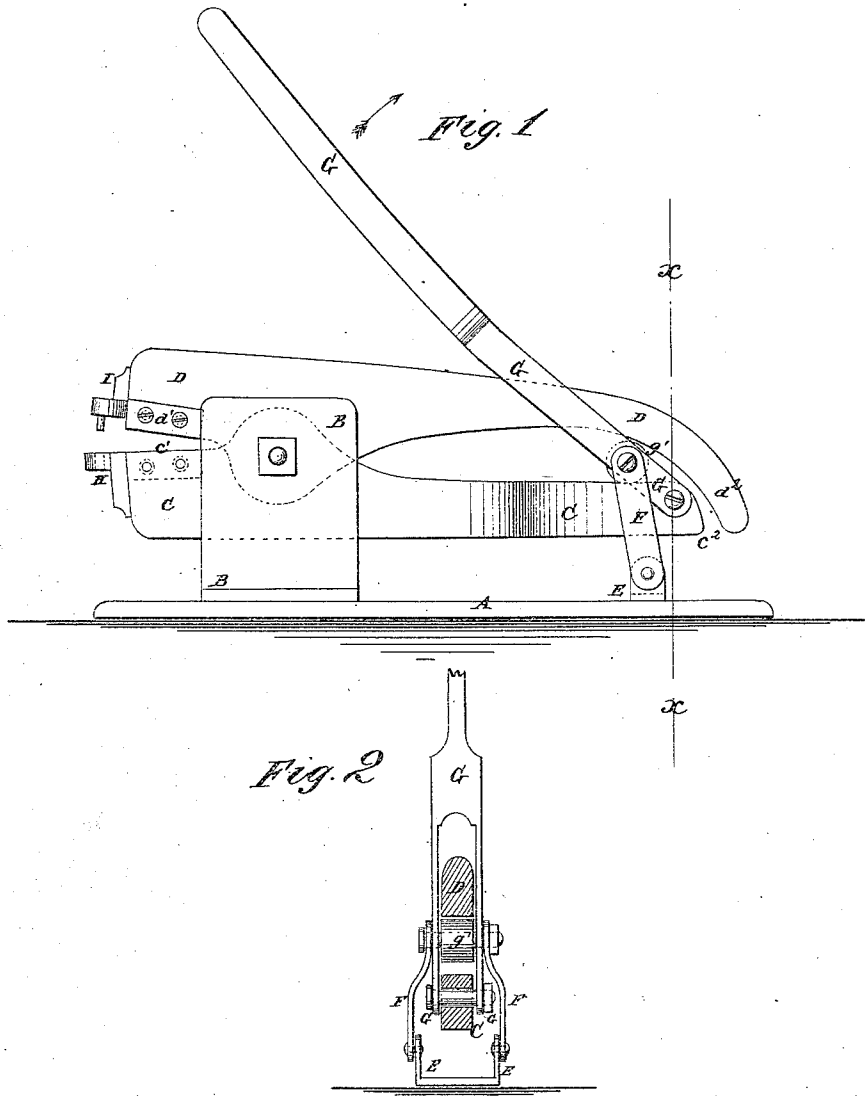


C. H. REYNOLDS.

Mechanisms for Operating Punches, Shears, &c.

No. 153,279.

Patented July 21, 1874.



WITNESSES:

A. W. Almqvist
Edgworth

INVENTOR:

C. H. Reynolds
BY *Wm. H. [unclear]*

ATTORNEYS

UNITED STATES PATENT OFFICE.

CHARLES H. REYNOLDS, OF WILLIAMSBURG, NEW YORK, ASSIGNOR TO
HIMSELF AND HENRY C. RICHARDSON, OF SAME PLACE.

IMPROVEMENT IN MECHANISMS FOR OPERATING PUNCHES, SHEARS, &c.

Specification forming part of Letters Patent No. 153,279, dated July 21, 1874; application filed
May 23, 1874.

To all whom it may concern:

Be it known that I, CHARLES H. REYNOLDS, of Williamsburg, Kings county, New York, have invented a new and useful Improvement in Device for Operating Shears, Punches, &c., of which the following is a specification:

Figure 1 is a side view of my improved device shown as applied to shears. Fig. 2 is a detail cross-section of the same through the line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved device for operating shears, punches, &c., when great power is required, and which shall be simple in construction. The invention consists in the combination of the pivoted connecting-bars, the slotted lever, and the roller with the arms of the jaws of the machine.

A represents the bed-plate of the machine, to which, near its forward end, are attached two standards, B, to and between which are pivoted the parts C D of the shears. To the forward ends of the parts C D are attached the cutters *c* *d*, by which the metal is cut. To the rear part of the bed-plate A are attached two lugs or short standards, E, to which are pivoted the lower ends of the short connecting-bars F. The upper ends of the connecting-bars F are pivoted to the lever G at a little distance from its end. The lever G is slotted to receive the arms of the parts C D of the shears, and its lower end is pivoted to the rear end of the lower arm *c* of the part C. Upon

the bolt that pivots the upper ends of the bars F to the lever G, within the slot of said lever, is placed a roller, *g'*, which, when the said lever is operated, rolls along the under side of the arm *d* of the upper part of the shears. The arm *d* is curved downward, so as to approach nearer and nearer to the pivot of the lever G, as shown in Fig. 1. The arm *d* should be made so heavy that its own weight will draw it downward and open the jaws of the shears.

With this construction, when the free end of the lever G is moved to the rearward in the direction of the arrow, the arm *c* of the lower jaw will be moved downward and the arm *d* of the upper jaw will be moved upward, bringing the jaws together with immense power.

The lever G may be operated by hand or by machinery, as may be desired or convenient.

If desired, a punch and die, H I, may be attached to the forward ends of the jaws C D, thus forming a punch of great power.

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

The combination of the pivoted connecting-bars F, the slotted lever G, and the roller *g'* with the arms *c* *d* of the jaws C D, substantially as herein shown and described.

CHARLES H. REYNOLDS.

Witnesses:

JAMES T. GRAHAM,
T. B. MOSHER.