

A. A. Kent.

Metal Shears.

N^o 107,179.

Patented Sept. 6, 1870.

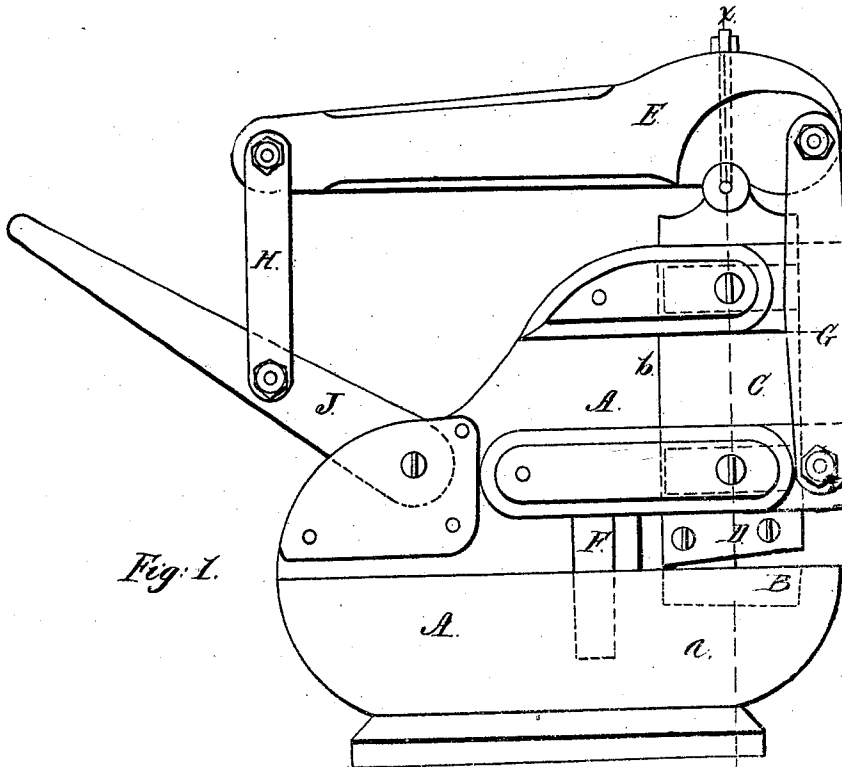


Fig. 1.

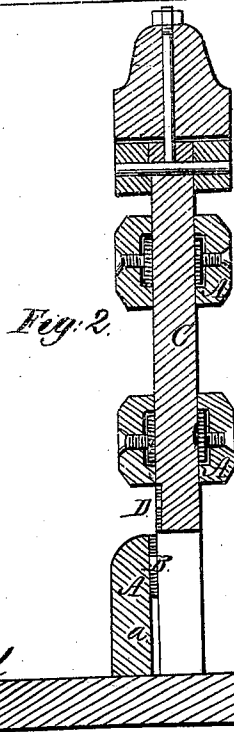


Fig. 2.

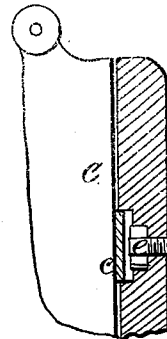


Fig. 3.

Witnesses:
H. S. Sprague,
Charles F. Hammond

Inventor:
Arturo A. Kent
per Cetty
Thos. Sprague

UNITED STATES PATENT OFFICE.

ARTEMAS A. KENT, OF LYONS, IOWA.

IMPROVED MACHINE FOR SHEARING METAL.

Specification forming part of Letters Patent No. **107,179**, dated September 6, 1870.

To whom it may concern:

Be it known that I, ARTEMAS A. KENT, of Lyons, in the county of Clinton and State of Iowa, have invented a new and useful Improvement in Tools for Shearing Metals; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon, and being a part of this specification.

Figure 1 is a side elevation. Fig. 2 is a vertical section on the line *xx*, Fig. 1. Fig. 3 is a detached section of the adjustable casing.

The nature of this invention relates to an improvement in the construction of machines for shearing metals; and consists in the construction and arrangement of the frame and in a novel arrangement of compound levers, whereby great power is exerted on the slide carrying the shear-blade.

In the drawing, A represents a proper frame, to be cast in one piece, and in such a manner that the lower part, *a*, shall form the base and support for the shear-blade B.

The upper part, *b*, is suitably arranged to support the movable sash C. The mortise through which it passes is chambered to admit the adjustable casing *c*, nut *e*, and screw *d*, by which the sash is guided as desired. (Shown in Fig. 3.)

To the lower end of the sash or slide C is attached the upper shear-blade, D, to act in concert with the lower blade, B. The upper end of slide C is constructed so as to form the fulcrum of lever E, to which it is attached by a hinge-joint.

The offset between the upper and lower portions of frame A is for the purpose of allowing

a wide plate to pass through without bending or coming in contact with the jaws of the shears upon either side, the blades being set so that the cut is made nearly on a line with the center of this offset.

F is a wrought bar, which is cast in the frame A for the purpose of strengthening the same.

The lever E having its fulcrum on top of sash C, its short arm is attached to the frame A by suitable straps G, which prevent its rising or lowering as the lever is moved, but allow it a lateral motion necessary to adjust itself to the fulcrum.

The long arm of lever E is attached by straps H to the lever J, and in such a manner that the lower ends of said straps with their attachments form the fulcrum of the lever J. The short arm of this lever is pivoted to the after part of frame A, the long arm being used to operate the machine.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In combination with the frame A, cast in one piece, having an offset, as shown, and the slide or sash C, the adjustable casing *c*, arranged and operating substantially as described.

2. The combination and arrangement of the frame A, slide C, casing *c*, nut *e*, screw *d*, levers E and J, straps G and H, and upright bar F, when constructed, arranged, and operating substantially as and for the purpose set forth.

ARTEMAS A. KENT.

Witnesses:

AYLETT R. COTTON,
AUSTIN M. UNDERHILL.