

(No Model.)

I. BECK.
CENTER PUNCH.

No. 578,196.

Patented Mar. 2, 1897.

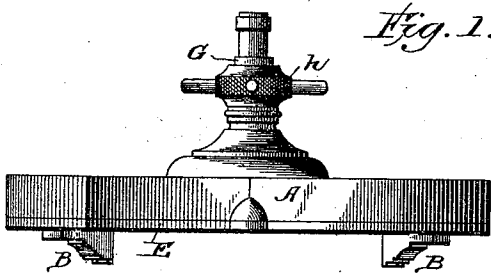


Fig. 1.

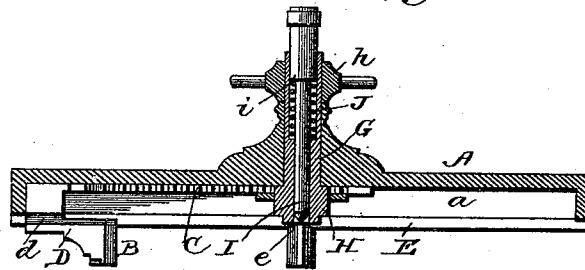


Fig. 3.

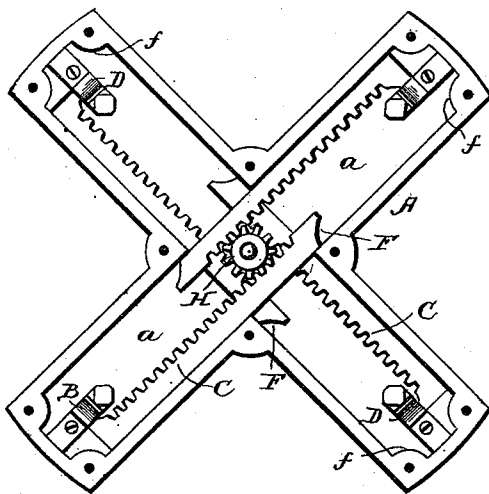


Fig. 2.

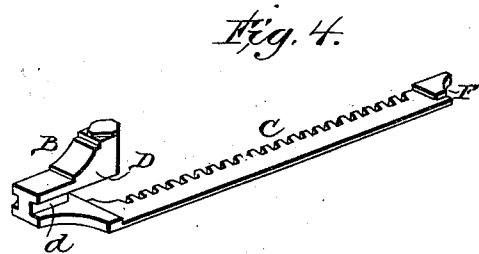


Fig. 4.

Witnesses
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UNITED STATES PATENT OFFICE.

ISRAEL BECK, OF PHILIPSBURG, PENNSYLVANIA, ASSIGNOR OF ONE-HALF
TO HARRY J. BECK, OF SAME PLACE.

CENTER PUNCH.

SPECIFICATION forming part of Letters Patent No. 578,196, dated March 2, 1897.

Application filed May 16, 1896. Serial No. 591,829. (No model.)

To all whom it may concern:

Be it known that I, ISRAEL BECK, a citizen of the United States, residing at Philipsburg, in the county of Centre and State of Pennsylvania, have invented certain new and useful Improvements in Punches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to certain new and useful improvements in punches of that class known as "center" punches; and it has for its object, among others, to provide a simple and cheap construction by which the punch may be readily adapted to holding square or round articles and the holding arms or jaws simultaneously adjusted to and from a central point. The punch is mounted to reciprocate through the hub of the centrally-disposed pinion.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be particularly pointed out in the appended claim.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is an elevation of my improved punch. Fig. 2 is a bottom plan with the plates removed. Fig. 3 is a vertical section. Fig. 4 is a detail of one of the sliding plates and its rack.

Like letters of reference indicate like parts in the several views.

Referring now to the details of the drawings by letter, A designates the body portion of the punch, which in this instance is shown in the form of a cross or four-armed frame, the under sides of the said arms being chambered or recessed, as at *a*.

B are the jaws, mounted to move in the chambers or recesses of the said arms, each being formed with the integral rack-arm C and the horizontal arm D, formed upon opposite sides with the grooves *d* to receive the adjacent edges of the angle-plates E, which are secured to the under sides of said arms removably and arranged at a distance apart to form a slot *e* in each arm, in which the

jaws are adapted to slide. The acting faces of these jaws may be of any suitable construction, preferably that shown, and the outer ends of the rack bars or arms thereof are formed with the recesses *F*, adapted to engage stops *f* in the outer ends of the chambers of the arms to limit the movement of the jaws. The rack-arms of the four jaws are arranged at right angles to each other, as shown, overlapping each other, the jaws being formed so as to receive the same and avoid undue friction.

G is a hollow shaft mounted in the center of the body portion or frame and adapted to be rotated therein and at its lower end carrying a pinion or gear wheel H, which being arranged at the center is adapted to engage all four of the rack-arms of the jaws. A hand-wheel or other suitable means *h* is provided for turning this shaft to operate the jaws.

I is a punch of any well-known construction, mounted for reciprocation through this hollow shaft, being provided with a collar *i* or other means to limit its downward movement and being thrown upward or to its normal position by a spring J, secured within the hollow shaft and acting upon the punch, as shown in Fig. 3.

The operation will be apparent. Turning of the hand-wheel in one direction or the other brings all four jaws simultaneously toward or from the center. The jaws are held locked in any and all of their adjusted positions, and an article once held between them will be securely retained in position until the hand-wheel is moved so as to release the same from the jaws.

Modifications in detail may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages.

What is claimed as new is—

The combination with the body portion having radially-extending arms provided with chambers having stops *f* at their outer end, and plates secured to said arms to close said chambers, said plates being provided with longitudinal slots, of jaws B having arms D formed with grooves *d* to engage the side of the longitudinal slots, and having rack-arms C, the outer ends of which are provided with stops *F* to abut against the stops *f* and limit

the movement of the jaws, a hollow shaft
mounted centrally of the jaws, a gear-wheel
carried at the lower end of said shaft and en-
gaging all of the rack-arms, a punch mounted
5 for reciprocation in said shaft and provided
with a collar *i* and a spring for lifting said
punch, substantially as shown and described.

In testimony whereof I have signed this
specification in the presence of two subscrib-
ing witnesses.

ISRAEL BECK.

Witnesses:

FRANK F. IRWIN,
WM. E. IRWIN.