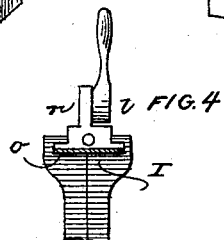
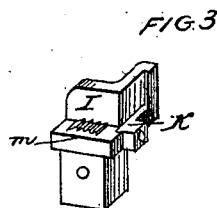
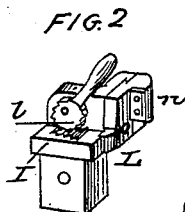
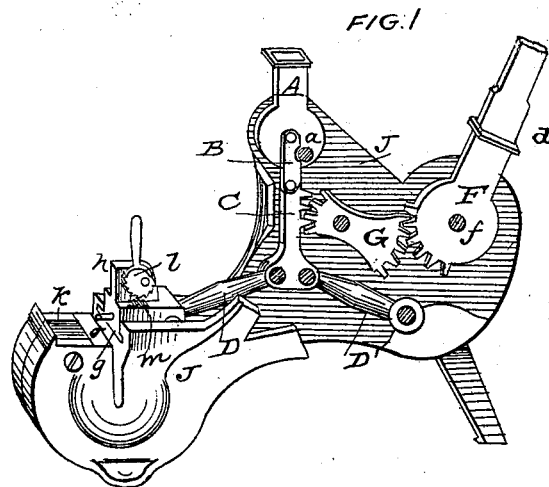


A. C. STANNARD.

Combined Power Punch and Shears.

No. 107,116.

Patented Sept. 6, 1870.



WITNESSES

*A. B. Sprague*  
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INVENTOR

*A. C. Stannard*  
*Per Attorney*  
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# United States Patent Office.

ABRAM C. STANNARD, OF MILTON, WISCONSIN.

Letters Patent No. 107,116, dated September 6, 1870.

## IMPROVED COMBINED POWER-PUNCH AND SHEARS.

The Schedule referred to in these Letters Patent and making part of the same

### To whom it may concern:

Be it known that I, ABRAM C. STANNARD, of Milton, in the county of Rock and State of Wisconsin, have invented a new and useful Improvement in Combined Power-Punch and Shears; 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 of my device, partially in perspective, and with a portion of the side frame broken out, in order to show the interior mechanism.

Figure 2 is a detached view of stationary jaw, with punch-die in place.

Figure 3 is a detached view of the same, with punch-die removed, and vertical shear-jaw inserted.

Figure 4 is an end view of the movable shear-blade head, showing the vertical and horizontal cutting-blades and punch.

Like letters refer to like parts in each figure.

The nature of this invention relates to an improvement in the construction and operation of a combined apparatus for punching and cutting metal plates, so arranged as to be operated by hand, very effective in its operation, and not expensive in its construction.

The invention consists in a new, novel, and ingenious arrangement of well-known mechanical devices for operating the device, and in a new arrangement of cutting-blades, so that a perpendicular or horizontal cut can be effected without any change in the machine; also, in combining a punch and die with said cutting-blades, that metal plates may be punched at any desired distance from the edges, thereby rendering the punching of stay-bolt holes in boiler-plates a very easy matter; also, in a general arrangement of all the parts, as more fully hereinafter described.

In the accompanying drawing—

J represents a metallic frame, within and to which the operating parts are attached.

This frame is provided with a vertical slot, *p*, to receive any metallic sheets upon which it is desired to operate.

A cam-lever, A, is pivoted to the frame, at *a*, and provided with a socket, *s*, to receive a proper lever.

This cam-lever A is connected, by stirrups B, to the vertical rack-bar C, one side of which is provided with a rack, *b*.

The lower end of this rack-bar is pivoted to the levers D D', the latter of which is pivoted to the frame, at *e*, while the former is pivoted to the shear-

blade and punch-head H, and gives a reciprocating motion thereto.

To enable me to increase the power when heavy work is required, I employ the segmental gear-wheel F, which is pivoted at *f*, and provided with a socket, *d*, to receive a lever; by means of which the wheel is operated.

The teeth of this wheel F engage with the teeth upon one end of the segmental cam G, while teeth upon the opposite end of said cam engage with the rack-teeth, *b*, on the rack-bar C.

Working in proper slides is the head H, which has a reciprocating motion from the devices hereinbefore described.

To this head are secured the vertical cutting-blade *h*, the horizontal cutting-blade *g*, and the punch *i*.

I is a stationary head, which is inserted in the recess, *k*, in the frame J, and is so arranged that the punch-die K may be inserted by a dovetail, or in any other suitable manner.

The punch-die may be removed, and, in the same manner, may be inserted the shear-blade head L, which is provided with a shear-blade, *n*, set vertically to operate with the cutting-blade *h*, which is secured to the reciprocating head H.

Secured to the top of the jaw of the frame, immediately in front of the recess *k*, is the shear-blade *o*, which operates with the horizontal cutting-blade *g*, which is secured to the reciprocating head H.

The small serrated cams *l*, provided with proper handles, are pivoted, one to each, to the heads H I, and are intended to engage with and hold a piece of iron into engagement with the serrated racks *m*, in order that the device may be employed as an iron-shrinker when required.

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

1. The combination, with the frame J, of the cam-lever A, stirrups B, vertical bar C, the toggle-levers D D', and the punch-head H, constructed and arranged substantially as and for the purposes herein set forth.

2. The combination of the segmental toothed wheel F, provided with socket *d*, for receiving a lever, pivoted, at *f*, to the frame, the double toothed lever G, the rack-bar C, the toggle-levers D D', and the punch-head H, as and for the purposes herein described.

ABRAM C. STANNARD.

Witnesses:

H. F. EBERTS,  
SAM'L. E. JONES.