

J. O. JONES.
Bolt-Heading Machines.

No. 141,059.

Patented July 22, 1873.

Fig. 1.

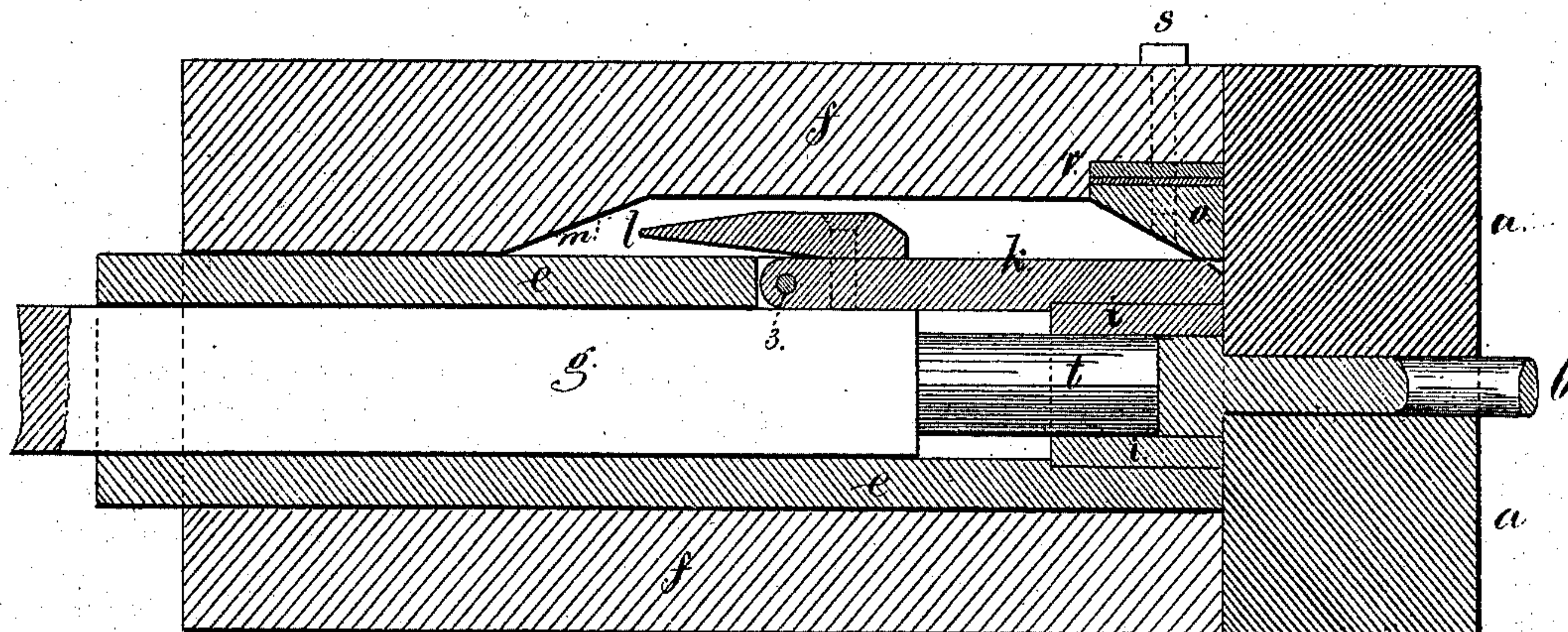


Fig. 2.

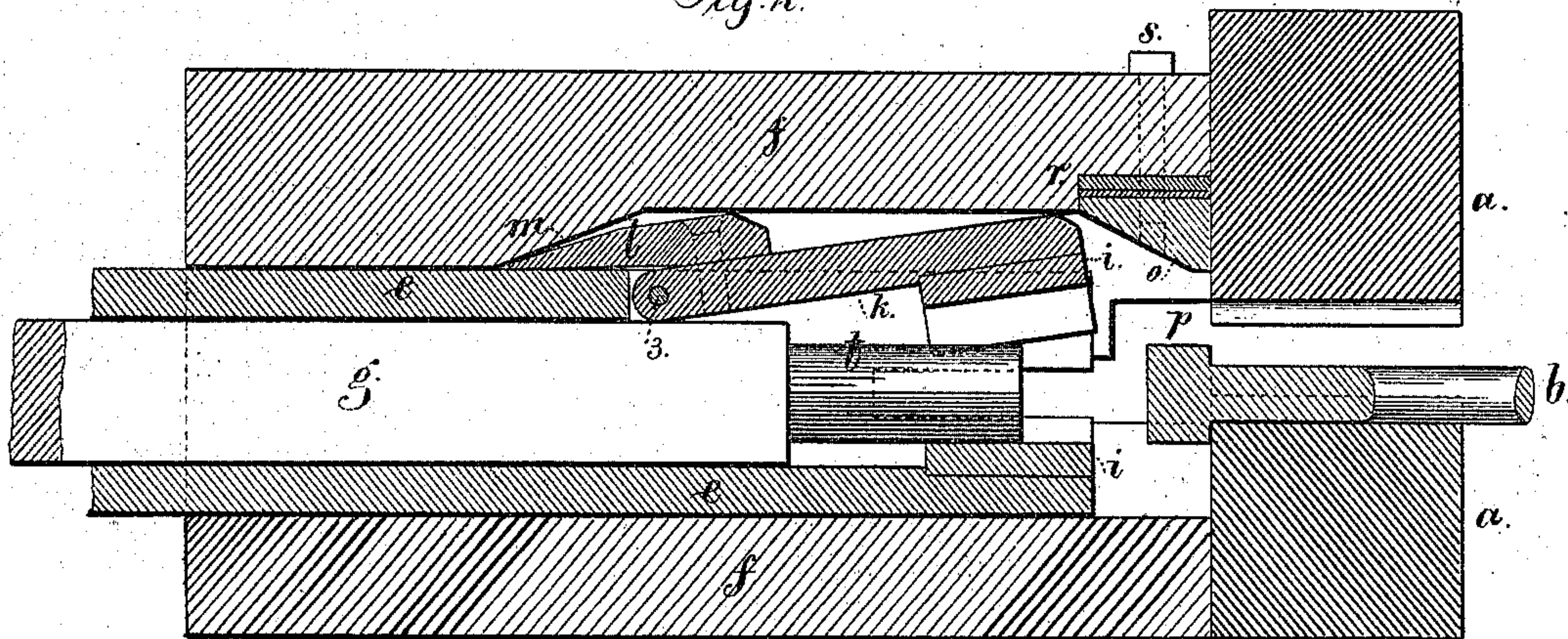
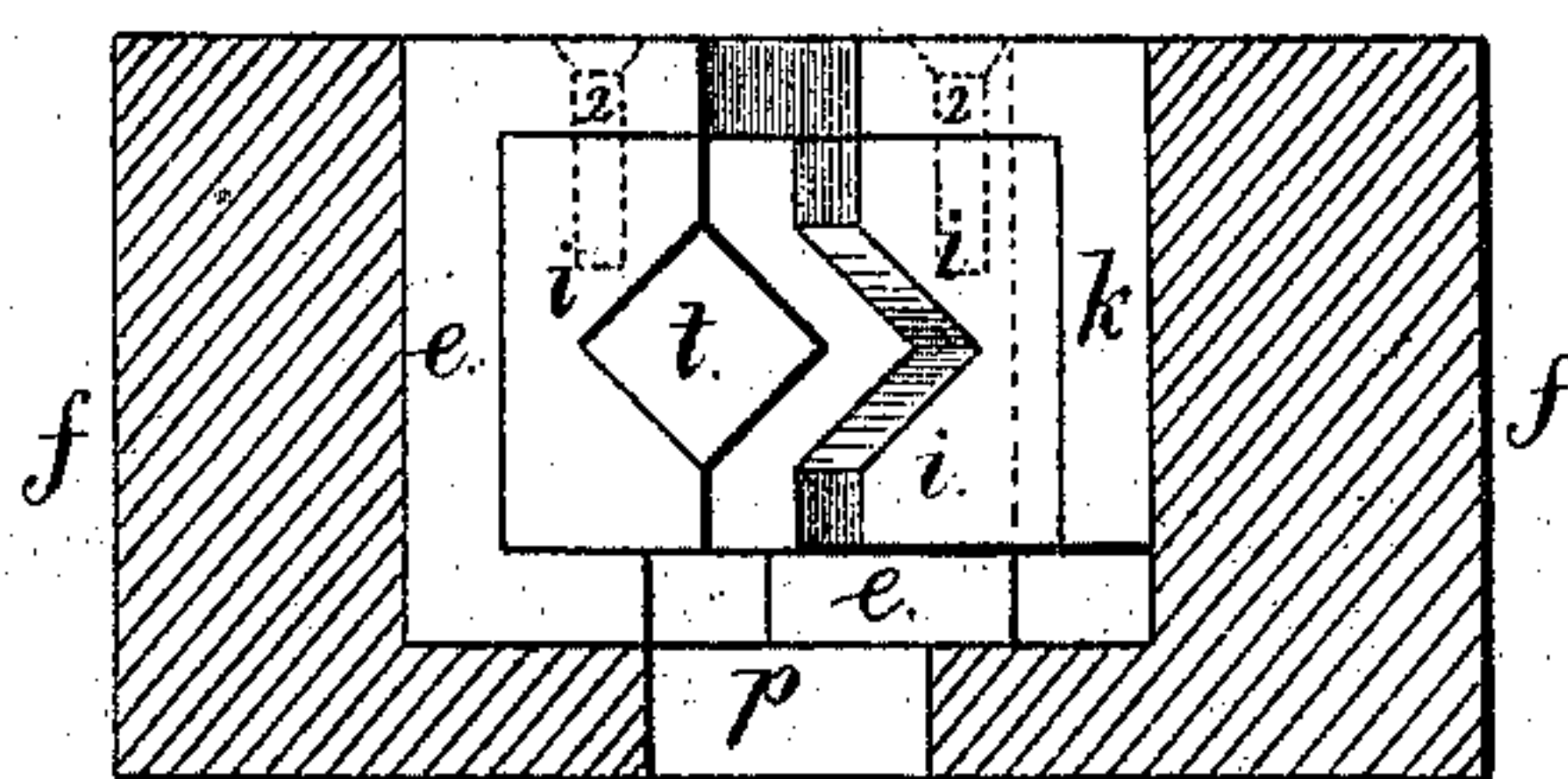


Fig. 3.



Witnesses.

Chas. N. Smith.
Geo. D. Walker.

Inventor.

James O. Jones.
Lemuel W. Serrell.
Atty.

UNITED STATES PATENT OFFICE.

JAMES O. JONES, OF BROOKLYN, ASSIGNOR TO HIMSELF AND ADOLPH STARKE, OF NEW YORK, N. Y.

IMPROVEMENT IN BOLT-HEADING MACHINES.

Specification forming part of Letters Patent No. **141,059**, dated July 22, 1873; application filed March 27, 1873.

To all whom it may concern:

Be it known that I, JAMES O. JONES, of Brooklyn, in the county of Kings and State of New York, have invented an Improvement in Machinery for Heading Bolts, Spikes, &c., of which the following is a specification:

This invention relates to the die in which the head is formed. The said die is made in two parts, hinged together and opened at the back movement, and closed and held at the forward movement. In consequence of making this die in two parts, the head of the bolt is delivered very easily when the die opens, and any scale or other material that might remain and injure the parts or interfere with their perfect operation falls out; and this may be facilitated and the dies cooled by jets of water easily directed into the dies when open. The means for closing the dies and holding them in position are adjustable to compensate wear.

In the drawing, Figure 1 is a section plan of the dies, punch, and holding mechanism closed. Fig. 2 is a similar view of the same as open, and Fig. 3 is an end view of the punch and die as open.

The dies *a a* are of ordinary character, and clamp the rod *b* while the head is being formed thereon. The mechanism for opening and closing these, being well known, is not shown. The die-stock *e* slides in the guides or bed *f*, and is reciprocated at the proper time by a cam or otherwise, as usual in bolt-machines; and within this stock *e* is the punch-carrier *g*, also moved by a cam at the proper time. The dies *i i* are of a size and shape adapted to the bolt-head. They are changeable, and are secured by bolts 2 2. The jaw

k is hinged at 3 to the stock *e*, and carries one of the dies *i*, the separation between the jaw *k* and die-stock *e* being longitudinal and in line with the center of the bolt. The lever *l* at the back end of the jaw *k* is employed to open the jaw as the stock *e* is drawn back, said lever-end *l* sliding against the incline *m*; hence, when the jaw *k* is open, the dies *i* are separated, and the bolt drops freely through the opening at *p*. Any scale or foreign substance is also free to drop, and water can be ejected upon the faces of the dies *i*.

As the stock *e* is moved forward, the end of the jaw *k* comes into contact with the stationary incline *o*, so that the jaw *k* and dies *i* are closed to place, and firmly held together and against the sides of the clamping-dies *a a*, while the heading-punch *t* is moved forward to upset the heated bolt and form the head.

The incline *o* is made adjustable to compensate wear. It is preferable to employ thin plates at *r*, the same being introduced behind the incline *o* from time to time, as required. A screw, *s*, may be used to hold the incline *o* in place.

I claim as my invention—

The jaw *A*, hinged to the sliding stock *e*, and carrying one of the dies *i* for the bolt-head, in combination with the heading-punch sliding in the stock *e* and the mechanism for opening and closing the jaw *k*, substantially as set forth.

Signed by me this 22d day of March, A. D. 1873.

JAMES O. JONES.

Witnesses:

GEO. T. PINCKNEY,
CHAS. H. SMITH.