

L. CHAPMAN.

DIES FOR FORMING THE EYES OF PICKS.

No. 183,749.

Patented Oct. 31, 1876.

Fig. 1.

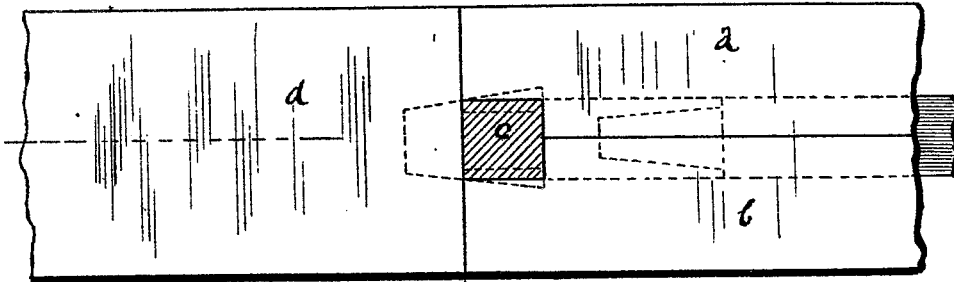


Fig 2

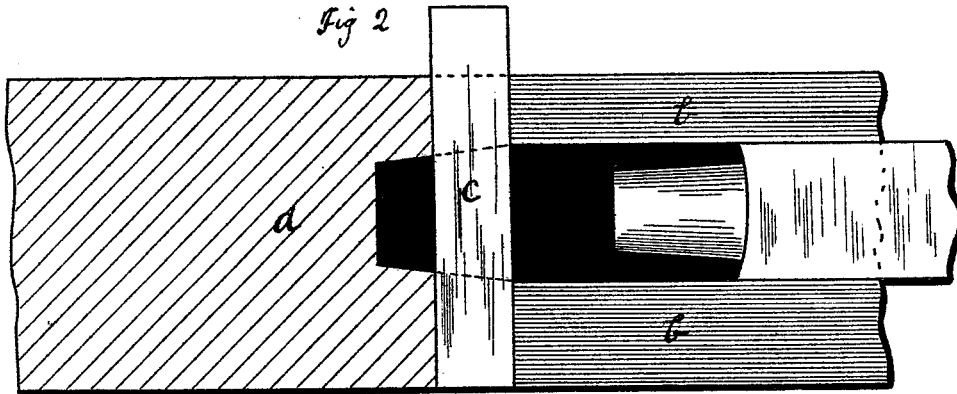
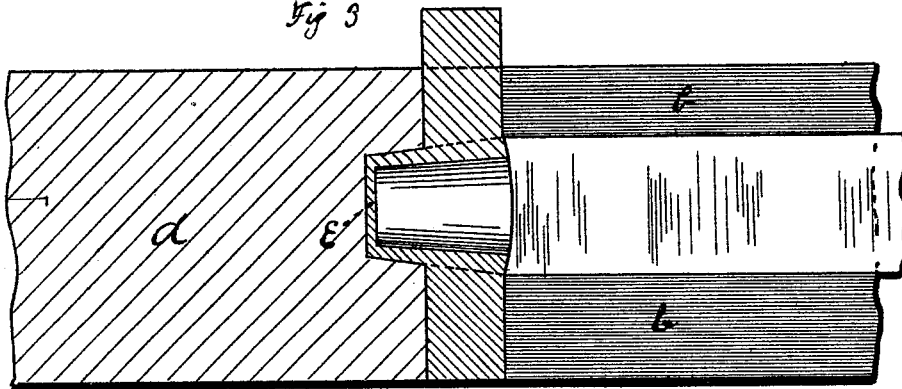


Fig 3



Witnesses

John Pollitt
Robt. F. Hayward

Inventor

Duke Chapman
By Wm. C. Simonds
Att'y.

UNITED STATES PATENT OFFICE.

LUKE CHAPMAN, OF COLLINSVILLE, CONNECTICUT, ASSIGNOR TO THE
COLLINS COMPANY, OF SAME PLACE.

IMPROVEMENT IN DIES FOR FORMING THE EYES OF PICKS.

Specification forming part of Letters Patent No. 183,749, dated October 31, 1876; application filed
February 10, 1876.

To all whom it may concern:

Be it known that I, LUKE CHAPMAN, of Collinsville, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements pertaining to Dies and Punches for Producing the Elongated Eyes of Picks and other Tools, of which the following is a specification, reference being had to the accompanying drawings, where—

Figure 1 is what may be called an edge view of the dies closed together. The dotted lines denote the punch, its path, and the matrix for the formation of the eye. The end of the stock-bar is shown. Fig. 2 shows a face view of one of the side clamping-dies, also of the punch and stock-bar, with the resisting-die in central section. The stock-bar is shown as inserted ready to be operated on. Fig. 3 is a view the same as Fig. 2, except that the punch has advanced and operated on the stock-bar.

These dies and this punch are for producing what are known as elongated or socket eyes upon pick-axes and other tools.

The letters *a* and *b* denote the two dies, which, moved by appropriate machinery, clamp the sides of the bar of stock *c*. They may be made to clamp and compress the stock, or the stock may simply lie in between them. The letter *d* denotes what may be termed the resisting-die. The matrix for the formation of the eye is partly in dies *a* and *b* and partly in die *d*. The matrix for the elongated part of the eye is wholly (though obviously this

may be changed to partly) in the resisting-die *d*, which is not partible. One thing aimed at in making the die *d* solid instead of partible is the avoidance of the formation of a fin in the parting or joint of partible dies, which sometimes takes place when the punch moves down to its work. The rib *e* at the bottom or end of the eye is punched out or sawed off after the forging is taken out of the dies.

The essential element of novelty in these dies is the combination of the partible side dies *a b* with the solid (*i. e.*, not partible) resisting-die *d*, wherein the whole or a part of the elongated part of the eye is formed. This mechanism is an improvement on the devices shown in several of my patents dated January 18, 1876, and is designed especially to prevent the formation of fins on the article being produced.

In using these dies the stock is, of course, properly heated before submission to their action.

I claim as my invention—

Partible side dies *a b*, in combination with a solid resisting-die, *d*, for forming the whole or a part of the elongated part of the eye, when all are constructed and designed for operation and use substantially as described, and for the purpose set forth.

LUKE CHAPMAN.

Witnesses:

OLIVER F. PERRY,
GEORGE P. EDWARDS.