J. PINKERTON.

Die for Forming the Eyes of Hammers.

No. 164,326. Patented June 8, 1875.

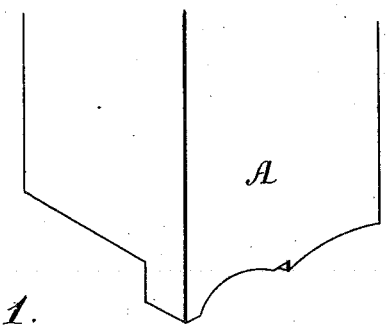


FIG. 1.

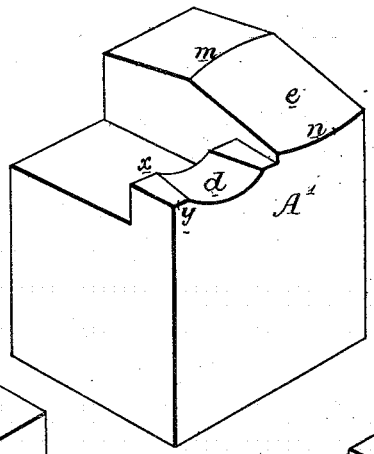


FIG. 2.

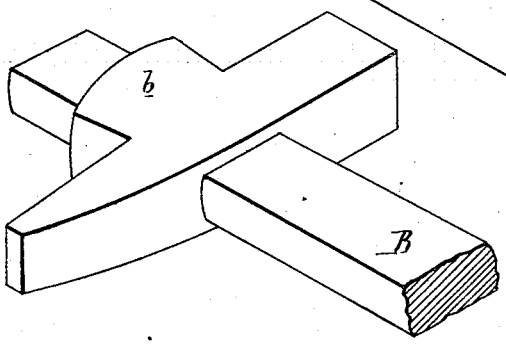
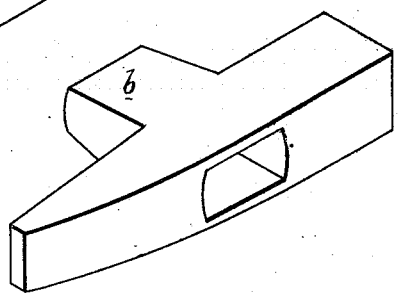


FIG. 3.



Witnesses,
Thomas McIlvaine
Hubert Howson

John Pinkerton
by his Attys.
Howson and Son.

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

JOHN PINKERTON, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN DIES FOR FORMING THE EYES OF HAMMERS.

Specification forming part of Letters Patent No. **164,326**, dated June 8, 1875; application filed April 20, 1874.

To all whom it may concern:

Be it known that I, JOHN PINKERTON, of Philadelphia, Pennsylvania, have invented an Improvement in the Manufacture of Adz-Eye Hammers, of which the following is a specification:

The object of my invention is to forge with rapidity and accuracy the sockets of adz-eye hammers, by means of the dies A and A′, illustrated in the perspective view, Fig. 1, of the accompanying drawing, the die A being attached to the reciprocating head of an ordinary trip or steam hammer, and the die A′ being secured to the anvil. The hammer-blank on which these dies are intended to operate is first roughly forged to the condition shown in Fig. 2, and while the blank is hot a mandrel, B, is driven through the eye, and by this mandrel the operator subjects the socket *b* of the hammer to the dies, the faces of which are precisely alike. The stationary die A′ has a slightly-hollowed face, *d*, corresponding with a like face in the upper die, and it is by and between these faces that the opposite edges of the socket are formed to the shape shown in Fig. 3. This face *d* is slightly inclined downward from the line *x* to the front edge *y*, the upper die having a corresponding inclination, so that the desired taper may be imparted to the socket simultaneously with the transverse rounding of the same by the concavity of the two faces. From the line *x*, which is the most elevated portion of the face *d*, the latter recedes toward the rear of the die, so that under all circumstances it may be clear of the mandrel, which carries the hammer-blank. Adjoining the face *d*, and above the latter, is a second face, *e*, which is inclined downward from the rear edge *m* to the front edge *n*, and is made hollow transversely, as shown, so that the desired shape shown in the perspective view, Fig. 3, may be imparted to the opposite sides of the socket of the hammer-blank, the upper die A having a face, *e*, corresponding to and coinciding with that below.

The operator, with the mandrel in his hand, has simply to place the edge of the socket on the face *d*, then turn the mandrel one-quarter round laterally, thereby placing the side of the socket on the face *e*, the die A in the meantime reciprocating rapidly and striking the socket a succession of blows, which, by turning the socket first to one face and then to the other, soon reduce the said socket to the desired shape.

It is important that the two faces *d* and *e* should adjoin each other, so that the blank can be rapidily turned from one to the other without interfering with the continuous movement of the hammer, the blows of which are given so rapidly that there is no time for any adjustment of blank, other than can be readily effected by the dexterity of the operator.

I am aware that dies have heretofore been constructed with recesses for receiving the projection of a hammer-head, and for molding the latter into form by pressure, said recesses being formed partly in the upper and partly in the lower die, and the dies being adapted to a power-press. I therefore do not claim the dies, irrespective of their construction and arrangement; but

I claim as my invention—

The combination of the dies A A′, each having a hollow face, *d*, contracted toward the rear end, and a concave face, *e*, inclined from its rear edge *m* downward toward the front of the die, when the said dies are constructed and arranged relative to each other to permit the transfer of the article being forged from one face to the other, all as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN PINKERTON.

Witnesses:
WM. A. STEEL,
HARRY SMITH.