

J. H. ZOTTMAN.

DIES FOR TRIMMING THE POINTS OF HORSESHOE NAILS.
No. 182,509.

Patented Sept. 19, 1876.

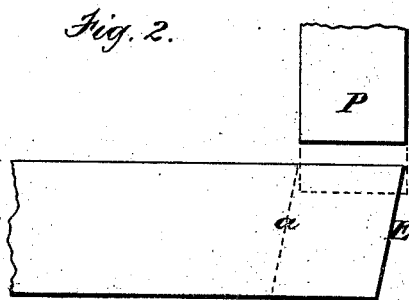
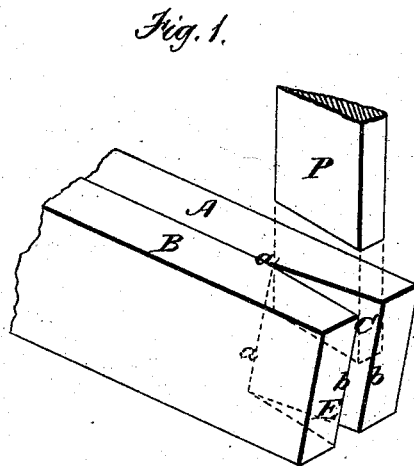
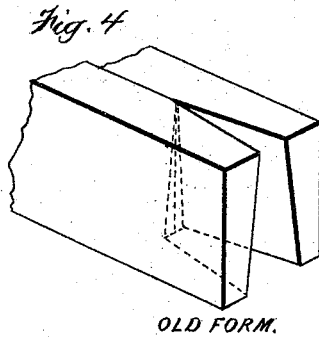
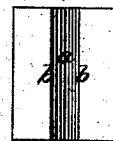


Fig. 3.



Witnesses.
C. T. Barron.
M. Chubb

Inventor
J. H. Zottman.
by his Atty.
H. C. Hallam

UNITED STATES PATENT OFFICE.

JOHN H. ZOTTMAN, OF VERGENNES, VERMONT, ASSIGNOR OF ONE-HALF OF HIS RIGHT TO WILLIAM S. HOPKINS, OF SAME PLACE.

IMPROVEMENT IN DIES FOR TRIMMING THE POINTS OF HORSESHOE-NAILS.

Specification forming part of Letters Patent No. 182,509, dated September 19, 1876; application filed June 20, 1874.

To all whom it may concern:

Be it known that I, JOHN H. ZOTTMAN, of Vergennes, in the county of Addison and State of Vermont, have invented certain new and useful Improvements in Dies for Trimming or Shearing Horseshoe-Nails; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective view of my invention. Fig. 2 is a side elevation. Fig. 3 is an end elevation; and Fig. 4 is a perspective view, showing the old form of die.

Similar letters of reference in the accompanying drawings denote the same parts.

The stationary cutting-dies ordinarily employed for trimming or pointing horseshoe-nails, after they have been cut from the blanks, have heretofore been provided with an opening or channel wedge-shaped or beveled in the direction both of its length and breadth, for the purpose of pointing the nail when acted on by the movable plunger, and at the same time permitting the clearance of the nail by the divergence of the side faces of the channel from the cutting-edge. The ends of the die, and the outer edges of the channel, in the construction described, are at right angles to the face of the die.

The result of this divergence of the side faces of the channel is that, after the face has been ground several times for the purpose of sharpening the die, the channel becomes too large on the cutting-face of the die, and does not fit the punch or male die, or answer the purpose for which it was intended; hence, such dies become inoperative after repeated sharpenings.

To obviate this defect is the object of my invention, which consists in beveling the side faces of the channel in the stationary die in the direction of its length only, the outer edges of the channel being parallel to each other, and the ends of the die being inclined to the face, by which construction the cutting part or face of the die retains the proper shape for pointing or trimming the nails, after being repeatedly ground, and the inclined position of the outer end of the die, relative to the face, will allow clearance to the nail after being pointed or trimmed.

In the accompanying drawings, A and B represent two pieces of steel doweled together

to form the stationary die, one end of which is provided with an opening or channel, C, in longitudinal section of the form of a pointed or finished horseshoe-nail, the side faces of the channel C being beveled or inclined from the line *a*, where they intersect, to the outer end of the die.

The angle which the side faces of the channel or opening in the female die make with each other may be varied at pleasure. The outer edges *b b* of the channel are parallel to each other their entire lengths; and, consequently, the longitudinal sections of the channel are alike wherever made in the die, so that the die may be repeatedly sharpened, and its cutting-face will still retain precisely the original form, thus obviating the defect in the ordinary die alluded to above and shown in Fig. 4.

In order to clear the nail from the female die, when acted on by the male die P, which operates perpendicularly to the cutting-face of the stationary die, the outer face E of the die is inclined, or forms an acute angle with the face of the female die, and the line of intersection *a* of the side face of the channel makes the same angle with the face of the female die, so that the same distance is preserved between the intersection of the side faces of the opening in the die and its end, after repeatedly grinding the die.

The inclination of the end of the die to its cutting-face allows the clearance of the nail as it is forced into the female die by the action of the male die or plunger P.

After grinding the face of the female die it will be necessary to adjust the latter somewhat to accommodate it to the action of the plunger moving perpendicularly to its cutting-face.

The male die P is beveled on both its side faces to adapt it to the channel in the female die, in which it is made to operate.

I claim as my invention—

The die for pointing horseshoe-nails, provided with an opening, having beveled side faces intersecting each other, the outer edges of the opening being parallel to each other, and the outer end of the die being inclined to the cutting-face, substantially as described, and for the purpose set forth.

Witnesses: JOHN H. ZOTTMAN,
JOSEPH LA DUKE,
WILLIAM S. HOPKINS.