J. C. RIETHMÜLLER.

Punch and Die for Making Bale-Ties.

No. 209,422. Patented Oct. 29, 1878.

Fig. 1.

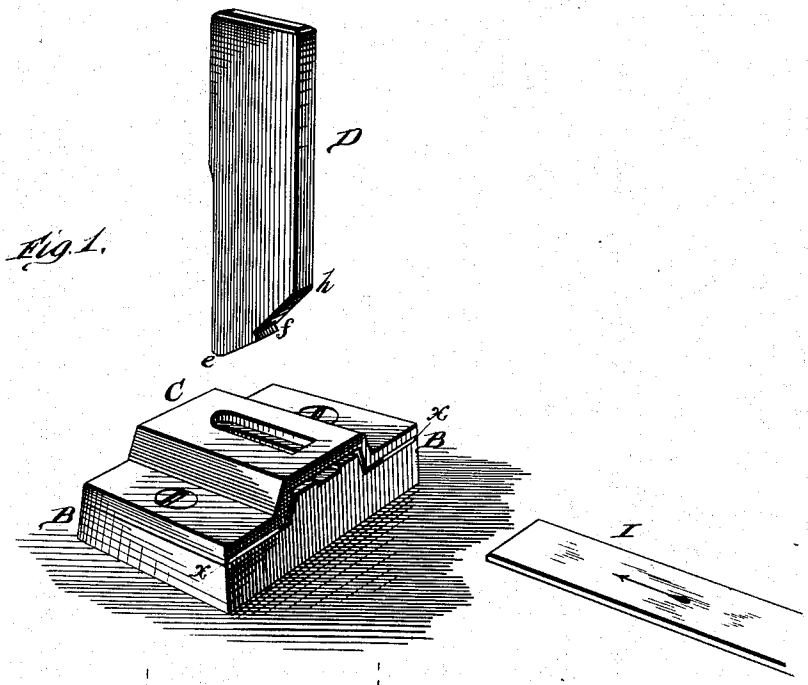
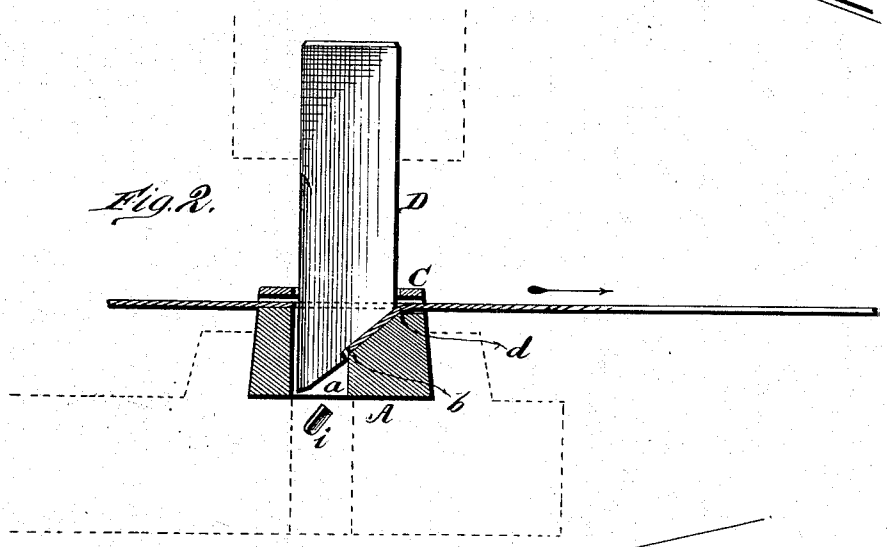


Fig. 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

JOHN C. RIETHMÜLLER, OF RESERVE TOWNSHIP, ALLEGHENY COUNTY, PA., ASSIGNOR TO SIMEON N. DRAKE, OF NEW ORLEANS, LA.

IMPROVEMENT IN PUNCH AND DIE FOR MAKING BALE-TIES.

Specification forming part of Letters Patent No. **209,422**, dated October 29, 1878; application filed November 10, 1877.

To all whom it may concern:

Be it known that I, JOHN C. RIETHMÜLLER, of Reserve township, in the county of Allegheny and State of Pennsylvania, have invented a new and valuable Improvement in Punch and Die (metal) for Manufacturing Bale-Ties; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a perspective view of my die and punch for manufacturing bale-ties, and Fig. 2 is a transverse vertical sectional view of the same.

My invention relates to the manufacture of that class of cotton-bale ties which are provided with a button-hole slot and lip for securely fastening the revolving button; and the nature of my invention consists in a die and punch so constructed as to punch the button-hole, cut the lip, and depress the lip all in one operation, as will be hereinafter more fully set forth.

The annexed drawing, to which reference is made, fully illustrates my invention.

A represents the die, having a vertical orifice or mortise, *a*, the front end of which is rounded the entire length from top to bottom of the die. The rear end of this mortise is made square, and extends from the bottom upward to a point, *b*, about midway in the center of the die, and from the point *b* is an incline to *d* in the upper surface of the die near the rear end, as shown in Fig. 2. The die A is formed on its sides with offsets or wings B B, and over the die is placed a correspondingly-shaped stripping-plate, C, which is fastened to said wings B by bolts or screws. In the cap or plate C is a slot corresponding with the opening in the top surface of the die, and a space is left between the die and the plate sufficiently large to admit the iron strap to be cut. The size of this space may be regulated by means of washers *x x*, interposed between the wings B and the ends of the plate C, so as to accommodate the device to iron of different thicknesses.

D represents the punch, the lower end of which is beveled or inclined from the toe *e* upward and rearward to a point, *f*, where an angular offset is formed, and from this point it is similarly inclined to the heel *h*. The front edge of the die is made rounded or convex from the toe *e* upward for a suitable distance.

The die and punch thus constructed are fastened in proper positions in a suitable machine for punching. The strap-iron I is passed into the space between the die and the stripping-plate when the punch is brought down.

The part from *e* to *f* of the punch cuts out a portion, *i*, of the metal, while the portion from *f* to *h* cuts the lip *m*, and bends the same down on the incline *b d*. When the iron is taken out the button is inserted in the hole formed by cutting out the part *i*, and the lip *m* pressed back to its original position.

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

1. As a means for forming bale-ties in which the end of the band is provided with a button-hole slot and a flexible lip, a punch and die constructed to cut an elongated slot, remove a portion of the metal to form the opening for the button, and bend down the remainder of the lip formed by the first cut, substantially as and for the purpose set forth.

2. The die A, provided with vertical mortise *a* and incline *b d*, in combination with the punch D, having two independent inclines from the toe *e* to the heel *h*, separated by an offset at *f*, substantially as and for the purposes set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOHN C. RIETHMÜLLER.

Witnesses:
H. F. MCGRADY,
D. E. DAVIS.