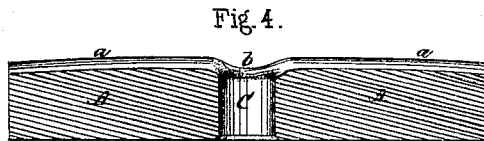
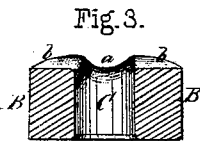
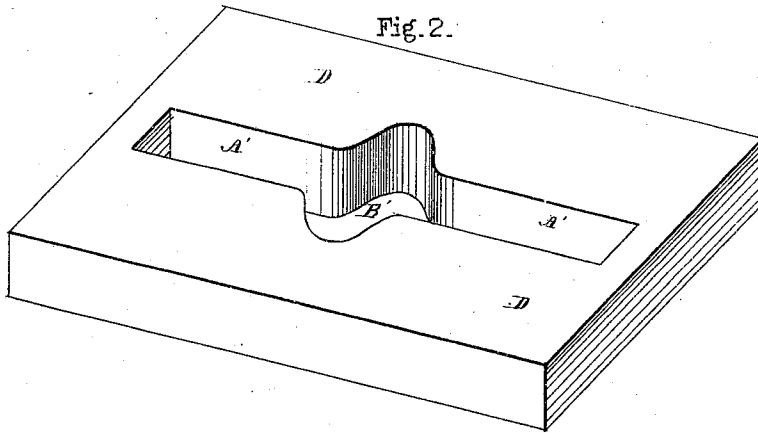
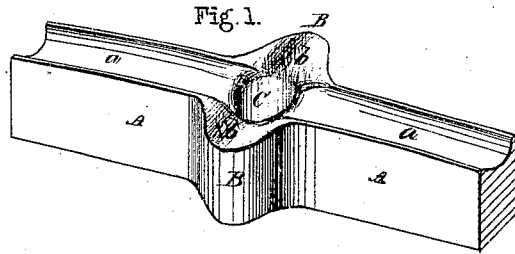


F. B. Prindle,

Manf. Carriage Irons.

No. 102708.

Patented May 3, 1870.



Witnesses.

W. H. Wood
Sam'l. M. ...

Inventor

F. B. Prindle
by Prindle & Gyer. Attys.

United States Patent Office.

FRANKLIN B. PRINDLE, OF SOUTHTON, CONNECTICUT.

Letters Patent No. 102,708, dated May 3, 1870.

IMPROVEMENT IN DIES FOR TRIMMING KING-BOLTS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, FRANKLIN B. PRINDLE, of Southington, in the county of Hartford and in the State of Connecticut, have invented certain new and useful Improvements in Dies for Forming Clip King-Bolts; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a perspective view of the male trimming-die;

Figure 2 is a like view of the corresponding female die; and

Figures 3 and 4 are central cross and longitudinal sections respectively of the male die.

Letters of like name and kind refer to like parts in each of the figures.

My device is designed for use in connection with other dies of my invention for forming clip king-bolts, and

It consists in the peculiar form and construction of the dies, by means of which the edges and ends of the clips are trimmed without changing their shape, as is hereinafter set forth.

In the annexed drawing—

A represents the male trimming-die, having a width upon its face equal to the breadth of the clip-arms, and provided at its center, lengthwise, with semicircular projections, B, corresponding in size and shape with the lips of the clip.

Extending longitudinally along the face of the die A is a semicircular groove, *a*, which, at its center, runs into an opening, C, passing vertically through the center of said die.

A second and larger groove, *b*, extends transversely across the center of the die A, and, like the groove *a*, dips downward into the opening C.

As seen in fig. 4, the face of the die A inclines slightly downward from the groove *b* to the ends, in order to make it conform to the shape of the clip-arms

as left by the forming-dies, and also to give a slight shearing cut to the die.

The female die D is formed of a block of metal having a plain upper surface, in and through which is provided a vertical opening, A' and B', which corresponds in size and shape with the male die A.

As thus constructed, the dies are complete, and, being placed within a suitable drop-press, are operated as follows:

The bolt, as left by the forming-dies, is placed within the male die A, the shank of said bolt fitting into the opening C, while the arms and lips of the clip fill the grooves *a* and *b* respectively, in which position, if said die is caused to pass downward through the lower or female die, carrying with it the bolt, all stock that projects beyond the edge of said male die will be neatly removed.

The especial advantage obtained by the use of this die is that, as it conforms exactly to the shape of the lower side of the clip-arms and lips as they leave the forming-dies, the operation of trimming does not in the least change their form, said parts being fully supported by said die.

Another advantage arises from the convex form of the cutting-surface of the male die, as by it a shearing cut is produced.

Having thus fully set forth the nature and merits of my invention,

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

The dies A and D, constructed and shaped as described and represented.

In testimony that I claim the foregoing, I have hereunto set my hand and seal this 11th day of April, 1870.

FRANKLIN B. PRINDLE. [L. S.]

Witnesses:

WALTER S. MERRELL,
CHAS. W. LANDAN.