

M. HINE.
Dies for Forging Carriage-Clips.

No. 210,694.

Patented Dec. 10, 1878.

Fig. 1.

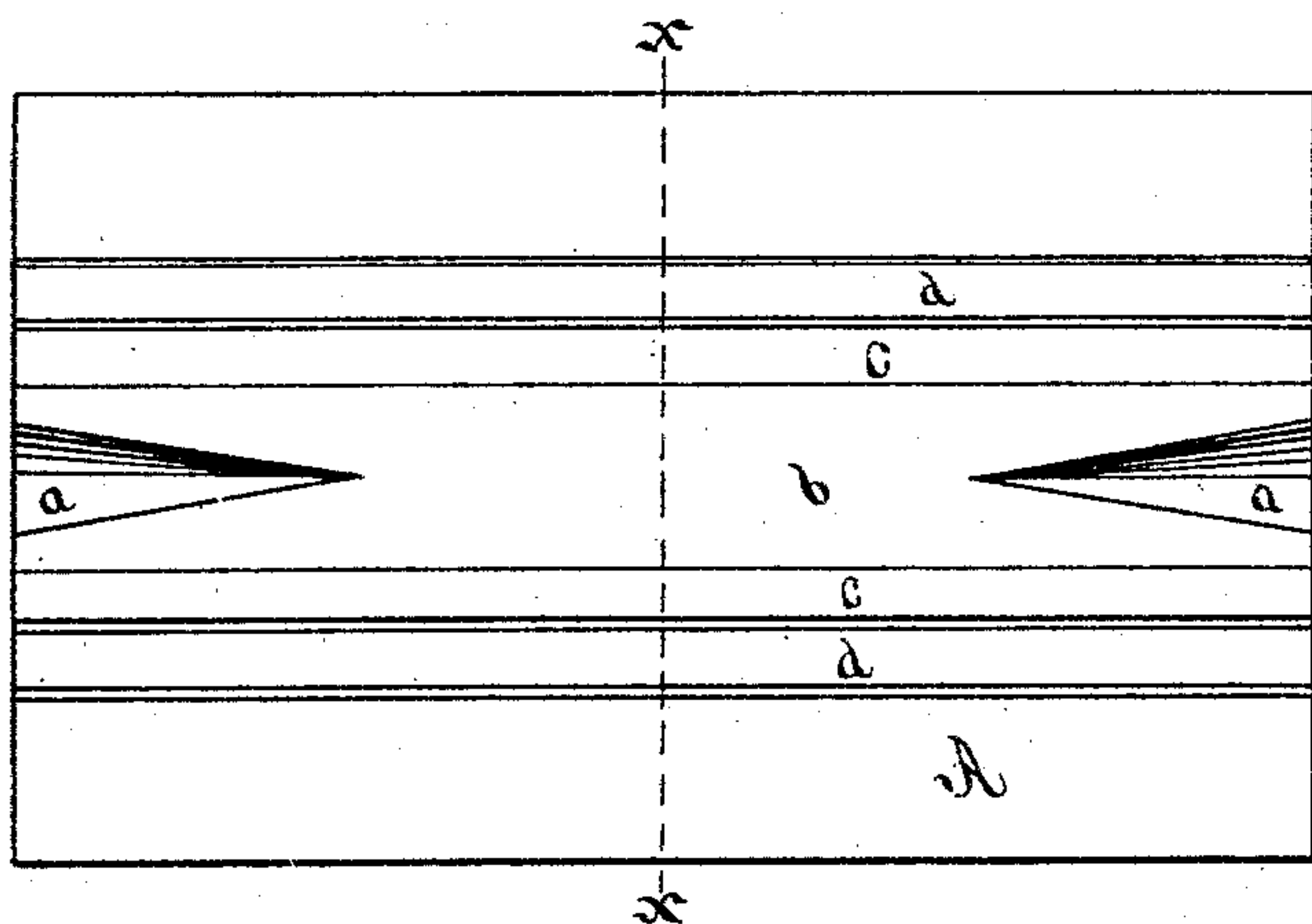


Fig. 2.

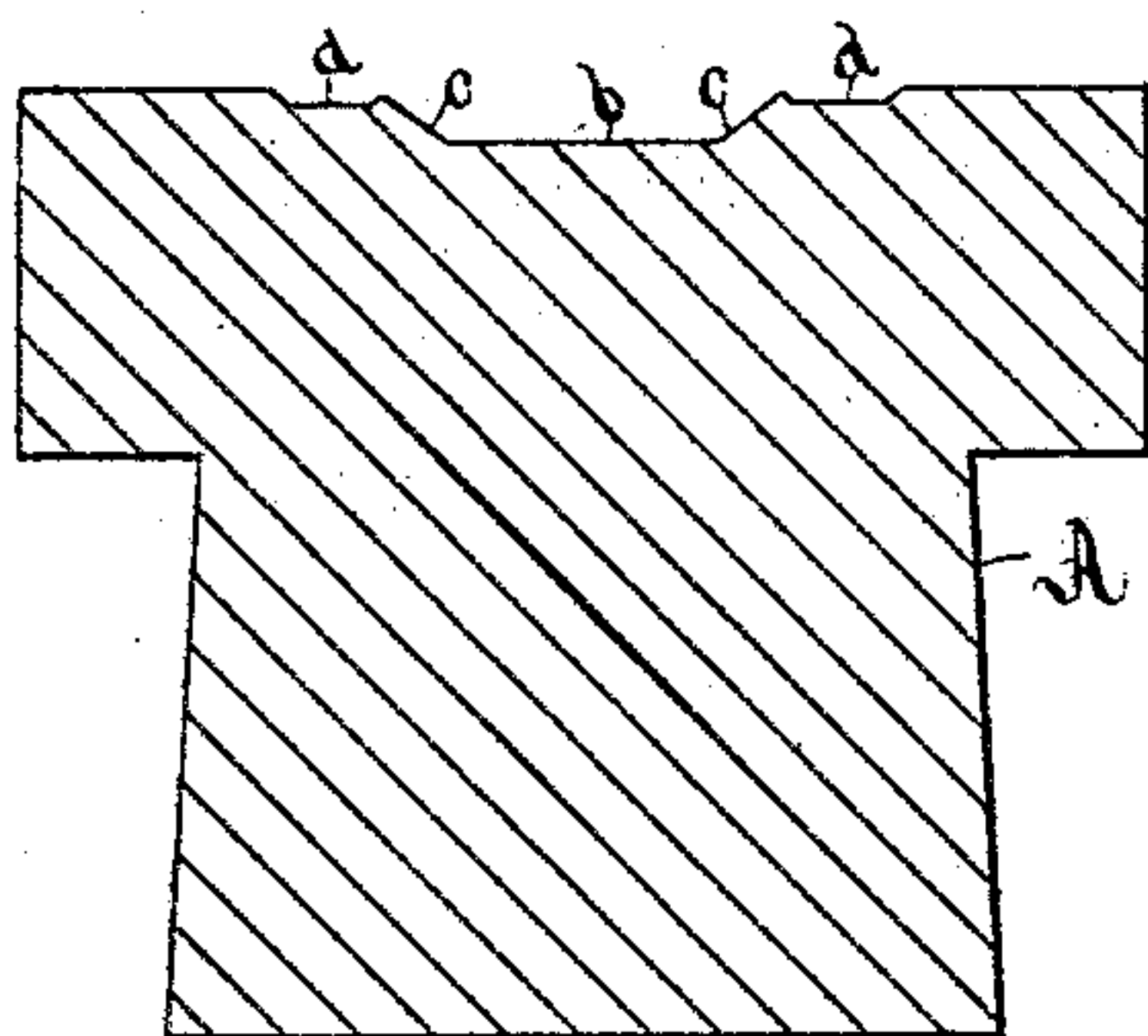


Fig. 3.

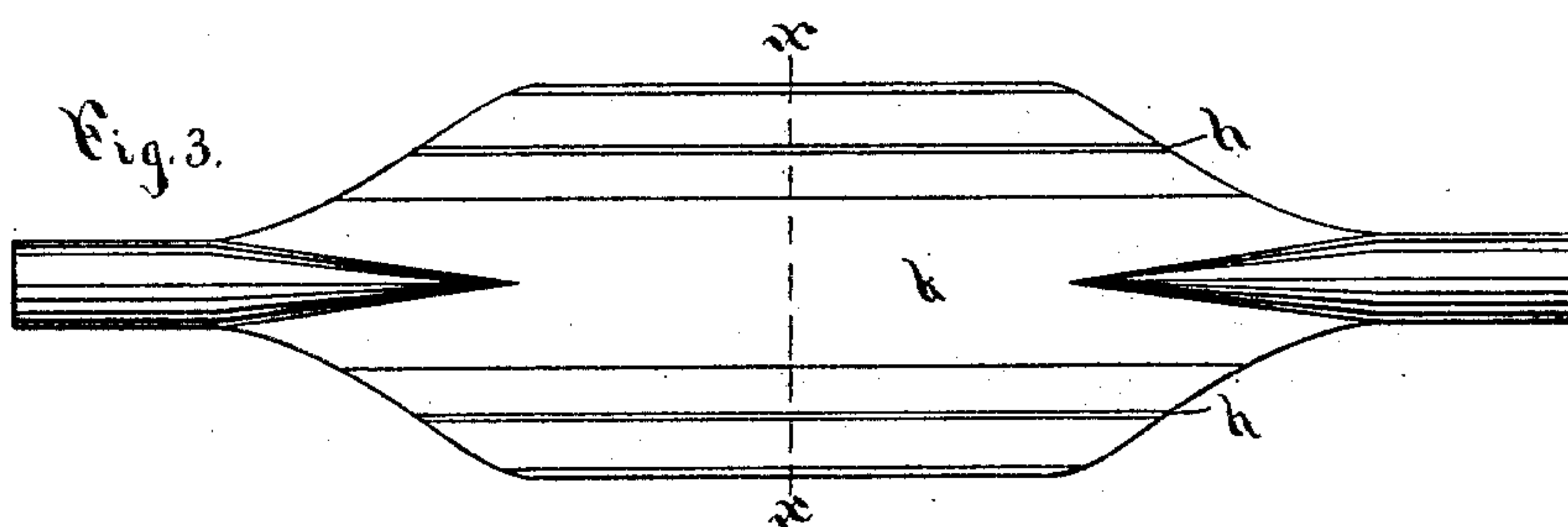
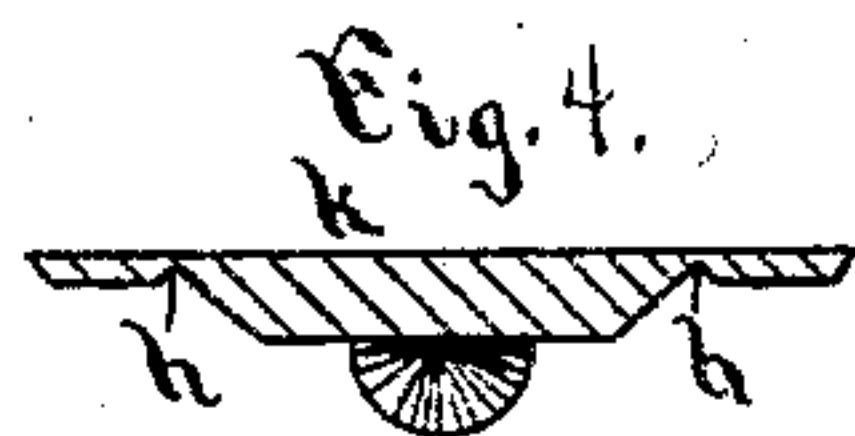
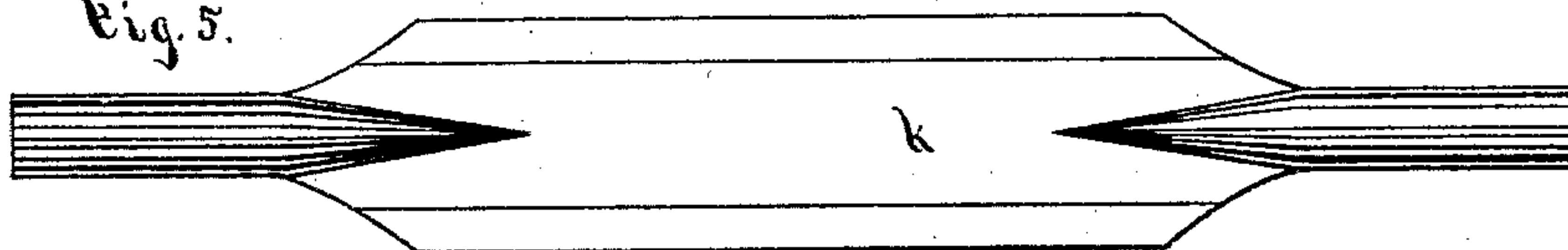


Fig. 5.



Witnesses
W. B. Thomson.
P. J. Markley.

Inventor
Merritt Hine
By James Shepard atty.

UNITED STATES PATENT OFFICE.

MERRITT HINE, OF UNIONVILLE, CONNECTICUT, ASSIGNOR TO UNION NUT COMPANY, OF SAME PLACE.

IMPROVEMENT IN DIES FOR FORGING CARRIAGE-CLIPS.

Specification forming part of Letters Patent No. **210,694**, dated December 10, 1878; application filed October 12, 1878.

To all whom it may concern:

Be it known that I, MERRITT HINE, of Unionville, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in the Dies for Manufacturing Carriage-Clips, of which the following is a specification:

My invention consists in the die having a longitudinal plane face, beveled faces, and grooves outside of said beveled faces, substantially as described hereinafter.

In the accompanying drawing, Figure 1 is a plan view of a die for making carriage-clips which embodies my invention. Fig. 2 is a transverse section of the same on line *xx* of Fig. 1. Fig. 3 is a plan view of a blank which is the result of the first step in the manufacture of clips in accordance with my invention. Fig. 4 is a transverse section of the same on line *xx* of Fig. 3, and Fig. 5 is a plan view of a clip ready to be threaded.

My invention has for its object the production of a neat clip, with its longitudinal edges beveled by a quick and economical mode.

Clips have heretofore been beveled with a file after being formed. They have also been forged flat, then trimmed, and subsequently put in a die to bevel the edges, all of which are hereby disclaimed.

I prefer to form the clip from a round rod or wire.

At each end of the forming-die A there is a semicircular and tapering recess, *a*, as in ordinary dies for clips of this class. Running longitudinally through the die A, between the recesses *a*, there is a plane face, *b*; and by the sides of said plane face there are beveled faces *cc*, also extending longitudinally through the die, and with the highest point of the bev-

eled faces in about the same plane as the face of the die-block A. Outside of these beveled faces, and parallel therewith, there are grooves *d d*, as shown.

The die may be placed in any suitable machine, and is designed to be used in connection with a follower or fellow die having a plane surface or face.

A rod of suitable length is brought to a proper heat and placed on the die over the recesses *a a*, and the dies are forced together, throwing the metal into the form shown in Figs. 3 and 4, in which it will be observed that there is a longitudinal groove, *h*, on each side, having the side which is toward the body *k* of the clip beveled with a gradual slope. The result of this first step in the process is then put in a trimming-die, which cuts off the metal on a longitudinal line through the bottom of the grooves *h h*, (or so as to leave the gradually-beveled sides thereon,) at which point the metal is very thin, thereby leaving the body of the clip with its longitudinal edges neatly beveled, but with the extreme thin edges smoothly trimmed, as shown in Fig. 5, the same being produced by only two operations, and with a smoother edge than is possible to produce by beveling a flat clip-body in a die after trimming.

I claim as my invention—

The die A, having the plane face *b*, beveled faces *cc*, and grooves *d d* outside of said beveled faces, substantially as described, and for the purpose specified.

MERRITT HINE.

Witnesses:

W. A. HITCHCOCK,
W. W. WOODFORD.