

E. B. JACKSON.
Dies for Forging Sheet-Metal Horse-Collar Blanks.

No. 214,918.

Patented April 29, 1879.

Fig. 1.

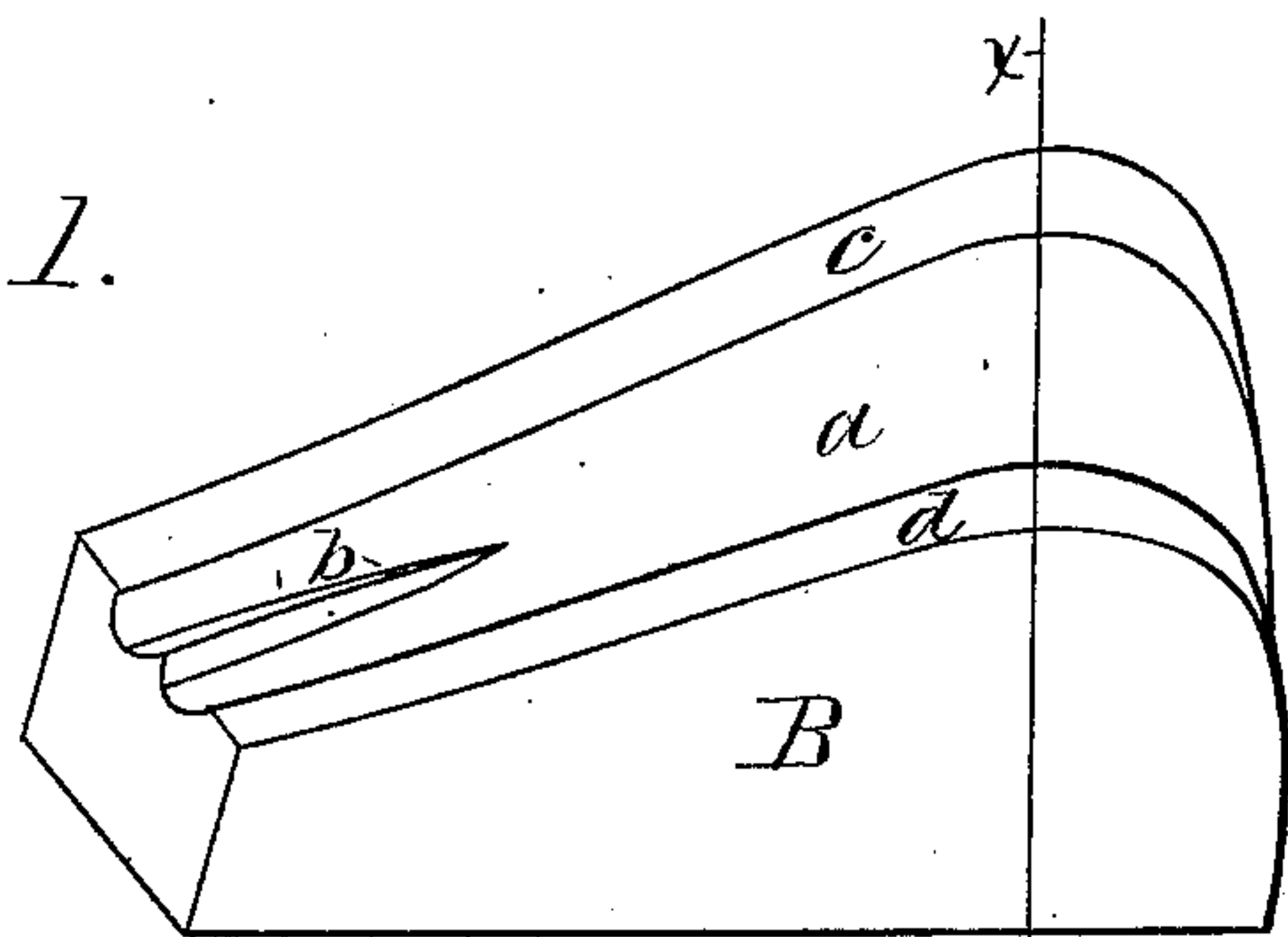


Fig. 4.

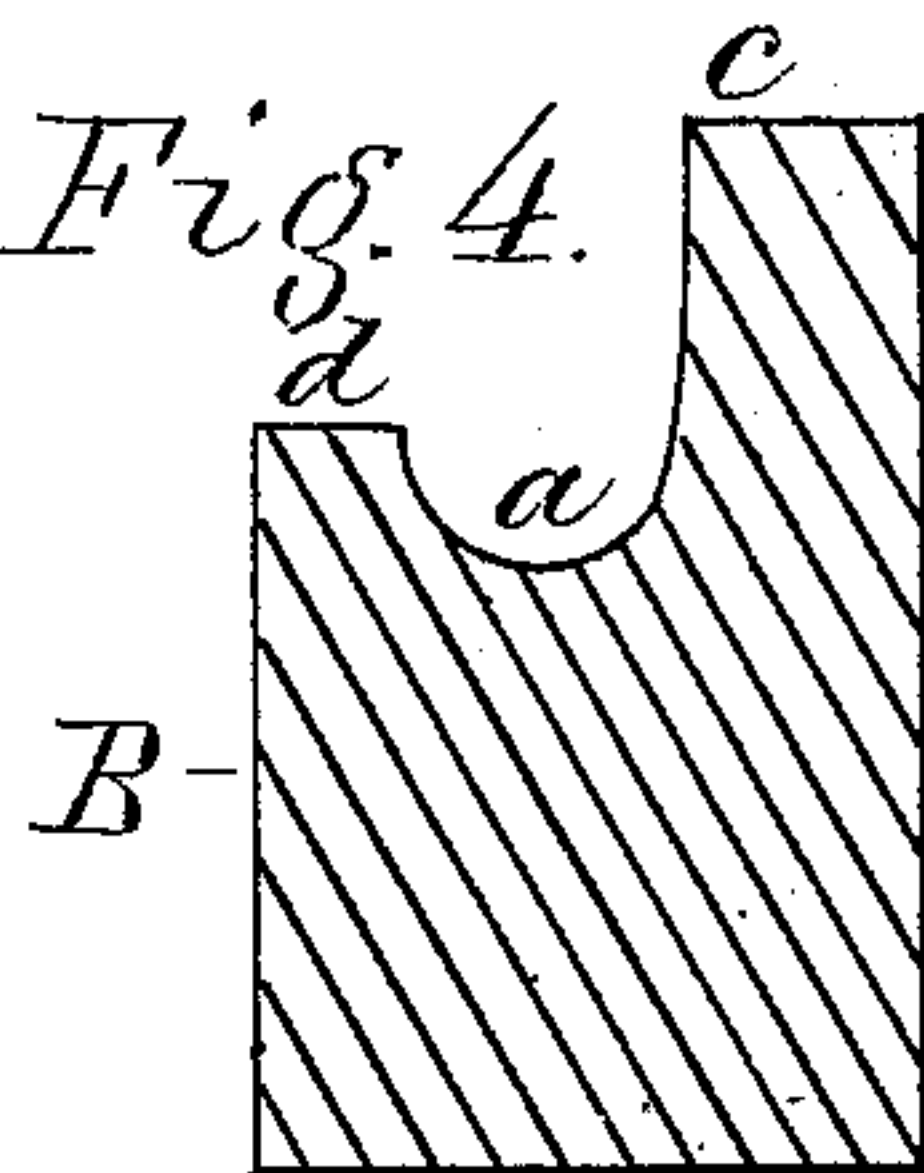


Fig. 2.

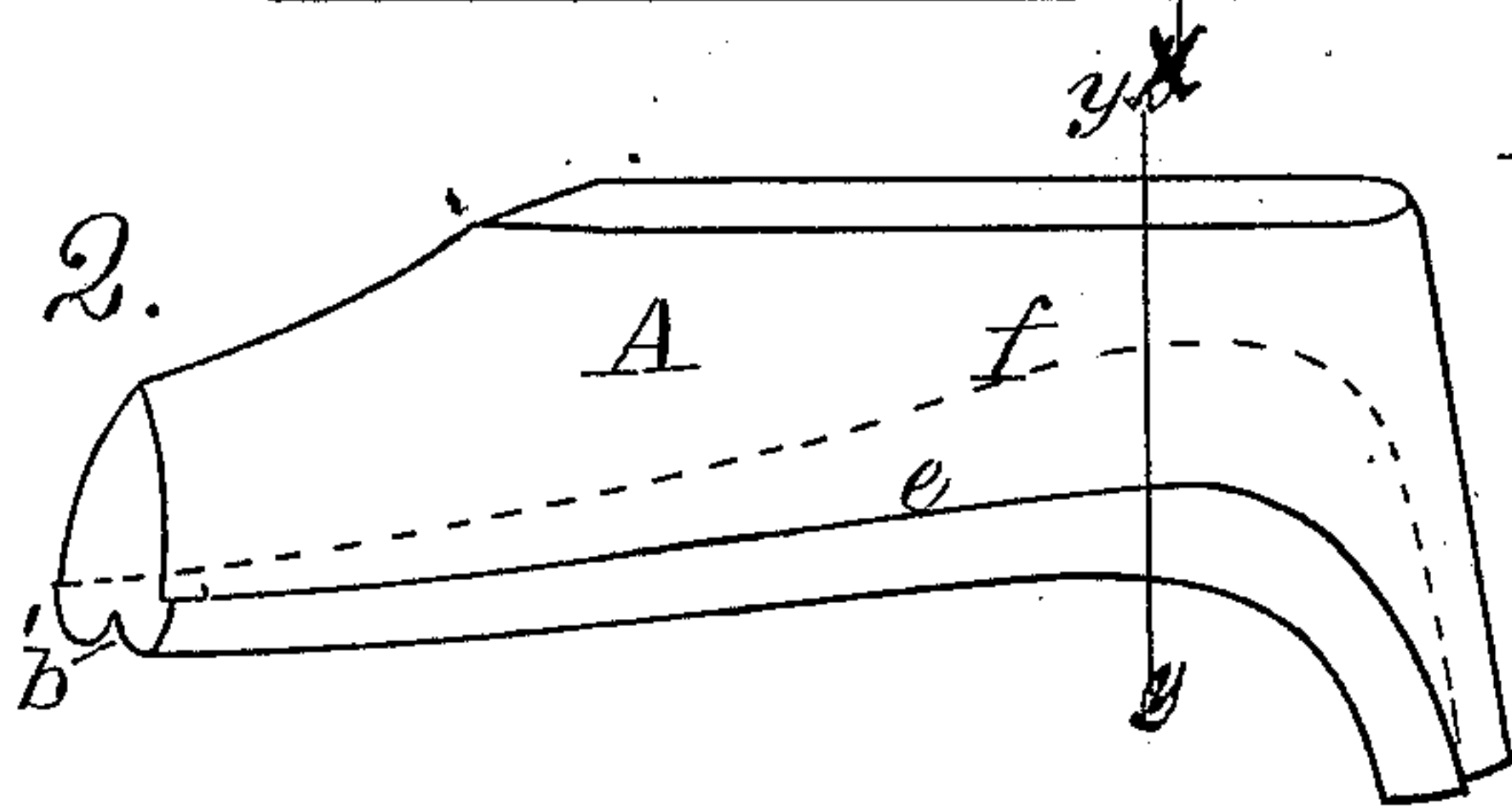


Fig. 5.

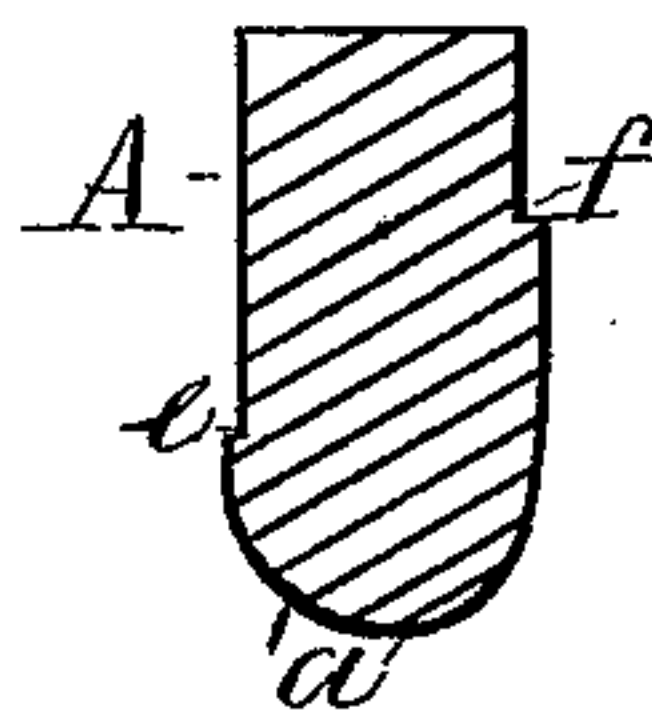


Fig. 3.

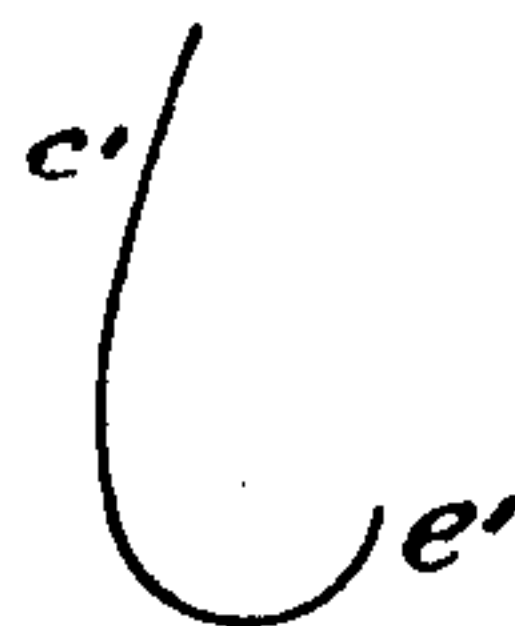
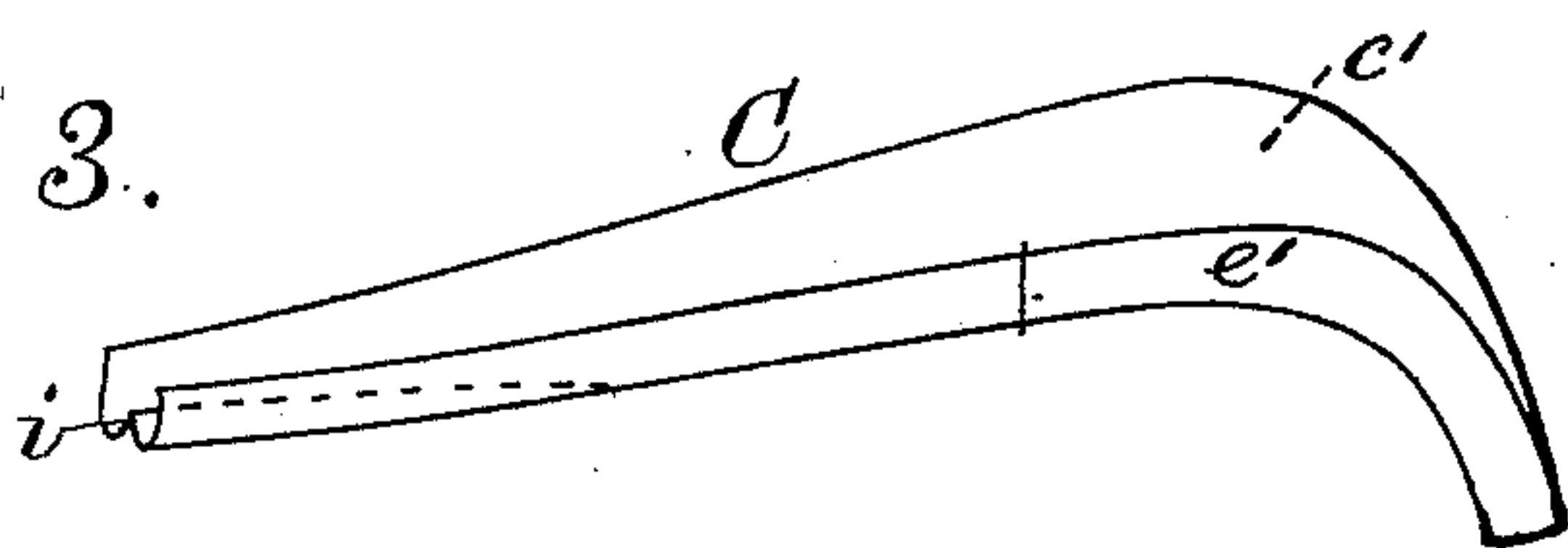
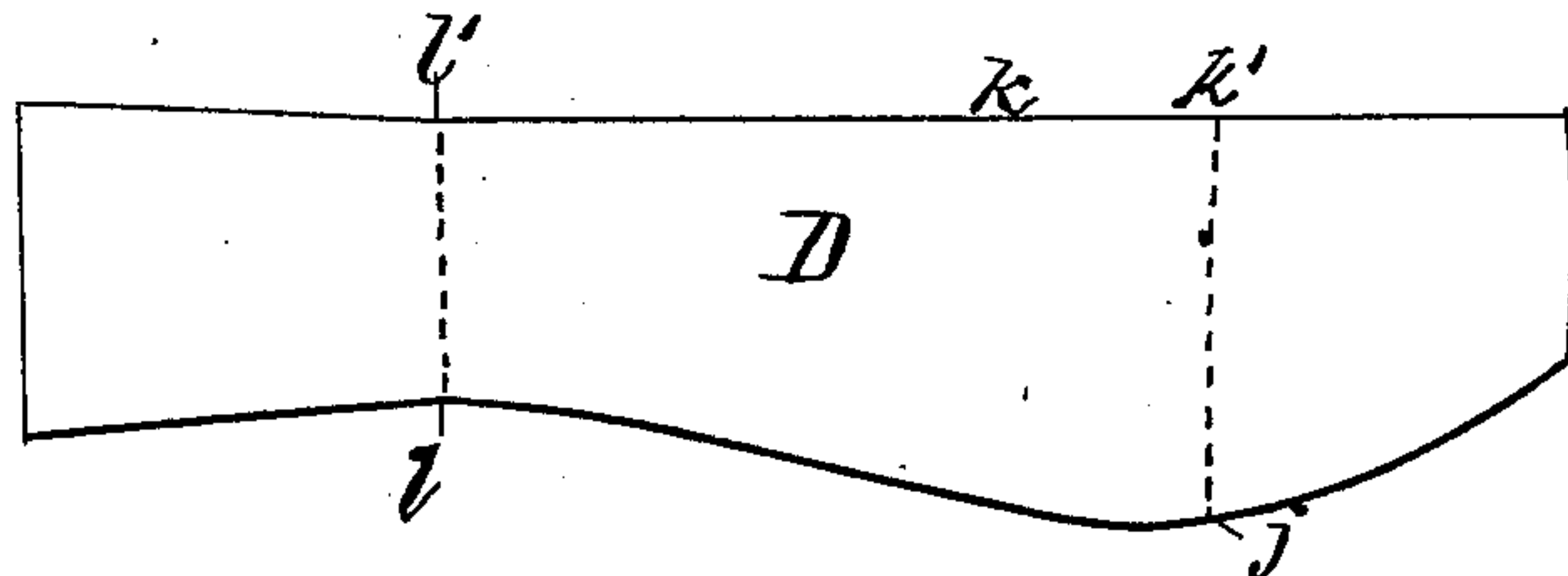


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

EDGAR B. JACKSON, OF DELAWARE COUNTY, OHIO, ASSIGNOR TO LOUIS B. JACKSON AND ENOS BALDWIN, OF SAME PLACE, ONE-FOURTH TO EACH.

IMPROVEMENT IN DIES FOR FORGING SHEET-METAL HORSE-COLLAR BLANKS.

Specification forming part of Letters Patent No. **214,918**, dated April 29, 1879; application filed August 5, 1878.

To all whom it may concern:

Be it known that I, EDGAR B. JACKSON, of the county of Delaware, in the State of Ohio, have invented certain new and useful Improvements in Dies for Forging Sheet-Metal Horse-Collar Blanks; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to sheet-metal blanks for horse-collars—that is to say, to certain parts of such collars which are made of sheet metal, and used in combination with other parts to form the complete collar.

It consists in the peculiar construction of the dies adapted to shape flat blanks cut from sheet metal into the shape of the blank proper, which, with its component parts, forms the complete collar-section, substantially as hereinafter more fully described, and pointed out in the claim.

In the drawings, Figure 1 is a perspective view of the lower or female section of my improved dies. Fig. 2 is a similar view of the upper or male section of the same. Fig. 3 is a perspective view of the shaped collar-blank. Figs. 4 and 5 are cross-sections of Figs. 1 and 2, taken on the lines indicated by *x x* and *y y*, respectively; and Fig. 6 is a plan view of the flat blank from which the shaped blank or metal collar-section is struck up.

Similar letters of reference indicate corresponding parts in all the figures.

The female section or matrix B of my improved dies consists of a heavy block of metal cast with a high curved end, *c a d*, Fig. 1, for the shoulder-section of the shaped blank. One side of this matrix, *c*, is higher than its opposite side, *d*, and the wall of the curved bottom *a* between the sides *c* and *d* tapers both in height and width toward the front part, which is made with a rib or feather, *b*, extending centrally along the bottom *a* from the end for a distance of about eight or ten inches, and decreasing in height from about one inch at its base or start to a point.

The male die A, Figs. 2 and 5, is shaped to fit the bottom *a* of the matrix B—that is to say, it has a shoulder, *f*, on one side corresponding to and impinging upon the raised part *c* of the matrix, and an opposite lower shoulder, *e*, corresponding to and impinging upon the part or side *d* of the matrix. It also has a central longitudinal and tapering recess, *b'*, at one end, registering with the rib or feather *b* in the matrix.

The flat blank which I use with the dies A B to form the shaped collar blank or section is shown at D in Fig. 6, and the shaped blank at C in Fig. 3. From this it will be seen that the flat blank (which is, by preference, of sheet-steel, about one-sixteenth of an inch in thickness) is cut with one straight, or nearly straight, edge, *k*, while the opposite edge is curved in a wave-line or S shape, its narrowest place being between *l' l*, and greatest width between *k' j*. This is for the purpose of providing sufficient metal to form the raised part *c'*, Fig. 3, of the shaped blank, which is formed by the bulging or wide part *k' j* of the blank, the narrow part or flange *e'* being struck up from the straight edge *k*. The part increasing in width on the other side of line *l' l* forms the tapering recess *i* in the shaped blank or section C and its adjacent curved sides, which said recess forms a point of attachment for an auxiliary part entering into combination with and forming a part of the complete collar.

The flat blank D should first be heated to a cherry-red, and as it is grasped by the tongs it is struck over the raised part or shoulders *c d* of the matrix B, which bends the blank and assists the operation of the dies. Care must be taken to so place the blank upon the lower die or matrix that its straight edge *k* shall register with the lower front edge or shoulder, *d*, after which the blank is shaped by the male die A (which is held in a drop-head) falling upon it, resulting in a shaped blank or collar-section of the configuration shown in Fig. 3.

I am aware that it is not new to prepare shells or metallic sections for horse-collars by striking up suitable blanks in a die or mold, as shown in the Letters Patent to J. W.

Schwaner, No. 110,685, dated January 3, 1871, and I do not claim dies or molds for such purpose, broadly; but,

Having thus described my improvement, I claim and desire to secure by Letters Patent of the United States—

The dies B A, for shaping sheet-metal horse-collar blanks, of the forms described and

shown, indicated by letters *c a d b* and *f e b'*, respectively, and arranged and operating substantially as and for the purpose set forth.

EDGAR B. JACKSON.

Attest:

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