

(No Model.)

C. H. WILLIAMS.  
BLANK FOR TURN BUCKLES.

No. 338,813.

Patented Mar. 30, 1886.

Fig. 1.

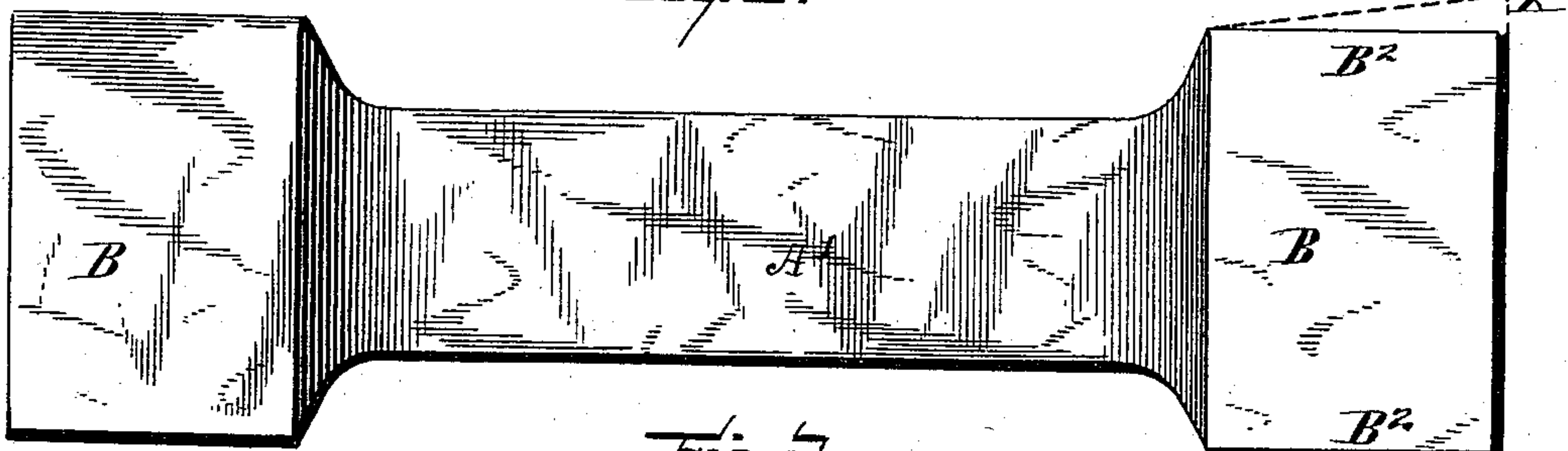


Fig. 2.

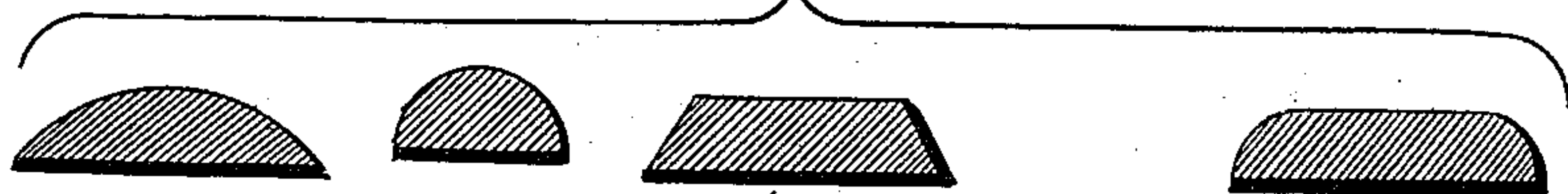


Fig. 3.

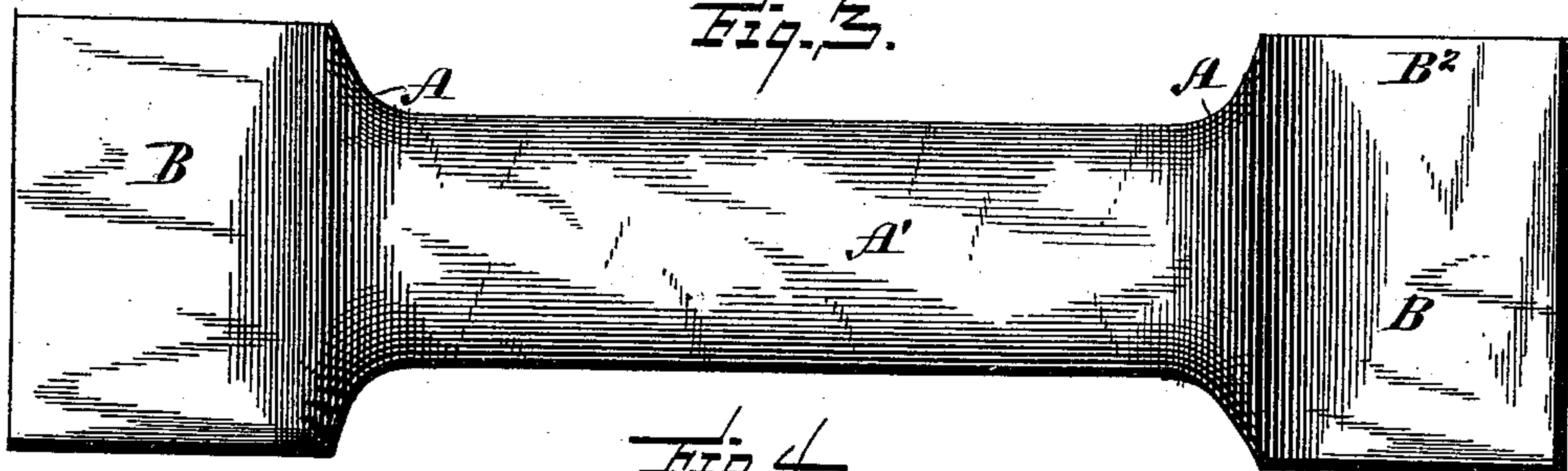


Fig. 4.

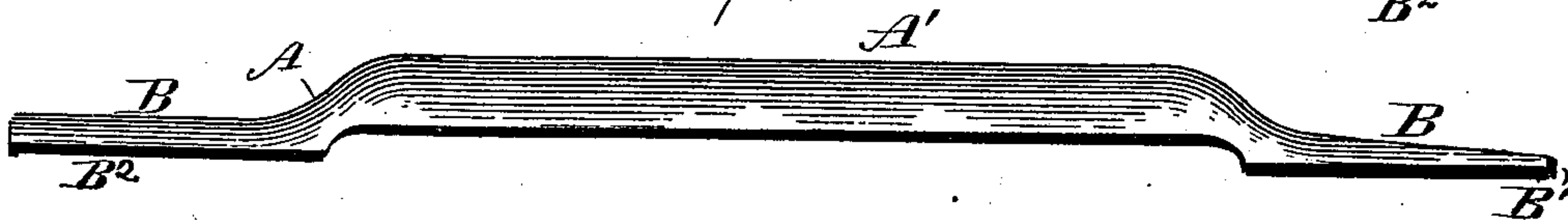


Fig. 5.

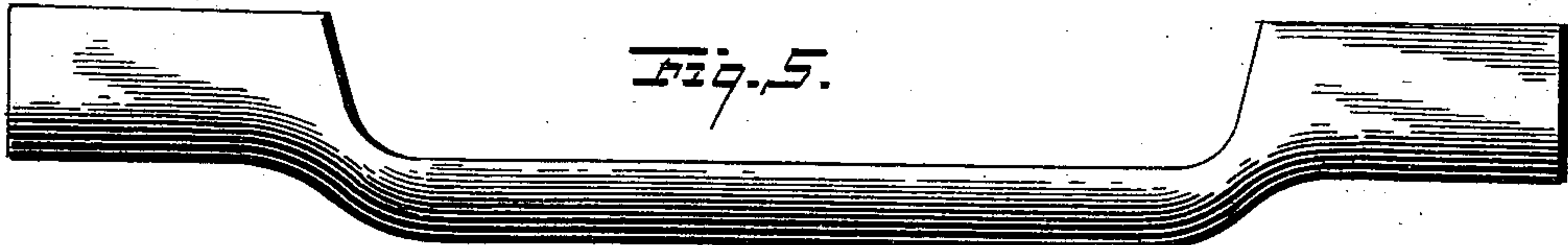


Fig. 6.

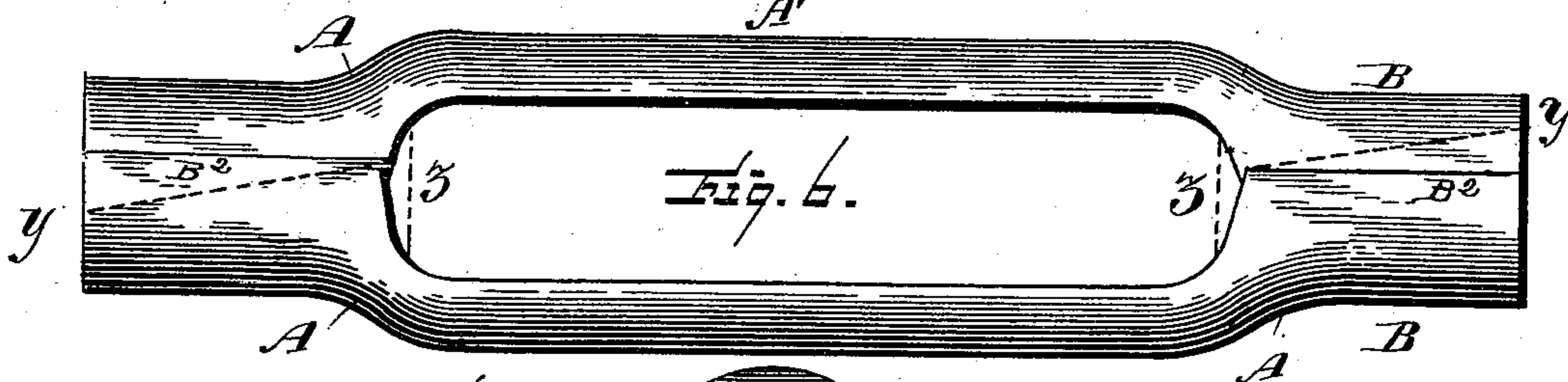
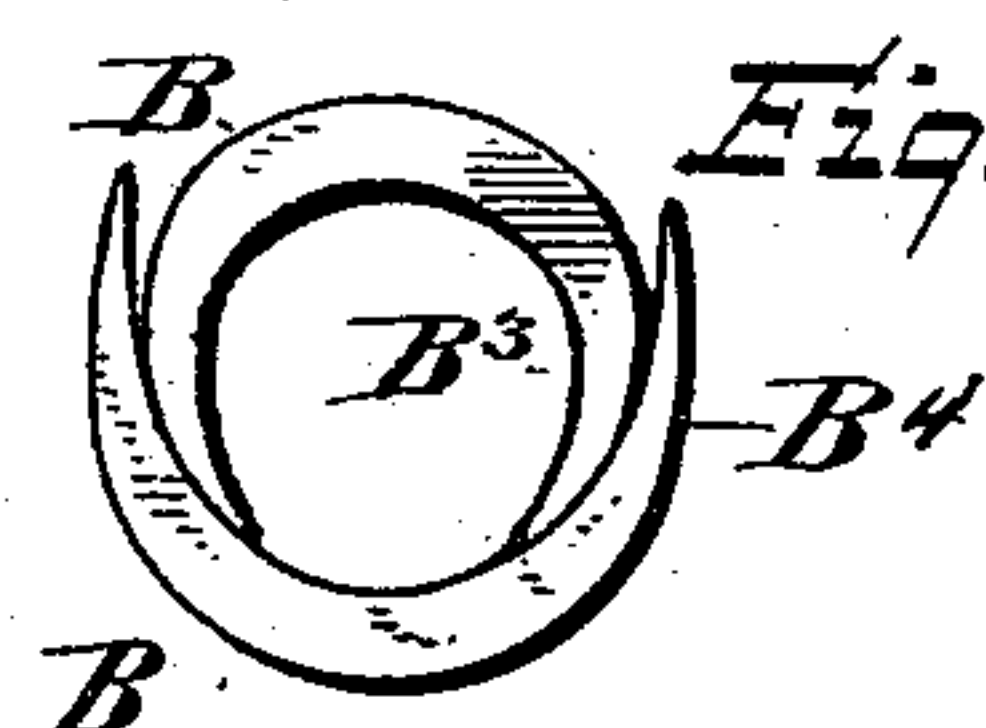


Fig. 7.



Fig. 8.



WITNESSES

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## BLANK FOR TURN-BUCKLES.

SPECIFICATION forming part of Letters Patent No. 338,813, dated March 30, 1886.

Application filed January 9, 1886. Serial No. 188,128. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES H. WILLIAMS, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga, State of Ohio, have invented certain new and useful Improvements in Blanks for Turn-Buckles and Method of Making the Same, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to blanks for turn-buckles and to a method of making the same, the object being to simplify the process of making the blank, and to produce blanks by said process which, when operated upon, will  
15 produce a strong turn-buckle at a minimum expense; and the invention consists in the blank herein described and in the method of making the same, all as hereinafter specified, and particularly pointed out in the claims.

20 Heretofore turn-buckles have been made of blanks each of which have constituted substantially one-half of the complete buckle—that is to say, straight bars have been placed parallel with each other, and have been coiled  
25 or twisted together at their ends or upset to form the head of the turn-buckle. So, also, as in my Patent No. 332,127, dated December 8, 1885, the ends of such blanks have been compressed inwardly upon each other to form the  
30 head of the turn-buckle.

The object of my present invention is, as before indicated, to simplify the method of producing turn-buckle blanks, and to secure as the product of such method a blank having  
35 peculiar novel features of construction, whereby the expense of production is reduced and the quality of the finished product enhanced.

Referring to the drawings, Figure 1 is a bottom view of a blank constructed in accordance  
40 with my invention. Fig. 2 is a series of transverse sections of different forms of bars which I may employ as material in constructing my blank. Fig. 3 is a plan of the top of the blank represented in Fig. 1. Fig. 4 is a side elevation of the blank shown in Figs. 1 and 3. Fig.  
45 5 is a similar view of the same blank as it appears after the second step of the process has been practiced thereon. Fig. 6 is a side elevation of two blanks in condition to be welded  
50 or united to each other to form a turn-buckle. Fig. 7 is an end elevation of the blank shown

in Fig. 3, and Fig. 8 is an elevation of the extreme end of Fig. 6.

Like letters of reference indicate like parts in all the figures of the drawings.

To construct a blank, I take a bar of iron, 55 which may be in cross-section either oval, half-round, bevel-back, or substantially rectangular, (as respectively shown in Fig. 2,) or any other desired form of material in bar 60 shape which is of a proper length for the proposed size of turn-buckle to be manufactured, and by dies or other suitable means, and preferably (though I do not limit my invention in this regard) at a single step or operation, curve 65 said bar longitudinally, as at A A, so as to bring its ends B B in a plane substantially parallel with but at one side of the main portion A' of the bar. At the same time, and preferably, though not necessarily, by the same 70 step in the process, I widen or spread the said ends B, and preferably, though not necessarily, reduce the thickness of the same, as shown at B' at the right of Fig. 4.

The effect of the process as thus far described is to produce from a straight bar a 75 blank which in its body portion A' constitutes an arm of a turn-buckle, and in its end portions, B, halves of the heads of a turn-buckle, with sufficient material at the sides B<sup>2</sup> of the 80 ends to form a lap-joint by welding. In order to present an increased lap-surface at the joints, I may at the time that I flatten or spread the ends B also expand the same in a manner indicated by dotted lines x, Fig. 1. The ma- 85 terial in the shape thus far described is next and preferably, though not necessarily, at the same heat in which it has been subjected to the step above described brought to the form illustrated in Fig. 5 by means of dies, or otherwise. In this step of the process the side 90 edges, B<sup>2</sup>, of the ends B are curved and flared or beveled, so that the ends form substantially half-tubes, the extreme edges being flared, beveled, or chamfered on lines which serve to fa- 95 cilitate the formation of a perfect weld or joint.

By reference to Fig. 8 it will be seen that when two of the blanks are arranged together to be formed into a turn-buckle the edges B<sup>2</sup> of one are disposed inside of the 100 the edges B<sup>2</sup> of its companion blank, and that the outer edges of the one are swaged or



beveled in this instance on a convexed line,  $B^3$ , conforming to but not extending completely along the concave edges  $B^4$  of the companion blank, whereby, in the action of compressing the two blanks together to form the head—as, for example, by the dies shown in my above-mentioned patent—a satisfactory welding of the blanks together may be secured. As before stated, the ends  $B$  may be spread laterally, as shown by dotted lines  $X$  in Fig. 1, so that when two of the blanks are arranged together the outer edge of one blank would occur on the line  $Y$  of Fig. 6, whereby a more extended lap-joint is produced in the head.

In the operation of welding the two blanks together the material is compressed longitudinally, so as to bring the end walls of the interior space of the buckle to about the lines  $Z$ , Fig. 6, in order to provide a square bearing-surface for the head of a rod or for a nut.

From the foregoing description it will be seen that by my method of procedure I am enabled to produce from a straight bar of desired form in cross-section blanks which possess in themselves sufficient stock properly disposed to develop or produce a desired head or socket, and a desired necessary width of surface at the ends, which by proper manipulation affords an enlarged lap-joint, essentially contributing to desired strength in the finished product.

As before stated, the curving of the bar and the spreading of the ends thereof and the flaring, for welding, of the side edges of the ends may all be effected at a single heat; but I do not limit my invention in this regard, as successive heats may be desirable. So, also, I may form each end of each blank separately from the opposite end of the same blank at a single or by successive steps or heats, or I may form both ends of each blank simultaneously and at a single or by means of successive heats. Nor do I confine my invention to the exact configuration of the extreme edges  $B^3$   $B^4$  of the ends  $B^2$  of the blanks, as other outlines may be employed, and still a

satisfactory welding of the blanks together accomplished.

Having thus fully described my invention, what I claim is—

1. The method herein set forth of making turn-buckle blanks, which consists in bending a straight bar, spreading the ends of the same, and curving the side edges of said ends, substantially as specified.

2. A step in the art of making turn-buckle blanks, which consists in simultaneously curving and spreading the end of a bar to adapt said bar end to form a portion of the head or socket of a turn-buckle, substantially as specified.

3. The method herein set forth of making turn-buckle blanks, which consists in simultaneously curving and spreading the opposite ends of a bar, and subsequently curving the side edges of said ends, substantially as specified.

4. A turn-buckle blank consisting of a bar having its ends spread and arranged in a common plane at one side of the body portion of the bar, said ends being thus adapted to form parts of the heads or sockets of a turn-buckle, substantially as specified.

5. A turn-buckle blank consisting of a bar having its ends spread, transversely curved, and arranged in a common plane at one side of the body portion of the bar, whereby said ends are adapted to be united with similar ends of a similar blank to form the heads or sockets of a turn-buckle, substantially as specified.

6. A turn-buckle blank comprising a bar having widened ends arranged outside of the plane of the bar, and swaged or beveled at the side edges for welding, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES H. WILLIAMS.

Witnesses:

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W. L. DUVALL.