

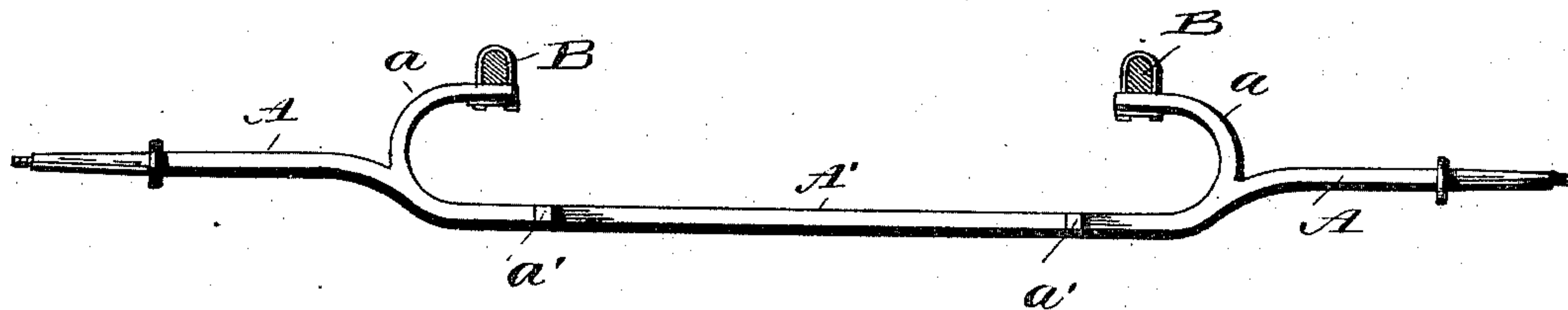
(No Model.)

L. I. WAITE.  
AXLE.

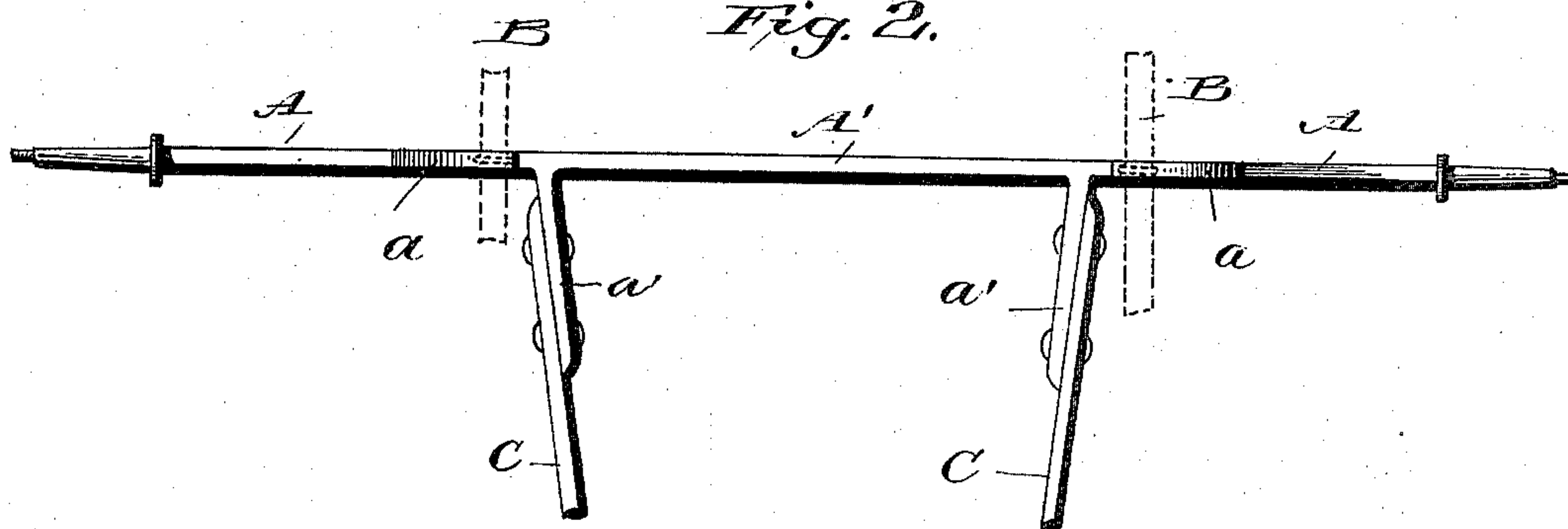
No. 535,746.

Patented Mar. 12, 1895.

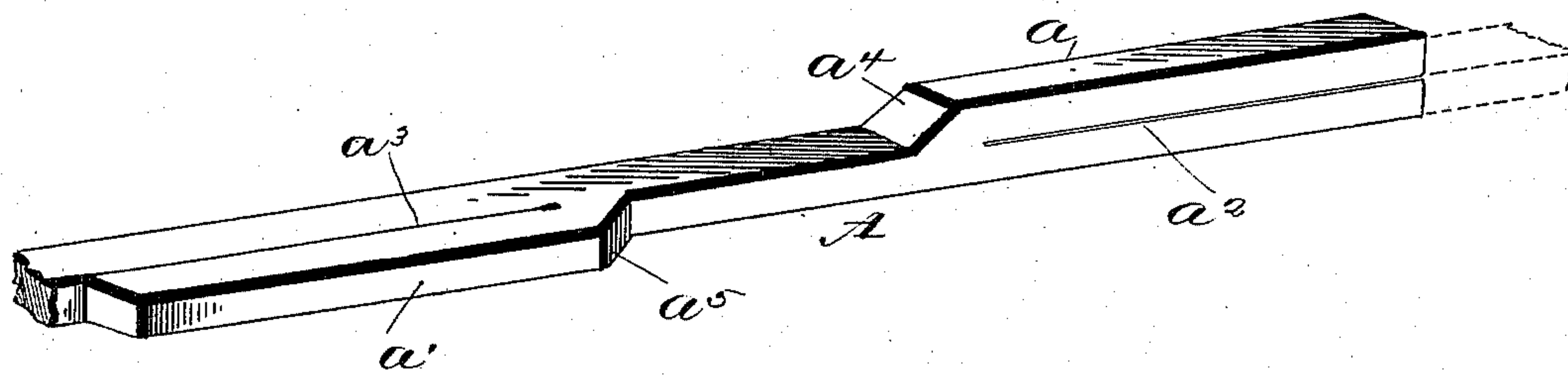
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses:  
L. C. Hills.  
E. H. Bond.

Inventor:  
Luther I. Waite,  
by E. B. Stocking  
Att'y.

# UNITED STATES PATENT OFFICE.

LUTHER I. WAITE, OF WHITNEY'S POINT, NEW YORK.

## AXLE.

SPECIFICATION forming part of Letters Patent No. 535,746, dated March 12, 1895.

Application filed December 24, 1894. Serial No. 532,841. (No model.)

*To all whom it may concern:*

Be it known that I, LUTHER I. WAITE, a citizen of the United States, residing at Whitney's Point, in the county of Broome, State of New York, have invented certain new and useful Improvements in Axles, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in axles and bars or blanks therefor, having for its objects among others to provide a strong and light axle having the side-bar or spring attaching devices rigid therewith and also provided with means for the attachment of the reach or longitudinal braces. I preferably form the axle of a single piece bent to give the required downward projection at the center and slit to form the upwardly-projecting arms for the attachment of the side-bars or the springs, and slit to form the horizontal portions for the attachment of the reach or horizontal and longitudinally-disposed brace bars. In some cases the said arms and reach-attaching portions may be welded to the axle proper.

Other objects and advantages of the invention will hereinafter appear and the novel features thereof will be specifically defined by the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a front elevation of an axle constructed in accordance with my invention. Fig. 2 is a top plan of the same with the side bars shown in dotted lines, and the longitudinal braces attached to the forwardly-extending portions of the axle. Fig. 3 is an enlarged perspective view of the blank from which the axle is formed.

Like letters of reference indicate like parts throughout the several views.

Referring now to the details of the drawings by letter, A designates the bar or blank from which the axle is formed. It is of the proper length to constitute the desired length of axle when complete. It is formed near each end with two enlargements, one  $a$  being upon the upper face, and the other  $a'$  being upon the front face as shown in Fig. 3. These enlargements are separated from the main body of the blank for nearly their whole

length by the slits  $a^2$  and  $a^3$  respectively, as seen in Fig. 3. The adjacent ends of the enlargements are beveled as seen at  $a^4$  and  $a^5$  so that when the enlargements are bent out into the position they assume when the axle is completed the beveled ends will allow the bent portions to assume a proper position which could not be done were the ends not beveled. These enlargements are bent to give the required shape as seen in Figs. 1 and 2, the portions  $a$  being curved upwardly and inwardly toward each other over the depressed central portion  $A'$  of the axle and upon these portions are designed to be supported the side bars B or the side springs. The portions  $a'$  are turned forward at a right angle or preferably slightly converging toward each other as they approach the front as shown in Fig. 2 and are designed to have attached thereto the longitudinal brace bars C or the reach in any suitable manner.

The portions  $a$  and  $a'$  may be formed separate and welded to the axle proper, but I prefer that they be made or cast integral therewith as above set forth.

What I claim as new is—

1. An axle blank having near each end two enlargements on adjacent sides of the blank and adapted to be bent at right angles to each other, as set forth.

2. An axle blank having integral enlargements extending in the direction of the length of the blank and separated therefrom for a portion of their length by slits the open ends of which are oppositely disposed, as set forth.

3. An axle blank having integral enlargements disposed one upon the top and the other on the front face of the blank and having their adjacent ends oppositely tapered, substantially as specified.

4. An axle formed with integral upwardly-extending portions near its ends and intermediate said upwardly-extending portions with integral forwardly extending portions for the attachment of longitudinal brace bars, substantially as specified.

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

LUTHER I. WAITE.

Witnesses:

HEATH SUTHERLAND,  
HENRY HILLS.