

J. P. THORP.
Making Carriage Couplings.

No. 28,114.

Patented May 1, 1860.

Fig. 1.

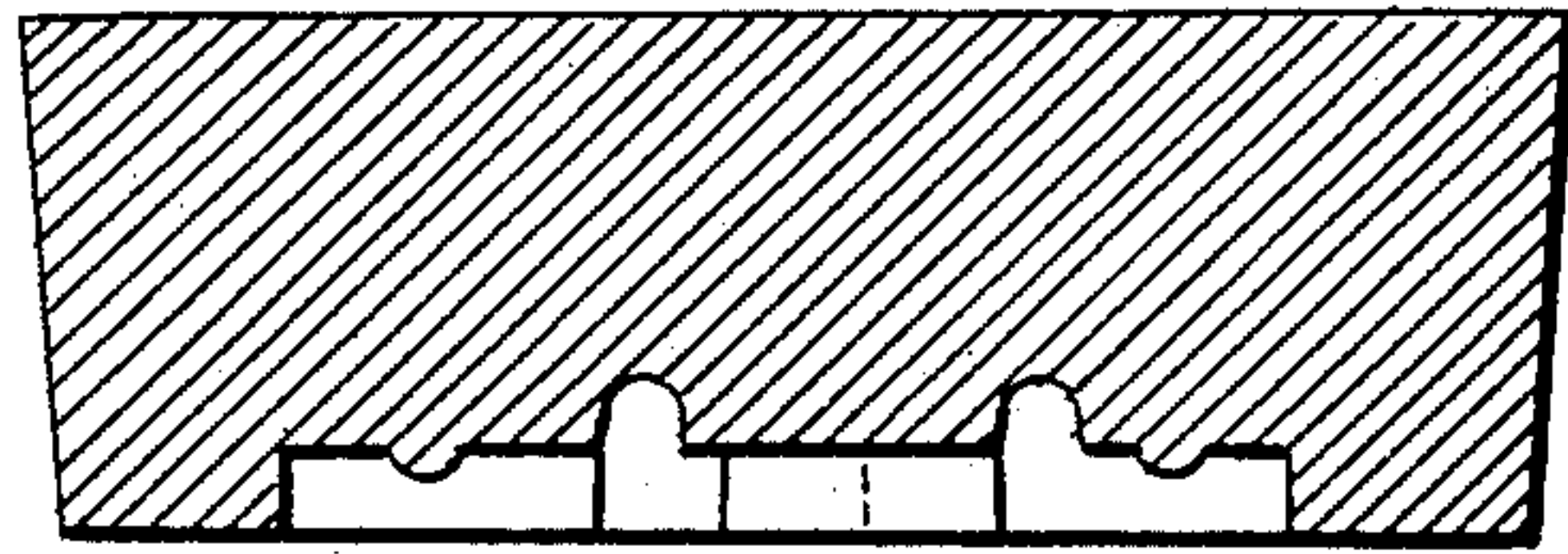
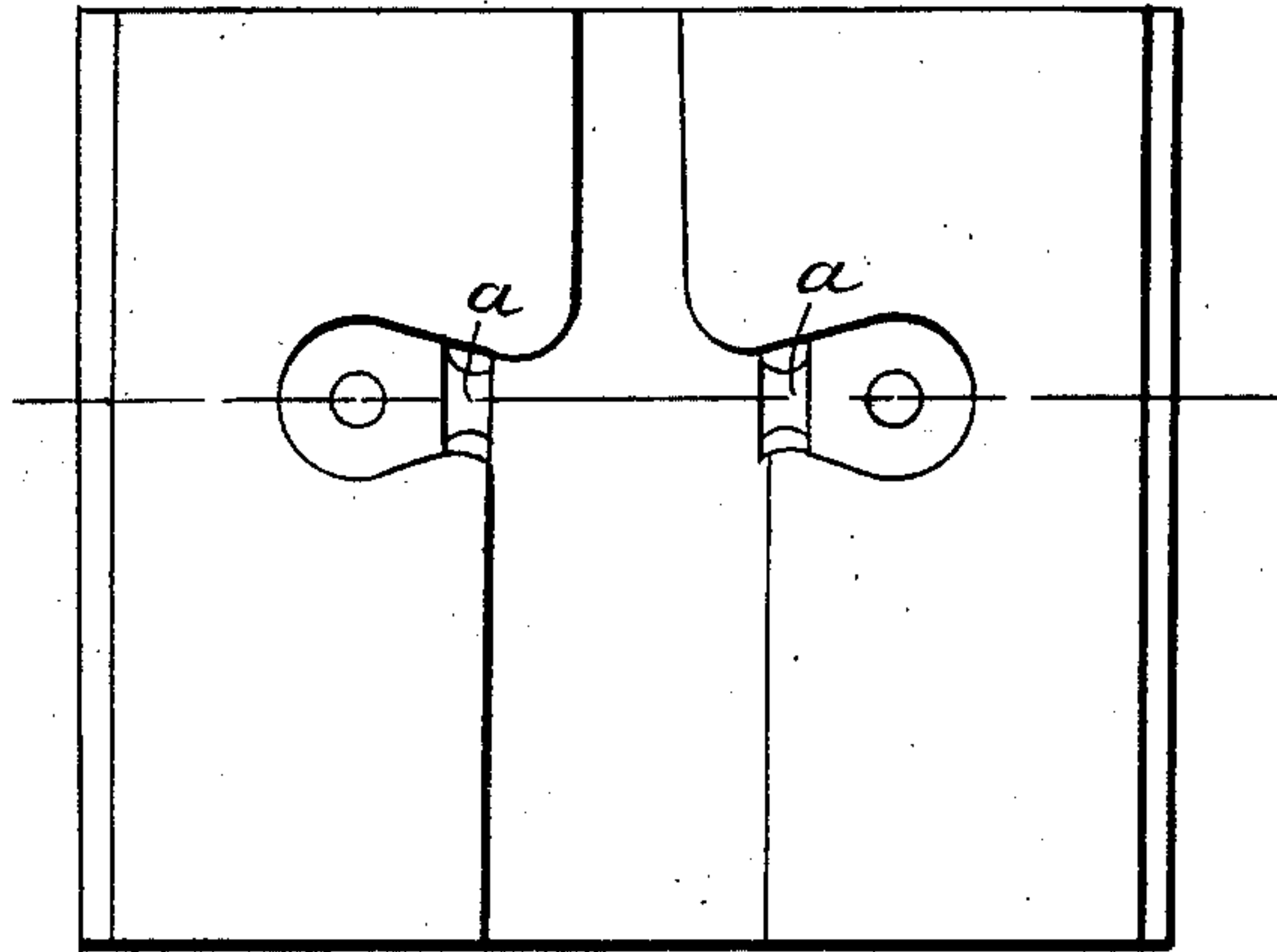
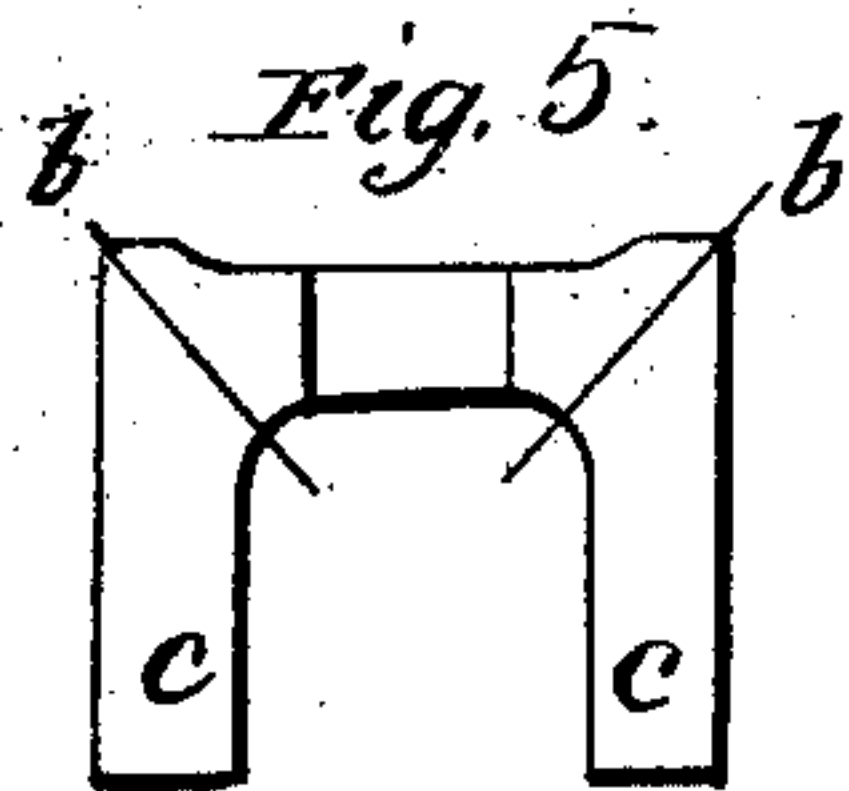
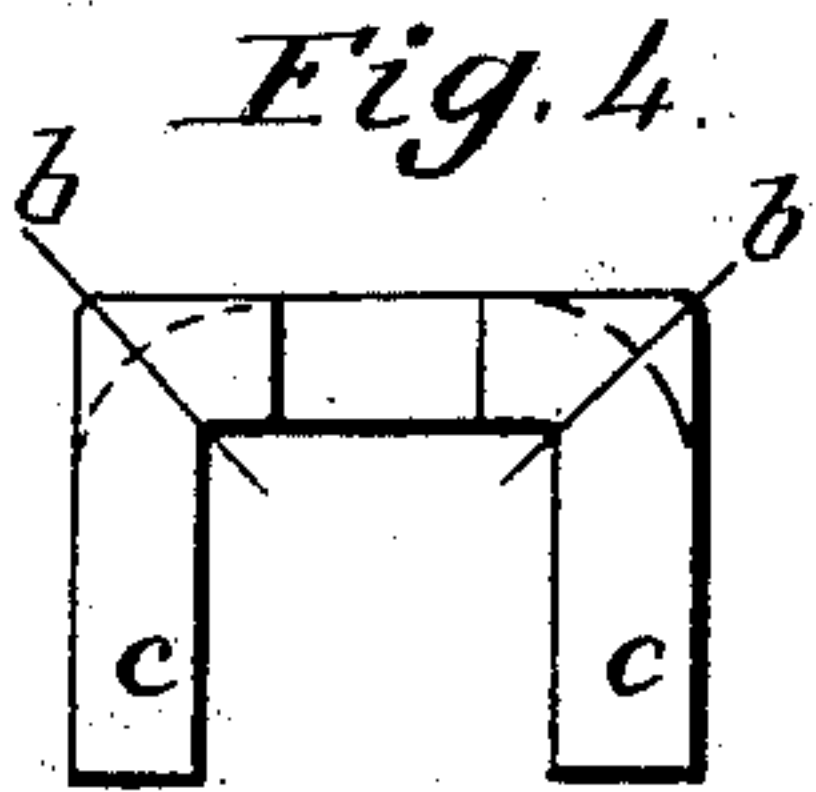
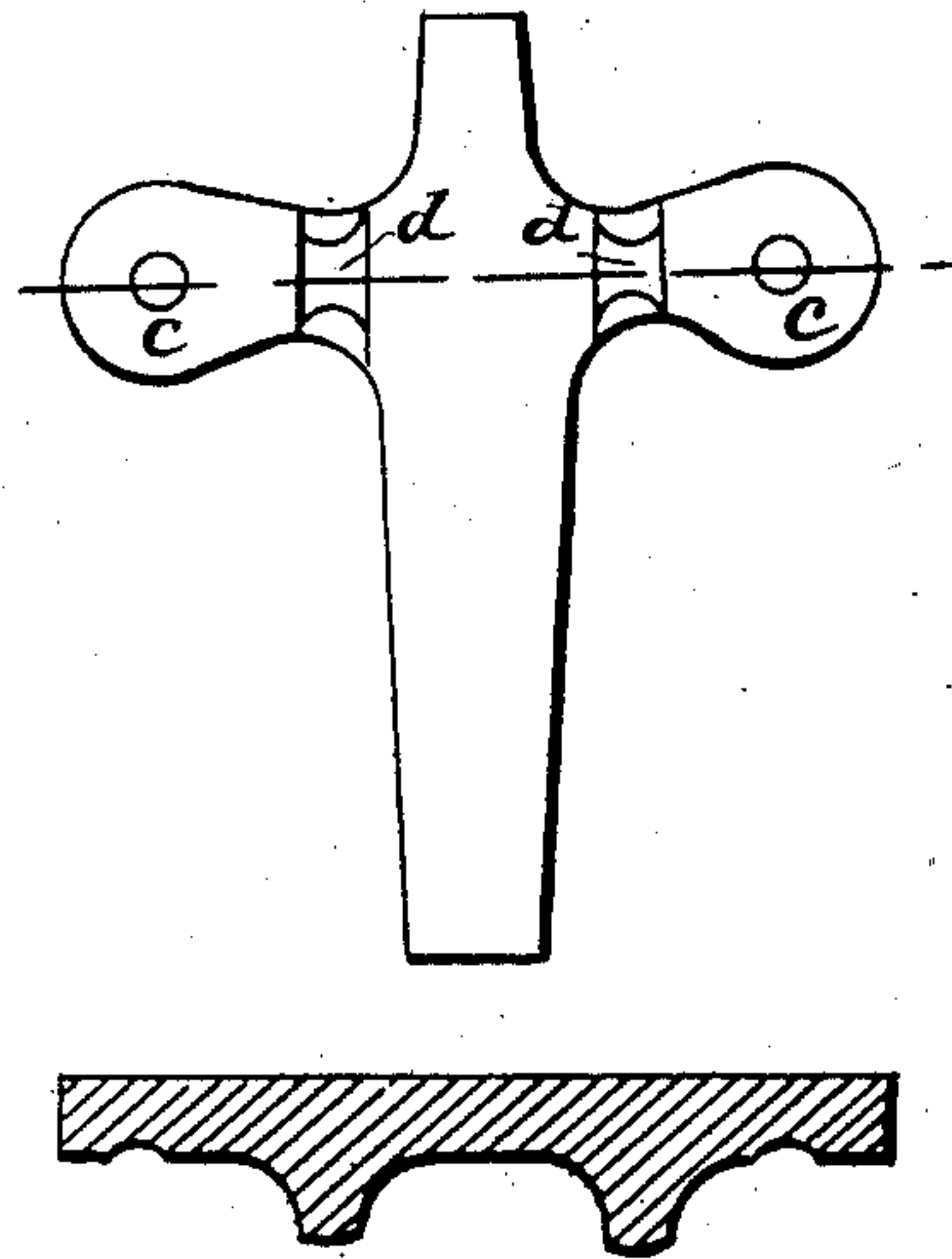


Fig. 3.

Fig. 2.



Witnesses:

Edmund Allen
James W. Bay

Inventor:

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UNITED STATES PATENT OFFICE.

JAMES P. THORP, OF PLANTSVILLE, CONNECTICUT.

WAGON-SHAFT SHACKLE.

Specification forming part of Letters Patent No. 28,114, dated May 1, 1860; Reissued September 18, 1866, No. 2,362.

To all whom it may concern:

Be it known that I, JAMES P. THORP, of Plantsville, county of Hartford, and State of Connecticut, have invented a certain new and useful and Improved Mode or Method of Forming Wagon-Shaft Shackles; and I do hereby declare that the same is described and represented in the following specification and drawings, and to enable others skilled in the art to make and use my said improvement I will proceed to describe its construction and the effect produced, referring to the drawings, in which the same letters indicate like parts in each of the figures.

This improvement relates to the now common method of forming wagon shaft shackles into the required shape, first by swaging in a die, then by another process turning up the ears so as to form a joint; and the nature of this improvement consists in the peculiar formation of the die, whereby I am enabled by the second process of bending or turning up the ears to secure a natural diffusion of the iron, so as to produce greater strength, and remove the natural tendency to break and at the same time secure a more perfect formation in shape and appearance.

In the accompanying drawing, Figure 1 shows a face view, and section, cut as shown by the red line, of a swage die (when the depressions *a*, are removed) in common use, and Fig. 3 shows a face and section view (cut as shown by the red line) of a blank formed therein, (which is what I call the old way.) Fig. 2 shows a face view of a blank and its section (cut as shown by the red line) formed in the die Fig. 1, with the depressions *a*, formed therein,—and though the depressions appear, (in addition to the die as commonly used) as of small moment, or of trifling importance, yet it will hereafter be seen to be of great importance, in time and labor, strength and durability, and the ease and facility with which they are made. Fig. 4 shows an end view of the shackle formed from the blank made in the old way, and Fig. 5 shows an end view of the shackle formed from the blank made in the new way.

Now by making the comparison between the two Figs. 4 and 5 it will be seen that

Fig. 4 is wanting in fullness at *b*, while Fig. 5 is full at *b*. Again, it will be seen that a natural fullness and a greater amount of iron is produced through the angle in direction of the red lines in Fig. 5, while a less fullness and less thickness of iron is shown in the direction of the red lines in Fig. 4.

By making the die, with the proper depressions in which the protuberances *d*, are produced on the blank (Fig. 2) and when heated, to turn up the ears *c*, and in an opposite direction from the said protuberances they will produce a fullness which or what would otherwise be a deficiency, through the bend or angle, in the direction of the red lines, (Fig. 5).

A contrast will be more noticeable when it is considered that in heating and bending a blank as Fig. 3, without the protuberances, the thickness through the iron in the direction of the red line, Fig. 4, will be less than before it was bent,—consequently more labor must be bestowed, in order to produce a properly shaped corner, and frequently in doing so the iron is found to be defective, and the labor lost. Not only so, but the corners cannot be made so plump and full in the old way as in the new way,—and the difference in the time in manufacturing is full two to one in favor of the new way, or in favor of the blanks Fig. 2 with the protuberances.

I have thus endeavored to show my improved method of forming shackles and the difference and advantage to be derived therefrom over others now in use.

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

An improved article of manufacture (a wagon shaft shackle) constructed substantially in the manner as herein set forth and described.

In testimony whereof I have hereunto set my hand and affixed my seal this twenty-seventh day of January, 1860.

JAMES P. THORP. [L. s.]

Witnesses:

EDWARD W. BLISS,
JEREMY W. BLISS.