J. B. Clark.

Making Carriage Thill-Couplings.

No. 66,130. Patented Jun. 25, 1867.

Fig. 1

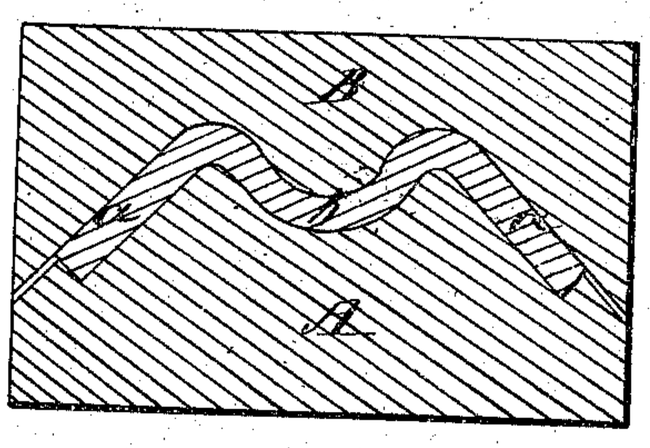
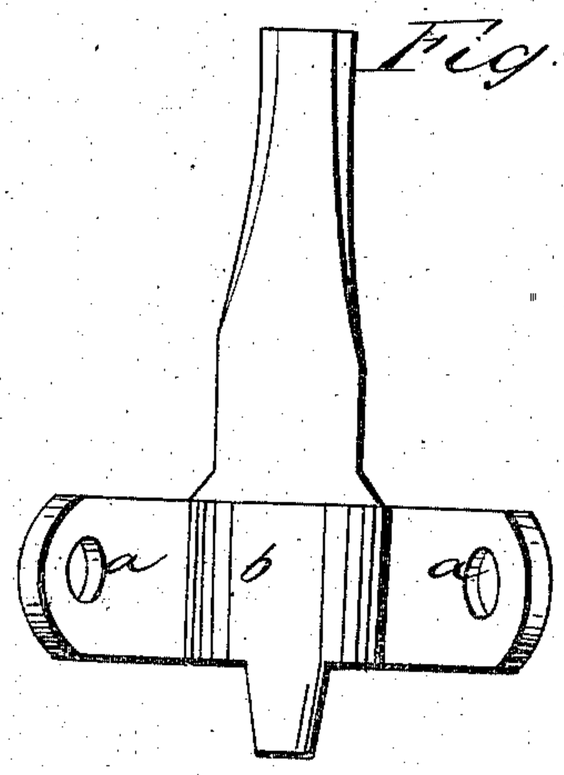


Fig. 2



Witnesses

E. Ellsworth

A. M. Tanner

Inventor

Jas. B. Clark

Per Munn & Co

Attorneys

United States Patent Office.

JAMES B. CLARK, OF PLANTSVILLE, CONNECTICUT.

Letters Patent No. 66,130, *dated June* 25, 1867.

IMPROVEMENT IN THE MANUFACTURE OF BLANKS FOR CARRIAGE-THILL SHACKLES.

The Schedule referred to in these Letters Patent and making part of the same

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JAMES B. CLARK, of Plantsville, in the county of Hartford, and State of Connecticut, have invented a new and useful Improvement in Shackle-Blanks; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to the construction of carriage-shaft shackle from solid blanks, and to the shape of the dies for forming the same, so that with the least amount of labor and power, the said shackle may be gradually formed into the required shape. In the annexed drawing this invention is illustrated.

Figure 1 is a vertical sectional view of a shackle-blank, showing it between the dies.

Figure 2 is a top or plan view of a shackle-blank, as the same is formed by the dies.

Similar letters of reference indicate like parts.

The blank, which is made in the shape of a cross in the usual manner, is placed upon the lower die A, and the upper die B is then forced down upon it, whereby the arms *a a* of the blank are bent into an oblique direction, and the body *b* is curved, as shown in the figure. The portion of the blank, where the arms join the body, is rounded, as shown on both the inside as well as on the outside, the straightening of the body of the shackle pushing out sufficient material for forming the sharp corners without having any hindersome and impractical projections. The dies are formed so as to give to the blank the required shape.

This process of forming shackle-blanks has proved by practice to be the most expeditious and simple yet performed, as it requires the least amount of machinery, and forms each part of the shackle with just the required amount and thickness of metal for completing the article.

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

1. The carriage-shaft shackle-blank, so formed between dies that the body *b* of the blank is curved, substantially as herein shown and described.

2. The dies A and B, for making the said blank, when so constructed and arranged as to form the rounded corners and the curved body of the said blank, substantially as herein shown and described.

JAMES B. CLARK.

Witnesses:

SIMEON H. NORTON,

DANIEL WALKER.