

W. W. Knowles.

Making Carriage Couplings,

N^o 54,253.

Patented Apr. 24, 1866.

Fig 1

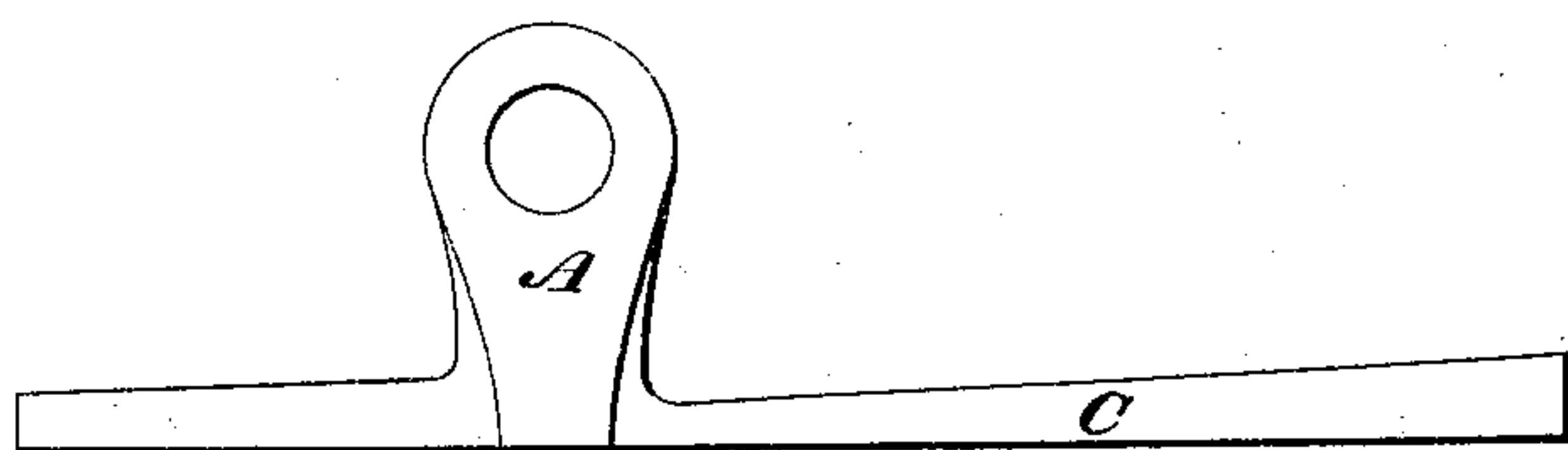


Fig 2.

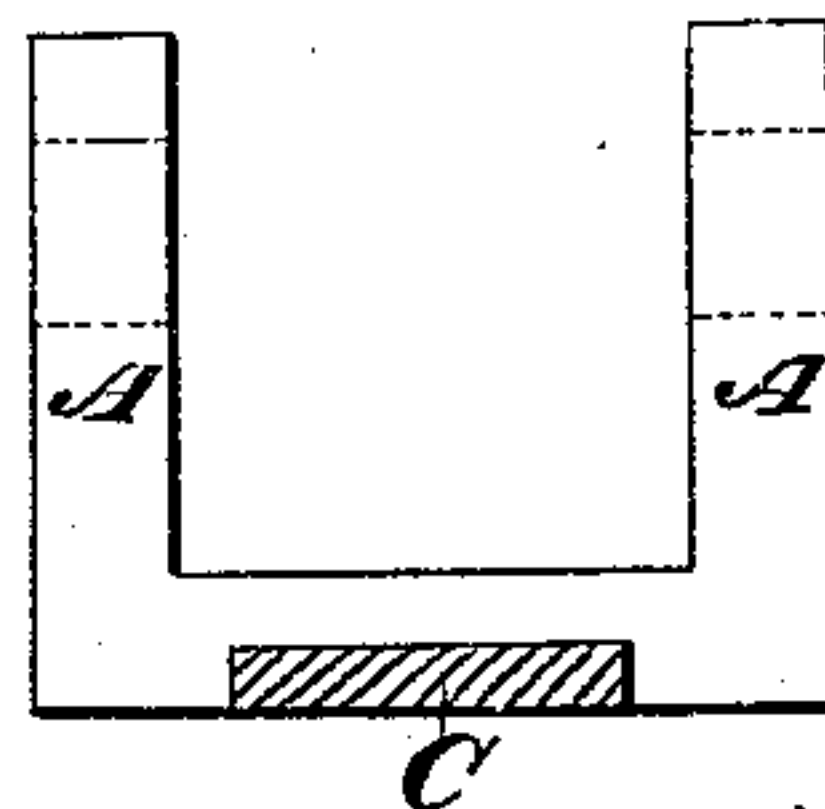


Fig 5.

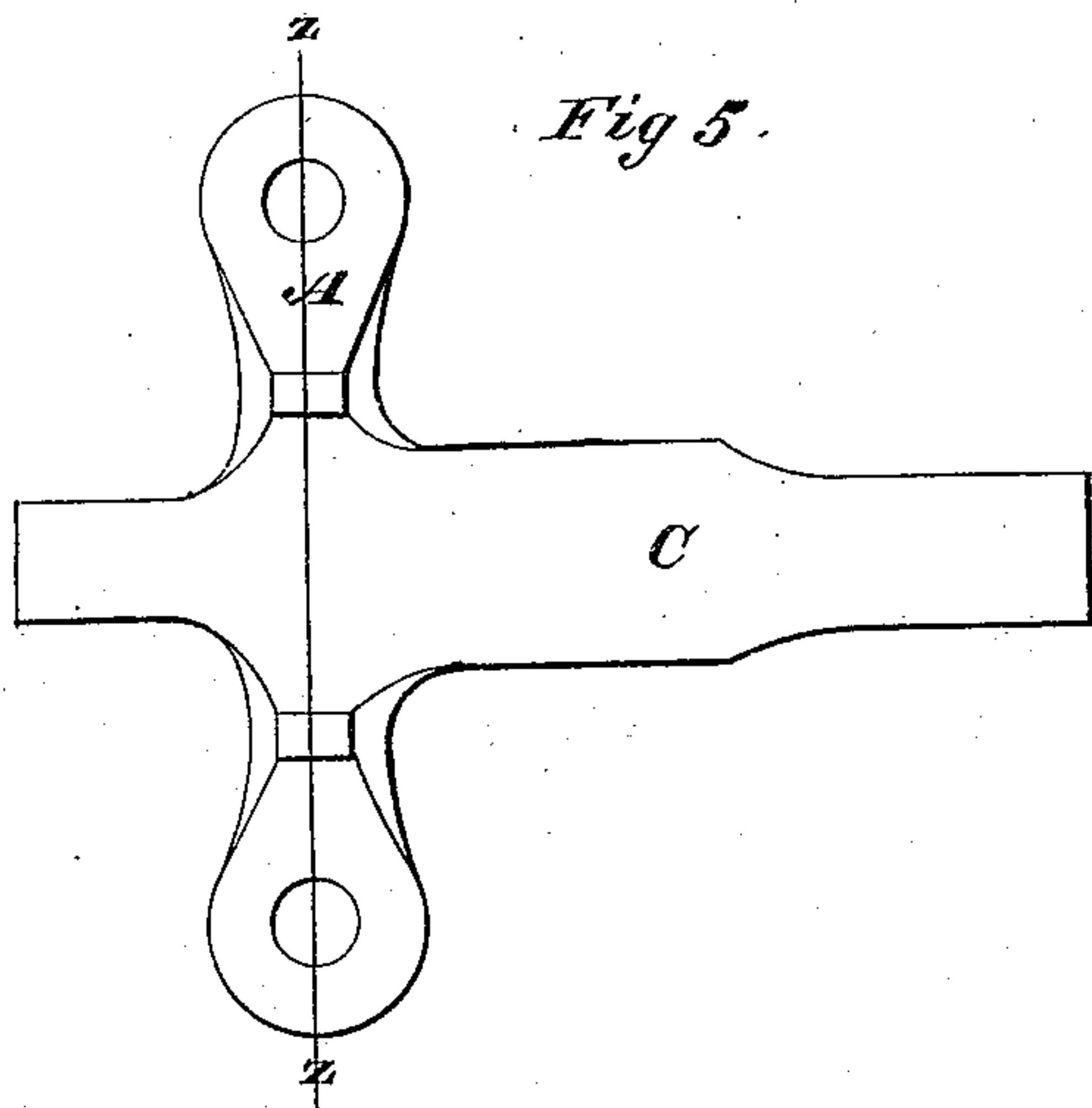


Fig 6

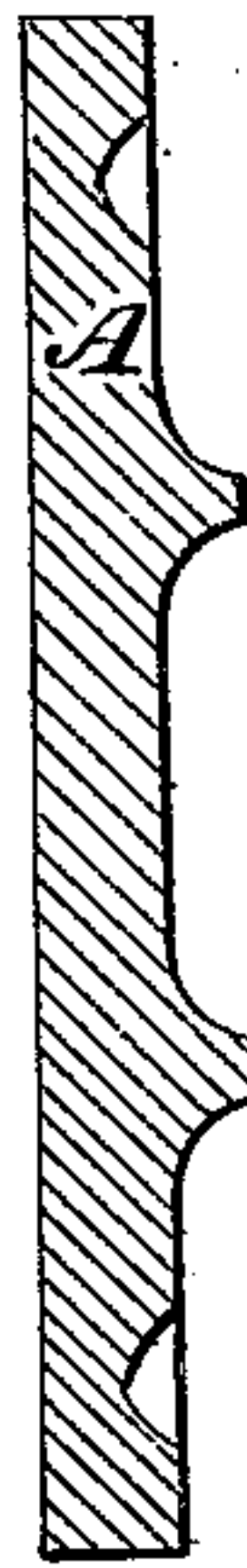


Fig 3

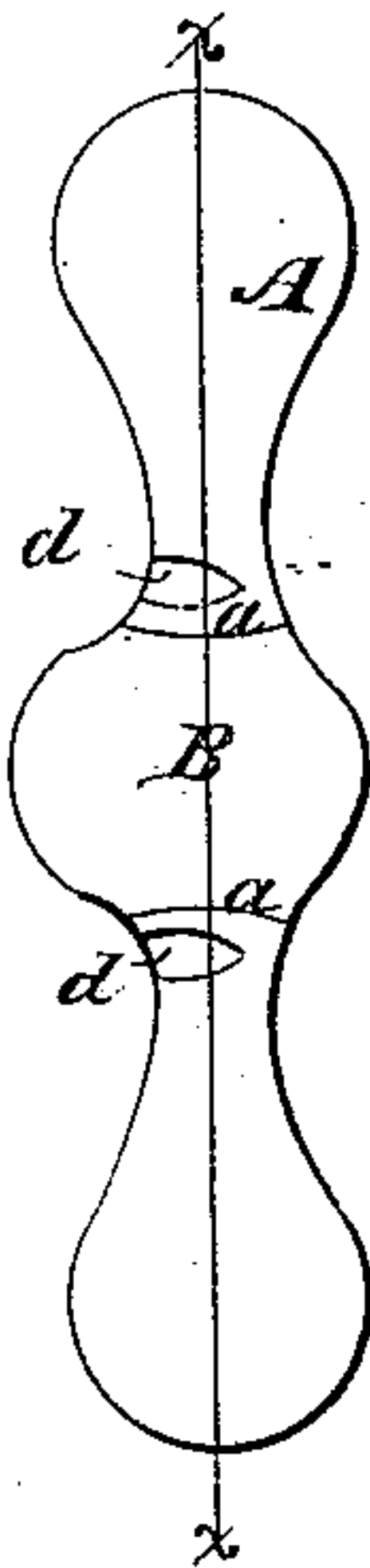
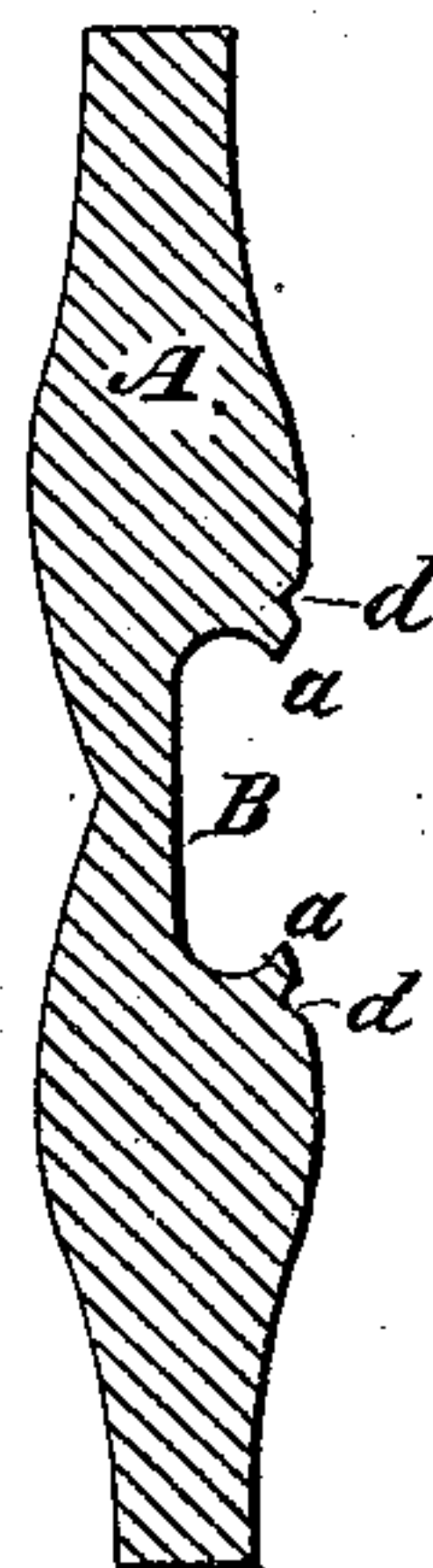


Fig 4



WITNESSES:

M. A. Kline.

John O. Hummway

INVENTOR:

William W. Knowles

By his atty John E. Earle

UNITED STATES PATENT OFFICE.

WILSON W. KNOWLES, OF SOUTHTON, CONN., ASSIGNOR TO HIMSELF,
JULIUS B. SAVAGE, AND WILLIS B. SMITH, OF SAME PLACE.

IMPROVEMENT IN CARRIAGE-SHACKLES.

Specification forming part of Letters Patent No. 54,253, dated April 24, 1866.

To all whom it may concern:

Be it known that I, WILSON W. KNOWLES, of Southington, in the county of Hartford and State of Connecticut, have invented a new and useful Improvement in Carriage-Shackles; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a side view of a shackle completed for market; Fig. 2, an end view of the same; Fig. 3, a top view of that part of the shackle upon which my improvement is made; Fig. 4, a section of the same on line *x x*; Fig. 5, a top view of the shackle further advanced toward completion, and in Fig. 6 a section of the same on line *z z*.

Heretofore, in the construction of the shackle and its attachment to the clip, the shackle has been partially formed; then the clip-bar, or bar of iron from which the clip was to be formed, was placed upon the shackle and firmly riveted thereto, then heated and forged to the proper shape. The operation of riveting adds much to the cost of manufacture, yet it is necessary in some manner to secure the shackle to the clip before the two parts can be welded together and the shackle completed. To do this at less expense and equally as good, if not better, is the object of my invention, which consists in forming the shackle at that stage of its construction when it is required to attach it to the clip-bar, so as to lock onto the said bar and hold sufficiently strong for the purpose required.

To enable others skilled in the art to construct and use my improvement, I will proceed to describe the same as illustrated in the accompanying drawings.

A is the shackle-piece, first formed in the usual manner to receive the clip-bar upon the upper side of the said bar, and at the same time the indentation B is formed to receive the clip-bar I turn the two edges *a a* inward by making indentations *d* upon the upper surface of the clip, as seen in Figs. 3 and 4, then force the clip-bar endwise into the said indentation B, the two hooked sides *a a* holding on to the bar sufficiently strong to retain it in its proper position, then in the usual manner forge the clip C, with the shackle A, into the form seen in Figs. 5 and 6, thence to that seen in Figs. 1 and 2, and my shackle is complete.

The hooks *a a* being formed at the same time that the indentation B is introduced, no additional expense is incurred, and thus I avoid the expense of riveting, as heretofore, and am enabled to produce a shackle of more finished appearance, as no evidence of a rivet appears, which it is impossible to obliterate in the shackle as heretofore constructed.

Having therefore thus fully described my improvement, what I claim as new and useful, and desire to secure by Letters Patent, is—

Constructing the shackle to receive the clip-bar, substantially as and for the purpose herein set forth.

WILSON W. KNOWLES.

Witnesses:

SIMEON H. NORTON,
SARAH E. NORTON.