

J. M. DODGE.
 PROCESS OF MANUFACTURING CHAIN LINKS.
 APPLICATION FILED MAR. 12, 1908.

912,982.

Patented Feb. 16, 1909.

Fig. 1.

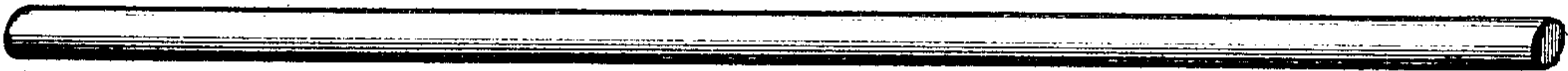


Fig. 2.

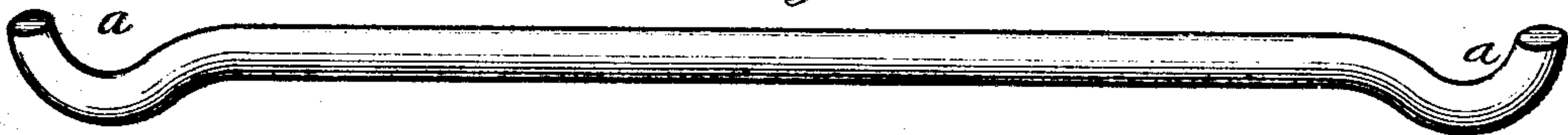
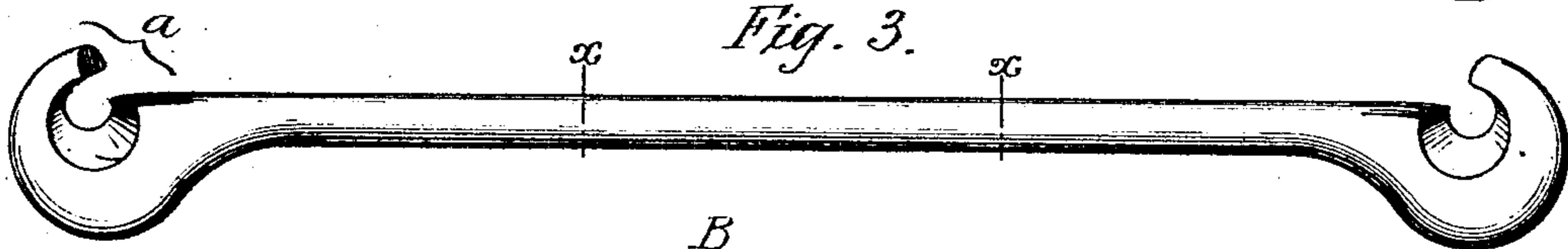


Fig. 3.



B



Fig. 5.

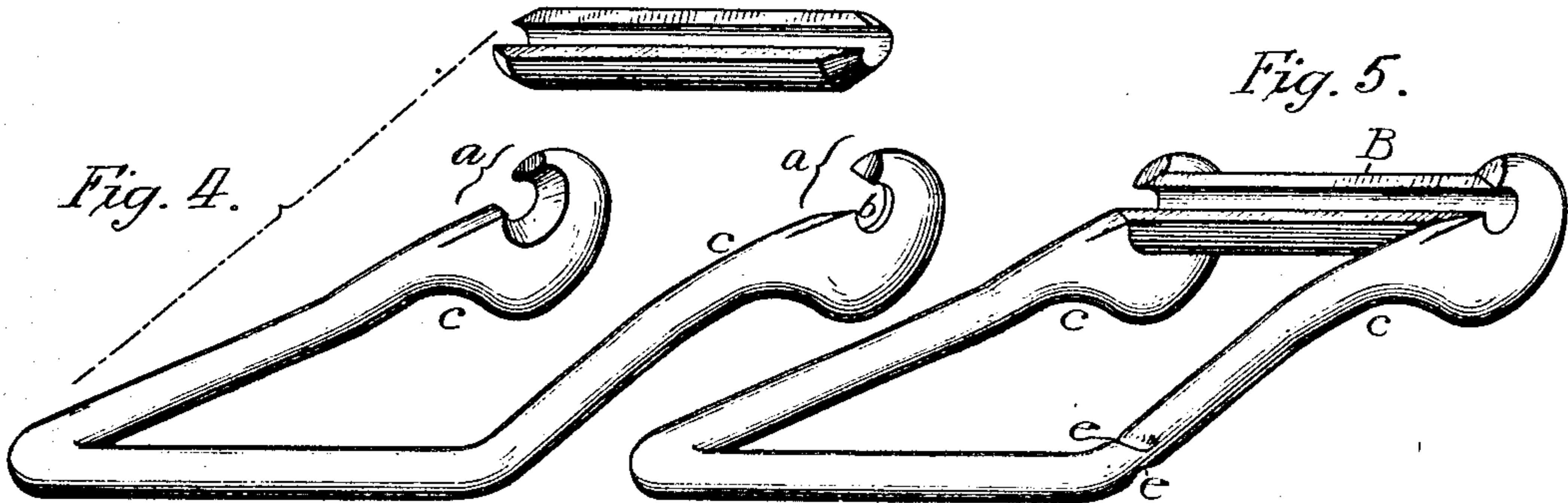
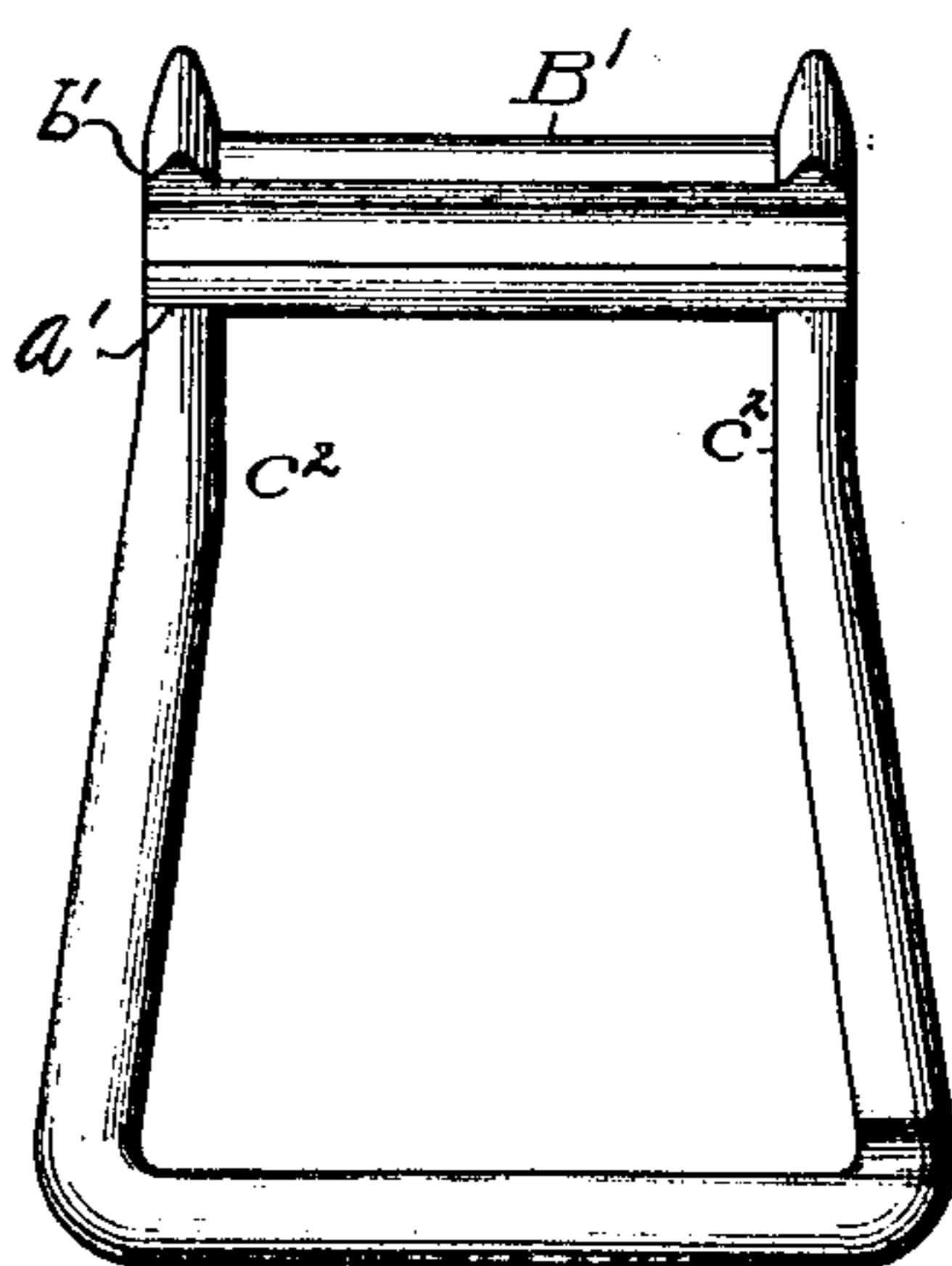
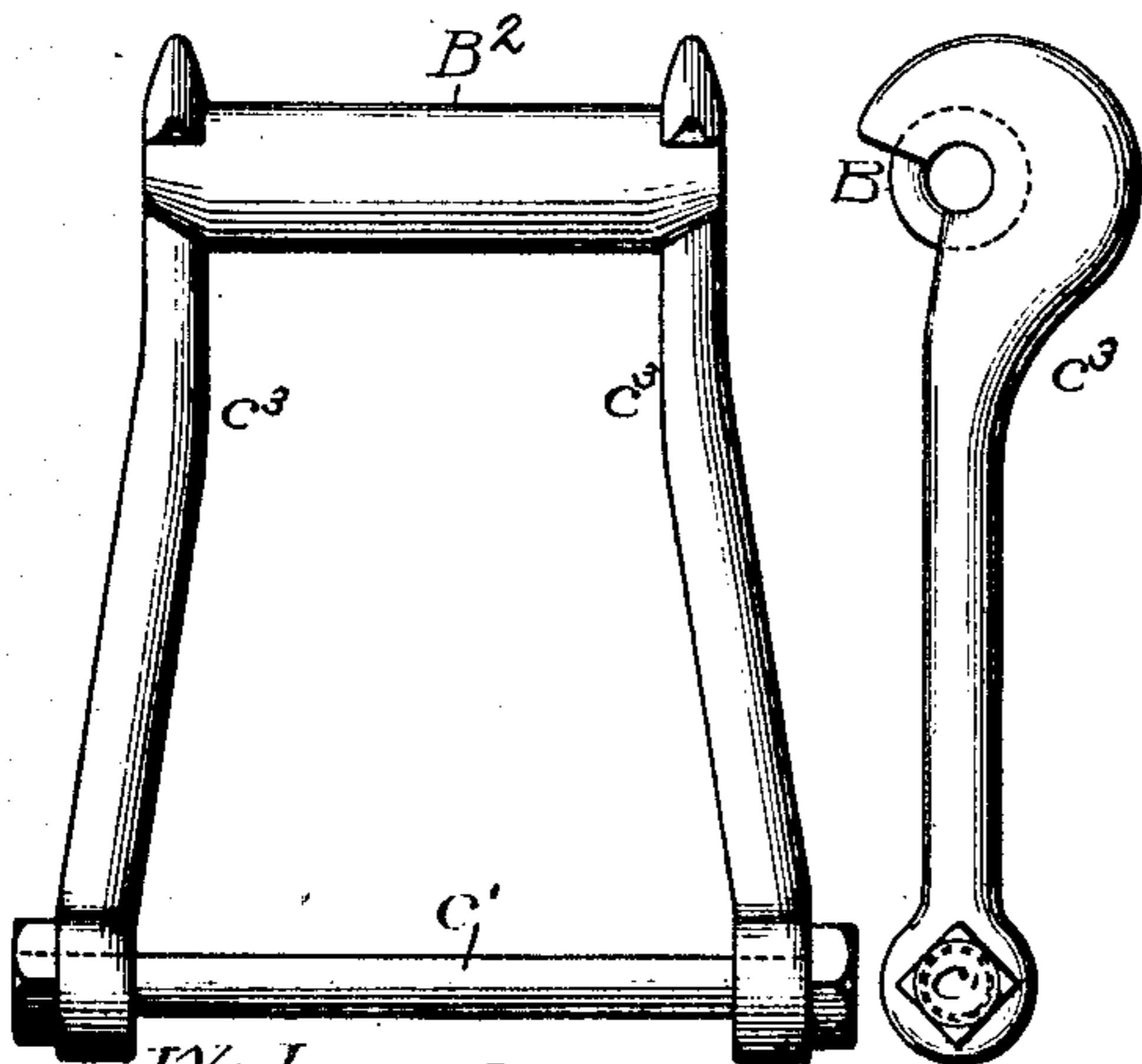


Fig. 8.

Fig. 9.

Fig. 6.

Fig. 7.



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PROCESS OF MANUFACTURING CHAIN-LINKS.

No. 912,982.

Specification of Letters Patent.

Patented Feb. 16, 1909.

Application filed March 12, 1908. Serial No. 420,548.

To all whom it may concern:

Be it known that I, JAMES M. DODGE, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in the Process of Manufacturing Chain-Links, of which the following is a specification.

The object of my invention is to manufacture wrought metal chain links in such a manner that they can be readily and cheaply made by being struck up and welded.

In the accompanying drawing:—Figure 1, is a view of one form of bar from which the major portion of the link is to be made; Fig. 2, is a view showing the first reduction of the bar; Fig. 3, is a view showing the second reduction of the bar; Fig. 4, is a view of the bent bar with cross piece of the link detached therefrom; Fig. 5, is a perspective view of the completed link; Figs. 6 and 7, are views illustrating a modification; and Figs. 8 and 9, are views illustrating another modification.

In the manufacture of chain links, especially drive chain or conveyer chain links commonly known as "Ewart" links, the method has been to manufacture the links of malleable iron, but the object of my present invention is to avail myself of the valuable properties of wrought metal for the purpose, and at the same time to manufacture the links at such cost that they will not be unduly expensive. In producing this link I preferably utilize a bar of the shape shown in Fig. 1, bending each end at *a, a* to form rounded portions, as shown in Fig. 2. The bar is then placed between suitable dies and struck up into the form shown in Fig. 3, the portions *a, a* forming loops having deep flat ribs of the form shown in Fig. 3, and, in the present instance, laterally flared or conical openings *b, b*, and the next step in the process is to bend the bar on the line *x, x*, Fig. 3, to the position shown in Fig. 4. An open slotted bar *B* is formed in any suitable manner and has flaring or conical ends which are of the same taper as the openings *b, b*. This slotted bar is then placed in position between the two arms *c, c* of the link and welded onto the portions *a, a*, either by the process of electric welding or by the common process. The link is then notched at *e, e* to permit it to be coupled to the slotted socket bar *B* of the adjoining link in the same manner as in the "Ewart" link above referred to. In some

instances the ends of the socket bar *B* need not be tapered. In Figs. 6 and 7, I have shown the ends *b'* of the socket bar *B'* plain and fitting within the openings *a'* in the arms *c'*, and welded, although I prefer, when the link is to be electrically welded, to make the parts as shown in Fig. 4, as the two arms *c, c* can be forced tightly upon the socket bar *B* and by tapering the parts a much better weld can be produced.

In carrying out my invention the arms *c³, c³* may be independent pieces as shown in Figs. 8 and 9; these pieces being welded to the socket bar, and a plain bolt *c'* being utilized for the cross bar. When this bolt is used I make the socket bar *B²* tubular and attach one arm *c³* to the other by passing the bolt *c'* through the openings in the arms and through the opening of the tubular socket bar of the adjoining link.

In carrying out my invention it will be understood that I may use any of the processes now in use for electrically welding the parts of the link together, the particular process will depend upon the size and the particular shape of the link, but a link made in accordance with my invention having the parts electrically welded will be very strong and comparatively cheap to manufacture.

I claim:—

1. The process herein described of manufacturing chain links, said process consisting in forming loops in the side members of the links and so arranging the said members that the loop of one member will be directly opposite the loop of the other member, mounting a socket bar so as to aline with the looped portions of the side members of the link, and finally welding the parts together.

2. The process herein described of manufacturing links, said process consisting in forming conical openings in each side portion of a link, forming a socket bar with tapered ends adapted to the conical openings in the side members, and then welding the bar to the side members.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

JAMES M. DODGE.

Witnesses:

JOS. H. KLEIN,
WM. A. BARR.