

M. SEWARD.

Dies for Bending Carriage Clips.

No. 133,492.

Patented Nov. 26, 1872.

fig. 1.

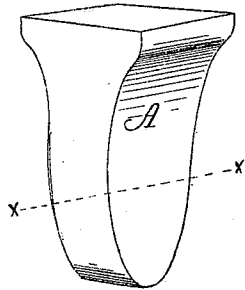


fig. 2.

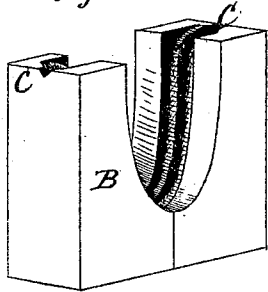


fig. 3.



fig. 4.

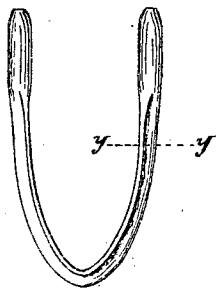


fig. 5.



Moses Seward  
Inventor

By his Atty.

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Witnesses

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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN DIES FOR BENDING CARRIAGE-CLIPS.

Specification forming part of Letters Patent No. 133,492, dated November 26, 1872.

*To all whom it may concern:*

Be it known that I, MOSES SEWARD, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Dies for Bending Carriage-Clips; and do hereby declare the following, when taken in connection with the accompanying drawing and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawing constitutes part of this specification, and represents, in—

Figure 1, a perspective view of the follower; Fig. 2, a perspective view of the lower die; Fig. 3, a transverse section on line *xx* of Fig. 1; Fig. 4, the clip bent; and in Fig. 5, a transverse section on line *yy* of the clip.

This invention relates to a device for bending carriage-clips.

In bending these clips, as heretofore practiced, the inner surface is convex, because, the metal of the clip usually being thicker at the center than at the edges, the inner surface at the center will contract more than at the edges; therefore it is necessary that the workman in applying the clips should dress the wood axle to correspond to the internal convexity of the clip; or, when this is not done, the clip only takes its bearing at the center, leaving the edges open.

To overcome this difficulty, and to produce a clip which shall be slightly concave on the inside, is the object of this invention; and it consists in constructing a follower, of the form required for the inside of the clip, with its edges made convex, and combined with a die corresponding with the outside of the clip, so that the straight clip laid upon the said lower die and forced into the said die by the said follower will be bent into the form required, the inner

surface of the clip, made concave, corresponding to the convexity of the said follower.

A is the follower, in form corresponding to the form for the inside of the clip, as seen in Fig. 4, that being the form here represented to be bent. The edges of the follower in transverse section are made convex, as seen in Fig. 3. B is the die corresponding to the external form of the clip, fitted at its upper edge, as at C, to receive the straight clip and serve as a guide to hold the clip to be bent in proper position. The straight clip or blank is laid across the die into the guides C, then the follower, forced down thereon, drives the clip into the die, bending it to the form desired, drawing the edges less than the center in consequence of the convexity of the follower, so that a transverse section of the clip when done will be substantially that as seen in Fig. 5. Hence, in applying the clips the edges come close down upon the wood, and will naturally be slightly embedded thereon, and more perfectly retain the position without fitting.

It will be understood that the form of the follower and die are to be made to conform to the particular class of clips designed to be bent.

I claim—

The herein-described die for bending carriage-clips, consisting of the follower A and die B, the said follower in transverse section formed with the faces convex to give to the inside of the clip a transverse concavity, and the die with suitable guides C, all substantially as set forth.

MOSES SEWARD.

Witnesses:

A. J. TIBBITS,  
J. H. SHUMWAY.