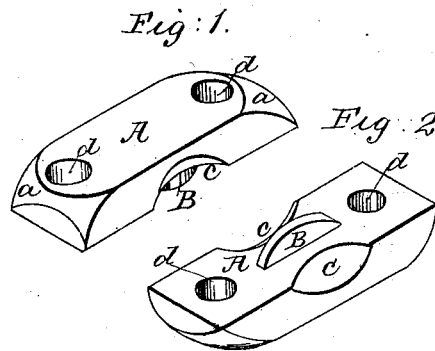


F. B. MORSE.

Clip Bar for Carriages.

No. 110,386.

Patented Dec. 20, 1870.



Witnesses.  
*J. H. Shumway*  
*A. J. Tibbits*

Inventor  
*Francis B. Morse*  
By his Attorney  
*John E. Earle*

# United States Patent Office.

FRANCIS B. MORSE, OF PLANTSVILLE, CONNECTICUT, ASSIGNOR TO HIMSELF AND H. D. SMITH & CO., OF SAME PLACE.

Letters Patent No. 110,386, dated December 20, 1870.

## IMPROVEMENT IN CLIP-BARS FOR CARRIAGES.

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, FRANCIS B. MORSE, of Plantsville, in the county of Hartford and State of Connecticut, have invented a new Improvement in Clip-Bars for Carriages; and I 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 looking upon the upper side of the bar; and

Figure 2, a perspective view looking upon the under side.

This invention relates to the article of manufacture commonly called "clip-bars"—that is, the bar which passes over the two ends of the clip beneath the axle, and against which the nuts are turned onto the clip to secure the axle to the wood, or other parts of the carriage to the axle.

Heretofore, these have been made, as required by consumers, from bar-iron, punched, and the ends filed off to give them the necessary finished appearance.

The object of my invention is—

First, to produce these bars as an article of manufacture, and as such to supply them to the trade by means of dies, whereby the article is made complete, ready for use.

Second, to construct the bar to avoid a difficulty

which has existed in the common straight bar from the fact that the bar is liable to be bent or sprung by the turning on of the nuts or by use, so that the nuts frequently work off, thereby loosening that part of the carriage.

My invention consists in a bar complete as an article of manufacture, having the bolt-holes punched, the ends rounded complete, ready for use, and with or without a strengthening-rib upon the outside.

A is the clip-bar, formed from a bar of iron heated, and placed in dies which round and finish the two ends *a a*, and holes *d*, punched in the bar, through which the two ends of the clip pass.

To strengthen the bar I form a rib, B, upon the under side, by striking recesses C into the bar, which force the metal from these recesses into a recess in the die to form the rib B.

While this rib greatly strengthens the bar and prevents its bending, I do not wish to confine myself to its use; but

I claim as my invention—

As a new article of manufacture, a clip-bar constructed and prepared for use substantially as herein set forth, and either with or without the rib B.

F. B. MORSE.

Witnesses:

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