

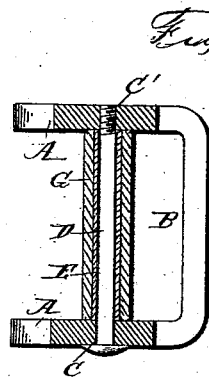
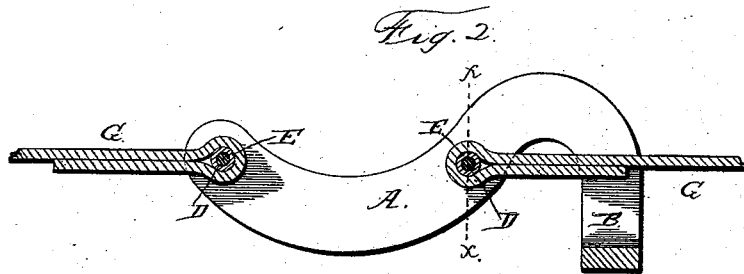
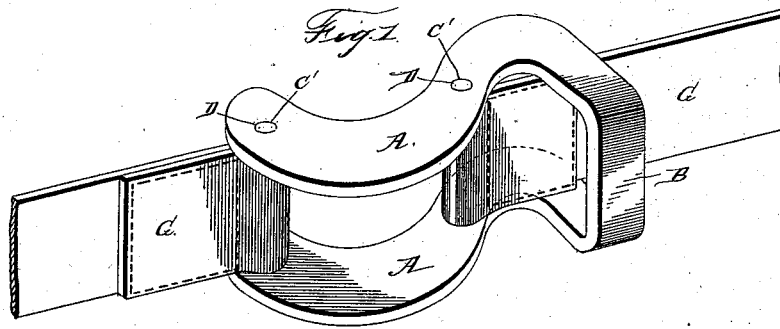
(No Model.)

H. C. & L. C. MINARD.

TUG BUCKLE.

No. 382,545.

Patented May 8, 1888.



Witnesses,

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# UNITED STATES PATENT OFFICE.

HORACE CLIFFORD MINARD AND LAURENCE CLARK MINARD, OF ST. CHARLES, IOWA.

## TUG-BUCKLE.

SPECIFICATION forming part of Letters Patent No. 382,545, dated May 8, 1888.

Application filed February 3, 1888. Serial No. 262,876. (No model.)

*To all whom it may concern:*

Be it known that we, HORACE CLIFFORD MINARD and LAURENCE CLARK MINARD, citizens of the United States, residing at St. Charles, in the county of Madison and State of Iowa, have invented new and useful Improvements in Hame-Tug Sections, of which the following is a specification.

Our invention relates to improvements in hame-tug sections, and it has for its object to provide a section which will be more easily applied to the hame-tug than previous devices, whereby when a section is broken after being attached to the tug a new section may be substituted without ripping out the loops which have been formed in the tugs.

The invention consists, mainly, in a section having removable rounds to which the ends of the portions of the tug are attached.

The invention consists, further, in certain novel details of construction and arrangement of parts, which are hereinafter more fully described in connection with the accompanying drawings, wherein—

Figure 1 is a perspective view of the section, showing the portions of the tug attached thereto. Fig. 2 is a longitudinal section of the same, taken centrally. Fig. 3 is a transverse section thereof on the line *xx* of Fig. 2.

Referring by letter to the drawings, A A designate the sides of the tug-section, and B designates the loop which is formed integral with the sides. The sides and loop are preferably formed of malleable iron.

C C designates smooth apertures in one of the sides A, and C' C' designate tapped apertures in the other side, which are respectively aligned with the apertures C C.

Rounds D D are engaged in the aligned apertures, and are threaded at their ends to screw into the tapped apertures, and provided with screw or bolt heads at the other ends. It will be seen that by screwing the rounds into the tapped apertures the sides A A are drawn toward each other.

E E represent sleeves or barrels which are mounted on the rounds D D and bear at their ends against the sides A A. When the sides

are drawn in by the rounds, they bear tightly against the ends of the sleeves and hold the latter rigid.

G G designate the portions of the hame-tug which are attached to the sleeves in the ordinary manner—namely, by forming loops in their ends which embrace the said sleeves.

The advantages of this invention will now be seen. When a section breaks, instead of being obliged to rip out the loops which are formed in the ends of the portions of the tug, in order to secure the said portions to the rounds of the new section, the sleeves are placed within the loops, and then the latter are placed in alignment with the apertures in the sides of the section and the rounds passed through, as described. It will be seen that this adjustment is accomplished in a very short time and all ripping and resewing of the tug are avoided. If preferred, the sleeves may remain loose on the rounds and they will then turn with the movements of the tug. Further, the sleeves may be omitted, if preferred, for the sake of simplicity; but we prefer to use them as described.

The body of the section may be made, as shown in the drawings, from sheet metal, which is struck out and then bent to form the loop B, after which the rounds and their sleeves are attached. This manner of constructing the section enables it to be very cheaply and easily manufactured, as will be seen.

If preferred, smooth openings may be formed in both sides of the section, and the rounds may be passed entirely through and have nuts screwed on their projecting ends; but the form herein described is simpler and therefore preferable.

Having thus described our invention, we claim as follows:

As an improved article of manufacture, the herein-described tug-section, comprising the parallel curved sides A A, having the plain apertures C, and the tapped apertures C' therein, respectively, the loop B, connecting the ends of the sides and forming a cross-bar perpendicular to the said sides, the removable rounds D, passing through the plain apertures

and having threaded ends engaging the tapped  
apertures, and the loose sleeves E, mounted on  
the rounds between the sides A and bearing  
at their ends against the sides to maintain  
5 them in the proper relative positions, substan-  
tially as specified.

In testimony that we claim the foregoing as

our own we have hereto affixed our signatures  
in presence of two witnesses.

HORACE CLIFFORD MINARD.

LAURENCE CLARK MINARD.

Witnesses:

C. F. WOOD,

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