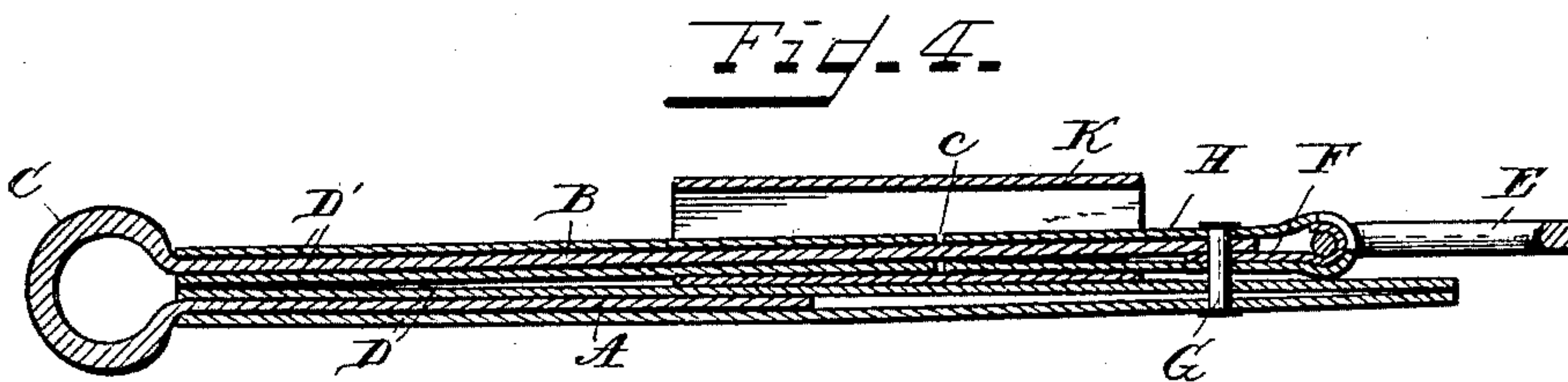
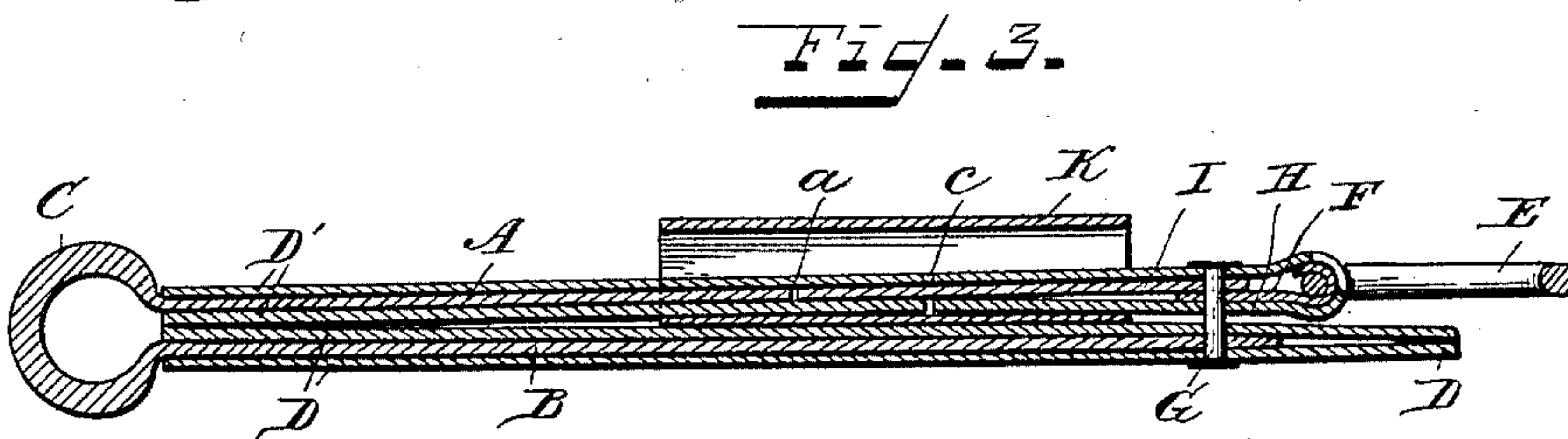
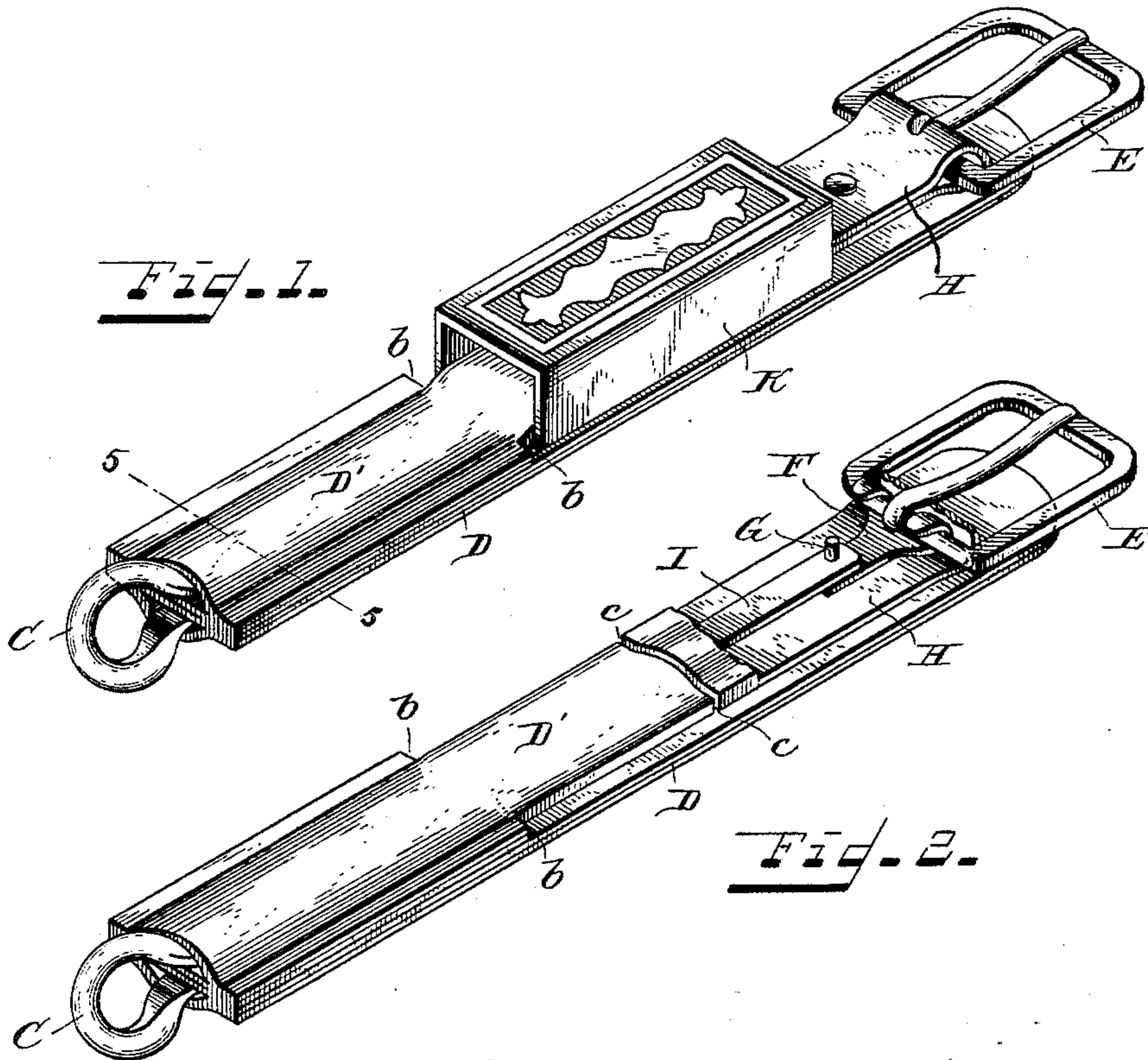


(No Model.)

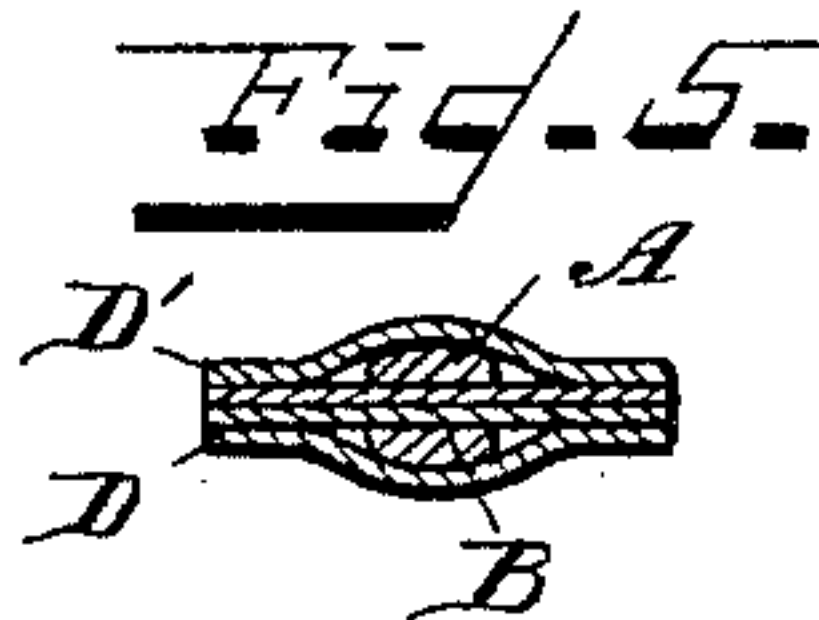
R. MEISTER & M. REMMEL.
HAME TUG.

No. 462,498.

Patented Nov. 3, 1891.



Witnesses.
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UNITED STATES PATENT OFFICE.

ROBERT MEISTER, OF CARTHAGE, AND MICHAEL REMMEL, OF CINCINNATI,
OHIO.

HAME-TUG.

SPECIFICATION forming part of Letters Patent No. 462,498, dated November 3, 1891.

Application filed July 6, 1891. Serial No. 398,458. (No model.)

To all whom it may concern:

Be it known that we, ROBERT MEISTER and MICHAEL REMMEL, both citizens of the United States, the former residing at Carthage and the latter at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Hame-Tugs, of which the following is a description, reference being had to the accompanying drawings, forming part of this specification.

The object of our invention is to produce a simple and cheap tug of greater strength than those now generally in use. Its novelty will be hereinafter set forth, and specifically pointed out in the claim.

In the accompanying drawings, Figure 1 represents a perspective view of our tug; Fig. 2, a corresponding view with the box-loop removed and with a portion of the leather covering adjacent to the buckle broken away; Fig. 3, a longitudinal vertical section of the complete tug shown in Fig. 1; Fig. 4, a like view showing a modification in the construction, and Fig. 5 a cross-section on the line 5 5 of Fig. 1.

The same letters of reference are used to indicate identical parts in all the figures.

The draft-iron of the tug is composed of the two bars A B, united at their left-hand end by the coupling or eye C, by which the tug is attached to the hame. As seen in Fig. 3, the bar B extends nearly the entire length of the tug, while the bar A is only about half as long, terminating at the point *a*. The leather covering which incloses the draft-iron consists of four strips of leather. The lower two D of these strips extend the entire length of the tug and form its bottom. They are stitched together along their sides and at their end adjacent to the trace-buckle, but are left open at their opposite ends to permit the insertion of the lower bar B of the draft-iron. The two upper strips D' are stitched fast to the lower two along their sides from the left-hand or hame end of the tug to the points *b b*, where their sides are cut away to form a narrow extension from said points to the ends of the strips at *c*, about midway of the tug. From the points *b* to their right-hand ends at *c* the

two strips D' are stitched together at their sides, but are left free from the two lower strips D, so that the bottom of the box-loop can be slipped between them and the two lower strips. They are left open at each end, and the bar A of the draft-iron is inserted between them at their left-hand end and pushed inward until the eye C abuts against them. The trace-buckle E is attached to the lower bar B of the draft-iron by means of a coupling-hook F and a rivet G, the rivet G being passed from the under side of the tug through the leather strips and through perforations in the lower bar B of the draft-iron and the shank of the coupling-hook, as shown in Fig. 3.

The coupling-hook F and the cross-bar of the buckle which it engages are inclosed in a leather covering H, consisting of a single strip of leather folded upon itself and having a hole in it at its bend for the tongue of the buckle. This leather covering H extends from the buckle to the right-hand end of the two upper strips D' at *c*.

I is a metal brace or stiffening-bar, whose left-hand end is inserted between the upper strips D' and pushed inward until it abuts against the end of the bar A of the draft-iron at *a*, as shown in Fig. 3. Its right-hand end rests upon the shank of the coupling-hook F and has a perforation through which the rivet G passes.

In constructing the tug, the covering-strips D D' are prepared and stitched in the manner described. The coupling-hook F is attached to the trace-buckle E and the covering-strip H applied to them and stitched together along its sides. The bars A B of the draft-iron are inserted between the covering-strips D D', and the stiffening-bar I is inserted between the two upper-strips D' until its end abuts against the end of the bar A. The box-loop K, which is made entirely separate, is then slipped around the bar I and the narrow extensions of the upper strips D' and pushed up against or adjacent to the offset at *b*. The right-hand end of the bar I is then inserted in the opening between the left-hand ends of the covering-strip H and the latter pushed to the left over the bar I until the ends of the strip H abut against the ends

of the strips D'. If desired, the lower corner of the end of the bar I and the upper corner of the end of the shank of the coupling-hook F may be slightly rounded or beveled, as shown, to insure the end of the bar I riding up over and resting upon the shank of the coupling-hook. When the parts are thus adjusted, so that the perforations through the strips D D', draft-iron B, coupling-hook H, bar I, and covering-strips H are all coincident, the rivet G is passed up from the bottom through all of them, a burr placed over its upper end, and the latter swaged to securely fasten the parts together. This completes the tug.

It will be seen that the entire draft strain comes upon the lower bar B of the draft-iron, the coupling-hook F, and the rivet G, and none of it upon the leather portions of the tug. This renders the tug much stronger than where the trace-buckle is secured to the tug simply by a leather strip, such as H, passed around the buckle and either stitched to the leather body of the tug or riveted to the draft-iron therein. The stiffening-bar I gives the tug the desired rigidity and prevents the lower strips D and the under side of the box-loop K becoming separated and the space filled with dirt in the use of the tug.

The modification shown in Fig. 4 consists simply in dispensing with the stiffening-bar I and reversing the position of the draft-iron, its shorter arm A being inserted between the lower strips D, and its longer arm B between the upper strips D', the right-hand end of the arm B then resting directly upon the shank of the coupling-hook F and the rivet G being passed up from below, through all of the parts, and fastened, as above described. Under this construction the covering-strips D D' are prepared as before, and likewise the coupling-hook F, buckle E, and covering-strip H. The draft-iron is then inserted through the spaces between the strips D D', the box-loop slipped over it and around the free ends of the upper strips D', as above described, and the end of the upper bar B of the draft-iron inserted be-

tween the ends of the strip H and the latter forced over it until its ends abut against the ends of the strip D', and the perforations for the rivets are all brought into line for the insertion of the latter.

We are aware that it is not broadly new in hame-tugs to attach the trace-buckle to the draft-iron or to one bar thereof by means of a coupling-hook similar to the one we employ; but in the prior constructions of this character with which we are familiar the points of the coupling-hook were left exposed and liable to chafe and wear the inside of the trace, and there was nothing corresponding to our covering-strip H, nor was there in the constructions with which we are familiar any separate stiffening-bar corresponding to the bar I which we employ.

We believe our tug to be a substantial improvement upon any prior tugs in which the trace-buckle was attached to the draft-iron by means of a coupling-hook, and it is a much stronger tug than any prior ones in which the trace-buckle was attached to the body of the tug merely by a leather strip.

Having thus fully described our invention, we claim—

In a hame-tug such as described, the combination of the covering-strips D D', the draft-iron composed of the short bar A and long bar B and connecting-eye C, the bars A B being inserted between the strips D D', the separate stiffening-bar I, inserted between the ends of the strips D', the box-loop K, fitted over the free ends of the strips D', the trace-buckle E and coupling-hook F, the covering-strip H, inclosing the coupling-hook and cross-bar of the buckle and slipped over the end of the stiffening-bar I, and the rivet G, passed through the leather covering and the perforations in the bar B, coupling-hook F, and stiffening-bar I, substantially as described.

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Witnesses:

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