(No Model.)

W. E. HUDSON.

HARNESS TUG.

No. 428,915. Patented May 27, 1890.

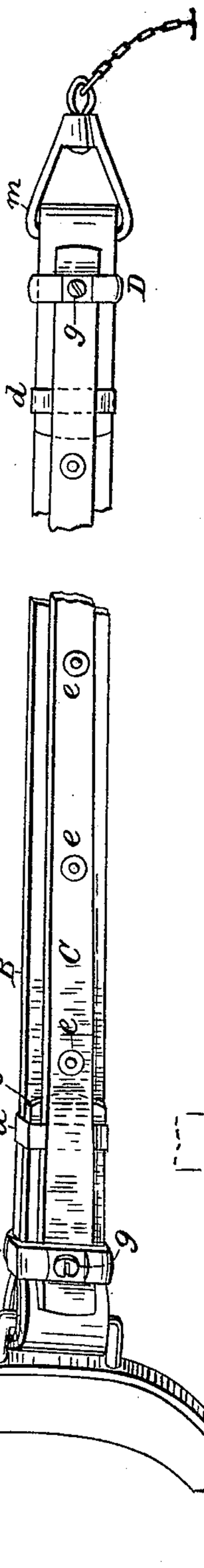

Fig. 1.

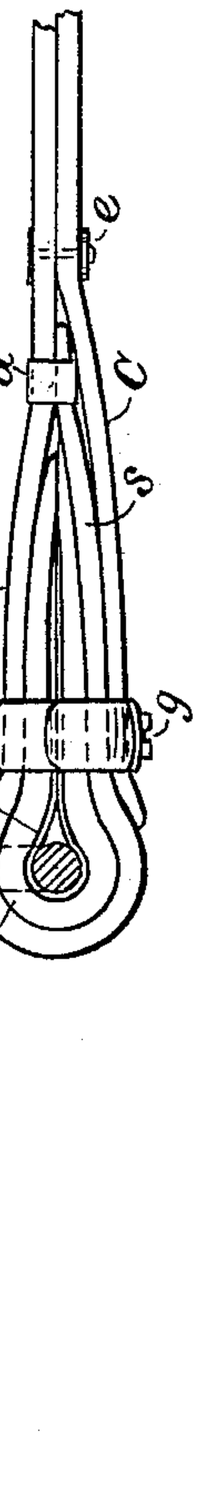

Fig. 2.

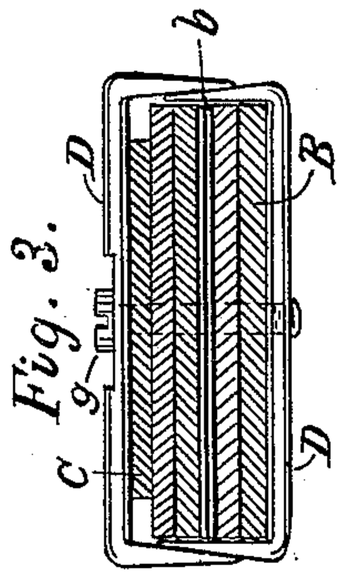

Fig. 3.

Witnesses:
C. S. Hoyer
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UNITED STATES PATENT OFFICE.

WILLIAM E. HUDSON, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR OF ONE-HALF TO EMANUEL JACKSON, OF SAME PLACE.

HARNESS-TUG.

SPECIFICATION forming part of Letters Patent No. 428,915, dated May 27, 1890.

Application filed February 6, 1890. Serial No. 339,507. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. HUDSON, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Tugs for Harness; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention relates to harness; and it consists in an improved construction of the traces or tugs of a harness, as hereinafter set forth and claimed, the improvement being especially adapted for hame-tugs which are connected with the hame and the singletree, and for heavy harness used with street-cars and heavy wagons.

In the accompanying drawings, Figure 1 represents a hame-tug provided with my improvements. Fig. 2 illustrates the same in longitudinal section. Fig. 3 is a cross-section taken near the clamp-fastening.

A designates a hame provided with a staple *a* for the attachment of the tug. A sheet-metal clip *b* is placed on the staple *a* and forms a bearing-piece between the leather and the staple. A short strengthening-piece of leather *c* covers the clip *b*, and one end of the main strap B of the tug is passed through the staple and folded over the leather *c* and passed under a loose metal loop *d*, which incloses the main strap.

C indicates an additional strap, which is secured by rivets *e* at intervals to the main strap B on the outer side of the tug, the end of strap C extending over the folded end *s* of strap B and being clamped, as hereinafter stated.

The parts, arranged as above stated, are secured by means of a clamp formed of two perforated plates D and a screw-bolt *g*. The said plates D are constructed with their extremities bent at right angles and are placed one on each side of the tug, so as to inclose the same, the ends of one plate extending somewhat over the extremities of the other, as seen in Fig. 3.

A screw-bolt *g* is used to tighten and secure the parts, the bolt being passed through apertures in the plates and in the parts inclosed by the clamp. The plates are drawn toward each other as the screw-bolt is turned, the aperture of the inner plate being threaded to connect with the screw.

In connecting the tug with the hame the sheet-metal clip is placed on the staple and covered by the leather *c*. One end of the strap B is then passed through the staple, folded over, and passed in the loop *d*, with the strap C extending over it, as seen in Fig. 2. The plates D are then applied, one to each side, so as to clasp the tug, and the securing-bolt is passed through from the outer side. The parts are thus tightly clamped together, and may be further secured by two or three blows of a hammer on the point end of the bolt to form a burr.

For the connection of the other end of the tug with the singletree the construction is substantially the same, the tug being connected in like manner with a loop or link *m* for attachment to the singletree or a chain to be connected with the singletree. A durable construction is thus formed, the tug being strengthened at the points where the strain is the greatest. It is also easily detachable for renewing the clip or inner parts, as may be necessary. As no stitching is necessary, the tug may be prepared and made ready for use in a much shorter time than is required to construct the article heretofore used.

I claim—

1. In a hame-tug, the combination, with the main strap of a tug, of a sheet-metal clip, a leather piece covering said clip, the main strap being folded over said piece, a loop *d*, inclosing said strap and its folded end, an additional strap secured by rivets to said main strap, and a clamping device consisting of two perforated plates, the ends of which are bent at right angles to clasp the parts of the tug, and a securing-bolt passed through said plates and tug, substantially as and for the purposes described.

2. In a harness-tug, the combination, with one or more straps, of a clamping device consisting of two separate plates, the extremi-

ties of which are beveled and bent at right angles, as shown, said plates being placed so as to clasp the tug, with the extremities of one plate lapping on the extremities of the other, and a screw-bolt passed through said plates and straps at right angles to said plates and straps, whereby the two plates may be drawn toward each other, substantially as set forth and described.

In testimony whereof I have affixed my signature in presence of two witnesses.

WILLIAM E. his × mark HUDSON.

Witnesses:
L. I. O'NEAL,
EMANUEL JACKSON.