(No Model.)

F. W. MILLER.

HAME TUG.

No. 515,438. Patented Feb. 27, 1894.

Fig. 1

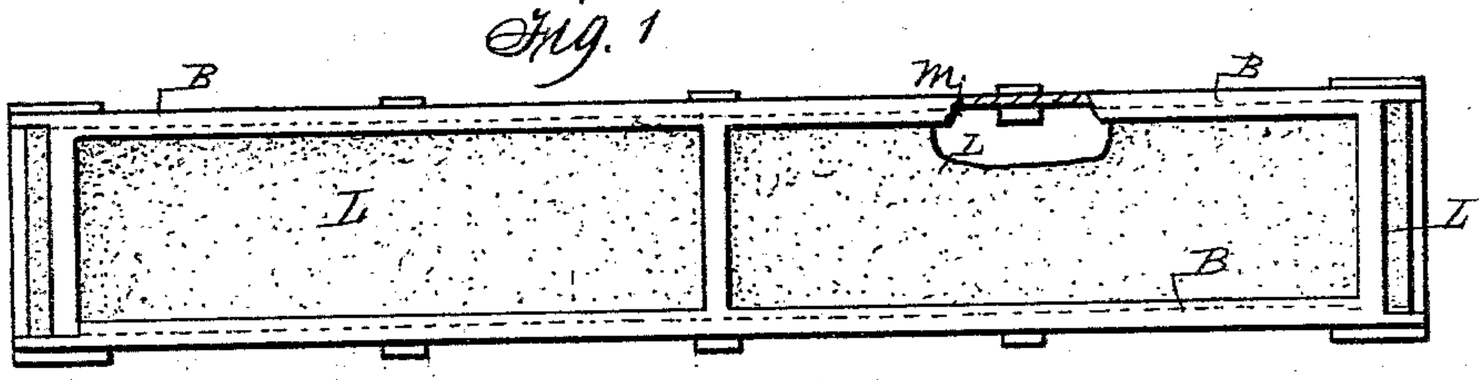

Fig. 2

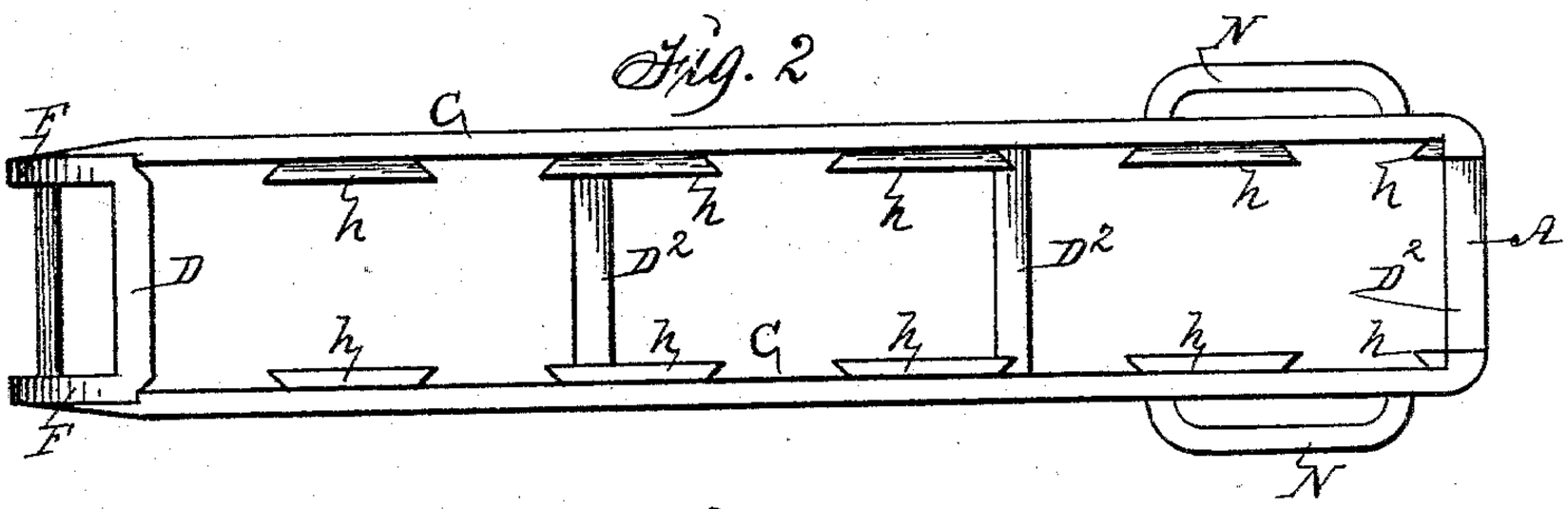

Fig. 3

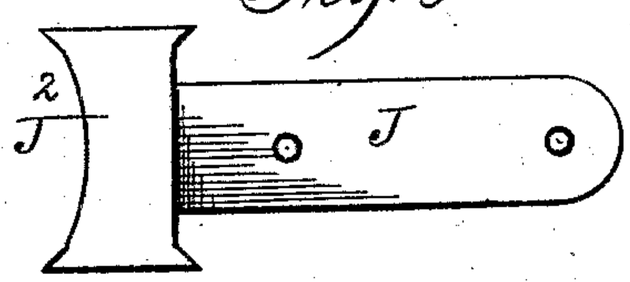

Fig. 5

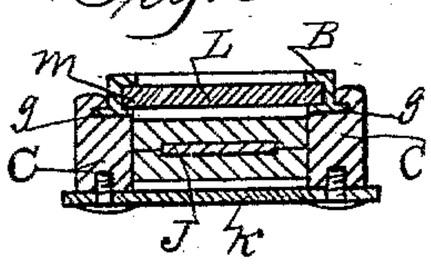

Fig. 4

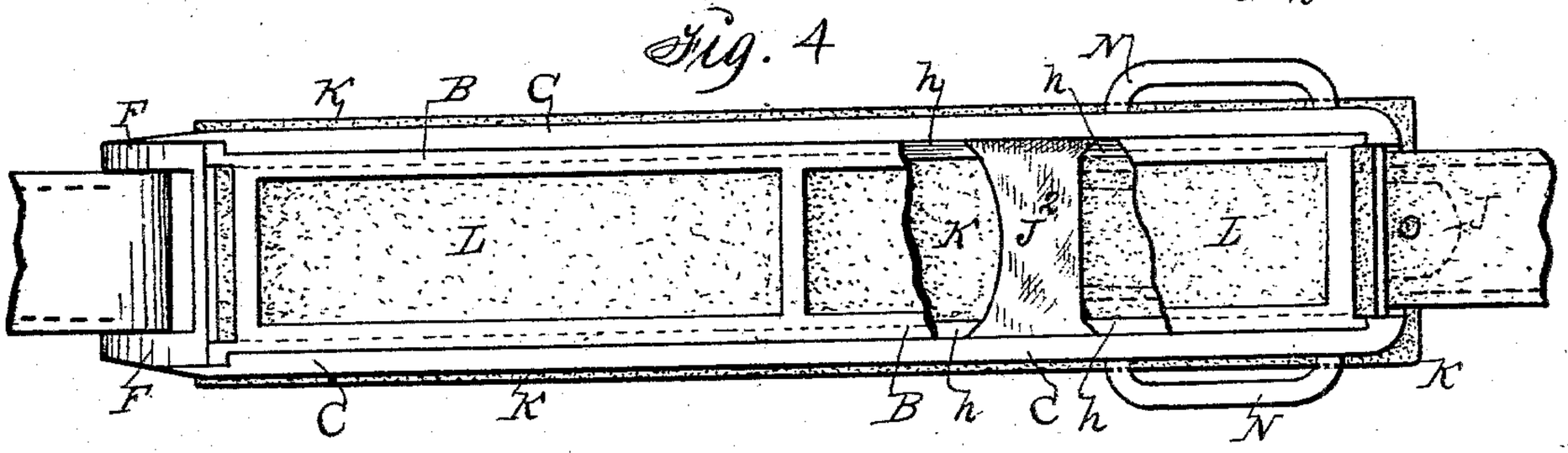

Fig. 6

Witnesses:
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FREDERICK W. MILLER, OF DES MOINES, IOWA.

HAME-TUG.

SPECIFICATION forming part of Letters Patent No. 515,438, dated February 27, 1894.

Application filed October 30, 1893. Serial No. 489,466. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK W. MILLER, a citizen of the United States of America, residing at Des Moines, in the county of Polk and State of Iowa, have invented a new and useful Adjustable Hame-Tug and Trace for Harness, of which the following is a specification.

My object is to dispense with loops and the difficulties incident to extending the front end of a trace relative to one or more fixed loops on a hame tug; to avoid the wear of a trace incident to lateral bends thereof relative to a hame tug or a buckle at the rear end of the hame tug; and to facilitate the adjustment of a trace relative to a tug and the length of a horse.

My invention consists in the construction, arrangement and combination of parts as hereinafter set forth, pointed out in my claims and illustrated in the accompanying drawings, in which—

Figure 1 is a top view of a sliding cover adapted to be detachably connected with my rigid hame tug. Fig. 2 is a top view of the metal portion of the hame tug cast complete in one piece. Fig. 3 is a view of the metal end piece adapted to be fixed to the front end of a flexible trace and to detachably and adjustably fasten the trace to the hame tug. Fig. 4 is a top view of the complete hame tug showing the trace connected therewith and the front end of the trace covered and concealed. Fig. 5 is a transverse sectional view and Fig. 6 a longitudinal sectional view of Fig. 4.

The rigid main portion of the hame tug is designated by the letter A and the metal part of the sliding cover by the letter B. The parallel sides of this metal part B have flanges extending inward and adapted to cover the edges of a piece of a leather fitted between the parallel metal sides.

The two parallel sides C of the hame tug are connected by means of an integral cross piece D at their front ends and by flat cross pieces D^2 at their bottom edges at different points.

F is an extension integral with the front ends of the sides B, adapted for connecting an extension thereto and producing a hinge joint. It is inclined downward, as shown in Fig. 5, and as required to allow the sliding cover B to be moved back and forth over it in grooves *g* in the inside faces of the parallel sides C.

A series of integral inward projections *h* on the inside faces of the sides C serve as dovetail tenons adapted to admit the ends of a cross head corresponding in size and shape therewith.

J is a metal plate adapted to be fixed in the front end of a leather trace by means of rivets and J^2 is an integral cross head, at its front end adapted to be inserted between the projections *h* as required to fasten the front end of the trace to the hame tug and to lengthen and shorten a trace by adjusting it relative to the hame tug.

K is a leather cover fixed to the flat bottom of the metal hame tug A, by means of screws or in any suitable way.

L is a leather cover fitted in the grooves *m* in the inside faces of the parallel sides of the metal frame of the sliding cover B.

N are loops, integral with the rear end of the metal hame tug A, adapted for connecting harness straps therewith.

In the practical use of my invention, I slide the cover B forward to admit the cross head J^2 on the front end of the trace to be inserted in the hame tug, as shown in Fig. 4, and then replace the sliding cover to protect and conceal the front end of the trace.

It is obvious that the sliding cover can be readily moved forward, whenever desired, so that the cross head on the front end of the trace will be accessible and also readily moved forward or backward as required to adjust the trace relative to the hame tug and the length of a horse.

I claim as my invention—

1. In a hame tug, a metal part or frame having parallel sides and grooves in the inside faces of said sides to admit a sliding cover, projections on the inside faces of the parallel sides adapted to engage the ends of a metal cross head on the front ends of a trace, a cross bar at the front end and flat cross pieces at the bottom edges of the parallel sides, and an integral extension at the front end adapted for connecting a hame therewith.

2. In a hame tug, a rigid slide or frame

having side edges adapted to slide in bearings or grooves in the inside faces of the rigid parallel sides of a hame tug and flanges on its parallel sides to cover the edges of a piece of leather and a piece of leather fitted between the said parallel sides in combination with a rigid hame tug having grooves to admit the edges of a sliding cover and projections on the inside faces of its parallel sides adapted to engage a cross head on the end of a trace, for the purposes stated.

3. A hame tug and trace adjustably connected, comprising a metal part composed of two parallel sides connected by means of integral cross pieces, bearings in the sides adapted to admit a sliding cover, projections on the inside faces of the parallel sides adapted to engage a cross head on the end of a trace, an integral extension at the front ends of the parallel sides for connecting a hame tug extension, a sliding cover fitted to the parallel sides, and a trace having a rigid cross head at its front end adapted to engage the projections on the inside faces of the parallel sides of the rigid tug, to operate substantially as and for the purposes stated.

FREDERICK W. MILLER.

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