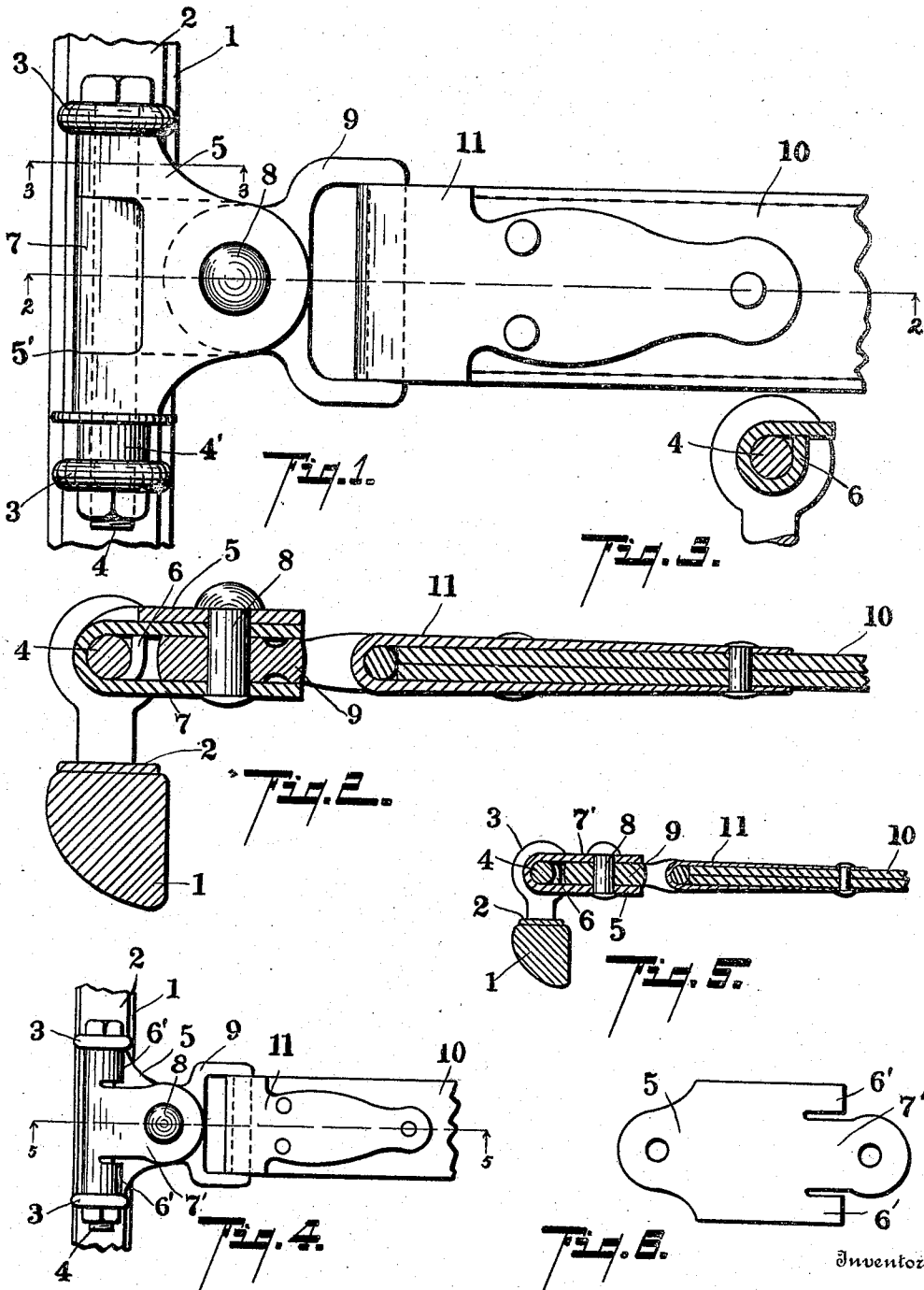


F. F. HODGES.
HAME AND TRACE CONNECTION.
APPLICATION FILED JUNE 19, 1908.

939,420.

Patented Nov. 9, 1909.



Witnesses

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UNITED STATES PATENT OFFICE.

FREDERICK F. HODGES, OF KALAMAZOO, MICHIGAN.

HAME AND TRACE CONNECTION.

939,420.

Specification of Letters Patent.

Patented Nov. 9, 1909.

Application filed June 19, 1908. Serial No. 439,379.

To all whom it may concern:

Be it known that I, FREDERICK F. HODGES, a citizen of the United States, residing in the city and county of Kalamazoo, State of Michigan, have invented certain new and useful Improvements in Hame and Trace Connections, of which the following is a specification.

This invention relates to improvements in hame and trace connections.

The object of this invention is to provide a structure especially designed to be economically produced from sheet metal stampings, and of such construction that the coupling is adapted to fit hames with a bolt pivot of different lengths satisfactorily and provide a coupling which will operate with a minimum wear on these important parts of a harness.

Objects pertaining to details will be readily understood from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification.

The invention is clearly defined and pointed out in the claims.

A structure embodying the features of my invention is clearly illustrated in the accompanying drawings, forming a part of this specification, in which:

Figure 1 is a side elevation view, substantially full-size, of my improved hame and trace connection; Fig. 2 is a detail, longitudinal, horizontal sectional view through the same, taken on line 2—2 of Fig. 1; Fig. 3 is a further detailed sectional view taken on line 3—3 of Fig. 1; Fig. 4 is an elevation view of a modification; Fig. 5 is a longitudinal horizontal sectional view on line 5—5 of Fig. 4, of the said modification; and Fig. 6 is a detail view of the blank of the main clip part of the modification.

In the drawings the sectional views are taken looking in the direction of the little arrows at the ends of the section lines, and similar numerals of reference refer to similar parts throughout the several views.

Considering the numbered parts of the drawings, a portion only of the hame 1 is illustrated on which is the usual reinforcing iron 2. Into this are inserted the pair of eyes 3 through which extends the pivot bolt 4. The structure I illustrate is a hame con-

struction with a bolt pivot. The structure, of course, is adapted to those hames in which a staple is made use of

My especially constructed clip 5 has an open space 5' at the center and has fingers 6 (see Figs. 1, 2 and 3) which embrace the bolt 4 toward each end, just within the eyes 3. This makes a comparatively narrow tubular embracing ring at each end. Within the open space 5 I insert a clip loop 7, inserting a rivet 8 down through the same which fits into the head of the swivel loop 9. In Fig. 1 I show the clip not entirely filling the space between the loops 3—3, the lower part of the same being filled up by a washer 4', my improved structure lending itself to this arrangement. On the swivel loop 9 I secure the trace 10 by a suitable clip 11 inserted through the swivel loop 9, and riveted to the said trace. From this it will be seen that I have produced a structure in which a larger number of the clip pieces can be formed from a given amount of metal with less waste than any other construction, and at the same time in the preferred construction appearing in Fig. 1 I have a continuous sleeve embracing the pivot bolt at the point of greatest wear. In Figs. 4, 5 and 6 I show how a similar result can be secured, forming the structure of a single piece of metal, in which the parts 5 are identical, fingers 6' 6' corresponding to the fingers 6 of the main structure there appearing, and a loop 7' integral with the clip piece 5 taking the place of the entire strap 7 of Fig. 2.

The structure illustrated in Fig. 1 is the preferred construction which I desire to claim specifically, but I also desire to be understood as claiming broadly the features which I have here illustrated and described in different forms.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. In a hame and trace connection, the combination with the pivot-bolt 4 of a hame with retaining eyes 3—3, of a sheet metal clip 5 open at the center and having fingers 6 wrapped about said bolt forming eyes completely embracing the said bolt toward each end within its retaining eyes 3; a central U-shaped loop 7 of sheet metal embracing the central portion of said bolt; a swivel 9

within the arms of said sheet metal clip, and a pivotal rivet 8 extending therethrough, coacting for the purpose specified.

2. In a hame and trace connection, the
5 combination with the pivot bolt of a hame, of a sheet metal clip 5 with fingers 6 wrapped about and formed into eyes completely embracing the said pivot toward each side; a
10 central U-shaped loop of sheet metal wrapped around the said bolt; a swivel 9

between the sides of said U-shaped loop; and a pivotal rivet extending therethrough, coacting for the purpose specified.

In witness whereof, I have hereunto set my hand and seal in the presence of two witnesses. 15

FREDERICK F. HODGES. [L. s.]

Witnesses:

LUELLA G. GREENFIELD,
GERTRUDE TALLMAN.