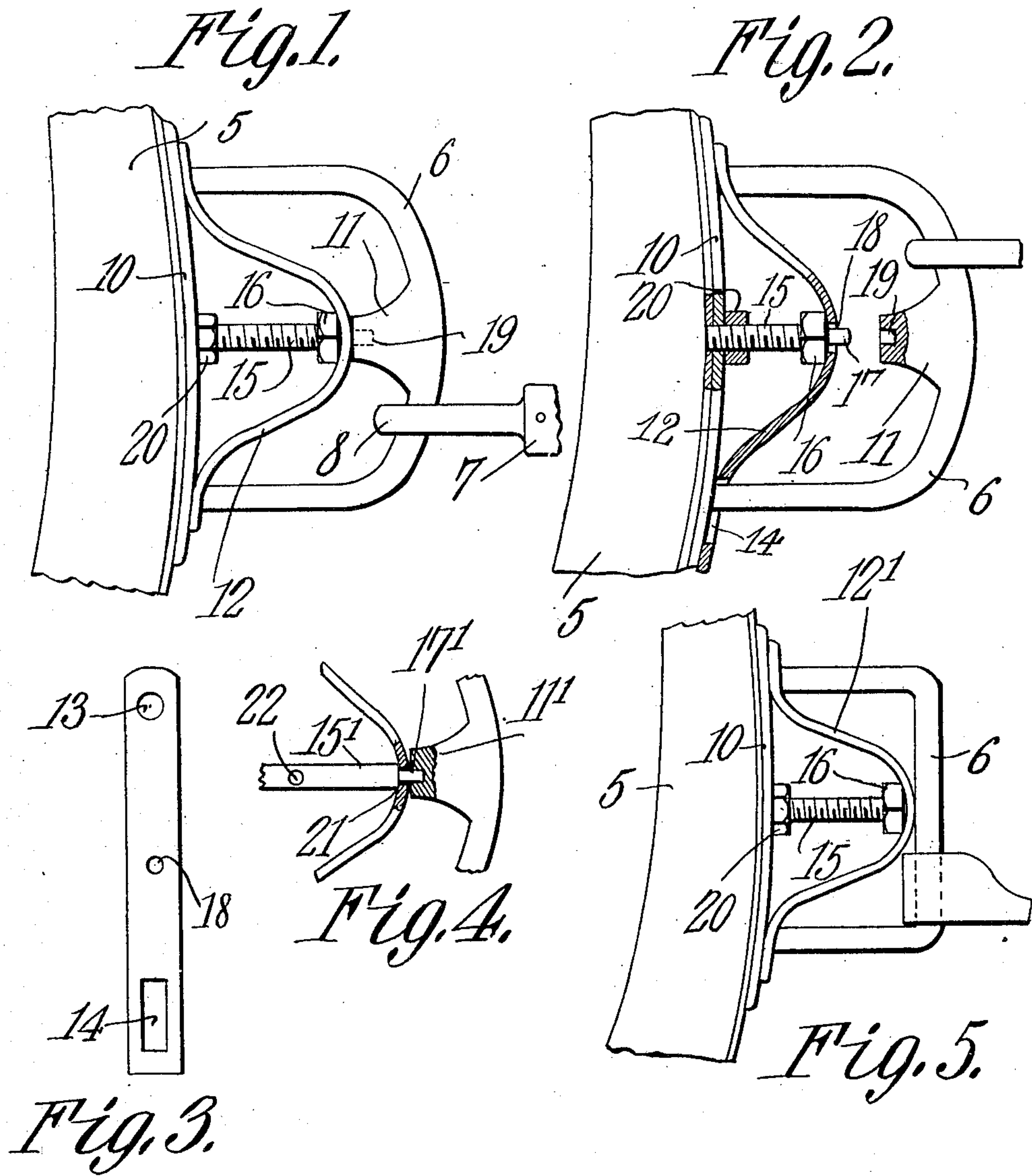


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PATENTED NOV. 19, 1907.

A. A. GALT.
HAME AND TRACE CONNECTION.
APPLICATION FILED MAY 20, 1907.



WITNESSES:
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AMOS A. GALT, OF EDGAR, NEBRASKA.

HAME AND TRACE CONNECTION.

No. 871,688.

Specification of Letters Patent.

Patented Nov. 19, 1907.

Application filed May 20, 1907. Serial No. 374,708.

To all whom it may concern:

Be it known that I, AMOS A. GALT, a citizen of the United States, residing at Edgar, in the county of Clay and State of Nebraska, have invented a new and useful Hame and Trace Connection, of which the following is a specification.

This invention relates to hame and trace connectors and has for its object to provide improved means for shifting the hame tug vertically of the hame thereby to change the line of draft and thus relieve the pressure of the collar on any particular portion of the animal's shoulder.

A further object is to provide means whereby the pull or line of draft may be maintained in the correct position relative to the animal's shoulder and means for adjusting the trace tug on the hame staple so as to prevent the tug from bearing against a sore or injured portion of the shoulder of said draft animal.

A further object of the invention is to provide the staple with a laterally extending lug or projection having a spring locking member co-acting therewith and adapted to bear against the projection for locking the trace tug in adjusted position.

A still further object of the invention is to generally improve this class of devices so as to increase their utility, durability and efficiency.

Further objects and advantages will appear in the following description, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

In the accompanying drawings forming a part of this specification: Figure 1 is a side elevation of a portion of a hame provided with my improved connection. Fig. 2 is a similar view showing the spring locking member released and the trace tug adjusted vertically of the staple or keeper to elevated position. Fig. 3 is a front elevation of the spring detached. Fig. 4 is a side elevation partly in section illustrating a modified form of the invention. Fig. 5 is a similar view illustrating another modification.

Similar numerals of reference indicate corresponding parts in all of the figures of the drawings.

The improved device forming the subject

matter of the present invention is principally designed for use in connection with hames and by way of illustration is shown applied to a hame 5 having a keeper or staple 6 upon which is mounted for vertical movement a trace tug 7, the latter being provided with the usual eye 8 for engagement with the closed end of the staple, as shown. The opposite ends of the staple 6 extend through the back plate 10 and may be riveted or otherwise rigidly secured to the hame.

Projecting laterally and centrally from the closed end of the staple 6 is a lug or projection 11 which engages a locking member 12 and thus serves to lock the trace tug between the central projection 11 and one of the side walls of the staple 6.

The locking member 12 is preferably in the form of a flat spring having one end thereof provided with an opening 13 for the reception of one leg of the staple while the opposite end thereof is provided with an elongated slot 14 so as to permit free expansion and contraction of the locking member when the latter is moved to operative and inoperative position.

Threaded in the metal binding of the hame and preferably disposed in alinement with the projection 11 is a bolt 15 having its free end provided with a terminal nut or head 16 which bears against the adjacent face of the spring 12 and serves to hold the locking member or spring 12 against the adjacent end of the projection 11.

The bolt 16 has a reduced extension or pin 17 which extends through a correspondingly shaped opening 18 formed in the central or bowed portion of the spring 12 and is seated in a depression 19 formed in the face of the projection 11 thus forming an additional support for the bolt and at the same time preventing accidental displacement of the spring or locking member.

Threaded on the fixed end of the bolt 15 is a clamping nut 20 by means of which the bolt 15 may be locked in adjusted position.

In operation when it is desired to shift the trace tug from the lower portion of the keeper or staple to the upper portion thereof the locking nut 20 is loosened and the bolt 15 rotated in the direction of the hame by turning the head 16 thus withdrawing the terminal pin or extension 17 from within the socket or depression 19 so that when the trace tug is adjusted vertically of the staple

the eye 8 of the trace tug will bear against the curved or bowed portion of the spring 12 and depress the same thereby to permit the trace to be moved to the opposite side of the central projection 11, as best shown in Fig. 2 of the drawing. After the desired adjustment has been effected the bolt 15 is rotated in the opposite direction which presses the spring or locking member 12 against the adjacent end of the projection 11 with the pin 17 engaging the depression 19 and in which position the trace tug is effectually locked against accidental displacement. The clamping nut 20 is then rotated in engagement with the plate 10 which effectually locks the bolt against rotation.

Attention is here called to the fact that the spring locking member 12 prevents the eye of the trace tug from bearing against and mutilating the threads on the bolt 15, while the latter prevents accidental displacement of the spring and thus positively locks said spring in engagement with the projection of the staple or keeper.

In Fig. 4 of the drawings there is illustrated a modified form of the invention in which the nut 16 is dispensed with, the bolt 15' being provided with a square shoulder 21 which bears against the spring and locks the latter in engagement with the projection 11' when the bolt is rotated. In this form of the device the bolt 15' is preferably formed with one or more openings 22 so that by inserting a suitable tool in said openings the bolt may be rotated to hold or release the spring. If desired, however, the pin 17' may be dispensed with and the spring locked against the projection 11' by the head of the bolt.

In Fig. 5 the spring 12' bears directly against the curved end of the loop or keeper thus dispensing with the employment of the central projection.

It will also be understood that a series of the projections may be formed on the staples shown in Figs. 1 to 5 inclusive, so that a number of adjustments of the tug trace may be effected.

Having thus described the invention what is claimed is:

1. The combination with a hame, of a staple secured thereto and provided with a lateral projection, a trace tug adjustable vertically of the staple, a spring bearing against the projection for locking the trace tug on either side of the projection, and means bearing against the spring for locking the latter in engagement with said projection.

2. The combination with a hame, of a staple secured to the hame and provided with a lateral projection having a depression formed therein, a trace tug adjustable vertically of the staple, a spring bearing against the projection for locking the trace tug on either side of the projection, and means piercing the spring and seated in the depression for

locking the spring in engagement with said projection.

3. The combination with a hame, of a staple secured to the hame and provided with a lateral projection, a trace tug adjustable vertically of the staple, a yieldably locking member bearing against the projection for locking the trace tug on either side of the projection, and means bearing against the locking member for supporting the latter in engagement with said projection.

4. The combination with a hame, of a staple secured to the hame and provided with an intermediate lateral projection, a trace tug adjustable vertically of the staple, a spring engaging the opposite legs of the staple and bearing against the projection for locking the trace tug on either side thereof, and means bearing against the spring for holding the latter in engagement with the projection.

5. The combination with a hame, of a staple secured to the hame, a trace tug adjustable vertically of the staple, a yieldably locking member engaging the opposite legs of the staple and bearing against the intermediate portion thereof for locking the trace tug in adjusted position on said staple, and means interposed between the hame and locking member for forcing the latter in engagement with the staple.

6. The combination with a hame, of a staple secured to the hame and provided with an intermediate projection, a trace tug adjustable vertically of the staple, a spring having one end thereof provided with a perforation for the reception of one leg of the staple and its opposite end formed with a slot for the reception of the opposite leg thereof, said spring having its intermediate portion bowed laterally for engagement with the projection, and a bolt secured to the hame and provided with a terminal head adapted to bear against the intermediate portion of the spring for forcing the latter in engagement with the adjacent end of the projection.

7. The combination with a hame, of a staple secured thereto, a trace tug adjustable vertically of the staple, a spring secured to both legs of the staple and having its intermediate portion bowed for engagement with the adjacent portion of the staple for locking the trace tug in adjusted position on said staple, a longitudinally adjustable bolt secured to the hame and bearing against the bowed portion of the spring, and a nut engaging the threads on the bolt and bearing against the hame for locking the bolt in adjusted position.

8. The combination with a hame, of a staple secured thereto and provided with an intermediate projection having a depression formed therein, a trace tug adjustable vertically of the staple, a spring having a slotted connection with the staple and bearing

against the projection for locking the trace
tug on either side of the projection, a bolt se-
cured to the hame and adapted to bear
against the spring, and an extension formed
5 on the head of the bolt and engaging the de-
pression in the projection for locking the
spring in engagement with said projection.

In testimony that I claim the foregoing as
my own, I have hereto affixed my signature
in the presence of two witnesses.

AMOS A. GALT.

Witnesses:

J. W. McCUE,
C. F. GLOZIER.