No. 869,813. PATENTED OCT. 29, 1907.

A. E. SUTTON.

HAME TUG.

APPLICATION FILED FEB. 2, 1907.

Fig. 1.

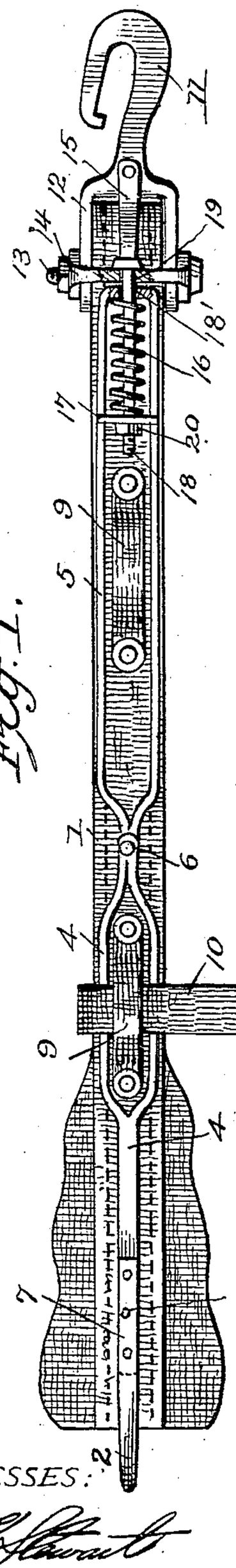


Fig. 2.

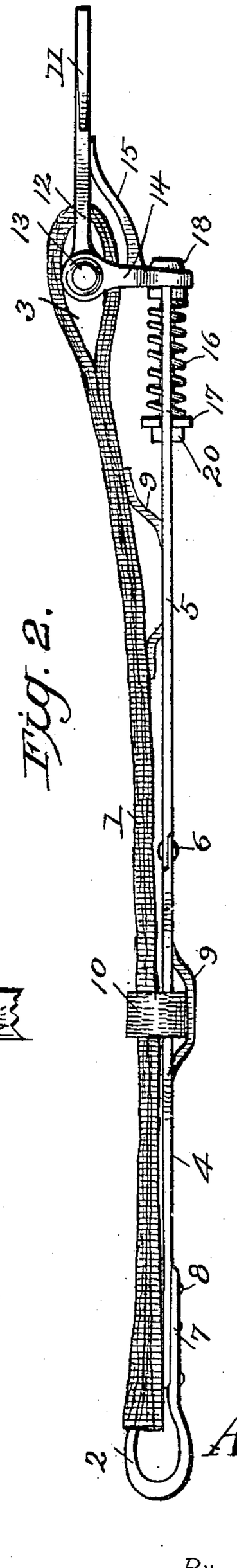
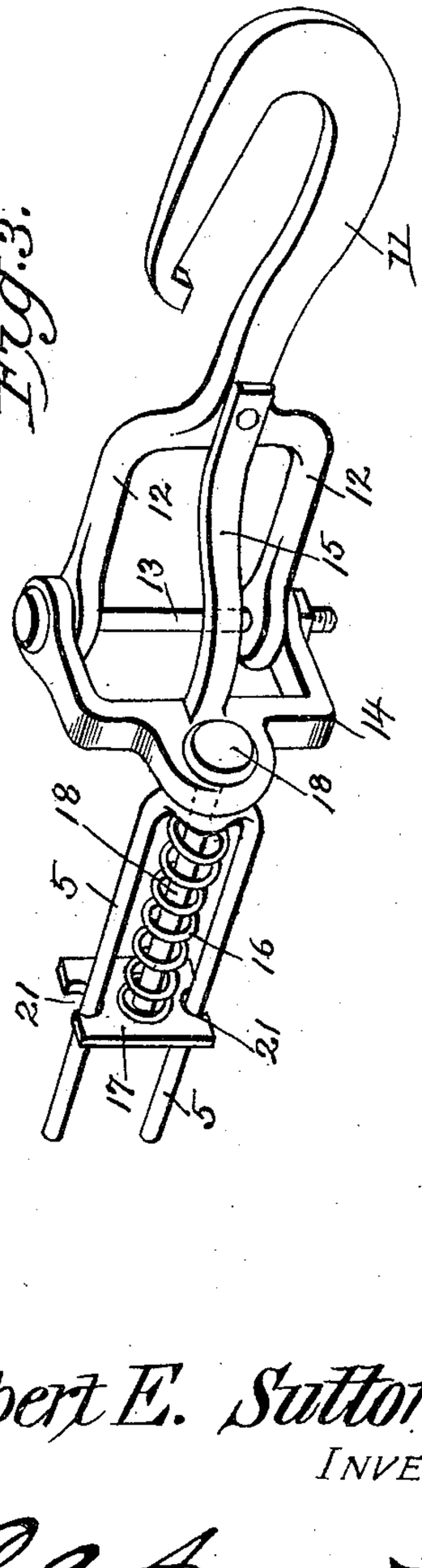


Fig. 3.



WITNESSES:

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HAME-TUG.

No. 869,813. Specification of Letters Patent. Patented Oct. 29, 1907.

Application filed February 2, 1907. Serial No. 355,466.

To all whom it may concern:

Be it known that I, ALBERT E. SUTTON, a citizen of the United States, residing at Elkins, in the county of Randolph and State of West Virginia, have invented a new and useful Hame-Tug, of which the following is a specification.

This invention relates to traces or tugs for harness of that type in which cushioning means are employed so as to relieve the horse of the jerks and jars incident to the starting or taking up of the load carried by the wagon or other vehicle to which the horse is hitched, thereby relieving the wear on the horse's shoulders and insuring increased comfort.

The invention has for one of its objects to improve and simplify the construction and operation of devices of this character so as to be comparatively simple, easy and inexpensive to manufacture, of substantial and durable construction, and reliable and efficient in use.

A further object of the invention is to provide a hame tug in which a pair of hingedly connected links are employed in connection with the usual leather form of tug, which links extend from the eye at the front to the hook or loop at the rear, so that the draft is through the links rather than through the leather portion of the hame.

Another object of the invention is the provision, in connection with a tug of the nature referred to, of a simple and efficient cushioning device for absorbing the jerks and jars as the load is taken up by the horse.

With these objects in view, and others, as will appear as the nature of the invention is better understood, the invention comprises the various novel features of construction and arrangement of parts, which will be more fully described hereinafter and set forth with particularity in the claims appended hereto.

In the accompanying drawing, which illustrates one of the embodiments of the invention, Figure 1 is a side elevation of one of the tugs or traces of a set of harness. Fig. 2 is a plan view thereof. Fig. 3 is a perspective view of the hook and cushioning device of the tug.

Corresponding parts in the several figures are indicated throughout by similar characters of reference.

Referring to the drawing, 1 designates a leather trace which may be of the usual construction having the hame engaging eye or loop 2 at one end, the looped portion or eye 3 at the opposite end formed by doubling the strip of leather of which the tug 1 is constructed.

Arranged along the outside of the tug 1 is a pair of metal links 4 and 5 arranged end to end and hingedly connected at 6 adjacent the middle of the tug 1. The front end of the link 4 laps under the arm 7 of the loop 2 and is securely attached to the tug 1 by the rivets 8 which serve to secure the loop 2 on the tug. The body portion of each link is open to accommodate the leather strips 9 attached to the tug 1 and coöperating therewith to form pockets for receiving the belly band 10, or other portions of the harness. A convenient way to construct the links 4 and 5 is to employ metal rods and work them into the desired shape. Except for the attachment of the front link, as hereinbefore referred to, the links are free of the body portion of the tug 1, so as to insure adequate flexibility.

At the rear end of the tug 1 is a hook 11, or other equivalent means, for attachment with the trace chains or thills of the vehicle, and this hook is provided with a bifurcated shank, the bifurcations 12 of which being disposed at the top and bottom of the loop 3 of the tug. These bifurcations are provided with eyes for receiving the bolt 13 that passes through the loop 3 of the tug, the said loop being of sufficient length to permit the bolt to move freely back and forth therein to permit the cushioning device to come into play. Extending laterally from the bolt 13 is a frame 14 whose outer end is braced from the shank of the hook 11 by the member 15. Instead of making the frame 14 separate from the hook, these two parts may be made integral, as will be readily understood. This frame 14 forms a connecting means between the cushioning device and link 5. The cushioning device comprises, in the present instance, a helical compression spring 16 disposed longitudinally between the top and bottom members of the link 5 at the rear end of the latter and arranged with one end abutting the link and the other end bearing against the follower or plate 17. This plate is movably connected with the front end of the rod 18 arranged within the spring to prevent the latter from collapsing and extending with its rear end through openings 18′ and 19 in the link 5 and frame 14, as best shown in Fig. 1, the rear extremity of the rod being formed into a head to retain it in position. By preference, this rod takes the form of a bolt having a nut 20, as shown in Fig. 1, which permits of the plate 17 being moved for varying the tension of the spring 16. The top and bottom ends of the plate 17 are provided with notches 21 for engaging around the members of the link 5, on which members the plate is freely movable back and forth. By means of this construction, the hook 11 is free to move as the tension or draft on the tug is varied, and the cushioning device operates to diminish the shocks incident to the variations of the draft.

From the foregoing description, taken in connection with the accompanying drawings, the advantages of the construction and of the method of operation will be readily understood by those skilled in the art to which the invention appertains, and while I have described the principle of operation of the invention, together with the device which I now consider to be the best embodiment thereof, I desire to have it under-

stood that the device is merely illustrative, and that various changes may be made, when desired, as are within the scope of the claims.

What is claimed is:—

1. A hame tug comprising a flexible leather section, a pair of links hingedly connected together, an eye riveted to the front link and said section, a hook movably attached to the rear end of the said section, and a cushioning device between the hook and rear link.

2. A hame tug comprising a leather member, links disposed along one side of the said member and having open body portions, strips arranged on the said member to extend through the open portion of the links and cooperating with the said member to receive parts of the harness, a fastening device at the rear end of the member, and a cushioning means between the said device and rear link.

3. A hame tug comprising a flexible member having a looped end, a hook, a member extending through the loop for securing the hook to the flexible member, a structure extending along the flexible member to receive the draft, and a cushioning device between the hook and said structure.

4. A hame tug comprising a flexible member having a loop at one end, an attachment device for attaching the tug to the vehicle to be drawn, a bolt on the device extending through the loop of the said member, a laterally extending frame connected with the said device, a structure extending along the said member for receiving the draft, means for connecting the said structure to the flexible member at the front end only, a compression spring on the said structure, and an adjustable connection between the spring and frame for cushioning the relative movement between the attachment device and said structure.

5. In a device of the class described, the combination of a hook, a laterally extending frame connected therewith, an open link, a helical compression spring arranged within the link, a bolt flexibly connecting the link and frame and extending through the spring, and means on the bolt forming an adjustable abutment for varying the tension of the spring.

6. In a device of the class described, the combination of a hook, a laterally extending frame connected therewith, an open link, a helical compression spring arranged within the link, and a bolt flexibly connecting the link and frame and connected with the spring for elastically connecting the hook with the link.

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

ALBERT E. SUTTON.

Witnesses:
N. G. KEIM,
G. D. HAY.