No. 744,809. PATENTED NOV. 24, 1903.

B. F. SHEPHERD.

BOX LOOP FOR HARNESS.

APPLICATION FILED DEC. 3, 1902.

NO MODEL.

Fig. 1.

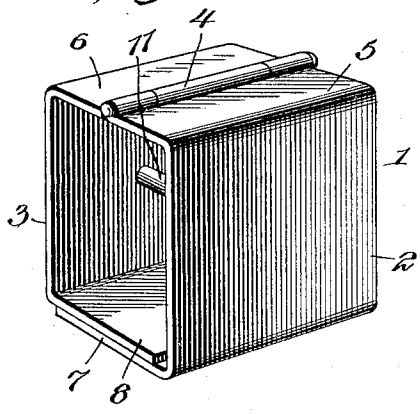


Fig. 2.

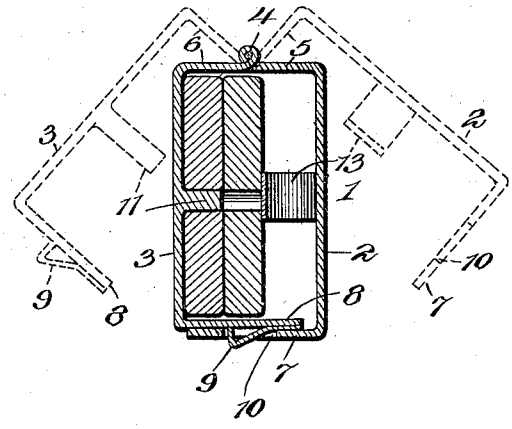


Fig. 3.

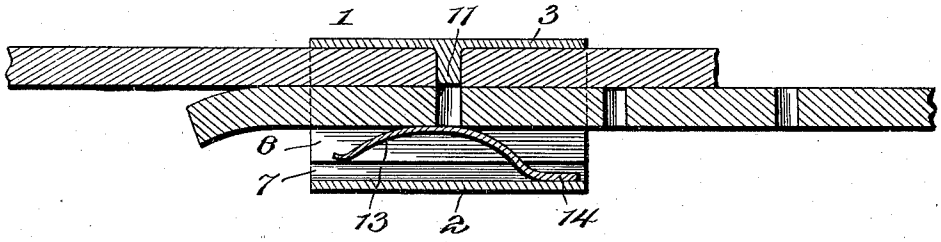
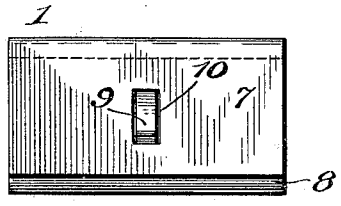


Fig. 4.



Witnesses
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No. 744,809. Patented November 24, 1903.

UNITED STATES PATENT OFFICE.

BENJAMIN FRANKLIN SHEPHERD, OF CARLOCK, ILLINOIS.

BOX-LOOP FOR HARNESS.

SPECIFICATION forming part of Letters Patent No. 744,809, dated November 24, 1903.

Application filed December 3, 1902. Serial No. 133,751. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN FRANKLIN SHEPHERD, a citizen of the United States, residing at Carlock, in the county of McLean and State of Illinois, have invented a new and useful Box-Loop for Harness, of which the following is a specification.

The invention relates to improvements in box-loops for harness.

The object of the present invention is to improve the construction of box-loops for harness and to provide a simple and comparatively inexpensive one of great strength and durability adapted for connecting the front end of the trace with the hame-tug and capable of being readily applied to the same and of permitting the parts to be quickly adjusted to lengthen and shorten the trace.

A further object of the invention is to provide a metal box-loop for harness adapted to be readily opened and closed and capable of fitting closely against the inner face of the hame-tug, whereby it is prevented from chafing or otherwise annoying or injuring an animal.

Another object of the invention is to provide a box-loop having a hinge connection and a catch arranged at points between the inner and outer sides of the loop, whereby they will be protected and prevented from coming in contact with a horse or an object to avoid injuring the former and to prevent the box-loop from being opened by contact with the latter.

The invention also has for its object to provide a box-loop in which the hame-tug will be held by a rigid engaging element and which will also be provided with means for holding the hame-tug firmly in engagement with the said rigid element to prevent any movement of the loop on the hame-tug and the trace.

With these and other objects in view the invention consists in the novel construction and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in the claims hereto appended, it being understood that changes in the form, proportion, and minor details of construction within the scope of the claims may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a perspective view of a harness box-loop constructed in accordance with the invention. Fig. 2 is a transverse sectional view of the same. Fig. 3 is a horizontal sectional view. Fig. 4 is a reverse plan view.

Referring to the drawings, in which like numerals of reference designate corresponding parts, 1 designates a box-loop for harness designed to receive a hame-tug and the front portion of a trace for adjustably connecting the same, and the said loop is composed of inner and outer sections 2 and 3, connected together at the center of the top by a hinge-joint 4. The sections 2 and 3 are provided at their top with inwardly-extending flanges or portions 5 and 6, forming the top of the loop and provided with registering eyes for the reception of a pintle to form the hinge-joint 4.

The inwardly-extending top portions or flanges 5 and 6 are arranged at right angles to the sides or body portions of the inner and outer sections, and the said sections 2 and 3 are provided with bottom flanges 7 and 8 of approximately the same width as the box-loop. The bottom flanges, which form the bottom of the box-loop, overlap and are detachably secured together by means of a fixed catch 9, secured to the lower face of the flange 8 and arranged to extend through an opening 10 of the flange 7. The bottom flanges, which are arranged at right angles to the inner and outer sides of the loop, are formed integral with the same, and the metal of which the sections are constructed possesses sufficient resiliency to permit the bottom flanges to spring inward and outward, whereby the catch of the bottom flange 8 will automatically engage the slot or opening 10 when the sections are closed. By hinging the sections together at the center of the top of the loop or at a point midway between the front and rear walls the overlapped bottom flanges of the sections are necessarily deflected in opening and closing the loop, whereby the resiliency of the metal of which the sections are constructed is utilized for holding the catch in engagement with the slot or opening of the bottom

flange 7, thereby obviating the necessity of employing a separate spring and a movable or pivotally-mounted catch for this purpose.

The catch presents an inclined lower face and has an inner shoulder to form a stop or lock for engaging the flange 7 of the outer section 2, the inclined bottom portion being adapted to deflect the flange 7 and guide the parts into engagement with each other to cause an automatic locking action when the loop is closed. The said catch, which may be constructed of any suitable material, preferably consists of a narrow strip of metal bent into the form shown and secured to the lower face of the bottom flange 8.

By arranging the hinge-joint midway between the front and back of the loop, at the top thereof, and the catch at the center of the bottom of the loop these parts are protected and prevented from coming in contact with a horse or with an object, whereby the horse is prevented from being injured by such parts and the loop is prevented from being accidentally unfastened.

The rear section is provided with a rigid centrally-arranged horizontal stud 11 suitably secured to the inner face of the said rear section 3 and adapted to engage a perforation of a hame-tug and to extend through the same.

The trace and the hame-tug are firmly held in engagement with each other and the rigid stud or engaging element 11 by means of a spring 13, arranged at the inner face of the front section 2 and disposed longitudinally of the trace. The spring, which is arranged horizontally, is bowed longitudinally and is secured at its end 14 to the inner face of the front section, and its other end is free. The spring by engaging the outer face of the trace not only retains the same and the hame-tug in their engagement with each other and the stud 11, but it also operates to hold the rear or inner side or wall of the loop tightly against the inner face of the hame-tug to prevent the box-loop from chafing or otherwise injuring a horse. The spring by yieldably engaging the parts is adapted to take up all wear and prevent the box-loop from moving longitudinally of the hame-tug and the trace. In practice the box-loop will be clasped around the hame-tug with the lug or stud in one of the perforations of the same, and the spring will yield sufficiently to enable the front portion of the trace to be passed through the loop.

It will be seen that the device, which is exceedingly simple and inexpensive in construction, is adapted to take the place of the ordinary leather harness box-loop and possesses great strength and durability, that it is adapted to be readily applied to a hame-tug and a trace without necessitating any alteration of the construction of the same, and that it will permit the parts to be readily adjusted to lengthen and shorten the trace; also, it will be clear that the hinge-joint and the locking device are located at points between the front and back of the box-loop and that should an animal roll or come in contact with an object it will not be injured by the hinge-joint and the catch will not be automatically or accidentally released through such contact of the loop with the animal and an object or the ground. It will be clear that this arrangement of parts also enables the resiliency of the material of which the sections are constructed to be utilized for maintaining the catch in engagement with the bottom flange and that it is necessary to deflect the bottom flanges in opening and closing the loop. Furthermore, the spring performs the double function of holding the trace and the hame-tug in engagement with each other and the stud and of taking up lost motion and wear and maintaining the inner or rear side of the loop pressed tightly against the inner face of the tug to avoid chafing or otherwise injuring an animal.

What is claimed is—

1. A box-loop for harness provided at one side with a rigid engaging element, and having at the opposite side a yieldable device located within the box-loop and spaced from the engaging element when the said box-loop is in use, substantially as described.

2. A box-loop for harness provided at one side with a projecting stud, and having a spring at the other side, said spring being located within the loop and spaced from the stud when the device is in use, substantially as described.

3. A box-loop for harness provided at one side with a rigid engaging element and having a spring at the opposite side, said spring being bowed and secured at one end to the loop and arranged wholly within the same and spaced from the engaging element when the box-loop is in use, substantially as described.

4. A box-loop comprising inner and outer resilient sides provided at one end of the loop with inwardly-extending flanges hinged together at a point between the inner and outer sides, said inner and outer sides being provided at the opposite end of the loop with inwardly-extending overlapped resilient flanges, and means carried by one of the flanges for automatically engaging the other when the loop is closed, substantially as described.

5. A box-loop comprising inner and outer resilient sides, provided at one end with inwardly-extending flanges hinged together between the inner and outer sides, the latter being provided at the opposite end of the loop with inwardly-extending overlapped resilient flanges, and a fixed catch mounted on one of the overlapped flanges and arranged to engage the other automatically when the loop is closed, substantially as described.

6. A box-loop comprising inner and outer resilient sides provided at one end with inwardly-extending flanges hinged together at the center of said end, said sides being pro-

vided at the opposite end of the loop with inwardly-extending overlapped resilient flanges, one of the overlapped flanges being provided with a slot, and a fixed catch mounted on the other overlapped flange and arranged to engage the slot, substantially as described.

7. A box-loop comprising inner and outer resilient sections hinged together at one end at a point between the inner and outer sides of the loop, and provided at the opposite end with a catch located at a point between the inner and outer sides, substantially as described.

8. A box-loop comprising inner and outer resilient sections provided with inwardly-extending top and bottom flanges, the top flanges being hinged together at the center of the top of the loop and the bottom flanges being overlapped, and a catch detachably locking the bottom flanges together and located at a point between the inner and outer sides of the loop, substantially as described.

9. A box-loop for harness adapted to receive a plurality of straps and provided at one side with a rigid engaging element, and having a yieldable device at the opposite side for holding one of the straps in engagement with the said element, the latter terminating short of one of the sides of the loop to permit one of the straps to be adjusted longitudinally without opening the loop, substantially as described.

10. A box-loop for harness adapted to receive a plurality of straps and provided at one side with a rigid stud terminating short of the opposite side to provide an open space to permit one of the straps to be adjusted longitudinally, and a spring mounted in such open space for holding one of the straps in engagement with the stud and for frictionally engaging the other strap, substantially as described.

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

BENJAMIN FRANKLIN SHEPHERD.

Witnesses:

J. A. ORY,

GEO. SHERMAN.