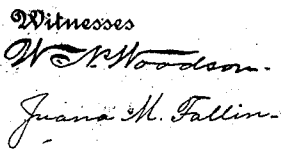


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By

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UNITED STATES PATENT OFFICE.

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HARNESS-BUCKLE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM UTECH, citizen of the United States, residing at Sanford, in the county of Orange and State of Florida, have invented certain new and useful Improvements in Harness-Buckles, of which the following is a specification.

This invention relates to harness connectors and more particularly to a novel form of buckle especially designed for connecting the traces to the hames of harness.

The object of the invention is to provide a trace buckle of simple and durable construction by means of which the traces may be readily attached to or disconnected from the hames without the employment of the usual hame straps, tug hooks or permanent attaching buckles.

A further object of the invention is to provide a buckle, the construction of which is such that the trace will lie perfectly straight and flat when in use, thus permitting a direct pull on the trace without liability of twisting or buckling the latter.

A further object is to provide a trace buckle which will permit longitudinal adjustment of the trace with respect to the hames and also cause the pull or strain to be evenly distributed on the securing pins thus to prevent tearing or cutting of the trace.

A still further object of the invention is generally to 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.

For a full understanding of the invention and the merits thereof, reference is to be had to the following description and accompanying drawing, in which:

Figure 1 is a perspective view of a portion of a trace provided with a buckle constructed in accordance with my invention, the latter being connected with the adjacent hame; Fig. 2 is a top plan view of the same, partly in section; Fig. 3 is a longitudinal sectional view; Fig. 4 is a side elevation; Fig. 5 is a transverse sectional view taken

on the line 5—5 of Fig. 2; Fig. 6 is a perspective view of the co-acting clamping members and locking bail detached in order to more clearly show the construction of the parts.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawing by the same reference characters.

The improved buckle forming the subject matter of the present invention is principally designed for connecting traces to the hames of harness and by way of illustration is shown in connection with a portion of a harness in which 5 designates one of the hames and 6 the trace.

The device comprises co-acting clamping members 7 and 8, preferably in the form of metallic plates having flat inner faces for contact with the trace 6, one of said members being longer than the other and having its outer end terminating in a hook 9 for engagement with a staple or loop 10 secured to the hame, as shown. Secured to or formed integral with the clamping member or plate 7, are spaced laterally extending pins 11 adapted to pass through the tongue receiving openings 12 in the trace 6 for engagement with correspondingly shaped openings 13 formed in the mating member 8 so that the strain or pull on the trace will be uniformly distributed on both pins and thus effectually prevent cutting or tearing of the trace.

The clamping member 7 is preferably substantially triangular in cross section to produce a reinforcing rib 14, to which is riveted or otherwise rigidly secured a transverse pin or bar 15. The inner face of the pin or bar 15 is preferably cut-away to conform to the shape of the rib 14 so as to assist in retaining the pin in position thereon, the opposite ends of said pin being extended laterally beyond the adjacent longitudinal edges of the member 7 to form trunnions 16 on which is pivotally mounted a locking bail or yoke 17.

Extending transversely across the outer face of the member 8, between the openings 13, is a pin or bar 18, the inner face of which is cut-away at 19 to accommodate said member, while its opposite ends are projected

laterally beyond the adjacent longitudinal edges of the member 8 to form trunnions 20, similar in construction to the trunnions 16.

The locking bail or yoke 17 is preferably formed of a single length of wire having an intermediate portion thereof bent upon itself to produce a handle 21, the opposite arms of which are preferably offset to form substantially triangular projections 22 defining cam faces 23 for engagement with the trunnions 20 so that when the handle 21 is forced laterally into engagement with the outer face of the clamping member 8, the trace 6 will be securely held in adjusted position. The free ends of the wire after the offset portions or projections 22 are formed, are bent or coiled to produce eyes 24 which fit in grooves 25 in the trunnions 16, there being similar grooves, preferably formed in the trunnions 20 to assist in guiding the locking member when the latter is moved to operative and inoperative positions.

The free ends of the pins 11 are preferably inclined or beveled at 26 to permit the locking yoke or bail to be swung downwardly in engagement with the member 8, the handle of the locking member, by contact with the adjacent pin, serving to assist in holding said locking member in operative position. The bill of the hook 9 is preferably provided with a flat face 27 arranged at an angle or inclination to the longitudinal plane of the clamping member 7 so that by turning the buckle to a position at substantially right angles to the hame 5, the hook may be readily detached from the staple 10 and the buckle attached to the hames of another harness, when desired. Thus it will be seen that by swinging the locking bail or yoke laterally on the trunnions 16, the clamping member or plate 8 may be removed so as to permit the trace 6 to be adjusted longitudinally of the mating member 7 or entirely detached therefrom. It will also be seen that when the clamping member or plate 8 is positioned over the trace and the handle of the locking bail or yoke moved in contact with the outer face of said plate, the members 7 and 8 will be securely clamped in engagement with the trace, this being due to the fact that the inclined or cam face 23 of the yoke exerts a wedging action on the trunnions 20 when said handle is swung laterally in engagement with the adjacent clamping member.

Attention is here called to the fact that the free end of the trace 6 is extended longitudinally beyond the hook 9 so as to form in effect a guard for the latter and thus assist in preventing accidental detachment of the buckle, the hook 9 being entirely housed by the trace, as best shown in Fig. 1 of the drawing. It will also be noted that by reason of the construction of the buckle, the trace will lie perfectly straight and flat

throughout its entire length when in use, so that a direct pull may be had on the trace without liability of the latter twisting or buckling.

The buckles may be made in different sizes and shapes and nicked, japanned or otherwise coated to give the same a neat, attractive appearance and to prevent corrosion of the metal when subjected to the action of the elements.

While the buckle is principally designed for connecting the traces of harness to the hames thereof, it will of course be understood that the buckle may be used on other portions of harness or wherever a device of this character is found desirable or applicable.

Having thus described the invention, what is claimed as new is:

1. A buckle including co-acting clamping members, spaced pins projecting laterally from the inner face of one member and adapted to enter corresponding openings formed in the mating member, trunnions extending laterally from the longitudinal edges of both members, and a locking bail formed of a single length of metal having its intermediate portion bent to produce a handle terminating in spaced arms having eyes formed therein for engagement with the trunnions of one of said members, the arms of the bail being offset to provide cam faces for engagement with the trunnions on the bar of the mating member, whereby to clamp said members in engagement with a strap.

2. A buckle including co-acting clamping members, a pin extending laterally from one of the clamping members and projecting through an opening in the mating member, trunnions extending laterally from the longitudinal edges of said members, and a locking bail pivotally mounted on the trunnions of one of the members and provided with a handle adapted to bear against the pin, said bail being provided with offset portions defining cam faces for engagement with the trunnions on the other member, whereby to clamp said members in engagement with a strap.

3. A buckle including co-acting freely separable clamping members having flat inner faces, spaced pins extending laterally from the flat inner face of one member and adapted to enter corresponding openings formed in the mating member, trunnions extending laterally from the longitudinal edges of both members at a point between said pins, and an angularly disposed locking bail formed of a single length of metal having its intermediate portion bent to produce a handle extending transversely across one of the members and terminating in spaced arms having eyes formed therein for engagement with the trunnions of the mat-

ing member, the arms of said bail being off-
set and extended transversely across the ad-
jacent longitudinal edges of the adjacent
clamping member, to provide cam faces for
engagement with the adjacent trunnions,
5 whereby to clamp said members in engage-
ment with a strap.

In testimony whereof, I affix my signa-
ture in presence of two witnesses.

WILLIAM UTECH. [L. s.]

Witnesses:

S. RUNGE,

J. WHITAKER, Jr.