No. 742,267. PATENTED OCT. 27, 1903.

G. W. WILLIAMS.

TRACE BUCKLE.

APPLICATION FILED APR. 8, 1903.

NO MODEL.

Fig. 1.

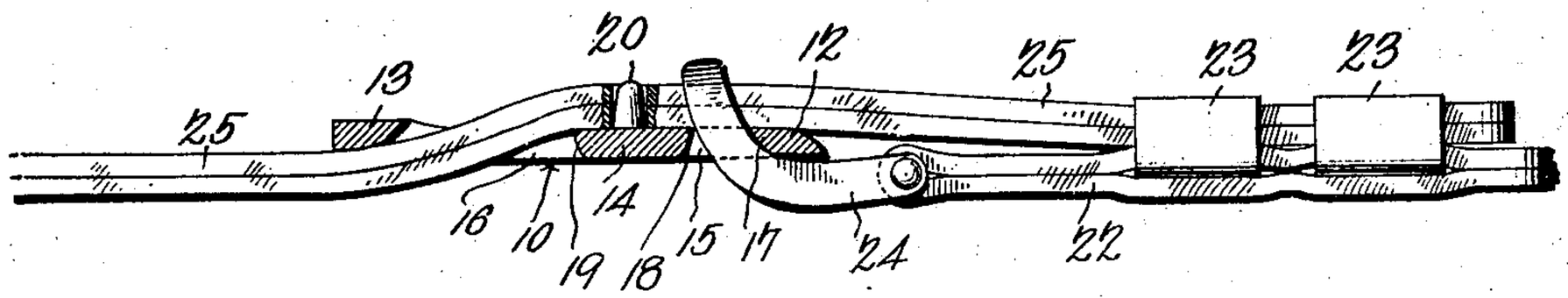


Fig. 2.

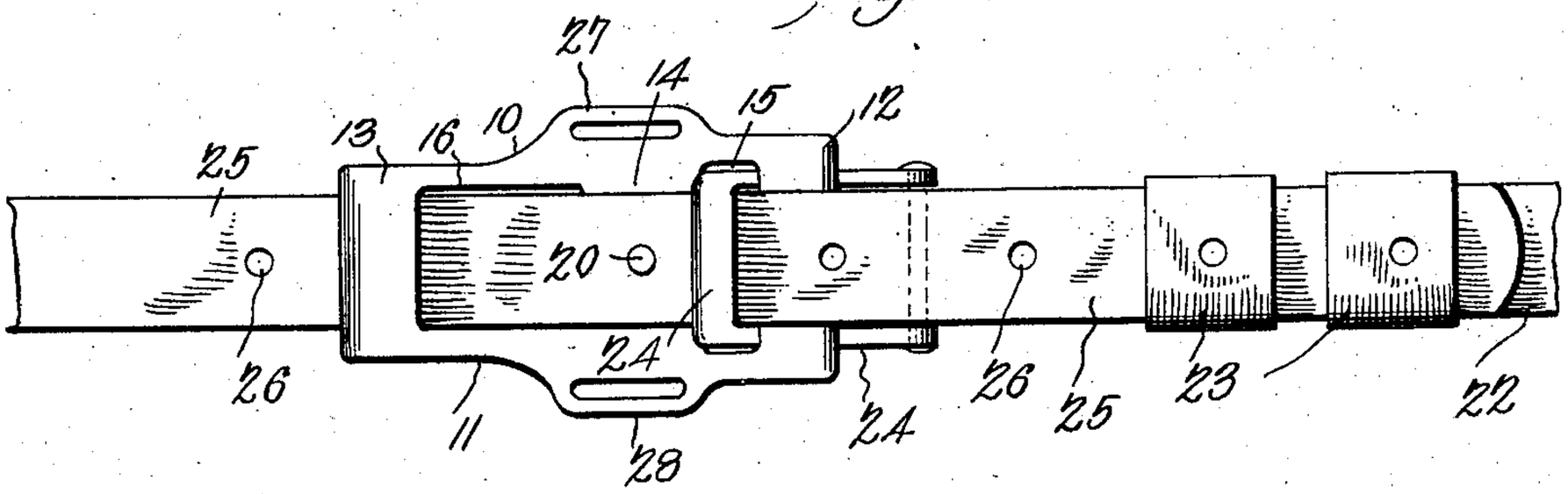
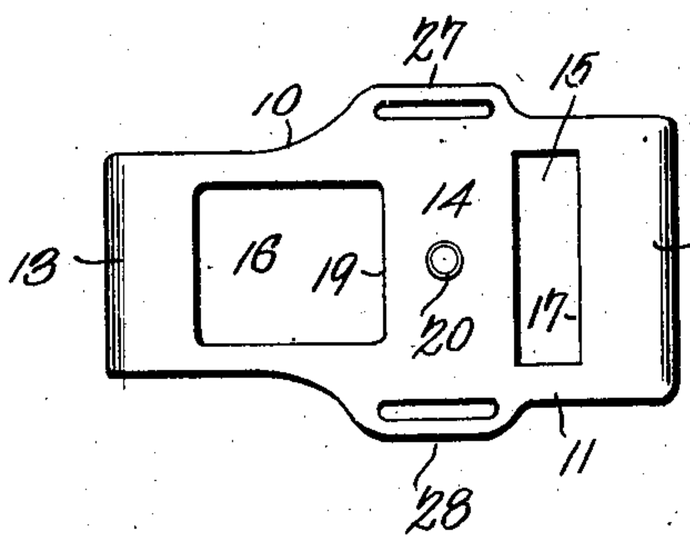


Fig. 3.



Witnesses
E. H. Stewart
C. N. Woodward.

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Attorneys

No. 742,267. Patented October 27, 1903.

UNITED STATES PATENT OFFICE.

GEORGE W. WILLIAMS, OF BETHANY, MISSOURI.

TRACE-BUCKLE.

SPECIFICATION forming part of Letters Patent No. 742,267, dated October 27, 1903.

Application filed April 8, 1903. Serial No. 151,659. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. WILLIAMS, a citizen of the United States, residing at Bethany, in the county of Harrison and State of Missouri, have invented a new and useful Trace-Buckle, of which the following is a specification.

This invention relates to harness-buckles, more particularly to the class known as "trace-buckles," employed for uniting the short traces or tugs and main traces or tugs and likewise utilized for connecting the girth and saddle straps, and has for its object to simplify and improve devices of this character and to produce a device which will secure the parts with an increased "grip" without increase of weight or cost of manufacture and without detriment to the efficiency.

Other novel features of the invention will appear in the annexed description and be specifically pointed out in the claims following.

In the drawings illustrative of the invention, in which corresponding parts are denoted by like designating characters, Figure 1 is a longitudinal sectional view, and Fig. 2 is a top plan view showing the device applied, and Fig. 3 is a plan view of the base-frame member of the device detached.

For the sake of convenience in describing, one face of the buckle will be designated as the "outer" face and the other face thereof as the "inner" face.

The improved buckle consists of a substantially rectangular frame formed of side members 10 11, end members 12 13, and an intermediate transverse bar 14, the bar disposed near one end of the frame, whereby a relatively contracted aperture 15 is formed between the bar and the end member 12 and a relatively elongated aperture 16 likewise formed between the bar and the other end member 13, as shown. The loop 27 for supporting the saddle or back band and the loop 28 for supporting the girth-band are formed upon opposite sides of the rectangular frame, as shown. The side walls 17 18 of the contracted aperture 15 are reversely inclined away from the outer face of the frame, as shown in Fig. 1, while the opposite edge 19 of the transverse bar is also inclined away from the outer face thereof to provide the inner edge of the end member 12 and both edges of the bar 14 with "knife-edges," as shown in Fig. 1. The end member 13 is elevated slightly above the general plane of the frame and made convex on its inner side, as shown.

Extending centrally from the outer face of the bar 14 is a tongue 20, adapted to engage one of the apertures in the trace, as hereinafter shown.

The "short tug" or "short trace" is represented at 22 and will be provided with the usual keepers 23 and movably coupled to a bail or loop 24, adapted to be passed outwardly through the aperture 15 and of a width slightly less than the aperture, so that the bail will nearly fill the aperture, as shown in Fig. 1.

The "billet" end of the long trace or tug is represented at 25 and will be provided with the usual spaced apertures 26 and passed beneath the end member 13 and over the bar 14, where one of the apertures 26 will engage the tongue 20. This end is then passed through the outwardly-extending bail 24 and thence beneath the keepers 23, as shown in Fig. 1. By this simple arrangement it will be noted that when the draft is applied the bail 24 will compress the trace member 25 into close engagement with the surface of the frame adjacent to the aperture 15, whose margins, as before stated, are comparatively knife-edged, so that when the strains are exerted the bail will bend the trace over the knife-edged margins, and thereby very firmly hold the parts and materially increase the grip between them, while at the same time the relatively limited distance between the bail and the walls of the aperture prevent the trace being drawn bodily through the aperture or injuriously affected by the knife-edge margins. The bail, it will be obvious, thus coacts with the tongue 20 to very firmly unite the parts and prevent all longitudinal movement between them while in operative position. The coaction between the bail and the edges of the aperture 15 not only increases the grip upon the trace, but likewise relieves the pin 20 from a large percentage of the strains, and by exerting pressure upon the full width of the trace material distributes the strains, so as to reduce to a minimum the tendency to fracture or to weaken the material.

As above noted, the end member 13 is slightly offset, so that the trace member is deflected and a brake-like or retarding pressure imparted which materially lessens the strains upon the tongue and likewise assists in holding the trace in operative engagement with the frame, preventing lateral movement of the trace or its separation from the frame or tongue.

The whole device is very simple and inexpensive in construction and will hold the parts very securely, while at the same time it is very easily separable when the trace is to be adjusted.

The buckle-frame and bail member will preferably be constructed of malleable iron or steel and may be varied in size to conform to the harness to which they are to be attached and may be plated, japanned, or otherwise ornamented or protected, as required or fancy may dictate.

Having thus described the invention, what I claim is—

1. The combination in a buckle, of a rectangular frame having a relatively contracted transverse aperture near one end with the side walls thereof inclined away from the outer face of the frame, a relatively broad transverse bar adjacent to said aperture and provided with an extended tongue, a relatively elongated aperture between said transverse bar and the opposite end of the frame, a trace-bail attachable to the short trace and extending through said contracted aperture and adapted to engage the trace and hold it into close engagement with said frame adjacent to said contracted aperture, substantially as described.

2. A harness-buckle comprising a substantially rectangular frame formed with spaced side members and transverse end members, one of said end members being slightly offset from the longitudinal plane of the frame and the inner edge of the other end member, and inclined away from the surface of the frame, and a transverse bar having a centrally-disposed tongue and connecting said side members relatively near said last-mentioned end member and with the edge adjacent thereto reversely inclined away from the outer surface of the frame, whereby a relatively contracted aperture having reversely-inclined walls is formed at one end of the frame, and a trace-bail attachable to the short trace and extending through said contracted aperture and adapted to inclose the trace and bind it adjustably in position relative to the frame, 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.

GEORGE W. WILLIAMS.

Witnesses:
GEO. W. BARLOW,
E. H. HAMPTON.