

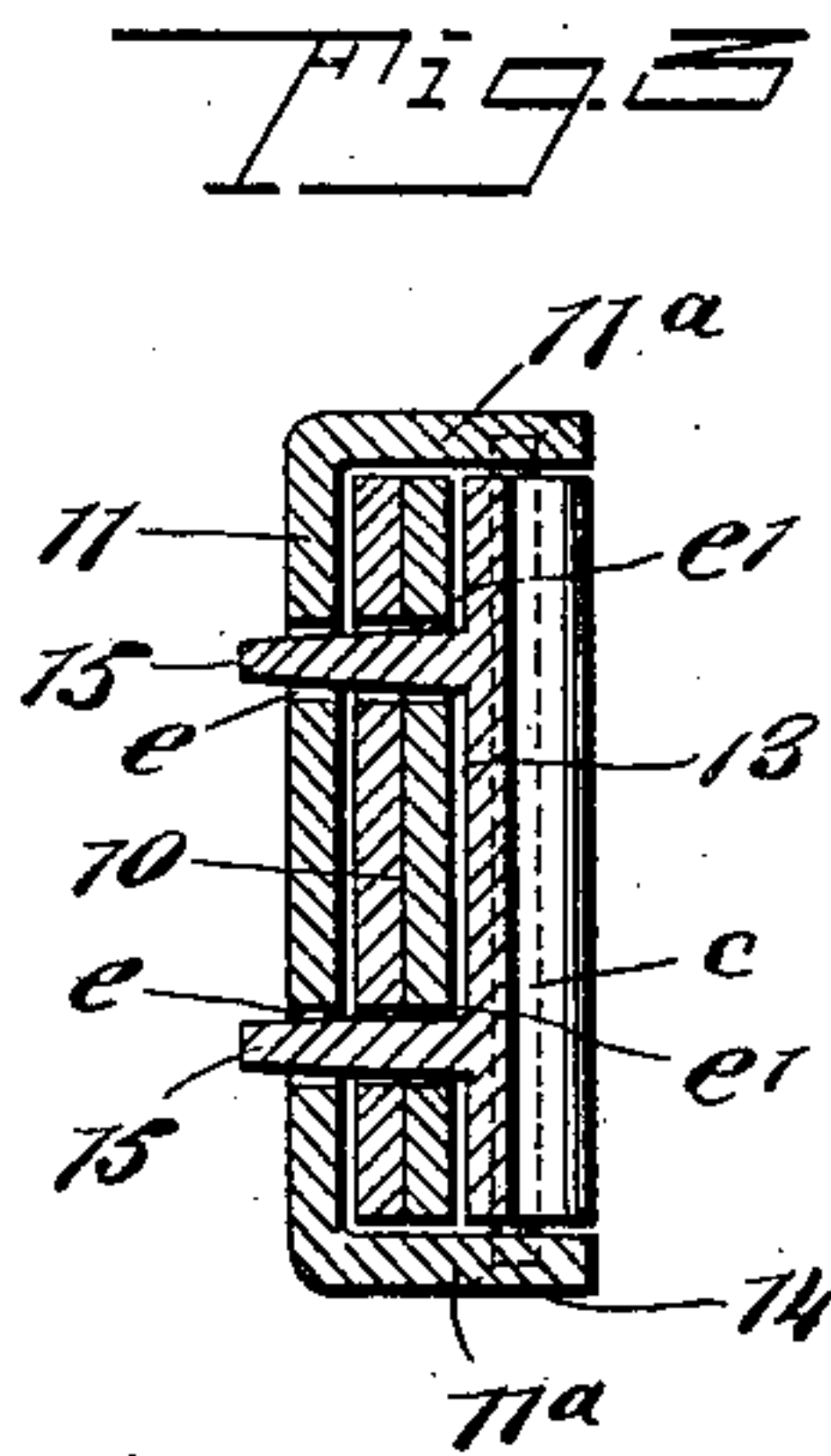
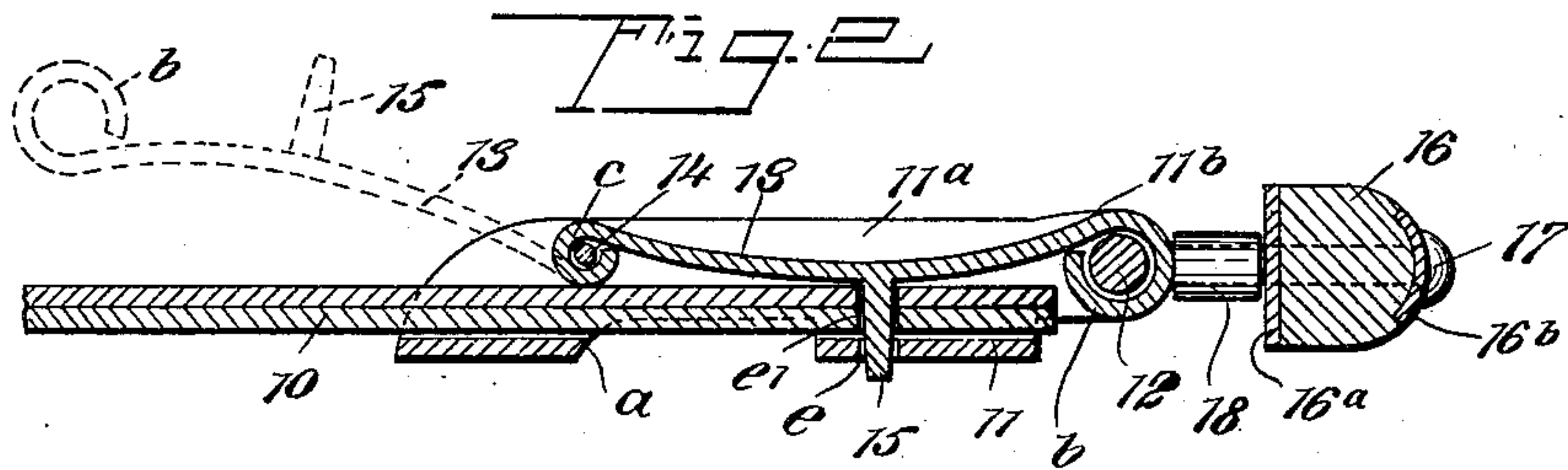
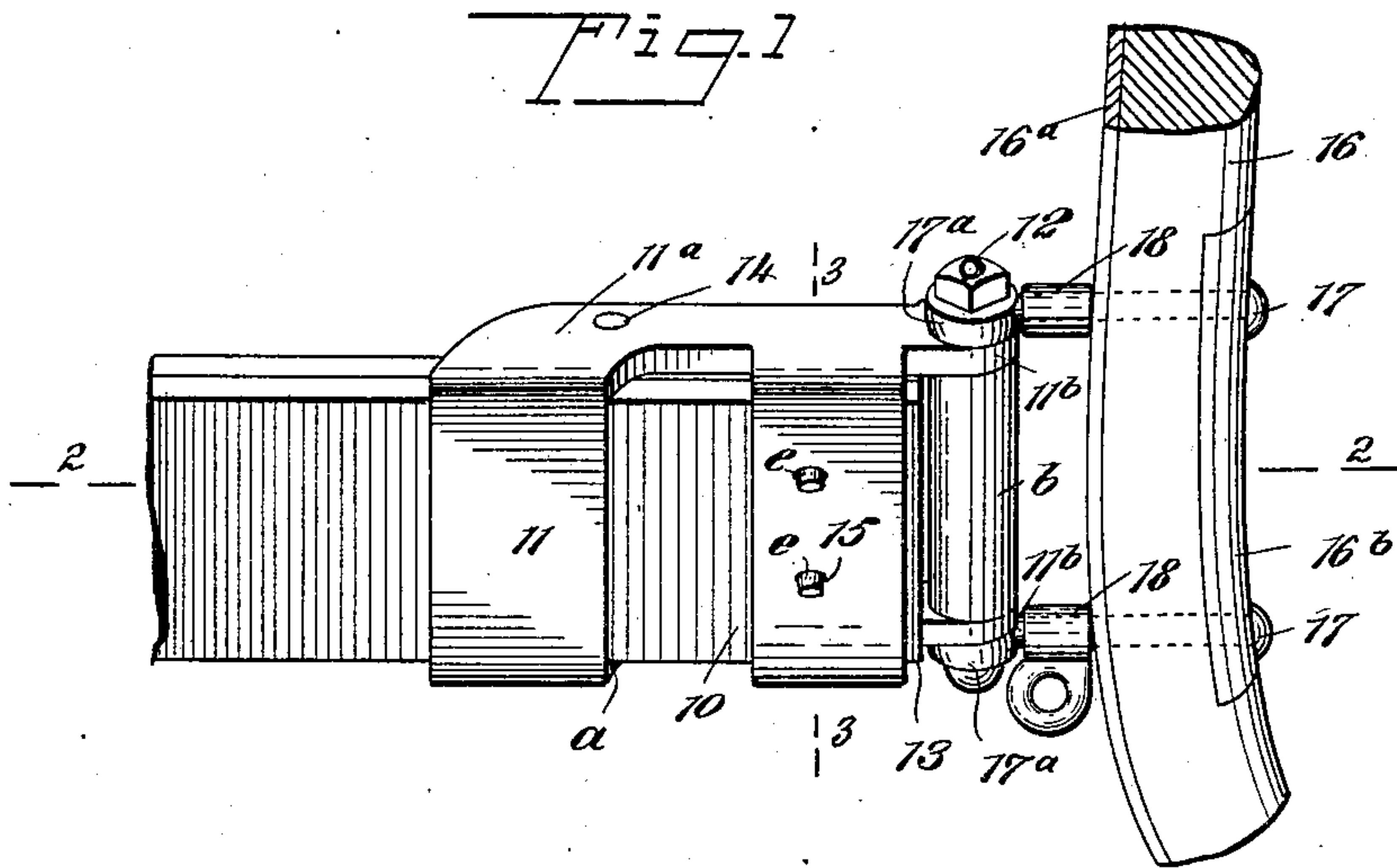
No. 697,543.

Patented Apr. 15, 1902.

W. H. ROSE.
BUCKLE FOR TUG STRAPS.

(Application filed May 1, 1901.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM H. ROSE, OF BEMIDJI, MINNESOTA.

BUCKLE FOR TUG-STRAPS.

SPECIFICATION forming part of Letters Patent No. 697,543, dated April 15, 1902.

Application filed May 1, 1901. Serial No. 58,291. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. ROSE, a citizen of the United States, and a resident of Bemidji, in the county of Beltrami and State of Minnesota, have invented a new and Improved Buckle for Tug-Straps, of which the following is a full, clear, and exact description.

This invention has for its object to provide a novel, simple, and durable buckle that affords a reliable attachment for the end of a trace or tug-strap upon hames of a harness, is convenient in adjustment to connect or release the strap, and which will avoid bending the strap or trace at the point of connection, thereby reducing injurious wear to which such straps are ordinarily subjected.

The invention consists in the novel construction and combination of parts, as is hereinafter described, and defined in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side view of the buckle, shown connecting a hame-bar and tug-strap. Fig. 2 is a longitudinal sectional view substantially on the line 2 2 in Fig. 1, and Fig. 3 is a transverse sectional view substantially on the line 3 3 in Fig. 1.

The tug-strap 10, of which an end portion is shown, in complete form may be of any suitable length and, as usual, be formed of a plurality of plies of harness-leather to render it strong enough for efficient service.

The improved buckle comprises the following details of construction: A frame consisting of an elongated base-piece 11, of such proportionate width as will adapt it to conform with the breadth of the strap 10, is provided with two similar side flanges 11^a, that are integrally joined thereto, and at one end of each flange an ear 11^b is extended beyond the adjacent end of the base-piece. The base-piece 11 may have an aperture *a* formed therein between its ends to lighten it, and the corners of the flanges 11^a at their ends opposite those terminating in the ears 11^b are preferably rounded, as shown. A transverse locking-bolt 12 is inserted laterally through aligned perforations formed centrally in the ears 11^b,

and upon the locking-bolt one end of a tongue-plate 13 is detachably secured, as follows: A tubulation *b* is formed on the end of the tongue-plate 13, of sufficient diameter to loosely receive the body of the bolt 12, that also passes through the ears 11^b, as before mentioned. The tongue-plate 13 is of sufficient length to extend near to the rounded ends of the flanges 11^a, and at its extremity, which in service is adjacent to said ends, a tubulation *c* is thereon formed.

Two opposite perforations are formed in the side flanges 11^a, through which a pintle-rod 14 is inserted, which also passes through the tubulation *c*, and said rod is secured by its ends in the flanges, whereby the end of the tongue-plate 13 that is farthest from the locking-bolt 12 is held to rock upon the buckle-frame.

The tongue-plate 13 may with advantage be curved or bent down between the tubulations *b* *c*, so as to dispose the body thereof close to the strap 10, so as to bear thereon when the latter is introduced within the buckle-frame for connection therewith, and from the lower surface of the tongue-plate preferably two studs 15 are projected, which may be secured to the tongue-plate or formed integral therewith.

It is to be understood that I may prefer in some cases to employ but one stud 15, which obviously would be positioned centrally of the tongue-plate. Generally, however, it is found advantageous to provide two studs 15, that are suitably spaced apart and have sufficient length to project loosely down through like spaced perforations *e*, formed in the base-plate 11, as shown in the drawings.

The hame-bar 16 (shown in part) may be of any approved construction. Preferably, however, the wooden body thereof is reinforced on one side with a metal plate 16^a, and oppositely from the reinforce-plate a stiffening-block 16^b is bedded in a recess formed to receive it in the hame proper.

Two eyebolts 17 have their perforated heads 17^a imposed upon the outer sides of the ears 11^b and are thereupon held by the locking-bolt 12, which passes through the heads of the eyebolts and also through the ears 11^b and through the tubulation *b*, as before explained, said bolt being removably held in

place by a head and nut on the ends of the same, as indicated in Fig. 1.

The bodies of the eyebolts 17 pass through spaced perforations formed in the hame-bar, reinforcing-plate, and the stiffening-block thereon, and, as shown, spacing-ferrules 18 are mounted upon the eyebolts and positioned adjacent to the heads thereof, these serving to properly space the buckle-frame from the hame-bar, and thus permit a flexure of the joint between the hame-bar and ears on the buckle-frame.

To adapt the tug-strap 10 for connection with the improved buckle, suitable perforations e' are formed therein for passage of the studs 15 therethrough and into the perforations e in the base-plate 11. To connect the tug-strap with the improved buckle that is to receive it, the tongue-plate 13 is released from the bolt 12 by removal of the latter from the tubulation b , so that the tongue-plate may be rocked upon the pintle-rod 14 into the position indicated by dotted lines in Fig. 2. The tug-strap 10 may now be freely introduced endwise below the pintle-bolt and tubulation c , and the perforations e' are relatively positioned so that the reversed rocking movement for disposal of the tongue-plate, as shown by full lines in Fig. 2, will permit the passage of the studs 15 through the perforations e' in the strap and also through the aligned perforations e in the base-plate 11. The locking-bolt 12 is now replaced in the ears 11^b and tubulation b , as well as in the heads of the eyebolts 17, and it is secured against accidental displacement by engagement of the nut on its projecting end. Hence if the pair of tug-straps necessary for a single harness are each provided with the improved buckle connections said tug-straps will be securely but de-

tachably connected to the hames of the harness.

The pressure of the tongue-plates 13 upon the tug-straps 10 above the studs 15 produces frictional contact between the buckles and the tug-straps, so that the pulling strain is transmitted from the hames to the buckle-frames and thence to the tug-straps in a manner that will prevent an injurious rubbing wear of the latter, which is incurred in use of tug-strap connections as usually constructed.

Having fully described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination with a frame comprising a base-plate and spaced flanges thereon, of a tongue-plate pivoted at one end between said flanges, and detachably secured at the other end thereof by a transverse bolt, and a stud projecting from the tongue-plate through a perforation in the base-plate.

2. The combination with a base-plate having spaced flanges at the sides thereof and spaced perforations in said base-plate, of a tongue-plate having a tubulation at each end, a pivot-rod engaging one of said tubulations and fixed in the spaced flanges near one end thereof, ears on the opposite ends of the flanges, having aligned perforations, and a bolt having engagement with the ears and also with the remaining tubulation on the tongue-plate.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM H. ROSE.

Witnesses:

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J. R. ORINGER.