

R. B. CARTER.
HARNESS BUCKLE.
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988,078.

Patented Mar. 28, 1911.

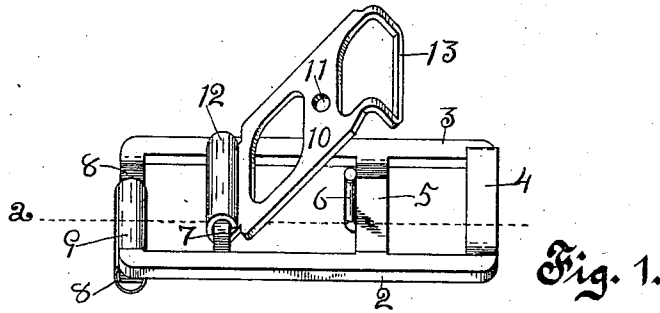


Fig. 1.

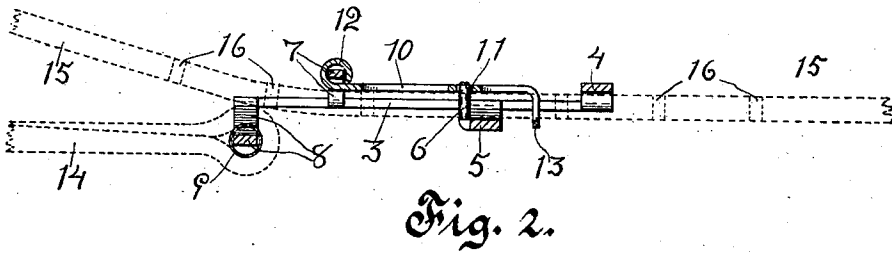


Fig. 2.

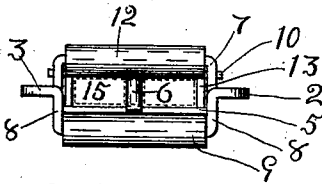


Fig. 3.

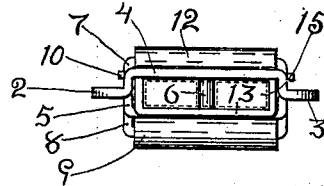
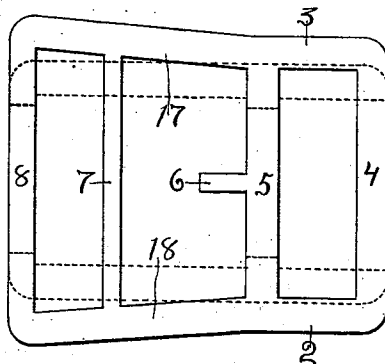


Fig. 4.

Fig. 5.



WITNESSES:

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UNITED STATES PATENT OFFICE.

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HARNESS-BUCKLE.

988,078.

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To all whom it may concern:

Be it known that I, RICHARD B. CARTER, citizen of the United States of America, residing at Blair, in the county of Washington and State of Nebraska, have invented certain new and useful Improvements in Harness-Buckles, of which the following is a specification.

My invention relates to improvements in harness-buckles in which a skeleton body shaped to form a strap-way having a rigid stud-tongue therein operates in conjunction with a member hinged to said body to lock a shiftable strap disposed in said strap-way into engagement with said tongue; and the objects of my improvement are, first, to provide a positive and automatic lock readily unlocked when so desired; second, to provide a shiftable strap-way as nearly straight as practicable in a buckle well adapted as a shiftable connection of cross-reins to main driving reins; and, third, to facilitate properly shaping an integral body part from sheet-metal; all of which with other minor objects hereinafter more particularly set forth I attain by the mechanism illustrated in the accompanying drawing, in which—

Figure 1 is a perspective view of the open complete buckle alone; Fig. 2, a central longitudinal section of the closed buckle on the broken line *a* of Fig. 1, showing its application to a driving rein indicated by the broken lines; Fig. 3, a front end view of the closed buckle alone; Fig. 4, a rear end view of the same; and, Fig. 5, a view of the flat sheet-metal blank before it is bent and pressed to form the skeleton body or strap-way. In all of which views similar numerals refer to like parts.

The buckle is here illustrated as made of sheet-metal and is shown in Fig. 2 applied to a rein used for guiding a team. To the forward end of the buckle the rear end of the cross or spread-rein 14, is attached by forming it into a closed loop around the offset cross-bar 8. The main rein 15 is disposed through the skeleton strap-way formed by the body of the buckle which is adjusted thereon by shifting the stud-tongue 6 to different holes 16 in said main rein.

The body of the buckle comprises the straight side-bars 2 and 3 connected by the offset-cross-bars 4, 5, 7 and 8. Alternate cross-bars are offset in opposite directions out of alinement with the sides but lying in

planes parallel therewith and the ends of the bars connected with the side-bars by integral double reverse bends. The cross-bar or lock-bar 4 is disposed or offset toward the face of the buckle, and the tongue-cross-bar 5 a like distance in an opposite direction or toward the back of the buckle, see Figs. 2 and 4, to give the desired depth of strap-way. The stud-tongue 6 is an integral projection disposed centrally at one edge of this bar and bent to project across through the strap-way. The hinging-cross-bar 7 is disposed or offset toward the face of the buckle a distance greater than the lock-bar; the excess of offset being sufficient to support the swinging face or locking-plate 10, hinged thereon, out of the strap-way. The chape or fastening cross-bar 8 is disposed oppositely to the hinging-bar and offset a still greater distance to receive the thick attaching loop of the spread-rein 14 as much out of the strap-way as desired; and a wear tube or sleeve 9 is disposed on this bar to protect said loop.

The swinging face-plate has its front end 12 rolled outward around the cross-bar 7 to hinge said plate to the buckle-body. The plate has the centrally disposed perforation 11 to receive the projecting end of the tongue 6 when the plate is closed inward and to support this end against draft of the buckled strap or rein. The free or swinging end of the face-plate is worked to form the rectangular lock loop 13, and bent in at right angles to the face-plate to carry therethrough the strap or rein to be buckled and close through between the side-bars of the body and between the lock-bar and tongue-bar and across or through the strap-way. When this lock-loop is closed in it is retained therein by the unbent shiftable rein 15 lying through the strap-way as shown in Fig. 2. The proximity of the closed-in locking-loop to the oppositely disposed locking-bar 4 requires the inserted rein or other strap to be bent quite shortly in order to open the buckle to raise the strap off from the tongue; hence, the buckle is never unintentionally opened. After the strap is bent and the face-plate and lock-loop swung outwardly therewith, the strap may be readily shifted to any desired position and the whole drawn back into locked position again.

The blank, from which the body is bent by pressing in suitably formed dies, is cut

with an excess of width over the width of the finished buckle equal to the amount required to be taken up in making the offset bends at the ends of the cross-bars. The offset of the hinging-bar 7 and the chape-bar 8 being greater than the other cross-bars the parts 17 and 18 of the sides connecting the ends of these bars and the tongue-bar are cut divergent, making these cross-bars longer as shown in Fig. 5; while the opposite side portions 2 and 3 connecting the equally offset tongue-bar and lock-bar are parallel. But when all the cross-bars are bent and pressed to the required forms and positions as shown in Figs. 1 to 4 inclusive, the side-bars assume the forms and positions shown in Fig. 1, and indicated by the broken lines in Fig. 5.

I claim:

1. A buckle, comprising a skeleton strapway consisting of side-bars connected by cross-bars alternately offset in opposite directions to form said strapway, a stud-tongue disposed from an intermediate offset cross-bar across said strapway, a locking-plate hinged to one of said cross-bars and having a perforation to receive the point of said tongue and a loop at the free end disposed angularly thereto to close through between said side-bars and cross-bars to support said plate against lateral movement and

said loop adapted to receive therethrough a strap disposed through said strapway.

2. In a buckle-body an integral sheet-metal skeleton strapway, comprising parallel side-bars connected by cross bars of varied lengths offset alternately in opposite directions by offsetting bends equal at the opposite ends of each cross-bar but greater bends at the ends of said longer cross-bars whereby said longer cross-bars are offset greater distances than others from the plane of said side-bars.

3. A sheet-metal blank adapted to be bent to form an integral skeleton strapway buckle-body, comprising side-bars having straight parallel portions and diverging portions and connected by cross-bars of different lengths adapted to be bent flatwise at their connected ends to offset them into different planes parallel with the plane of said side-bars and said diverging portions of said side-bars adapted to be brought into alignment with the parallel portions when the cross-bars are bent.

In testimony whereof I affix my signature in presence of two witnesses.

RICHARD B. CARTER.

Witnesses:

HERMAN H. STRUVE,
GUY S. HELTMAN.