

(No Model.)

A. P. STORY.
CROSS LINE BUCKLE.

No. 474,195.

Patented May 3, 1892.

Fig. 1.

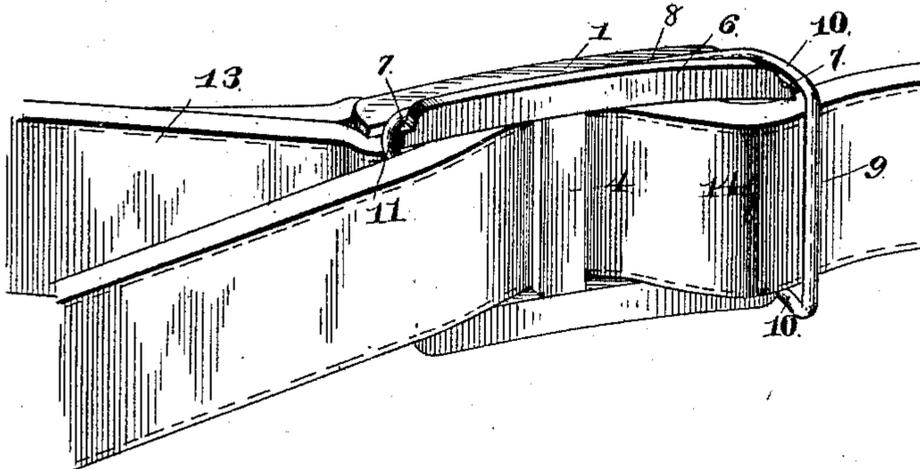


Fig. 2.

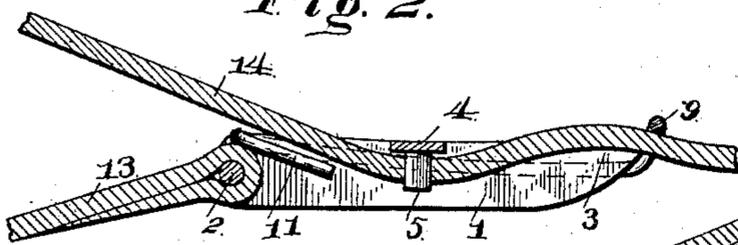


Fig. 3.

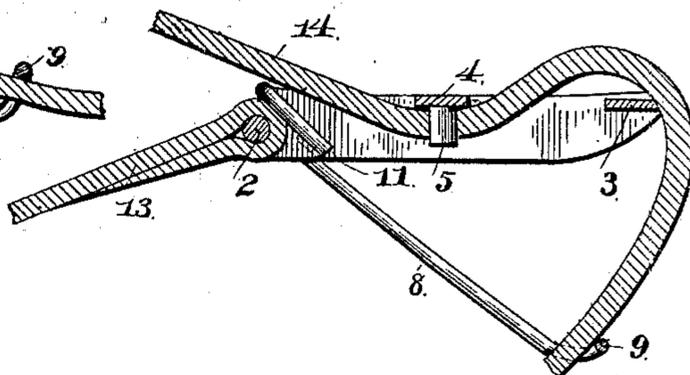
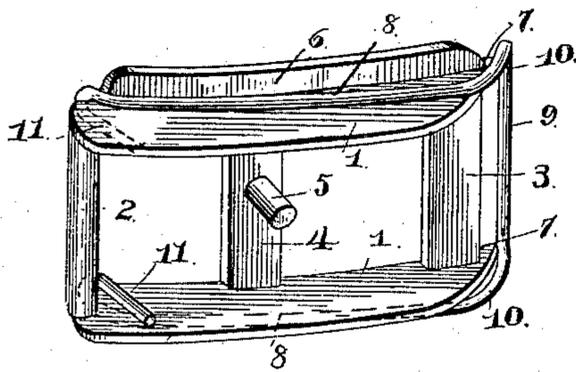


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

ALBERT P. STORY, OF RICHLAND, MINNESOTA.

CROSS-LINE BUCKLE.

SPECIFICATION forming part of Letters Patent No. 474,195, dated May 3, 1892.

Application filed December 26, 1891. Serial No. 416,216. (No model.)

To all whom it may concern:

Be it known that I, ALBERT P. STORY, a citizen of the United States, residing at Richland, in the county of Rice and State of Minnesota, have invented a new and useful Cross-Line Buckle, of which the following is a specification.

This invention relates to improvements in buckles; and the objects in view are to provide a buckle of cheap and simple construction adapted for connecting the cross-lines to the main lines in double harness, and to so construct the buckle that the same will be free from any points or sharp edges likely to engage the terret-rings, fly-nets, or other portions of the harness.

A further object is to obviate the necessity of perforating the cross-lines and to prevent the gradual enlargement or wearing away of the perforations in the main line with which the buckle stud or tongue engages, or, in other words, to construct a buckle that will tightly clamp the two lines together and will have no loose movement thereon.

Other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a perspective of a portion of a main line and a cross-line, the two being connected by a buckle constructed in accordance with my invention. Fig. 2 is a longitudinal section of the same. Fig. 3 is a similar view, the main line being slackened, as in the act of disengaging the buckle therefrom. Fig. 4 is a detail in perspective of the buckle.

Like numerals of reference indicate like parts in all the figures of the drawings.

In constructing the buckle I provide an oblong frame, the same consisting of a pair of opposite side bars 1, which are slightly curved upon their upper faces and have their under edges at their rear ends rounded, as shown. The front ends of the side bars are connected by a transverse cylindrical end bar 2, while the rear ends are connected by a flat transverse bar 3, the upper face of which is slightly below the plane of the upper edges of the side bars 1. Near their middles the side bars are connected by a transverse connecting-bar 4, from the center of the under side of which

depends a stud or tongue 5. The side bars 1 are L-shaped in cross-section, and therefore have projecting laterally from their upper edges flanges 6, the ends of which are rounded and terminate short of the ends of the side bars, thus forming pairs of recesses 7 at the opposite ends of the buckle-frame. The frame thus constructed is preferably formed integral and may be readily cast, as will be obvious.

A U-shaped wire bail formed of spring material, preferably, and comprising opposite side bars 8, the rear ends of which are upwardly bent and connected by a cross-bar 9, embraces the buckle-frame and is of a width sufficient to receive the buckle-frame, the side bars lying under the flanges of the side bars of the frame. The cross-bar of the bail extends across the upper front edges of the buckle-frame, the cutting away or recessing of the flanges receiving the curved portions 10, heretofore mentioned as being formed at the rear ends of the side bars of the bail. The rear ends of the side bars of the bail are inwardly bent, forming hooks 11, which hooks take in the rear pair of recesses of the flanges of the side bars 1, engaging over said side bars and terminating between the same, whereby the bail becomes pivoted to the frame and may be swung downwardly from the rear at its rear end. While the bail is free to swing down from the buckle, it will be seen that the terminals thereof coming in contact with the under sides of the laterally-disposed flanges, which constitute stops, said bail is prevented from having any upward movement above the stops, except at its free end, which is upwardly curved, as shown, and will project above the buckle-frame sufficiently far for the passage of a strap.

13 designates the cross line or rein, and the same has its rear end bent around the front cross-bar 2 of the buckle-frame, after which its terminals are stitched together in the usual manner.

14 designates the main line or rein, which is applied in the following manner: Its rear free end is passed downwardly between the cross-bars 2 and 4 and then upwardly between the cross-bars 4 and 3, and thence downwardly between the rear end bar 3 and the cross-bar of the bail, the bail being swung

downwardly to permit of the same. When in this position, the buckle lug or tongue 5 is engaged with the perforation with which the main line or rein is provided. It now simply remains to strain the main line, when the locking-bail will be drawn into alignment with the buckle-frame and clamp the same tightly between its cross-bar and the rear cross-bar 3 of the buckle-frame. Longitudinal movement upon the part of the buckle-frame upon the main line is now impossible. In order to adjust or remove the buckle-frame on the main line, said line is forced upwardly between the cross-bar of the bail and the rear end bar of the frame, after which the bail is swung down or sprung from over the rein, the stud disengaged from the rein, and the buckle may be slid along to a proper point on the rein or removed entirely therefrom. If it be desired to simply adjust the buckle at some other point along the rein, the stud thereof is engaged with a convenient perforation formed in the rein, and it is only necessary, in order to form a locking of the buckle and rein together, to strain the latter.

It will be seen from the foregoing description that I have provided a buckle embodying simplicity and cheapness, that may be readily manufactured and applied to the cross and main lines of double harness, whereby a secure connection is formed, and that there are no protruding points or parts that will engage with the fly-nets, terret-rings, or other portions of the harness.

Beyond their hooked ends the terminals of the spring-wire bail are preferably extended, as at 15, so that they press against the under side of the main line or rein, and thus hold the same snugly at this point against the under side of the central cross-bar 4, whereby the main line is prevented from accidental disengagement with the stud.

Having described my invention, what I claim is--

1. In a cross-line buckle, the combination, with the oblong frame comprising opposite

side bars the upper edges of which are provided with laterally-projecting stops, front and rear end bars, and an intermediate transverse bar, the latter having a depending stud, of the U-shaped wire locking-bail pivoted at its terminals to one end of the buckle-frame and having its opposite end adapted to be swung over the front end of the buckle-frame, substantially as specified.

2. In a cross-line buckle, the combination, with the oblong buckle-frame comprising opposite L-shaped side bars, the front cylindrical, rear flat, and the intermediate connecting-bars, the latter having the depending tongue or stud, of the U-shaped spring-wire bail the opposite side bars of which embrace the side bars of the frame, the rear ends of the bail being upwardly curved and seated in notches formed in the flanges of the side bars of the frame and connected by a transverse clamping-bar, and the front ends of the side bars of the bail being bent to form inwardly-disposed hooks for engaging over the rear recessed ends of the side bars of the frame, substantially as specified.

3. In a cross-line buckle, the combination, with the oblong frame comprising opposite sides having laterally-disposed flanges, opposite end, and a central connecting-bar, the latter provided with a depending stud, of the U-shaped spring-wire locking-bail embracing the buckle-frame and having its free ends inwardly bent to form hooks for engaging the side bars and extended inwardly under the central transverse bar, the opposite end of the bail being adapted to swing over the opposite end of the buckle-frame, substantially as specified.

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

ALBERT P. STORY.

Witnesses:

ANDREW STORY,
J. W. SMALLIDGE.