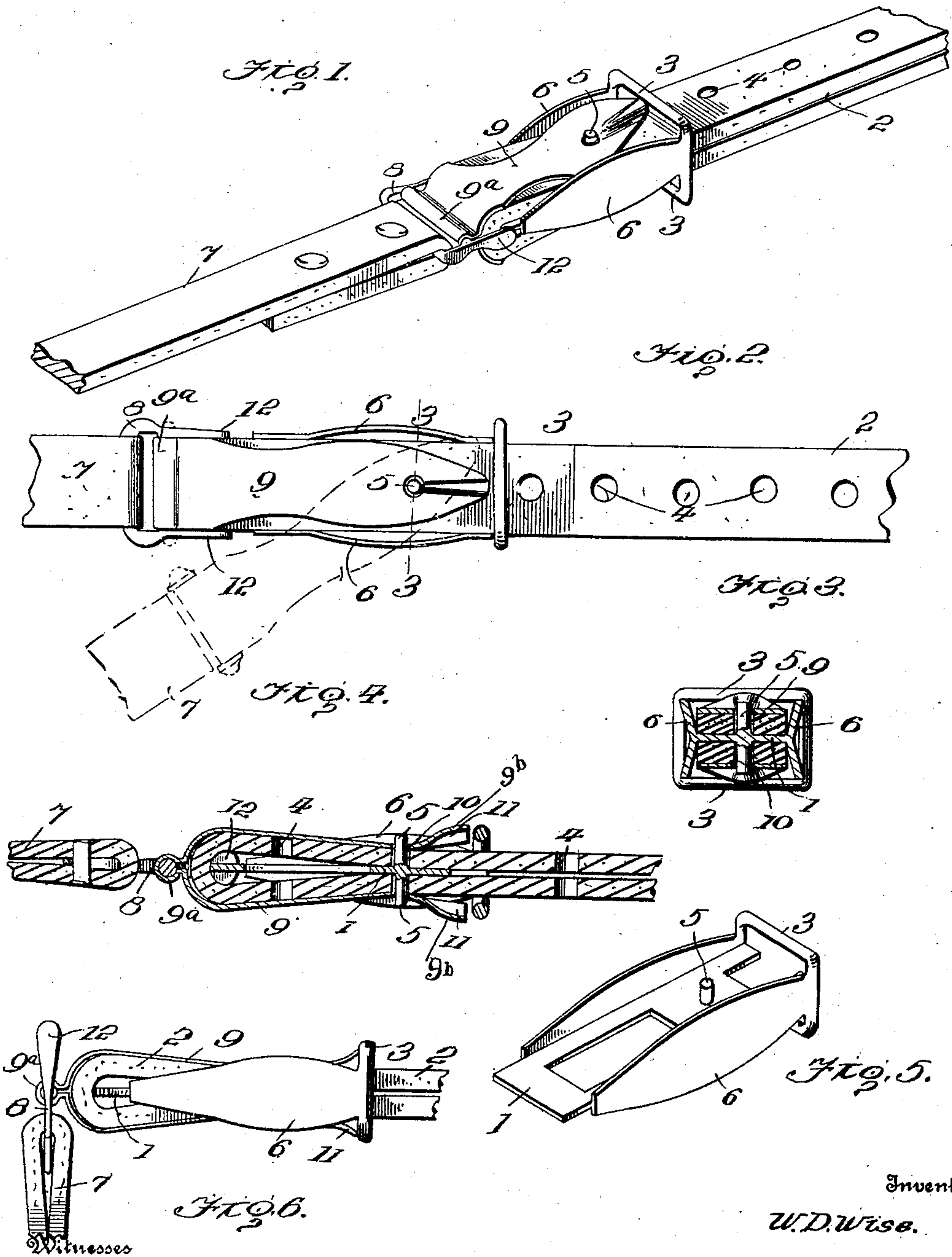


W. D. WISE.
CROSS LINE BUCKLE.
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938,536.

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Inventor

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Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM D. WISE, OF DETROIT, MINNESOTA.

CROSS-LINE BUCKLE.

938,536.

Specification of Letters Patent.

Patented Nov. 2, 1909.

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To all whom it may concern:

Be it known that I, WILLIAM D. WISE, citizen of the United States, residing at Detroit, in the county of Becker and State of Minnesota, have invented certain new and useful Improvements in Cross-Line Buckles, of which the following is a specification.

The present invention relates to certain new and useful improvements in cross line buckles, and the object of the invention is the provision of a novel buckle of this character which is peculiarly constructed so as to admit either of the hand line being quickly detached from the cross line, or the cross line being adjusted as required.

The invention further contemplates a simple and inexpensive cross line buckle which is free from projections and will not catch on the fly nets or pull through and get fastened in the terret rings on the back bands of the harness.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction and the means for effecting the result, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a perspective view of a cross line buckle constructed in accordance with the invention; Fig. 2 is a top plan view, the clip to which the hand line is attached being shown as swung laterally to one side in dotted lines; Fig. 3 is a transverse sectional view on the line 3—3 of Fig. 2; Fig. 4 is a longitudinal sectional view through the buckle; Fig. 5 is a detail perspective view of the buckle frame; and, Fig. 6 is a side elevation of the buckle showing the manner in which the locking arms are swung upwardly previous to moving the clip to one side to disconnect the hand line from the cross line.

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

The frame of the buckle comprises an elongated plate 1 around which the cross line 2 is designed to be looped, the ends of the cross line passing through keepers 3 which project laterally upon each side of the plate 1 at one extremity thereof. This cross line 2 is formed with the usual openings 4 which are engaged by studs 5 projecting from opposite sides of the plate. It will thus be obvious that the buckle can be readily moved to any desired position upon the cross line

and the relative lengths of the two ends of the line which lead to the bits, thereby adjusted. The longitudinal edges of the plate 1 are formed with the side flanges 6, the portions of the flanges adjacent the studs 5 projecting outwardly beyond the same and the flanges gradually decreasing in width from this point to the rear end of the frame so as to provide inclined edges.

The hand line 7 is connected to a ring 8 which is pivoted within a crimped portion 9^a at the back of a U-shaped clip 9. The arms of this clip 9 have a spring action and are designed to embrace the plate 1 and the looped end of the cross line 2, openings 10 being formed in the arms for engagement with the studs 5. The free ends of the arms of the clip are flared outwardly at 9^b and formed with the longitudinal grooves 11 which serve to receive the studs and force the spring arms of the clip apart when the clip is being applied to the frame, the studs entering the openings 10 and permitting the spring arms to come together as soon as the clip has been forced into its proper position.

The spring arms of the clip are contracted in width at an intermediate portion in the length thereof, and when the clip is swung laterally to either side about the studs 5 as a pivot, the edges of the spring arms of the clip engage the inclined edges of the flanges 6 and ride upon the same. In this manner a cam action is obtained which serves to force the spring arms of the clip apart and release them from engagement with the studs 5, whereupon the clip can be removed from the frame and the hand line detached from the cross line. For the purpose of normally locking the clip against this lateral swinging movement when the buckle is in use, the ring 8 is formed at its opposite ends with the arms 12 which are designed to embrace the rear end of the plate 1 and to remain in such position as long as there is any tension in the hand line. However, when the ring 8 is turned to right angles to the longitudinal axis of the clip, the arms 12 are swung out of engagement with the plate 1, and the clip may be swung to one side so as to cause the arms thereof to ride upon the inclined edges of the side flanges 6 and be sprung out of engagement with the studs 5, whereupon the members may be disconnected. Attention may be directed to the fact that the side flanges 6 do not extend entirely to the rear end of the plate and that

when the arms 12 are in operative position they form substantially a continuation of the side flanges so that there are no projections to catch in the fly net.

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

1. In a buckle, the combination of a plate around which one of the straps to be connected is designed to be looped, studs projecting from the plate for engagement with the said strap, and a clip to which the opposite strap is secured, the said clip being formed with arms adapted to embrace the plate and detachably engage the studs projecting therefrom.

2. In a buckle, the combination of a plate adapted to have one of the straps to be connected looped around one of the ends thereof, keepers projecting upon opposite sides of the opposite end of the plate and receiving the ends of the said strap, studs projecting from the plate and engaging the strap, and a clip to which the opposite strap is secured, the said clip being formed with arms which are designed to embrace the plate and detachably engage the studs projecting therefrom.

3. In a buckle, the combination of a plate around which one of the straps to be connected is designed to be looped, a stud projecting from the plate and designed to engage the strap, a flange projecting from the plate and formed with an inclined edge, and a spring clip to which the opposite strap is secured, the said spring clip serving to embrace the plate and engage the stud, and being disengaged from the stud when swung laterally to one side about the stud as a pivot and caused to ride upon the inclined edge of the flange.

4. In a buckle, the combination of a plate around which one of the straps to be connected is designed to be looped, a stud projecting from the plate and serving to engage the strap, a flange projecting from the plate and formed with an inclined edge, a spring clip to which the opposite strap is secured, the said spring clip being designed to embrace the plate and to engage the stud, and being disengaged from the stud when swung laterally to one side about the stud as a pivot and caused to ride upon the flange, and means for preventing such swinging movement of the clip when the buckle is in use.

5. In a buckle, the combination of a plate around which one of the straps to be connected is designed to be looped, a stud projecting from the plate and serving to engage the said strap, a flange projecting from the plate and formed with an inclined edge, a spring clip to which the opposite strap is secured, the said clip being adapted to embrace the plate and to engage the stud, and being sprung out of engagement with the stud when swung laterally to one side about the stud as a pivot and caused to ride upon the inclined flange, and arms upon the clip which normally embrace the plate and lock the clip against such swinging movement.

6. In a buckle, the combination of a plate around which one of the straps to be connected is designed to be looped, studs projecting laterally from opposite sides of the plate and serving to engage the strap, a spring clip adapted to embrace the plate and engage the studs, means cooperating with the spring clip to disengage the same from the studs when it is swung laterally about the same as a pivot, and means for holding the clip against such swinging movement when the buckle is in use.

7. In a buckle, the combination of a plate adapted to have one of the straps to be connected looped around one of its ends, keepers projecting laterally from the opposite end of the plate and designed to receive the ends of the strap, studs projecting upon opposite sides of the plate and serving to engage the strap, side flanges upon the edges of the plate, the outer edges of the flanges being inclined, a spring clip adapted to embrace the plate and engage the studs, a ring pivoted to the base of the spring clip and adapted to have the opposite strap connected thereto, and arms formed in conjunction with the ring and normally engaging the plate to prevent the clip swinging laterally about the studs as a pivot, the said clip being designed to ride upon the inclined edges of the flanges and be disengaged from the studs when it is swung laterally about the same as a pivot.

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

WILLIAM D. WISE. [L. S.]

Witnesses:

DAVE HAGE,
A. G. WEDGE.