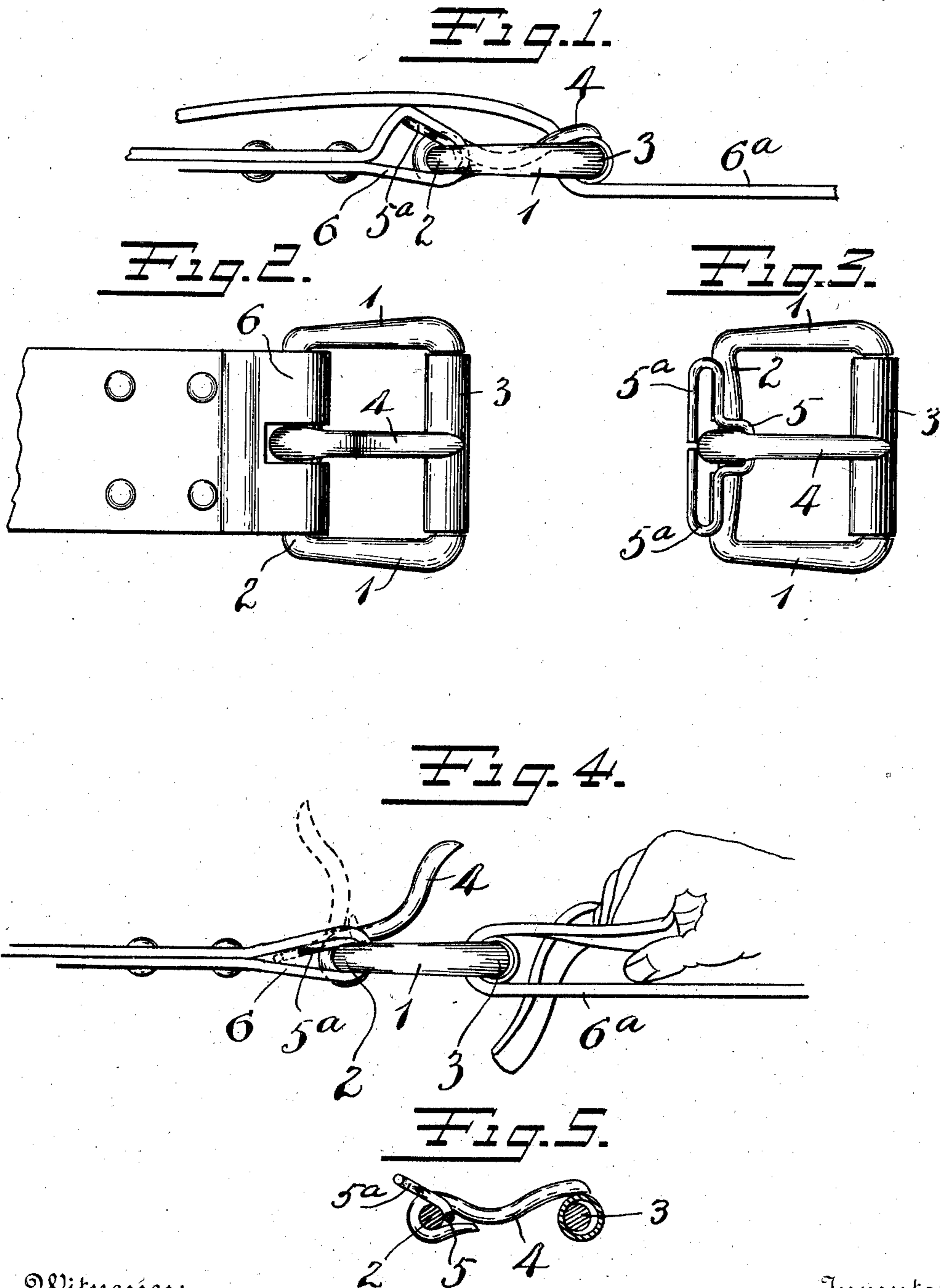


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BUCKLE.  
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928,212.

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# UNITED STATES PATENT OFFICE.

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## BUCKLE.

No. 928,212.

Specification of Letters Patent.

Patented July 13, 1909.

Application filed November 9, 1908. Serial No. 461,606.

*To all whom it may concern:*

Be it known that I, GEORGE H. NEARING, a citizen of the United States, residing at New Britain, county of Hartford, Connecticut, have invented certain new and useful Improvements in Buckles, of which the following is a full, clear, and exact description.

My invention relates to buckles for straps, and is essentially valuable when used in connection with straps upon which heavy strains are put, the object being to provide in such a buckle a simple and effective means for casting off the tongue automatically when the strap is pulled.

This invention is essentially an improvement upon the device made the subject-matter of Letters Patent No. 886,129 to Paul I. Andrews, dated April 28, 1908, the object of the present invention being to simplify and cheapen the construction and to provide means whereby the tongue can be, after it is automatically released, easily and quickly pushed back by the thumb so as to be entirely out of the way of the running end of the strap.

In the accompanying drawings, Figure 1 is a side elevation of my invention in its preferred form, and as it appears in use with the strap. Fig. 2 is a plan view of the buckle and the attached end of the strap. Fig. 3 is a plan view of the buckle separate from the strap. Fig. 4 is a side elevation of the buckle with the strap ends, showing the position that the tongue assumes upon being automatically released. Fig. 5 is a side elevation showing the buckle frame in section.

The buckle comprises the usual frame consisting of the side bars 1—1, the tongue bar 2 and the end bar 3, which may be provided with a roller, as shown, and over which the running end of the strap is drawn.

4 is the tongue hinged on the tongue bar 2 in the usual manner.

The parts thus far described comprise the conventional buckle. My improvement consists in providing said buckle with an improved means to automatically lift the tongue when the running end of the strap is pulled in the proper direction.

My automatic tongue lifter may be made very cheaply from wire, and comprises a forward under-bend portion 5 extending underneath the tongue just in front of its hinged bearing on the tongue bar 2. The two sides

of this under bend stand on opposite sides of the hinge knuckle at the rear end of the tongue and project up over the tongue bar 2, and thence rearwardly to a point somewhat to the rear of said tongue bar. By preference this tongue lifter has its ends extended out laterally to furnish a broad bearing, as indicated by the bearing parts 5<sup>a</sup> 5<sup>a</sup>. One end of the strap has a loop 6 around the tongue bar 2 as well as the tongue lifter.

6<sup>a</sup> represents what I term the running end of the strap. This strap end is passed through the buckle loop in the usual manner, and is pulled back until the proper tension is had. So long as tension is on the strap, and the free end is pushed back, as shown in Fig. 4, the tongue 4 will remain elevated, as shown in solid lines. When the proper tension is upon the strap, the tongue may be pressed down by the thumb so as to pass through one of the perforations in the strap, after which it will be held down by the strap, as shown in Fig. 1. While the tongue is in this position, it will be seen that the bearing end 5<sup>a</sup> of the frame will lift the top of the loop 6, as by a lever action. When it is desired to release the strap, the running end 6<sup>a</sup> is again grasped in the usual manner and pulled. The moment the tongue is free from the opening in the strap end, the pressing down action of the upper part of the loop upon the rear end of the tongue lifter will automatically lift the tongue to the position indicated in solid lines in Fig. 4, so as to free it from said strap. As a matter of fact, the angle of the tongue lifting frame is somewhat exaggerated in Fig. 1, for the purpose of more clearly illustrating the action. In practice it is only necessary to have a sufficient pressure upon the frame to merely cause the tongue to become freed from the strap, thereby avoiding the necessity of picking it out with the fingers. This permits the user to apply both hands to the running end 6<sup>a</sup> of the strap in releasing it. The moment the tongue is free, and it is possible for the user to release one hand, he may then engage the end of the tongue with the thumb and throw it back to the position indicated in dotted lines in Fig. 4, entirely out of range of the strap end 6<sup>a</sup>, thereby avoiding all possibility of reengagement during the act of removing said strap end from the buckle. In the patent to which I have above referred, the tongue releasing frame is made integral

and rigid with the tongue, with the result that it holds the tongue, when released in this manner, rigidly in such a position that its end is close to the end 6<sup>a</sup> of the strap. 5 Since in that construction it is not possible to throw back the tongue with the thumb at such time to a position such as indicated in dotted lines in Fig. 4 of the drawings, there is danger of reengagement of the tongue with 10 the strap. My invention will be seen to provide a very substantial advantage and improvement over the construction set forth in the aforesaid patent, because the tongue may be moved freely to a position where re- 15 engagement is impossible.

In the preferred form of my invention, the under bend 5 of the frame is preferably embraced within the knuckle of the tongue, as shown in Fig. 5, so as to be loosely held 20 therein and partake of a hinging movement, whereby when the tongue is thrown back to the dotted lines shown in Fig. 4, the rear bearings 5<sup>a</sup> of said frame will recede in said loop, as indicated in dotted lines in said figure. 25 By embracing the under-bend 5 in the eye or knuckle of the tongue, the danger of accidental separation of the frame from the buckle before the buckle is attached to the strap, is prevented. Of course, when the 30 strap is in place, it serves to hold the frame in place, irrespective of whether the under-bend of the latter is held within the eye of the tongue.

From the foregoing, it will be seen that the 35 tongue and tongue lifter, as combined in Fig. 1, operate after the manner of a lever, the fulcrum being at the tongue bar, whereby when tension is put upon the strap in a direction away from the buckle the tendency 40 will be to press down the tongue lifter and simultaneously lift the free end of the tongue.

What I claim is:

1. In a buckle, a frame including a tongue 45 support, a tongue pivoted thereto, and a tongue lifter loosely connected to said tongue and extending to the rear thereof.

2. In a buckle, a frame including a tongue support, a tongue pivoted thereto, and a tongue lifter loosely connected to said tongue 50 and extending past the tongue bar and to the rear thereof, said lifter being provided with oppositely and laterally extending bearing ends located to the rear of said bar in combination with a strap looped around said sup- 55 port and the rear extension of said lifter.

3. In a buckle, a frame including a tongue support, a tongue pivoted thereto, and a tongue lifter loosely connected to said tongue 60 and extending over and to the rear of the tongue bar and taking a bearing thereon in combination with a strap looped around said support and the rear extension of said lifter.

4. In a buckle, a frame having a tongue support, a tongue, a substantially closed 65 knuckle at one end thereon surrounding said bar, and a tongue lifter frame loosely connected to and held by said tongue, a portion of said frame being arranged within said knuckle, another portion of said frame ex- 70 tending to the rear of said tongue bar.

5. In a buckle, a frame, a tongue pivoted to one part thereof and overlapping another part, a tongue lifter loosely connected with said tongue and extending away from it be- 75 yond its hinged axis so as to form the rear arm of a lever, of which the tongue proper is the front arm, said extension bar being at an angle with the plane in which the tongue lies whereby pressure upon said rear arms to- 80 ward said plane tends to raise the point of the tongue from its normal position in contact with the frame, in combination with a strap inclosing said rear arm of the tongue and that part of said frame which constitutes 85 the pivotal axis of the tongue whereby tension upon said strap in a direction away from the buckle tends to press down the rear end of the tongue lifter frame and raise the free end of the tongue.

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Witnesses:

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