No. 879,077. PATENTED FEB. 11, 1908.

D. H. YOUNG.

HARNESS BUCKLE.

APPLICATION FILED MAR. 12, 1907.

Fig. 1.

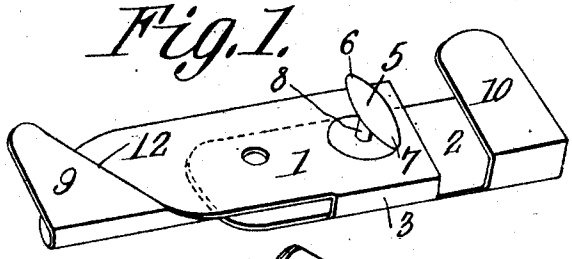


Fig. 3.

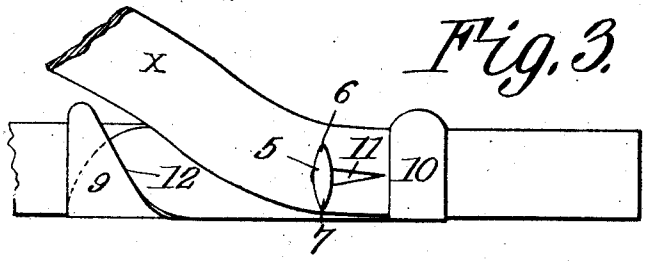


Fig. 2.

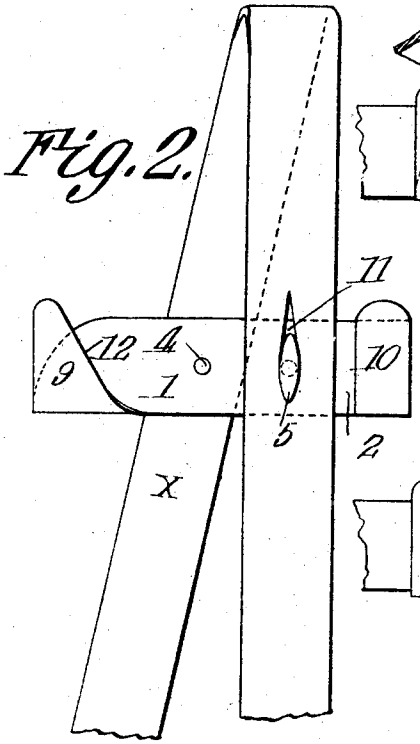


Fig. 4.

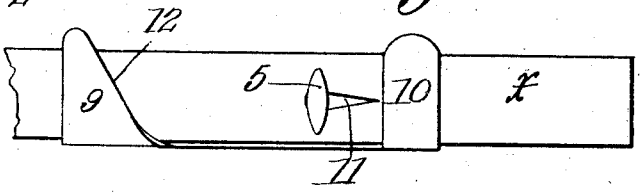
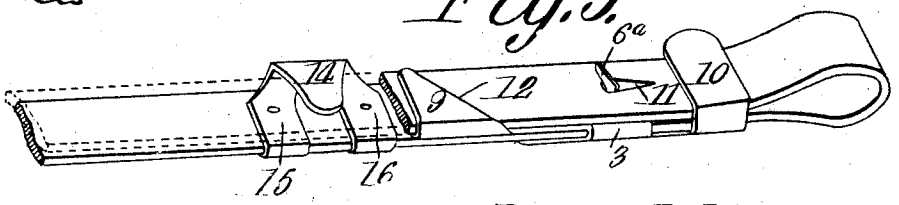


Fig. 5.



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HARNESS-BUCKLE.

No. 879,077. Specification of Letters Patent. Patented Feb. 11, 1908.

Application filed March 12, 1907. Serial No. 361,944.

To all whom it may concern:

Be it known that I, DANIEL H. YOUNG, a citizen of the United States, residing at Manchester, in the county of Delaware and State of Iowa, have invented a new and useful Harness-Buckle, of which the following is a specification.

The present invention relates to improvements in buckles, and more especially to that class employed in connection with leather fastening straps of harness, belts, and like devices, and it has for its object to provide a buckle of an improved construction that may be readily applied to straps of leather, or other suitable material, and which is provided with keepers arranged to coöperate with the straps in such a way that accidental unfastening of the buckle is impossible, and, furthermore, it has for its object to provide a buckle that may be constructed at a small cost and is capable of being applied to harness or leather without the necessity of doubling and stitching, as is necessary with an ordinary buckle.

To these and other ends, the invention consists in certain improvements and combinations and arrangements of parts, all as will be hereinafter more fully described, the novel features being pointed out particularly in the claims at the end of the specification.

In the accompanying drawing, Figure 1 is a perspective view of a buckle constructed in accordance with my invention. Fig. 2 is a view of the buckle applied to a strap, the parts being shown in unlocked position. Figs. 3 and 4 are views similar to Fig. 2, showing the buckle in fastened relation to the strap. Fig. 5 is a perspective view of a modified form of the invention.

Corresponding parts in the several figures are indicated throughout by similar characters of reference.

In that form of the invention shown in Figs. 1 to 4, inclusive, the buckle embodies a pair of plates 1 and 2 arranged to engage at each side of one end of a strap *x*, these plates being connected by the portion 3 extending across one edge of the strap. These parts are preferably composed of a single piece of sheet metal punched out in the proper form and formed up by suitable dies. The plates 1 and 2 in this case are arranged in parallelism by doubling the blank, the portion 3 connecting the proximate edges of the two plates. These plates are pivotally attached to the strap by means of a rivet, or other suitable fastener 4, which extends through the plates and the strap interposed between them, and the plate 1 is provided on its upper surface with a fastening head 5 of any suitable form, it being shown in Figs. 1 to 4, inclusive, as of substantially a T-form, that is to say, it has projections 6 and 7 extending laterally from the sides of a supporting stud 8 toward the longitudinal edges of the plate 1 to which it is rigidly secured. On one end of the plate 1 is formed a keeper 9, the latter, in the present instance, being provided by doubling a portion of the metal at one edge of the plate 1 into parallelism with the surface of the latter, and this keeper is adapted to receive a strap between it and its supporting plate. On the plate 2 is arranged a keeper 10 which extends upwardly from one of its edges and extends in the same direction as the keeper 9, it being doubled into parallelism with the upper surface of the plate 2 and adapted to receive the strap passing between plates 1 and 2, and one lying between the keeper 9 and the upper surface of the plate 1, both of the keepers opening toward the same side of the buckle.

In order to apply a buckle of the kind described to a strap, a portion of the latter adjacent to the end to be doubled is fitted flatwise between the parallel plates 1 and 2, and the rivet 4 is applied to provide a pivotal center for the buckle, as well as to retain the latter in coöperative relation with the strap, and the latter is also provided with one or more elongated openings 11 on the end thereof beyond that portion which is to form the loop. When the buckle is turned into unfastened position, as shown in Fig. 2, the projections 6 and 7 on the fastening head will extend longitudinally of the opening in the strap, and the latter may be readily applied thereto, and in order to fasten the buckle, it is only necessary to rotate it into the position shown in Fig. 3, that is to say, with its plates 1 and 2 arranged in alinement with the strap, and as the buckle assumes this position, the keeper 10 will slip over the apertured end of the strap and hold the latter in coöperative relation with the fastening head, and the keeper 9 will slip beneath the apertured end of the strap, it being preferably provided with an inclined or cam surface 12 to facilitate its passage therebeneath, and to lock the strap, the free end of the latter is inserted beneath the keeper 9.

When the buckle occupies the locked position as just described, the keepers 9 and 10 will engage the same edge of at least one of the straps, the keeper 9 engaging the apertured portion of the strap at the inside of the fastening head and the keeper 10 engaging the apertured portion of the strap, and also the portion thereof extending between the plates 1 and 2, so that rotation of the buckle to an unlocked position is positively prevented until the free end of the strap is disengaged from the keeper 9, and when this has been done, the buckle may be readily unlocked by turning it on its pivot, as this will disengage the keeper 10 from both straps, as shown in Fig. 2, and the free end of the strap may be easily disengaged from the fastening head.

In that form of the invention shown in Fig. 5, the buckle proper is similar to that shown in Figs. 1 to 4, except that the fastening head is provided with a single projection 6^a, and it is also provided with a supplemental keeper 14 which is provided to lock the free end of the strap in coöperative relation with the keeper 9, and for this purpose it is so applied that its opening extends in a direction opposite to those of the keepers 9 and 10. The supplemental keeper shown in the present instance is also preferably composed of sheet material embodying a pair of attaching members 15 and 16 adapted to be doubled on opposite sides of one of the straps and riveted or otherwise suitably secured thereto, and the body portion thereof is doubled into parallelism with the attaching members to form a receptacle for the free end of the strap beyond the keeper 9. After the buckle has been turned to the fastened position, as described in connection with that form shown in Figs. 1 to 4, the free end of the strap is first inserted into the opening of the keeper 9 by a turn of the strap in one direction, and the strap is then turned in a reverse direction to introduce it into the reversely arranged opening of the keeper 14, after the manner of lacing a shoe, and as the openings of the keepers 9 and 14 are in reversed arrangement, accidental disengagement of the strap relatively to the keepers cannot occur.

A buckle constructed in accordance with my present invention is particularly adapted for use on harness and analogous uses wherein the parts must be secured with certainty in order to avoid accidents, although it may be understood, of course, that the buckle is capable of use in various other connections, and it is capable of being applied to straps and other devices in a very simple manner, avoiding the necessity of doubling portions of the strap and stitching it as is necessary with the ordinary buckle, and, furthermore, it may be constructed very cheaply of almost wholly sheet material by the use of dies, enabling buckles constructed in accordance with the present invention to be sold at a reasonable price.

What is claimed is:—

1. A harness buckle adapted to be pivotally attached to a strap and having a fastening head thereon adapted to coöperate with an aperture in the strap, and keepers arranged to engage the same longitudinal edge of the strap permitting a relative turning movement between the latter and the buckle, and serving to retain the apertured portion of the strap in coöperative relation with the fastening head.

2. A buckle adapted to be pivotally attached to a strap and having a fastening head thereon capable of engaging and disengaging an apertured portion of the strap, when the buckle is turned relatively thereto, and keepers both opening toward the same side of the buckle and coöperating with the same longitudinal edge of the strap for preventing turning movement of the buckle.

3. A buckle adapted to be attached pivotally to a strap having a fastening head thereon provided with a laterally turned projection capable of being engaged and disengaged relative to a slotted portion of a strap when the buckle is turned into a position out of alinement with the strap, said projection coöperating with the slotted portion of the strap to prevent its disengagement from the strap when the buckle is in alinement therewith, and keepers arranged on opposite sides of the pivotal center of the buckle and arranged to coöperate with the edge of the strap to lock the buckle in alinement therewith.

4. A buckle embodying a pair of plates arranged in parallelism and adapted to lie on opposite sides of a strap, a pivot for connecting the plates to the strap for permitting relative movement of the latter and the strap in the plane of the sides thereof, a fastening head on the outside of one of said plates adapted to coöperate with an apertured portion of the strap, a keeper on each plate at opposite sides of said pivot, and opening toward the same side of the buckle and adapted to receive the strap between them and their respective plates for preventing relative turning movement of the buckle and strap.

5. A buckle comprising a body portion composed of sheet material embodying a pair of plates arranged substantially in parallelism and connected at one side, a fastening head on one of the plates adapted to coöperate with an apertured portion of the strap, a keeper arranged on the plate carrying the fastening head and attached to said plate at the same side that is attached to the coöperating plate, and a second keeper arranged on the coöperating plate and closed or attached thereto at the same side at which the latter

is connected to the plate having the fastening head.

6. A buckle comprising a pair of coöperatively arranged plates adapted to receive a strap between them, said plates being connected for simultaneous movement, a pivot connecting said plates pivotally to the strap, a fastening head arranged on the outer surface of one of the plates and adapted to coöperate with an apertured portion of the strap, a keeper on the plate carrying the fastening head and adapted to coöperate with the portion of the strap fastened by the latter, and a keeper on the coöperating plate adapted to coöperate with the portion of the strap secured by the fastening head and also the portion engaging between the plates, said keepers opening toward the same side of the buckle and coöperating with the edges of the strap to prevent relative pivotal movement of the buckle and the strap.

7. A buckle adapted to be pivotally attached to a strap having a fastening head thereon adapted to coöperate with an apertured portion of the strap and capable of being locked and unlocked by a relative turning movement of the buckle and strap, keepers on the buckle opening toward the same side thereof and on opposite sides of its pivotal point and adapted to coöperate with portions of the strap to prevent unlocking movement of the buckle, and a supplemental keeper adapted to be secured to a portion of the strap adjacent to one of the keepers first mentioned and having its opening reversely arranged relatively thereto and adapted to coöperate with the apertured portion of the strap to prevent its disengagement from said keepers.

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

DANIEL H. YOUNG.

Witnesses:

HUGH CLEMANS,

W. R. BLAKE.