

Aug. 11, 1942.

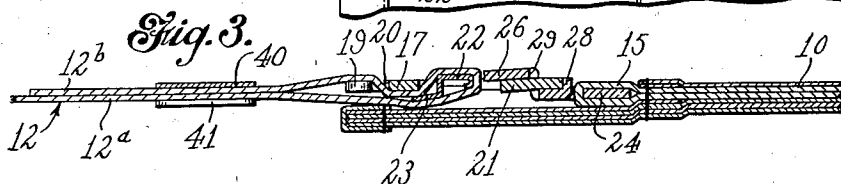
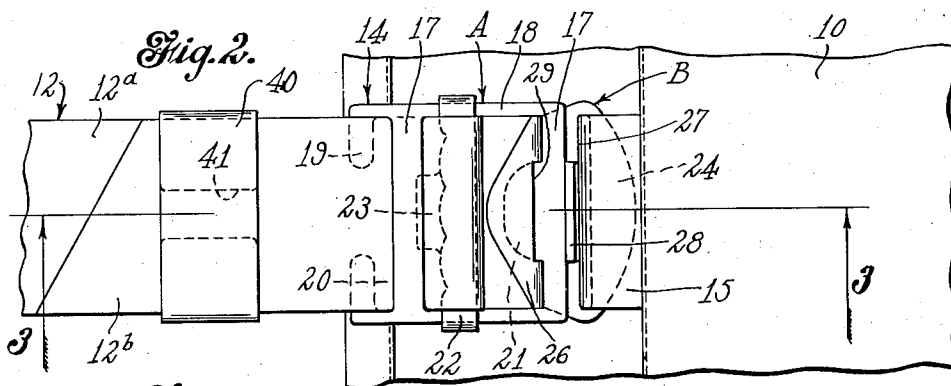
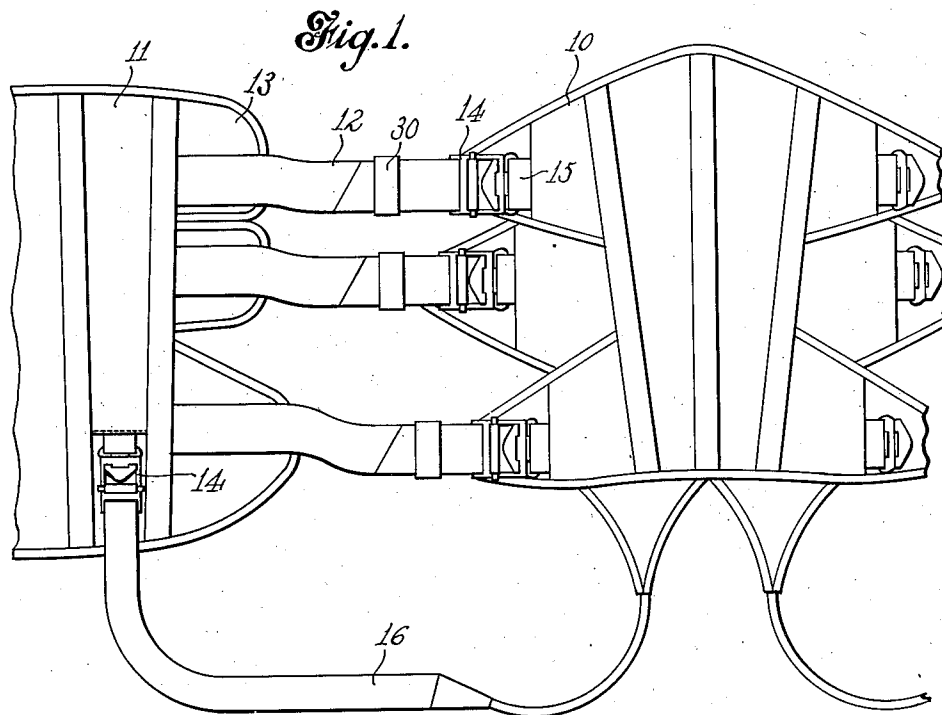
I. R. VERSOY

2,292,553

BUCKLE, CLASP, OR THE LIKE

Filed Feb. 4, 1942

2 Sheets-Sheet 1



Inventor

Irving R. Versoy

By *Rockwell-Bartholow*
Attorneys

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BUCKLE, CLASP, OR THE LIKE

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2 Sheets-Sheet 2

Fig. 4.

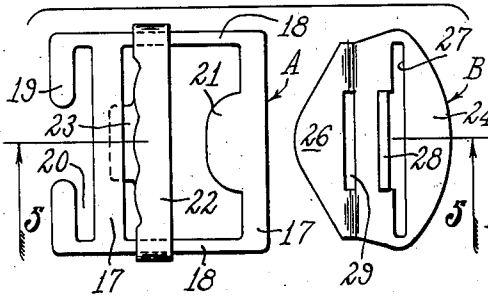


Fig. 9.

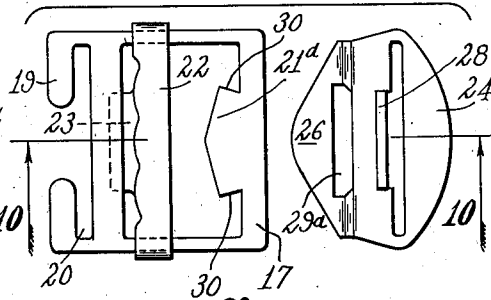


Fig. 5.

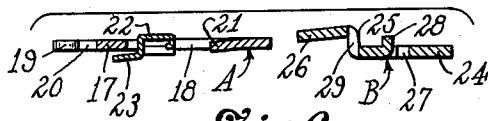


Fig. 10.

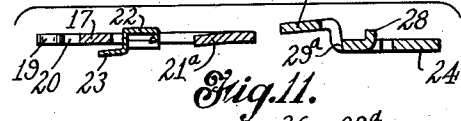


Fig. 6.



Fig. 11.

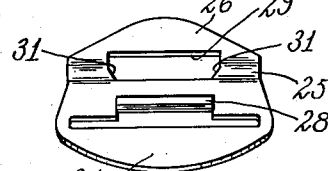


Fig. 7.



Fig. 12.

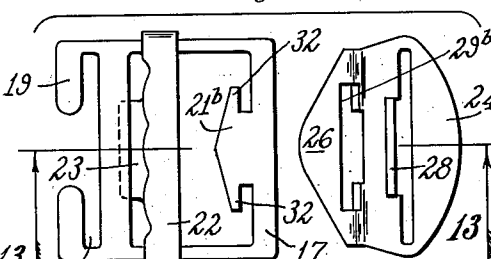


Fig. 8.

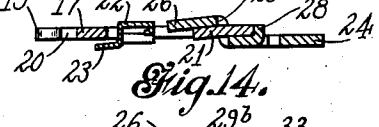


Fig. 13.

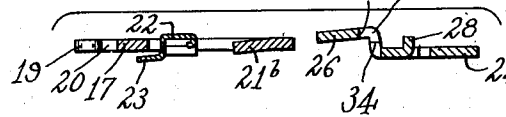


Fig. 14.

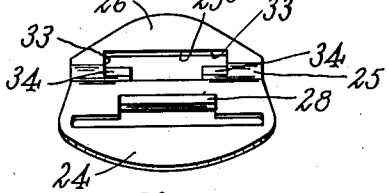


Fig. 15.



Inventor

Irving R. Versoy
By Rockwell - Bartholow
Attorneys

UNITED STATES PATENT OFFICE

2,292,553

BUCKLE, CLASP, OR THE LIKE

Irving R. Versoy, New Haven, Conn., assignor to
The Berger Brothers Company, New Haven,
Conn., a corporation of Connecticut

Application February 4, 1942, Serial No. 429,466

15 Claims. (Cl. 24-75)

This invention relates to buckles or similar fastening devices, and more particularly to a buckle designed to be used to secure garments or parts of garments together. The invention is, however, capable of use in any relation wherein the ordinary functions of a buckle are desired.

When garments or parts of a garment are to be secured together by means of a buckle, it is desirable that the portions of the buckle may be engaged with a minimum of effort or attention on the part of the user, and at the same time be so engaged that there is no likelihood of accidental detachment of the parts. It is, of course, also desirable to so arrange the buckle that the parts may be readily detached when desired. The present invention is designed to provide a buckle having the aforesaid functions.

One object of the present invention is, therefore, to provide a two-part buckle designed to connect garments or parts of a garment such that the portions of the buckle may be securely interengaged with a minimum of effort.

Another object of the invention is to provide a two-part buckle of the class described, the parts being so arranged that when once engaged there will be no likelihood of accidental detachment, while at the same time the parts may be readily detached one from the other when this is desired.

A still further object of the invention is to provide a simple and economical form of buckle for use in attaching garments or parts of a garment together, which buckle will be efficient in operation, economical to manufacture, and unlikely to become disengaged.

A still further object of the invention is to provide a buckle designed to be used in relations in which the buckle itself and associated parts of the garment or garments to which the buckle is attached will be subject to relatively hard usage, while at the same time the buckle will be relatively simple to manipulate, both as regards the attachment of its parts and the detachment thereof.

To these and other ends the invention consists in the novel features and combinations of parts to be hereinafter described and claimed.

In the drawings:

Fig. 1 is a front elevational view of portions of a garment provided with buckles embodying my invention;

Fig. 2 is an enlarged detail view of one of the buckles and associated parts of the garment;

Fig. 3 is a sectional view on line 3-3 of Fig. 2;

Fig. 4 is a detached plan view of the male and female portions of the buckle per se;

Fig. 5 is a sectional view on line 5-5 of Fig. 4;

Figs. 6, 7 and 8 are sectional view through the portions of the buckle showing the operation of securing the two parts of the buckle together;

Fig. 9 is a view similar to Fig. 4, showing a slightly modified form of my invention;

Fig. 10 is a sectional view on line 10-10 of Fig. 9;

Fig. 11 is a perspective view of the female member of the buckle;

Fig. 12 is a view similar to Fig. 4 showing a further modification;

Fig. 13 is a sectional view on line 13-13 of Fig. 12;

Fig. 14 is a perspective view of the female member of the buckle shown in Figs. 12 and 13; and

Fig. 15 is an enlarged sectional view of a slightly modified form of the buckle shown in Fig. 4.

To illustrate a preferred embodiment of my invention, I have shown in the accompanying drawings a garment which in this instance is a belt comprising a front section 10 and a rear section 11, the latter being provided with relatively long straps 12 secured to tabs 13 adjacent the ends of which the male portions of the buckles 14 are adjustably secured, as will be hereinafter explained. The front section 10 of the garment is provided with relatively short straps 15 to which the female portions of the buckles 14 are secured. As shown, the garment is also provided with perineal straps 16 which are adapted to be secured to the back portion of the garment by similar buckles 14. It will be understood that this particular garment is shown only by way of illustrating one of the various uses of the invention which is applicable to garments or parts of garments of other form and construction.

As shown more particularly in Figs. 2, 3 and 4, the buckle 14 comprises a male portion A and a female portion B. The male portion A of the buckle is generally in the form of a hollow rectangle having front and rear substantially parallel members 17, and side portions 18. As shown, these side portions are continued beyond the rear bars 17 and are there provided with inwardly turned ends 19, the extremities of which are spaced from each other so as to permit the entry of the straps, as will be hereinafter explained, within the slot or opening 20 between these ends and the rear bar 17. The front bar is provided with a tongue or inwardly extending portion 21, which, as will be hereinafter ex-

plained, is adapted to cooperate with an opening in the female portion B of the buckle. The tongue 21 is substantially in the plane of the rectangular body portion of the portion A of the buckle, but inclines slightly inwardly or downwardly, as shown in Fig. 5. Also this tongue 21 may taper slightly toward its free end so as to provide for easy engagement with the female portion of the buckle.

Slidably mounted on the side portions 18 is the usual clamping bar 22 having a tongue 23 extending below and adapted to cooperate with the rear bar 17 to grip the strap therebetween, as will be hereinafter explained.

The female portion B of the buckle comprises a base portion 24, an intermediate portion 25 extending substantially transversely to the base portion, and an end or tip portion 26 substantially parallel to the base portion 24 but inclined slightly downwardly toward the base portion, as shown, for example, in Fig. 5. It will be seen, therefore, that the female portion of the buckle is substantially Z-shaped in cross section, having two substantially parallel portions 24 and 26 extending in opposite directions from the ends of a transverse or upstanding portion 25.

The portion 24 of the female portion of the buckle is provided with a transversely extending slot 27, and an upstanding stop or shoulder 28, the shoulder, as shown, being preferably formed by bending upwardly at substantially right angles to the plane of the member 24 a portion of the metal from the slot 27. Also the upstanding intermediate portion 25 of this portion of the buckle is provided with an opening 29, which is adapted to receive the tongue 21 of the male portion of the buckle. The free end 26 of the female portion of the buckle has tapered sides to be substantially V-shaped in plan view, as shown in Fig. 4.

The female portion of the buckle is secured upon the strap 15 by having this strap passed through the slot 27 and the ends of the strap sewed or otherwise secured together. The male portion of the buckle, as shown in Fig. 3, is adapted to be secured to the free end of the strap 12. As shown in this figure, the end of the strap is passed below the rear end of the buckle and upwardly between the bar 22 and tongue 21. It is then folded upon itself and passed downwardly between the bar 22 and the rear portion 17 of the buckle lying below the latter. This secures the buckle adjustably to the strap, for, as will be understood, when tension is exerted upon the lower ply 12^a of this strap, the slidable bar 22 will be forced toward the portion 17, thus binding the strap between this side of the buckle and the tongue 23. However, when tension is exerted upon the free end 12^b forming the upper ply of the strap, the strap will slip freely through the buckle for adjustment.

After the ends of the strap have been inserted in the male portion of the buckle, as described, and adjusted to the desired position, the upper ply 12^b of the strap may be inserted within the space 20 between the rear bar 17 and the end portions 19. This may be readily done by folding the outer edges of this free end of the strap toward the center and inserting them into the slot 20 through the opening between the adjacent ends of the portions 19. This will cause the entire male portion of the buckle to be held in the plane of the strap and not swing loosely around the strap upon the bar 22, as would otherwise

be the case, and results in easier manipulation of the buckle during the fastening operation.

After the strap has been so arranged, both plies may be inserted within a clip 40, as shown in Figs. 2 and 3, this clip merely being in the form of a keeper and comprising a strip of metal folded in the form shown, having its ends spaced, as shown at 41, for the insertion of the plies of the strap.

When the two portions of the buckle have been secured to the straps 12 and 15, respectively, they may be securely engaged, as shown in Figs. 6, 7 and 8. As shown in Fig. 6, for example, the operation is begun by tilting the male portion of the buckle with respect to the female portion of the buckle, and inserting the end portion 26 between the tongue 21 and bar 22 until the end of the tongue 21 reaches the opening 29. The direction of movement may now be reversed so that the tongue 21 enters the opening 29, as shown in Fig. 7. The male portion A of the buckle may then be brought upwardly substantially in the plane of the female portion B, and, as shown in Fig. 8, the front edge of the portion 17 will then lie between the shoulder or stop 28 and the intermediate upstanding portion 25 of the buckle. It will be seen, therefore, that with the parts in this position there will be no danger of any disengagement of the parts, for, as shown in Fig. 8, the male portion of the buckle must move toward the right with respect to the female portion to be disengaged, and such movement is prevented by the shoulder 28.

Disengagement can only be effected by tilting the main portion of the buckle to the position shown in Fig. 7, and, as will be understood, this tilting movement is resisted when the buckle is in use by the tension which will normally be applied to the straps 12 and 15. It will be seen that the slight inclination of the portion 21 will facilitate the insertion of this member into the opening 29, as will also the rounded or tapered end portion of the part 21. This shape of the latter member will serve to guide it through the opening or slot, even if it may approach that slot at an angle.

In Fig. 15 of the drawings I have shown the upstanding portion 25 of the female portion of the buckle provided with a forwardly extending bump or boss 25^a. When the two portions of the buckle are engaged it will be seen that the front portion 17 of the male part of the buckle will lie below this boss and will thereby be held against upward movement. As upward movement is necessary for disengagement of the parts, it will be seen that they will be securely locked together, although it will be found that in many instances the provision of the boss 25^a is unnecessary.

In Figs. 9, 10 and 11 of the drawings I have shown a somewhat modified form of buckle in which the tongue 21^a, corresponding to the tongue 21 of the male portion of the buckle shown in Fig. 4, is provided with dove-tailed side edges 30 whereby the end portion of this member is wider than the base portion adjacent the front cross member 17. The opening 29^a of the female portion of this modified form of buckle is provided with upwardly and outwardly tapering side edges 31, as shown more especially in Fig. 11, and the upper portion of this opening is slightly larger to extend a slightly greater distance along the tip portion 26. Otherwise the buckle shown in Figs. 9 to 11 is substantially like that shown in Figs. 4 and 5, and the two portions will be

engaged in the same manner except that the tongue 21^a can only be inserted through the opening 29^a when it is at the upper part of this opening. After such insertion it will be moved downwardly, as already explained, and the narrower base portion of the tongue 21^a will engage in the lower narrow portion of the opening 29^a and will be prevented from being disengaged from this opening, as the tip of the tongue 21^a will be too large to pass through the lower portion of the opening 29^a. Disengagement is, of course, effected by raising the tongue into the larger part of the opening 29^a.

In Figs. 12 to 14 of the drawings a further modification is shown, in which the tongue 21^b is of T-shaped formation having overhanging end portions 32. The opening 29^b of the female portion of the buckle is in this instance of similar shape, being enlarged at its upper portion, as shown at 33, and provided with shoulders 34 at its lower portion. In this instance also, the tongue 21^b can only be inserted through the upper portion of the opening 29^b, and when it drops down until the member 17 rests upon the base portion 24, the overhanging members 32 will be held behind the shoulders 34 and effectively prevent disengagement of the parts. In other respects the parts of the buckles shown in Figs. 12 to 14 are substantially like the corresponding elements of the buckles shown in Figs. 4 and 5.

While I have shown and described some preferred embodiments of my invention, it will be understood that it is not to be limited to all of the details shown, but is capable of modification and variation within the spirit of the invention and within the scope of the claims.

What I claim is:

1. A two-part buckle or clasp, one part of which is of open rectangular formation provided with side members and a forwardly disposed member having an inwardly projecting tongue, the other part thereof having a base portion and a second portion in a plane substantially at right angles to that of the base portion, said second portion having an opening to receive said tongue, and a strap-clamping bar slidably mounted on said side members.

2. A two-part buckle or clasp, one part of which is provided with a forwardly disposed member having an inwardly projecting tongue, the other part thereof having a base portion and a second portion in a plane substantially at right angles to that of the base portion, said second portion having an opening to receive said tongue, and means on said base portion to engage said member on said first part and normally prevent withdrawal of the tongue from the opening.

3. A two-part buckle or clasp, one part of which is provided with a forwardly disposed member having an inwardly projecting tongue, the other part thereof having a base portion and a second portion in a plane substantially at right angles to that of the base portion, said second portion having an opening to receive said tongue, and an upstanding shoulder on said base portion to abut said member on the first part and normally hold it against movement in a direction to withdraw said tongue from said opening.

4. A two-part buckle or clasp, one part of which is provided with a forwardly disposed member having an inwardly projecting tongue, the other part thereof having a base portion and a second portion in a plane substantially at

right angles to that of the base portion, said second portion having an opening to receive said tongue, and an upstanding shoulder on said base portion to abut said member on the first part and normally hold it against movement in a direction to withdraw said tongue from said opening, said member being of bar-like form and adapted to lie snugly between said second portion and said shoulder.

5. A two-part buckle or clasp, one part of which is provided with a forwardly disposed member having an inwardly projecting tongue, the other part thereof having a base portion and a second portion in a plane substantially at right angles to that of the base portion, said second portion having an opening to receive said tongue, an upstanding shoulder on said base portion to abut said member on the first part and normally hold it against movement in a direction to withdraw said tongue from said opening, said member being of bar-like form and adapted to lie snugly between said second portion and said shoulder, and said shoulder having a boss thereon to overlie said bar-like member.

6. A two-part buckle or clasp comprising one part adapted to be adjustably secured to a strap or the like, said part having a front bar-like member provided with a rearwardly projecting tongue lying substantially in the plane of the member, and a second part comprising a base portion adapted to be secured to a part of a garment, a portion upstanding from the base portion and provided with an opening to receive said tongue, and an end portion extending from the upper edge of said upstanding portion in a direction away from the base portion, and means for adjustably securing said first part to a strap.

7. A two-part buckle or clasp comprising one part adapted to be adjustably secured to a strap or the like, said part having a front bar-like member provided with a rearwardly projecting tongue lying substantially in the plane of the member, and a second part comprising a base portion adapted to be secured to a part of a garment, a portion upstanding from the base portion and provided with an opening to receive said tongue, an end portion extending from the upper edge of said upstanding portion in a direction away from the base portion, and a shoulder on said base portion spaced from and substantially parallel to said upstanding portion to engage said bar-like member and hold it in place.

8. A two-part buckle or clasp comprising one part adapted to be adjustably secured to a strap or the like, said part having a front bar-like member provided with a rearwardly projecting tongue lying substantially in the plane of the member, and a second part comprising a base portion adapted to be secured to a part of a garment, a portion upstanding from the base portion and provided with an opening to receive said tongue, and an end portion extending from the upper edge of said upstanding portion in a direction away from the base portion, said end portion overlying said tongue when the latter is received in said opening.

9. A buckle or clasp comprising a female member of substantially Z-shaped form having an intermediate portion and substantially parallel end portions extending in opposite directions from the ends of said intermediate portion, the latter being provided with an opening, and a male member of open construction having a front bar and an inwardly projecting tongue on said bar adapted to be received in said opening.

10. A buckle or clasp comprising a female member of substantially Z-shaped form having an intermediate portion and substantially parallel end portions extending in opposite directions from the ends of said intermediate portion, the latter being provided with an opening, and a male member of open construction having a front bar and an inwardly projecting tongue on said bar adapted to be received in said opening, said tongue and opening being of complementary shape whereby the buckle members interlock when the tongue is inserted in the opening.

11. A buckle or clasp comprising a female member of substantially Z-shaped form having an intermediate portion and substantially parallel end portions extending in opposite directions from the ends of said intermediate portion, the latter being provided with an opening, and a male member of open construction having a front bar and an inwardly projecting tongue on said bar adapted to be received in said opening, and said tongue and opening being of dove-tailed form whereby said tongue when inserted in the opening interlocks with the edges thereof.

12. A buckle or clasp comprising a female member of substantially Z-shaped form having an intermediate portion and substantially parallel end portions extending in opposite directions from the ends of said intermediate portion, the latter being provided with an opening, and a male member of open construction having a front bar and an inwardly projecting tongue on said bar adapted to be received in said opening, said tongue and opening being of T-shaped form whereby said tongue when inserted in said opening interlocks with the edges thereof.

13. A buckle or clasp comprising a female member of substantially Z-shaped form having an intermediate portion and substantially parallel end portions extending in opposite directions from the ends of said intermediate portion, the latter being provided with an opening, and a male member of open construction having a front bar and an inwardly projecting tongue on said bar adapted to be received in said opening, said male member having at the rear portion thereof a slot to receive a strap or the like, and said slot opening through the rear edge of said member.

14. A buckle or clasp comprising a female member of substantially Z-shaped form having an intermediate portion and substantially parallel end portions extending in opposite directions from the ends of said intermediate portion, the latter being provided with an opening, and a male member of open construction having a front bar and an inwardly projecting tongue on said bar adapted to be received in said opening, one of the end portions of said female member having an upstanding shoulder thereon spaced from and substantially parallel to said intermediate portion whereby said bar is retained between said intermediate portion and said shoulder.

15. A buckle or clasp comprising a female member of substantially Z-shaped form having an intermediate portion and substantially parallel end portions extending in opposite directions from the ends of said intermediate portion, the latter being provided with an opening, and a male member of open construction having a front bar and an inwardly projecting tongue on said bar adapted to be received in said opening, said tongue being slightly inclined with respect to the plane of said bar to facilitate engaging said member with the female portion of the buckle.

16. A buckle or clasp comprising a female member of substantially Z-shaped form having an intermediate portion and substantially parallel end portions extending in opposite directions from the ends of said intermediate portion, the latter being provided with an opening, and a male member of open construction having a front bar and an inwardly projecting tongue on said bar adapted to be received in said opening, said male member having at the rear portion thereof a slot to receive a strap or the like, and said slot opening through the rear edge of said member.

IRVING R. VERSOY.