Dec. 14, 1965 W. ROSENZWEIG 3,222,687

ADJUSTABLE STRAP

Filed May 31, 1963

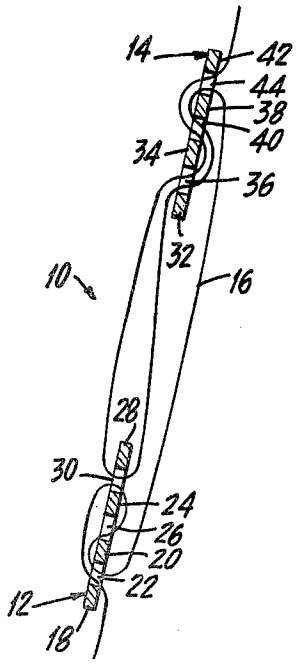


FIG. 2

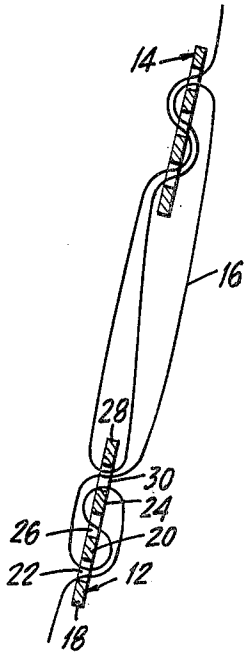


FIG. 4

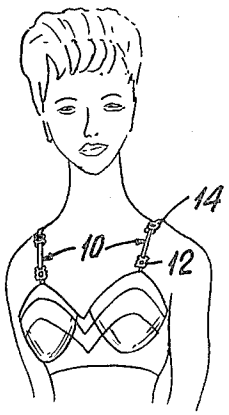


FIG. 1

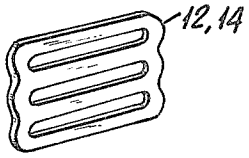


FIG. 3

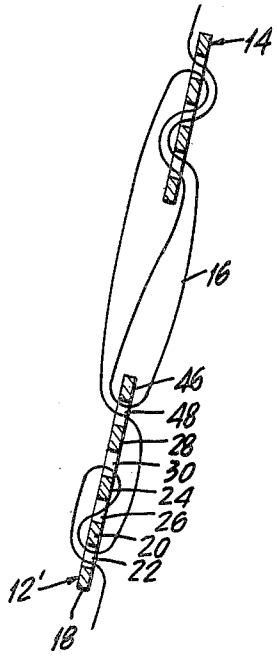


FIG. 5

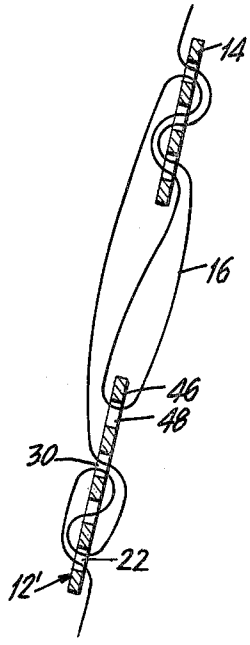


FIG. 7

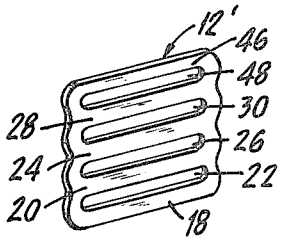


FIG. 6

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ADJUSTABLE STRAP

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9 Claims. (Cl. 2—323)

This invention relates to an adjustable strap for articles of clothing, especially brassieres and slips.

An object of the present invention is to provide an adjustable strap of the type which only includes an anchorage buckle and an adjusting buckle interconnected to each other by a unitary length of material, and wherein provision is made to lock the buckles against movement with respect to each other after the adjusting buckle is moved into its adjusted position. The locking feature of the present invention is especially important with respect to shoulder straps for brassieres, since relatively large forces are exerted on the ends of the straps, which have caused slippage of the adjusting buckle of previous straps. Moreover, shrinking or other changes of the tape material of the strap after washing has caused slippage of the buckles of previous straps. The present invention obviates these defects.

A further object is to provide an adjustable strap having an improved anchorage end.

Another object is generally to provide an improved adjustable strap of the type indicated.

The above and other objects, features and advantages of the invention will be more clearly understood from the following description of the invention considered in connection with the accompanying illustrative drawing in which:

FIG. 1 illustrates the strap of the present invention incorporated in a brassiere;

FIG. 2 is a side elevational view of the strap with the buckles in cross-section;

FIG. 3 is a perspective view of an anchorage or adjusting buckle;

FIG. 4 is a side elevational view of the strap with the buckles in cross-section according to another form of the invention;

FIG. 5 is a side elevational view of the strap with the buckles in cross-section according to a still further form of the invention;

FIG. 6 is a perspective view of another form of anchorage buckle; and

FIG. 7 is a side elevational view of a strap with the buckles in cross-section according to a still further form of the invention.

Referring now to the drawing in detail, and first to FIGS. 1 to 3, the strap 10 comprises an anchorage buckle 12, an adjusting buckle 14, and a threaded ribbon or tape 16 interconnecting the buckles in the manner shown. The tape is threaded through the anchorage buckle in a manner to hold the anchorage buckle in fixed position on the tape. The tape is threaded through the adjusting buckle in such manner that, when the tape is slightly loosened on the adjusting buckle, the latter may be slid along the tape for adjusting the overall length of the tape. When the tape is tightened on the adjusting buckle it locks the adjusting buckle in its adjusted position, and excessive pulling forces at the opposite garment connecting ends of the strap tape do not move the adjusting buckle or otherwise vary the adjusted strap length. The locking of the adjusting buckle is accomplished by threading the tape through the adjusting buckle in the manner hereinafter described.

The anchorage buckle 12 comprises a first cross bar 18, a second cross bar 20 spaced from said first cross bar and thereby forming a first aperture 22. A third cross bar 24 is provided spaced from said second cross bar 20 and thereby forming a second aperture 26. A fourth cross bar 28 is also provided spaced from said third cross bar 24 and thereby forming a third aperture 30.

The adjusting buckle 14 comprises a first end cross bar 32 and a first intermediate cross bar 34 spaced from said first end cross bar 32 and thereby forming a first aperture 36. A second intermediate cross bar 38 is also provided spaced from said first intermediate cross bar 34 and thereby forming a second aperture 40. A second end cross bar 42 is also provided spaced from said second intermediate cross bar 38 and thereby forming a third aperture 44.

The threading of tape 16 through anchorage buckle 12 and adjusting buckle 14 may be described as follows. The tape passes through the first aperture 22 of the anchorage buckle 12, over the second cross bar 20 and third cross bar 24 of the anchorage buckle and through the third aperture 30 thereof, under the third cross bar 24 of the anchorage buckle and through the second aperture 26 thereof, over the second cross bar 20 of the anchorage buckle and through the first aperture 22 thereof, under the second, third and fourth cross bars 20, 24 and 28, respectively, of the anchorage buckle and to the adjusting buckle, passing under the first, second and third cross bars 32, 34 and 38, respectively, of the adjusting buckle and through the third aperture 44 thereof, around the second intermediate cross bar 38 of the adjusting buckle and through the second aperture 40 thereof, around the first intermediate cross bar 34 of the adjusting buckle and through the first aperture 36 thereof, back to and through the third aperture 30 of the anchorage buckle, back to the adjusting buckle and through the first aperture 36 thereof, around said first intermediate cross bar 34 of the adjusting buckle and through the second aperture 40 thereof, and around the second intermediate cross bar 38 of the adjusting buckle and through the third aperture 44 thereof.

Referring now to FIG. 4, there is shown another form of the invention in which the tape is threaded through the anchorage buckle in a different manner from what is shown in FIG. 2, but in which the tape is threaded through the adjusting buckle in the same manner as shown in FIG. 2. More particularly, the tape passes through aperture 22 of the anchorage buckle by first passing over cross bar 18, rather than under the cross bar, as illustrated by FIG. 2, then under cross bars 20 and 24, respectively, through aperture 30, over cross bar 24, through aperture 26, under cross bar 20, through aperture 22, over cross bars 20 and 24, respectively, through aperture 30 and on to the adjusting back through which it is threaded as previously described.

In FIGS. 5 and 7, the anchorage buckle 12' is provided with another and fifth cross bar 46 spaced from fourth cross bar 28 and thereby forming a fourth aperture 48. The tape is initially threaded through the anchorage buckle as previously described and passes through aperture 48 to bring it over cross bar 46 and over the adjusting buckle, rather than under it, as illustrated by FIG. 2, and is then threaded through the adjusting buckle, as illustrated, which is opposite to that illustrated by FIG. 2.

FIG. 7 is similar to FIG. 5, except that the tape passes from aperture 22 to and through aperture 30 and then on to the adjusting buckle, rather than through aperture 48.

In all forms of the invention, the tape returns to the anchorage buckle from the adjusting buckle and passes through the end aperture of the anchorage buckle, which is aperture 30 in the forms illustrated by FIGS. 2 and 4, and aperture 48 in the form illustrated by FIGS. 5, 6 and 7.

While I have shown and described the preferred embodiment of the invention, it will be understood that the invention may be embodied otherwise than as herein spe-

cifically illustrated or described, and that certain changes in the form and arrangement of parts and in the specific manner of practicing the invention may be made without departing from the underlying idea or principles of this invention within the scope of the appended claims.

I claim:

1. An adjustable strap comprising, an anchorage buckle having a first cross bar and a second cross bar spaced from said first cross bar and thereby forming a first aperture, a third cross bar spaced from said second cross bar and thereby forming a second aperture, and a fourth cross bar spaced from said third cross bar and thereby forming a third aperture; an adjusting buckle having a first end cross bar and a first intermediate cross bar spaced from said first end cross bar and thereby forming a first aperutre, a second intermediate cross bar spaced from said first intermediate cross bar and thereby forming a second aperture, and a second end cross bar spaced from said second intermediate cross bar and thereby forming a third aperture; and a tape threaded through said first aperture of said anchorage buckle, under said second and third cross bars of said anchorage buckle, through said third aperture of said anchorage buckle, over said third cross bar of said anchorage buckle and through said second aperture thereof, under said second cross bar of said anchorage buckle and through said first aperture thereof, over said second and third cross bars of said anchorage buckle and through said third aperture thereof, through said third aperture of said adjusting buckle, around said second intermediate cross bar of said adjusting buckle and through said second aperture thereof, around said first intermediate cross bar of said adjusting buckle and through said first aperture thereof, back to said anchorage buckle and through said third aperture thereof, back to said adjusting buckle and through said first aperture thereof, around said first intermediate cross bar of said adjusting buckle and through said second aperture thereof, and around said second intermediate cross bar of said adjusting buckle and through said third aperture thereof.

2. An adjustable strap comprising, an anchorage buckle having a first cross bar and a second cross bar spaced from said first cross bar and thereby forming a first aperture, a third cross bar spaced from said second cross bar and thereby forming a second aperture, a fourth cross bar spaced from said third cross bar and thereby forming a third aperture, and a fifth cross bar spaced from said fourth cross bar and thereby forming a fourth aperture; an adjusting buckle having a first end cross bar and a first intermediate cross bar spaced from said first end cross bar and thereby forming a first aperture, a second intermediate cross bar spaced from said first intermediate cross bar and thereby forming a second aperture, and a second end cross bar spaced from said second intermediate cross bar and thereby forming a third aperture; and a tape threaded through said first aperture of said anchorage buckle, over said second and third cross bars of said anchorage buckle and through said third aperture thereof, under said third cross bar of said anchorage buckle and through said second aperture thereof, over said second cross bar of said anchorage buckle and through said first aperture thereof, under said second, third and fourth cross bars of said anchorage buckle and through said fourth aperture thereof, through said third aperture of said adjusting buckle, around said second intermediate cross bar of said adjusting buckle and through said second aperture thereof, around said first intermediate cross bar of said adjusting buckle and through said first aperture thereof, back to said anchorage buckle and through said fourth aperture thereof, back to said adjusting buckle and through said first aperture thereof, around said first intermediate cross bar of said adjusting buckle and through said second aperture thereof, and around said second intermediate cross bar of said adjusting buckle and through said third aperture thereof.

3. An adjustable strap comprising, an anchorage buckle having a first cross bar and a second cross bar spaced from said first cross bar and thereby forming a first aperture, a third cross bar spaced from said second cross bar and thereby forming a second aperture, a fourth cross bar spaced from said third cross bar and thereby forming a third aperture, and a fifth cross bar spaced from said fourth cross bar and thereby forming a fourth aperture; an adjusting buckle having a first end cross bar and a first intermediate cross bar spaced from said first end cross bar and thereby forming a first aperture, a second intermediate cross bar spaced from said first intermediate cross bar and thereby forming a second aperture, and a second end cross bar spaced from second intermediate cross bar and thereby forming a third aperture; and a tape threaded through said first aperture of said anchorage buckle, over said second and third cross bars of said anchorage buckle and through said third aperture thereof, under said third cross bar of said anchorage buckle and through said second aperture thereof, over said second cross bar of said anchorage buckle and through said first aperture thereof, under said second and third cross bars of said anchorage buckle and through said third aperture thereof, through said third aperture of said adjusting buckle, around said second intermediate cross bar of said adjusting buckle and through said second aperture thereof, around said first intermediate cross bar of said adjusting buckle and through said first aperture thereof, back to said anchorage buckle and through said fourth aperture thereof, back to said adjusting buckle and through said first aperture thereof, around said first intermediate cross bar of said adjusting buckle and through said second aperture thereof, and around said second intermediate cross bar of said adjusting buckle and through said third aperture thereof.

4. An adjustable strap comprising, an anchorage buckle having a first cross bar and a second cross bar spaced from said first cross bar and thereby forming a first aperture, a third cross bar spaced from said second cross bar and thereby forming a second aperture, and a fourth cross bar spaced from said third cross bar and thereby forming a third aperture; an adjusting buckle having apertures therein; and a tape threaded through said first aperture of said anchorage buckle, under said second and third cross bars of said anchorage buckle, through said third aperture of said anchorage buckle, over said third cross bar of said anchorage buckle and through said second aperture thereof, under said second cross bar of said anchorage buckle and through said first aperture thereof, over said second and third cross bars of said anchorage buckle and through said third aperture thereof, through said apertures of said adjusting buckle, back to said anchorage buckle and through said third aperture thereof, and back to said adjusting buckle and through said apertures thereof.

5. An adjustable strap comprising, an anchorage buckle having a first cross bar and a second cross bar spaced from said first cross bar and thereby forming a first aperture, a third cross bar spaced from said second cross bar and thereby forming a second aperture, a fourth cross bar spaced from said third cross bar and thereby forming a third aperture, and a fifth cross bar spaced from said fourth cross bar and thereby forming a fourth aperture; an adjusting buckle having apertures therein; and a tape threaded through said first aperture of said anchorage buckle, over said second and third cross bars of said anchorage buckle and through said third aperture thereof, under said third cross bar of said anchorage buckle and through said second aperture thereof, over said second cross bar of said anchorage buckle and through said first aperture thereof, under said second, third and fourth cross bars of said anchor-

age buckle and through said fourth aperture thereof, through said adjusting buckle, back to said anchorage buckle and through said fourth aperture thereof, and back to and through said adjusting buckle.

6. An adjustable strap comprising, an anchorage buckle having a first cross bar and a second cross bar spaced from said first cross bar and thereby forming a first aperture, a third cross bar spaced from said second cross bar and thereby forming a second aperture, a fourth cross bar spaced from said third cross bar and thereby forming a third aperture, and a fifth cross bar spaced from said fourth cross bar and thereby forming a fourth aperture; an adjusting buckle having apertures therein; and a tape threaded through said first aperture of said anchorage buckle, over said second and third cross bars of said anchorage buckle and through said third aperture thereof, under said third cross bar of said anchorage buckle and through said second aperture thereof, over said second cross bar of said anchorage buckle and through said first aperture thereof, under said second and third cross bars of said anchorage buckle and through said third aperture thereof, through said adjusting buckle, back to said anchorage buckle and through said fourth aperture thereof, and back to and through said adjusting buckle.

7. An adjustable strap comprising an anchorage buckle having first, second and third cross bars and first and second apertures, an adjusting buckle comprising first, second and third cross bars and first and second apertures, and a tape passing on one side of the first and second cross bars of the anchorage buckle, then through the second aperture of said anchorage buckle, then around the second cross bar of the anchorage buckle, to the other side of said anchorage buckle, then through the first aperture to said one side of said anchorage buckle, then around the first cross bar to the other side of said anchorage buckle, then around said first and second cross bars at said other side of said anchorage buckle, then through a slot of the anchorage buckle to said one side thereof, then up and through an aperture of said adjusting buckle, then around a cross bar of said adjusting buckle, back to the anchorage buckle around the third cross bar thereof, then back to said adjusting buckle through an aperture thereof, around a cross bar thereof, and through another aperture thereof.

8. An anchorage buckle having at least three cross bars and at least two slots and first and second sides, and an adjusting buckle having at least two cross bars and at least one slot and first and second sides, a single tape having a first portion passing through a first slot of the anchorage buckle from the first side to the second side, a second portion extending from said first portion passing around a first cross bar of said anchorage buckle at said second side, a third portion extending from said second portion and passing through a second slot of the anchorage buckle from said second side back to the first side thereof, a fourth portion extending from said third portion passing over the first side, over an edge and around the second side of a second cross bar, a fifth portion extending from said fourth portion and

passing over the second slot and first cross bar at said second side of said anchorage buckle, a sixth portion extending from said fifth portion and passing through a slot of said anchorage buckle from the second side to the first side, a seventh portion extending from the sixth portion and passing to the adjusting buckle, an eighth portion extending from the seventh portion and passing through a slot of said adjusting buckle and around a cross bar thereof, a ninth portion extending from said eighth portion and passing back to the anchorage buckle, a tenth portion extending from said ninth portion and passing through a slot thereof and around a cross-bar thereof, an eleventh portion extending from said tenth portion, back to said adjusting buckle, and a twelfth portion extending from said eleventh portion and passing through a slot of said adjusting buckle, said sixth portion being located between said first portion and said tenth portion of said tape.

9. In combination, an anchorage buckle having at least four cross bars and at least three slots, and first and second sides, and an adjusting buckle having at least three cross bars and at least two slots and first and second sides, a single tape having a first passage through one slot of the anchorage buckle from the first side to the second side and extending around at least two cross bars and an intervening slot at said second side of said anchorage buckle, a second passage through another slot of said anchorage buckle from the second side to the first side, extending around at least one cross bar of the anchorage buckle at said first side, a third passage through a slot of said anchorage buckle from said first side to said second side, extending around at least one cross bar at said second side, a fourth passage through a slot of said anchorage buckle from said second side to said first side, extending over at least two cross bars and an intervening slot at said first side of said anchorage buckle, a fifth passage through a slot of said anchorage buckle, from said first side to said second side, extending up to the adjusting buckle and through one slot, from a first side thereof to a second side thereof, around a cross bar of said adjusting buckle and through another slot thereof, back to said anchorage buckle around at least one cross bar thereof, a sixth passage through a slot thereof from one side thereof to the other thereof back to the adjusting buckle and through a slot thereof and around the cross bar thereof and through another slot thereof, said fifth passage of said tape through said anchorage buckle being disposed between said second and sixth passages of said tape through anchorage buckle.

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