July 5, 1938. S. SEGAL 2,122,441

FASTENING DEVICE

Filed June 10, 1937

Fig. 1.

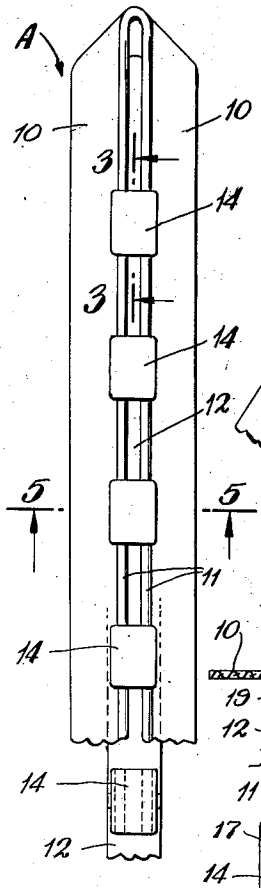


Fig. 2.

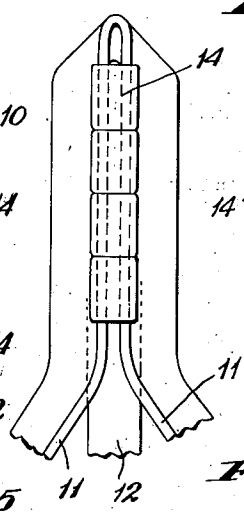


Fig. 3.

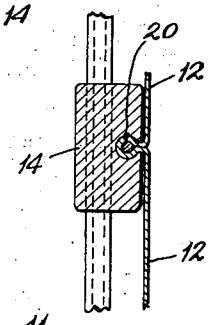


Fig. 4.

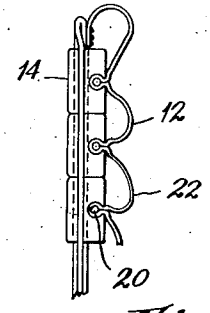


Fig. 10a.

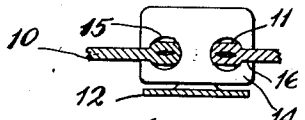


Fig. 6.

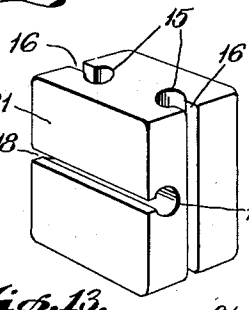


Fig. 7.

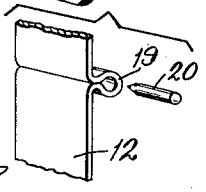


Fig. 5.

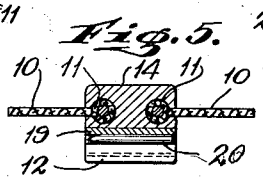


Fig. 12.

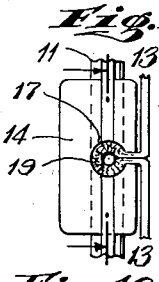


Fig. 13.

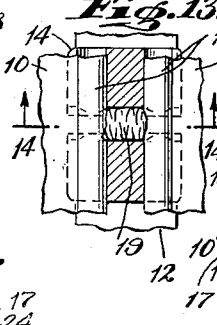


Fig. 11.

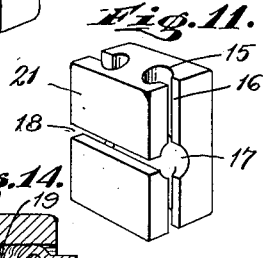


Fig. 14.

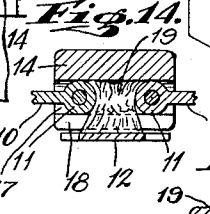


Fig. 15.

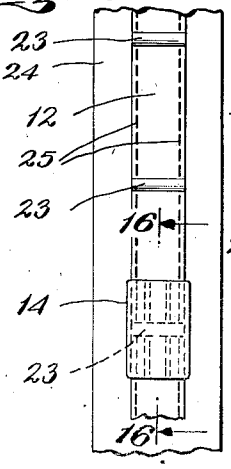


Fig. 16.

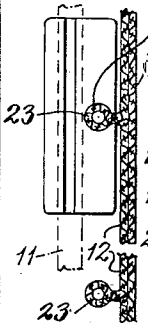


Fig. 8.

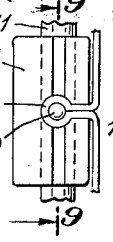


Fig. 9.

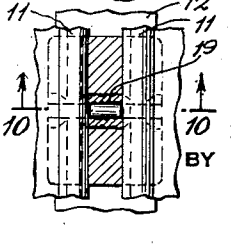
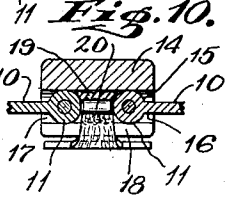


Fig. 10.



INVENTOR
Samuel Segal
BY
ATTORNEY

Patented July 5, 1938 2,122,441

UNITED STATES PATENT OFFICE

2,122,441

FASTENING DEVICE

Samuel Segal, Brooklyn, N. Y., assignor of twenty-five percent to Charles Palmer, Washington, D. C., twenty-five percent to Harry Model, and twenty-five percent to Harry Schwartz, both of New York, N. Y.

Application June 10, 1937, Serial No. 147,401

6 Claims. (Cl. 24—207)

The present invention deals with a fastening device of the type having a plurality of spaced runners fastened to an intermediately disposed flexible ribbon forming settable closure means for a gap in wearing apparel comprising beaded edges slidably guiding the runners and although the invention is particularly applicable to wearing apparel in its broadest aspect it is not limited in this respect. In the prior art fastening devices of the type referred to, the runners thereof as far as I am aware were fastened to a flexible ribbon by tacks or the like having their shanks projected through the ribbon and runners while the heads of the tacks were of a sufficient diameter to engage a greater portion of the width of the ribbon and in actual practice at times the heads of the tacks were exposed to the surface of the skin of the user or adjacent to the undergarment of the latter. Where the heads are exposed to the skin, chafing or irritation would take place and if adjacent to the undergarment the latter is caught therein in the event there be clearance between a head and a respective runner and thus the latter is locked and prevented from sliding. Also in actual practice, the shank of a tack at times becomes disassociated from its runner through uncontrollable causes and consequently falls towards the body of the user subjecting the latter to danger and infection due to scratching of the skin in cases where no undergarment is adjacent a runner attached to the intermedially disposed ribbon. The present invention has as its dominant object to overcome the disadvantage referred to in providing an improved and serviceable fastening device comprising a plurality of slidably guided runners each having means for threadably receiving a portion of their common flexible ribbon anchored by simplified means inaccessible to the surface of the skin of the user, thus eliminating the possible danger of scratching, irritation or infection of the skin, and in case where the improved fastening device is disposed adjacent an undergarment, the anchoring means is adequately spaced from the undergarment to prevent interlocking therewith to insure proper sliding action of the several runners. Other objects, advantages, and features of the invention are in part obvious and in part hereinafter more particularly pointed out and for a clearer understanding of the invention, attention is directed to the following description in connection with the accompanying drawing in which:

Fig. 1 is a fragmentary plan view of the fastening device according to my invention, showing a plurality of runners thereof widely spaced apart and the ribbon on which they are secured closing the gap formed by the beaded edges of the spaced tapes or braids slidably guiding the runners.

Fig. 2 is a fragmentary plan view of Fig. 1 however illustrating the runners shifted to one end of the spaced beaded tapes whereby the latter may be readily diverged.

Fig. 3 is a sectional view on the line 3—3 of Fig. 1.

Fig. 4 is a side view of Fig. 2 showing the ribbon in a folded or looped relation.

Fig. 5 is a sectional view on the line 5—5 of Fig. 1.

Fig. 6 is a perspective view of one of the runners shown in Figs. 1–5 inclusive.

Fig. 7 illustrates in perspective the manner in which the ribbon is folded upon insertion in a runner, and the pin utilized in connection therewith for anchoring the folded portion.

Fig. 8 is a fragmentary side view of another form of fastening device with one of the beaded tapes removed for purposes of clearness.

Fig. 9 is a sectional view on the line 9—9 of Fig. 8, however illustrating both of the beaded tapes.

Fig. 10 is a sectional view on the line 10—10 of Fig. 9.

Fig. 10^a is an end view of one of the runners according to the invention of the type shown either in Fig. 6 or Fig. 11.

Fig. 11 is a perspective view of a runner of the type shown in Figs. 8–10 inclusive.

Fig. 12 illustrates a side view of another form of anchoring means for the runners of the type shown in Fig. 11.

Fig. 13 is a sectional view on the line 13—13 of Fig. 12.

Fig. 14 is a sectional view on the line 14—14 of Fig. 13.

Fig. 15 illustrates a fragmentary plan view of another form of fastening device and

Fig. 16 is a sectional view taken on the line 16—16 of Fig. 15.

Illustrative of the several forms disclosed, the fastening device generally denoted A comprises spaced tapes or braids 10 each provided with a suitable beaded edge 11. These tapes are of flexible material and if desired may be of a suitable cloth or leather. The beaded edges may be formed in any well known manner.

For closing the gap defined by the beaded edges 11, a suitable flexible ribbon 12 is provided. This

ribbon carries a plurality of runners or blocks 14 and according to Figs. 6 and 15 each comprises spaced longitudinal grooves 15 each terminating in a marginal relatively narrow slot 16. Each of these blocks is also provided with a relatively large slot 17 extending along the width of a respective block and terminating in a communicating relatively narrow slot 18.

According to the invention the several runners 14 are each secured to the flexible ribbon 12 by first threading the latter to be arranged in the opening defined by a pair of companion slots 17 and 18 as shown and subsequently anchoring each loop portion or bead 19 formed by a pointed pin 20 which frictionally holds the loop 19 in slot 17. For example in Figs. 1–6 inclusive, the fold or loop 19 may be made by any suitable means. However after it is inserted into a runner as described the pin 20 is forced into the eye of the loop 19 to anchor the runner to the tape while the portion of the ribbon adjacent the anchored loop projects through slot 18 and extends along the interrupted bottom face 21 of the runner. Hence by the present arrangement the anchoring member 20 is secured within the runner and is spaced from the body of extendible and contractible part of the ribbon 12.

In actual practice, tapes 10 of a fastening device are fastened to opposite sides of an opening in wearing apparel, pocketbooks, suit cases, etc. Thereafter the several runners are slidably threaded on to the beads 11 in such fashion that the ribbon 12 is arranged at the rear of the beads. To close the gap between the beaded edges, an end runner of the plurality is grasped and moved towards one end of the fastening device. During movement the grasped runner acts to shift the next adjacent runner and the latter actuates its adjacent runner until the several runners are in the position illustrated in Figs. 2 and 4 at which time it will be noted that the ribbon 12 has been considerably shortened or contracted forming the folds 22. With the runners in the position shown in Figs. 2 and 4, the tapes 10 may be widely separated.

Where it is desired to close the gap between beaded edges 11, the end runner is slidably moved until the several runners are widely spaced apart as shown in Fig. 1 and in such relation the body of the ribbon except for loops 19 are substantially in a rectilinear plane and adjacent to the rear faces 21 of the runners.

Except for the fact that the slots 17 are slightly larger and intersect and communicate with the spaced grooves 15 and marginal slots 16, the fastening device illustrated in Figs. 8–11 inclusive is identical in construction to the form shown in Figs. 1–7 inclusive. In Figs. 8–11, however, beads 11 also cooperate with anchoring member 20 to hold the latter within loops 19 of the interlocked ribbon 12 in place even though portions of the latter are compressed slightly and if desired and as shown the anchoring pin need not be pointed and is considerably shorter than the anchoring pin shown in Figs. 1–5 inclusive.

In the form according to Figs. 12–14 inclusive, each runner 14 is along the lines of the runner shown in Fig. 11, but in Figs. 12–14, the anchoring pin 20 is eliminated, and a relatively enlarged loop or bead 19 of the ribbon 12 is compressibly retained in and interlocked with the walls of slot 17 by the beaded edges 11 of tapes 10.

With the form according to Figs. 15 and 16, the ribbon 12 is provided with spaced beads or loops 23 extending along the width thereof and these are threaded into and interlocked with the transverse slots 17 of the several runners 14 of the type shown in Figs. 1–5 inclusive to anchor such runners to the ribbon 12 which is sewed by stitching 25 to a wider ribbon 24 to be arranged in back of the beaded edges 11.

It is therefore apparent that with the several forms disclosed the anchoring members for attaching the several runners to the closure ribbon are disposed within the runners and therefore are inaccessible to an undergarment to be caught by the latter and are widely spaced from the body of the wearer to prevent scratching or cutting of the skin in the event no undergarment is used.

In the several forms disclosed the runners are first anchored in spaced relation to the flexible closure ribbon 12 after which corresponding terminals of the beaded edges 11 are thinned or reduced slightly in size (see Fig. 10a) whereby these terminals may be readily insertable in the openings formed by grooves and slots 15 and 16 to facilitate threading of the runners on the beaded edges, and it will be appreciated that in the forms shown in Figs. 8–11 inclusive the beaded edges of the tapes also cooperate to prevent lateral displacement of the anchoring pins 20 which are prevented from falling out by the narrow slots 18 through which portions of the ribbon adjacent the loops 19 are threaded, and in case of the forms illustrated in Figs. 12 to 16 where no anchoring pin is used, the beads or loops 19 or 23 are also held interlocked with and crimped in the slots 17 by the beaded edges 11, see for example Fig. 14.

As many changes could be made in the above construction and many widely different species or structural embodiments of the invention could be devised without departing from the scope thereof, it is intended that all matter hereinbefore described in the specification and illustrated in the accompanying drawing shall be interpreted as illustrative and not in a limiting sense.

I claim:—

1. In a fastener comprising spaced tapes having beaded edges defining an elongated gap, a plurality of runners each including grooves having walls slidably guided by said edges and lengthwise of said gap and each including a slot extending widthwise of said gap, a foldable and flexible ribbon shiftable lengthwise of said gap and disposed at the rear of said edges and comprising a plurality of loops extending widthwise of said ribbon and disposed in said slots, and pin means disposed within said runners for securing said loops to said runners.

2. In a fastener comprising spaced tapes having beaded edges defining an elongated gap, a plurality of spaced runners shiftable lengthwise of said gap and slidably guided by said edges and each including a slot extending widthwise of said gap, a flexible ribbon shiftable lengthwise of said gap and disposed at the rear of said edges and having a plurality of spaced loops disposed within said slots, and pin means within said runners and cooperating with said loops for securing said runners to said ribbon.

3. In a fastener comprising spaced tapes having beaded edges defining an elongated gap, a plurality of spaced runners each having grooved sides slidably guided by said edges and lengthwise of said gap and each including a slot disposed widthwise of said gap, a flexible ribbon disposed lengthwise of said gap and at the rear of said edges and having a plurality of spaced loops

extending widthwise of said ribbon and disposed in said slots, and pin means disposed within said runners and spaced from front and rear faces thereof and cooperating with said loops for holding said runners to said ribbon.

4. In a fastener comprising spaced tapes having beaded edges defining an elongated gap, a plurality of spaced runners each having side grooves slidably guided by said edges and lengthwise of said gap and each including a slot disposed widthwise thereof, a closure for said gap comprising a flexible and foldable elongated ribbon having a plurality of spaced loops disposed widthwise thereof and arranged in said slots, and pin means within said runners and within said loops for securing said runners to said ribbon.

5. In a fastener comprising spaced tapes having beaded edges defining an elongated gap, a plurality of runners having spaced grooves slidably guided by said edges longitudinally of said gap and each including a slot extending widthwise thereof, a closure for said gap comprising an elongated flexible ribbon having a plurality of spaced loops each extending widthwise of said ribbon and disposed within said slots, and pin means wholly within said runners and cooperating with said loops for securing said runners to said ribbon.

6. In a fastener comprising spaced tapes having beaded edges defining an elongated gap, a plurality of runners having spaced sides slidably guided by said edges longitudinally of said gap and each including a slot extending widthwise of said gap, and an elongated closure for said gap comprising a flexible ribbon having a plurality of said loops extending widthwise of said ribbon and interlocking with the walls of said slots for holding said runners to said ribbon.

SAMUEL SEGAL.