

March 17, 1970

J. R. FOSTER

3,500,478

WAIST CLOSURE FOR GARMENTS

Filed April 24, 1968

2 Sheets-Sheet 1

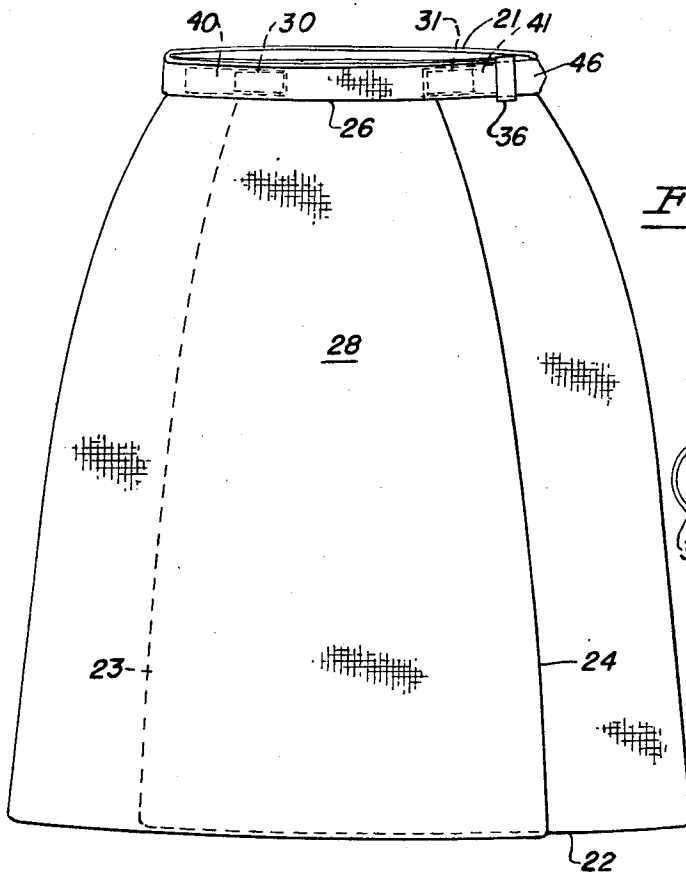


Fig. 1.

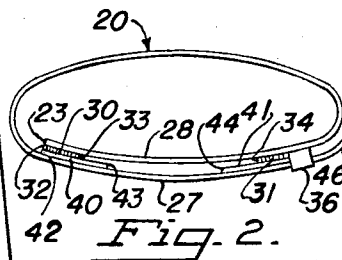


Fig. 2.

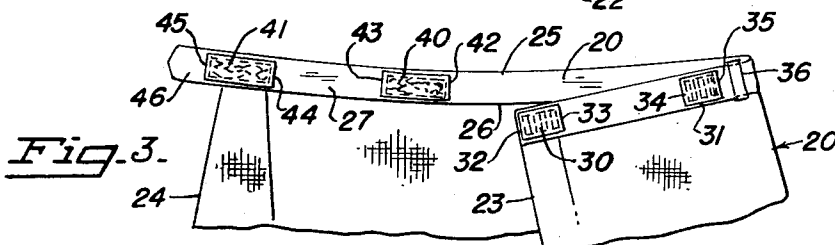


Fig. 3.

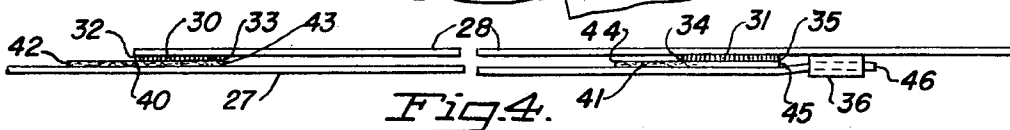


Fig. 4.

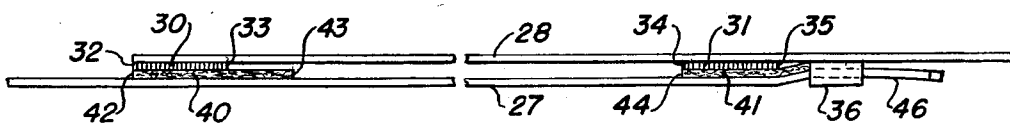


Fig. 5.

INVENTOR
JOHN R. FOSTER

BY *Owen, Wickersham & Erickson*
ATTORNEY

March 17, 1970

J. R. FOSTER

3,500,478

WAIST CLOSURE FOR GARMENTS

Filed April 24, 1968

2 Sheets-Sheet 2

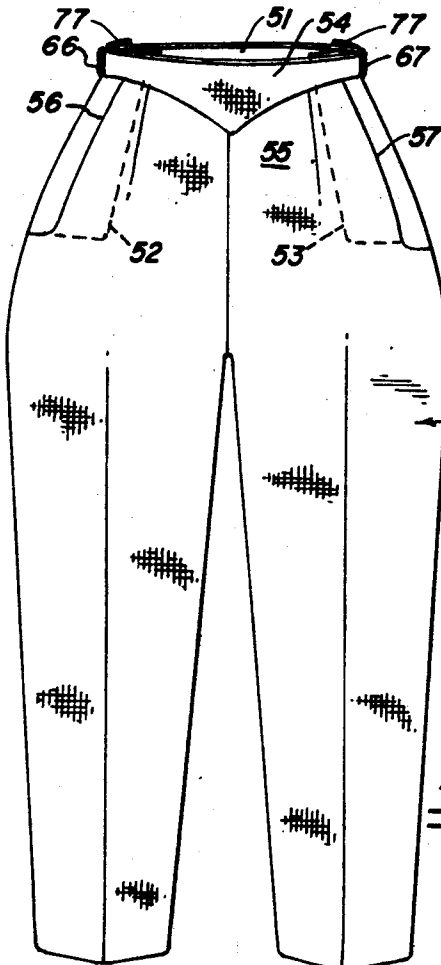


Fig. 6.

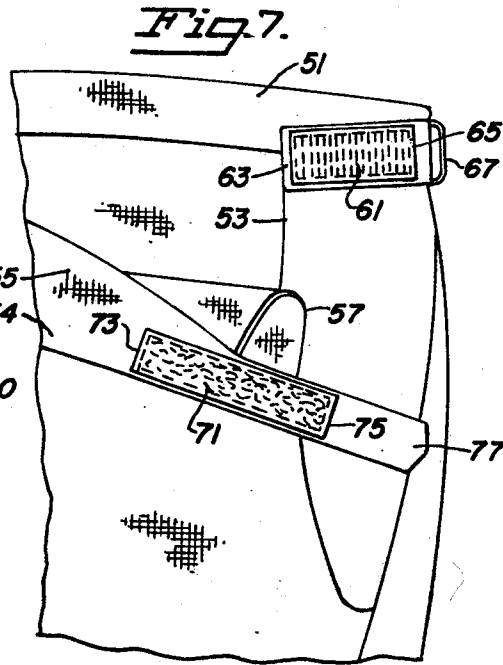


Fig. 7.

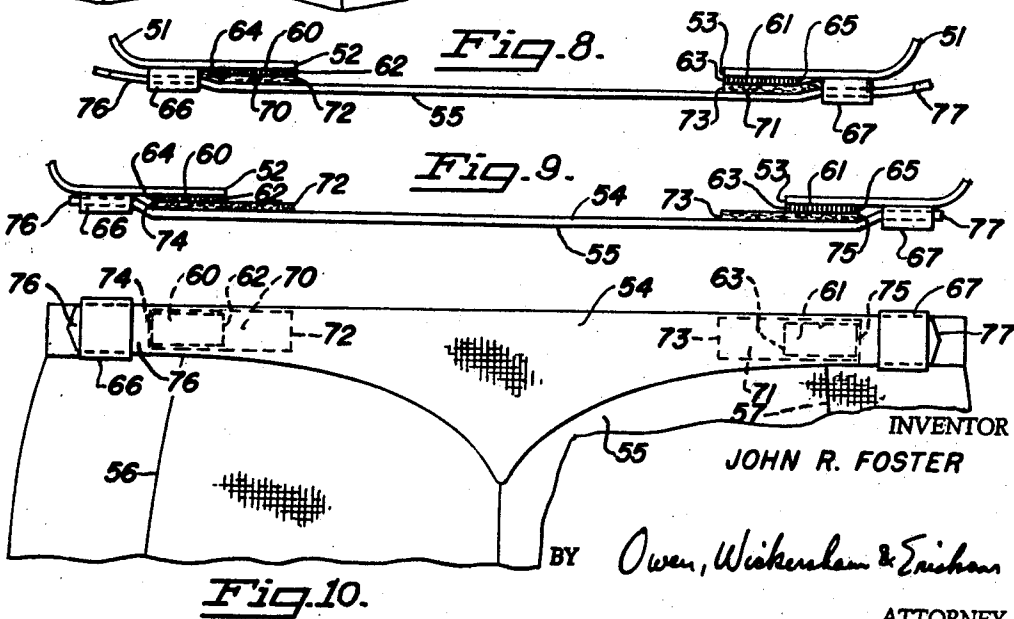


Fig. 10.

ATTORNEY

1

3,500,478

WAIST CLOSURE FOR GARMENTS

John R. Foster, Daly City, Calif., assignor to Koret of California, Inc., San Francisco, Calif., a corporation of California

Filed Apr. 24, 1968, Ser. No. 723,724

Int. Cl. A41d 1/14; A41f 9/00

U.S. Cl. 2—221

4 Claims

ABSTRACT OF THE DISCLOSURE

A waist closure arrangement for skirts, slacks, and the like employing the teasel-and-fleece type of fastening strips, where there are pairs of strips, one of each pair with many tiny hooks and the other with many tiny loops or a fleece-like pile. Adjustability is herein provided by having one of each pair, generally the fleece-like strip, much longer than the other strip and located on the inner face of the outer layer of two garment layers, with the shorter strip on the outer face of the inner layer, both at the waist. The outer layer has a short belt-like flap extending beyond its end and at the end of the longer strip, and this tucks into a belt loop closely adjacent to the end of the shorter strip. For wraparound skirts, two pairs of closure strips may be provided in repeating relationship, with one tuck flap and belt loop. For slacks, a drop front may be used with strips and flaps at each end of the belt line, and the inner layer terminates in two spaced-apart ends near the extremities of the front waist, with the belt loops at the sides or near to them.

This invention relates to improvements in garments, such as skirts and slacks, and particularly to improved waist closures therefor.

Neat appearance, security, convenience, comfort, and speed in donning and doffing such garments are all affected by their closure arrangements. Zippers and buttons, when used alone for waist closure, fall short in almost every one of these desirable features. When used together or with belts, they gain in security and sometimes in appearance, but become less convenient and slower to put on or off. Belts, whether completely separate from the garment or attached to a part thereof, give adjustability only in fairly large increments, require belt buckles, tongues, reinforced holes, and usually require either a zipper or a button arrangement besides. They are usually not convenient at all with wraparound skirts and limit slacks design. Thus, although skirts and slacks are very old garments, the closure problem has yet to see a perfect solution.

Economics, as well as the factors named above, also are worth consideration, and here, too, the conventional methods are expensive in labor consumption and often in materials.

The present invention presents a new approach, employing in a new structure a well-known closure that in its former uses was not seen to be satisfactory either. I have found that my new arrangement results in improved appearance, remarkable speed and convenience, better economy, completely continuous adjustment throughout a given range of waist length with resultant enhancing of comfort, and full safety. The results are especially good with wraparound skirts and drop-front slacks for ladies wear.

Basically, the closure is of the teasel-and-fleece type rep-

2

resented by the Velcro fasteners, wherein complementary strips of nylon or other synthetic material are used, one strip having many tiny teasel-like hooks facing in all directions, the other strip resembling fleece and typically having many tiny loops that are readily engaged by the tiny hooks in a locking arrangement. When the two strips are brought together, with or without pressure, they readily engage, and they strongly resist forces exerted in shear, yet they are readily stripped apart. For speed, convenience, appearance, and economy they have been long admired, but heretofore they were unable to give the needed adjustability with the vital safety.

The ability of these teasel-and-fleece or multiple mini-hook, mini-loop fasteners to withstand shear and to release instantly under stripping action has been both their virtue and their failing as waist closures, for while their behavior is a virtue in the obvious ways, it becomes a fault when the free end of a garment with such a closure brushes against furniture, doors, or almost any other object, for then there has been two great a tendency to strip and therefor to become unfastened, and security is imperiled.

I have found that both adjustability and security become both compatible and quite attainable with this teasel-and-fleece type of fastening closure by: first, making one of the strips, preferably the fleece (or multi-mini-loop) strip much longer than the other; second, securing the longer strip on the inner face of the outer layer of the garment and the shorter strip on the outer face of the inner layer; third, providing a belt loop near the end of the shorter strip; fourth, providing a short belt-like flap to project beyond the outer layer's end and beyond the longer strip, for tucking into the belt loop. Mere tucking is sufficient, no buckle or other fastener is needed. No buttons, zippers, or other auxiliaries are used.

My invention is particularly effective when two pairs of strips are used. In a wraparound skirt, for example, there is only one belt-like flap and one belt loop, but preferably there is a pair of the teasel-and-fleece strips at each extremity of the front waist. In drop-front slacks, there is a long fleece strip on each end of the drop flap, and there is a belt flap extending out on each end also; there is a teasel strip on each end of the inner layer, which has a wide gap across it, with the belt loops located at the side or even slightly in back.

These features and their significance will be made clearer, and other objects and advantages of the invention will appear from the following description of some preferred embodiments of the invention.

In the drawings:

FIG. 1 is a view in front elevation of a wraparound skirt embodying the principles of the invention.

FIG. 2 is a somewhat diagrammatic top plan view of the skirt of FIG. 1. Thicknesses have had to be exaggerated and have resulted in distortion of shape and scale.

FIG. 3 is a fragmentary view in elevation of the upper portion of the skirt of FIG. 1 partially unwrapped.

FIG. 4 is a fragmentary top plan view on a larger scale, broken in the middle, of the front portion of the fastened skirt of FIG. 1, shown at the largest size for which it is adjustable.

FIG. 5 is a view similar to FIG. 4 showing the skirt adjusted to the smallest of its possible sizes.

FIG. 6 is a view in front elevation of a pair of drop-front slacks embodying the principles of the invention.

FIG. 7 is a fragmentary view in perspective of a

3

portion of the slacks of FIG. 6, showing one end of the drop front and the main body to which it is secured.

FIG. 8 is a fragmentary top plan view of the front portion of FIG. 1, straightened out to show the fastening means in the adjustment for their smallest size.

FIG. 9 is a view similar to FIG. 8 showing the closure arrangement adjusted to the largest size.

FIG. 10 is a fragmentary view in front elevation corresponding to the adjustment of FIG. 9.

The invention has especial advantages when used with a wraparound skirt 20, as shown in FIGS. 1-5. Here is a strip with a waist 21, a hem 22, an inner-layer end edge 23, and an outer-layer end edge 24. The waist 21 is shown defined between an upper edge 25 and a stitch line 26, to give a nice appearance. The strip overlaps across the front, providing there an outer layer 27 and an inner layer 28, both at the waist and below it.

In the present invention, I prefer to apply two strips 30 and 31, preferably rectangular, to spaced-apart portions of the waist 21 on the outer surface of the inner layer 28. These strips 30 and 31 are preferably of the multi-mini-hook type of closure member, typically made of nylon. They are stitched or adhesively fastened in place. The strips 30 and 31 are preferably identical in size and measure about one inch wide (height) and preferably about one and one-half inches long, at least one inch long. One edge 32 of the strip 30 is very close to the inner edge 23 of the skirt 20, preferably as close as possible, with the other edge 33 of the strip 30 being spaced from the succeeding edge 34 of the strip 31 by a distance sufficient to locate both strips 30 and 31 at the front of the waist near its extremities. The other edge 35 of the strip 31 is spaced a short distance, e.g., about one-half inch to one inch from a belt loop 36.

To the inner face of the waist of the outer layer 27 are secured two longer strips 40 and 41 of closure members, preferably of the multi-mini-loop or fleece-like pile type. The strips 40 and 41 are the same width (height) as the strips 30 and 31, but are preferably longer by the desired maximum adjustment desired. For example, each strip 40 and 41 may be three inches long for a one and one-half inch length of the strips 30 and 31. This is not a definite fractional relationship; it is the gripping length desired plus the adjustment length desired. Thus, the first edge 42 of the strip 40 is lineally spaced from the edge 32 of the strip 30 by the minimum waist length desired, and it directly overlies the edge 32 at the minimum size of its adjustable range, as shown in FIG. 5. Similarly, the edge 43 of the strip 40 is spaced from the edge 33 of the strip 30 by a distance equal to the maximum size of the adjustable range for overlying the edge 33 at that size, as shown in FIG. 4. The edges 44 and 45 of the strip 41 are spaced exactly the same distances from the edges 34 and 35.

Preferably, the strip 41 extends beyond the edge 24 on the inner face of a belt-like strap 46, which is long enough so that it tucks through the loop 36 at all sizes in the adjustability range. There, once the flap 46 is tucked in, all danger of accidental stripping of the closure is prevented. Adjustability is made compatible with security and the closure is given a security it has generally lacked. Appearances are improved while giving added comfort.

Special advantages are also obtained from use of the invention in a pair of drop-front slacks 50, as shown in FIGS. 6-10. Here, a waist 51 is provided for the sides and rear by a main portion having ends 52 and 53, while a waist 54 for the front is provided by a drop-front portion 55 which overlaps the ends 52 and 53 with its own ends 56 and 57.

Strips 60 and 61 generally correspond to the strips 30 and 31 (of FIGS. 1 to 5), but there is a difference, for the facing ends 62 and 63 of the two strips 60 and 61 both lie as close as possible to their respective ends 52 and 53, and closely adjacent to each of the opposite ends 64 and 65 is a belt loop 66 and 67. These loops 66 and

4

67 may lie on the sides of the waist or even slightly to the rear, FIGS. 8-10 being exaggerated to show the pattern, not the wearing position.

Strips 70 and 71 on the inner surface of the drop flap 55 also generally correspond to and resemble the strips 40 and 41 of FIGS. 1-5, but in this instance, the distance between the facing edges 72 and 73 of the two strips 70 and 71 determines the minimum adjustment and the distance between the outer edges 74 and 75 determines the maximum adjustment, as shown in FIGS. 8 and 9, for at the minimum size, the edges 62 and 72 are aligned and so are the edges 63 and 73 (FIG. 8), while at the maximum size, the edges 64 and 74 are aligned and so are the edges 65 and 75. Also, there are two belt flaps 76 and 77, and each of the strips 70 and 71 extends beyond its respective edge 56 and 57 onto the flaps 76 or 77. The arrangement here is symmetrical rather than repetitive. However, the same basic principles are observed and, again, adjustability may be achieved at any size whatever within the range given by the overlength of the strips 70 and 71 relative to the strips 60 and 61. Also, there is again security against stripping apart of both closures by the tucking of the flaps 76 and 77 into the loops 66 and 67.

To those skilled in the art to which this invention relates, many changes in construction and widely differing embodiments and applications of the invention will suggest themselves without departing from the spirit and scope of the invention. The disclosures and the description herein are purely illustrative and are not intended to be in any sense limiting.

I claim:

1. A pair of drop-front slack comprising:

a main body having ends that terminate at opposite sides of the front of said slacks with a waistband having at each end a rectangular closure member comprising a large number of projecting tiny hooks, said waistband also having adjacent each said strip and inboard therefrom a belt loop, and

a drop flap secured below the waist to said main body and having ends that overlap the ends of the main body with a waistband that is extended at each end beyond its ends to provide a flap and having, bridging each said end onto said flap and inboard therefrom, a rectangular closure member of fleece-like hook-engageable material that engages the members on said main body and effects closure of said drop flap, the opening through said belt loops being of substantially the same width as said flaps whereby said flaps can be snugly tucked into said loops to effect security against accidental stripping open of the closure.

2. The article of claim 1 wherein said fleece-like closure members are substantially longer than said hooked strips, to provide adjustability in the amount of the difference in length.

3. The article of claim 2 wherein said hooked members are about one to one and one-half inches long and said fleece strips are about three inches long.

4. A waist closure arrangement for garments comprising a closure strip having inner and outer surfaces, a pair of members each comprising a large number of variously oriented hooks secured in spaced apart relation to one of the surfaces, a pair of fleece-like hook engaging members secured in spaced apart relation to the other surface, each of said pair of members on said one surface having a length along the strip greater than each of said pair of members on said other surface, whereby the ends of the strip can be overlapped and the pairs of members secured together at a number of adjusted positions, said strip carrying a closed loop removed from one end thereof of substantially the same width as the other end of said strip to snugly receive said other end when overlapped, one of said one pair of members being spaced from the other end of the strip a distance such that the end of the

strip will extend through the loop in all positions where the shorter member fully engages the longer member.

1,014,150 12/1965 Great Britain.
1,035,643 7/1966 Great Britain.

References Cited

UNITED STATES PATENTS

1,638,073 8/1927 Van Heusen.
2,248,861 7/1941 Friedman ----- 2—237
3,081,772 3/1963 Brooks et al.
2,910,982 11/1959 Woodward ----- 128—284

FOREIGN PATENTS

1,374,231 8/1964 France.

OTHER REFERENCES

5 Velcro Fasteners; 2 pp.; received in Patent Office Jan. 16, 1961.

H. HAMPTON HUNTER, Primary Examiner

U.S. Cl. X.R.

10 2—237; 24—201