Feb. 5, 1935. N. SALWEN 1,990,311

CLOSURE FOR ARTICLES OF APPAREL

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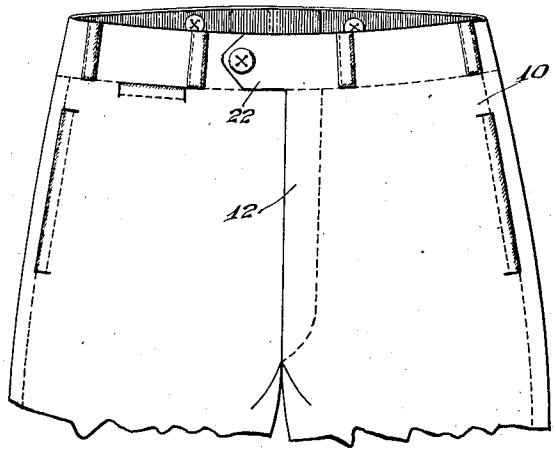


Fig. 1

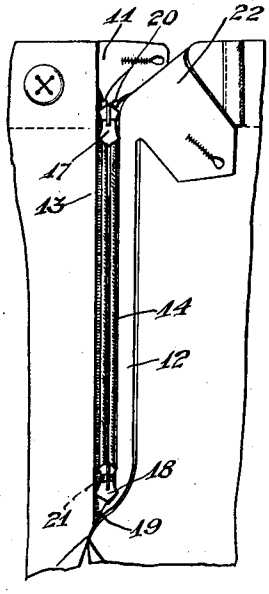


Fig. 2

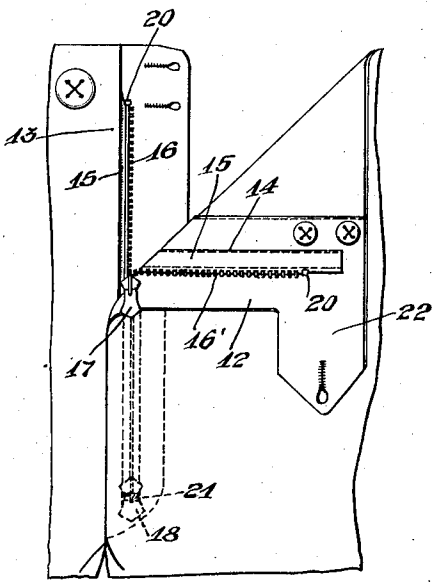


Fig. 3

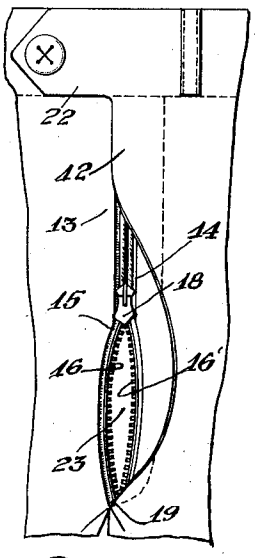


Fig. 4

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CLOSURE FOR ARTICLES OF APPAREL

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2 Claims. (Cl. 2—234)

This invention relates to improvements in articles of apparel, being particularly directed to a closure applied in trousers or like garments.

Among the late developments in closures for garments, such as trousers or the like, there has been applied the so-called "zipper" device involving two strips carrying parallel sets of meshing elements in offset relationship which, upon movement of a closure member enclosing portions of the same, and known to the trade as a "slider", may cause the respective meshing elements on the strips to be brought into interlocking relationship or separated one from the other, dependent upon the directional movement of such closure member; and with respect to trousers, this device has been applied at the "fly" portions of the same in lieu of the button method of fastening.

However, with respect to such use, the two above strips carrying the meshing elements are fastened at the apex of the "fly" portion and are normally free at the other extremities, the strips being fastened along their length to the portions of the trouser section defining the "fly", while the "slider", in order to carry out its proper functions is drawn upwardly to interlock the meshing sections for sealing the "fly", the "slider" being temporarily locked at the upper extremities of the strips carrying the meshing elements; and the "slider" is drawn downwardly to separate the meshing elements and the "fly" closure assembly carrying the same, whereby the trousers may be manipulated for dressing or undressing or other uses.

However, it is an obvious and known fact with respect to the use of garments, that frequently it is desirable to open the "fly" closure, and such opening is normally adjacent the apex of the "fly" section, which opening is necessarily not of great length in comparison with the total length of the "fly" closure. With the present form of "fly" closure it is necessary to draw the "slider" downwardly towards the apex in order to separate the "fly" sections to provide the necessary slit, with the result that the trousers are normally no longer supported as desired, and this procedure being obviously too cumbersome and inconvenient, the necessary comfort and ease desired in men's apparel cannot be obtained.

It is an object of this invention to form a closure of the so-called "zipper" type applied as a "fly" closure in men's trousers, among other articles of apparel, wherein the strips carrying the meshing elements are mounted as heretofore, being joined at the apex of the "fly" and fastened along their length to the trouser sections defining the "fly"; however, there being mounted in association with such strips carrying the meshing elements a plurality of "sliders", in this instance, two in number, assembled with respect to the strips as to be opposed in function when moved in the same direction, the lower of the two sliders normally positioned adjacent the apex being adapted to separate the closure upon upward movement, while the other slider disposed at the free ends of the strips opens the closure on downward movement.

These and other advantages, capabilities and features of the invention will appear from the subjoined detailed description of one specific embodiment thereof illustrated in the accompanying drawing, in which

Figure 1 is a front view of an article of apparel, particularly trousers, incorporating the invention.

Figure 2 is a front view showing the invention as applied to a trouser "fly" with the flap open, the "fly" being closed and the sliders in normal position.

Figure 3 is a front view indicating the position of the trouser "fly" when the upper of the two sliders is displaced in a direction for opening the same.

Figure 4 is a front view of the trouser "fly" indicating the position of the elements thereof when the lower slider member is moved in a direction for opening a portion of the "fly".

Referring to the reference characters in the drawing, numeral 10 represents a garment herein indicated as men's trousers having a "fly" portion 11 closed by a flap 12. To each of the sections 13 and 14 defining the "fly" slit of the trousers 10 there is attached as by stitching or the like strips 15 carrying respectively parallelly disposed meshing elements 16 and 16' which are offset with respect to one another to provide for a vertical interlocking in the alternate spaces on the respective strips of the meshing elements thereof, when the strips are drawn together through operation of a slider, such sliders being known to the art and being of such structural formation as to encircle the meshing elements on the respective strips for a certain depth and which, upon movement in a certain direction, cause either the interlocking of the respective meshing elements on the two strips or the separation of the meshing elements when the same have been interlocked.

Referring particularly to Figures 2, 3 and 4, it

is noted that two sliders 17 and 18 are provided, the respective sliders being positioned in relation to the strips carrying the meshing elements as to provide the separation of interlocked strips when slider 17 is moved downwardly; and the separation of the interlocking strips when slider 18 is moved upwardly; it being noted that the sliders, which are of the same construction, are disposed oppositely as to assembly in relationship to the strips, so that movement in the same direction of the respective sliders will produce opposite results as to interlocking or separation of the strips.

With further reference to Figures 2, 3, and 4, it should be noted that the strips 15 are fastened at the apex 19 and extend along sections 13 and 14, so as to provide free ends having slider movement limiting means 20 thereon, similar means being shown in dotted lines as 21 adjacent the apex 19, the sliders normally having latching means actuable at the attainment of the slider limiting point for locking the slider at such points.

Referring particularly to Figure 3, the "fly" slit may be opened in its entirety by drawing the slider 17 downwardly and the "fly" slit closed by drawing the same upwardly, and when slider 17 is at its locking point flap 22 may be attached to the trousers by means of a button on the trousers and buttonhole on such flap.

Having reference to Figure 4, slider 18 has been drawn upwardly from the apex 19 thus separating the meshing elements 16 and 16' of the strips 15 and providing an aperture 23, which may be varied as to size dependent upon the extent to which the slider 18 has been displaced.

It should be understood that the slider may be displaced as desired to provide varying apertures and at the same time the trousers with respect to the remaining portions of the strips carrying the meshing elements, and the sections and flaps of the trousers defining the "fly" may remain in closed relationship. It is to be noted that when one slider is in use the other remains in its locked position, since the same are actuated normally for different purposes and to provide different results.

Although this invention has been described with respect to an embodiment involving the "fly" closure of trousers, it is within the province of this invention to apply the same to various slits or apertures where it may be desired at times to provide a full opening from separable ends to an apex on the one hand, and partial openings to varying degrees from an apex towards the free ends, which remain normally locked.

It is obvious that various changes and modifications may be made to the details of construction without departing from the general spirit of the invention as set forth in the appended claims.

I claim:

1. In a pair of trousers, a "fly" extending from the crotch upwardly through the waistband thereof, a closure for the "fly" incorporating strips carrying meshing elements, said strips being joined at the apex of the slit defined by the "fly" and fastened along their length to material defining the edges of the "fly" slit, sliders disposed on said strips, each cooperating with sections of both of said meshing elements, one slider being normally disposed at the apex of the "fly" slit adjacent the crotch, and the other slider being normally disposed at the free extremities of the strips adjacent the waistband, when the "fly" slit is closed, any one of the sliders upon being displaced towards the other from its normal position being adapted to separate the intermeshed elements, thereby to open a portion of the "fly" slit, and upon being moved away from the other slider, being adapted to interlock the meshing elements previously by it separated, to close the "fly" slit, the slider normally adjacent the apex of the "fly" slit upon displacement towards the free extremities of the strips being adapted to provide for an opening of the "fly" slit to varying degrees, dependent upon its displacement relative to its normal position.

2. In a pair of trousers a "fly" extending from the crotch upwardly to the waistband thereof, a closure for the "fly" incorporating cooperating meshing elements extending along opposite sides of the slit defined by the "fly", said meshing elements merging at the apex of the slit adjacent the crotch and the free extremities thereof extending to the waistband, sliders disposed on both of the meshing elements, each acting upon cooperating sections of the meshing elements to interlock or separate the same, one slider being normally disposed at the apex of the "fly" and the other slider normally disposed at the waistband, when the "fly" is closed, the slider normally disposed at the waistband upon being displaced towards the crotch being adapted to separate the intermeshed elements from their free extremities leading towards the apex of the "fly" to provide for the formation of a "V" slit, the slider normally disposed at the apex upon being displaced towards the waistband being adapted to separate the intermeshing element from the apex towards the waistband to provide for the formation of an elliptical slit, the opening of the "fly" in varying degrees being dependent upon the position of the respective sliders relative to their normal position, only one of the respective sliders being moved from its normal position at one time, for the purpose specified.

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