

May 10, 1966

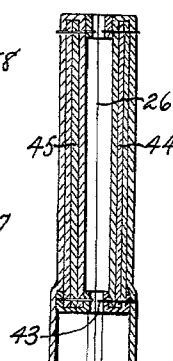
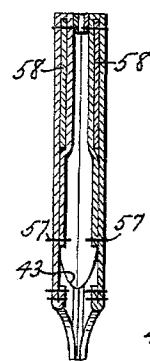
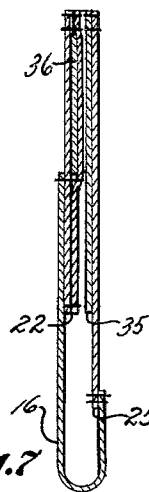
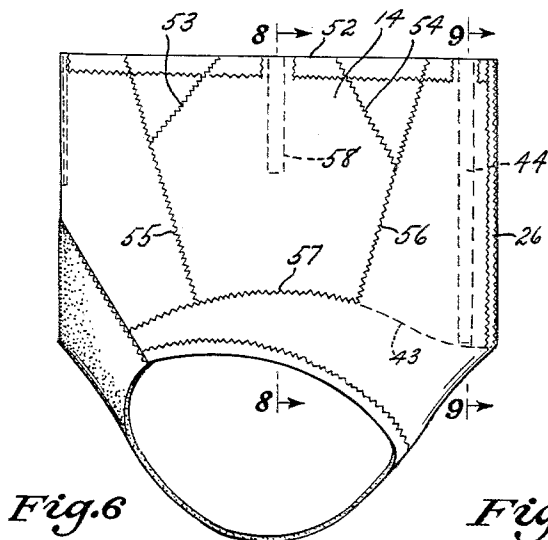
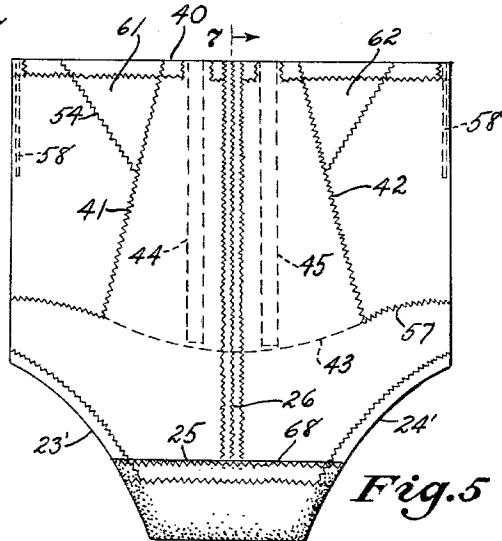
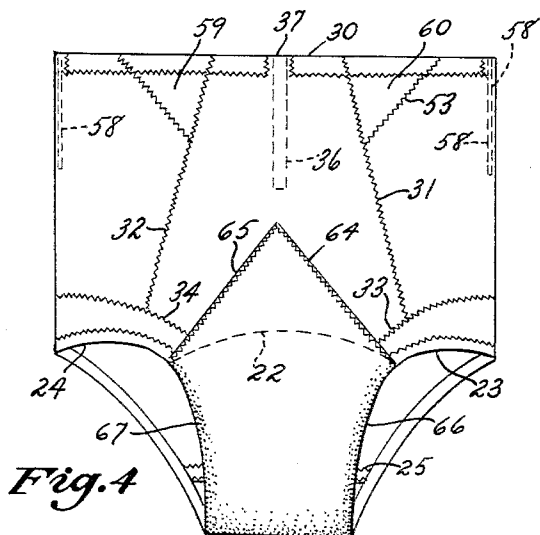
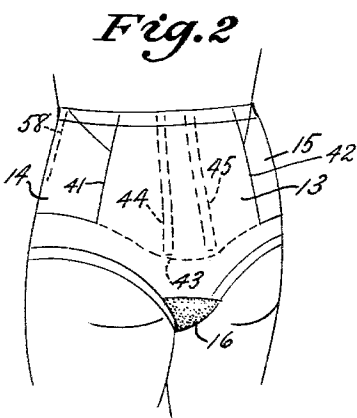
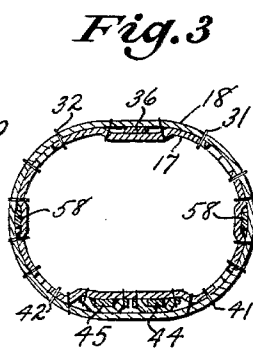
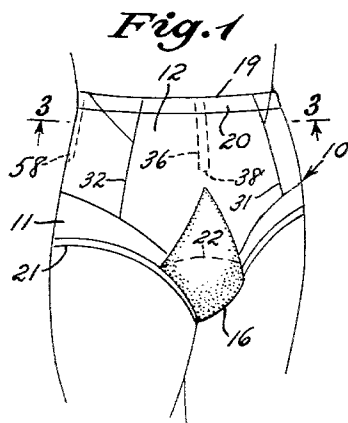
L. H. LOEFFEL ETAL

3,250,273

BRIEF TYPE CONTROL GARMENT

Filed Nov. 22, 1963

2 Sheets-Sheet 1



May 10, 1966

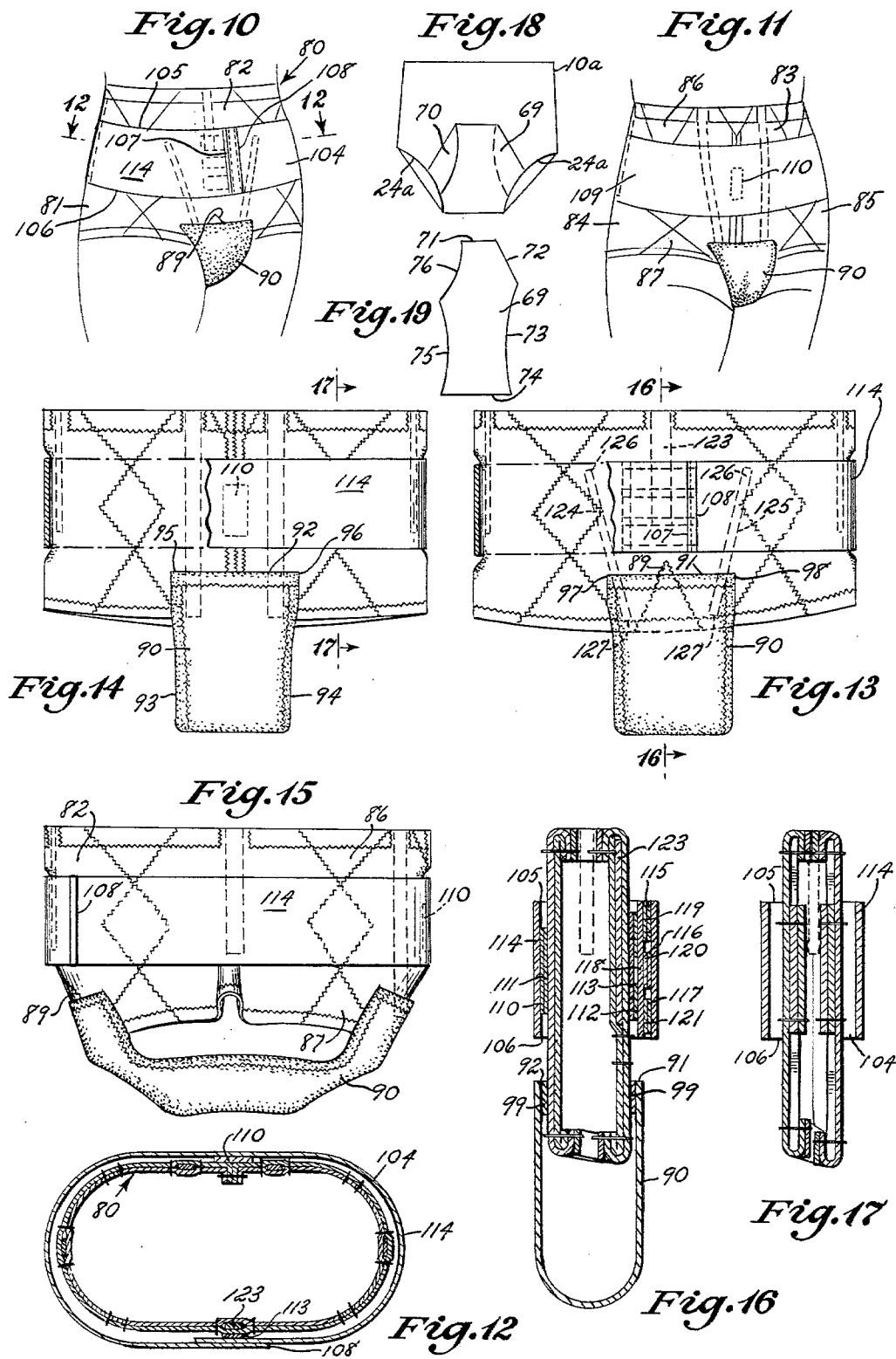
L. H. LOEFFEL ETAL

3,250,273

BRIEF TYPE CONTROL GARMENT

Filed Nov. 22, 1963

2 Sheets-Sheet 2



1

3,250,273

BRIEF TYPE CONTROL GARMENT

Lester H. Loeffel, West Haven, and Emory C. Champagne, Woodbridge, Conn., assignors to The Berger Brothers Company, New Haven, Conn., a corporation of Connecticut

Filed Nov. 22, 1963, Ser. No. 325,722

3 Claims. (Cl. 128—159)

This invention relates generally to the field of undergarments, and more particularly to an improved form of brief type control garment suited for use by a male wearer. Devices of this general type are known in the art, and the invention lies in specific constructional details which permit improved comfort for the wearer, as well as posture-assisting control over portions of the abdomen which have heretofore not been obtainable.

It is among the principal objects of the present invention to provide a control garment of the class described which may resemble to a substantial degree a knit type form fitting men's brief, and which may be worn with comparable comfort.

Another object of the invention lies in the provision of an improved control garment of the class described having means positioned in the sacrolumbar area of the wearer for assisting the function of muscles disposed in this region, wherein the wearer may maintain an erect posture without fatigue.

Another object of the invention lies in the provision of an improved brief type control garment in which the major control elements thereof are substantially concealed from view when the garment is worn.

Yet another object of the invention lies in the provision of an improved control garment construction which, in addition to the above described function, will afford adequate control of the lower portion of the figure, to impart a trim athletic outline thereto.

Yet another object of the invention lies in the provision of an improved control garment capable of unusual flexibility to accommodate for necessary stretching when the garment is worn for relatively long periods while in a sitting position.

A feature of the invention lies in the provision of secondary constricting elements which may be adjustably located with respect to a principal constricting element, in one of the disclosed embodiments, whereby the individual needs of a particular wearer may be accommodated subsequent to purchase of the garment.

Another feature of the invention lies in the provision in one of the disclosed embodiments, of a crotch piece, which is conveniently removed for laundering, from the remaining portions of the garment, and which may be adjusted as to dimension to suit the requirements of an individual user.

Still another feature of the invention lies in the relatively low cost of manufacture of the disclosed embodiments, thereby permitting consequent wide sale, distribution and use.

These objects and features, as well as other incidental ends and advantages, will more fully appear in the progress of the following disclosure, and be pointed out in the appended claims.

In the drawings, to which reference will be made in the specifications, similar reference characters have been employed to designate corresponding parts throughout the several views.

FIGURE 1 is a fragmentary front perspective view of a first embodiment of the invention.

FIGURE 2 is a fragmentary rear perspective view of the first embodiment.

FIGURE 3 is a transverse sectional view as seen from the plane 3—3 in FIGURE 1.

2

FIGURE 4 is an enlarged front elevational view of the first embodiment.

FIGURE 5 is an enlarged rear elevational view of the first embodiment.

FIGURE 6 is a side elevational view of the first embodiment, as might be seen from the right hand portion of FIGURE 4.

FIGURE 7 is a vertical longitudinal sectional view as seen from the plane 7—7 in FIGURE 5.

FIGURE 8 is a longitudinal fragmentary sectional view as seen from the plane 8—8 in FIGURE 6.

FIGURE 9 is a fragmentary longitudinal sectional view as seen from the plane 9—9 in FIGURE 6.

FIGURE 10 is a fragmentary front perspective view, corresponding to that as seen in FIGURE 1, but showing a second embodiment of the invention.

FIGURE 11 is a fragmentary rear perspective view of the second embodiment.

FIGURE 12 is a transverse sectional view as seen from the plane 12—12 in FIGURE 10.

FIGURE 13 is a front elevational view of the second embodiment.

FIGURE 14 is a rear elevational view of the second embodiment.

FIGURE 15 is a side elevational view of the second embodiment, as might be seen from the right hand portion of FIGURE 14.

FIGURE 16 is a longitudinal sectional view as seen from the plane 16—16 in FIGURE 13.

FIGURE 17 is a longitudinal sectional view as seen from the plane 17—17 in FIGURE 14.

FIGURE 18 is a front elevational view corresponding to that seen in FIGURE 4, but showing an alternate form of crotch element.

FIGURE 10 is a view in elevation of a blank forming a part of the alternate form of crotch element.

In accordance with the first embodiment of the invention, the device, generally indicated by reference character 10, comprises broadly; a main contractile element 11, a front panel element 12, a rear panel element 13, side panel elements 14 and 15, and a crotch element 16.

The main contractile element 11 is of elastic tubular configuration, and is bounded by an inner surface 17, an outer surface 18, an upper edge 19, which is preferably provided with an additional elastic reinforcing band 20; and a lower edge 21 of an irregular configuration including front curve portion 22, side curve portions 23 and 24, generally curvilinear rear portions 23' and 24', and a generally rectilinear rear portion 25. The element 11, being formed from planar material, is interconnected to tubular form along a single line of interconnection 26, preferably situated at the rear of the garment.

The front panel element 12 is also formed of planar elastic material, although of preferably greater elastic modulus than the material employed to form the element 11. It is of generally rhombic configuration, being bounded by an upper edge 30, diverging side edges 31 and 32, converging side edges 33 and 34, and a bottom edge 35 which is preferably coextensive with respect to the edge portion 22 of the edge 21. As best seen in FIGURE 3 in the drawing, the element 12 is provided with a short vertically disposed centrally located boning member 36 interconnected by stitch means thereto, having an upper terminal 37 which extends to the edge 30, and a lower terminal 38 which terminates approximately at the median point between the upper edge 30 and the bottom edge 35. It will be observed that by providing a boning member of relatively short length, rolling or curling of the upper edge 30 is effectively prevented, without hindering, or making uncomfortable the usual motions involved in reaching a sitting position.

The rear panel element 13 is preferably of similar

3

configuration, and is bounded by an upper edge 40, diverging side edges 41 and 42 and a curved lower edge 43, best seen in FIGURE 5.

As seen in FIGURE 7, only the upper edge 40 and side edges 41-42 are interconnected to the inner surface of the main contractile element 11, leaving the lower edge 43 free of interconnection. Integrated by stitch means with the upper panel element 13 are a pair of boning members 44 and 45 which are substantially vertically disposed, and perpendicular with respect to the upper edge 40. The members 44 and 45 are relatively longer than the boning member 36, and extend between the upper and lower edges 40 and 43 respectively. They are positioned in mutually parallel relation on either side of the line 26, so that when the device is worn, as seen in FIGURE 2, they will be positioned on either side of the spinal column of the wearer, to assist the muscles in the sacro-lumbar region. The rear panel element 13 is preferably formed of material similar to that of the front panel element 12, that is to say having a relatively higher modulus of elasticity as compared with the main contractile element 11. However, its supportive effect is, as has been mentioned, to assist the muscles in supporting the back, and by leaving the lower edge 43 free of interconnection, no interference, by way of additional resilience is added to the element 11 to hinder the wearer when in a seated condition, as the relatively low vertical resilience of the element 11 alone is tensed at this time.

The side panel elements 14 and 15 are similar and symmetrical, and accordingly a detailed description of one of the elements will serve to describe the other. As best seen in FIGURE 6, the elements 14 and 15 are bounded by an upper edge 52, diverging edges 53 and 54, converging edges 55 and 56, and a lower curved edge 57 which is coextensive with the edges 34 and 35 of the element 12. A short boning member 58 serves a function equivalent to that of the boning member 36, and is of similar dimensions.

From a consideration of FIGURES 1, 2, 4 and 5, it will be observed that the interconnection of the front, rear and side panel elements 12-15, inclusive, results in the formation of four triangular shaped areas 59, 60, 61 and 62 on the element 11 which are of lesser elastic modulus and which permit adequate expansion for normal changes in girdles during the course of the period in which the garment is worn, without materially altering the normal constricting force of the device.

The crotch element 16 is preferably of mesh-type construction, that is to say of knitted material, and is of generally elongated configuration as best seen in FIGURES 4 and 5. It includes an interconnected front edge 64, a free edge 65, side edges 66 and 67, and a rear edge 68. This construction permits the normal absorptive functions of conventional knit garments, and permits the provision of the usual support in this area.

Turning now to the alternate form of construction illustrated in FIGURES 18 and 19, parts corresponding to those of the principal form have been designated by similar reference characters with the additional suffix "a."

In the alternate form of construction, the crotch element 16a comprises a pair of symmetrically arranged blanks 69 and 70, each including a front edge 71, a side edge 72 of rectangular configuration, a curved side edge 73, a rear rectilinear edge 74, a curved side rectilinear edge 75, and an indented side edge 76. As seen in FIGURE 18, when arranged in overlapped relation, a more convenient relief is afforded than that disclosed in the principal form of the first embodiment.

Turning now to the second embodiment of the invention, generally indicated by reference character 80, there is illustrated a tubular main contractile element 81 of somewhat shorter height, and in which the supplemental panels extend substantially the entire height or length

4

thereof. Secured to the inner surface of the main contractile element 81 is a front panel element 82, a rear panel element 83, and side panel elements 84 and 85, all of which are in the shape of a truncated rhomboid. The interconnection of the same in the manner shown forms a plurality of upper triangular portions 86, which function in a manner similar to that in the first embodiment, and a plurality of lower triangular portions 87 which provide for adequate expansion at the point of encirclement of the calves of the wearer. In addition, an additional triangular portion 89 cooperates with the crotch element 90 which is of quasi-rectangular configuration. As best seen in FIGURES 13 and 14, the crotch element 90 is bounded by a forward edge 91, a rearward edge 92 and inwardly curved side edges 93 and 94. On the inner surface of the crotch element 90 there are provided four corner areas of interconnection 95, 96, 97 and 98 which are selectively engageable in adjusted relation with respect to corresponding pads, one of which is indicated by reference character 99 on the outer surface of the main contractile element 81. While snap-fasteners, hook and eye interconnecting means, and other metallic interconnection may be provided, I have found preferable the use of corresponding synthetic resinous interconnection means, presently marketed under the trademark, Velcron, a type of interconnection in which a large number of small plastic hooks engage a felted material in an infinite number of adjustable positions in selective manner.

As best seen in FIGURE 10 of the drawing, there is also provided a secondary contractile element 104 of band-like configuration, the same being bounded by an upper edge 105, a lower edge 106 and end edges 107 and 108 which are selectively interconnectable in lapped relation, also preferably by the use of Velcron interconnecting means. The control area, generally indicated by reference character 109 is adjustable over the surface of the main contractile element 81 and means is provided for selectively maintaining the secondary contractile element 104 in relatively fixed relation with respect to the main contractile element 81, by placing Velcron connecting means on the outer surface of the latter which are adjustably selectively interconnectable with the corresponding means on the inner surface of the former. Referring to FIGURE 11, there is shown a rear interconnecting member 110 which is engaged by positioning the element 104 in proper relation and pressing the same into contact with a corresponding member 111 (see FIGURE 16). A corresponding front member 112 engages a member 113 to provide a similar selectively fixed adjustment on the front portion of the garment.

On the outer surface 114 of the secondary contractile element 104, adjacent the end edge 107 there are provided three elongated interconnecting members 115, 116 and 117, while on the inner surface 118 of the element 104 there are provided corresponding interconnecting members 119, 120 and 121. Thus by determining the point of interconnection at the front portion of the garment, the tension exerted by the secondary contractile element may be carefully governed.

Referring to the front panel element 82, as best seen in FIGURE 13, there is provided a central boning member 123 which extends partially downward from the upper edge of the main contractile element 81, and a pair of canted boning members 124 and 125, the upper ends 126 of which extend above the lower end of the member 123, and the lower ends 127 of which extend to the lower edge of the element 81. This construction facilitates the assuming of a sitting position by the wearer, and provides means for distributing the tension of the secondary contractile element 104 over the entire front panel element.

We wish it to be understood that we do not consider the invention limited to the precise details of structure shown and set forth in this specification, for obvious modifications will occur to those skilled in the art to which the invention pertains.

5

We claim:

1. A brief type control garment construction comprising:

- (a) a main contractile element formed of a unitary blank of material interconnected along a pair of abutted edges thereof to form a circumferentially contractile tube having inner and outer surfaces, and being bounded by upper and lower edges, 5
- (b) a front panel of generally rhombic planar configuration interconnected to the inner surface of said main contractile element, 10
- (c) a rear panel element of generally rhombic planar configuration interconnected to the inner surface of said main contractile element, and along the upper edges thereof, and 15
- (d) first and second parallel boning members interconnected to said rear panel element, and disposed substantially perpendicular to the upper edges of said main contractile element on each side of a parallel median line vertically bisecting said rear panel element, said boning members terminating above the lower free edge of the rear panel, and 20
- (e) first and second side panel elements secured to the inner surface of the said main contractile element

6

and interconnecting said front and rear panel elements,

- (f) a crotch element of elongated planar configuration having first and second ends, said ends interconnected to the outer surface of said main contractile element.

2. The brief type control garment construction of claim 1 further comprising a second contractile element having adjustable interconnecting first and second ends and means for selectively interconnecting said secondary contractile element to the outer surface of said main contractile element.

3. The brief type control garment construction of claim 1 wherein said crotch element is detachably secured to the said outer surface of said main contractile element.

References Cited by the Examiner

UNITED STATES PATENTS

2,313,992	3/1943	Fredericksen	128—159
2,942,605	6/1960	Erteszek	128—549
2,981,258	4/1961	Moellendorf	128—527

ADELE M. EAGER, *Primary Examiner.*