This invention relates more especially to swim trunks but is also applicable to various other garments formed of knitted elastic fabric.

One object of the invention is to provide a knitted elastic body constricting garment having a body encircling portion which has a part which overlies the abdomen of the wearer's body and is less elastic laterally of the wearer than other parts so as to provide a greater constriction effect on the abdomen than the constricting effect provided by other parts of the garment on other portions of the wearer's body, whereby to flatten the wearer's abdomen without excessive constriction on other parts of the body. Pursuant to this object of the invention, the abdomen covering part of the garment is knitted from an integral part of the garment and is formed by inactivating certain needles in the area where said part is formed, which results in the formation of a lesser number of knitted loops in said part so that less elastic yarn is incorporated therein.

Another object is to provide a garment having integrally knitted waistband and body portions each having a front part which is less elastic laterally of the wearer than the remaining part.

A further object is to form the front parts of the waistband and body portions of an elastic knitted garment with a lesser number of knitted loops than the remaining parts of the waistband and body portions, respectively, of the garment, whereby each of said front parts has less elastic yarn and is less elastic than the remaining parts thereof, respectively.

A further object is to provide a knit elastic garment having a two-ply waistband wherein the front part of each layer 23 of the waistband is less elastic laterally of the wearer than the remaining parts of said waistband.

Another object is to provide a circular rib knit elastic garment having the above indicated characteristics, for example a swim trunk, a girdle or similar article.

The above and other objects, features and advantages of the invention will be fully understood from the following description of the invention considered in connection with the accompanying illustrative drawings.

In the drawings:

FIG. 1 is a front view of a man's swim trunks in accordance with the present invention; and FIG. 2 is a sectional view taken on line 2—2 of FIG. 1.

Referring now to the drawings in detail, the garment 10 is knitted on a circular knitting machine and is formed as rib-knit swim trunks which is stretchable both longitudinally and circumferentially of the wearer, the circumferential stretchability of the garment being substantially greater than the longitudinal stretchability of the garment. The garment comprises a body encircling and constricting portion 12, a waistband 14 which is integrally knitted with portion 12, the leg portions 16 and the crotch insert 18. The upper part 20 of the waistband is preferably folded inwardly to lie in confronting relation with the outer layer 23 of the waistband and is secured thereto by the row of stitching 24. Similarly, the lower ends 26 of the leg portions 16 are folded inwardly to lie against said leg portions inwardly thereof and are secured thereto by the rows of stitching 28. It will be understood that the garment is preferably formed from a circular rib-knit tube of elastic material which is cut to form the leg portions and the insert for the crotch and is substantially sewn in a well known manner.

Pursuant to the invention, the body portion 12 of the garment is formed with a part 30 which is adapted to be in confronting relation with the abdomen of the wearer's body when the garment is worn. Part 30 is formed during the knitting of the body portion of the garment and is less elastic than the remaining parts of the body portion of the garment and provides a constricting effect on the abdomen of the wearer which is greater than the constricting effect of the remaining parts of the body portion of the garment on other portions of the wearer's body. The lesser elasticity of part 30 as compared to the other parts of the body portion of the garment is obtained by omitting the knitting action of certain needles of the knitting machine during the knitting of part 30 and thereby providing a lesser number of knitted loops and consequently a lesser amount of elastic yarn in said part than is provided in the remaining parts of the body portion. The number of needles omitted may be varied over a considerable range and it is to be noted that the yarn needles omitted the former number of yarns is selected so as to thereby providing a greater degree of decreased stretchability. It will be noted that part 30 increases in width in a direction extending from the lower part of the abdomen of the wearer toward the waistline, as illustrated by the stepped-like pattern forming the boundaries of part 30. In this manner a gradually increasing flattening effect, as distinct from an abrupt effect, occurs in a direction extending from the lower part of the abdomen to the waistline.

The front part 32 of the waistband 14 is less elastic than the remaining parts of the waistband 14 laterally of the wearer and is formed in the same manner as part 30. As herein shown, part 32 is knit integrally with and as a continuation of part 30 and the two plies of material forming the waistband, each ply having a part 32, provides a high degree of constriction action on the wearer's waist. In conjunction with the other parts of the waistband, part 32 also assists in providing an elastic waist part of the waistband about the waist of the wearer. It will be understood that waistband 14 is less elastic than body portion 12 since the body portion of the garment must be readily stretchable to conform to the buttocks and other parts of the wearer's body with which it is in contact.

The manner in which the tubular blank is knit on a circular knitting machine will be readily apparent from the above description of the garment. More specifically, however, in order to form the tubular blank on a circular knitting machine which has, for example, four active yarn feeds for feeding yarn to form the waistband 14 of the garment, feed 1 is supplied with an elastic yarn and a substantially inelastic yarn. The elastic yarn is preferably nylon covered rubber or nylon covered spandex and the inelastic yarn is preferably a nylon yarn, for example the nylon yarn known by the trademark "Banlon." Similarly, feed 2 is supplied with an elastic yarn and an inelastic yarn. In both feeds 1 and 2, both yarns are supplied to the cylinder needles and to the dial needles of the machine. Feeds 3 and 4 are each supplied with a substantially inelastic yarn, for example "Banlon." In the area of the needles which form part 32 of the waistband, a lesser number of the needles are used than the number of needles used to form the remaining parts of the waistband, whereby a lesser number of knitted loops are formed in part 32 to form a less elastic fabric than the remaining parts of the waistband.

To form the body portion 12 of the garment, feed 1 or 2 is dropped so that three yarn feeds of the machine are used to knit said body portion which is lighter in weight.
3. Than the waistband. Feeds 1 or 2, as the case may be, is supplied with the above mentioned elastic yarn and substantially inelastic yarn, and both yarns are knitted only on the dial needles. Knitting of the elastic yarn on the dial needles only results in the disposition of the elastic yarn toward the inner surface of the fabric. Feeds 3 and 4 are each supplied with a substantially inelastic yarn, for example “Banlon.” In part 30 of the body portion of the garment, a certain number of the needles are inactivated whereby said part is provided with a lesser number of knitted loops and a lesser amount of elastic yarn than the remaining parts of the body portion of the garment. As the knitting of the tubular blank progresses in a direction away from the waistband portion, more needles are added to reduce the width of part 30 and provide a boundary for said part which resembles the stepped pattern shown in FIG. 1. At the lower end of part 30, all of the previously omitted needles are operating and the knitting of the body part will continue in the usual manner.

While we have shown and described the preferred embodiment of our invention, it will be understood that various changes may be made in the present invention without departing from the underlying idea or principles of the invention within the scope of the appended claims.

What we claim is:

1. An elastic knitted garment, comprising an elastic body encircling constricting portion having elastic yarn incorporated therein and having an integral front part and an integral remaining part, said front part of said body encircling portion being positioned in said garment with respect to said remaining part of said body encircling portion so as to overlie the abdomen of the wearer's body when the garment is worn, said front part of said body encircling portion having an amount of elastic yarn incorporated therein which is less than the amount of elastic yarn incorporated in said remaining part of said waistband, so that said front part of said waistband is less elastic than said remaining part of said waistband to provide a flattening effect on the abdomen of the wearer.

2. An elastic knitted garment, comprising an elastic body encircling constricting portion and an integral elastic waistband having elastic yarn incorporated therein and having an integral front part and an integral remaining part, said front part of said waistband being positioned in said garment with respect to said remaining part of said waistband so as to overlie the front waist portion of the wearer's body when the garment is worn, said front part of said waistband having an amount of elastic yarn incorporated therein which is less than the amount of elastic yarn incorporated in said remaining part of said waistband, so that said front part of said waistband is less elastic than said remaining part of said waistband to provide a flattening effect on said front waist portion of the wearer.

3. An elastic knitted garment, comprising an elastic body encircling constricting portion and having an integral front part and an integral remaining part, said front part of said body encircling portion being positioned in said garment with respect to said remaining part of said body encircling portion so as to overlie the abdomen of the wearer's body when the garment is worn, said front part of said body encircling portion having an amount of elastic yarn incorporated therein which is less than the amount of elastic yarn incorporated in said remaining part of said waistband, so that said front part of said waistband is less elastic than said remaining part of said waistband to provide a flattening effect on the underlying portions of the wearer's body.

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