

- [54] **BRIEF AND METHOD OF PRODUCTION**
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- [73] Assignee: **Sears, Roebuck and Co., Chicago, Ill.**
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- [21] Appl. No.: **126,074**

Related U.S. Application Data

- [63] Continuation-in-part of Ser. No. 874,260, Nov. 5, 1969, Pat. No. 3,541,865.
- [52] **U.S. Cl.****2/224 A**
- [51] **Int. Cl.****A41b 9/02**
- [58] **Field of Search**.....**2/224 A, 224, 225, 226, 238**

[56] **References Cited**

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[57] **ABSTRACT**

A brief for men and boys characterized by a generally yoke-shaped blank cut from tubular fabric and having a generally triangular central seat portion having a base line approximately the width of the wearer's crotch and a pair of similar elongated vertical panels on opposite sides of said seat portion each about the width of the base line. A continuous tape edge binding is attached to the lower edges of the blank. One of the panels is lapped over the other and a waist band is stitched to the top edge of the blank. The lower edges of the panels in overlapped relation are stitched to the base line of the central portion to complete the garment.

8 Claims, 9 Drawing Figures

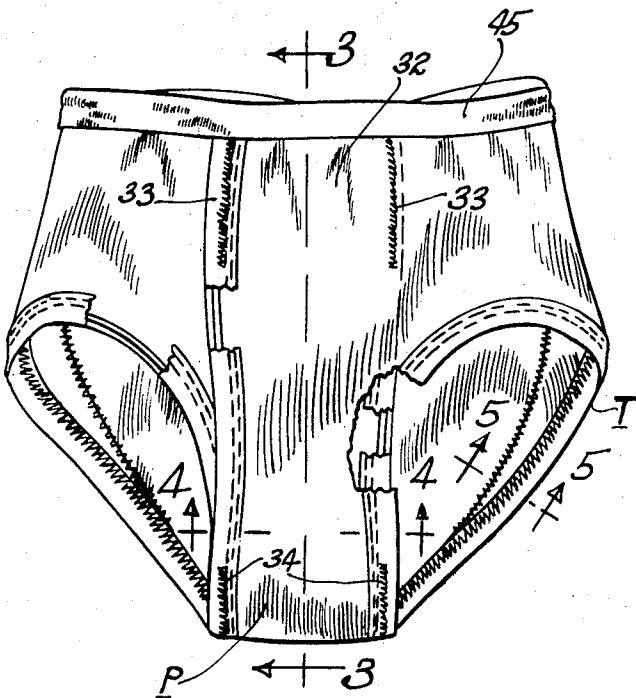


FIG. 1

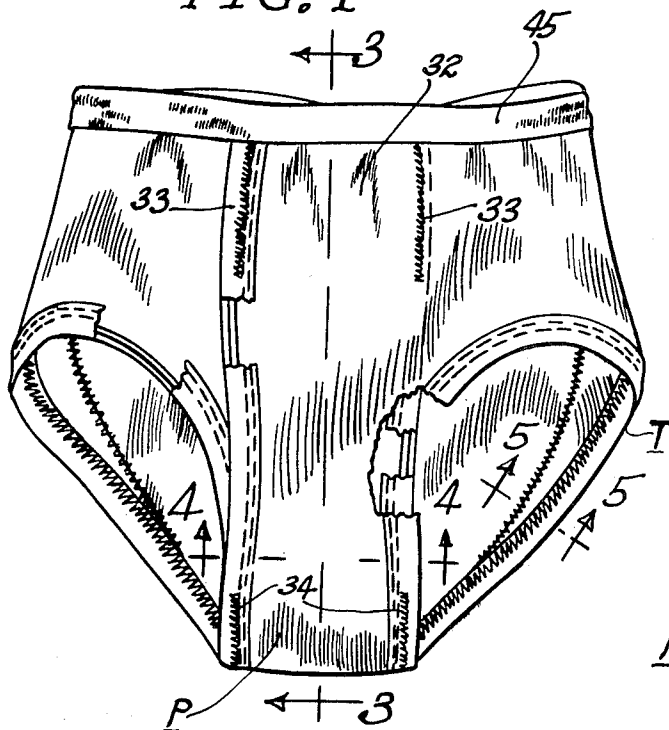


FIG. 3

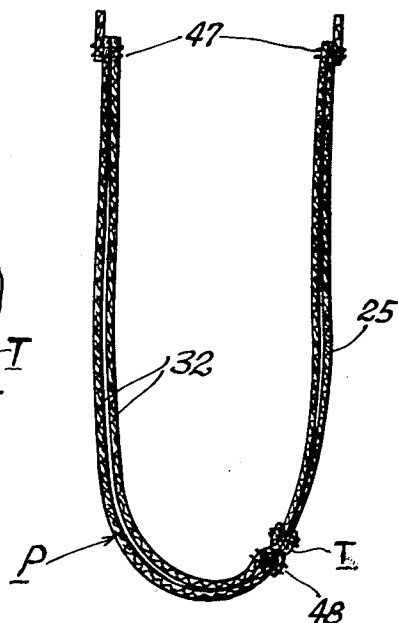


FIG. 2

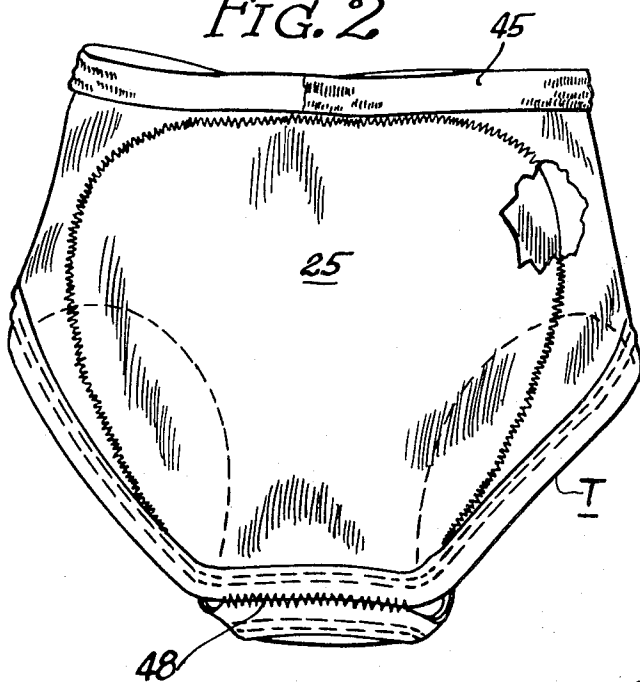


FIG. 4

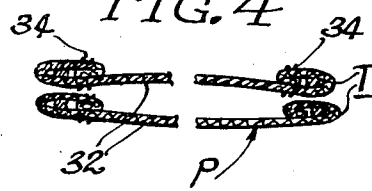
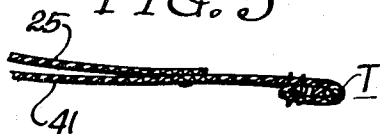


FIG. 5



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FIG. 7

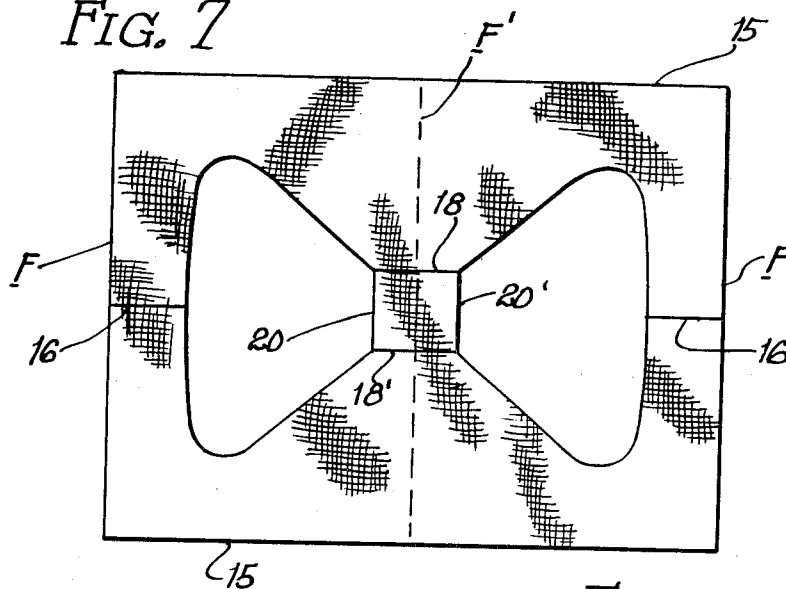


FIG. 8

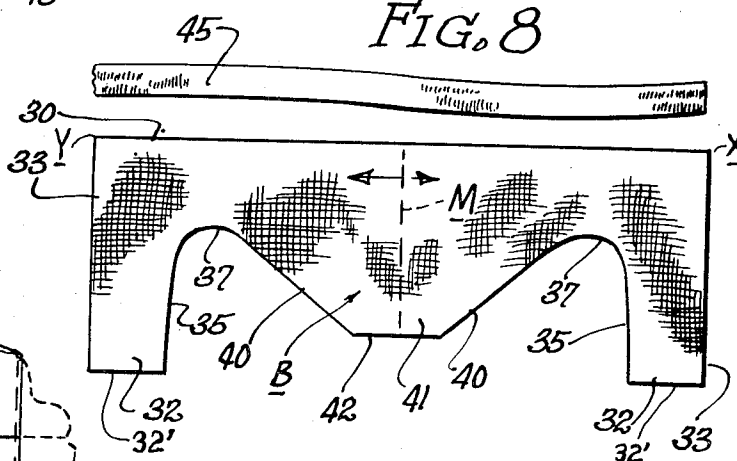
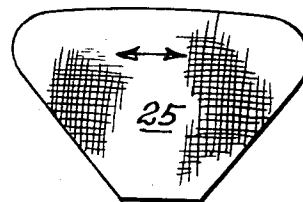


FIG. 9



BRIEF AND METHOD OF PRODUCTION

The present application is a continuation-in-part of my co-pending application Ser. No. 874,260 filed Nov. 5, 1969 now U.S. Pat. No. 3,591,865 issued July 13, 1971.

My invention has to do with an undergarment of the general character of drawers for wear by men and boys and may in a sense be considered an improvement over the invention described and claimed in my copending patent application Ser. No. 650,833, now U.S. Pat. No. 3,487,833 dated Jan. 6, 1970.

BACKGROUND OF THE INVENTION

The aforesaid prior invention involves a brief, or snugly fitting drawers, characterized by the presence of an overlap extending upwardly from the crotch and overlapping a panel which extends downwardly from the waist over the abdomen, and including a passage with a horizontal opening, the upper edge of said overlap having means for resiliently closing said passage. That structure has certain important advantages not found in the prior art.

The usual brief, as marketed for a long time, is characterized by overlapping layers of fabric in front with an opening along a vertical line. Furthermore, such a garment is usually fabricated from a plurality of pieces or swatches of fabric, as many as six in some cases, requiring considerable hand labor in cutting and sewing and excessive waste material. Hence, the cost is high.

BRIEF OUTLINE OF THE INVENTION

The present invention, in contradistinction to said U.S. Pat. No. 3,487,833, is characterized by the presence of a pair of overlapping flaps of fabric covering the abdomen, groin and crotch portions of the wearer's anatomy and providing a horizontal passage through the vertical edges of said flaps. The structure of said garment is so designed and constructed that said vertical side edges of the aforesaid flaps providing said passage will permit manual access from the right side and will normally be maintained taut. Thus, the overlap which forms the support will provide the support for the genitalia desired by young males who prefer this type of garment.

Another object is to provide a garment of the type referred to so designed that it may be cut from tubular fabric in such manner as to provide little or no wasted material, thus reducing cost.

Still another object is to provide a garment of the type referred to designed so that it may be cut from tubular material to provide a swatch which may, if desired, be attached to the garment as a seat reinforcement.

A further object is to provide a new and improved method of producing a garment of the type referred to which may be fabricated from a single blank of fabric, with a minimum of cutting and sewing operations, and thus is simple, economical, and capable of operation by relatively unskilled labor.

Other objects and advantages will doubtless suggest themselves to those skilled in the art as the description proceeds.

BRIEF DESCRIPTION OF THE DRAWINGS

Referring now to the drawings forming a part of this specification and illustrating a preferred embodiment of my invention,

FIG. 1 is a front plan view of a brief embodying my invention, certain parts being cut away for added clearness;

FIG. 2 is a rear plan view of the same;

FIG. 3 is a sectional view taken substantially along the line 3—3 of FIG. 1;

FIG. 4 is a sectional view of the overlap portion of the garment, taken substantially along the line 4—4 of FIG. 1;

FIG. 5 is a fragmentary sectional view taken substantially along the line 5—5 of FIG. 2;

FIG. 6 is a fragmentary view of a strip of tubing from which my improved garments are fabricated;

FIG. 7 is a plan view showing a fabric section cut from tubing seen in FIG. 6, at a subsequent stage of production;

FIG. 8 is a plan view of a blank for a single garment at a still later stage of production, and

FIG. 9 is a plan view of a supplemental seat portion for a garment embodying my invention.

DETAILED DESCRIPTION

It is believed that my invention may be most clearly understood if I first describe the method of production.

Referring to FIGS. 6-9, inclusive, there is utilized a tubular material of a character commonly employed in the textile industry, being an elastic knitted fabric known in the trade as Spandex or Lycra, the numeral 10 indicating such a tube as disposed on a cutting table, conveyor or the like. Such material has a one-way elasticity as indicated by arrows in FIGS. 8 and 9. Obviously, such a tube will provide a pair of overlapping sheets 12, 12' of identical width, with longitudinal edges or fold lines F and F'.

A rectangular section is cut from the tubing as defined by the transverse line 15, 15.

A cut is made through the tube material through both tubing layers 12 and 12' of generally triangular shape, as indicated by numerals 20 and 23, said cut producing a swatch 25 seat patch of generally triangular shape which then is removed as shown in FIG. 9. The converging sides of the triangle may, but need not necessarily, terminate a short distance inwardly of edge F'.

The tube is then cut along fold line F, and the section then opened along fold line F' resulting in a substantially rectangular swatch as seen in FIG. 7, with the triangular spaces disposed in allochiral relation. Further cutting is then done along the lines 16, 16, 18, and 18', resulting in two identical blanks B (FIGS. 7 and 8), capable of producing two garments.

The rectangular swatch defined by lines 18, 18', 20, 20' is eliminated, being the only waste resulting from the operation, which is of negligible economic importance.

Blank B is yoke-shaped and characterized by a substantially straight horizontal edge 30 which is of a length sufficient to pass around the wearer's waist, with a substantial overlap, as seen in FIG. 1. Depending from edge 30 at opposite ends thereof is a pair of flaps

32, 32 defined by vertical outer edges 33, 33 and inner edges 35, 35 which are roughly parallel to edges 33, 33, but slope upwardly and inwardly to rounded corners 37, 37 and thence extend diagonally downwardly and inwardly at an angle of about 45° along straight lines 40, 40, the lower ends of which are spaced apart to define a relatively short horizontal edge 42, approximately equal in width to the wearer's crotch.

It will be seen that the central portion 41 of blank B is roughly triangular, corresponding approximately to the shape and size of swatch 25 (FIG. 9).

As stated hereinabove, the fabric of which tube 10 is formed is essentially a one-way-stretch material and the blanks hereinabove described are cut so that the major stretch thereof is in a horizontal direction, as indicated by the arrows in FIGS. 8 and 9.

Blank B constitutes substantially the entire fabric of the garment embodying my invention, except for a few accessories such as a waistband 45 (FIG. 8) and elastic edging material hereinafter described.

One of the features of the present invention is the use of a continuous unitary tape binding T which is stitched to all of the edges of the blank B below the horizontal edge 30. Thus, referring to FIG. 8, the sewing machine operator would begin by attaching the tape binding T at the upper right hand corner indicated by the letter X and would stitch the binding T successively to edges 33, 32', 35, 37, 40, 42, 40, 37, 35, 32' and 33 and ending up at the left hand corner Y directly opposite the starting position X. At this point all of the edges of the blank B, except edge 30, are covered by the tape binding T.

This construction affords substantial advantages in the fabrication of the garment. The use of a unitary piece of tape binding covering all of the edges below the waistline simplifies fabrication, permitting the employment of operators having lower degrees of skill than heretofore required in the industry for similar functions. Further, avoidance of the use of a plurality of shorter tape binding sections, as in the prior art, results in an increased rate of production of the garments.

To complete the fabrication of the garment, Blank B is folded over upon its vertical median line, M resulting in overlapping flap portions 32, 32, as seen in FIGS. 1, 3 and 4. The elastic waistband 45 may then be attached by stitching 47 and the lower edges of flaps 32, in overlapped relation, are then secured to the lower edge 42 of the central portion 41 by a horizontal line of zig-zag stitching 48 (FIG. 3) passing through edge binding T.

Flaps 32, 32 are likewise secured together by stitching 38, 38 at the top and 34, 34 at the bottom for stabilization. Such stitching extends only a relatively short distance from the top and bottom, respectively, leaving a free open space therebetween for convenient access. Such access may be had from the right side.

Obviously, in production, the length of the slit or opening between the top and bottom vertical stitching may be adjusted as desired by varying the length of said stitching.

Because of the double folds of fabric 32, 32 forming overlap P, this structure provides superior support for the male genitalia, which is a feature of considerable importance in this type of garment.

Furthermore, my improved structure insures, in addition to the excellent support just mentioned, that firm

and neat closure is provided at all times, the double-walled overlap providing comfortably positive coverage of the groin and abdomen, at the same time permitting ready ingress and egress through the passage between the flaps.

Although the garment is complete in all respects as hereinabove described, inasmuch as my invention provides the swatch 25 precisely the desired shape and size to form a supplemental seat portion, it is so employed by stitching said swatch 25 to the back of the garment, as seen in FIGS. 2, 3 and 5, the stitching extending around the periphery of said swatch. Thus, my invention permits reinforcement of the garment in the seat, a place of maximum wear, at substantially no added expense.

It will be seen that I have conceived a novel form of brief having a number of superior features, as well as a novel method of production thereof, resulting in nearly complete elimination of waste material and thus effecting substantial economies which may be passed on to the consumer in the form of reduced cost. Fabrication in accordance with my invention is so simple and expedient that relatively unskilled personnel may be employed.

The use of only a simple blank, in lieu of a plurality up to six, effects a saving in both labor and material, while production of the supplemental seat reinforcing swatch requires no extra step of labor except for its attachment.

Various changes coming within the spirit of my invention may suggest themselves to those skilled in the art; hence, I do not wish to be limited to the specific embodiment shown and described or uses mentioned, but intend the same to be merely exemplary, the scope of my invention being limited only by the appended claims.

I claim:

1. An undergarment for males, comprising

- a. a generally yoke-shaped blank having a top edge, a generally triangular central seat portion having a base line approximately the width of the wearer's crotch and a pair of similar elongated vertical panels on opposite sides of said seat portion, each substantially the width of said base line and extending from said top edge for a distance substantially beyond said base line,
- b. a continuous tape edge binding attached to the lower edges of said blank below said top edge,
- c. said panels being overlapped,
- d. a waist band stitched to said top edge of said blank, and
- e. the portions of the continuous tape edge binding attached to the lower edges of said panels being stitched together and to the portion of the continuous tape edge binding attached to said central seat portion at said base line.

2. The invention as defined in claim 1 wherein said panels have free horizontally spaced vertical edge portions defining a passage extending horizontally therethrough to permit manual ingress and egress of the genitalia.

3. The invention as defined in claim 2 in which the panels have vertical marginal stitching securing said panels together at the upper and lower portions thereof, so as to restrict the vertical length of said

passage to an extent sufficient to insure the positive closure while permitting convenient manual access.

4. A method of producing a garment of the character described comprising

- a. cutting a generally yoke-shaped blank from tubular fabric, said blank having a top edge, a generally triangular seat portion having a base line approximately the width of the wearer's crotch and a pair of similar elongated vertical panels on opposite sides of the seat portion, each having a width substantially equal to the base line and extending from said top edge for a distance substantially beyond said base line,
- b. stitching a continuous edge binding to the lower edges of said blank below said top edge,
- c. folding said blank to lap one panel over the other,
- d. stitching a waist band to said top edge of said blank, and
- e. stitching the portions of the continuous edge binding stitched to the lower edges of said panels together and to the portion of the continuous edge binding stitched to said seat portion at said base line.

5. The method as defined in claim 4 wherein said panels are stitched together at the top and bottom thereof along spaced substantially vertical lines to restrict the passage thereof while still permitting convenient manual access therebetween.

6. An undergarment for males, comprising

- a. a generally yoke-shaped blank having
 1. a substantially straight top horizontal edge of a length sufficient to pass around a wearer's waist with a substantial overlap,
 2. a pair of elongated panels depending from said top edge at opposite ends thereof defined by vertical outer edges and inner edges spaced therefrom which slope upwardly and inwardly to rounded corners spaced downwardly from said top edge, said spaced inner and outer edges of each of said panels being connected by a lower edge of each of said panels, said lower edge of each of said panels extending approximately the width of the wearer's crotch, and
 3. a generally triangular central seat portion extending downwardly from said top edge, said seat portion having a pair of side edges extending diagonally downwardly and inwardly from said rounded corners to a substantially horizontal edge forming a generally centered base line approximately the width of the wearer's crotch,
- b. a continuous tape edge binding being attached in sequence to the outer edge of one of said pair of panels, to the lower edge of said panel, to the inner edge of said panel, to the rounded corner contiguous to said inner edge of said panel, to the side edge of said seat portion contiguous to said rounded corner, to said horizontal edge of said seat portion, to the other of said side edges of said seat portion, to the other of said rounded edges, to the inner edge of the other of said panels, to the lower edge of the said other panel, and to the outer

edge of the said other panel,

- c. said panels being overlapped,
- d. a waist band stitched to said top edge of said blank, and
- e. the portions of said continuous tape edge binding attached to the lower edges of said panels being stitched together and to the portion of said continuous tape edge binding attached to the horizontal edge of said seat portion.

7. The invention as defined in claim 6 wherein said panels have free horizontally spaced vertical edge portions adjacent said inner and outer edges thereof, the portions of the continuous tape edge binding attached to each of said panels being stitched to the other overlapped panel at the upper and lower portions of said panels to define a passage of restricted vertical length extending horizontally through said panels.

8. A method of producing a garment of the character described comprising

- a. cutting a generally yoke-shaped blank from tubular fabric, said blank having
 1. a substantially straight top horizontal edge of a length sufficient to pass around a wearer's waist with a substantial overlap,
 2. a pair of elongated panels depending from said top edge at opposite ends thereof defined by vertical outer edges and inner edges spaced therefrom which slope upwardly and inwardly toward the center of said top edge to rounded corners spaced downwardly from said top edge, said spaced inner and outer edges of each of said panels being connected by a lower edge of each of said panels extending approximately the width of the wearer's crotch, and
 3. a generally triangular central seat portion extending downwardly from said top edge, said seat portion having a pair of side edges extending diagonally downwardly and inwardly from said rounded corners to a substantially horizontal edge forming a generally centered base line approximately the width of the wearer's crotch,
- b. stitching a continuous tape edge binding in sequence to the outer edge of one of said pair of panels, to the lower edge of said panel, to the inner edge of said panel, to the rounded corner contiguous to said inner edge of said panel, to the side edge of said seat portion contiguous to said rounded corner, to said horizontal edge of said seat portion, to the other of said side edges of said seat portion, to the other of said rounded edges, to the inner edge of the other of said panels, to the lower edge of the said other panel, and to the outer edge of the said other panel,
- c. folding said blank to lap one panel over the other,
- d. stitching a waist band to said top edge of said blank, and
- e. stitching the portions of the continuous tape edge binding stitched to the lower edges of said panels together and to the portion of the continuous tape edge binding stitched to said seat portion at said base line.

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