Jan. 7, 1969 I. S. DE WOSKIN 3,420,236

SANITARY GARMENT

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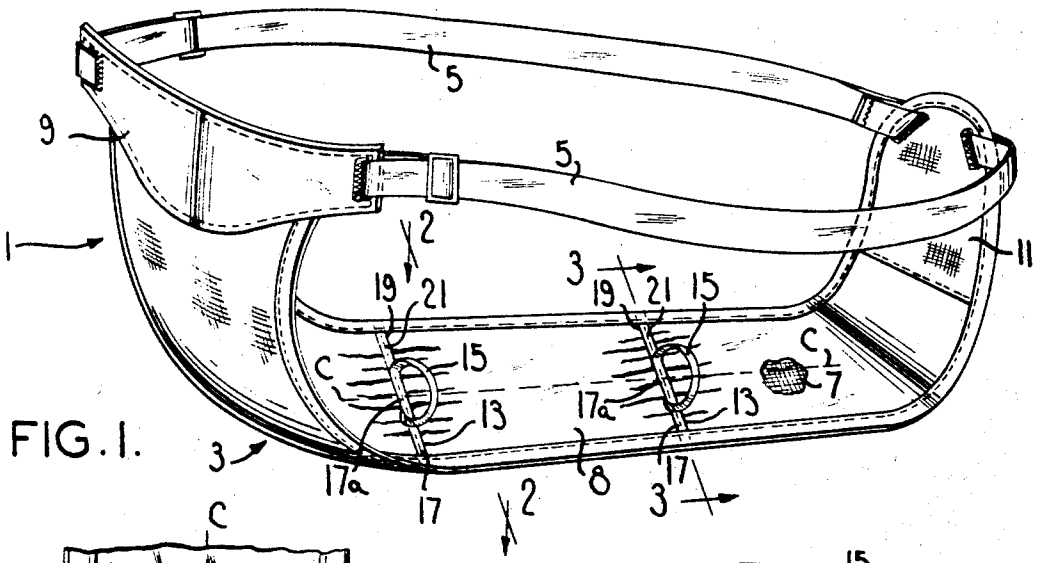


FIG. 1.

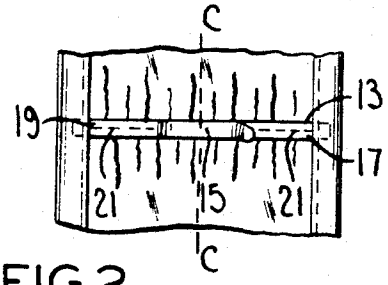


FIG. 2.

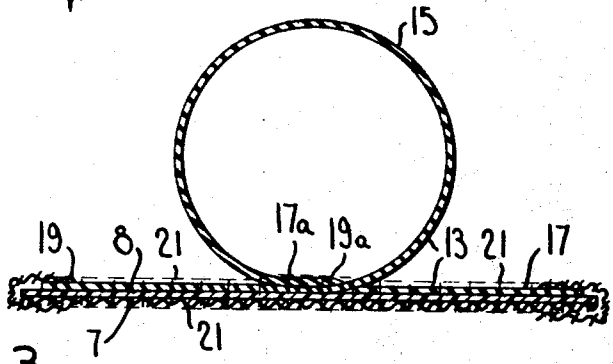
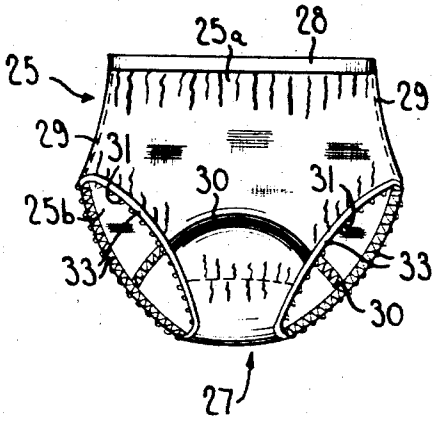


FIG. 3.

FIG. 4.



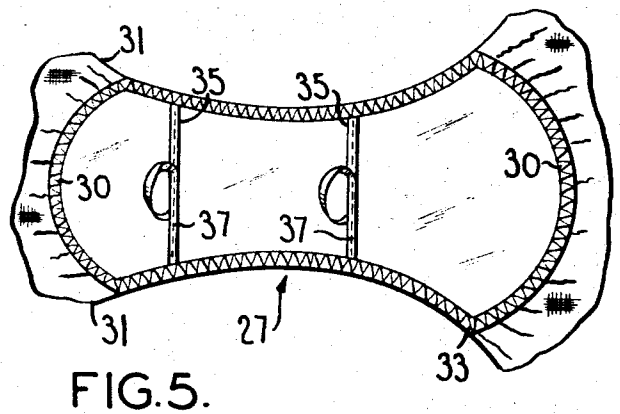


FIG. 5.

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SANITARY GARMENT

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U.S. Cl. 128—291 3 Claims

Int. Cl. A61f *13/16*

ABSTRACT OF THE DISCLOSURE

A sanitary garment having a pair of loops stitched to the crotch section of the garment for holding a sanitary napkin in place in the crotch section. The loops are constituted by central portions of bands which extend across the crotch section from one side thereof to the other and which are stitched to the crotch section.

Among the several objects of the invention may be noted the provision of a sanitary garment, either of the shield or sanitary panty type, having improved means for holding a sanitary napkin in place in the crotch section of the garment, which means comprises loops instead of the usual grips or pins, enabling use of napkins without the usual gauze end extensions, and making it easy to attach such a napkin to the crotch section and remove it therefrom; the provision of a garment such as described wherein the construction is such that the operation of attaching the loops to the crotch section may be readily effected by stitching utilizing a simple attachment to a sewing machine, with a minimum of hand operations; the provision of a garment such as described wherein the attachment of the loops to the thin material of the crotch section is such as to avoid curling or compacting of the crotch section fabric around a sanitary napkin; and the provision of a garment such as described which allows a sanitary napkin to follow the actions of the wearer during walking, sitting down, rising from a sitting position, etc. Other objects and features will be in part apparent and in part pointed out hereinafter.

The invention accordingly comprises the constructions hereinafter described, the scope of the invention being indicated in the following claims.

In the accompanying drawings, in which several of various possible embodiments of the invention are illustrated,

FIG. 1 is a perspective of a shield type sanitary garment of this invention;

FIG. 2 is a fragmentary plan taken along line **2**—**2** of FIG. 1;

FIG. 3 is an enlarged fragmentary section taken along line **3**—**3** of FIG. 1;

FIG. 4 is a view of a panty type sanitary garment of this invention; and

FIG. 5 is an enlarged fragmentary plan of the crotch section of the FIG. 4 garment.

Corresponding reference characters indicate corresponding parts throughout the several views of the drawings.

Referring first to FIG. 1 of the drawings, there is indicated at **1** a sanitary garment of the so-called shield type, comprising a crotch section **3** and adjustable elastic waist bands **5** attached at their ends to the ends of the crotch section. The latter typically consists of a long narrow piece **7** of textile fabric, such as nylon, having a coating **8** (FIG. 3) on one face (its inside face as worn on the body) of a plastic material rendering it impervious to passage of menstrual discharge, and plain fabric end pieces **9** and **11**, the elastic waist bands being attached to the latter.

Spaced along the length of the crotch section are two elastic bands **13** each of which is stitched to the crotch section on its inside face in such manner as to have a central loop portion **15** which is free of the crotch section

for insertion therein of a sanitary napkin, the loop portions being adapted snugly and elastically to completely encircle the napkin and hold it in place on the inside face of the crotch section. Each of bands **13** has an overall length greater than the width of the crotch section at the location of the band, and has end portions **17** and **19** which extend inward from opposite side edges of the crotch section in line with one another past the longitudinal center line C—C of the crotch section, with the inner end **17***a* of end portion **17** overlapped on the outside of inner end **19***a* of end portion **19** for some distance on opposite sides of the longitudinal center line. These end portions of the band are secured to the crotch section by a line of stitching **21** extending through the end portions for the length thereof across the width of the crotch section. The central portion of the band is formed into the loop **15**, and is not stitched down so that it is free of the crotch section.

The loop **15** is constituted by the central portion of the band representing the excess of the length of the band over the width of the crotch section. This central portion extends away from the inner end **19***a* of the end portion **19** out from under the end portion **17** and is looped around to the inner end **17***a* of end portion **17**.

Unlike an arrangement in which the elastic band would simply have its very ends tacked down to the side margins of the crotch section, with substantially the entire length of the band free of the crotch section between the tacked down ends of the band, the central-looped band arrangement of this invention as above described is easy and economical to manufacture with a minimum of hand operations, provides for better fit of the napkin held in the loops to the body of the wearer, allows the napkin to follow the actions of the body of the wearer during walking, sitting down, rising from a sitting position etc., and eliminates the possibility of the crotch section curling or compacting around the napkin. As to ease and economy in manufacture, the elastic band is easily sewn to the crotch section of the garment by using an attachment on a sewing machine, thus eliminating hand labor usually required and resulting in more accurate and positive positioning of the bands. The provision of the loops at the longitudinal center C—C of the crotch section holds the napkin in the desired position and locates it relative to the garment with more accuracy than prior garments which merely use a loop that is free from one side to the other side of the crotch section. Attachment of the elastic bands to the crotch section throughout the width of the crotch section avoids any tendency of the bands to pull the edges of the crotch section laterally toward each other. Therefore, the crotch section does not curl or compact around the napkin as may occur when an elastic band is attached to the crotch section only at the edges of the crotch section. The loops and napkins can move freely relative to the rest of the garment, thereby allowing the napkin to follow the actions of the body of the wearer during walking, sitting down, rising etc. Since there is no lateral pulling force exerted by the elastic band, it can be attached to very thin knit goods without tearing the knit material.

FIGS. 4 and 5 show a sanitary garment of the panty type which comprises a body portion generally designated **25** and a crotch portion or section **27**. An elastic waist band **28** encircles the waist of the body portion. The body portion consists of front and back sections **25***a* and **25***b* joined at stitched side seams **29**. The front and back sections are also attached to the ends of crotch section **27** along stitched seams **30**. The body portion and crotch section are cut to provide leg openings **31**. Elastic bands **33** encircle the leg openings and are sttiched to the body portion and crotch section. The crotch section **27** may be somewhat narrower at its center portion than at its ends as shown in FIG. 5.

The crotch section is made of a textile fabric coated with an impervious material such as the fabric previously described. A pair of the elastic bands **35** are spaced along the length of the crotch section for holding a sanitary napkin in the crotch section. These bands are of the same construction and function in the same manner as bands **13**. The bands are attached to the crotch section by lines of stitching **37**. A sanitary napkin is held by bands **35** in the same manner as described in connection with FIGS. 1–3.

As specified above, bands **13** (and **35**) are elastic bands, and loops **15**, in their unstretched condition, are slightly smaller in circumference than the circumference of a napkin to be used. For example, in the case of a napkin with a circumference of five inches, the loops would be made with a circumference, in unstretched condition, of about four and three-quarters inches. It is possible to use non-elastic bands instead of elastic bands, again with the loops somewhat smaller than the napkin circumference, the napkin being inserted in the loops by slightly compressing the napkin.

In view of the above, it will be seen that the several objects of the invention are achieved and other advantageous results attained.

As various changes could be made in the above constructions without departing from the scope of the invention, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

What is claimed is:

1. A sanitary garment having a crotch section and a pair of bands spaced along the length of the crotch section for holding a sanitary napkin in place in the crotch section, each band extending completely across the crotch section and having an overall length greater than the width of the crotch section at the location of the band, each band having end portions extending inward from opposite side edges of the crotch section in line with one another past the longitudinal center line of the crotch section with

the inner end of one of said end portions overlapped on the outside of the inner end of the other for some distance on opposite sides of the longitudinal center line, with stitching extending completely across the crotch section securing said end portions to the crotch section, and each band having an integral central loop portion constituted by a central portion of the band representing the excess of the length of the band over the width of the crotch section, said central portion extending away from the inner end of said other end portion of the band out from under said one end portion of the band and looped around to the inner end of said one end portion of the band, said central loop portion being free of the crotch section for insertion therein of a sanitary napkin, said loop portions being adapted snugly to encircle the napkin and hold it in place on the crotch section.

2. A garment as set forth in claim **1** wherein the crotch section of the garment comprises a long narrow piece of textile fabric having on one face a coating of an impervious material, and elastic waist bands attached at their ends to the ends of the crotch section.

3. A garment as set forth in claim **1** further comprising a fabric body portion having front and back sections attached to each other along stitched side seams and attached to the ends of the crotch section along stitched seams, and the body and crotch sections being cut to provide leg openings at the sides of the crotch section.

References Cited

UNITED STATES PATENTS

Re. 18,939	9/1933	Harrington	128—290
1,144,631	6/1915	Barlet	128—287
2,016,355	10/1935	Alsop	128—288
2,678,648	5/1954	De Woskin	128—288
2,705,957	4/1955	Mauro	128—288
2,977,957	4/1961	Clyne	128—289

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