United States Patent

[11] **3,559,654**

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[21] Appl. No. **756,000**
[22] Filed **Aug. 28, 1968**
[45] Patented **Feb. 2, 1971**

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[54] **COMBINATION GIRDLE AND STOCKINGS**
7 Claims, 4 Drawing Figs.

[52] **U.S. Cl.** **128/519,** 2/224, 2/239; 128/528, 128/535
[51] **Int. Cl.** **A41c 1/00**
[50] **Field of Search** 128/519, 524, 529, 535, 530; 2/239, 240, 224

[56] **References Cited**

UNITED STATES PATENTS

3,465,757	9/1969	Barg	128/535
3,469,583	9/1969	Gottlieb	128/519

FOREIGN PATENTS

1,506,507	11/1967	France	128/535

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ABSTRACT: A ladies undergarment and stockings, the undergarment including stomach and buttocks surrounding portions and having downwardly directed leg portions with bottom extremities, each of the bottom extremities carrying a non-slip fabric band thereon for supporting the thigh engaging portion of an associated ladies stocking. Each of the non-slip fabric bands comprises a longitudinally elastic textile material having a layer of frictional material laminated thereto and exposed on the inside surface of the band. Each of the stockings has a thigh engaging portion formed of a high-stretch yarn. The stockings are positionable so that the thigh engaging portions thereof are disposed under the non-slip fabric bands of the undergarment, whereby the frictional material exposed on the inside surfaces of the bands of the undergarment engage the thigh engaging portions of the stockings so as to detachably secure the stockings to the undergarment.

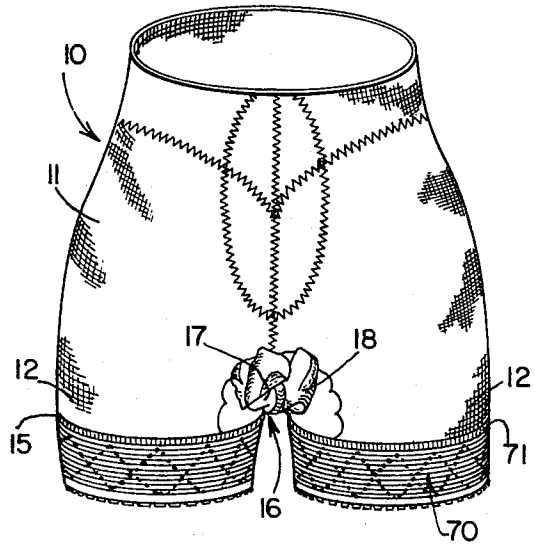


FIG. 1

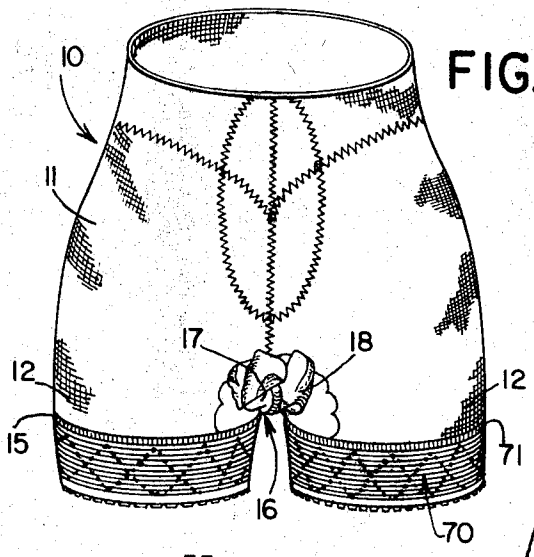


FIG. 2

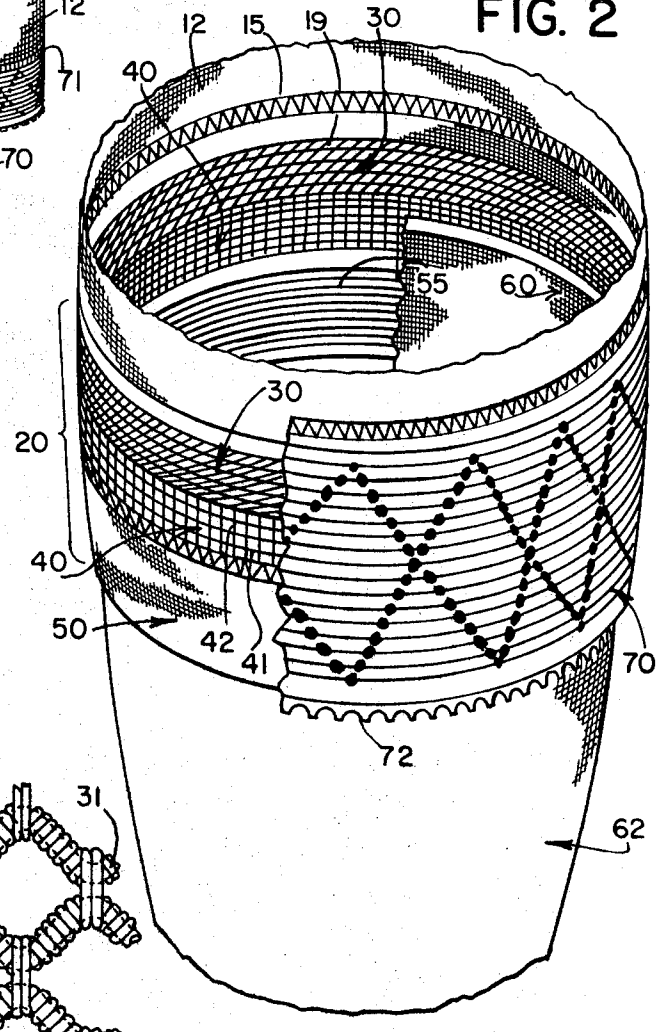


FIG. 3

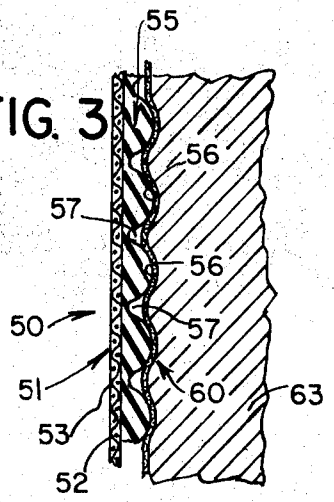
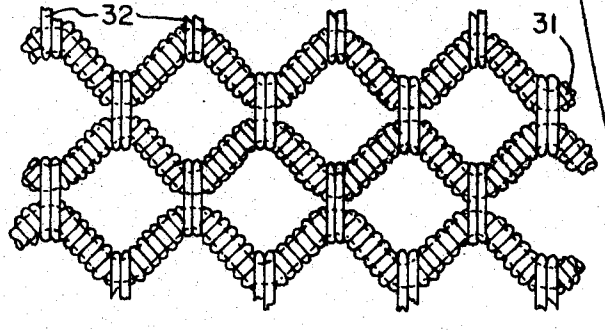


FIG. 4



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COMBINATION GIRDLE AND STOCKINGS

This invention relates to intimate garments for females which may be generally classified as panty girdles and more particularly to a panty girdle having bands of frictional material at the extremities of the leg portions thereof for frictional support of a lady's stockings.

In modern female dress, especially that worn by young women, it is desirable that the outer garment of the trouser type be tight fitting. When it is desired to wear long hose under such a trouser type garment, the use of garters and fasteners to support the hose is undesirable for two reasons; first because the outline of the garters may be visible through the undergarment, and secondly because such fasteners may be uncomfortable because of the tight fit of the trouser type outer garment which presses against the garter and fastener.

Accordingly, it is an object of the invention to provide a combination undergarment and stockings wherein the bottom extremities of the leg portions of the undergarment are provided with nonslip fabric bands, each comprising a longitudinally elastic textile material having a layer of frictional material secured thereto and exposed on the inside surface of the band, the stockings being formed of a thermoplastic stretch yarn to provide substantial stretchability thereto, so that upon positioning the thigh engaging portions of the stockings, under and in juxtaposition with the nonslip bands on the bottom extremities of the leg portions of the undergarment, the stockings will be frictionally supported by the undergarment.

Another object of the invention is to provide an undergarment having the nonslip fabric bands of the character described, and further including sections of textile strips respectively connecting each of the nonslip fabric bands to the bottom extremities of the leg portions, the textile strips being of a stretch character which permits axial movement of the stockings relative to the leg portion of the undergarment so as to accommodate movement of the stockings without disengaging the thigh engaging portions of the stockings from the nonslip bands of the undergarment.

Still another object of the invention is to provide, in an undergarment having the textile strip and the nonslip fabric band described above, a lace textile strip stitched to the undergarment and positioned to normally overlie the nonslip fabric band so as to conceal same.

Further features of the invention pertain to the particular arrangement of the elements of the undergarment and the stockings, whereby the above-outlined and additional operating features thereof are attained.

The invention, both as to its organization and method of operation, together with further objects and advantages thereof, will best be understood by reference to the following specification taken in connection with the accompanying drawing, in which:

FIG. 1 is a perspective view of one type of undergarment embodying the invention, shown as it would normally be worn;

FIG. 2 is an enlarged perspective view with parts broken away of the leg portion of the undergarment, showing in greater detail various features of the composite band of the undergarment and illustrating an associated stretch stocking supported thereby;

FIG. 3 is an enlarged sectional view illustrating the engagement of the frictional material of the nonslip fabric band carried by the undergarment with the thigh engaging portion at the upper end of a stocking;

FIG. 4 is an enlarged view illustrating in greater detail the intermediate mesh textile strip.

Referring now to FIG. 1, there is illustrated an undergarment **10** for females, the undergarment **10** illustrated herein being of the panty girdle type and including a body portion **11** designed to cover the lower portion of the torso, including the stomach and buttocks of the user. The body portion **11** includes a pair of downwardly directed thigh engaging leg portions **12**, each leg portion being turned at the lower end thereof to provide a welt or bottom extremity **15**. The undergarment **10** further is provided with a crotch piece **16** preferably fabricated of a soft flexible material, the crotch piece **16** being fabricated of a plurality of overlapping layers of fabric **17** and **18**, whereby the layers may be easily separated to facilitate the normal bodily functions without removal of the undergarment **10**. While the undergarment shown in FIG. **1** is of the type known as a panty girdle, it will be understood that the invention is applicable to underdrawers of the type known as panties.

Attached to the bottom extremity **15** of each of the leg portions **12**, as by stitching along the line **19**, is a stocking securing composite band indicated generally by the numeral **20**, intended to engage and support the upper marginal portion of a stocking by frictional means, as hereinafter described.

As best seen in FIG. **2**, the composite band **20** comprises a plurality of interconnected textile strips and bands indicated generally by the numeral **30**, **40** and **50**. The first textile strip is stitched along the line **19**, the textile strip **30** comprising a plurality of longitudinally extending elastic strands **31**. (FIG. **4**) A plurality of axially extending inextensible filaments **32** is interwoven with the strands **31** in a manner which imparts an open-mesh fishnet character to the strip **30**. The particular character of the mesh-type strip **30** is not critical so long as it is of a stretch textile material or weave which is capable of both axial and longitudinal elastic movement, this being desirable for reasons hereinafter explained. The term axially as used herein refers to the axis of the generally cylindrical shape defined by the leg portion **12** of the undergarment.

The textile strip **40** stitched to the lower end of the fishnet strip **30** comprises a plurality of longitudinally extending elastic strands **41** which are interwoven with a plurality of axially extending filament **42**, the filaments **42** being interwoven with the strands **41** in a manner whereby the strip **40** is longitudinally elastic only. The strip **40** serves as a flat portion connecting the open-mesh strip **30** to a nonslip fabric band **50** forming the bottommost portion of the composite band **20**.

The nonslip fabric band **50** is comprised of a longitudinally elastic textile material **51** comprised of a plurality of longitudinally extending elastic filaments **52** with transverse inextensible filament **53** interwoven therewith. Each of the extensible filaments **52** is comprised of a core of elastic material covered by a sheath of yarn. For example, the core may be either formed of a rubber or spandex material covered by two layers of yarn, such as nylon, or, alternatively, the core may be comprised of a spun yarn of rubber or spandex, the sheath then comprising a polyester or acrylic yarn.

A layer of frictional material **55**, such as rubber, is secured to the inwardly facing side of the textile material **51**. In the embodiment shown, the rubber is laminated to the textile material and is formed in a manner which provides a plurality of longitudinally extending alternating ridges **56** and valleys **57**. The rubber may be adhesively secured to the textile material **51** as by spraying thereon. It will be appreciated that because the frictional material **55** is of a natural or synthetic rubber, it is also longitudinally elastic together with the underlying textile material **51**.

The frictional material **55** provides a surface which is adapted to cooperate with a thigh engaging portion **60** (FIG. **3**) formed as the upper welt of a stocking **62**, a portion of which is shown in FIG. **2**. The stocking **62** is preferably formed of a thermoplastic stretch yarn which is relatively highly stretchable. The term "stretch" is intended to include all types of monofilament and multifilament yarns capable of providing the desired stretch and shape characteristics to the stocking and causing it to fit smoothly and unwrinkled when supported in accordance with this invention.

For example, the stocking may be knit of lively torque yarn which has been twisted to provide sufficient torque to cause distortion of the knit stitches. Yarns having torque in opposite directions are usually knit in alternation to balance the overall torque in the stocking.

The stocking may also be knit of "nontorque" or bicomponent type crimped or curled thermoplastic yarn which does

not require alternate knitting. The crimp or curl may be imparted to the yarn by any one of several known methods and the torque may be balanced so that the stocking may be knit at a single feed. The crimp or curl may be set in the yarn by passing it through a heated stuffer box, passing it over a heated blade, passing it between gear teeth, passing it through an air jet, or by other known means. In a preferred embodiment, the stocking may be knit of a polyamide self crimping yarn such as Du Pont's Cantrece Nylon, Type 881.

It will be appreciated that the thigh engaging portion **60** of the stocking is positionable so that the frictional material **55** exposed on the inside surface of the band **50** overlies the welt of the stocking. Because the band **50** is in a stretched condition, the frictional material **55** tightly engages the stocking and presses it against the limb of the user, designated as **63** in FIG. **3**. The use of a high stretch yarn material for the stocking increases the frictional engagement between the undergarment **10** and the stocking and prevents the stocking from snapping out of engagement with the nonslip fabric band of the undergarment when the wearer sits down.

The undergarment illustrated in FIG. **1** is further provided with a lace textile strip **70** which is stitched along one edge **71** thereof to the bottom extremity **15** of the leg portion **12** of the undergarment. As best seen in FIG. **2**, the lower edge **72** of the lace strip completely overlies the composite band **20** which includes the fishnet textile strip **30**, the flat band **40**, and the nonslip fabric band **50**, whereby the lace strip **70** serves to conceal the mesh strip **30**, the the band **40** and the nonslip fabric band **50**.

By providing the frictional area **55** on the undergarment and by using a stocking having the thigh engaging portion formed of a high stretch yarn, sufficient frictional contact is provided to securely retain the stocking when the thigh engaging end thereof is engaged by the nonslip band of the undergarment. In this regard, the alternate ridge and valley configuration of the frictional material **55** enhances the frictional engagement between the stocking and the undergarment and functions with maximum efficiency to retain the stockings in position under conditions of great activity The mesh textile strip **40** accommodates movement of the nonslip fabric band **50** relative to the undergarment when the user thereof sits down, while disposing the frictional material of the undergarment on the inner side of the nonslip fabric band prevents the rubber frictional material from interfering with the outer garment.

While there has been described what is at present considered to be the preferred embodiment of the invention, it will be understood that various modifications may be made therein, and it is intended to cover in the appended claims all such modifications as fall within the true spirit and scope of the invention.

I claim:

1. An undergarment comprising a member including stomach and buttocks surrounding portions and a pair of downwardly directed thigh engaging leg portions having bottom extremities, a pair of textile strips respectively stitched along one edge to the respective bottom extremities of said undergarment, each of said textile strips being longitudinally and axially elastic and comprised of widely spaced longitudinally extending elastic strands with axially extending inextensible filaments interwoven therewith, a nonslip fabric band connected to the opposite edge of said textile strip, each of said nonslip fabric bands comprising a longitudinally elastic textile material having a layer of frictional material laminated thereto and exposed on the inside surface of said band and formed to provide a plurality of longitudinally extending alternating ridges and valleys, whereby said frictional material is adapted to frictionally grip and support the thigh engaging portion of an associated stocking and support same on the leg of the user thereof while said textile strip accommodates movement of the associated stocking relative to the undergarment.

2. The undergarment set forth in claim **1**, and further comprising a pair of lace textile strips respectively stitched along one edge to a respective one of said bottom extremities of said leg portion, the free edge of each of said lace strips extending parallel to the terminal edge of the corresponding one of said nonslip fabric bands and overlying same, whereby said lace strips conceal said bands.

3. The undergarment as set forth in claim **1**, wherein said undergarment is a panty girdle and includes a crotch piece fabricated of a plurality of overlapping layers of fabric, the layers of fabric being easily separated to facilitate the performance of normal bodily functions without requiring removal of the undergarment.

4. In combination, an undergarment having leg portions with bottom extremities each of said bottom extremities carrying a nonslip fabric band thereon, each of said nonslip fabric bands comprising a longitudinally elastic material having a layer of frictional material laminated thereto and exposed on the inside surface of said band and formed to provide a plurality of longitudinally extending and alternating ridges and valleys, textile strips respectively connecting each of said nonslip fabric bands to the respective bottom extremities of said undergarment each of said textile strips being longitudinally and axially elastic and being of a stretch character and comprised of widely spaced longitudinally extending elastic strands with axially extending inextensive filaments interwoven therewith, and a pair of stockings, each of said stockings having a thigh engaging portion formed of a thermoplastic stretch yarn, said stocking being positionable so that said thigh engaging portions are interposed between said bands and the limb of the user, whereby the frictional material exposed on the inside surfaces of said bands cooperate with the thigh engaging portions of said stockings to detachably secure said stockings to said undergarment and support same on the leg of the user thereof.

5. In combination, an undergarment having leg portions with bottom extremities, each of said bottom extremities carrying a nonslip fabric band thereon, each of said nonslip fabric bands comprising a longitudinally elastic textile material having a layer of frictional material laminated thereto and exposed on the inside surface of said band and formed to provide a plurality of longitudinally extending and alternating ridges and valleys, a pair of lace textile strips each stitched along one edge to a respective one of said bottom extremities of said leg portion, the free edge of each of said lace strips extending parallel to the terminal edge of the corresponding nonslip fabric band and overlying same, whereby said lace strips conceal said bands, and a pair of stockings, each of said stockings having a thigh engaging portion formed of a thermoplastic stretch yarn, said stockings being positionable so that said thigh engaging portions are interposed between said bands and the limb of the user, whereby the frictional material exposed on the inside surface of said bands cooperates with the thigh engaging portions of said stockings to detachably secure said stockings to said undergarment and support same on the leg of the user thereof.

6. In combination, an undergarment having leg portions with bottom extremities, each of said bottom extremities carrying a nonslip fabric band thereon, each of said nonslip fabric bands comprising a longitudinally elastic textile material having a layer of frictional material laminated thereto and exposed on the inside surface of said band and formed to provide a plurality of longitudinally extending and alternating ridges and valleys, said textile material of said nonslip fabric bands comprising a plurality of longitudinally extensible elastic filaments with transverse inextensible filaments interwoven therewith, each of said extensible filaments comprising a core of elastic material covered by a sheath of yarn, and a pair of stockings, each of said stockings having a thigh engaging portion formed of a thermoplastic stretch yarn, and said stockings being positionable so that said thigh engaging portions are interposed between said bands and the limb of the user, whereby the frictional material exposed on the inside surfaces of said bands cooperates with the thigh engaging portions of said stockings to detachably secure said stockings to said undergarment and support same of the leg of the user thereof.

7. An undergarment comprising a member including stomach and buttocks surrounding portions and a pair of downwardly directed thigh engaging portions each terminating in an open bottom extremity, a pair of first textile strips respectively secured along the upper edges thereof to the bottom extremities of said undergarment, each of said first textile strips being longitudinally and axially elastic and comprised of widely spaced strands interwoven in an open-mesh fishnet pattern, a pair of second textile strips respectively secured along the upper edges thereof to the bottom edges of said first textile strips, each of said second textile strips being longitudinally elastic and comprised of closely spaced strands interwoven in a close-knit pattern, a pair of nonslip fabric bands respectively secured to the bottom edges of said second textile strips, each of said nonslip fabric bands comprising a longitudinally elastic textile material having a layer of frictional material secured thereto and exposed on the inside surface of said band and formed to provide a plurality of longitudinally extending and axially alternating ridges and valleys, whereby said frictional material is adapted to frictionally grip and support the thigh engaging portion of an associated stocking and support same on the leg of an associated wearer thereof while said first textile strips accommodate movement of the associated stockings relative to the undergarment.

UNITED STATES PATENT OFFICE

CERTIFICATE OF CORRECTION

Patent No. 3,559,654 Dated February 2, 1971

Inventor(s) HENRY POPE, JR.

It is certified that error appears in the above-identified paten and that said Letters Patent are hereby corrected as shown below:

Column 4, Claim 4, Line 4, after "elastic" insert -- textile --.

Column 4, Claim 6, Line 69, after "yarn," delete -- and --.

Signed and sealed this 4th day of May 1971.

(SEAL)
Attest:

EDWARD M.FLETCHER,JR.
Attesting Officer

WILLIAM E. SCHUYLER, J
Commissioner of Patent