

May 19, 1953

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2,638,602

SUPPORT STRUCTURE FOR STOCKINGS

Filed Aug. 5, 1950

2 Sheets-Sheet 1

FIG. 1.

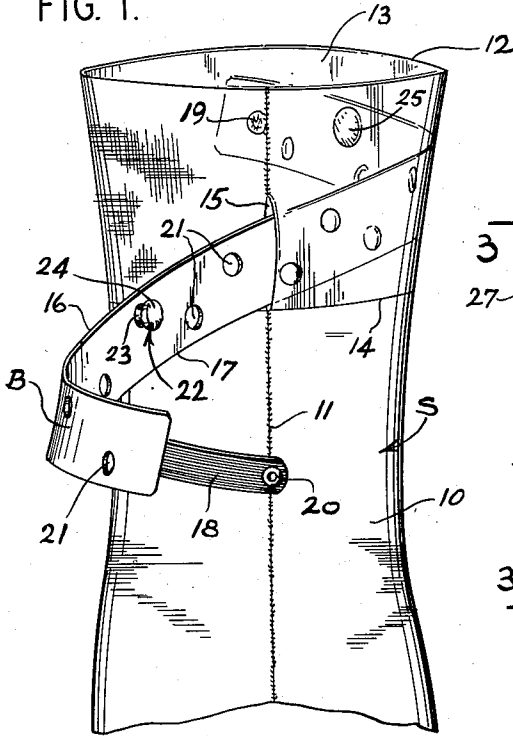


FIG. 2.

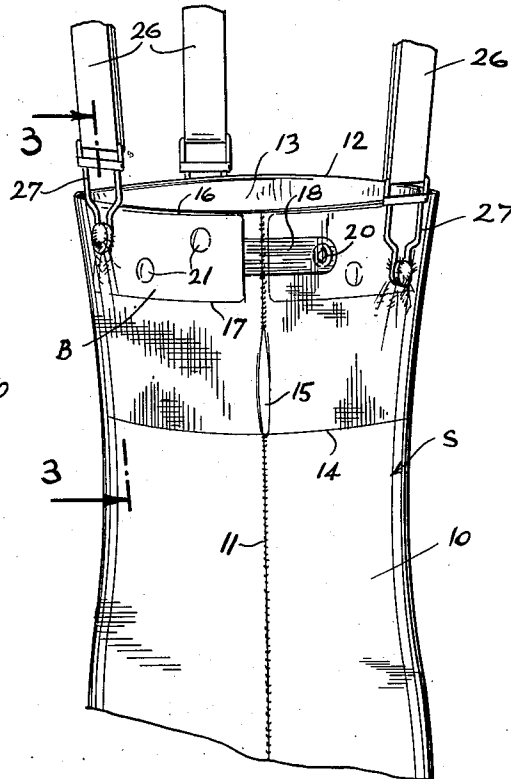
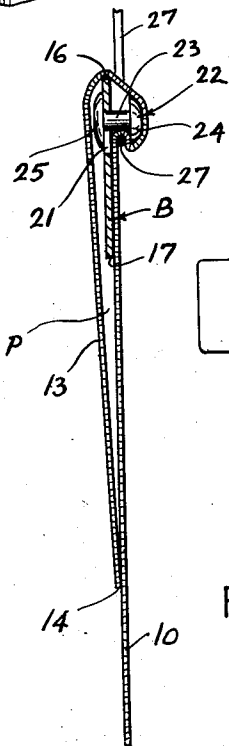
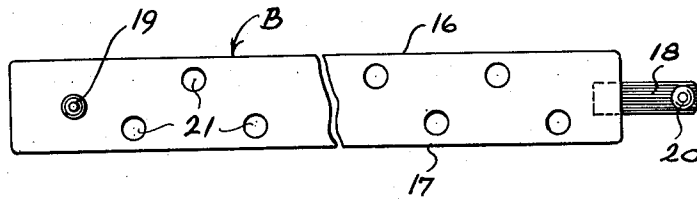


FIG. 4.

FIG. 3.

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FIG. 5.

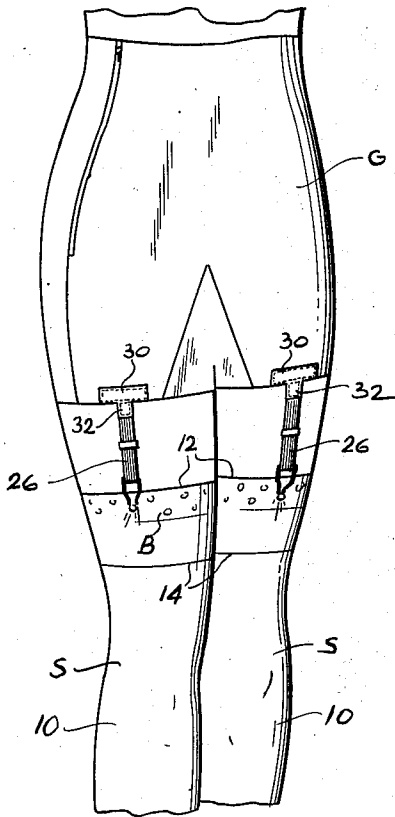


FIG. 7.

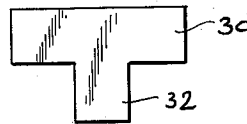
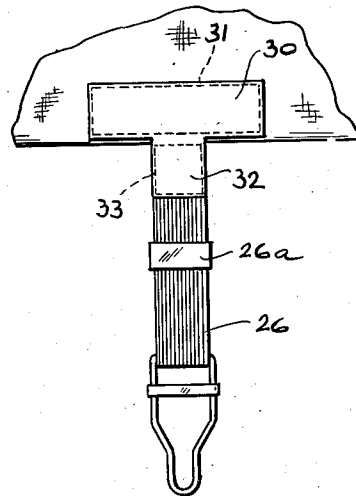


FIG. 6.

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2,638,602

SUPPORT STRUCTURE FOR STOCKINGS

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Application August 5, 1950, Serial No. 177,930

3 Claims. (Cl. 2-240)

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My invention relates to improved means for supporting stockings, particularly women's stockings.

One present manner of supporting women's stockings, which is commonly used, involves the use of a girdle or garter belt from which a plurality of elastic straps depend, these straps being provided at their lower ends with means for their attachment to the stockings. As a result, the stockings are pulled upwardly within the vicinity of the points at which the supporting straps are attached, and sag intermediate the areas of upward pull. Since the upward pull on each stocking is not distributed evenly around the entire circumference of the top of the stocking and instead is concentrated at several discrete areas, great strain must be exerted on these areas in order to hold up the stocking, and this results in a tendency toward runs. Other difficulties also arise, including a tendency of the supporting straps to break or tear away at their points of connection to the girdle or garter belt.

It being generally recognized that the mere use of a garter is not sufficient to hold up a woman's stocking properly, a number of alternatives to the above system of support have been proposed. For example, it has been proposed to make the upper portion of the stocking of an elastic, but this construction is basically open to the same objections as the first-mentioned construction. Even if the upper portion be only circumferentially elastic and not vertically elastic, it is still a band of fabric and subject to upward lift at the points of support and to sag intermediate said points.

While this construction is said to permit the permanent fastening to the elastic fabric of buttons to which the lower ends of the supporting straps may be affixed, there is then no provision for adjusting of the position of the buttons to meet the convenience of the wearer.

It has been further proposed to secure permanently in the upper portion of the stocking a band of canvas or other strong fabric. This fabric is still subject to tension which is substantially localized at the points of support.

My invention makes use of a principle of suspension, rather than of upward pull on points of the stocking. I provide an insert band which may be removably inserted in the hem in the upper portion of the stocking and which is made of a material, such as a vinylite plastic, which is bendable around any transverse axis, but which is substantially incompressible and non-stretchable. When this band is inserted in the stocking, the band acts like a hoop and rises as a unit when

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upward force is exerted at two or more circumferentially spaced points on the band. As a result, the upper portion of the stocking is supported as a unit and has no areas of sag. This enhances the appearance of the stocking, makes it possible to support it under less tension than has been possible with the use of prior constructions and reduces the possibility of runs.

I provide the insert band with a plurality of holes in which buttons to receive the supporting straps may be removably inserted in positions to suit the convenience of the individual wearer.

I optionally provide means for reducing the sag of the girdle or garter belt at the points of attachment of the supporting straps. I have therefore done away with the old principle of stocking support, in which the stocking and girdle tend to be anchored in place and linked by two or more elastic straps which pull on the stocking and girdle primarily at the points of attachment. It is to be further noted that with this system, the girdle and stocking tend to move to new places of anchorage when the wearer sits down and frequently have to be adjusted when the wearer returns to a standing position.

Since in my improved system the stocking, with its hoop-like supporting band, is more responsive to an upward tension, the stocking tends readily to move automatically to the proper position when the wearer moves from a sitting to a standing position.

Other objects and advantages of my invention will become apparent from the following description and the annexed drawings, in which preferred embodiments are disclosed.

In the drawings,

Fig. 1 is a perspective view of a woman's stocking, with the lower part of the stocking shown broken away, showing my improved insert band B partly inserted within the upper hem of the stocking.

Fig. 2 is a view similar to Fig. 1, showing band B completely inserted in place and showing girdle support straps connected to the band, the upper portions of these bands being shown broken away.

Fig. 3 is an enlarged section on line 3-3 of Fig. 2.

Fig. 4 is a plan view of band B, said band B being shown broken away.

Fig. 5 is a plan view of a strengthening member which may be connected to a girdle.

Fig. 6 is a front elevation, broken away, showing said strengthening member attached to a

girdle and a holding strap depending from the strengthening member.

Fig. 7 is a perspective view, broken away, showing stockings and girdles on a wearer and my improved means for holding up the stockings.

Upon reference to the drawings in detail, it is seen that I have illustrated my invention used in conjunction with a conventional girdle G and with stockings S. It is to be understood that instead of girdle G, my invention may be used with a garter belt, corset or other article of apparel from which supporting straps depend for connection to stockings.

It is apparent from Figs. 1-3 that stocking S is of a kind commonly in use at the present time, which has a leg portion 10 which extends above the knee of the wearer. The lower part of this leg portion 10 is shown broken away in all the views, the omitted parts being conventional and therefore not shown.

The upper part of stocking S is folded inwardly on itself along circumferential fold line 12 to form an inner hem element 13 which is positioned adjacent the inner face of the upper part of leg portion 10. The free end of this element 13 is stitched to leg portion 10 along circumferential stitch line 14. As a result of this construction, pocket P is formed between inner hem element 13 and leg portion 10; and this pocket P is bounded at its upper limit by fold line 12 and at its lower limit by stitch line 14. This pocket P extends circumferentially around the upper part of stocking S.

As is further shown in the drawings, conventional leg seam 11 extends longitudinally along leg portion 10. Seam 11 extends along the entire length of leg portion 10 and extends above stitch line 14 to fold line 12. In forming seam 11, inner hem element 13 is not stitched to leg portion 10, except at stitch line 14.

As is clearly shown in Figs. 1 and 2, seam 11 is interrupted for a considerable distance just above stitch line 14 to form an opening 15 in the outside hem part of leg portion 10, and this opening 15 serves as a means of access to pocket P.

My invention consists in improved means for supporting stocking S, and I have found it convenient to embody my invention in the form of an insert band B, which is shown in flattened form in Fig. 4. This band B is adapted to be used in conjunction with the above-described and commonly used stocking S, because band B may be removably inserted in pocket P through opening 15. However, as will become clear, my invention is not limited to use with stocking S and may be used in conjunction with any stocking, particularly any stocking having a leg portion which extends above the knee of the wearer.

Prior to assembly, as shown in Fig. 4, band B is a flat, relatively thin strip of material with substantially parallel upper and lower edges 15 and 17. This band B is quite flexible, but the material of which band B is formed is relatively incompressible and non-stretchable. One end of band B is provided with a connecting strap 18 which is secured to said band B by any suitable means. The other end of band B is provided with suitable means to which the free end of the strap 18 may be connected in order to close the band. As illustrated in the drawings, the fastening means may comprise a male snap member 19, which is secured near the end of band B and a female snap member 20 which is secured to the free end of strap 18 and which is adapted to be releasably interengaged with member 19. How-

ever, any other suitable fastening means may be provided instead of members 19 and 20.

Optionally and preferably, connecting strap 18 is made of a flexible and stretchable material of a conventional type, so that band B will fit sufficiently tightly around legs of varying diameter. However, connecting strap 18 may also be made of non-stretchable material.

Band B is preferably provided with a plurality of holes 21 which may be positioned at various points along the length and width of band B. These holes 21 serve a ventilating purpose, and they also serve as means whereby girdle garter straps may be connected to band B. Holes 21 are preferably respectively round.

Prior to insertion of band B in pocket P, band B is provided with a plurality of buttons 22. As is clearly shown in Fig. 3, each button 22 comprises a shank 23 which has a button head 24 attached to one end thereof and a base member 25 attached to the other end thereof. This button 22 is optionally and preferably made in one piece and may be made of hard rubber with a slight amount of resiliency. Button head 24 is small enough so that it may be readily inserted through a selected hole 21, while base member 25 is too large to pass through said hole 21. This base member 25 preferably has a substantially planar face which is adapted to abut band B. After a plurality of buttons 22 have been inserted in selected holes 21 of band B, for a purpose to be explained below, band B may be inserted in pocket P. While either end of band B may be inserted through opening 15, preferably the end adjacent fastener member 19 is first inserted. Fig. 1 shows band B partially inserted in pocket P. It will be noted that the width of band B is sufficiently less than the width of opening 15 to provide for ease in inserting band B.

After band B has been completely inserted in pocket P, fastener members 19 and 20 may be inter-engaged, as shown in Fig. 2. Band B may then be adjusted to any desired position within pocket P, and it is preferred that band B be adjusted so that its edge 16 is adjacent fold line 12. While band B is shown in Fig. 2 with seam 11 extending across strap 18, it is possible to adjust band B circumferentially with respect to stocking S to any desired position. Buttons 22 have been inserted in such a way that heads 24 extend outwardly against stocking leg portion 10.

After band B has been adjusted to the desired position within pocket P for each stocking S of the pair to be worn, the legs of the wearer may be inserted into said stockings S. As is clearly shown in the drawings, girdle G is provided with a plurality of depending supporting straps 26. Each said strap 26 is substantially conventional, being longitudinally elastic and being adjustable in length by means of keeper 26a. Each strap 26 has a female clasp member 27 conventionally secured to the free end thereof; but the conventional button and the supporting strap therefor are omitted, because buttons 22 are instead affixed to band B.

Girdle G is provided with two or more supporting straps 26 for supporting each stocking S. Three such straps 26 are shown in Fig. 2 as used for supporting one stocking S, this number being chosen solely for illustrative purposes. Buttons 22 have been placed on each band B in the manner previously described, in such number and in such positions that the female fastening members 27 which are connected to bands 26 may be

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respectively interengaged with respective button heads 24.

Buttons 22 are preferably so distributed circumferentially around band B that the straps 26 which are secured to the respective buttons 22 are substantially vertical upon the wearer, or in any other desired position relative to the wearer. Buttons 22 may have varying vertical positions, as shown in Fig. 2, which, in conjunction with the varying lengths of straps 26, makes it possible to maintain stocking S in a desired normal position upon the wearer.

Under tension, the assembly looks substantially as shown in Fig. 3, with each shank 23 positioned adjacent the upper part of its associated hole 21, with member 27 positioned between button head 24 and band B, and with stocking leg portion 10 extending against band B, between member 27 and shank 23, around button head 24 and up to fold line 12. Preferably, shank 23 is of such a length that the assembly of band B, stocking S, button 22 and fastening member 27 is fairly rigid to prevent buckling or relative movement of the various above listed components.

The above construction utilizes a principle of stocking support somewhat different from that presently in common use. In the present commonly used construction, each strap 26 carries a subsidiary strap which holds a button which is adapted to inter-engage with fastening member 27, with the stocking fabric placed between said button and said member 27. As a result, stocking S is raised in the vicinity of the points at which the supporting straps are affixed thereto, and at other points stocking S sags.

Similarly, in the present commonly used construction, girdle G is pulled downwardly at the points at which the supporting straps are attached, and girdle G tends to rise at other points.

Girdle G, stocking S and supporting straps 26 are a system in which stocking S is pulled upwardly primarily by means of forces exerted along straps 26, and girdle G is pulled downwardly in part by means of forces exerted along straps 26, and in part by means of other forces. Because the forces exerted by each strap 26 are not properly distributed and are applied to stocking S and girdle G substantially only at the respective points of connection thereto, each strap 26 must be able to furnish great tension, and its elasticity must be kept within reasonable limits. When the wearer sits down, girdle G generally rises considerably, and stocking S also tends to fall. As a result, strap 26 is elongated and placed under great strain. Frequently, girdle G tears at a point at which a strap 26 is attached thereto.

When the wearer returns to a standing position, the tension exerted along strap 26 to girdle G and stocking S, to make girdle G fall and stocking S rise, is inefficiently transferred, as described above; and as a result, girdle G and stocking S tend to remain in improper positions.

In my present invention, I have at least relieved some of the above-described difficulties in the old system of stocking support, by changing the principle of the transfer of tension from strap 26 to stocking S. When band B is inserted in stocking S in the manner described, band B acts substantially as a hoop. The tension exerted along supporting straps 26 is distributed around band B and is therefore distributed substantially evenly around the entire circumference of stocking S. As a result, less tension is exerted upwardly along straps 26 in holding up stocking S,

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and less tension is exerted downwardly on girdle G by straps 26. Fold-line 12 retains a substantially circular appearance with no points of pronounced elevation or sag.

It is apparent that a considerable number of modifications can be made in the construction and mode of securing of band B, still retaining the hoop-like effect. In my preferred construction, the purpose of strap 18 is to hold band B sufficiently closely around the leg of the wearer so that, the holding effect of leg portion 10 being taken into consideration, band B does not buckle when tension is exerted thereon along straps 26. Strap 18 is elastic so that it may be extended when the wearer sits down and enlarges the upper part of the leg. In this construction, band B does not grip the leg tightly, and there is no garter action.

Band B, as above noted, is preferably made of a material which is flexible and relatively inextensible and incompressible. An example is aluminum or another metal, which in the form of band B is sufficiently flexible to be inserted in pocket P. When upward tension is exerted on a band B made of such material, there is little tendency to buckle and little tendency for edge 16 to be raised at the points of support and to sag at other points.

Because of the support given to band B by the leg of the wearer and by the material of pocket P, band B may be made of plastics and other materials besides metal. I have preferred to construct band B from fairly thick commercial vinylite sheeting, which is sufficiently strong for this purpose. I can also use Celluloid, semi-hard rubber, leather and other materials.

It is to be understood that the manner of attaching band B may be varied, so long as the hoop-like action is substantially retained. Band B may be permanently secured in pocket P. Band B may be secured to the outside of stocking S. Band B may be secured above leg portion 10 (in other words, band B may serve as the upper part of stocking S). Strap 18 may be omitted or inelastic. Band B may be broken at a point intermediate its ends, and the broken ends joined by a further connecting strap.

Band B must also be made of a material, such as those listed above, which is adapted to be provided with a plurality of holes 21 in which relatively rigid buttons 22 may be respectively releasably inserted. Buttons 22 are circumferentially and vertically adjustable, and this eliminates the drawbacks of prior constructions in which buttons were permanently affixed to the stocking during manufacture.

It is to be noted that my invention makes it not only desirable, but preferable, to attach buttons 22 to band B. If the conventional construction were followed, in which the male button is attached by an auxiliary strap to the supporting strap, then the male button would be pressed against the inside of stocking S, through hole 21 of band B and through the opening of member 26. As a result, much of the suspension effect of band B would be lost, and the material of stocking S would be subject to increased risk of tearing.

Figs. 5-7 show an improvement in girdle design which is useful in itself and also in conjunction with the use of band B. In this improvement, a substantially T-shaped insert 30 is provided for use with each supporting strap 26. This insert 30 has a cross-arm which is fastened to the base of girdle G by stitching 31 of any

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convenient pattern and type, or by other suitable means. Arm 32 depends from and is preferably integral with the cross-arm of insert 30. The upper part of strap 26 is aligned with arm 32 and is fastened thereto by means of stitching 33 of any convenient pattern and type, or by other suitable means.

Insert 30 is made of a flexible but relatively incompressible and non-stretchable material, such as vinylite sheeting. Inserts 30 serve to strengthen the respective connections between straps 26 and girdle G. Also, inserts 30 distribute the tension exerted by respective straps 26 on girdle G. This has many of the same desirable effects as the use of band B in conjunction with stocking S. There is less tendency for straps 26 to tear away from girdle G. To the extent that stockings S, straps 26 and girdle G serve as a system for pulling girdle G downwardly, the use of inserts 30 decreases the tension that need be exerted along straps 26.

I have disclosed preferred embodiments of my invention, and I have indicated certain modifications, additions and omissions which may be made therein. Various other modifications, additions and omissions may be made in my invention without departing from the scope and spirit thereof.

I claim:

1. A device for supporting stockings in connection with suspended spaced supporting means and hose fasteners comprising a stocking hemmed at its top to form an annular pocket having a closed upper end, a band positioned in said pocket and adapted to form a hoop-like element therein, said band being integral and having a length less than the peripheral length of the top of the pocket but greater than the included distance of the spaced supporting means, said band being of material width uniform from end to end and being bendable about its trans-

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verse axis but being incompressible and non-stretchable, said band having means at its free end for removably connecting the ends to complete the hoop-like element, said pocket having a side opening through which the band may be positioned internal of the pocket, said band carrying supporting means for cooperation with the respective stocking supporting means depending from above the stocking top for positioning the hoop-like element in straight line contact relation with the inner fold of the top of the pocket throughout the length of the top of the unitary portion of the hoop-like element for maintaining such pocket top and band against sagging.

2. An assembly as in claim 1 characterized in that the integral portion of the band is provided with a plurality of spaced openings arranged in the top and bottom portions of the band and in spaced relation in the direction of length of the band and said band carrying supporting means comprise anchor buttons selectively positioned in said openings.

3. An assembly as in claim 1 characterized in that the integral portion of the band is formed of a vinylite plastic.

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