United States Patent

[11] **3,547,128**

[72] Inventor **Raymond O. Keltner**
8900 Pawnee Lane, Leawood, Kansas 66206

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[54] **HIP HOSE**
6 Claims, 8 Drawing Figs.

[52] **U.S. Cl.** **128/519;** 2/224, 2/239; 128/525, 128/535
[51] **Int. Cl.** **A41c 1/00**
[50] **Field of Search** ..... 128/519, 535, 524—529, 454; 2/239, 240, 227, 224

[56] **References Cited**
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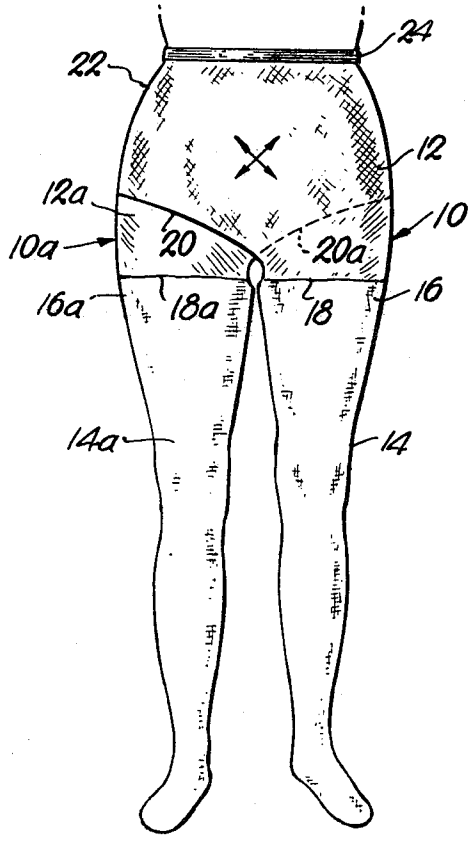
Primary Examiner—Adele M. Eager
Attorney—Schmidt, Johnson, Hovey, Williams and Chase

ABSTRACT: A pair of stocking units each comprising a hose section which is continuous with a trunk or pant section that is cut away to clear the opposite leg. When worn, the upper portion of one trunk section overlies the other but each is free to slide laterally when the wearer sits or assumes other positions causing spreading of the hips or buttocks, thereby preventing the garment from pulling down away from the waist.



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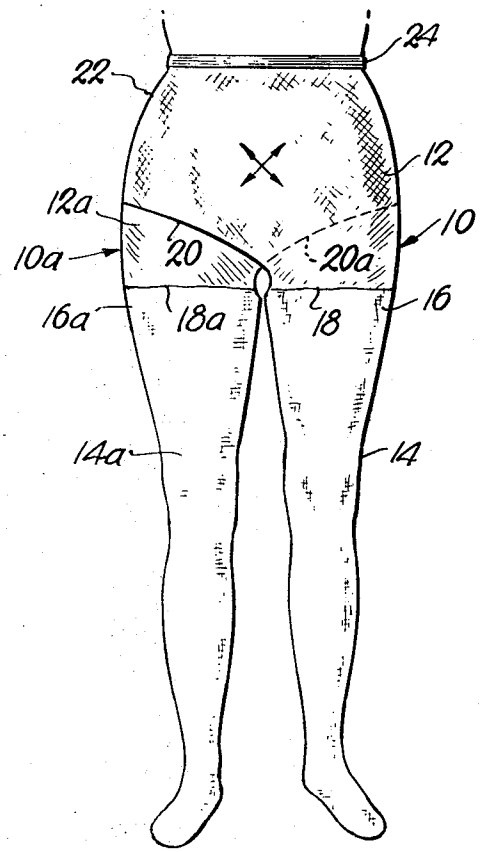

Fig. 1.

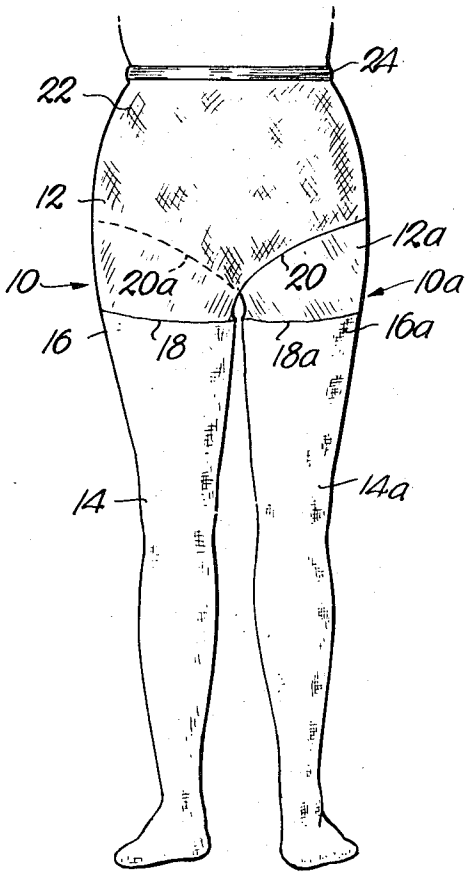

Fig. 2.

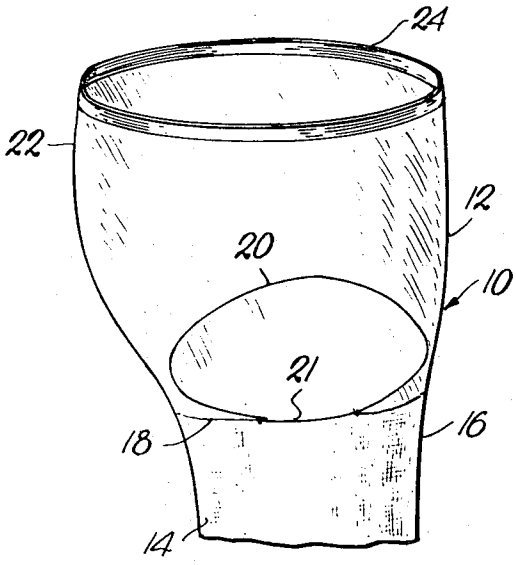

Fig. 3.

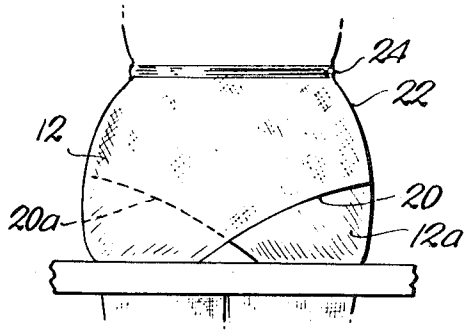

Fig. 4.

INVENTOR
Raymond O. Keltner

BY Schmidt, Johnson, Hovey, Williams & Chase
ATTORNEYS

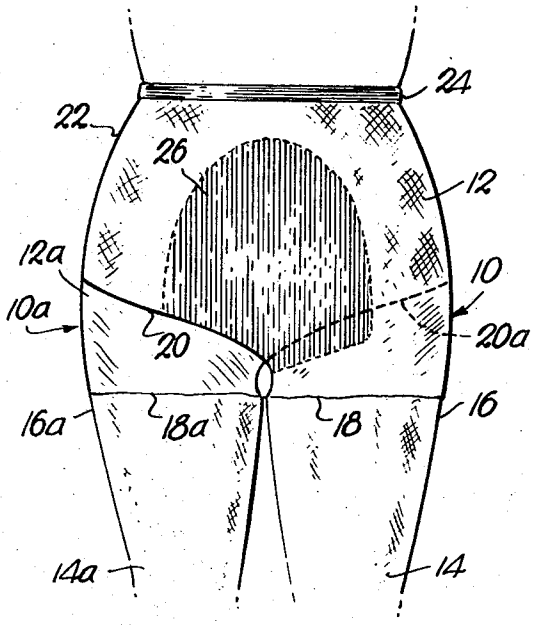

Fig. 5.

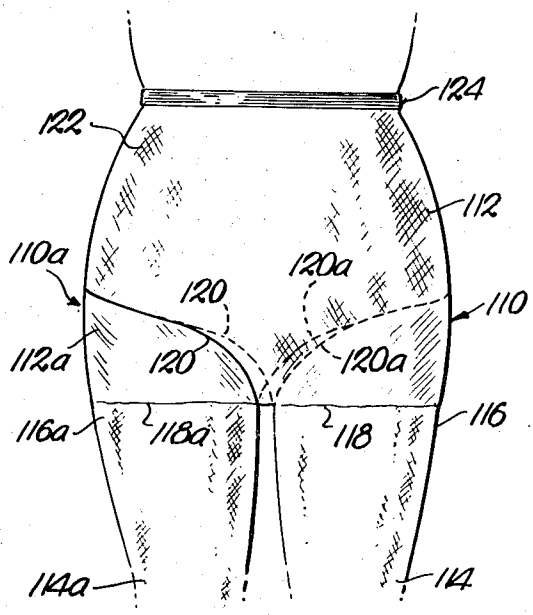

Fig. 6.

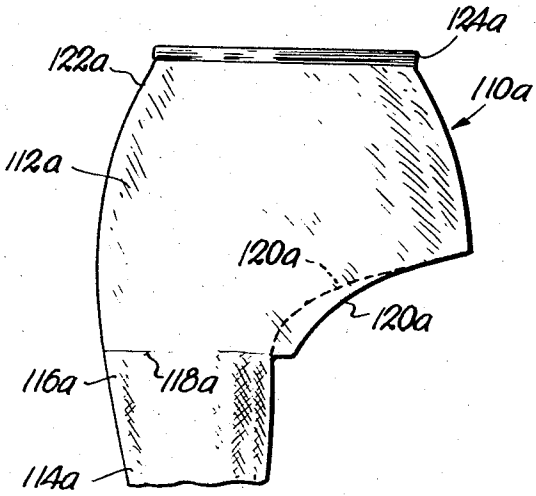

Fig. 7.

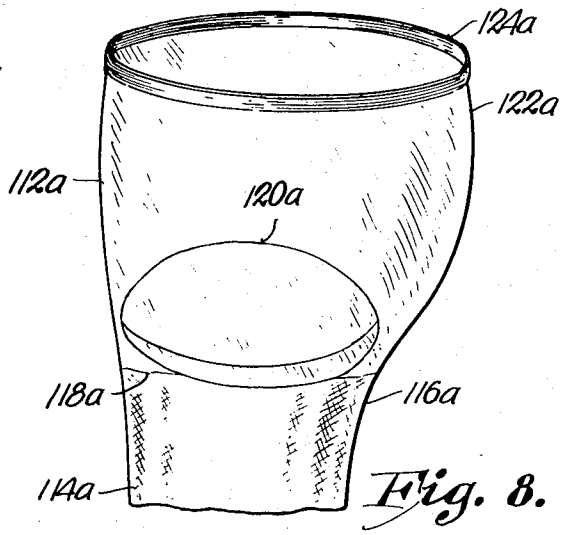

Fig. 8.

INVENTOR
Raymond O. Keltner

BY Schmidt, Johnson, Hovey, Williams & Chase
ATTORNEYS

HIP HOSE

This invention relates to an improved stocking or hose of the self-supporting type having a trunk section capable of serving as a girdle when desired.

Designers in the garment industry have previously developed a number of means of supporting hose, particularly those worn by women. Short skirt lengths have led to the desirability of panty hose which combine a lower undergarment with a pair of hose to eliminate visible supporters or gaps between the tops of the hose and the undergarment. However, the undergarment or panty does not at all times properly support the hose since it is subject to being pulled down away from the waist when the wearer sits or assumes other positions causing spreading of the hips or buttocks.

It is, therefore, an important object of the present invention to provide stockings or hose which stay up with minimal sagging despite physical activities of the wearer such as sitting, bending or kneeling.

As a corollary to the foregoing object, it is an important aim of this invention to provide a garment which incorporates hose that are uniformly supported without utilizing supporters visible above the hose, and which is smooth in appearance so as to not be visible under tight or thin clothing.

Another important object of the invention is to provide a stocking garment as aforesaid which provides the ultimate in comfort for the wearer, may be readily put on and removed, and in which both stockings do not have to be discarded if only one becomes defective.

Still another important object of the invention is to provide a stocking garment as aforesaid which does not require adjusting or partial removal for toilet functions.

Still another important object of the invention is to provide a stocking garment as aforesaid which is devoid of tight bands at the top of the hose which could hinder blood or lymphatic circulation and ultimately have an adverse effect upon the circulatory system in the lower extremities.

It is a further and important object of this invention to provide such a stocking garment having trunk or pant sections which may be made of an elastic type material to serve as a girdle, yet without the danger of causing the above mentioned circulatory problem in the lower extremities.

Yet another important object of the invention is to provide a stocking garment as aforesaid that may be worn as surgical or support hose (by either males or females) when made of an elastic material appropriate to the support function.

In the drawing:

FIG. 1 is a front view showing the garment in place on a wearer;

FIG. 2 is a rear view showing the garment in place on the wearer;

FIG. 3 is an enlarged, fragmentary, side perspective view of the left stocking unit viewed from the open leg side thereof;

FIG. 4 is a fragmentary, rear view showing the garment on the wearer when seated;

FIG. 5 is a fragmentary view similar to FIG. 1 on a larger scale, illustrating an adaptation of the garment for pregnancy;

FIG. 6 is a fragmentary, front view of a modified form of the garment showing the same in place on a wearer;

FIG. 7 is a fragmentary, front view of the right stocking unit of the modified garment of FIG. 6; and

FIG. 8 is an enlarged, fragmentary, side perspective view of the right stocking unit of FIG. 7 viewed from the open leg side thereof.

Referring to FIGS. 1—4, a left stocking unit **10** and a right stocking unit **10***a* are shown on a female wearer (FIGS. 1, 2 and 4), the two units being identical except for the legs which they are intended to cover. Therefore, only the left unit **10** will be described in detail herein, it being understood that corresponding features of the right unit **10***a* are designated with the same reference numerals with the addition of the *a* notation.

The stocking unit **10** includes an upper, trunk or pant section **12** and a lower, hose section **14** formed as a continuous

garment. The hose section **14** has a thigh-encircling top portion **16** which extends above the leg of the wearer to a boundary **18** where the hose section **14** is joined without interruption to the trunk section **12**. As illustrated, the hose section **14** may comprise a sheer stocking material such as nylon with the trunk section **12** being made of an elastic material to provide a girdle. Alternatively, if girdle action is not desired, the trunk section **12** may be a heavier nylon fabric or other material compatible with the hose section **14**.

The trunk section **12** is cut away to provide a lower margin **20** which forms an opening for the opposite leg and is continuous and generally oval-shaped as is clear in FIG. 3. The boundary **18** extends to the margin **20** above the inner thigh and substantially tangentially merges at both ends with the margin **20** at the lowermost arcuate segment **21** thereof seen in FIG. 3. From the top portion **16** of the hose section **14**, the lower margin **20** curves upwardly to the opposite hip, clearing the opposite leg, and rises to a height approximately one-half the distance between the crotch and the waist of the wearer. Therefore, the trunk section **12** has a waist portion **22** that completely encircles the hips and covers approximately the upper one-half of the opposite hip. An elastic waistband **24** may be employed at the top of the waist portion **22** to augment the support of the garment at the waist.

In use, the left and right stocking units **10** and **10***a* of FIGS. 1—4 are normally worn over bare skin from the waist to the feet, with panties being worn thereover. This permits toilet functions without removing or adjusting the stocking garment since the lower margins **20** and **20***a* are spaced apart between the legs and the buttocks as is apparent from the FIGS. When a normal adult assumes a sitting position, the buttocks spread laterally, causing the circumference of the hips to increase an average of approximately 2 inches as compared with standing. When bending forwardly, the hip area increases in vertical length with the distance from the small of the back to the buttocks-thigh crease increasing by approximately 2 inches in bending over standing. However, referring to FIG. 4, it may be seen that the garment does not pull down at the waist when the wearer is seated, even though the hips and the buttocks spread. Since the lower margin **20** and **20***a* clear the right and left legs respectively, the action of sitting, bending or kneeling causes the margins **20** and **20***a* over the buttocks to slide laterally away from the crotch rather than pulling the trunk sections **12** and **12***a* down in the posterior areas thereof. Furthermore, since the two stocking units **10** and **10***a* are completely separate from each other, the trunk sections **12** and **12***a* are free to undergo lateral movement independently of each other as the wearer assumes such a position causing spreading of the hips or buttocks. Thus, the cumulative effect of the separate trunk sections and the open leg arrangement of margins **20** and **20***a* is to prevent the development of any substantial vertical forces in the two trunk sections **12** and **12***a* which, if present, would tend to pull such sections down away from the waist of the wearer and cause sagging of the hose sections **14** and **14***a* when the wearer later assumes a standing position.

It should be understood that the width of each of the trunk sections **12** and **12***a* from the waist to the lower margin thereof on the open leg may be varied as desired and would be narrower, for example, in a bikini type garment having a low waist. Adequate support for the hose sections **14** and **14***a* is still provided as long as the tops of the trunk sections are above the flare of the hips and protruding buttocks.

The crossed arrows over the abdomen of the wearer in FIG. 1 illustrate the crossed lines of force of the girdle provided by the two trunk sections **12** and **12***a*, the latter necessarily overlapping each other over the upper half of the hips, the abdomen, and the lower back. The line of force of the left trunk section **12** is from the right hip toward the left leg; conversely, the line of force of the right trunk section **12***a* is from the left hip toward the right leg.

Besides providing a girdle action when an elastic material is used for the two trunk sections **12** and **12***a*, the encircling of

the hips by both of the trunk sections **12** and **12***a* makes use of the hips for support of the hose sections **14** and **14***a*, the hips being a superior base of support as compared with suspending hose from the legs or thighs only. Furthermore, the boundaries **18** and **18***a* are sufficiently high in front so that the elastic girdle material does not extend down onto the upper portion of the thighs. Therefore, return circulation of the lower extremities through the femoral and saphenous veins is not constricted, yet the two elastic layers formed by the trunk sections **12** and **12***a* provide automatic two-way stretch as illustrated by the arrows and discussed above even though the girdle material does not extend down over the upper leg areas of the wearer. It has been found that the mentioned vein constriction tends to promote varicose veins and other circulatory problems and is, therefore, to be avoided. Particularly, the boundaries **18** and **18***a* in front should be above the inguinal ligament (at the lower portion of the abdomen) to obviate this tendency to constrict return circulation which would otherwise arise.

It should also be appreciated that any tendency of the trunk sections **12** and **12***a* to ride up over the hips is offset by virtue of the continuous construction of the trunk and hose sections. In the present invention the forces produced that cause this tendency augment the supporting function of the trunk sections **12** and **12***a* to thereby assure that the hose sections **14** and **14***a* are properly supported and prevented from sagging. In this respect, it is also noteworthy that the lack of any interruptions in the boundaries **18** and **18***a* provides uniform support for the hose sections to further contribute to the prevention of sagging hose.

If it is desired to utilize the garment of the instant invention as a surgical or support hose, each of the hose sections **14** and **14***a* would be entirely composed of an elastic material to provide the required support. It is not mandatory in such applications that the boundaries **18** and **18***a* be as high as shown and previously described, since the elastic material is below the boundaries rather than above and is thereby incapable of constricting return circulation. If the trunk sections **12** and **12***a* are also of elastic material for girdle function, the boundaries **18** and **18***a* actually would no longer exist, but the tendency discussed above to adversely affect return circulation is also not a problem in this case since the entire garment is made of elastic material.

Furthermore, the garment may be modified in certain details to permit its use for specialized conditions. In FIG. **5** the garment of FIGS. **1—4** is shown adapted for pregnancy by the substitution of a front abdominal insert **26** in trunk section **12** of a material having less tensile strength. The insert **26** and a like insert thereunder in trunk section **12***a* replace the elastic girdle material or customary panty material in trunk sections **12** and **12***a*. In FIGS. **6—8** a modified form of the invention is shown which is especially suited for dancers or others wearing extremely short dresses, the entire upper inner thigh being covered by eliminating the bare area between the legs at the crotch of the wearer, with the obvious disadvantage that the garment must be partially removed for toilet functions. The left and right stocking units **110** and **110***a* of FIGS. **6—8** are otherwise identical to the preferred form of the invention shown in FIGS. **1—4**, in that the modified units **110** and **110***a* comprise trunk sections **112** and **112***a* having lower margins **120** and **120***a*, waist portions **122** and **122***a*, and waistbands **124** and **124***a*, and hose sections **114** and **114***a* having top portions **116** and **116***a* extending to boundaries **118** and **118***a* with respective trunk sections **112** and **112***a*. To provide the additional covering, the open legs are not as severely cut away as is apparent from the location of the lower margins **120** and **12***a*, particularly at the front of the garment where the two margins **120** and **120***a* overlap to a substantial degree to completely cover the crotch as well as the adjacent upper inner thigh areas.

I claim:

1. A garment comprising:

a pair of separate stocking units each having an upper, trunk section and a lower, hose section;

each hose section having a thigh-encircling top portion joined without interruption to the respective trunk section whereby the hose section of each unit is continuous with the trunk section thereof to provide uniform support for the hose sections; and

each trunk section circumscribing the hips when worn and having a lower margin clearing the opposite leg and extending upwardly from the top portion of the respective hose section to the opposite hip to provide free lateral movement of each trunk section independently of the other trunk section when the wearer sits or assumes other positions causing spreading of the hips or buttocks.

2. The garment as claimed in claim **1**, the lower margins of the trunk sections being spaced apart between the legs and buttocks of the wearer.

3. The garment as claimed in claim **1**, each trunk section having a waist portion completely encircling the hips when worn, the waist portion of one trunk section overlying the waist portion of the other trunk section.

4. The garment as claimed in claim **3**, the lower margins of the trunk sections being spaced apart between the legs and buttocks of the wearer.

5. The garment as claimed in claim **3**, said trunk sections being composed of an elastic material to provide a girdle having crossed lines of force extending from the hips toward the opposite legs of the wearer.

6. The garment as claimed in claim **3**, said trunk sections being composed of an elastic material to provide a girdle, each of said units having a boundary between the hose and trunk sections thereof defining the elastic trunk section thereabove, each of said boundaries extending to the lower margin of the respective trunk section above the thigh of the wearer anteriorly.