

July 15, 1958

C. M. GRANNAN

2,843,116

HIP SUPPORT

Filed Nov. 30, 1955

2 Sheets-Sheet 1

Fig. 1.

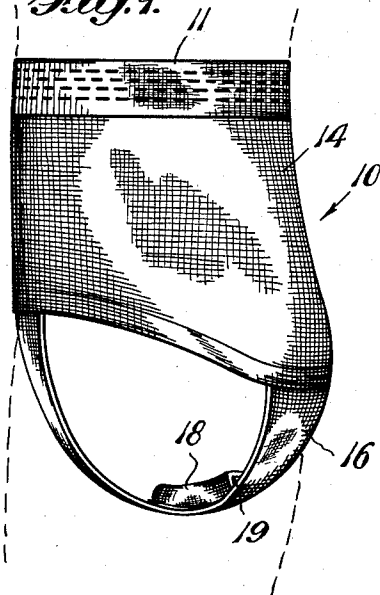


Fig. 2.

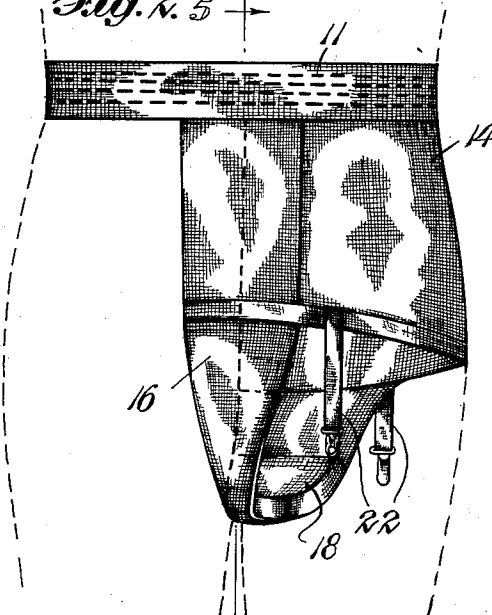


Fig. 3.

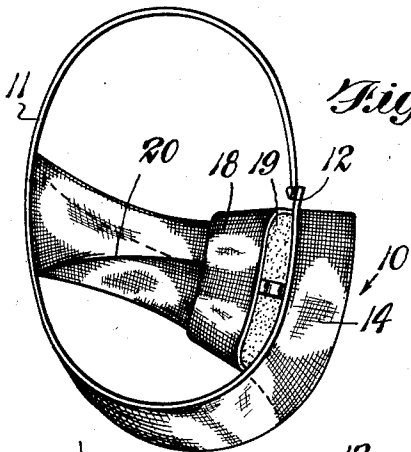


Fig. 4.

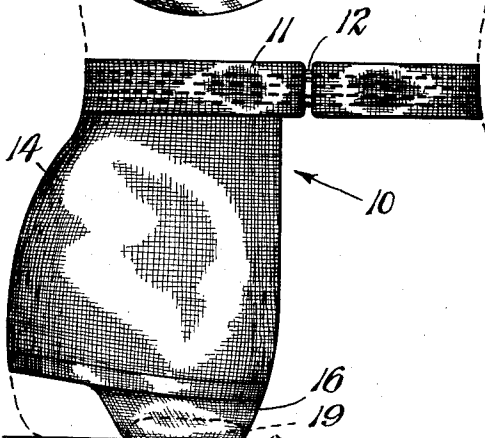
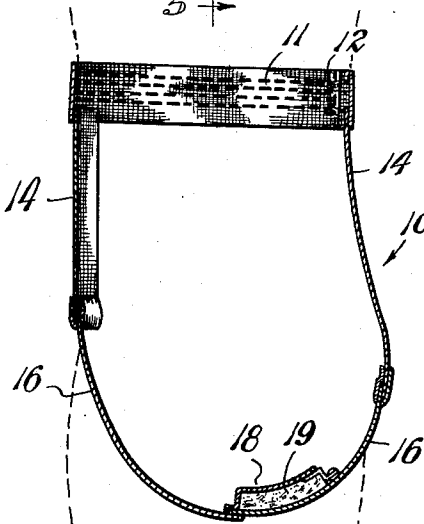


Fig. 5.



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Fig. 6.

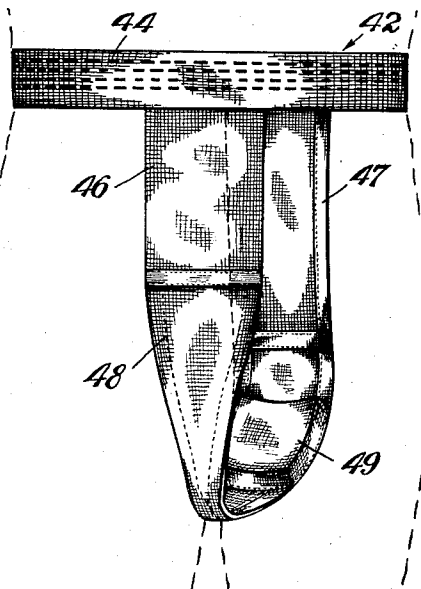
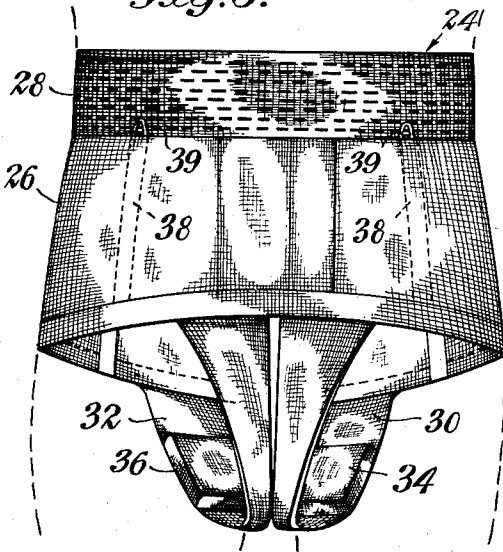


Fig. 8.

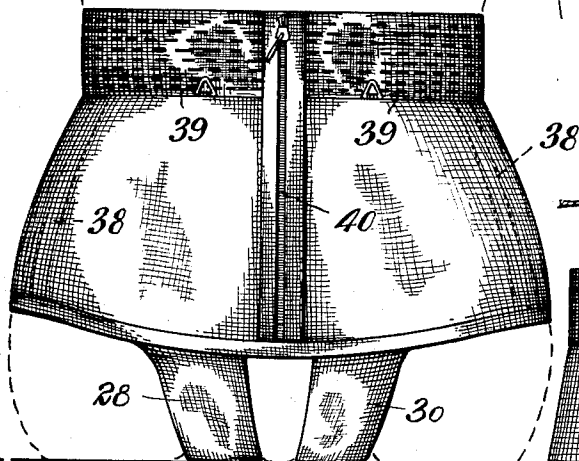


Fig. 7.

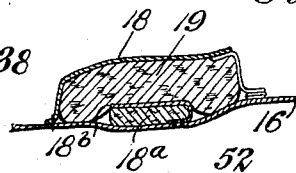


Fig. 11.

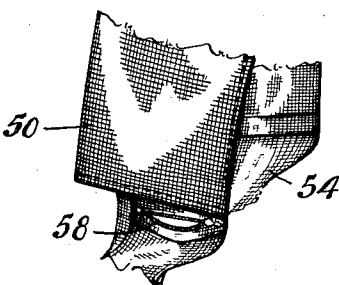


Fig. 10.

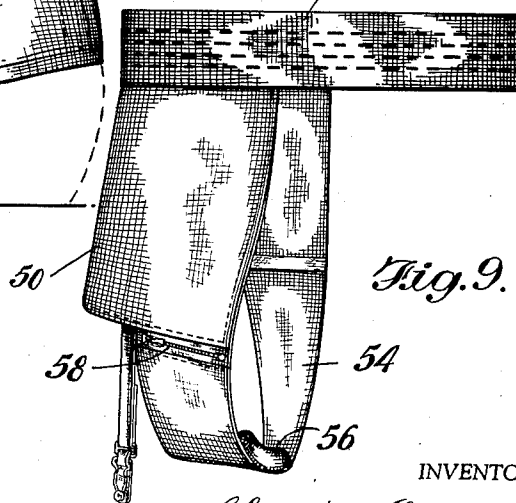


Fig. 9.

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HIP SUPPORT

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8 Claims. (Cl. 128—78)

The present invention relates to a hip supporting device. More particularly, the present invention relates to a body encircling garment that includes means for extending beneath the underside of the hip, thereby being adapted to support the hip and acting to eliminate pain resulting from hip fatigue.

Hip fatigue is a common source of pain to those individuals who, by accident or disease, have one hip displaced below the other. In such cases, after a period of standing or walking, the pressure exerted on the displaced hip causes considerable pain and discomfort. Even those individuals who have no physical disability experience hip fatigue when subjected to standing on their feet for extended periods of time. Heretofore, the only relief of hip fatigue has been to employ artificial means, such as crutches, which are cumbersome and, in most instances, difficult to use, or to completely relieve the pressure on the hips by lying or sitting down. Frequently, it is necessary for an individual to remain on his feet for long periods of time and therefore when hip fatigue occurs, the individual is not able to relieve the strain by sitting down or to employ any artificial supporting means.

It is seen, therefore, that prior to the instant invention, those individuals who suffered from hip fatigue were not afforded any relief, and therefore, it is an object of the present invention to provide a hip supporting means to correct and alleviate hip fatigue.

Another object of the present invention is to provide a garment which is provided with support pads for supporting the underside of the hip of those individuals who are subjected to hip fatigue.

Still another object of the present invention is to provide a supporting garment for substantially elevating the hip to relieve pressure exerted thereon.

Still another object of the present invention is to provide a hip supporting device which includes hip supporting pads that may be located below one or both of the hips of the individual on which the device is worn.

Still another object of the present invention is to provide a hip support which may be easily removed or placed on the individual with a minimum of effort.

Other objects and the nature and advantages of the instant invention will be apparent from the following description taken in conjunction with the accompanying drawings, wherein:

Fig. 1 is a side elevational view of the garment embodying the hip support of the present invention, the hip supporting pad being positioned on the underside of the hip of the individual on which the garment is worn;

Fig. 2 is a front elevational view of the hip supporting garment illustrated in Fig. 1 and is shown in the position of use;

Fig. 3 is a plan view of the hip supporting garment illustrated in Figs. 1 and 2;

Fig. 4 is a rear elevational view of the hip supporting garment and is shown in the position assumed when the individual on which it is worn is sitting;

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Fig. 5 is a vertical sectional view taken along the lines 5—5 of Fig. 2;

Fig. 6 is a modified form of the present invention showing a hip supporting garment which includes a double strap construction;

Fig. 7 is a rear elevational view of the hip supporting garment shown in Fig. 6 and illustrates the position of the supporting pads when the individual on whom the garment is worn is in the sitting position;

Fig. 8 is a further modified form of the present invention showing a front elevational view thereof;

Fig. 9 is a rear elevational view of the modified form of the invention shown in Fig. 8;

Fig. 10 is an enlarged portion of the hip supporting means illustrated in Fig. 9; and

Fig. 11 is a fragmentary view in cross section of a detail of a modified form.

Referring now to the drawings, and particularly Figs. 1 to 5, one form of the invention is shown therein and includes a hip supporting garment generally indicated at 10. The garment 10 comprises a belt 11 that is adapted to encircle the waist of the wearer and may be formed with adjustable means to compensate for different size waists. The belt 11 is provided with hooks and eyelets at the rear thereof as illustrated at 12 in Fig. 4, or any other convenient joining means which enables the garment to be easily and quickly applied to the wearer. Joined to the belt 11 is a body portion 14 which, as shown in Figs. 2, 3 and 4, is adapted to cover only one hip of the wearer. The body portion 14 extends somewhat lower at the rear than at the front of the garment and substantially covers the left buttock, as seen in Fig. 1. The body portion 14 may be formed of any convenient elastic or flexible material normally used in abdominal encircling devices but, in the modification shown in Figs. 1—5, is formed of a conventional fabric. Joined to the body portion 14 and depending therefrom is a supporting strap 16 that extends substantially front to rear and is of sufficient width to have formed therein a pocket 18. The pocket 18 is located on the inner side of the strap 16 and receives therein a pad 19. The enclosed pad 19 is displaced slightly to the rear of the strap 16 so that contact with the underside of the hip will be made when the garment is in the position of use. The strap 16 is formed of a conventional fabric, but may also be formed of a firm, resilient material, thereby being adapted to stretch slightly when it is applied to the wearer, for defining a firm support when in the position of use. The pad 19, which is located in the pocket 18, and which is disposed on the inner side of the strap 16, is formed of a soft, spongy material and is adapted to directly contact the lower region of the hip or the underside of the buttock of the wearer.

As shown in Fig. 3, the strap 16 is formed in overlapping layers of material, the overlap being defined by the parting line 20. The overlapping layers enable the strap 16 to be parted and thereby enable the wearer to be relieved without removing the garment.

The pocket 18, in which the pad 19 is placed, may be provided with snaps, buttons or some convenient securing means for locking the pad 19 in the pocket. The pad 19 may then be easily removed from the pocket 18 when it is desired to clean the garment by simply unsnapping the pad retaining means.

As described above, the body portion 14 is formed only a portion of the way around the abdominal area of the wearer, since the garment illustrated in Figs. 1—5 is adapted to be utilized for supporting only one hip. As to be described hereinafter, a double hip support is contemplated by the present invention. If the garment 10 is to be worn by a woman and it is so desired, garter

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straps 22 may depend from the lower end of the body portion 12 at the front and rear thereof and are adapted to retain stockings in place, such as is commonly known in garter belts.

In use, the garment 10 is placed on the body of the wearer, the belt 11 encircling the waist thereof and retaining the body portion 14 in proper position. The left leg of the wearer extends through the opening defined by the body portion 14 and the strap 16, the strap 16 extending below the left buttock of the wearer. The pad 19 thus engages the underside of the hip of the wearer and is pulled into firm contact therewith by the lifting action of the belt 11 and the body portion 14. With the hip supporting means positioned firmly on the wearer, it is seen that the pad 19 forms a lift for the left hip (as seen in Fig. 2) and actually tends to lift the hip upwardly. Since the material forming the body portion 10 is sufficiently rigid to retain the pad 18 firmly against the underside of the hip of the wearer, a firm support is provided. If required, according to the case, bones or stays may be inserted in the body portion 14 of the hip support to increase the lifting action thereof, as will be described hereinafter.

As shown in Fig. 4, when the wearer is in the sitting position, the pad 19 contacts the underside of the hip and thus tends to elevate the hip. When the wearer is in the standing position (Fig. 1), it is seen that the firmer fitting of the strap 16 the better lifting action obtained. It is apparent that by use of the hip supporting device described above, hip fatigue and pain resulting from hip displacement are thereby avoided or considerably alleviated.

Referring now to Figs. 6 and 7, a modified form of the invention is illustrated and includes a double hip supporting garment. The double hip supporting garment is indicated generally at 24 and includes a body portion 26 that is joined to a belt 28 that is adapted to encircle the body of the wearer. The body portion 26 completely encircles the abdominal regions of the wearer in much the manner of a corset and the rear region thereof extends below the front portion, terminating at the buttocks. Joined to the body portion 26 and extending front to rear thereof are adjacent straps 30 and 32 which are of a sufficient width to receive pads 34 and 36, respectively, that are positioned in appropriate pockets formed in the straps 30, 32. The pads 34 and 36, which are secured to the straps 30, 32 are substantially similar to pad 19 and are formed of a spongy resilient material. If desired, a stay 38 may be mounted in the body portion 26, thereby increasing the stiffening action of the garment and aiding in elevating the hip of the wearer. The application of stays, of course, will depend on the requirements of the wearer. Hooks 39 may also be secured to the front and rear of the belt 28 and are located just above the stays 38. The hooks 39 may be used by both men and women wearers, being adapted to receive suspender straps if a man, or the lower end of a brassiere strap if a woman, the suspenders or brassiere strap thus aiding in effecting a lifting action.

In order to conveniently apply the garment to the wearer, the body portion 26 is split at the rear thereof and is provided with a zipper 40. In use, the hip supporting device 24 is conveniently put on by the wearer by opening the zipper 40, stepping into the garment and placing the legs between the openings formed by the straps 30, 32 and the body portion 26. The pads 34 and 36 contact the underside of the hips of the wearer in the region of the lower buttocks, thereby acting to elevate the hips in a supporting manner. As illustrated in Fig. 7, when the wearer is located in a sitting position, the pads 32 and 34 are positioned directly under the hips and thereby act to support the hips in this position. It is seen that the double supporting device is especially designed to assist in relieving fatigue of those individuals who are subjected to long periods of standing and walk-

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ing and whose body exerts considerable pressure on the hips. By wearing the device shown in Figs. 6 and 7, the pressure is considerably relieved.

Referring now to Fig. 8, a further modified form of the present invention is illustrated and includes a hip supporting garment generally indicated at 42. The hip supporting garment 42 is relatively simple as compared to the hip supporting means illustrated in Figs. 1-5 and Figs. 7 and 8 and includes a belt 44 that is adapted to encircle the waist of the wearer. Joined to the belt 44 at the front and rear thereof are narrow body portions 46 and 47. Joined to the body portions 46 and 47 in a continuous manner is a strap 48 that is of sufficient width to receive a pad 49. The pad 49 is located in a pocket formed on the strap 46 and is formed of a spongy material and, as described above, is adapted to engage the underside of the hip of the wearer.

It is seen that in use the hip supporting garment 42 is applied to the wearer by encircling the waist thereof with the belt 44, positioning the strap 48 as illustrated in Fig. 8 so that the pad 49 contacts the underside of the hip in the region of the buttock and is thereby adapted to elevate the hip. The degree of lift in this construction is somewhat less than in the device described above, but the device is less confining and is particularly useful for those individuals requiring only a nominal support.

A further modified form of the present invention is illustrated in Figs. 9 and 10 and includes a body portion 50 that is joined to a waist encircling belt 52. Joined to the body portion 50 and extending front to rear thereof is a strap 54, the strap 54 having mounted thereon a spongy pad 56 that is adapted to engage the underside of the hip of the wearer. To provide for adjustment of the strap 54, a zipper 58 is positioned transversely of the strap 54 and thereby enables the strap to be moved slightly when the garment is on the wearer. As illustrated in Fig. 10, the zipper 58 has been opened and the strap 54 is thereby capable of being loosened and moved as, for example, when the wearer is seeking relief or adjusting to size.

The form of invention illustrated in section in Fig. 5 comprises a single volume of padding material 19 within the pocket 18. When this volume of padding material is in the form of an integral pad and it is found after use that additional adjustment is required, the modified form of the invention illustrated in fragmentary detail in Fig. 11 may be utilized which comprises the strap 16 to which is secured the relatively large pocket 18 within which is placed the pad 19. In addition, there is provided therebelow and facing inwardly the pocket 18b which is adapted to envelope a smaller pad 18a. The small pad 18a is adapted to be inserted within the pocket 18b through the opening at 18b prior to the insertion of the pad 19 within the pocket 18.

It is also contemplated to provide the single hip supports shown in Figs. 1-5 and 8-10 with a zipper attachment, that would be secured to the front portion of the supporting strap. By providing such a construction, a single hip support could be modified to include a double hip support by simply securing another strap to the assembly by means of the zipper.

It is seen that the hip supporting garments described above provide a simple, yet effective, device for relieving pressures on the hips of those individuals who suffer from hip fatigue. The hips are elevated by the lifting action of the straps and thus tend to relieve the pressure exerted on the hip such as, for example, when there is a physical displacement thereof.

It will be obvious to those skilled in the art that various changes may be made without departing from the spirit of the invention and therefore the invention is not limited to what is shown in the drawings and described in the specification but only as indicated in the appended claims.

What is claimed is:

1. In a hip supporting device, a belt, a body portion

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joined to said belt and depending therefrom, a strap secured to said body portion and extending front to rear thereof, said strap and body portion defining an opening for receiving the leg of the wearer of the device, a resilient pad secured to said strap and extending substantially the width thereof, said pad positioned immediately adjacent the underside of the hip of the wearer when said device is in the position of use, said pad cooperating with said strap, body portion and belt to effect a lifting action, thereby relieving pressures exerted on the wearer's hip.

2. In a hip supporting device, a belt, a body portion joined to said belt and adapted to extend substantially over the hips of the wearer of said device, a pair of straps joined to said body portion and extending front to rear thereof, said straps and body portion defining openings for receiving the legs of said wearer, each of said straps having a pocket formed thereon slightly displaced to the rear thereof, a pad disposed in each of said pockets, said pads being positioned immediately adjacent the underside of the hips of the wearer and cooperating with said straps, body portion and belt to effect a lifting action on said hips, thereby acting to relieve pressures exerted on said hips.

3. In a hip supporting device as set forth in claim 2, wherein said body portion is formed with a zipper closure located at the rear thereof, said zipper closure enabling said device to be easily applied to and removed from the wearer.

4. In a hip supporting device as set forth in claim 2, wherein said body portion is provided with stays for adding rigidity thereto, thereby aiding in the lifting action of said device.

5. In a hip supporting device, a belt, a body portion secured to said belt and having a strap secured thereto, a pad positioned on said strap and located immediately adjacent the underside of the hip of the wearer of said device, said pad cooperating with said strap, body portion and belt to aid in relieving pressures exerted on the

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hip of the wearer, said strap being formed in overlapping folds of material, said overlapping folds providing for relief for said wearer.

6. In a hip supporting device as set forth in claim 5, wherein said strap is formed with a laterally extending zipper portion, said zipper portion providing for adjustability of said strap.

7. In a hip supporting device, a body portion, a strap secured to said body portion and extending from front to rear thereof to define a leg receiving opening therewith, a pocket formed on said strap, and a cushion material disposed in said pocket to define a pad, said pad being positioned slightly to the rear of said strap and located immediately adjacent the underside of the hip of the wearer, said device thereby acting to exert a lifting action on said hip to relieve body pressures thereon.

8. In a hip supporting device, a garment comprising a waist encircling belt, a body portion joined to said belt and depending therefrom, a strap secured to said body portion at the ends thereof and having a pad secured thereto, said pad being positioned slightly toward the rear of said strap and adapted to contact the underside of the hip of the wearer of said garment, said belt and body portion acting to exert a lifting action on said strap, thereby tending to relieve pressures on said hip, said strap provided with a pocket on the inner side thereof for receiving said pad, said pocket being provided on its interior with a second pocket, a second pad within said second pocket.

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