P. ZUCKRIEGEL.

ABDOMINAL SUPPORTER AND SUSPENSORY.

APPLICATION FILED FEB. 11, 1908.

908,533.

Patented Jan. 5, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

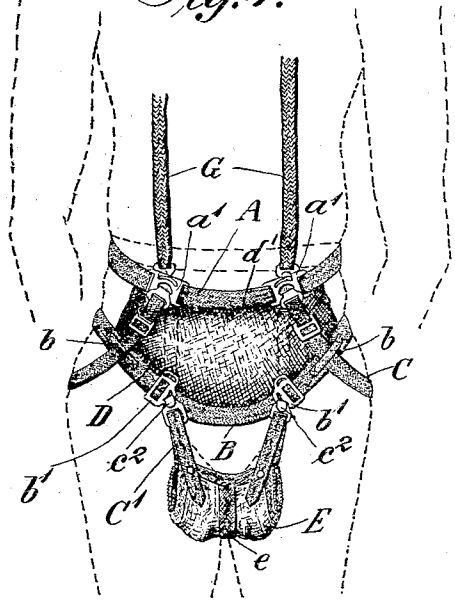


Fig. 2.

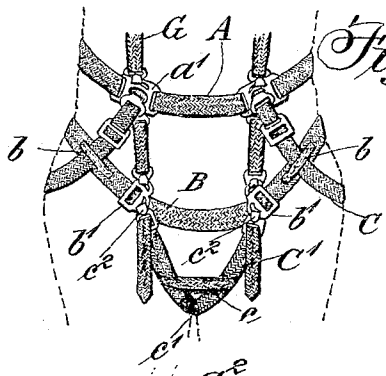


Fig. 3.

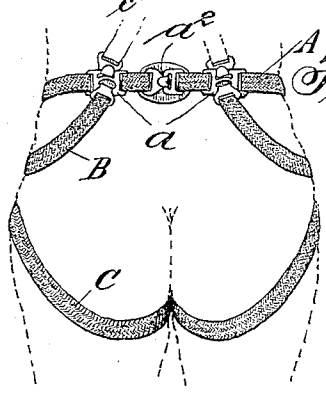


Fig. 4.

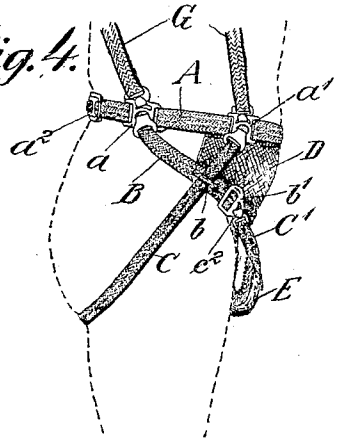
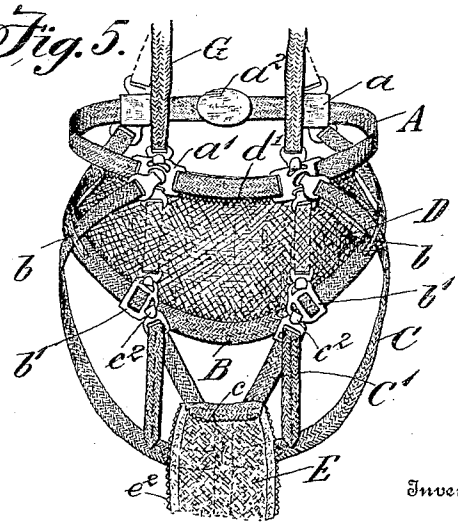


Fig. 5.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 6.

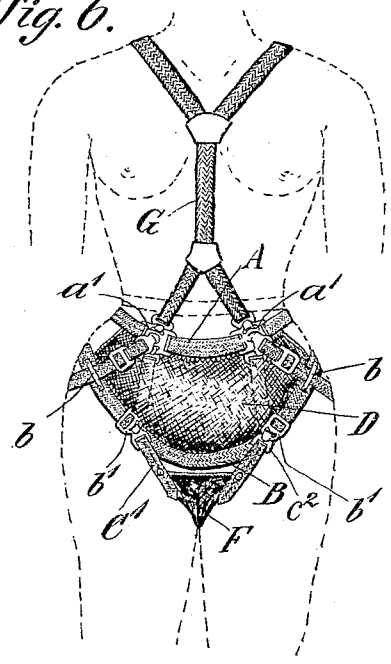


Fig. 7.

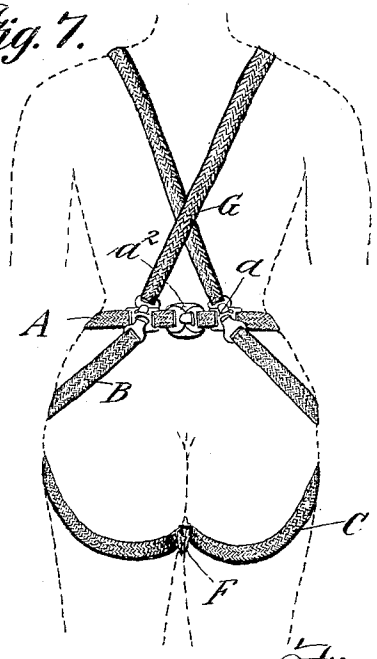
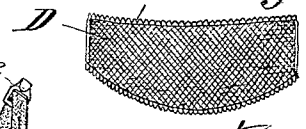


Fig. 8.



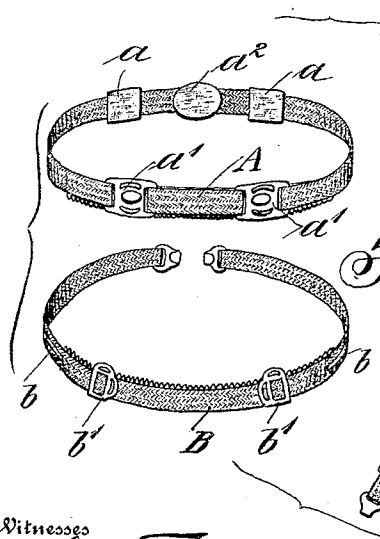


Fig. 9.

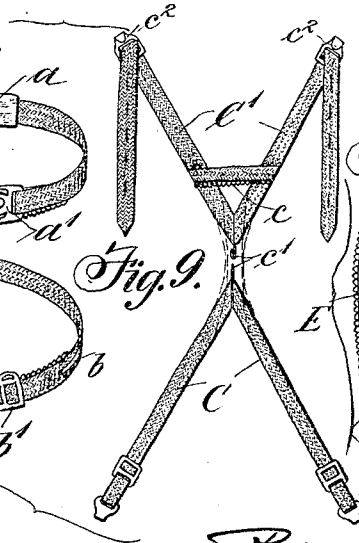


Fig. 10.

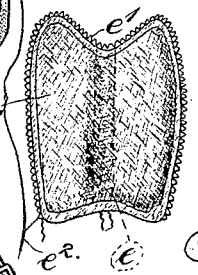


Fig. 11a.

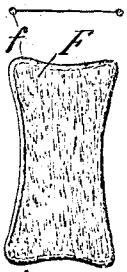


Fig. 11.

Witnesses

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ABDOMINAL SUPPORTER AND SUSPENSORY.

No. 908,533. Specification of Letters Patent. Patented Jan. 5, 1909.

Application filed February 11, 1908. Serial No. 415,334.

To all whom it may concern:

Be it known that I, PETER ZUCKRIEGEL, a citizen of the United States, resident at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Abdominal Supporters and Suspensories, of which the following is a specification.

This invention relates to a device the object whereof is to provide an abdominal supporter and suspensory. The arrangement being adjustable to different forms and conditions to suit the physique of the wearer, and being detachable so that the specific parts—abdominal supporter and suspensory—may be worn jointly or separately. The adjustable features apply also to the minor parts of the combination, for the purpose of easy cleansing and readjusting as also the substitution of new parts, etc. I attain these objects by an adjustable means for applying bands and straps to the body, fitting them closely and firmly to the proper parts, but so arranged that perfect ease and freedom are given to the various movements of the wearer's body. The manner and means by which I accomplish these objects are set forth in the following description and the illustrations in the accompanying drawings, of which—

Figure 1 is a front view of the device as it appears on the body of a male wearer, with all the parts applied. Fig. 2 is a front view of the device with the abdominal supporter and suspensory removed, thus showing the system of bandaging and strapping, which forms the foundation of the apparatus and which I term the harness. Fig. 3 is a rear view of the harness. Fig. 4 is a side view of the harness, showing the relation of the sliding clasps on the waistband which regulate the positions of the downward supporting bands and straps; also showing the hinge-like connection of said downward straps at their crossing. Fig. 5 is a perspective view of the harness to which, after it is properly adjusted to the body, the specific parts—abdominal supporter and suspensories—are attached, jointly or separately. Fig. 6 is a front view of the device as it appears on the body of the female wearer, with all the parts—abdominal supporter and suspensory—applied. Fig. 7 is a rear view of the device as applied to female users. Fig. 8 is a view of a strip or center-piece which, when attached to the harness, forms the abdominal supporter. Fig. 9 is a view of the harness detached, showing separately the four parts of which it is composed. Fig. 10 is a view of the suspensory sack for the support of the male organs of generation. Figs. 11 and 11^a are plan and section of the female suspensory for use during menstruation.

Similar letters refer to similar parts throughout the several illustrations.

The device is composed of the four parts that compose the harness, the center-piece that forms the abdominal supporter, the sack which forms the body of the male suspensory, and the sack which forms the female suspensory; seven parts in all, not counting clasps and the like. The body portion of the combination is made of woven fabrics and rubber of suitable kind and the adjusting parts are composed of clasps, hooks, buckles and buttons etc., and are made of material best suited for the purpose. This kind of appliance is in demand by people of all kinds of physical conditions, the healthy wear them for comfort and the maintenance of health, the feeble and afflicted wear them for relief and cure. Therefore, it has been my aim to construct a devices that shall meet every contingency.

The combination of the seven parts above named, will meet all ordinary conditions, for comfort and aid to the moderately afflicted, while extreme conditions may have additional supporting aid by a system of shoulder straps, which I call emergency straps and which are shown in the illustrations and indicated by the letter G. The clasps "*a*" and "a^1" on the waistband and correspondent clasps thereto are provided with special slots to receive these straps, by means of hooks, etc., upward and downward. Thus the most delicate and severe conditions can be served.

Referring to Fig. 1 the device is shown as it appears on the body of the male wearer, complete with the specific parts—abdominal supporter and suspensory—attached. The bands A and B at the lower and upper ends, respectively, are provided with a series of loops, extending the entire length of the belly portion of said bands, and the center-piece D, if made of solid material, is likewise provided with loops "*d*" to correspond, (see Fig. 8). Through these loops, between center-piece and bands, lace or cord "d^1" is threaded or drawn and thus the parts

are connected and so form the abdominal supporter. However, these loops on the bands A and B as also on the center-piece, if the latter is made of solid material, may be dispensed with by perforating the edges and strengthening the holes by way of button-hole stitching or metal eyelets. For ordinary purposes the center-piece is preferably made of open netting, in which case the edges are hemmed and the lace is drawn through openings near the edge. When the abdominal supporter is used, the waistband is given more slack and is brought down somewhat lower than otherwise. The male suspensory sack is attached in a similar manner; straps C^1, as shown in Figs. 2, 5 and 9, is provided with a series of loops "*c*" and so is the sack, (see Fig. 10) thus the two are laced together in manner same as the parts of the abdominal supporter, and subject to the same modifications. Thus attached, the rear end of the sack is firmly held to the body and in this shape or stage of application, hangs down like an apron, (see Fig. 5), the male organs are thus considered as suspended over and outward, the lower end of the apron is now raised and attached to the straps C^1 and thus the sack is formed as shown in Fig. 1. The sack so formed, takes on a flat, horizontally elongated shape, which admits the penis and testicles to lie in an independent separate position, by spreading out sidewise, which is the ideal condition for comfort and completely overcomes the obnoxious bundling which shows so disagreeably through the trousers. Furthermore, this sack as here shown, in Figs. 1 and 4 is partially open at the ends and this feature is, under ordinary conditions, the most healthful and pleasant arrangement. These ends are, however, provided with lace or cord which is drawn through loops or openings and all that is necessary for closing the sack is to take up the slack. Likewise, a cord "*e*" in double row, is drawn through the middle of the sack by means of which, in taking up slack, a double pouch of any degree desirable is produced. (See Figs. 1 and 10). Provision is also made to draw a cord through the upper front end of the sack, which admits of drawing together of this part for extreme central dressing. The arrangement of this suspensory sack as shown at Fig. 1, represents what may be considered a normal condition, and to change this, to meet different conditions, the adjustable features admit of making different arrangements, for instance, to raise or lower the sack, we need only to carry the front end of the sack to a point higher or lower on the extension or strap C^1, which is easily done by means of buttons, or hooks provided therefor, and in the same manner, central or side positions are obtained. In short, the adjustable arrangement of the harness in combination with the adjustable arrangement of the sack itself, makes it possible to meet any condition incidental to these specific organs of the body.

Referring now to the composition of the harness. A is the waistband, to which the main supporting straps are adjustably attached, and this band serves as a means to regulate the position of the said straps, namely; the bellyband, the rear part of the regulation straps and the extensions or emergency straps, all of which is accomplished by way of adjustable, movable clasps. This waist band also forms the upper part of the abdominal supporter, B refers to the belly band and is the chief supporting band in the combination, each end of this band is provided with a hook by means of which it is attached to the clasp "*a*" at the rear of the waistband, from which point it extends, curving forward and passing down along the groove of the groin, rounding up at the lower end of the belly or abdomen, at which point the suspensory arrangement is attached. This bellyband also forms the lower part of the abdominal supporter.

C is the rear part of what I term the regulation straps, these straps, likewise, have hooks at each end, by means of which they are attached and held to the clasps "a^1" on the front end of the waistband, from which point they curve around the hips rearward, passing down and coming together at a point centrally between the legs and slightly forward of the rectum, here they meet a similar strap from the front and the two are connected by means of hooks and eyes "c^1". The advantage of making these straps separable at this point is obvious. It makes it easy to put aside these parts when at stool, though not necessary under ordinary conditions. It makes possible the removal of the entire apparatus over the clothes, upward or downward, by simply detaching this hook and opening the waist band. It also makes possible the removal of either of the parts without disturbing the other parts of the combination, for cleansing, etc.

C^1 is the front part of said regulation straps, the middle or curved part thereof being provided with a hook or eye, which meets its correspondent of the rear part of the strap and thus forms a connection, centrally between the legs as before said. Each of the extending ends of this strap is provided with an adjustable clasp, having a hook by means of which these straps are attached to the clasp "b^1" on the bellyband which completes the harness adjustment, (see Fig. 5).

The clasps "b^1" on the bellyband are adjustable the same as those on the waistband, (see Fig. 9, part "*b*"). The clasps on the straps C^1 are so arranged that the straps

may be drawn through one part and reversely through another part or slot so that both ends may be subjected to a fixed position by the tension thereof, (see Fig. 9, part "c^2").

The primary object of the regulation straps is, to hold the supporting parts of the combination, and which are suspended at the front, firmly to the body at the lower end, thus assuring desired results of the specific parts—abdominal supporter and suspensory—, in addition to this, the front part of these regulation straps, indicated by the letter C^1 also acts as the direct holder and controller of the suspensory part of the combination. By reference to Fig. 9 it will be seen that this strap is turned over in the middle, forming a V, in this shape it is sewed together, the connecting hook being applied at the same time. Slightly above this central point a cross-piece is added and to this and part way up on each of the straps a series of loops "c" are placed (see Figs. 2 and 9). To these loops, as hereinbefore explained the scrotum sack is attached and further up on these straps, about midway, the clasps "c^2" are placed, (see Fig. 9), this leaves considerable of the ends of the straps to overlap and this surplus is utilized for holding the front end of the sack.

Referring now to Figs. 6 and 7, the device is shown applied to the female body, and it may be seen that the harness arrangement remains practically the same, the only difference being in the regulation straps, which for female use have no detachable connection between the legs, but pass through from rear to front independently as shown by dotted lines in Fig. 9 part C and C^1. These straps, so much thereof as passes between the legs, are rounded so as to lie smoothly in the curve between the vulva and the legs, thus leaving the vulva and anus entirely free and unobstructed. The same principle applies to the menstrual suspensory sack which, when applied, takes the place of the rounded portion of said straps.

Referring now to the female suspensory sack, which is designed for use during menstruation, the arrangement is a flat piece F of oblong shape, (see Fig. 11) this piece is made, preferably, of rubber, the center part being thin while the edges "f" are considerably thicker and rounded, the latter for the purpose of greater strength and to lie smoothly and comfortably, under pressure or tension, in the curve of that part of the body between the legs and the vulva, and also to prevent escape of liquid matter over sides and ends. The application of this sack in combination with this harness, makes it possible to completely arrest and control the menstrual flow, to-wit: When the sack is applied a layer of absorbent material, loose or in pads, is placed lengthwise, in the middle, the sides are then turned up and thus it is placed in position, the contraction of space between the legs will keep it so, and cause it to form a hollow, the corner ends are then attached to the harness at the rear and front, by means of clasps, and by virtue of the arrangement peculiar to this harness, the sack can be regulated, high or low, tight or loose, while the ends at the front and rear are held outstretched at full width, so that the rounded sides of the sack are held firmly up and against the legs away from the vulva, thus allowing the flow to pass freely into the sack, where it is absorbed, or held by the sack, thus no part can escape as the construction of the sack and the manner in which it is held to the body will prevent leakage; even discharges from the rectum are arrested and held. Another advantage of this arrangement is, that it can be worn nights after retiring as well as when up during the day.

The extension or emergency straps: This arrangement is shown in the illustrations and is indicated by the letter G. This is in the true sense of the word an emergency arrangement, being a system of additional strapping to meet extreme cases in which enlarged or additional appliances are used, causing the pressure from weight or tension on any of the parts to exceed the ordinary and become irksome. To meet such conditions, the clasps on the waistband are provided with special slots to receive bands or straps, by way of hooks, which can be carried over the shoulders, in manner same as suspenders, and also downward from the waistband to any of the lower parts, which enables to serve the most delicate and severe conditions.

I am aware that previous to my invention devices for similar purposes have been made and called abdominal supporters and suspensories, they were, however, mostly for the treatment of specific diseases and not for general utility. However, all such devices, that have come under my observation, were defective because of their being built upon wrong principles. The chief error is, that they are all built exclusively on the waistband by attaching the supporting parts to the front end thereof, thus placing the weight where the body can least bear the strain and fixing the base for regulating the lower appendages at a point where it is most difficult to maintain proper positions. Likewise in the matter of male suspensories; the adjusting manipulations apply to the whole of the supporting sack, that is to say, when it is desired to raise or lower the sack, the rear end is affected the same as the front, when the rear should ever be permanent and well up against the scrotum at its rear junction to the body. Also the sacks themselves are usually wrong, inasmuch as their shapes

force the penis and testicles to lie lumped together and so causing discomfort, overheating and ugly appearance through the trousers. Also in the matter of female suspensories for use during menstruation, the devices thus far produced, so far as known to me, have failed to give satisfaction, because, they are only partially effective. None completely control the flow sufficiently to prevent soreness from this irritating discharge or protect the clothing, etc., from the drippings of excessive discharges. In my invention all these defects are overcome. The waistband acts only as a regulator of the positions of the real supporting bands or straps, the chief one of which is the bellyband, which for steadiness of position under tension or strain, caused by any movement of the body, is attached to the waistband at the rear where the pressure or weight is easiest borne, and from whence the most natural downward line of cleavage is found, thus enabling to firmly attach all the essential parts to the proper places and without the slightest discomfort to the wearer.

Various other modifications of the principle of my invention may be made within the scope of the accompanying claims.

I claim:

1. A supporting harness for an abdominal supporter or suspensory, comprising a waistband, a bellyband connected to the waistband at the rear, and regulating straps connected from front to rear between the waistband and bellyband and looped to extend around the legs and forwardly at an inclination across the hips to connection with the waistband at the front.

2. A supporting harness for an abdominal supporter or suspensory, comprising a waistband, a bellyband connected at its rear ends to the waistband at the back thereof, and regulating straps adapted to extend between the legs and adjustably connected at one end to the front of the bellyband and at the other end to the front of the waistband and looped to extend around the legs.

3. A supporting harness for an abdominal supporter or suspensory, comprising a waistband, and front and rear supporting and regulating straps attached thereto and adapted to extend between the legs and having a slidable connection with each other.

4. A supporting harness for an abdominal supporter or suspensory, comprising a waistband, a bellyband connected at its rear end thereto, and straps connected at one end to the waistband at the front thereof and extending backwardly over the hips and across the bellyband and forwardly between the legs and connected at the other end to the bellyband at the front thereof.

5. A supporter comprising a waistband, a bellyband connected at the rear thereto and extending around in front below the waistband, and a detachable strip extending between and connected to said bands, forming an abdominal supporter.

6. The combination with a supporting harness, of an abdominal supporter and a suspensory, the supporter and suspensory being separately attachable to and detachable from the harness, so that both or either may be worn.

7. The combination with a supporting harness having a waistband and a bellyband, of a strip between said bands forming an abdominal supporter, and a suspensory connected to the bellyband, the supporter and suspensory being independently attachable, so that one or both may be worn.

8. The combination of a waistband, a bellyband below the same, and an abdominal supporter stretched between said bands and connected thereto along its upper and lower edges.

9. The combination of a waistband, a bellyband connected thereto, and perineal straps extending between and connected at opposite ends to said bands, the straps being detachable and changeable to adapt the same for male or female use.

10. The combination of a bellyband, perineal straps connected thereto, said straps having a cross piece near the front, and a suspensory comprising a web the rear end of which is connected to said cross piece and the front end of which is connected to the bellyband.

11. The combination of a waist band, a bellyband connected thereto, and a suspensory comprising a web folded transversely to form a pouch, and straps connected to the opposite ends of the web and to the bellyband.

12. A suspensory sack consisting of a flat piece of web or fabric folded transversely and upwardly to form a pouch and adapted to be unfolded and flattened when desired, and having means at its edges to detachably attach the same to a support and means to detachably attach the edges together.

13. A suspensory sack consisting of a piece of fabric folded upwardly and transversely to form a transversely elongated pouch and having a central draw-string for dividing the pouch into two side compartments.

14. A suspensory sack consisting of a piece of fabric folded transversely to form a pouch with the fold extending from side to side and having lacings at its edges for adjusting the same and opening or closing its ends.

In testimony whereof I do affix my signature, in presence of two witnesses.

PETER ZUCKRIEGEL.

Witnesses:
MONROE E. MILLER,
JOHN A. BOMMHARDT.