

Nov. 12, 1946.

C. D'APRILE

2,411,129

GARMENT

Filed April 26, 1945

2 Sheets-Sheet 1

FIG. 2.

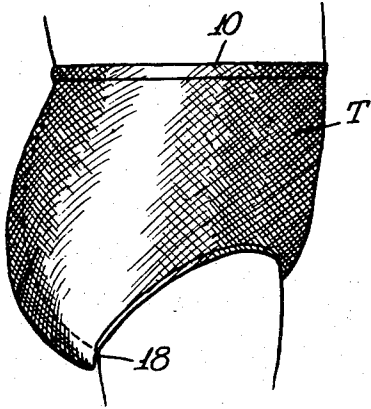


FIG. 3.

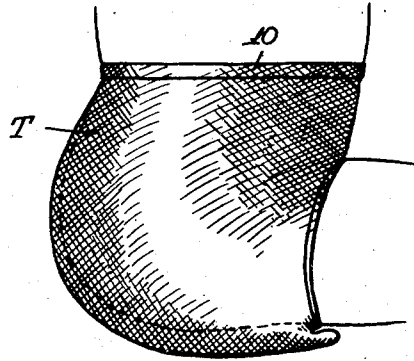


FIG. 4.

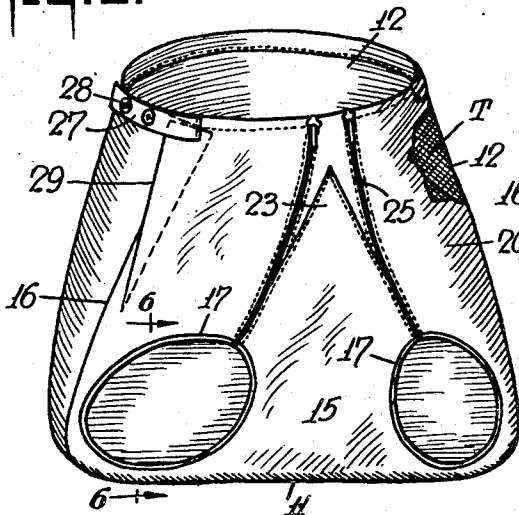


FIG. 1.

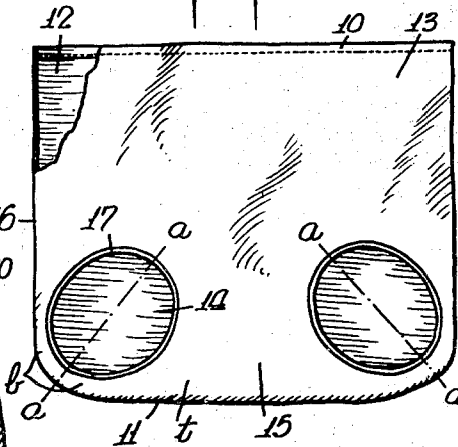
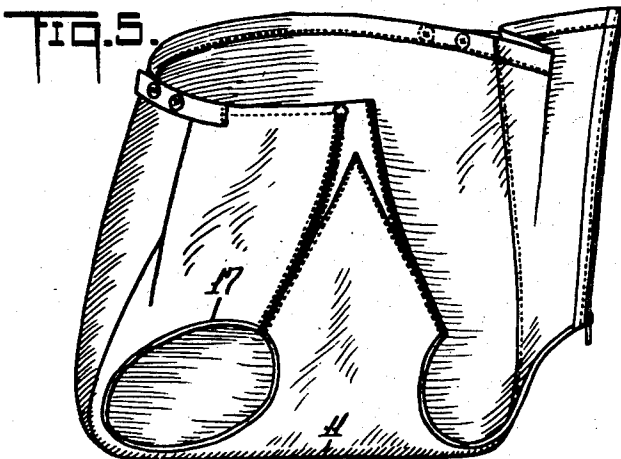
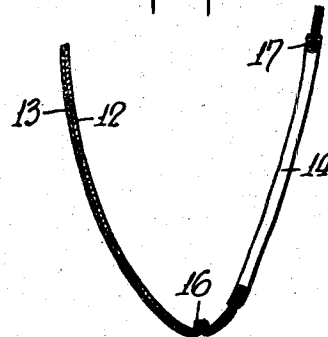


FIG. 5.



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FIG. 7.

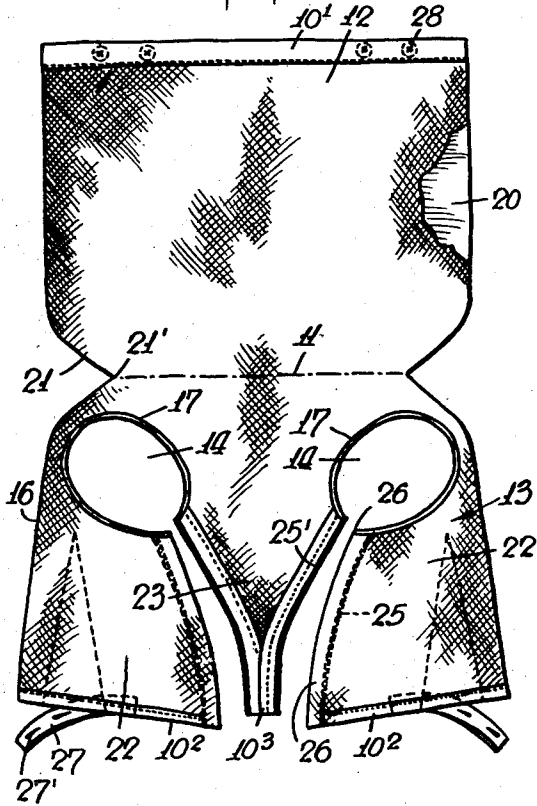


FIG. 8.

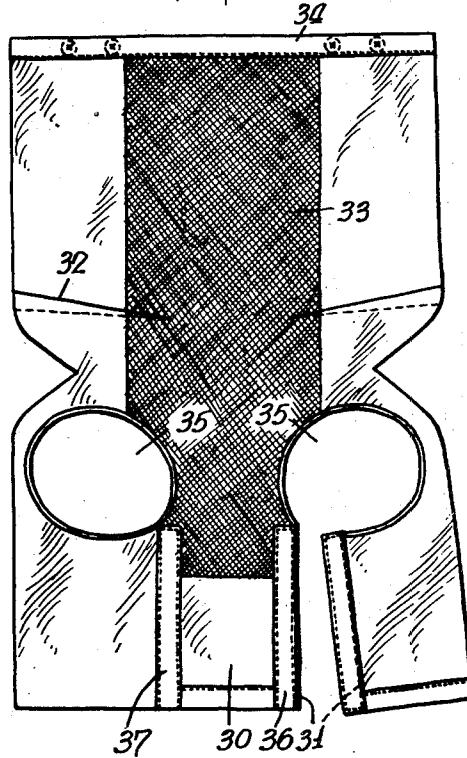
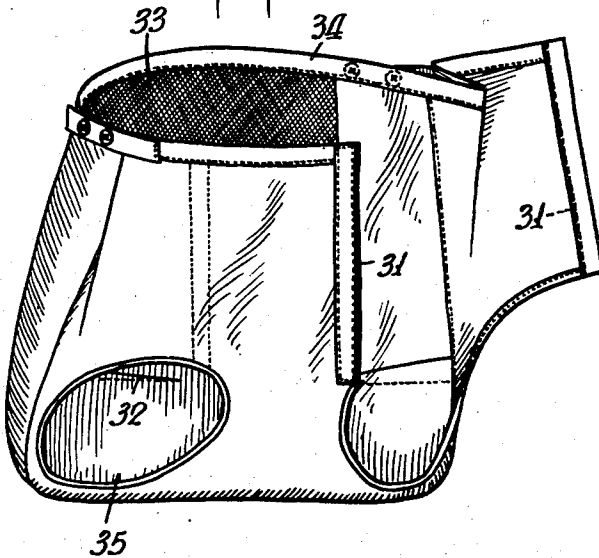


FIG. 9.



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GARMENT

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Application April 26, 1945, Serial No. 590,326

9 Claims. (Cl. 2-224)

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The present invention relates to garments which fit about the waist and encompass the individual legs near the crotch and which I define as trunks.

It is among the objects of the invention to provide trunks which inherently fit fairly snugly without ungainly bagginess, but yet permit freedom of vigorous movement without binding at the crotch, and which snugly embrace the legs and guard against exposure, yet without constriction of blood circulation, the garment requiring a minimum of fabric and being attractive in appearance, both on display and in wear.

The invention in its broader aspects is applicable to a variety of trunk-type garments, including drawers for men, women and children, trunks for sportswear, male and female, such as tennis and swimmers' trunks and playsuit pants, as well as trunks for theatrical performers such as acrobats and ballet dancers.

In important special embodiments disclosed herein, the invention has particular utility as a trunk-type garment worn over an absorbent pad, bandage or diaper, as for example, for sanitary pants, for hospital use and for babies' pants.

According to the invention the garment comprises a sac-like trunk having front and rear portions with a transverse horizontal connection such as a fold line therebetween, the leg openings being in the front panel at a substantial distance above the transverse connection and preferably also at a substantial distance inward from the sides of the flat garment. As a consequence, the garment in wear will be under tension at the front from the waist band to the leg openings, the borders of which latter extend obliquely upward from the rear to the front of the leg, while the rear portion of the garment hangs substantially without strain from the waist band to the leg openings and affords excess material adjacent the leg openings for freedom of movement, and in the pad, diaper or bandage holding embodiments affords a trough in which liquid may collect without leak, whether the user is in upright or reclining position.

In the accompanying drawings in which are shown one or more of various possible embodiments of the several features of the invention:

Fig. 1 is a front view of one embodiment of the garment shown in flat position;

Fig. 2 is a side elevation showing the garment upon the upright body as worn;

Fig. 3 is a view similar to Fig. 2, showing the relation of the garment to the body in a sitting or reclining position;

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Fig. 4 is a view of another embodiment in distended position;

Fig. 5 is a view similar to Fig. 4, showing one of the wings in open position and folded rearward;

Fig. 6 is a detailed view in longitudinal section on a larger scale taken on line 6-6 of Fig. 4;

Fig. 7 is a plan view showing the fabricated blank from which the garment of Figs. 4 to 6 is made;

Fig. 8 is a view similar to Fig. 7 of a modification; and

Fig. 9 is a view showing the modification of Fig. 8, with one wing separated and thrown back.

Referring now to Figs. 1 to 3, the garment has a waist-band 10 from which depends the trunk T which is sac-like, inasmuch as the lower end thereof is continuous and uninterrupted like the bottom of a sac and is preferably a transverse fold line 11 between the preferably continuous uninterrupted rear portion 12 of the garment and the front portion 13 thereof. The leg openings 14 are wholly in the front portion of the trunk, and are wholly above the lower end or transverse fold 11, the lower edge of the leg-hole being spaced from the bottom or transverse fold line by a distance desirably at least one-half inch, but preferably as much as an inch or more. The leg openings are preferably separated by a wide interval, as shown, which forms the crotch span 15. The outer edges of the leg openings are preferably well inward from the sides of the flat garment, that is, they are spaced from the edges 16, preferably to the same extent as they are spaced above the transverse fold 11. The leg openings are preferably oval in form, as shown, with the major axes *a-a* diverging outwardly and downwardly, as appears most clearly in Fig. 1. Each leg opening has a binder 17, which may be a binding stitch or which may be of any suitable covering fabric such as silk, cotton or rayon ribbon connected in place by stitching or otherwise.

The garment as thus far described, if sufficiently elastic, for instance, if of knitted fabric, might be put on by stepping through the leg openings and drawing the waist-band upward, until arrested by the fit of the leg opening binders 17. If of knitted or other elastic fabric, the garment will fit securely and resiliently about the waist. The garment, if not of elastic fabric, may be provided with one or more releasable lines of fasteners such as hookless fasteners along the height of the side, front or rear, as shown in the embodiments of Figs. 4 to 9 to be described here-

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inafter. The waist-band in the embodiment of Figs. 1 to 3 may be provided, if desired, with a buckle or other adjustable fastening means for secure fit about the waist.

In wear, the leg openings will extend, as best shown in Fig. 2, obliquely downward from the front to the rear, tension existing over the belly from the front of the waist-band to the front of the leg opening binder strips 17, and thence obliquely along said strips against the rear of the legs, the oval leg openings thus becoming elongated and their lengths being, therefore, pressed against the sides of the legs. The rear of the trunk hangs from the waist-band, as shown, with slack provided in the trough-like dependent portion 18 determined by the area *t* of the front portion 13 which extends below and rearward of the leg openings. As seen, there is a greater length of material in the garment that intervenes from the rear edge of the leg openings to the rear than to the front of the waist-band. The tension from the front of the waist-band being taken by the leg openings at binder 17, no tension can be transmitted to the crotch span 15, which moreover has adequate width for desired slack at the crotch and hangs loosely at its rear from the trough 18.

Thus the garment has no ungainly slack, it fits securely about the waist, and it fits about the legs without the constriction of blood circulation incurred where elastic bands are used; and it is yet proof against exposure. It affords ample slack at the trough 18 in the back for forward bending and permits vigorous motion, all without strain or binding at the wide crotch span. The trunks described are, therefore, useful as drawers for ordinary wear or as trunks for sportswear, such as for tennis, swimmers' and play suits, and also for theatrical performers such as acrobats or ballet dancers.

In the specific embodiments shown in Figs. 4 to 7, the garment is illustratively shown as a pair of baby pants desirably made of a generally rectangular blank of suitable fabric. This fabric may be of a single ply 12 of waterproof fabric, or if desired there may be also an outer ply 20 of silk, rayon or the like. Preferably the generally rectangular blank has a pair of lateral notches 21 in its side edges, connected at their peaks 21' by a transverse fold line 11 which is preferably midway between the ends of the blank, thereby to sub-divide that blank into a rear panel 12 which is preferably continuous or uninterrupted, and a front panel 13. In the front panel are the leg openings 14. These openings are spaced from the transverse fold line 11 and are also spaced inward from the lateral edges 16 of the front panel as above described. About the openings are the border strips 17 above described.

The front panel is desirably symmetrically slit from the leg openings 17 to the waist-band, thereby determining identical wing sections 22, and a plaque 23 therebetween. Preferably lines of releasable fasteners are provided along the lengths of both sides of the slit that is along the inner edges of the wings 22 and along the lateral edges of the plaque 23, such fasteners cooperating to close the garment, as best shown in Fig. 4. Preferably hookless fasteners are used for the purpose, and these are of the severable type, as shown. Desirably, the two coacting hookless fastener elements are not both at the extreme edges to be connected thereby, but one of said members, illustratively fastener element 25 on

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the wing section, is at a distance of one-half to one inch from the extreme edge and on the outer face thereof, so that when the garment is closed the border 26 intervenes between the metal fastener 25' on the plaque edge and the body, diaper, pad or bandage.

The blank, as shown in Fig. 7, has a waist line element 10' along its upper end and the composite section making up the front panel has waist line segments 10² on the extreme transverse edges of the wings 22 and waist line section 10³ at the extremity of the plaque 23.

The fabric blank as shown in Fig. 7, is converted into the garment by simply folding along the transverse line 11 with the waterproof fabric 12 at the outside, and stitching together the registering lateral edges 16 of the front and rear panels clear to the point 21' of the respective notches. In this operation the segments 10² of the waist-band are secured to the ends of the waist-band segment 10'. The assembly is then turned inside out so that the ply 20 of silk, rayon or the like is at the outside and the material beyond the seam at the lateral edges 16 extends inward, as best shown in Fig. 6.

It will of course be apparent that after the diapered infant has been laid on the back panel of the open garment, the separated hookless fasteners at the leg holes are simply brought together and then drawn upward to the waist-band to close the garment, as shown in Fig. 4. Thus the front of the garment is under tension between the waist band and the leg holes and that tension is distributed about the borders of the leg holes which are elongated, as shown, and are spanned obliquely across the width of the leg, as best shown in Fig. 2. The garment permits freedom of movement, freedom from binding at the crotch and security against exposure, exactly as in the case of the generalized garment previously described.

In addition, however, since a trough 18 formed by the portions *b* of the front panel in combination with the lower edge of the rear panel frames each leg opening from below as well as laterally of the body, moisture that escapes from the diaper, pad or bandage will collect therein. The wide crotch span 15 between the leg holes will fold and droop between the legs and preclude leakage from the inner sides of the leg holes. The protection from leakage is afforded, as will be readily apparent in Figs. 2 and 3, regardless whether the wearer is in upright or reclining position.

The waist line of the trunks may be provided with a more or less conventional adjustment strap 27 with two or more button holes 27' to be closed selectively over buttons 28 on the waist-band, excess material being taken up by oblique fold 29 in the tighter setting. Thus the garment may afford the desired pressure against the enclosed diaper, pad or bandage to confine the same and its free contents against shifting.

The embodiment of Figs. 8 and 9 is generally similar to that of Figs. 4 to 7 and will, therefore, be briefly described. The plaque 30 is rectangular rather than triangular, and only one line of fastener 31 is used. Preferably the reinforce strip 36 at one side of the plaque is duplicated at 37 at the other side thereof. Illustratively, darts 32 are stitched transversely inward from the sides in the back panel for enhanced fullness. The present embodiment is more especially suitable as sanitary pants and to this end is made of single ply with only a middle strip 33 of waterproof material for retaining the sani-

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tary napkin. The strip 33 extends from immediately below the waist-band 34 to the middle of the length of plaque 30. The user steps into the closed leg hole 35, draws the garment upward about the napkin until arrested by the border of leg-hole 35 and then connects and closes the hookless fastener 31.

Obviously the embodiments shown are more or less interchangeable if made of suitable size, but in general the form of Figs. 4 to 7 is preferred for babies' pants, and of Figs. 8 and 9 for sanitary pants.

As many changes could be made in the above construction, and many apparently widely different embodiments of this invention could be made without departing from the scope of the claims, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

1. Trunks having a waist-band, a sac-like body connected thereto, the latter having a pair of leg openings wholly in the front thereof the entire area of each of said openings being well above the lower edge of the flat garment.

2. Trunks having a waist-band, a sac-like body connected thereto, the latter having a pair of leg openings wholly in the front thereof the entire area of each of said openings being well above the lower edge and well inward from the lateral edges of the flat garment.

3. Trunks having a waist-band and a sac-like body dependent therefrom, including a continuous rear panel and a front panel of substantially the same length and width as said rear panel, said front panel having a pair of leg openings therein spaced inward from the lateral edges of the flat garment and spaced upward from the lower common edge of front and rear panels, and a releasable connector extending from at least one leg opening to the waist-band, for facility of application and removal of the garment.

4. Trunks having a rear panel and a front panel joined together laterally, said panels being transversely connected, the front panel having a pair of leg openings therein with the rims thereof substantially above said transverse connection.

5. Trunks having a rear panel and a front panel joined together laterally, said panels being transversely connected, the front panel having a pair of leg openings therein with the rims thereof

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substantially above said transverse connection and substantially spaced inwardly from the lateral edges of the trunks.

6. Trunks comprising a rear panel, lateral wings thereon, a crotch span extending from the lower ends thereof, a plaque constituting an upright extension on said crotch span, the garment presenting a curved length of border extending along the lower end of each wing and along the corresponding lateral edges of the crotch span, means for releasably connecting the lateral edge of each wing to the corresponding lateral edge of the plaque, thereby closing the curved length of border to form a complete leg opening, the rear end of said leg opening being considerably nearer to the front than to the rear part of said waist-band when measured along the length of the garment.

7. Trunks having a waist-band and comprising a forward part and a rear part connected at their lower ends and of liquid-tight fabric, said forward part having a pair of leg openings therein above the lower end thereof, said openings presenting borders and extending obliquely and upward in wear, the material bordering the rear and outer part of the leg openings forming a trough.

8. A blank for a pair of trunks, said blank being generally rectangular in shape and having a pair of notches in the middle of its lateral edges defining therebetween a transverse fold line, said blank defining a continuous rear panel to one side of the said fold line and a front panel of substantially the same area and to the other side of said fold line, said front panel having a pair of leg openings therein spaced substantially from said transverse fold line and from the lateral edges thereof and defining a crotch span therebetween, said front panel being sub-divided and comprising a pair of lateral wing sections and an intervening plaque beyond the crotch span, said blank having releasable fasteners including complementary elements along the length of the plaque and along the corresponding lengths of the wing sections.

9. Trunks having a waist band, a sac-like body connected thereto, the latter having a pair of leg openings wholly in the front thereof, well above the lower edge and well inward from the lateral edges of the flat garment, each of said leg openings having a substantially non-elastic border thereabout.

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