Nov. 21, 1950 E. BUCHLER 2,530,647

GARMENT

Filed Nov. 12, 1948 2 Sheets-Sheet 1

Fig. 1.

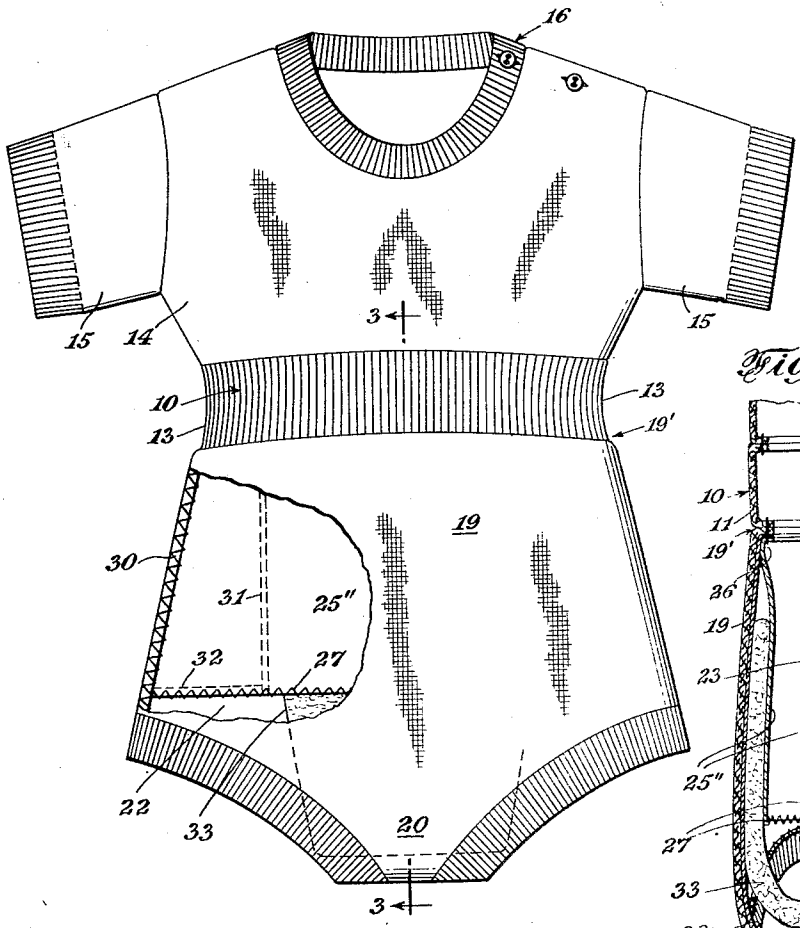


Fig. 3.

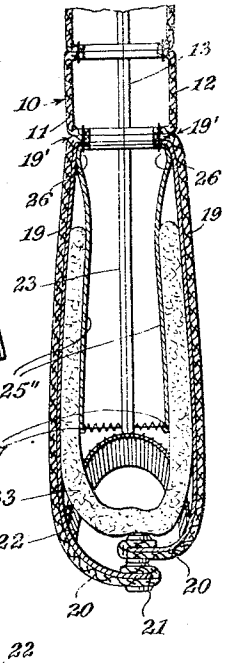
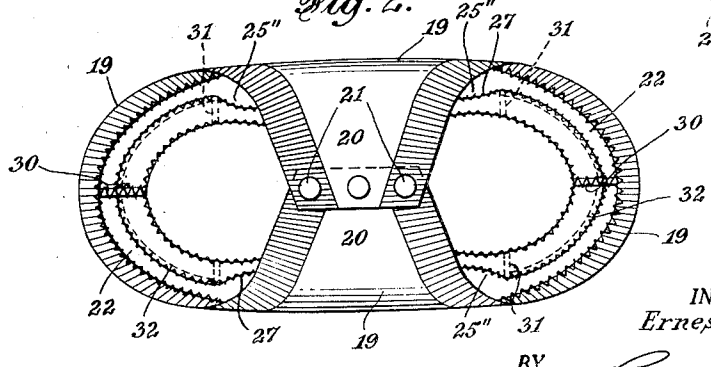


Fig. 2.



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Fig. 4.

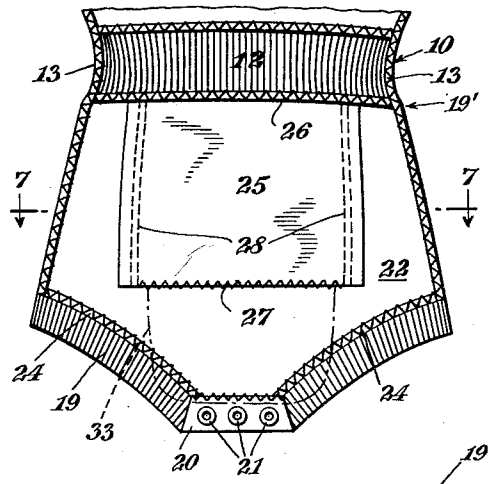


Fig. 5.

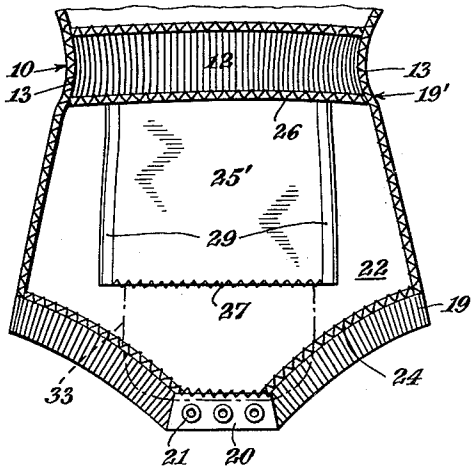


Fig. 7.

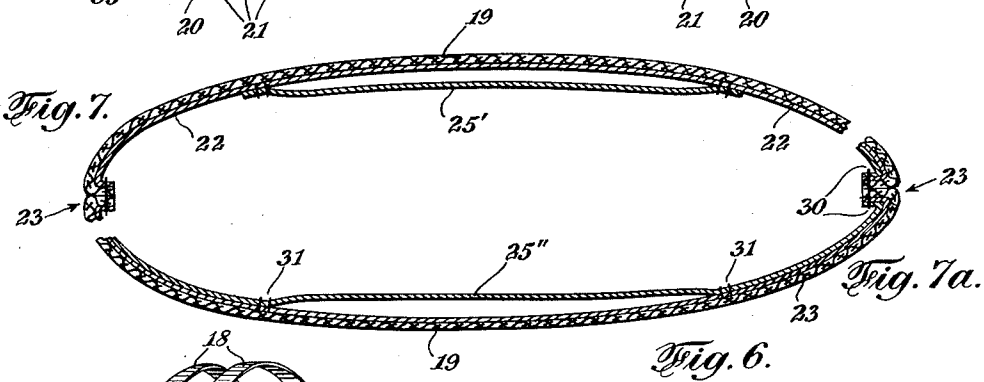


Fig. 7a.

Fig. 8.

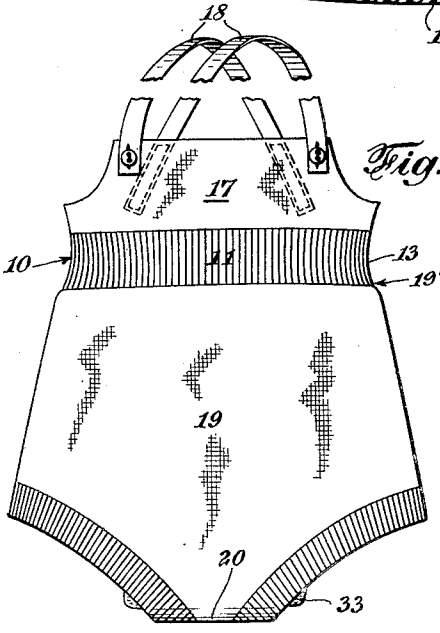
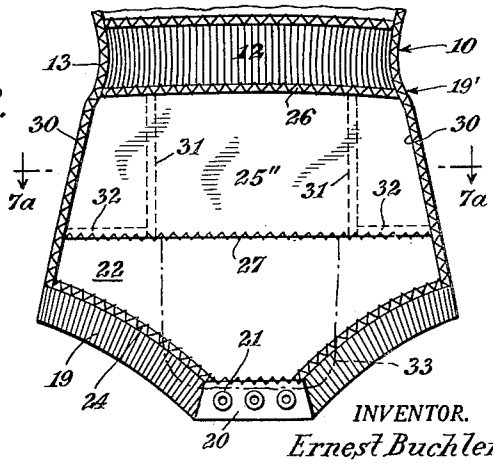


Fig. 6.



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UNITED STATES PATENT OFFICE

2,530,647

GARMENT

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Application November 12, 1948, Serial No. 59,689

1 Claim. (Cl. 128—287)

1

This invention relates to garments in general, and especially to infants' wearing apparel wherein the lower structure of the garment is provided with a moisture-proof lining, such as disclosed in my Patent No. 2,450,631, issued October 5, 1948, and wherein such lining is equipped wih pocket formations for the reception of readily replaceable moisture-absorbent inserts which latter are adapted to take the place of the usual diaper, and are intended to be discarded after use.

The prime object of the present invention is to provide in an infant's garment of a relatively inexpensive and therefore economical construction, a lower garment structuer which is composed of two like, sidewisely united front and rear elements, each of the elements comprising an outer garment portion extending downwardly from the waistline of the garment, and terminating at its lower end in a gradually reducing crotch flap, and wherein the crotch flaps of the two garment portions are adapted to overlap and are equipped with means for detachably fastening them in overlapped position, and wherein the entire interior surfaces of the depending outer garment portions are equipped with a moisture-impervious lining which extends from the waistline of these garment portions to the edges of their crotch flaps, and wherein the lining is composed of two individual sheets of a shape and size corresponding to that of the front and rear elements of the lower garment structure, the side and crotch flap edges of the lower garment elements being simultaneously united with the corresponding edges of the lining sheets, the latter being provided with oppositely disposed, inverted, moisture-impervious pockets forming separate but integrated parts of the lining, and wherein the open lower ends of the pockets are designed to facilitate the reception of a readily replaceable, moisture-absorbent, band-like insert or inlay, and wherein the overlapping, crotch flaps, when closed, are adapted to support the body portion of such inlay.

Another object of the present invention is to provide an infant's garment with a lower garment structure composed of outer garment portions having a waterproof lining equipped with waterproof, inverted pockets and wherein the upper edges of the outer garment portions and the upper edges of the lining and the upper edges of the pockets are secured together in the vicinity of the waistline of the garment, and wherein the outer edges of the garment portions and the outer edges of the lining are united

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simultaneously at the sides of the garment, and wherein the open ends of the pockets are reinforced to facilitate their gripping and handling when the aforesaid replaceable moisture-absorbent inlay is to be placed into position.

Another object of this invention is to provide a garment with a waterproof lining having inverted pocket formations associated therewith, and wherein the latter comprise substantially oblong sheet members, the side edges of which are attached to the body of the lining along spaced, relatively narrow, substantially parallel areas, while the upper edges of the sheet members are secured to the lining in the vicinity of the garment waistline.

A further object resides in the provision of a lining and of pocket formations, both made from thermoplastic material, and wherein the pocket material is connected by heat-sealing with the material of the lining along relatively narrow, strip-like areas.

Still another object of the present invention is to provide a garment of the type indicated, wherein the pocket formations comprise substantially oblong sheet members which extend over the entire width of the lining, and wherein the upper edges of these sheet members are attached along the upper edges of the lining, and the upper edges of the lining are secured, together with the upper edges of the outer lower garment portions, along the waistline area of the garment, and wherein the outer edges of these sheet members and the outer edges of the lining are secured together with the sidewisely united edges of the front and rear garment portions, and wherein the pocket-forming middle portions of these sheet members are attached by means of spaced, relatively narrow, substantially parallel, vertically extending areas, while the lower edges of the sheet members are secured horizontally to the lining material in the directions from the bottom ends of these vertically extending attaching areas towards the united side edges of the garment portions, the union between the sheet members and the lining being effected either by stitching or heat-sealing.

An additional object of this invention is the provision of a garment structure openable at its crotch portion, and wherein the inner faces of its front and rear portions below the waistline are equipped with individual, waterproof lining panels, each panel having an inverted pocket made from waterproof material, the pockets of both panels being adapted to become aligned when the front and rear garment por-

tions are in superimposed position, the panels extending with their side and lower edges to the respective corresponding edges of the lower garment portions and are firmly and simultaneously united by way of their edges with the edges of these garment portions in such a manner that the free edges as well as the bodies of the pocket material will automatically separate from the material of the lining panels, and wherein the free edges of the pockets are finished, reinforced and stiffened with material other than the waterproof lining material, for the purpose of assuring an automatic separation of these free edges from the lining material and to facilitate their gripping for lifting the pocket material when an absorbent pad is to be inserted.

These and other objects and important provisions of the present invention will become more fully apparent from the following description, in conjunction with the accompanying drawings, wherein:

Fig. 1 illustrates a front elevation of a creeper in accordance with the present invention, with portions thereof removed;

Fig. 2 is a bottom view of Fig. 1;

Fig. 3 is an enlarged section taken approximately along line 3—3 of Fig. 1;

Fig. 4 is an interior plan view of the lower garment portion showing one form of a pocket formation attached to the lining by stitching;

Fig. 5 is a similar illustration with a pocket formation shown heat sealed to the lining;

Fig. 6 illustrates a modified form of a pocket formation extending over the width of the lining;

Fig. 7 is a fragmental section taken approximately along line 7—7 through Fig. 4;

Fig. 7*a* is a fragmental cross section taken approximately along line 7*a*—7*a* through Fig. 6; and

Fig. 8 illustrates a sun suit constructed in accordance with the present invention.

In these figures the lower garment structure is shown provided with a wiastband 10 composed of frontal and rear portions 11 and 12, as clearly seen in Fig. 3. These two waistband portions are preferably united along their side edges 13, and when thus united, constitute a closed unit.

Obviously, the waistband as such may be readily omitted in garments when their upper and lower structures are produced either from one-piece frontal and one-piece rear sections, or when the upper and lower garment structures are each made from independent frontal and rear sections sewed together directly along the garment waistline.

In Fig. 1 is illustrated a creeper garment having a top portion 14 provided with sleeves 15 and a neck structure 16. Fig. 8 on the other hand shows what is known as a sun suit, which in this case has a bib formation 17, which latter of course may be omitted when desired. The garment is held in place by means of shoulder straps 18.

Figs. 2, 3, 4, 5 and 6 illustrate lower garment structures which are applicable to infants' garments of any desired type, such as sleepers, creepers, dress suits, rompers, etc., and which lower garment structures, with or without waistbands, constitute the main subject of the present invention.

As proposed, the lower structure of an infant's garment, in accordance with the present invention, is composed of two like, sidewisely united front and rear elements, depending from the garment waistline, each element comprising an

outer garment portion 19, which may be associated with a waistband portion, as at 19', and which terminates in a gradually reducing crotch formation in the form of a flap 20. The crotch flaps of the two elements are adapted to overlap and are equipped with openable fastening means, such as snap fasteners 21, which are adapted to normally hold the two flaps in closed, overlapping position.

The entire interior surfaces of the front and rear elements are covered with a moisture-impervious lining 22 which extends from the garment waistline to the lowermost ends of the crotch flaps. Lining 22 is composed of two individual sheet members which correspond in shape and size to that of the front and rear elements of the garment skirt portion. The upper edge of the lining is preferably attached along the upper edge of outer garment portions 19. The side edges of the outer garment portions and of the lining are simultaneously united along the sides of the garment, as clearly seen at 23 in Figs. 7 and 7*a*. The lower edges of lining 22 are associated with the lower edges of the outer garment portions, as shown at 24 in Figs. 4, 5 and 6.

Forming separate but integrated parts of the lining are what may be termed inverted pocket formations 25, 25' and 25'' as shown in Figs. 4, 5 and 6, respectively. Generally speaking these pocket formations comprise substantially oblong sheet members which are fixedly associated with the lining bodies. In each one of the constructions shown the upper edges of these sheet members coincide with or are adjacent to the upper edges of lining 22. They are preferably secured together with these upper lining edges and the upper edges of the outer garment portions, as shown clearly at 26. The lower, free edges of the sheet members forming the inverted pockets are preferably reinforced at 27, by a zigzag, overlock thread stitching which passes from face to face of and encircles the edge margin, the purpose of which reinforcement will be presently evident. The sides or side edges of the pocket-forming sheets are variously secured to the body of the lining as shown in Figs. 4, 5 and 6, but in every case the attaching areas defining the effective width of the pockets comprise two approximately parallelly arranged, vertically downwardly extending, spaced, relatively narrow attaching strips which terminate at the lower edge of the sheet members.

Thus in Fig. 4 the attachment of the sheet member to lining body 22 is effected by means of a double row of stitching 28, whereas in Fig. 5 both lining 22 as well as the pocket-forming sheet member are made of thermo-plastic material and the side edges of the sheet member are heat-sealed to the lining as indicated at 29.

In Fig. 6 the pocket-forming sheet member 25'' extends over the entire width of lining 22. The extreme outer edges of the sheet member are secured, together with the edges of the lining, to the united side edges of the garment as indicated at 30. The width of the pocket formation in sheet member 25'' is defined by its attachment to the lining body along two spaced, parallel, relatively narrow vertical areas 31 by either stitching or heat sealing, which mode of attachment leaves free the central, bottom reinforced edge portion 27. The bottom edge portions of member 25'' extending at both sides from central, free edge portion 27 are also secured to the lining body by either stitching or

heat sealing along areas **32**, which latter continue from the bottom ends of parallel vertical attaching areas **31** toward the united side edges of the garment.

As stated, reinforcement **27** of the free edges of the pocket formations, illustrated in Figs. 1, 2, 3, 4, 5 and 6, is effected by a zigzag, overlock and edge-encircling thread stitching. That edge reinforcement serves two distinct purposes. In the first place it strengthens the free pocket edges and lengthens their useful life, and, secondly, it is directly responsible for the automatic separation of the reinforced edges from the lining, thereby facilitating the gripping of the edge areas of the pockets and the lifting of the pocket panels away from the lining for the insertion into the pockets of a moisture-absorbing pad.

That automatic separation of the reinforced pocket edges from the lining is due directly to the stiffening and thickening of the edge areas and to the difference between the material of the reinforcing thread and of the lining material, the thread forming a physical spacer between the pocket edge and the lining.

Additionally, the manner in which the pocket panels are joined with the lining along spaced, vertical areas, is instrumental in facilitating ready separation of the pocket panels from the lining. As will be observed from Fig. 7*a*, there exists an although slight, but nevertheless definite difference in length between the lining and the pocket panel when measured in respect to the vertical attaching areas **31** shown in that figure, and which difference in length causes the pocket panel to move away from the lining.

Inserted into the inverted pocket formations are the ends of a moisture-absorbing pad **33**, as clearly indicated in Fig. 3, while the body of the pad is supported by the connected, overlapping flaps **20**. This pad serves in place of the usual diaper and is intended to be discarded when wet.

When placing this moisture-absorbing pad into the pockets it is necessary to separate the pocket-forming portions of sheets **25**, **25'** and **25''** from lining **22**, and in order to facilitate such separation, prevent undue wear, displacement or other interference with the placement of pad **33** into the pockets, the aforementioned reinforcement **27** is provided.

Pad **33** is preferably so designed that when placed into the pockets as shown in Fig. 3, it will either not project to without the garment, or project only slightly as shown in Fig. 8, whereby its entire body is thus supported by the waterproof lining of the garment, which lining prevents moisture from penetrating to without the garment. The provision of the pocket formations and the buttonable flaps facilitate ready exchange of the moisture-absorbent pad without the requirement of removing or relocating the garment while worn by an infant.

In the foregoing description only a few embodiments of the lower garment structure in accordance with the present invention are dealt with. Depending upon the application of such lower garment structure to the various types of garments indicated, changes and improvements may become necessary, all within and without departing from the basic scope of this invention, as defined in the annexed claim.

I claim:

A garment comprising a body having front and rear sections, said sections having side edges permanently secured together and forming seams along opposite sides of the body, said sections having lower portions tapered downwardly and terminating in depending tongues initially free and having lower ends overlapped and detachably secured and therby forming a releasable crotch portion and defining leg openings at opposite sides thereof, a lining consisting of sheets of moisture-impervious material secured against the inner faces of said front and rear sections, moisture-impervious sheet elements disposed against the lining of the front and rear sections and having upper edges secured along the upper edges of the said sections and their side edges being secured to the front and rear sections, said sheet elements being free along their lower edges and forming pockets with the linings and having lower ends open for the full width of the pockets and spaced upwardly from the leg openings, and a wide pad of moisture-absorbing material folded midway its length and inserted into the body through the open lower end thereof with its end portions extending upwardly and fitting snugly into the pockets through the open lower ends thereof for substantially the full length of the pockets, said tongues being then secured to each other to form the crotch portion and to removably hold the pad in place.

ERNEST BUCHLER.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,977,604	Alsop	Oct. 23, 1934
2,450,631	Buchler	Oct. 5, 1948