

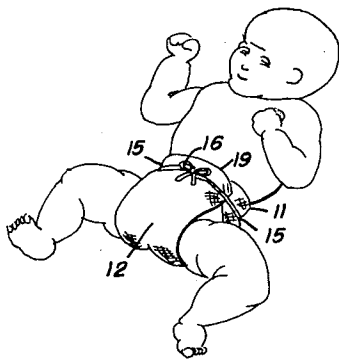
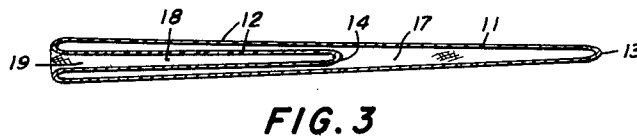
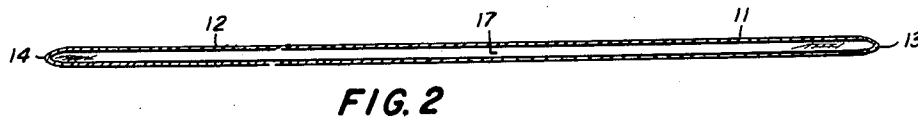
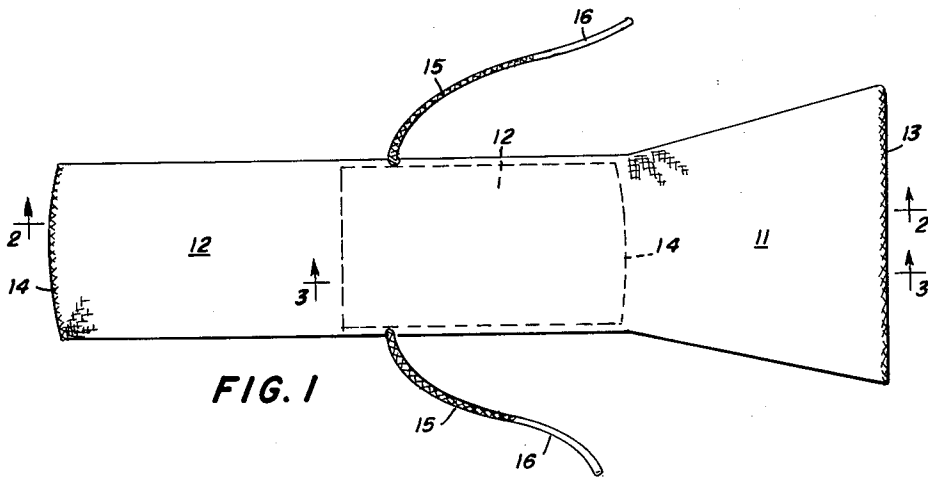
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J. O. CASALE

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BABY'S DIAPER

Filed Dec. 23, 1958



**FIG. 4**

INVENTOR

**JORGE OSCAR CASALE**

BY *Harriet Downing Sebold*  
ATTORNEYS

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3,057,353  
BABY'S DIAPER

Jorge Oscar Casale, 1393 Corrientes St., Buenos Aires,  
Argentina

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This invention relates to a novel baby's diaper having a high absorption power and liquid retentive capacity, being very practical, simple, economic and more convenient to manufacture than known ones.

Known diapers and napkins suffer from the great disadvantage that they are provided with edges and longitudinal seams making the baby uncomfortable. They also use hooks and eyes or buttons and non-elastic bands to fasten the diaper, resulting in inconvenience for the baby.

The diaper or napkin of my invention has the peculiarity of being made of a single tubular piece, knitted in one piece. It has no longitudinal seams nor edges. This means to say that it is composed of an anatomical tubular portion with one end widened which, as it becomes narrower, is of a constrictive nature and prolonged by a cylindrical tubular portion.

Once flattened it takes an irregular shape with a constriction extended in elongated shape. To close both its ends two transversally situated extensible seams are used.

This diaper thus being made of a single tubular piece, on being folded inwards as far as its middle part, as shown in FIG. 2, forms an absorbent four-ply surface with great absorption capacity. Once unfolded, according to FIGS. 1 and 2, it forms a large two-ply surface which being tubular is easy to aerate thus allowing the diaper to be dried quickly after washing.

Another advantage of this diaper is its simple and economic manufacture since it does not require templates for cutting it to measure nor longitudinal seams.

Being made in tubular form and of a single piece of knitted fabric its removal from the knitting machine is necessary only after it has reached its full length. Even though the diaper has a different width when taking an irregular shape, the knitting has nevertheless broadways along the whole extension of the diaper the same number of stitches, and the width of the diaper varies only in one of its parts according to the length of the yarn applied by the needles of the machine on which the diaper is knitted. Thus one part of the diaper is more close-knitted than the other.

In order to fasten the diaper to the baby only two bands are used with an elastic portion and a non-elastic one. Said bands have their elastic end fixed to the sides of the middle part of the diaper.

Another characteristic of this diaper is that the end of the elongated portion is folded inwards. It constitutes a double absorption area and a receptacle capable of housing absorbent material (cottonwool, tissue paper, cellulose, etc.) if desired. Thus the outward percolation of the liquid is avoided.

Even though the diaper is made of two plies, there are no seams in contact with the baby's skin. Being highly flexible this diaper adheres to the baby's body allowing the latter absolute freedom of movement without the diaper being deformed nor becoming undone.

Another of the characteristics of this diaper is that, being made of two plies, it enables an absorbent supplement to be installed, if desired, even when the diaper is completely closed; said absorbent material being independent of the diaper can be separated and removed to be replaced, thus reducing appreciably the drying time. Thus, although the knitted fabric of the diaper be light

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its absorption capacity is very high. Nowhere in the diaper impervious fabrics or sheets are used.

By way of example the accompanying drawing shows an embodiment of the invention, like reference characters 5 indicating like visible or corresponding parts in the various figures; in said drawing:

FIG. 1 shows said diaper completely extended and flattened; the broken lines show how the elongated end is folded until penetrating partially into the same.

FIG. 2 shows the same diaper completely unfolded, seen in profile in section along A—B of FIG. 1.

FIG. 3 shows the same diaper folded, seen in profile in section along B—C of FIG. 1; and

FIG. 4 is a view in perspective of the same diaper applied to a baby.

Said diaper is made up of a tubular piece of knitted fabric, the knitting being tuck stitch, without any seams on the side edges and closed at both ends. Said piece has in flattened condition a substantially widened portion 11. Its narrow part continues in an elongated projection 12. The widest part of said widened portion 11 is closed by an inner extensible seam 13. The end of said elongated projection 12 is closed by an outer seam 14 which later on is lodged inside. Midway between both sides of portion 12 two bands 15 are secured; two thirds of the length of said bands are woven of a material having a high elastic recuperation, the remaining portion 16 being non-extensible.

When a non-extensible band is tied round the abdomen of a baby, its lack of resiliency interferes with the respiratory movements. Upon being wetted by the baby the band shrinks to a certain extent thus making the abdominal movements still more difficult and causing the baby serious inconvenience and trouble. For this reason partially elastic bands are provided, having non-elastic ends in order to facilitate the rapid and firm tying of said bands, which could not be attained if the free end of the band were extensible.

Both portions 11 and 12 of the diaper form an inside cavity 17 permitting to fold the portion 12 in its inside as far as its middle part, as can be seen in FIGS. 1 and 3. This fold forms in its inside a cavity 18 with a large opening 19 in order to insert through the same, if necessary, cotton-wool or another absorbent supplement.

Once the diaper is folded, containing if desired in the cavity 18 an absorbent supplement, the diaper is placed on an appropriate surface and the baby is placed with its back on portion 11 with its waist at the height of the closed end 13. Said portion 11 is stretched, wrapping it across the baby's abdomen, and the rectangular portion 12 is passed upwards between the baby's legs and the diaper is tied round the baby's body with the bands 15. The ends 16 of said bands 15 are tied in a knot on the baby's belly as can be seen in FIG. 4.

It is obvious that when carrying this invention into practice the materials most suitable for the purpose may be employed and structural details may be modified without departing from the scope of the invention.

What I claim is:

1. An elongated baby diaper made of continuous knitted fabric, said diaper being tubular along its length and having its remote ends closed, the rearward end portion of the tubular diaper when pressed flat flaring outwardly along the longitudinal axis of symmetry to embrace the rear portion of the torso of the baby and extend around toward the front thereof, the forward end portion of the tubular diaper being of reduced width to pass beneath and between the legs of the baby and upward toward the front and adjacent the stomach of the baby, said forward end portion of the tubular diaper also being of substantially at least twice the length of the rear-

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ward flared portion so that the forward portion may be reversely folded into itself toward the flared portion to form a hollow receptacle therein extending at least substantially to the inner end of said flared portion, with an access opening for the insertion of absorbent material into said receptacle being formed where the inward fold is created.

2. The invention as set forth in claim 1, wherein the said forward end portion includes a pair of elastic bands secured to respective sides thereof, each band having a non-elastic end to facilitate firm tying of the bands.

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