July 3, 1962 F. WUHRLIN 3,042,043

CELLULOSE WADDING SHEETS FOR THE LINING OF BABY'S NAPKINS

Filed April 1, 1957 2 Sheets-Sheet 1

FIG. 1

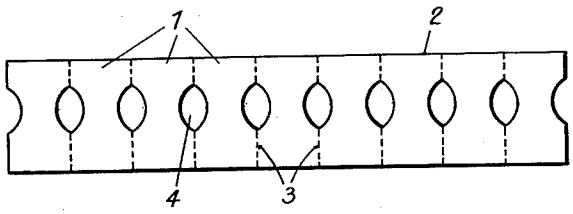


FIG. 6

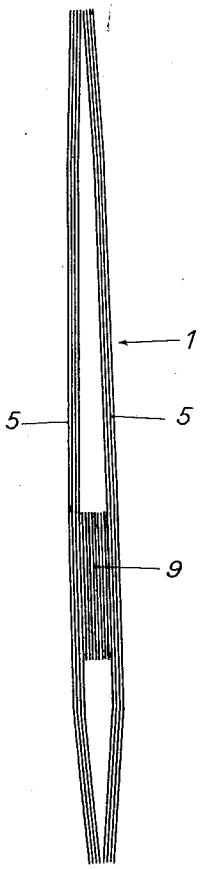


FIG. 2

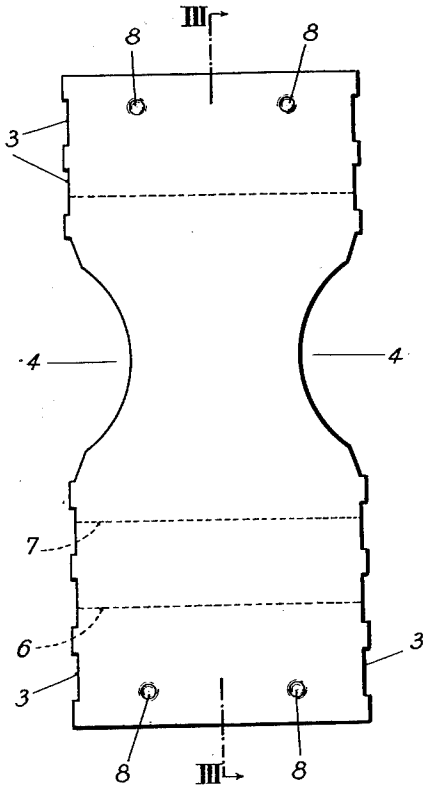
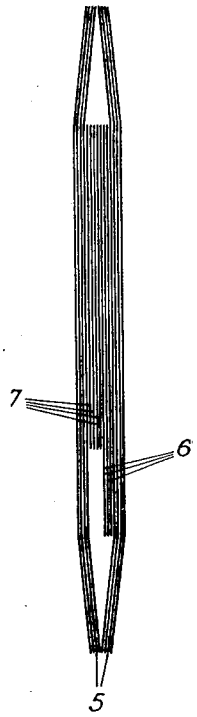


FIG. 3



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CELLULOSE WADDING SHEETS FOR THE LINING OF BABY'S NAPKINS

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FIG. 7

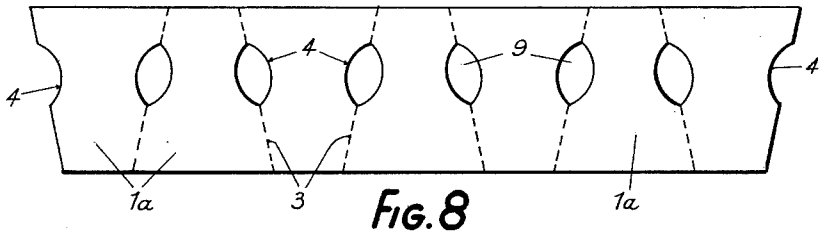


FIG. 8

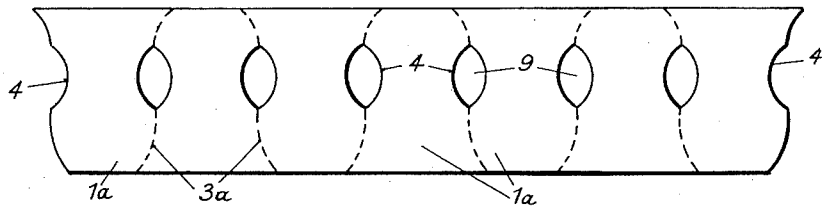


FIG. 5

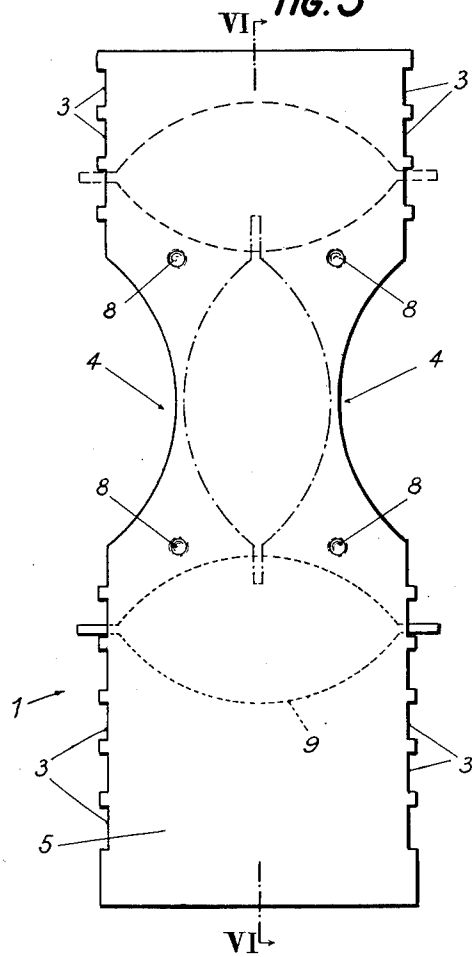
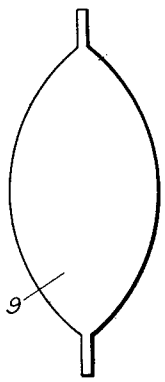


FIG. 4



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CELLULOSE WADDING SHEETS FOR THE LINING OF BABY'S NAPKINS

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2 Claims. (Cl. 128—284)

This invention relates to cellulose wadding bands of a new structure of superposed sheets intended for lining baby's napkins; their structure makes them very efficient and of a particularly convenient use.

According to the main feature of the invention the cellulose wadding bands form a succession of rectangular adjoining units, the separation of which is made easier by an interrupted cutting line.

Each unit is provided with two cut-away portions or indentations corresponding to the shape of the upper part of the child's thigh.

Said identations are symmetrical in relation to the longitudinal axis of the unit sheet and, in order to allow a better distribution of the absorption surfaces, they are located forwardly in relation to the transverse axis, that is to say that the unit surface located in front of the child's thighs has a size less than that of the back part.

Owing to this structure, the setting of said units in position is very quick and the absorbing material is at the desired places without providing undesirable over thicknesses.

To line the baby's napkins, a unit of the series is normally detached but the number of the superposed sheets in the napkin may vary according to requirements without it being necessary to tear out the intermediate interrupted cutting lines.

According to a variant of the embodiment each piece cut from two adjoining units to provide in each cellulose unit and on either side of the longitudinal axis, the two indentations corresponding to the shape of the upper part of the child's thigh, constitutes a removable piece intended to be inserted at a suitable place within the actual thickness of the unit at the moment of utilization in order to increase the absorption capacity of said unit according to the position of the child.

The invention includes also embodiments comprising at least one of the following features:

(*a*) The rectangular adjoining units form a succession of units constituting a long band which is manufactured for instance as a roll or as an accordion pleating.

(*b*) In a series, all the units are identical and have an opening on their joining line with the two adjoining units.

(*c*) The joining line of the units is cut or perforated at intervals, so as to make it possible to detach easily a unit or a group of units from the remainder of the band.

(*d*) The cutting line of the units enabling a unit or a group of units to be detached is formed by thinning down by pressure, starting a cut or any other suitable means in order to obtain an easy and clean tear of the units.

(*e*) The cut-away side portions of the units are located forwardly of the transverse axis.

(*f*) The bands from which the units are cut are formed by superposed bands of different widths with the narrower bands sandwiched between the wider bands, so that the units are thicker in the middle than at the edges.

(*g*) The adjoining units of cellulose wadding composed of superposed sheets have all the same thickness.

(*h*) Each piece cut out from two adjoining units to provide in each cellulose wadding unit and on either side of the longitudinal axis of the latter, the two arcuate indentations corresponding to the shape of the upper part of the child's thighs, constitutes a removable piece intended to be inserted at a suitable place into the thickness of the unit at the moment of its utilization in order to increase the absorption capacity of said unit according to the position of the child.

(*i*) Each detachable unit may have a rectangular or trapezoidal shape, a sinuous outline or any shape having an axis of symmetry between the two cut-away portions corresponding to the shape of the upper part of the child's thighs.

(*j*) The sheets which constitute the units are held together by points of stamping preferably located on the edges.

(*k*) The middle part of the sheets may be embossed or corrugated.

Other particular features and advantages of the invention will appear from the following description and from the consideration of the annexed drawings, which show, by way of examples and without implied limitation, embodiments of the invention.

In said drawings:

FIG. 1 is a general view of a cellulose wadding band divided into units according to the invention.

FIG. 2 shows on an enlarged scale one of the units out of the band shown in FIG. 1.

FIG. 3 is a sectional view taken along line III—III of FIG. 2.

FIG. 4 shows the part cut in two rectangular adjoining units to provide in each unit the side indentations corresponding to the shape of the upper part of the child's thighs.

FIG. 5 shows a rectangular unit with the cut-out piece inserted in the thickness of the unit.

FIG. 6 is a sectional view taken along line VI—VI of FIG. 5.

FIG. 7 is a general view of a cellulose wadding band composed of trapezoidal shaped units.

FIG. 8 is a view similar to FIG. 7, the units being cut-out from the cellulose wadding band along a sinuous line.

Referring to FIG. 1, there can be seen a continuous band of cellulose wadding composed, by way of an example, of nine identical rectangular adjoining units 1. Said band 2 may have the shape of a roll or of an accordion pleating.

The joining line of two adjoining units is partly perforated, as shown at 3, so that the desired unit or units can be easily detached from the remainder of the band. On each joining line an indentation is cut in each unit, corresponding to the shape of the upper part of the child's thighs.

According to FIG. 3, the band is composed of superposed sheets, so disposed that the thickness in the central area is greater than at the edges thereof. For instance, there are a few sheets outside which have the same width as the band 2 (sheets 5 in FIG. 3), then a few sheets 6 a little less wide and a few sheets 7 still less wide. In this way the middle part of the unit which is the absorbing part is the thickest one, while the edges of the band are much less thick and thus cause no inconvenience.

Obviously, a quite different combination of the sheets from that indicated might be adopted.

It will be pointed out that the side indentations 4 are displaced upwards in relation to the transverse axis of the units 1.

According to the alternative form of embodiment shown in FIGS. 4 to 6, there can be seen the part 9 cut from two rectangular adjoining units 1, to provide in each unit the side indentations corresponding to the shape of the upper part of the child's thigh.

When the unit 1 is used, said part 9 which constitutes a removable part which is inserted at a suitable place between the superposed sheets which constitute the unit 1 is

detached at the same time in order to increase the absorption capacity of the latter.

When the baby is lying down, the removable part 9 is preferably located as shown in dotted lines in FIG. 5, that is to say behind the back. When the child begins to walk the removable part 9 may be located between the two side notches 4 as shown in dot-and-dash lines. It is also possible to locate the removable part 9 higher on the front as shown in broken lines in FIG. 5.

In these examples the joining line of the units is partly interrupted to make the separation easy at the moment of the use, but it may be formed by thinning down by pressure, a starting of a cut or any other suitable means of obtaining an easy and clean tear.

In the example shown in FIGS. 5 and 6 the adjoining units 1 composed of superposed sheets 5 have a uniform thickness which allows the band to be rolled-up during manufacture.

In FIGS. 7 and 8 are shown other alternative forms of embodiments in which the detachable units have a trapezoidal shape (FIG. 7) or are provided with joining lines with a sinuous outline 3*a* (FIG. 8).

To hold the sheets attached to one another to a certain extent, stamping points 8 are provided near the edges of the unit.

Moreover it is possible to provide at least certain sheets with an embossed or corrugated structure in the middle part of the unit.

It can be seen that owing to the removable nature of part 9, it is easy, when the child's napkin is lined, to take into consideration the position which the latter will have to assume and to put said part 9 accordingly at the suitable place within the very thickness of the unit.

The invention is not restricted to the embodiments shown and described which have been given by way of examples but 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.

What I claim is:

1. Strip diaper material for forming disposable linings for baby diapers, comprising superposed, co-extensive, longitudinally elongated, rectangular outside sheets, rectangular inside sheets disposed between said outside sheets and co-extensive in length therewith, the longitudinal edges of said inside sheets being disposed laterally inwardly of the longitudinal edges of said outside sheets, said strip material having longitudinally spaced lines of weakening extending laterally entirely across the strip to divide it into individual pads which may be separated by tearing the strip along the lines of weakening and which may serve as individual disposable linings for baby diapers, each pad having symmetrically curved notches

with their bases along the lines of weakening, said notches being spaced laterally inwardly from the longitudinal edges of said inside sheets, said notches conforming to approximately half the circumference of the upper part of a baby's thigh, and a plurality of indentations in said outside sheets between successive lines of weakening and laterally outwardly of said inside sheets providing depressions in one face and protuberances in the opposite face of a sheet, whereby the depressions in the face of one outside sheet receive the protuberances in the face of the other outside sheet to secure said outside sheets together.

2. Strip diaper material for forming disposable linings for baby diapers, comprising superposed, co-extensive, longitudinally elongated, rectangular outside sheets, rectangular inside sheets disposed between said outside sheets and co-extensive in length therewith, the longitudinal edges of said inside sheets being disposed laterally inwardly of the longitudinal edges of said outside sheets, said strip material having longitudinally spaced lines of weakening extending laterally entirely across the strip to divide it into individual pads which may be separated by tearing the strip along the lines of weakening and which may serve as individual disposable linings for baby diapers, each pad having symmetrically curved notches with their bases along the lines of weakening, said notches being spaced laterally inwardly from the longitudinal edges of said inside sheets, said notches conforming to approximately half the circumference of the upper part of a baby's thigh, and a plurality of indentations in said outside sheets between successive lines of weakening and laterally outwardly of said inside sheets providing depressions in one face and protuberances in the opposite face of a sheet, whereby the depressions in the face of one outside sheet receive the protuberances in the face of the other outside sheet to secure said outside sheets together, said inside sheets being laterally slideable between the outside sheets of the separated pad.

References Cited in the file of this patent

UNITED STATES PATENTS

1,674,600	Mackenzie	June 19, 1928
1,914,596	Diehl	June 20, 1933
1,959,845	Thomas	May 22, 1934
2,095,788	Brown	Oct. 12, 1937
2,122,417	Fridolph	July 5, 1938
2,169,415	Giese	Aug. 15, 1939
2,476,869	Hughes	July 19, 1949
2,696,819	Lovekin	Dec. 14, 1954

FOREIGN PATENTS

979,069	France	Dec. 6, 1950
699,161	Great Britain	Oct. 28, 1953
493,819	Great Britain	Oct. 14, 1938