Oct. 10, 1933. H. SOUCHARD 1,930,398

IMPERVIOUS AND RESILIENT NAPKIN FOR INFANTS AND INVALIDS

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Fig. 1

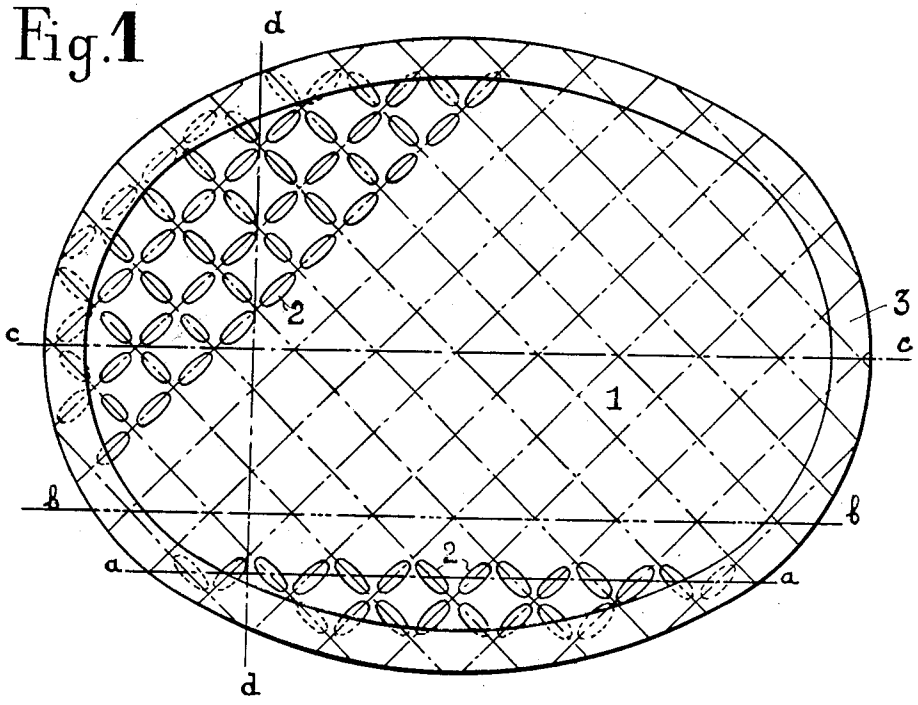


Fig. 2

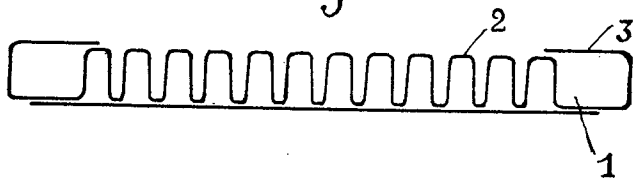


Fig. 3

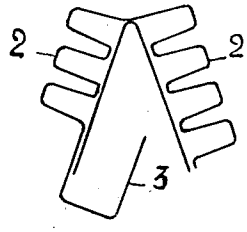
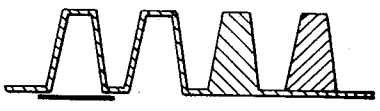


Fig. 12



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Fig. 4

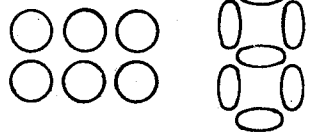


Fig. 5

Fig. 6

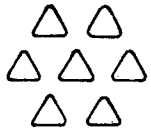


Fig. 7



Fig. 8



Fig. 9

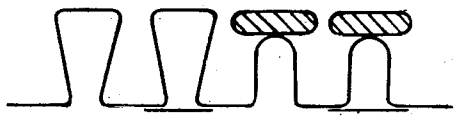


Fig. 10

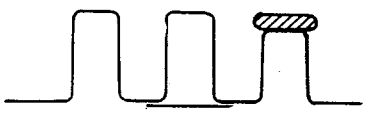
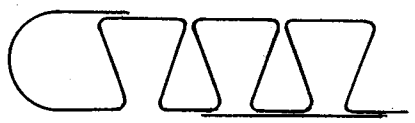


Fig. 11



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UNITED STATES PATENT OFFICE

1,930,398

IMPERVIOUS AND RESILIENT NAPKIN FOR INFANTS AND INVALIDS

Henri Souchard, Royan, France

Application March 17, 1932, Serial No. 599,531, and in France March 20, 1931

1 Claim. (Cl. 5—91)

This invention relates to an impervious and resilient napkin for infants and invalids and adapted:

1. To collect the urine or other liquids, in order to avoid the contact, on the one hand, with the bedding, and, on the other hand, with the skin.

2. To interpose between the body and the bedding a supple and resilient device, in order to diminish the fatigue when the infant or invalid is lying down or is seated.

3. To present bearing surfaces for the body, which are sufficiently soft and resilient, in order to eliminate the interposition of any more or less wet linen between the skin and the device, and this without fear of cutting or chafing the skin of the infant or invalid.

The present invention essentially consists in providing the bottom of the main body member with resilient protuberances or projections independent from each other, in order to utilize, on the one hand, the apices of the said protuberances or projections to rest the body of the infant or invalid thereon, and to use, on the other hand, the empty space existing between the protuberances for draining the liquids; it is to be noted that this napkin constitutes a unit easy to be cleaned.

The accompanying drawings illustrate this napkin by way of example.

Fig. 1 is a plan view of the said napkin.

Fig. 2 is a section thereof made according to line *a*—*a* of Fig. 1.

Fig 3 shows how the napkin can be cleaned.

Figs. 4 to 12 shows various forms of construction of the said protuberances or projections.

This napkin is composed of a main body member 1, the bottom of which is provided with protuberances or projections 2 of any suitable shapes, several forms of construction of which are hereinafter, indicated. The entire unit is made of rubber or similar material.

The main body member 1 is provided with raised ledges 3 bent inwardly so as to slightly overlap the peripheral projections, but without being rendered rigid with the latter.

The main body member, its ledges and the projections constitute a single unit, directly obtained, or constituted by separate parts permanently connected together by glueing or any other suitable means.

The projections are sufficiently high for maintaining the body of the infant or invalid out of contact with the liquids.

In order to present a supple and soft surface, these projections are very numerous and are placed very near each other; they can even touch each other at their apex in order to avoid their lateral flexure; they can be solid or hollow and, in the latter case, they can be in communication with the atmosphere, or on the contrary, they can be hermetically closed, thus constituting a small cushion deriving its resiliency from the compression of the air it contains. The projections are preferably arranged according to straight lines, so as to facilitate cleaning; in Fig. 1 the lines *b b*, *c c*, *d d*, indicate, by way of example, folding axes, as will be indicated later on.

The cross section of the projections can be of any shape, and they can be arranged in any suitable manner on the bottom of the main body member; Figs. 1, 4, 5, 6 and 7 illustrate several forms of construction.

The projections can have the same cross section throughout their height; if it is desired to increase their suppleness and their liquid capacity, they can be given the shape of a mushroom, Figs. 8, 9 and 11, that is to say they can have a horizontal cross section larger at their apex than at their base; the upper part of the mushroom can be secured in position (right-hand portion of Figs. 8 and 9). If it is desired to increase their rigidity (or for facilitating the manufacture by moulding), they can on the contrary be given a larger cross section at the base than at the apex (Fig. 12); the lower part can be in communication with the atmosphere, or on the contrary, it can be closed by a cloth or a rubber sheet, which contributes to give greater rigidity to the whole; in the said figure and in Figs. 10 and 11, are indicated several modes of construction which are self explanatory.

The projections of one and the same napkin can all be similar, or they may have different shapes.

A small tube can be provided at any suitable place of the main body member for draining the liquids. The device is used in the following manner:

The device being interposed between the breech of the infant or invalid and the bedding, the body rests on the apex of the projections; urine or other liquids will flow away between the projections and will be collected at the bottom of the main body member. The body will thus be out of contact with the liquids and a slight circulation of air can thus be established under the body.

Under the pressure of the body, the projections will become slightly distorted and will exert their reaction thrust in a similar manner to mattress springs which are nearly independent from each other. The cleaning of the device will be effected as follows: The edge 3 of the main body member 1, which is loose, will be turned out under the main body member throughout its perimeter; the main body member will then be successively folded according to each of the straight lines separating the rows of projections, Fig. 2; the projections will then move away from each other according to an angle which may reach 180°, and this will allow to easily clean the device by means of a brush or otherwise. It suffices to turn up again the edge of the main body member so as to allow the device to be again ready for use.

It is to be understood that the invention is not limited to the details indicated above or by the illustrations given simply by way of example.

Thus the shape or constitution of the main body member, of its edge, projections, as well as the number or arrangement of the latter can be modified; the device can be made of rubber or of any other suitable materials, and also by the combination of rubber and of the said materials.

I claim:—

A sanitary convenience device for infants and invalids formed in one-piece of resilient material and comprising in combination a relatively thin flat bottom layer, a series of hollow upstanding resilient projections of mushroom shape and covered at their low portions to form enclosed air chambers, draining channels between said projections and extending down to said bottom layer, and a trough formed on the periphery of the device by bending the peripheral edge of the said thin bottom layer upwards and then inwards to overlap slightly the peripheral projections, the said trough being in direct communication with the said draining channels.

HENRI SOUCHARD.