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DISPOSABLE SANITARY NAPKIN

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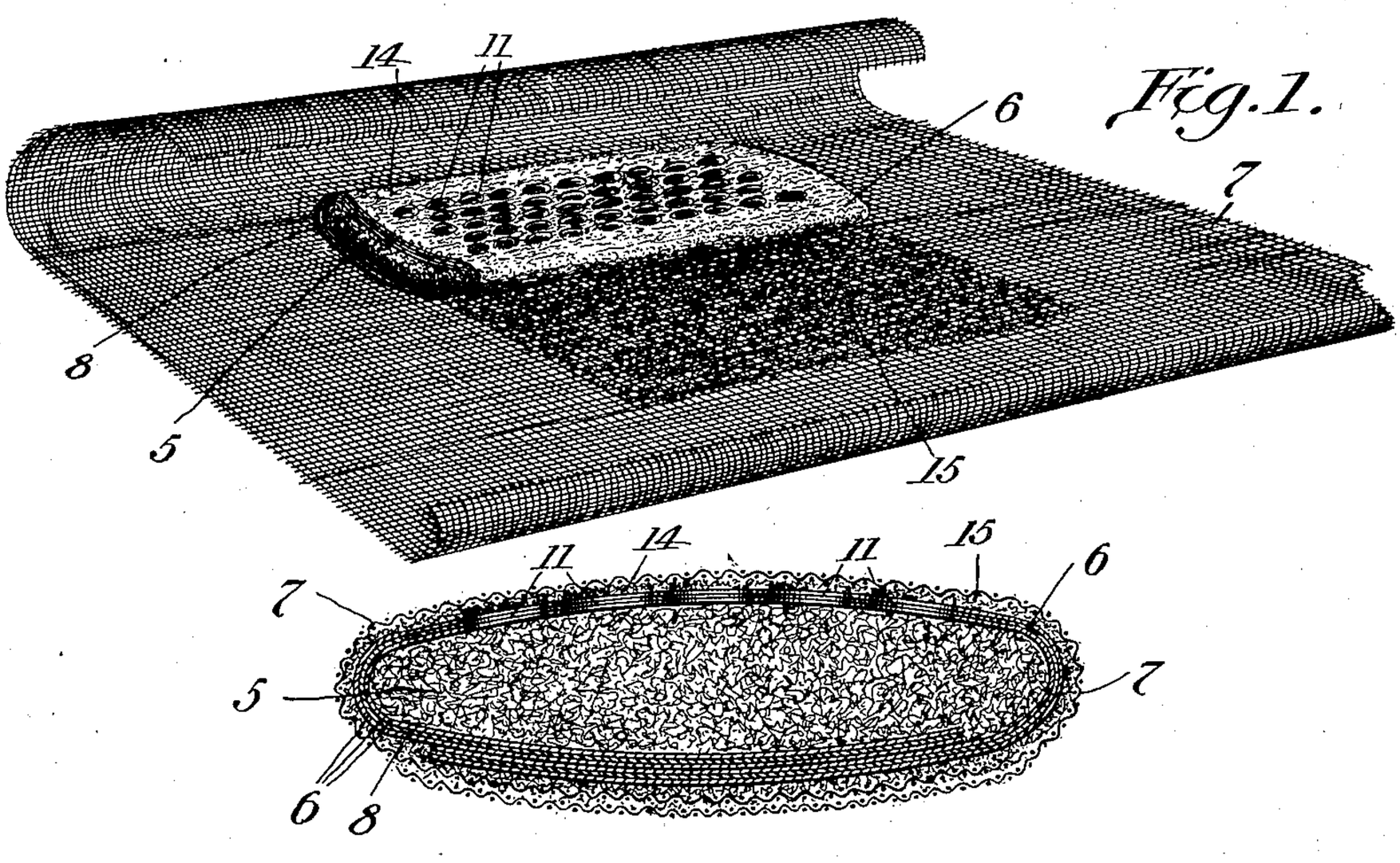


Fig. 1.

Fig. 2.

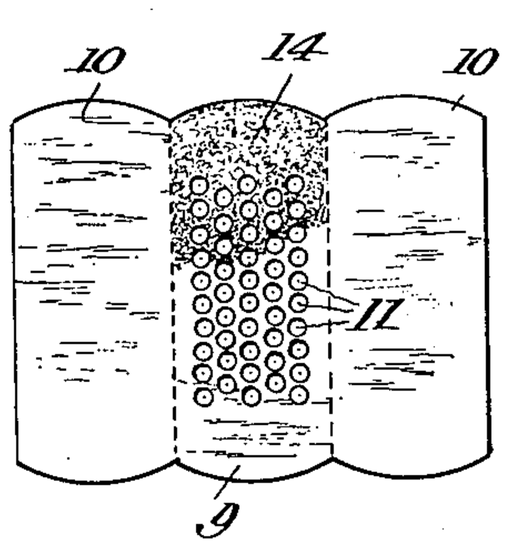


Fig. 3.

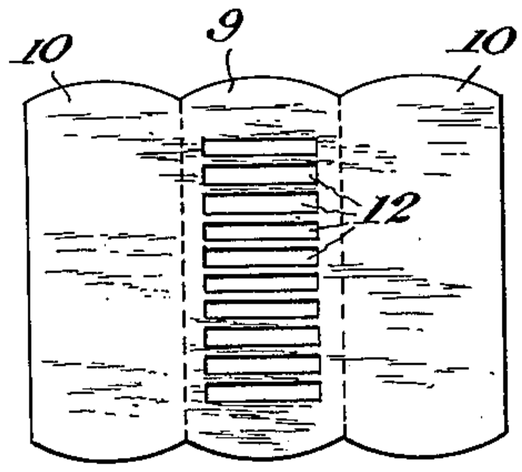


Fig. 4.

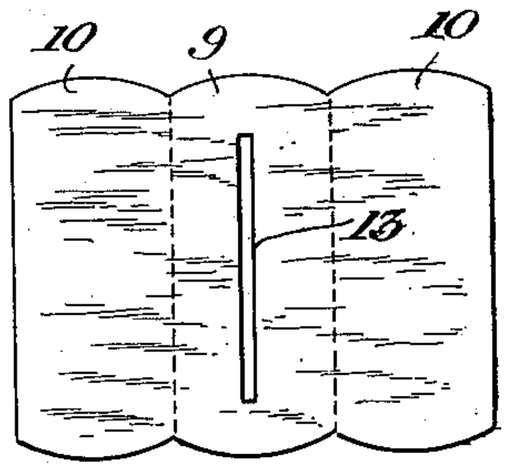


Fig. 5.

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DISPOSABLE SANITARY NAPKIN

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5 Claims. (Cl. 128—290)

The invention relates to sanitary napkins of the disposable type and was devised to obviate certain disadvantageous conditions attendant on the use of all classes of sanitary napkins but which peculiarly are associated with disintegratable or disposable napkins; namely, tendency to seepage or creeping of the flow along the sides of the napkins to the thighs with consequent soiling of lingerie, not to mention irritation, discomfort, and a sense of insecurity.

Objects of the invention are to provide an all cellulosic napkin, the components of which are all disintegratable or readily disposable in the usual way and via the usual facilities; to provide a napkin which has greater retentive powers than other disposable napkins, so that it is effective for longer periods of time and, hence, is a boon and great convenience under conditions in which it is neither convenient nor possible to change napkins; to provide a napkin that is proof against seepage and consequent irritation and soiling tendency and which lends a feeling of security making for the ease and comfort of the wearer.

Heretofore, and before our invention, it has been proposed to encase napkins or their components in oiled silk, rubber, and the like waterproof fabrics, but, aside from the expense involved in their use, such expedients are not desirable and are not practicable because they are not sanitary for the reason that they are intended to be and are usable over and over again with replacements of other napkins or their components. Moreover, they make for bulk and are a source of constant irritation and other discomfort. With them our invention is in nowise concerned for, as premised, it is addressed to napkins of the throwaway or all disposable type and in the achievement of its ultimate purpose it provides a wholly disposable napkin that is inclusive of a fluid repellent wrapper or casing.

The nature, characteristic features and scope of the invention more readily will be understood from the following description taken in connection with the accompanying drawing, forming a part hereof, wherein

Fig. 1 is a perspective view of the improved napkin with the gauze casing thrown back to display the component structure.

Fig. 2 is a sectional view on an enlarged scale of the complete assembly.

Figs. 3, 4, and 5 are plan views of the fluid repellent wrapper, showing varied details thereof.

In the drawing, numeral 5 represents the absorbent pad or filling; 6 represents the fluid repellent wrapper; and 7 represents the gauze casing. The latter and the filling may well follow the standard or conventional practice but by preference the filling is embodied of cellulosic material of fluffy characteristics in order that it may be completely conformable to the end of promoting ease and comfort. In any event, and regardless of its composition and structure, the filling, according to the essential features of our invention, is wholly encased by the fluid repellent wrapper 6. The latter essentially embodies a disintegratable material, disintegratable in the sense that it is readily disposable along with the other components of the used napkin. Under the preferred practice, the wrapper or casing 6 is constituted of sheet wadding comprising bibulous or cellulosic paper that is inherently soft and conformable and naturally permeable and absorbent but which, by impregnation with proper and well known materials, is modified to repel fluids. The impregnation is accomplished in such way as not appreciably to stiffen the paper and, if there is any manifestation of stiffness, it is readily eradicated by rumpling, as it were, to the end that the fluid repellent casing will be soft to the touch and completely responsive to the conforming action of the filling.

The sheet wadding, if desired, may be present in the form of a single sheet or layer but our preference is to use several plies or laminae as indicated at 8 in Fig. 2.

The wadding, after treatment to render it fluid repellent is blanked out by appropriate dies to casing form, as shown, for example, in Figs. 3, 4, and 5; the dotted lines indicating the lines of fold to establish a top face 9 and wings 10 which latter embrace the sides and bottom of the filling and have arcuate ends in conformity with the rounded corners of the filling. The top face is ported, for fluid entry, as by perforations 11 or transverse slots 12 or a longitudinally ranging slot 13, or otherwise as may be expedient or desirable. The relative arrangement of the fluid repellent disposable casing and the filling aptly is shown in Fig. 2.

Coming now to the gauze casing we are mindful that the general practice is to use a material of relatively small thread count. Gauze of such nature, strictly speaking, is not absorbent, nevertheless, it or its equivalent may be used with advantage in the assembly of our invention. However, under our preferred practice, we strike a happy medium between fully absorbent and non-absorbent gauze and thereby reduce the capillary

phenomenon to a point where it will permit the flow to pass through the gauze without the hazard of overflow and creepage to the sides. In a measure this desirable regulation is accomplished by varying the thread count of the gauze and principally by using a film of fibrous cotton which may be applied directly to the ported area of the fluid repellent casing, for example, as at 14 in Fig. 3 and be punched out contemporaneously with the casing or it may be applied, as at 15, Fig. 1, through the medium of the gauze itself. Aside from this regulating function the surgical cotton softens all abrasive surfaces, for example, any roughness apparent on the ported area of the fluid repellent casing.

It will be manifest from the foregoing that we have eliminated certain hazards of the old practice, particularly tendency of seepage or creepage beyond the limits of the napkin, and have accomplished all of these desirable things in a structure that is completely and readily disposable.

What is claimed is:—

1. An all disposable sanitary napkin, including a filling, and sheeted cellulosic wadding substantially surrounding the filling in conformable relation, said wadding being fluid repellant for substantially all of that area surrounding one face and the side margins of the filling and permitting flow to the filling via the other face thereof, a gauze casing, and means intermediate the exposed part of the filling and the gauze casing to reduce the capillary properties of the gauze so as to eliminate the hazard of seepage or creepage beyond the proofed area of the wadding.

2. An all disposable sanitary napkin, comprising a filling, a disintegratable jacket for the filling comprising a sheet of cellulosic wadding lapped about the filling in conformable relation and having punched openings adjacent one face of the filling to admit of fluid flow to the filling and being otherwise throughout its extent impervious to fluid flow, a gauze casing enclosing the jacketed filling, and independent fibrous material intermediate the punched area of the jacket and the gauze casing for the purpose and with the result of reducing the capillary properties of the gauze so as to eliminate the hazard of soiling beyond the proofed area of the wadding.

3. An all disposable sanitary napkin, comprising a filling, a disintegratable jacket for the filling comprising a sheet of cellulosic wadding lapped about the filling in conformable relation and having punched openings adjacent one face of the filling to admit of fluid flow to the filling and being otherwise throughout its extent impervious to fluid flow, a gauze casing enclosing the jacketed filling, and means intermediate the exposed part of the filling and the gauze casing and effective to reduce the capillary properties of gauze of low thread count, said means comprising a sheet of fibrous cotton having punched openings in substantial registry with the punched openings of the jacket.

4. In an all disposable sanitary napkin, the combination of a fluffy filling, a jacket for the filling and free to respond to conforming action thereof, and a gauze envelope, said jacket comprising cellulosic wadding impregnated throughout with a fluid repellent substance whereby it is impermeable to fluid flow and is effective to confine fluids to the filling, said jacket having on the vulva side a punched opening for conducting fluids to the filling and said fluidway or opening being primed with absorbent material.

5. In an all disposable sanitary napkin, the combination of a fluffy filling, a jacket for the filling and free to respond to the conforming action thereof, and a gauze envelope, said jacket comprising cellulosic wadding impregnated throughout with a fluid repellent substance whereby it is impermeable to fluid flow and is effective to confine fluids to the filling, and said jacket having a punched opening for conducting fluids to the filling, there being sharply absorbent material intermediate the punched face of the jacket and the gauze and coincidently punched.

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