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[54] **VESTIBULE-TYPE SANITARY NAPKIN**
 2 Claims, 10 Drawing Figs.

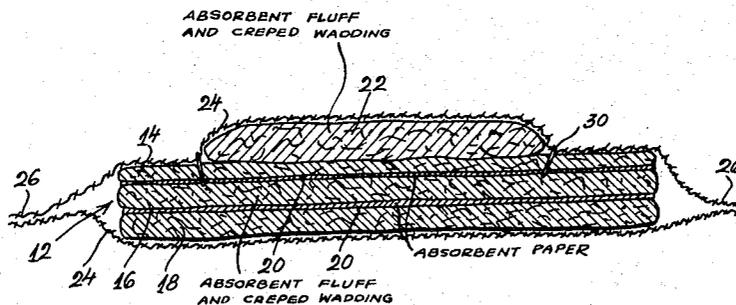
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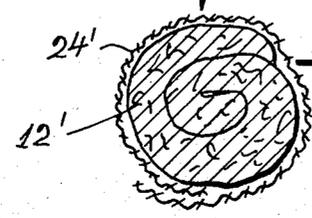
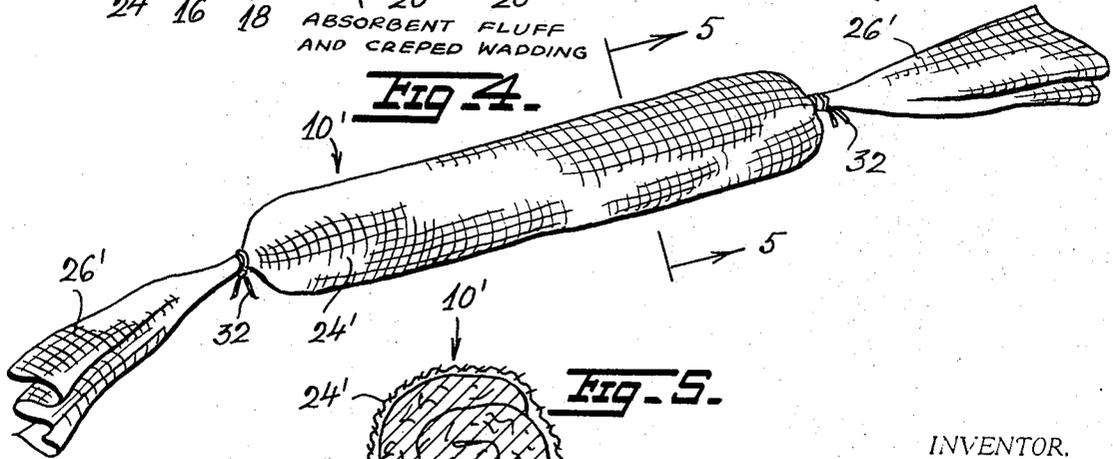
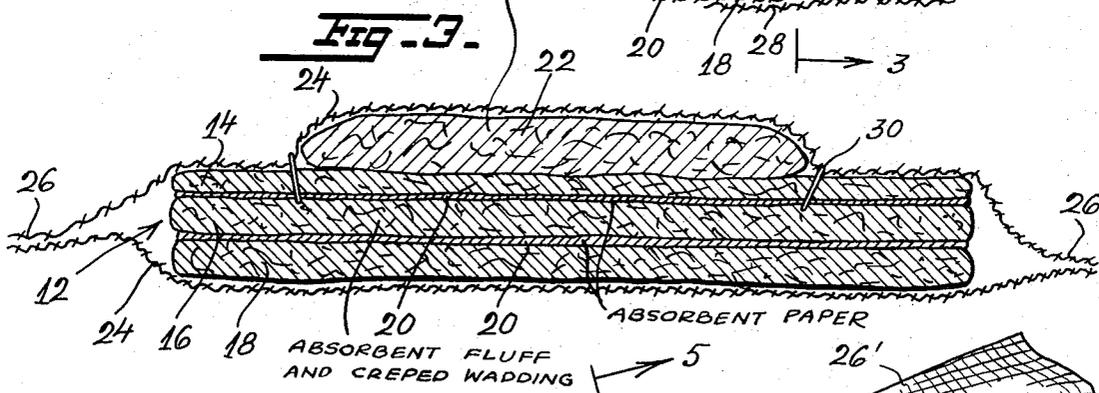
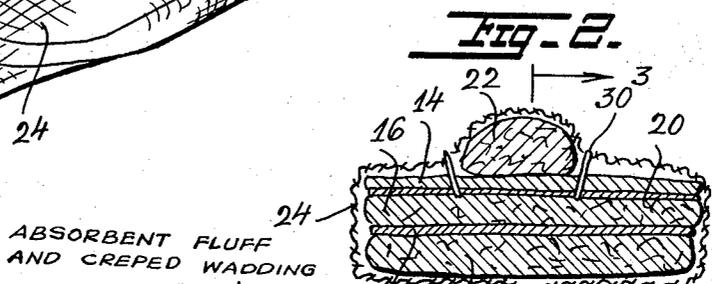
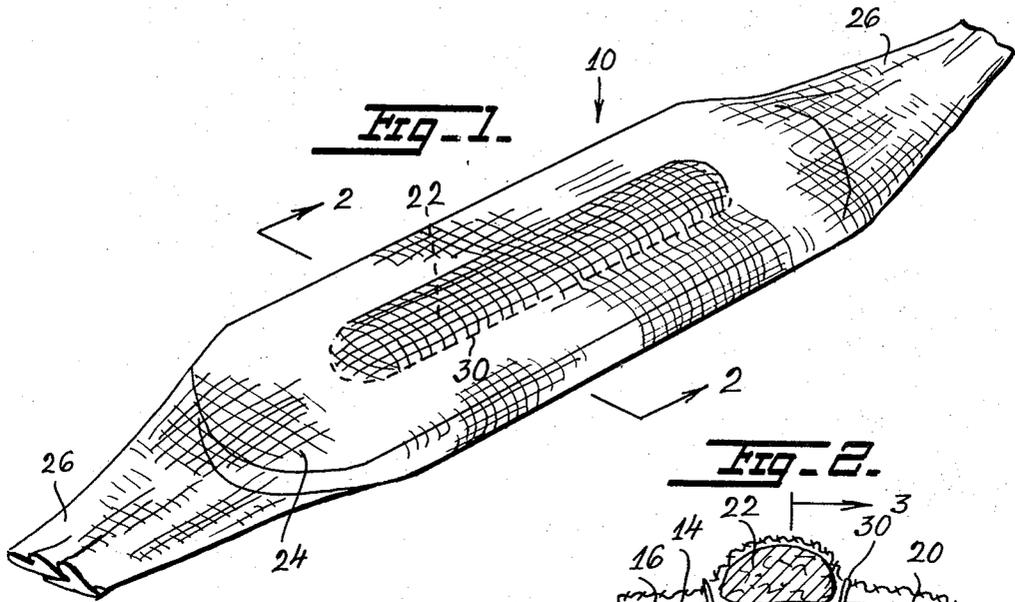
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ABSTRACT: A sanitary napkin comprising a primary pad of three layers of absorbent fluff and creped wadding and absorbent paper, a secondary layer centrally located on the top layer of the primary pad, a wrapping with stitching around the secondary layer and through the wrapping and connecting the secondary layer to the top layer of the primary pad. The other layers of the primary pad are added to the stitched primary top layer and secondary layer and the stitched wrapper folded over and under the bottom layers of the primary pad to enclose the same within the wrapper stitched to the top layer of the primary pad.





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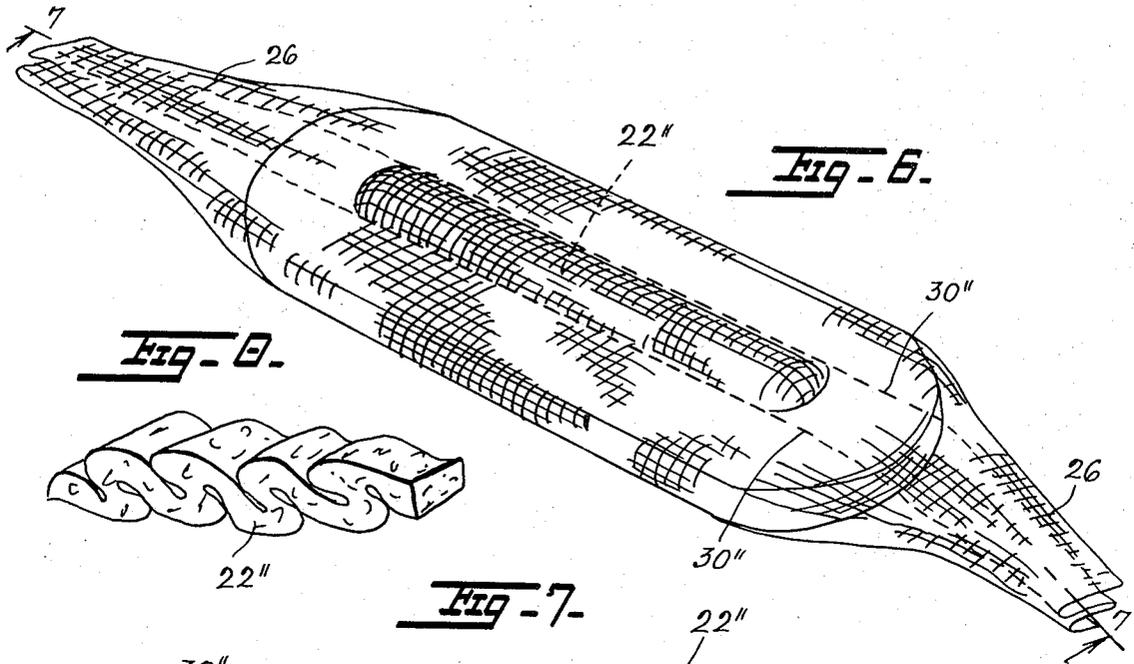


Fig. 6.

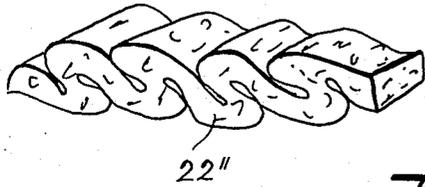


Fig. 7.

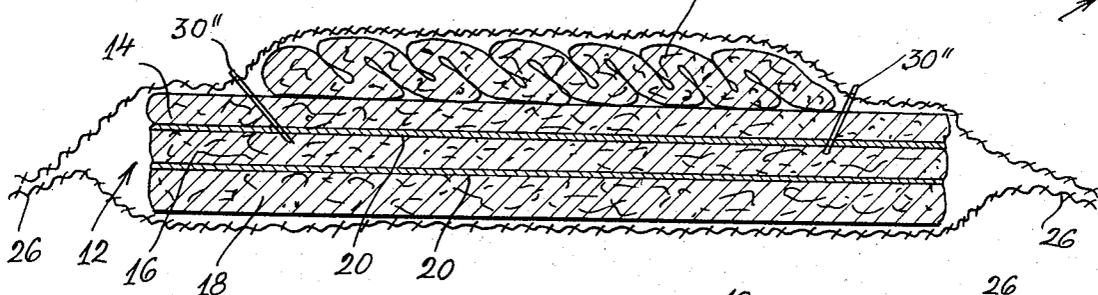


Fig. 8.

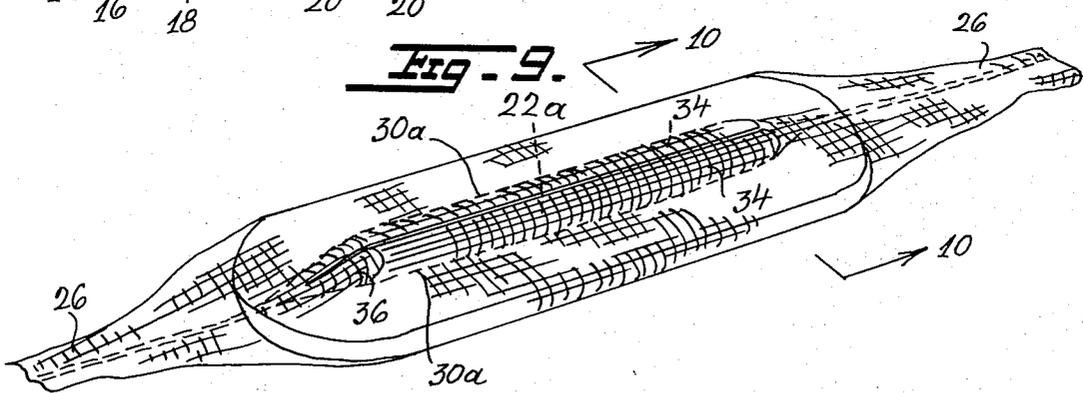


Fig. 9.

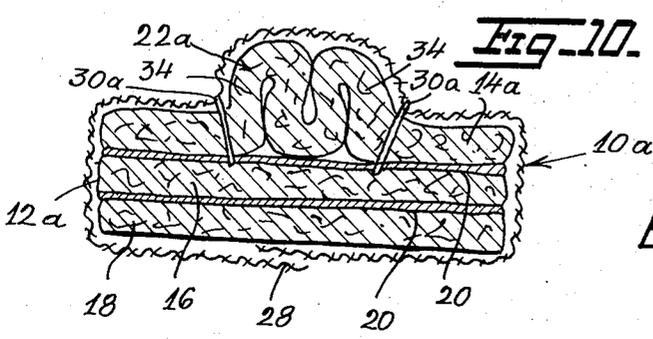


Fig. 10.

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VESTIBULE-TYPE SANITARY NAPKIN

A primary object of the present invention is to provide a sanitary napkin of an improved construction permitting use thereof as a semi-internal or vestibule-type napkin.

Another object of the invention is to provide an improved sanitary napkin which includes in addition to a main fluid absorbent element a secondary absorbent element of rib like configuration adapting the napkin to semi-internal use.

Still another object of the invention is to provide an improved napkin of the vestibule type having improved absorbency of the rib like element.

Yet another object of the invention is to provide an improved napkin of the vestibule type having a non woven cover or wrapped stitched to the secondary absorbent element and primary absorbent element, whereby the secondary absorbent element is held against displacement.

FIG. 1 is a top perspective view of a sanitary napkin embodying one form of the invention.

FIG. 2 is an enlarged cross sectional view taken on the plane of the line 2—2 of FIG. 1.

FIG. 3 is a vertical sectional view taken on the plane of the line 3—3 of FIG. 2.

FIG. 4 is a view similar to FIG. 1 of a sanitary napkin embodying a modified form of the invention.

FIG. 5 is a cross sectional view taken on the plane of the line 5—5 of FIG. 4.

FIG. 6 is a view similar to FIG. 1 of a sanitary napkin embodying another modified form of the invention.

FIG. 7 is an enlarged cross sectional view taken on the plane of the line 7—7 of FIG. 6.

FIG. 8 is a top perspective view of the auxiliary absorbent element.

FIG. 9 is a view similar to FIG. 1 of a sanitary napkin embodying yet another modified form of the invention.

FIG. 10 is an enlarged cross sectional view taken on the plane of the line 10—10 of FIG. 9.

Referring now in detail to the various views of the drawings in FIG. 1 a sanitary napkin embodying one form of the invention is shown and designated generally at 10. The sanitary napkin 10 comprises a primary fluid absorbent element 12 such as an elongated napkin or pad of fluff or a combination of fluff and creped wadding of generally planar configuration. The pad or napkin is composed of three superimposed layers 14, 16 and 18 of the fluid absorbent material with layers 20, 20 of absorbent paper therebetween.

The layers get thicker progressively from top to bottom. The pad or napkin is substantially rectangular in plan.

An auxiliary fluid absorbent element 22 is positioned on the top surface of the top layer 14 centrally of said top layer. The auxiliary absorbent element is formed of a single layer of absorbent material which may be fluff and creped wadding projecting above the top surface of the top layer 14. The auxiliary element is arcuate shaped in cross section and is very narrow and terminates short of the ends of the top layer 14.

The primary fluid absorbent element 12 and the auxiliary absorbent element or pad 22 are both enclosed in a fluid pervious nonwoven wrapping material 24 which extends beyond opposite ends of the pad 12 in a known manner to form tapered tab ends 26, 26 for securing the napkin in position during use. The enclosed elements are symmetrically disposed in respect to their center lines. The element 22 is raised approximately one half inch above the top layer 14.

As best shown in FIG. 2, wrapper 24 encloses the outer face of auxiliary pad 22 and is drawn inwardly along opposite sides margins of the primary pad 12, with the wrapping material being longitudinally overlapped along central portions of the bottom primary pad surface as indicated at 28.

A line of stitching 30 extends through the top layer 14 of the main element, the topmost paper layer 20 and through the long end edges of the auxiliary element 22, the overlapped edges 28 of the wrapper being unattached. The line of stitching 30 securely bonds the auxiliary pad 22 to the top

layer 14 of the primary element 12, holding the auxiliary pad against displacement.

In use, the auxiliary pad element 22 defines an elongated rib like element adapted for insertion into the vestibule. The symmetrically rounded ends of the auxiliary pad provide a relieved contour at both ends of the napkin for improved conformance with the anatomy.

In the embodiment of the invention, illustrated in FIGS. 4 and 5, the napkin 10' is comprised of a highly absorbent core or pad 12' enclosed in a nonwoven material wrapper 24'. The core is composed of highly absorbent cellulose materials such as cellulose wadding, wool fluff, cotton fibers or the like, folded or curled longitudinally.

The wrapper 24' is composed of a cross laid nonwoven material and is superimposed upon the core in such a manner that the longitudinal threads or warp threads of the wrapper material are parallel to the longitudinal axis of the core. The warp threads may be made of any material commonly used in sanitary napkins either natural or synthetic such as nylon. The wool threads may be of the same or different material from that of the warp threads. The warp and the wool threads should be bonded together by a suitable bonding agent, such as adhesive.

The wrapper is applied to the core by wrapping it around the core so that the longitudinal threads of the wrapper material are parallel to the longitudinal axis of the sanitary napkin core. The wrapped material is tied by strings 32 at the ends of the core forming tab ends 26' for attachment to an article of clothing or belt.

FIGS. 6 and 7 illustrate another modified form of the invention which differs from the napkin 10 of FIG. 1 merely in that the secondary pad 22'' is composed of an accordion pleated transversely folded strip of highly absorbent cellulose materials such as cellulose wadding, wool fluff, cotton fibers or the like, the folds being unattached to each other. In this form of the invention, the secondary pad 22'' is fixed against displacement by a pair of lines of stitching 30'', 30'' extending the length of the wrapper 24'' and along the long sides of the pad 22''.

In all other respects, the napkin 10'' is similar to the napkin 10 and similar reference numerals are used to indicate similar parts.

In the modified form of napkin 10a shown in FIGS. 9 and 10, the rib like secondary pad portion 22a is formed by folding the top layer 14a of the primary element or pad 12a longitudinally forming juxtaposed elongated folds 34, 34, and transversely cut at points remote from the ends of the top layer 14a as indicated at 36, 36.

The wrapper 24a is applied to the secondary pad portion 22a and the primary pad element 12a similarly to the application thereof to napkin 10 of FIG. 1, and two lines of stitching 30a, 30a extend along the long sides of the pad portion 22a and extend to the ends of the wrapper 24a.

In all other respects, the napkin 10a is similar to napkin of FIG. 1 and similar reference numerals are used to indicate similar parts throughout.

While I have illustrated and described the preferred embodiments of my invention it is to be understood that I do not limit myself to the precise construction herein disclosed and that various changes and modifications may be made within the scope of the invention as defined in the appended claims.

I claim:

1. A sanitary napkin of the vestibule type comprising a planar absorbent primary pad, said pad being formed of three layers of absorbent fluff and creped wadding with sheets of absorbent paper interposed therebetween, a secondary absorbent pad projecting upwardly from the top surface of the primary pad centrally thereof and midway its ends, said secondary pad comprising absorbent fluff and creped wadding, a wrapper of nonwoven material folded downwardly over the top surfaces of the primary and secondary pads and inwardly over the bottom surface of the lower layer of the primary pad

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in overlapped relation with the overlapped portions being unattached, and a line of stitching extending along the sides of the secondary pad and through the wrapper and top layer of the primary pad and adjacent sheet of paper.

1, wherein the secondary pad is composed of an elongated strip of absorbent fluff and creped wadding folded transversely forming a plurality of juxtaposed folds in loose relationship with each other.

2. A sanitary napkin of the vestibule type as defined in claim 5

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