

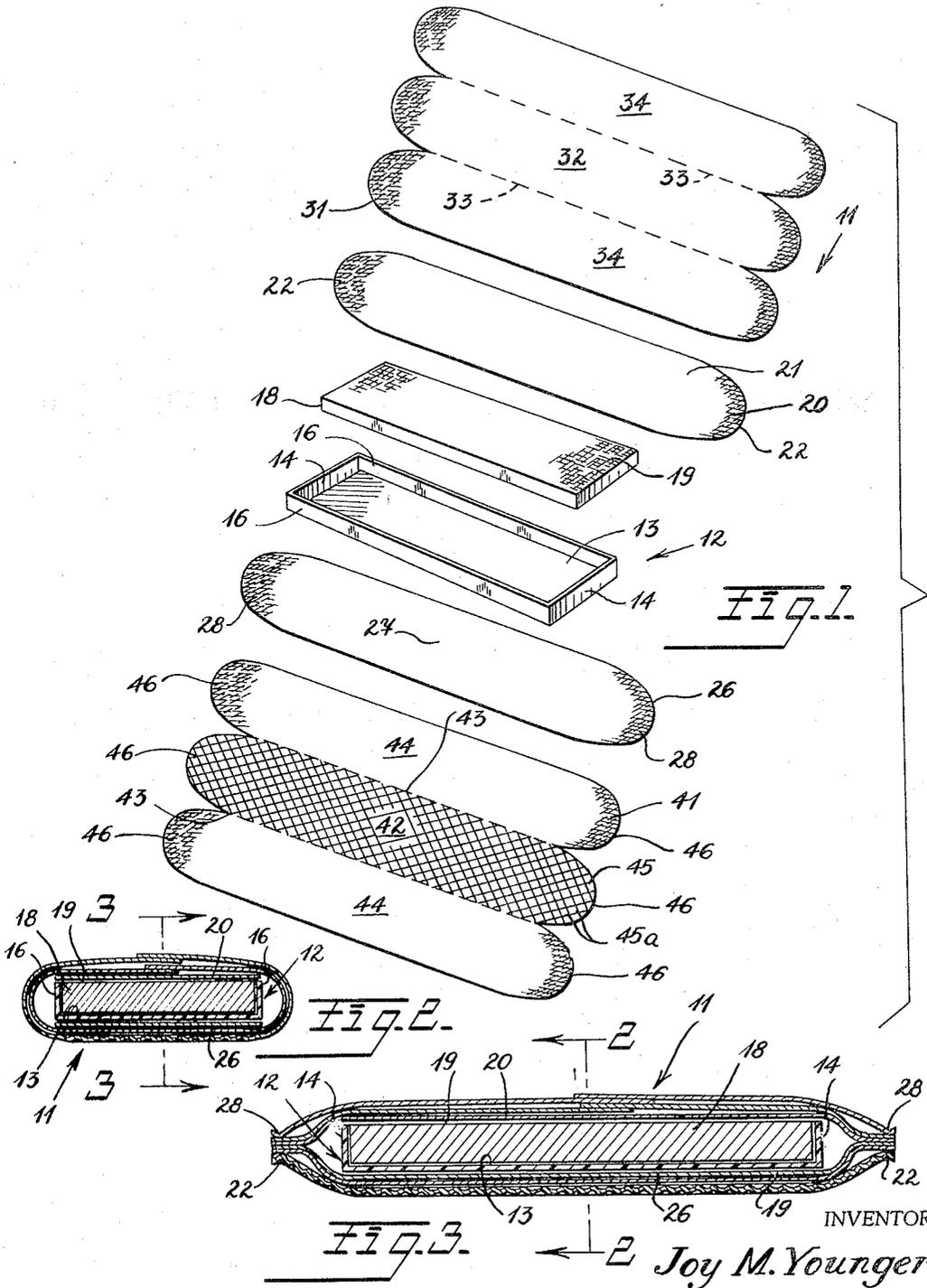
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SANITARY PAD

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3,294,090

SANITARY PAD

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This application is a continuation-in-part of my co-pending application entitled "Sanitary Pad," Serial No. 204,250 filed June 21, 1962, now abandoned.

The invention relates to feminine hygiene devices and more particularly, to sanitary napkins having storage or reservoir elements formed therein.

Both the market place and the patent literature are replete with sanitary pad devices. In general, the representative devices serve their purpose with only a moderate degree of success. More specifically, the heretofore available pads have been quite bulky, difficult to dispose of and far from satisfactory in their storage capabilities.

It is, therefore, an object of the invention to provide a sanitary pad which has a very substantial storage capacity.

It is another object of the invention to provide a sanitary napkin which is compact in size and which can readily be disposed of, as by flushing, without damage to the plumbing.

It is a further object of the invention to provide a sanitary pad which is economical and which lends itself particularly well to quick installation and removal.

It is another object of the invention to provide a generally improved sanitary pad.

Other objects, together with the foregoing, are attained in the embodiment described in the following description and shown in the accompanying drawing in which:

FIG. 1 is an exploded, perspective view showing the components before assembling and folding has occurred;

FIG. 2 is a transverse sectional view of the device in assembled condition, the plane of the section being indicated by the line 2—2 of FIG. 3; and

FIG. 3 is a medium longitudinal sectional view of the device in assembled condition, the plane of the section being indicated by the line 3—3 of FIG. 2.

While the sanitary pad of the invention is susceptible of numerous physical embodiments depending on the environment and requirements of use, substantial numbers of the herein shown and described embodiment have been made, tested and used, and all have performed in a highly satisfactory manner.

The sanitary pad device generally designated by the reference numeral 11, comprises a storage member 12, or tray. The tray is formed from a very thin, highly flexible and non-porous sheet of plastic material, such as polyethylene sheeting of 2 mil thickness. The tray, or container, is box-like in shape and includes a bottom panel 13, a pair of end panels 14, and a pair of side panels 16. Preferably, the box is about twice as long as it is wide, such as four inches by two and one-half inches, and has a depth of approximately three quarters of an inch.

Disposed snugly within the box is a highly absorbent filler pad 18 of fluffy cellulosic material, such as cotton. The upper surface 19 of the pad is approximately coplanar with the top of the box and the pad 18 in preferably assembled therein without the use of any connecting means such as inturned flanges, tabs, adhesives or heat seals.

Superimposed on the upper surface 19 of the pad 18 is an elongated cover member 20 of absorbent sheet material having a medial portion 21, approximately the

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same size as the pad surface 19, and a pair of tab portions 22 extending approximately one-half inch or less beyond the respective end panels 14 of tray 12.

Substantially identical with the upper cover member 20 is a lower cover member 26 having a medial portion 27 underlying the bottom of the tray and having a pair of end tab portions 28 of the same size as tab portions 22.

Adapted to housing the pad-filled tray and the two cover members is a confining member 31 of porous sheet material. The confining member 31 includes an elongated central panel 32 substantially identical in size with the underlying upper cover member 20. Attached to the central panel 32 along a pair of fold lines 33, is a pair of elongated lateral members 34, or lateral panels. The panels 34 are folded downwardly along the fold lines 33 so as to confine the lateral portions or sides of the tray and the side edges of the cover members. The panels 34 also fold inwardly into overlapping relation so as to underlie the bottom cover member 26.

It is clearly to be understood that while the embodiment shown and described includes the pad-filled tray, the cover members and the confining member, other additional absorbent members could be added if desired.

In the form here under discussion the final member to be assembled is an elongated napkin 41, or contact member, which is preferably formed of non-woven paper or paper-based material, at least in the downwardly facing central or contact panel 42 thereof. The napkin 41 comprises the central panel 42 to which is joined, along a pair of fold lines 43, a pair of lateral panels 44, each panel being adapted to be folded over the previously described structure and to overlap the other so as to envelop the assembly heretofore described. The central or contact panel 42 is crimped, folded or otherwise formed to provide a series of downwardly facing ridges or ribs. In the embodiment shown these include one series of parallel ridges 45 extending in a generally diagonal direction along the bottom surface thereof, and intersecting a second series of similarly formed ridges 45a disposed generally on the opposite diagonal. The bottom of the assembly is, therefore, provided with a friction surface adapted to mesh with a supporting garment, as will be described hereinafter. The lateral panels 44 can, as shown, be made from the same material as the central panel 42, but should have a smooth exterior surface rather than a friction type of surface of the type provided on central panel 42.

After folding the napkin the end margins 46 of the napkin panels, as well as the underlying registering end margins of the enclosed members 31, 20 and 26, are all crimped or compressed or embossed so as to seal the ends. None of the aforesaid end margins, however, extend more than approximately one-half inch longitudinally beyond the end walls 14 of the tray 12. They are provided for sealing purposes only, rather than for cooperation with external attachment means. Elongated extensions or streamers of the type conventionally used for such purposes would be unsatisfactory when the present sanitary pad is used in its intended manner.

The sanitary pad invention is particularly designed and adapted for use in connection with the sanitary pants shown and described in my patent entitled "Catamenial Pants," Patent No. 3,098,484, issued July 23, 1963, in that these pants include a wide fore and aft elastic band having transverse shirring which serves to engage firmly with the contact panel 42 of the pad. The elastic band is stretched upon application and when released to its normal condition of use the transverse shirring is brought together to effect a clamping action on the ridges 45 and 45a. The interengagement or meshing between the trans-

verse shirring of the pants and the projections 45 and 45a of the pad serve to eliminate lateral movement and fore and aft movement of the pad in use. Such movement is also restricted by the limited longitudinal extent of the pad, serving to present a similarly limited edge portion for engagement by the adjacent inner surfaces of the wearer's legs.

The overall length of the article is such that it engages the wearer only in the pelvic region, with the body of the pad extending barely beyond the ends of the vulva when applied. Accordingly, it lies in flat body engagement without being curled longitudinally to any substantial extent, with attendant disadvantages as to comfort and appearance. The reduction in overall size as well as the fact that no woven fibrous material is employed also facilitates disposal of the article as by flushing.

The sanitary pad of the invention, owing to the existence of the tray member, possesses substantial storage possibilities. Thus, while the pad is smaller, more compact and better fitting than the pads heretofore used, it is more than adequate to fulfill the normal requirements of this type of article.

What is claimed is:

1. A sanitary pad comprising:

- (a) a flexible non-porous container having a bottom panel, a pair of opposite end panels and a pair of opposite side panels, the length of said container being approximately twice the width thereof;
- (b) A highly absorbent filler pad disposed within said container, the exposed surface of said filler pad facing upwardly;
- (c) a pair of elongated absorbent cover members having a width substantially equal to the width of said container, each including a pair of tab portions on opposite ends to extend beyond the ends of said container, one of said cover members underlying said bottom of said container and the other overlying said exposed surface of said filler pad;
- (d) a porous confining member having a central panel overlying said other of said cover members and a pair of opposite lateral panels folded downwardly and inwardly toward each other and in overlapping position to underlie said one of said cover members; and
- (e) a contact napkin having an elongated central panel bounded on opposite sides by a pair of lateral panels, said central panel underlying the lateral panels of said confining member, and said elongated lateral

panels being folded upwardly and inwardly to overlie the central panel of said confining member, the central panel of said contact napkin being provided with a series of generally transverse ridges to effect a friction surface, and

(f) means for securing the corresponding end portions of said central panels and lateral panels together over the adjacent tab portions of said cover sheets at points immediately beyond the end walls of said container.

2. The article of claim 1 wherein said plurality of ridges are arranged in parallel relation and extend in a generally diagonal direction.

3. The article of claim 2 wherein said plurality of ridges intersect a second series of ridges extending generally diagonally in the opposite direction.

4. The article of claim 1 wherein said container has an overall length on the order of four inches and wherein the end portions of said panels and the tab portions of said cover sheets terminate at points not more than approximately one-half inch longitudinally beyond the respective end walls of said container.

5. A sanitary pad comprising a laminated arrangement including a core of cellulosic absorbent filler material enveloped in a plurality of layers of sheet material, said layers including a lowermost external sheet portion provided with a series of generally transverse, closely-spaced ridges extending below the main plane of the said portion a distance sufficient to effect a friction surface for meshing interengagement with a supporting garment disposed therebelow and an uppermost external sheet portion having a smooth external surface.

6. The article of claim 5 wherein said filler material is disposed in an upwardly open tray formed of plastic material and the remainder of said laminate is formed of non-woven paper-based material.

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