Sept. 25, 1934. W. MEDOFF 1,974,578

CATAMENIAL BANDAGE

Filed May 31, 1932

Fig. 1,

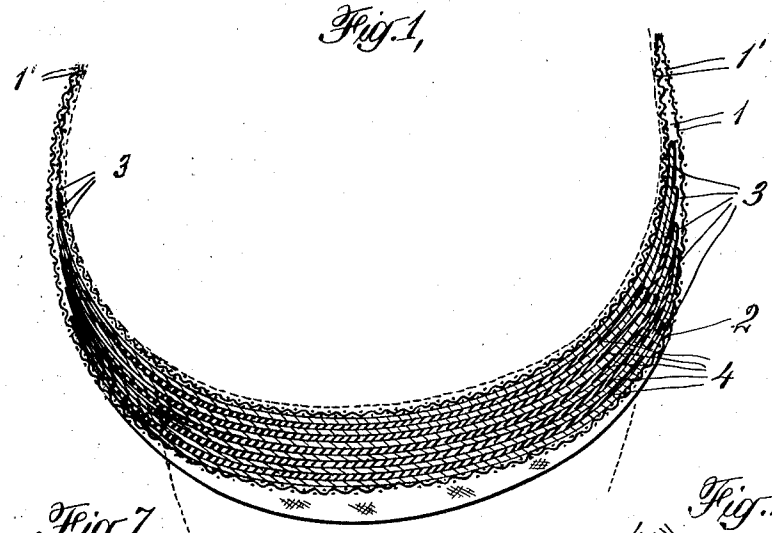


Fig. 7,

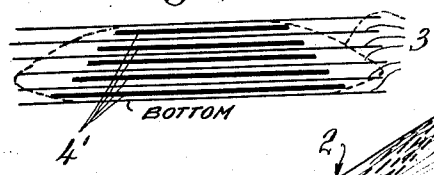


Fig. 2,



Fig. 4,

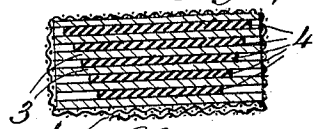


Fig. 3,

Fig. 5,

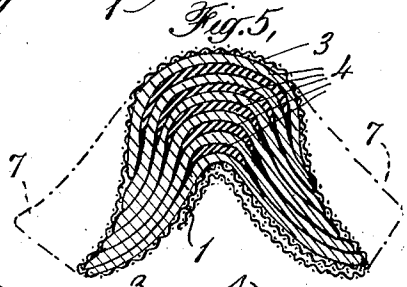


Fig. 6,

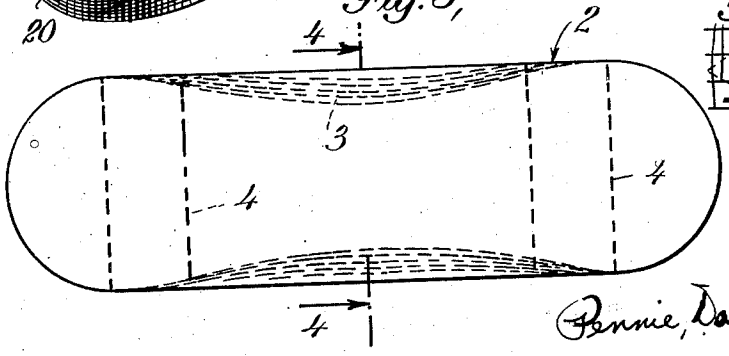




Fig. 8.

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Patented Sept. 25, 1934

1,974,578

UNITED STATES PATENT OFFICE

1,974,578

CATAMENIAL BANDAGE

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Application May 31, 1932, Serial No. 614,327

8 Claims. (Cl. 128—290)

This invention relates to catamenial napkins or bandages, and is particularly concerned with that type which includes a separate, distinct absorbent pad or "filler" in a "carrier," called a sack.

In separate-pad catamenial bandages, the pads quite often shift out of their intended position in the carrier, assuming awkward positions and twisting and "lumping up", with consequent discomfort and, sometimes, appreciable damage to the wearer. Even when the pads do not shift or slip in the carrier, the ordinary such pad has such a bulky nature and stiff composition and uncomforming outline that it cannot be satisfactorily and unfrictionally fitted by the wearer to the anatomical outline, with the result that it invariably binds, chafes, and "burns". Its ends also bulge, protrude, or sag, away from the anatomy in certain places, and buckle, wrinkle and double in others, in either case causing embarrassingly conspicuous protuberances in the figure-outline and in the clothes, and, by their bulkiness and displacement, prevent the clothes from fitting properly.

An important object of the present invention is to provide a separate-pad catamenial bandage in which the pad will not twist about its longitudinal axis, or shift in the carrier and lump up, but which will instead remain, or be positively maintained, properly fitted against the anatomy, always in its original, proper position.

A further object of the invention is to provide a bandage having a pad which when it is folded longitudinally to be applied, or assumes that shape on application, will, instead of then presenting longitudinal side edges which are stiff, sharp and bulky, take a vertically tapered longitudinally re-entrant shape and soft, yielding form that will relieve the adjacent anatomy from the cutting or frictional effect of the long, stiff edges of the usual napkin.

Another object of the invention is to provide a separate-pad catamenial bandage which will by the mere act of putting it on, itself merge in with and closely conform to and fit exactly, the exact cross-sectional outline of the anatomy concerned as soon as applied, without requiring the usual bending, twisting, or other adjustments or manipulations, and which will be always unnoticeable and, indeed, in effect invisible,—obviating humps, folds, doublings, or lumps at the ends or elsewhere, so as to preclude any anxiety, or embarrassment, improperly fitting clothes, etc., formerly due thereto.

A particular object of the invention is to provide a catamenial bandage which will have this improved, tapered nature yet nevertheless present substantially the same area for absorbing, as the former articles, and have as great an effective area in contact with the desired portions of the anatomy as the ordinary article, and which will be substantially as cheap and easy to make, and as low in sale price, as the unimproved articles.

A presently preferred embodiment of these inventive concepts, hereinafter described in conjunction with the accompanying drawing, is presented merely by way of clarifying the invention further, and the inventive concept itself is limited in its physical forms only by the scope of the subjoined claims.

In the drawing:

Fig. 1 is a vertical, longitudinal section with the catamenial bandage in place;

Fig. 2 is a diagrammatic view of the pad-portion of the bandage of Fig. 1;

Fig. 3 is a perspective of same;

Fig. 4 is a vertical, transverse section showing the shape, etc. of the article before application;

Fig. 5 is a similar section showing the improved shape, etc. the article assumes on application;

Fig. 6 is a top plan view of the pad of Fig. 3;

Fig. 7 is a diagrammatic development of a modified form of construction of the pad element, and

Fig. 8 is a diagrammatic development of a still further modification of the pad element.

The article comprises two main elements; a carrier or suspender 1, and a pad 2. The member 1 preferably comprises a rectangular strip of textile material, such as gauze or cheesecloth, folded lengthwise around the member 2 in such a way as to leave end portions 1' of sufficient length to be attached to a separate waist-band or belt (not shown), in the usual manner.

The pad-member 2 is made up of a plurality of plies of absorbent material, preferably pure cellulose made from wood pulp, or other soft, fibrous, capillary material, or other material of a suitable nature. The plies are preferably all of substantially the same thickness, but are not all of the same length and width. Somewhat over half the number of plies are made of the full length of an ordinary pad, as shown at 3, and the rest of the plies, 4, are made shorter and serve as fillers. Though all these shorter plies or fillers, 4 are preferably of equal thickness to each other and to the plies 3, they are not all of the same width, as evidenced by Figs. 4, 5, and 6, and not necessarily all of the same length, being shown

of all the same length in Figs. 1–6, and of differing lengths in Fig. 7.

The plies 3 and 4, in the preferred form, are arranged alternately on top of each other, and the uppermost of the plies 4 has its left-hand or outermost end arranged closer to the left-hand ends of the adjacent and surrounding plies 3 than is its right-hand end to the right-hand end of the larger plies 3, that is, the ply 4 is arranged off center. The next of the plies 4 has its outermost or right-hand end arranged in close proximity to the right-hand end of the stack; and the succeeding ply 4 has its outermost end arranged adjacent the left-hand end of the stack, and so on. That is to say, the successive plies 4 are staggered left or right, respectively, with reference to the vertical center line of the pad; or, are arranged vertically in vertical zig-zag relationship, alternating with full-length plies, 3.

The pad so built-up will thus have the major portion of its thickness concentrated at and between those points of the length of the pad where moisture is most likely to be received, and thereby also the usual equally-thick, knotty and bulging ends being totally obviated and instead, the pad being given a gradual taper, starting from the center and going toward each end where absorption is not so active and proceeding to a fine, "point-edge" at each tip. Notwithstanding the fact that the separate-layer construction gives this permanent, definitized taper at each end, it is thereby done so that there is no completely empty space, between plies or vertically through the thickness of the pad, or perpendicular to the face of the pad, in any one place, as there are left at least four layers at each end, obviating vertical gaps extending up through the whole vertical thickness of the pad. Nor is there any danger of the ends becoming compacted, hard, compressed, stiff, or otherwise changed from their original fluffy, soft, yielding condition. The filler is instead tapered off quite gradually towards either end, and effectuates the present object of obviating the usual inactive, harmful material occurring at both of the ends in the ordinary pad, and bringing the pad down to a rounded point or edge at each end, without, however, actually reducing the effective absorbing area or eliminating any part of the usual direct absorbing parts of the material, and also without forming end-shoulders, interior ledges, or other projections or angular irregularities in the interior of the pad. The effective absorbing-length and area are therefore maintained substantially the same as that of an ordinary pad of the same overall size, and the moisture is distributed evenly and properly throughout the full length and thickness of the pad, as capillary attraction will have more chance to carry it from the center equally towards both ends, due to the separate-layer construction. The pad will cover the same effective surface-area as the ordinary pad of the same overall size.

When the bandage is applied, the various separate layers 3 and 4 of the pad are caused to "leaf out" at either end like the leaves of the side-edge of an opened book; that is to say, the successive plies on the outside of the curve slide over each other and back off from the ends, thereby streamlining or contouring the bulk in longitudinal section, and making it merge in with and conform to, the anatomical outline and contours, with the staggered plies 4 leafing out and retreating in front, and retreating in the rear, the bandage thereby taking on a "chamfer" where it should have it in the front and in the rear to make it form-fitting and contoured. The plies "echelon" one back of the other as soon as applied, with the result that the pad merges into the cross-sectional outline of the anatomy, thereby obviating to the maximum the usual bumps and lumps formed by the excess projecting in front and back. Due to the fact that the plies 3 come together and "felt" at each end of the pad, the filler plies 4 are locked between them and cannot shift about in the pad. Due to its form-fitting nature also, liability of sagging, bulging or buckling in the middle is reduced, and the ends are positively prevented from protruding horizontally and showing, or "lumping up" and chafing.

Preferably, also, the pad is made, as shown in Fig. 6, with all the plies 4 re-entrant longitudinally, that is varying in horizontal width from their middles to near their ends, each one after the top one being indented more than the preceding, and so on down to the lowermost, which is indented the maximum amount advisable, as shown in Fig. 4. Thus, when the pad is folded into or comes into the shape shown in Fig. 5, that is, folded longitudinally and downwardly, it forms a smooth, convex, upper surface and with the broad, flat, rounded end-portions 20 preventing twisting about its longitudinal axis. The usual sharp, stiff, side-edges 7, shown in dotted outline, which would bear against the body and chafe same, are entirely obviated by virtue of the varying longitudinal re-entrance of the sides of the layers 4, which taper the pile vertically as shown in Fig. 5, and longitudinally, as shown in Fig. 6, and instead, a flat, soft, form-fitting, non-chafing side-edge is provided.

If desired, instead of each of the layers 4 consisting of a single ply or thickness, each may consist of two separate thicknesses, one being staggered to the right of the other in between one set of plies 3, and to the left, in between the next set of plies 3.

As the moisture tends to spread out in all directions like a cone from the apex down to the base after it reaches the top of the pad, if desired, the pad may be built up of layers in the manner shown in Fig. 7, where a finer, thinner point is obtained at each end, and yet the vertical thickness of the pad where needed, due to this capillary spreading, is the same as in the other modification.

Though by the present invention catamenial bandages are rendered of remarkably enhanced comfort, appearance, and fit, it is obvious that the pad has nevertheless substantially the same amount of effective absorbing area,—especially through the center where it is most needed—as the ordinary pad. The present bandage is also easy and inexpensive to make and therefore can be sold cheaply in spite of its improved nature.

I claim:

1. A catamenial bandage, comprising a carrier-member and an absorbent member, said absorbent member including a plurality of layers of a certain length and a plurality of layers of a shorter length, the second said layers being staggered and alternating with the first said layers to form a multi-ply pad.

2. In a catamenial bandage, an absorbent pad, said pad having a plurality of main plies and a plurality of filler plies, said filler plies being arranged in mutually overlapped positions, alternately in relation to the main plies, with the filler distributed symmetrically with respect to the

transverse center plane of the pad, and gradually double tapering the pad in thickness from substantially the center thereof to substantially the ends thereof, leaving the absorbing-area of the pad unaffected.

3. A catamenial bandage, comprising a carrier-member and an absorbent member, said second member including a plurality of layers of a certain length, and a plurality of layers of a shorter length, the second said layers alternating with the first said layers, said second said layers also being arranged in staggered relation to each other, and the longer ones being unstaggered.

4. A catamenial bandage, comprising a carrier-member, and a multi-ply absorbent pad, some of said plies running the full-length of the pad, and the others constituting shorter filler-members, each one of the latter being arranged in staggered fashion between two of said first plies, and each being held in place by meeting ends of the full-length plies.

5. A catamenial bandage, comprising a carrier-member and a multi-ply absorbent pad, some of said plies constituting overlappers and the others constituting shorter filler-members overlapped thereby, said fillers being so arranged and staggered as to receive the moisture in the center and distribute it by capillary attraction into both ends.

6. In a catamenial bandage, an absorbent pad; said pad having a plurality of main plies and a plurality of filler plies, said filler plies being respectively arranged in mutually overlapped positions alternately towards one end of the stack and then towards the other end, between the main plies, thereby forming internal ends.

7. In a catamenial bandage, an absorbent pad, said pad having a plurality of main plies and a plurality of filler plies, said second plies being arranged in mutually overlapped positions alternately in relation to the main plies so as to thereby form regions stiffer than the ends, the respective ends of said filler-plies being seized between two full-length plies, and the stiffened regions being adapted to abut respectively against protuberances and depressions of the human anatomy, whereby the pad is tapered in thickness where the anatomy protrudes in cross-section, and the pad is adapted to conform to and fit the cross-sectional configuration of the anatomy.

8. In a catamenial bandage, an absorbent pad, said pad having a plurality of main plies and a plurality of filler plies, each of said filler plies being constituted by two mutually overlapped layers, said overlapped layers taking alternating positions in successive filler plies throughout the pad, and the so-constituted successive filler plies being staggered as a whole from one end of the pad towards the other.

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