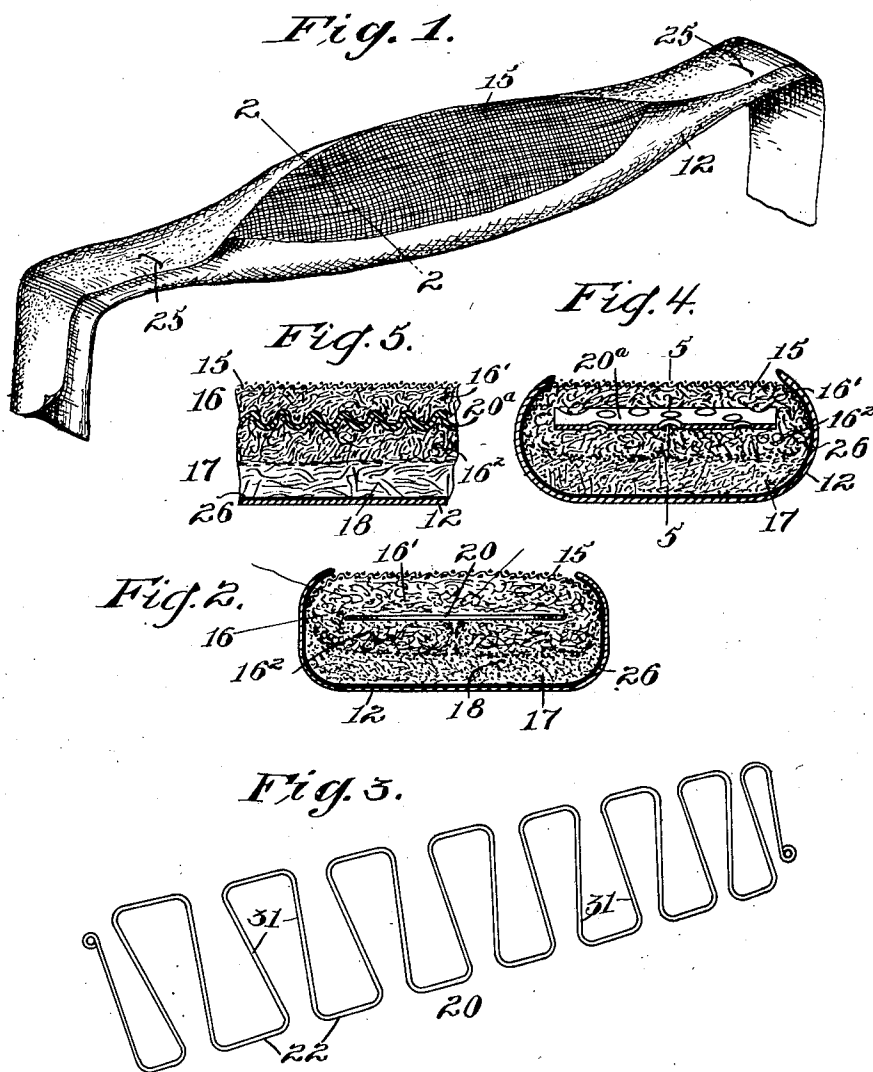


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W. R. GREEN.
ABSORBENT BANDAGE.
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ABSORBENT BANDAGE.

No. 810,117.

Specification of Letters Patent.

Patented Jan. 16, 1906.

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To all whom it may concern:

Be it known that I, WILLARD R. GREEN, a citizen of the United States, residing in Muscatine, in the county of Muscatine and State of Iowa, have invented certain new and useful Improvements in Absorbent Bandages, of which the following is a specification.

My present invention relates to that class of articles commonly known as "absorbent bandages," and has for its object an improved article of this kind adapted to be made at low cost and which will be of an efficient character.

In the drawings accompanying and forming a part of this specification, Figure 1 is a perspective view representing a bandage made in accordance with my present improvements. Fig. 2 is a cross-sectional view in line 2 2, Fig. 1. Fig. 3 is a perspective view of one form of side brace adapted for use in bandages made in accordance with my present improvements, said side brace corresponding to the one illustrated in Fig. 2. Fig. 4 is a cross-sectional view similar to Fig. 2, illustrating the use in the bandage of a different form of side brace. Fig. 5 is a partial longitudinal sectional view taken in line 5 5, Fig. 4.

Similar characters of reference designate corresponding parts in all figures.

In the perspective view Fig. 1 I illustrate in a general way a bandage made in accordance with my present improvement. It will of course be understood that the article may be made of such proportions as to width, length, and thickness as may be desired. The absorbent mass (designated in a general way by 17 in Figs. 2, 4, and 5) is shown contained and supported in a cover-sheet 12, the ends of which may be folded over and suitably sewed or otherwise attached together for convenience in holding the article in its assembled condition ready for market. In some cases this sheet may consist of paper or of an open-mesh fabric of light weight. In the present instance the folded edges at the end portions are represented as being secured by some suitable attaching device, as 25; but it is evident that other means—as, for instance, ordinary stitching—may be employed in lieu thereof. The absorbent mass 17 is shown covered by a surface sheet 15, which in practice I prefer to make of open

mesh, so as to readily permit the passage through it of relatively thick or semifluid substances. In the preferred form of the bandage I dispose or arrange the absorbent mass 17 in two principal portions 16 and 18. The upper portion 16 is represented divided by a side brace 20 into the upper portion 16' and lower portion 16². In practice I prefer to make the upper portion 16' of somewhat lesser thickness or depth than the lower portion 16². A further feature of the improvement relates to the flexibility with relation to the bending of the bandage. This is provided for in the side brace illustrated in detail in Fig. 3 by constructing said brace of a rod or wire folded back and forth transversely in some manner analogous to that represented in said figure. When employing this form of the side brace, I prefer to make it of a small elastic rod or wire of metal. It will be evident from this illustration, it being understood that the rod or wire will be of relatively small size and flexible, that the side brace (by reason of the transverse position of the parts 31 and the longitudinal position of the short parts 22) will be flexible both vertically and laterally—that is, in two directions—but will be relatively non-compressible, considered as a whole, in a third direction—that is, transversely of the bandage. In Fig. 2 such a side brace as is illustrated in Fig. 3 is represented as being laid between the two portions 16' and 16² of the upper absorptive portion 16 of the absorbent mass 17. In some cases the side brace may be located at or very near the upper surface of the absorbent mass. The side brace thus combined with the other members of the bandage operates to forcibly prevent any considerable compression or collapse widthwise of the bandage by sidewise pressure thereon, and thus operates to hold the absorbent material in better condition for receiving a relatively large amount of fluid. At the same time the side brace operates as a resistant device to prevent accidental discharge or expulsion of the fluid through squeezing the same out of the absorbent mass.

In Figs. 4 and 5 the side brace, here designated by 20^a, is represented as being formed of a perforated sheet of material having numerous transverse folds or corrugations, by which said member is given a high degree of

flexibility coupled with a relatively high resistance against the lateral pressure and at the same time is made sufficiently porous or open for permitting the fluids to freely pass downward through the side-bracing member into the absorbent material below the side brace.

As a suitable material for the absorbent member 16 I prefer to employ wood in the form of thin narrow strands of small size and a kind of fiber-like character, this material being preferably mingled and compacted together in such manner as to form spaces of varying sizes and shapes, the larger of which spaces will serve as distribution or conduction spaces, while the smaller and narrower spaces will constitute retention-spaces. For the lowermost layer 18, when the member 16 does not constitute the entire absorbent mass, I prefer to employ a vegetable fiber such as cotton or linen, this being intended more especially to absorb and retain the most fluid portions of the substance to be gathered.

For preventing fluids from saturating or escaping through the cover-sheet this is shown provided on the inner side thereof with a protective layer or lining. (Indicated by the heavy line 26.) In practice this protective layer or coating may consist of a suitable waterproofing material applied to the inner side of the cover-sheet, (or in some cases to the outer side thereof,) or it may consist of a sheet of some other kind of material of suitable character laid between the cover-sheet and the absorbent mass 17. A soft thin paper suitably treated may be so employed. It will be understood that the lower layer 18 may in some cases be omitted; also, that side-bracing members of a specific kind, form, and material other than and varying from those specifically illustrated herein may be employed within the scope of my present improvements.

The side-brace member, whether this be constructed in one or another of the particular forms indicated, preferably comprises a plurality or series of side-brace elements, which are located at successive points longitudinally of the bandage and are disposed in the absorptive mass, preferably near the upper side thereof, with their lengthwise dimension located transversely of the bandage for resisting lateral compression of the bandage by pressure applied along the sides thereof. Said side-brace elements—as, for instance, the rods or transverse members 31 of the member 20 or the corrugations of the member 20^a—are preferably connected together in such a manner, as already described, for combining a series of such side-brace elements into a single component member of the bandage. Preferably, also, such connection between the successive members of the series of side-brace elements should be of a flexible character for permitting the bending of the bandage as a whole. In the form of

side-brace member particularly indicated in Figs. 4 and 5 the corrugated portions may be considered as side-brace elements, these preferably being flexibly joined together, as already indicated, in such manner as to form a continuous member of considerable length in a direction longitudinally of the bandage.

Having thus described my invention, I claim—

1. In an absorbent bandage, the combination with a mass of absorptive stock, of a side-bracing member having transverse folded portions located within the mass and flexible for permitting the free bending of the bandage while resisting the collapse thereof by sidewise pressure.

2. In an absorbent bandage, the combination with a mass of absorbent material, of a side-bracing member so located as to resist the sidewise compression of the bandage.

3. In an absorbent bandage, the combination with a cover-sheet, of a mass of absorptive material therein, consisting of wood in the form of mingled strands disposed in upper and lower portions, and a flexible side-bracing member located between said portions.

4. In an absorbent bandage, the combination with a relatively compressible absorptive mass, of one or more relatively non-compressible side-brace elements located in the bandage for resisting lateral compression thereof.

5. In an absorbent bandage, the combination with a relatively compressible mass of absorptive material, of a plurality of side-brace elements disposed with their lengthwise dimension located transversely of the bandage, and having flexible connection for combining a series of the side-brace elements into a single member.

6. In an absorbent bandage, the combination with a cover-sheet having a reception-opening, of a relatively compressible absorptive mass in said cover-sheet, and a side-bracing member located in said mass adjacent to said opening for resisting lateral compression of the mass and the collapse of the said opening.

7. An absorbent bandage comprising an absorbent mass, means for supporting the same, and means for maintaining said mass against sidewise compression and constructed to readily yield in certain directions and to permit the passage of fluid therethrough.

8. An absorbent bandage made up of a mass of absorbent material, a corrugated bracing member located in said bandage, and a cover-sheet.

9. An absorbent comprising a mass of wood in the form of ribbon mingled together and promiscuously arranged forming capillary spaces and chamber-spaces disposed throughout the mass, an inclosure for said mass for retaining the same within bounds,

and means for distending said inclosure for preventing the compression of said mass and the collapse of the spaces within the same.

5 10. An absorbent bandage made up of a body of absorbent material, a corrugated and perforated member located in said bandage, and means for supporting the same.

Signed at Nos. 9 to 15 Murray street, New York, N. Y., this 25th day of May, 1904.

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Witnesses:

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