No. 810,130. PATENTED JAN. 16, 1906.

W. R. GREEN.

ABSORBENT BANDAGE.

APPLICATION FILED JUNE 13, 1904.

Fig. 1.

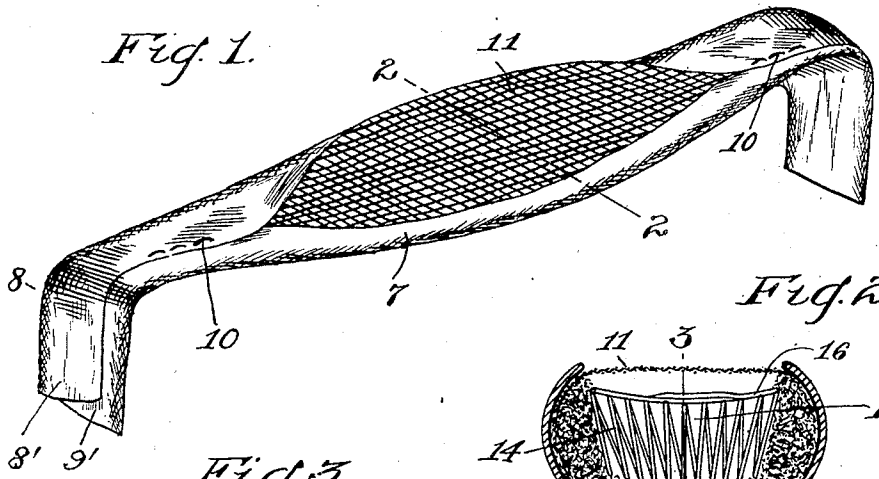


Fig. 2.

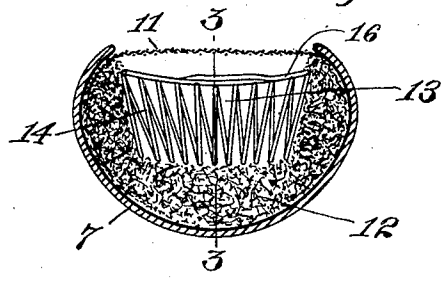


Fig. 3.

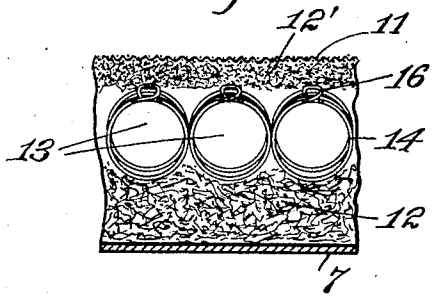


Fig. 4.

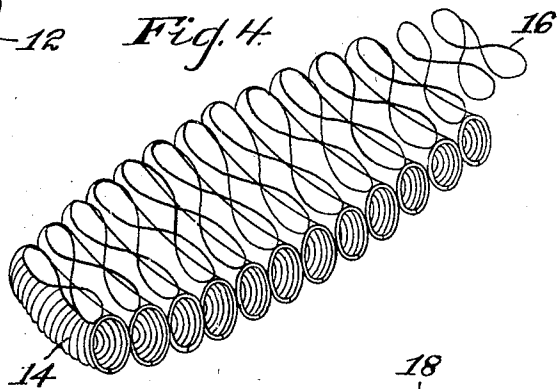


Fig. 5.

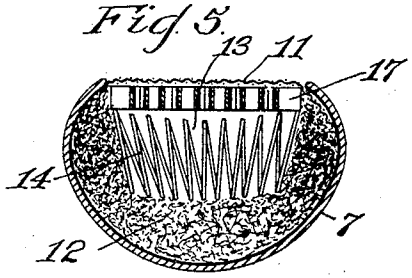
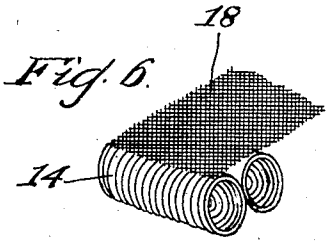


Fig. 6.



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UNITED STATES PATENT OFFICE.

WILLARD R. GREEN, OF MUSCATINE, IOWA, ASSIGNOR TO THE AMERICAN ABSORBENT FIBER COMPANY, OF PORTLAND, MAINE, A CORPORATION OF MAINE.

ABSORBENT BANDAGE.

No. 810,130. Specification of Letters Patent. Patented Jan. 16, 1906.

Application filed June 13, 1904. Serial No. 212,275.

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.

This invention relates to that class of articles commonly known as "absorbent" bandages, and has for its object to provide an improved article of this class of simple construction, efficient in action, and adapted to be manufactured at low cost.

In the drawings accompanying and forming a part of this specification, Figure 1 is a perspective view of an absorbent bandage made in accordance with my present improvements. Fig. 2 is a cross-sectional view taken in line 2 2, Fig. 1. Fig. 3 is a longitudinal sectional view of a portion of the bandage, this view being taken in line 3 3, Fig. 2. Fig. 4 is a perspective view of the chamber-space-forming member and the side-bracing member which may be employed in the bandage. Fig. 5 is a view somewhat similar to Fig. 2, showing a cell-space member located above the chamber-forming member and which may constitute the side-bracing member; and Fig. 6 is a detail in perspective, showing a different organization of the side-bracing member.

One of the objects and advantages sought to be obtained by means of the present improvement is to provide for the manufacture of the bandages at a low cost and for the use of materials of low cost employed in a minimum quantity. For this purpose and also to provide for a high degree of receptivity and distributive capacity, but especially to reduce the amount of absorptive material which would otherwise be required in a bandage of a given and proper bulk or size, I employ such a construction of the component members of the bandage as will secure a considerable proportionate amount of open space in the nature of chamber-space or cell-space, these spaces serving in part as receptacles for the quick reception of a considerable amount of fluid or semifluid material, and also serving as distributive means for transmitting the same more gradually to the absorptive portions of the bandage. Also such space or spaces will in general serve to finally receive and retain portions of material which would otherwise have to be taken up by the absorptive or fibrous portions of the bandage. The cell-space member receives the material for absorption and distributes it to the absorptive mass of fiber stock and prevents the tendency of such fibrous absorbent to mat at the receiving-surface. Such matting over would be attended by a sealing of the entire mass against absorption, and, upon the other hand, the cell-space or chamber-space member rests but lightly in most instances upon the absorptive mass, and consequently will not seal the mass by compressing its surface beyond the state of compression at which the absorptive capacity of the mass is present in a relatively high degree.

The receiving-body of the bandage may for convenience be supported and contained in a suitable cover-sheet 7, which may have its ends formed to constitute fastening members, (designated in a general way by 8,) which may be made by lapping one of the sides 8′ of the bandage over the other side 9′ and fastening the same at some convenient point or points by some suitable securing means 10. The bandage will have an opening at its application face, which may be covered by some suitable fabric which may be of open mesh, if desired, (designated in a general way by 11,) which fabric may or may not in practice be employed, as the exigencies of the case demand. In this form of the invention a relatively small amount of the absorptive mass (designated in a general way by 12) may be employed, and which mass will occupy a position at the bottom and sides of the cover-sheet or supporting member and be held away from the chamber-space (designated by 13) by some suitable means, here shown as a series of coils 14, which may be made of some suitable wire, thus giving an amount of elasticity to the bandage and assuring the reopening of the same in case of undue pressure being exerted upon the side causing the collapse thereof, it being of course evident that if the bandage is collapsed the opening thereof will be closed, which would defeat the objects for which it is employed. To assist the chamber-forming member in its work, a suitable side-bracing member 16 may be employed, which in the present instance is shown as a wire looped upon itself, which

may lie upon the coils of the chamber-space member.

In Fig. 2 it will be observed that the receiving-sheet 11 is at a distance above the side bracing member, and in Fig. 3 a body of absorbent material 12′ may be employed, which will act as a support for the cover-sheet, and in Fig. 5 a suitable cell member 17 is employed which may take the place of the side-bracing member, if made of suitable material.

Another feature of the invention embodies the use of coils which are of greater diameter at the ends than at the center, thus producing a member having a concavity at the center portion which will control the receiving-surface of the bandage. In Fig. 6 the side-bracing member 18 is composed of a sheet or blank of some suitably formed or woven fabric, which may be wire fabric. The material within the cover-sheet may, in some instances, be non-absorbent, and the transversely-disposed coils act as springs to maintain the same distended, whereby a large chamber-space will be afforded, and which chamber-space will take up material delivered to it.

I do not claim herein broadly a chamber-space-forming member, as this constitutes in part the subject-matter of my copending application, Serial No. 211,931, filed June 10, 1904; nor a side-bracing member broadly, as this constitutes in part the subject-matter of my copending application, Serial No. 211,926, filed June 10, 1904; nor a cellular side-bracing member, as this constitutes in part the subject-matter of my copending application, Serial No. 211,931, filed June 10, 1904; nor broadly a coil-formed chamber-forming member or structure, as this constitutes in part the subject-matter of my copending application, Serial No. 211,932, filed June 10, 1904.

Having thus described my invention, I claim—

1. In a bandage, the combination with a supporting member, of a body of absorbent material therein, and a chamber-space-forming member comprising a number of transversely-disposed coils of wire.

2. In a bandage, the combination with a supporting member, of a body of absorbent material therein, and a chamber-space-forming member comprising a number of transversely-disposed coils having greater diameter at the sides than at the center of the bandage.

3. In a bandage, the combination with a supporting member, of an absorptive mass therein, a space-forming member comprising a number of coils transversely disposed, and having a sinuous member resting thereon, and constituting a side brace.

4. An absorbent bandage comprising a supporting member, absorbent material therein, a series of coil-springs to press the same toward the sides and to form a chamber-space therein, and a side-bracing member upon said coil-springs.

5. In a bandage, the combination with a mass of absorptive material, of transversely-located means for supporting the same, a chamber-space-forming member within the absorptive mass, and comprising a number of helically-wound bodies, and a side-bracing member for said bandage.

Signed at Nos. 9 to 15 Murray street, New York, N. Y., this 11th day of June, 1904.

WILLARD R. GREEN.

Witnesses:

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JOHN O. SEIFERT.