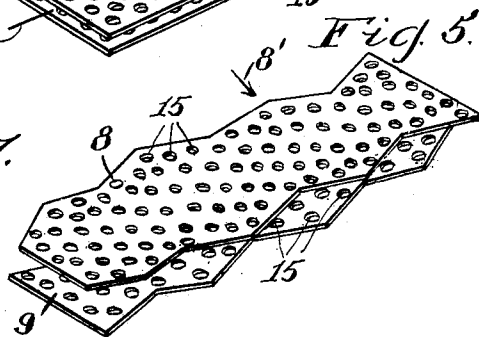
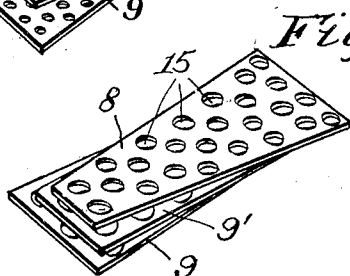
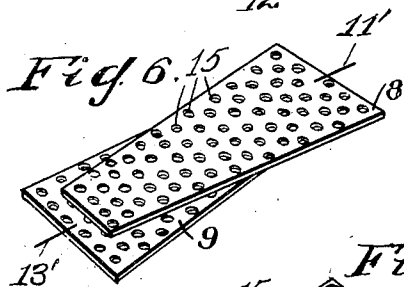
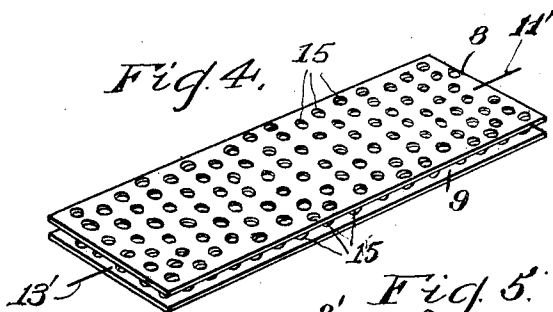
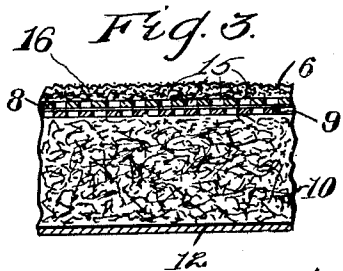
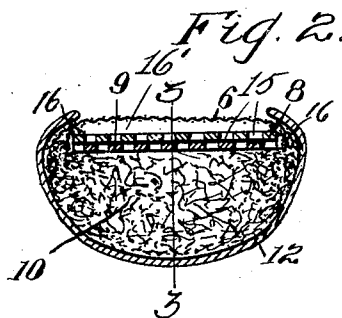
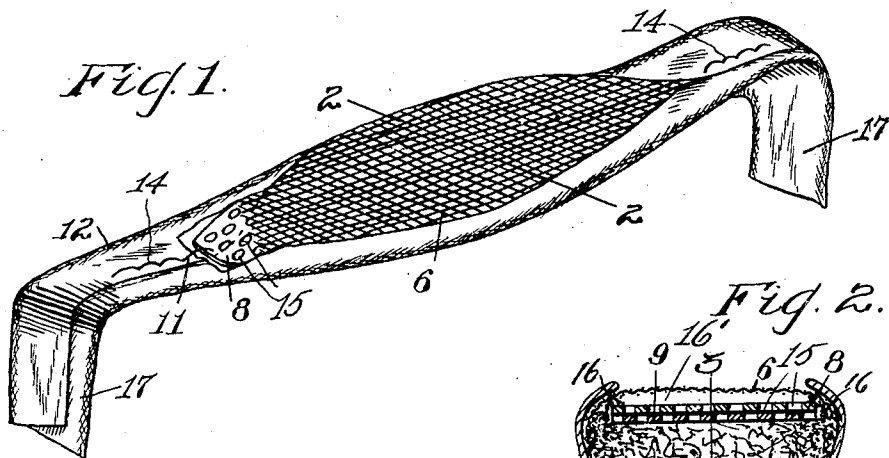


No. 810,127.

PATENTED JAN. 16, 1906.

W. R. GREEN.
 ABSORBENT BANDAGE.
 APPLICATION FILED JUNE 10, 1904.



Witnesses:

A. W. Pittman
G. C. Fress.

Inventor:
Willard R. Green;
 By his attorney,
F. H. Richards.

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. 810,127.

Specification of Letters Patent.

Patented Jan. 16, 1906.

Application filed June 10, 1904. Serial No. 211,936.

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 to provide an article of this class of improved construction whereby advantages of efficiency and mode of operation may be obtained in an article of low cost to manufacture.

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 of Fig. 1. Fig. 3 is a longitudinal sectional view in line 3 3 of Fig. 2. Figs. 4 to 7, inclusive, illustrate different forms and organizations of the cellular member of the bandage.

Similar characters of reference indicate like parts in the several views.

The receiving member is represented of a cellular construction, and in the preferred form thereof herein illustrated it comprises a plurality of flat members, as 8 and 9, which are in sheet form or plate form. In practice a medium grade of "pasteboard" or analogous sheet or plate material of a moderately or suitably flexible quality may be employed. The said members 8 and 9 are shown perforated, with a relatively large number of openings 15 in the nature of cells. These are shown located relatively close to each other for providing a considerable amount in the aggregate of cell-space in each of these cell-space members. A further feature (illustrated more especially in Figs. 5 and 6 and 7) relates to the manner in which the arrangement of the cells may be varied for the purpose of varying the coöperation of the several members 8 and 9 as regards the reception and disposal of semifluid or coagulative materials or the like by reason of a mobility of working movement as between said members. As will be seen by reference to Figs. 4 and 7, the upper cell member 8 is represented with the spacing of the cells more closely arranged than in the cell member next below. By reason of this arrangement it is evident that on the bending of the band-

age back and forth to even a small amount the register of the perforations relative to each other in two such superimposed cellular members will be varied throughout a considerable part of or the whole area of said members. This action will normally be such as to rapidly open and close to a greater or lesser extent the passage-way downward through the combined members at any given point in the area thereof. As the operation of one member upon the other is continued or increased or decreased in amount the position of the cells in one member as to alignment with the corresponding cells in the other member will be changed by increasing or decreasing the overlapping of the cells, and thus reducing or increasing the flowage-space downwardly through the members at such point or points. This operative relation between the cell members is of importance in promoting and controlling the disposition in some cases of the substances to be absorbed.

It will be evident that the kind of coöperation as between the successive cell members above described may take place as regards movement of the same longitudinally in the bandage or laterally thereof. For the purpose of taking greater advantage of the lateral movement due to any tendency to compress the bandage by pressure along the edges thereof I construct the cell members in some cases with the edges formed undulated or irregular one relative to the other. This feature is specially illustrated in Fig. 5, from which it will be seen that pressure against the member 8—for instance, as indicated by the arrow 8'—would operate to push said member laterally of the companion member, and thus cause a lateral changing as to the relation between the cells of the respective members.

As indicated in Fig. 7, a plurality of cell-space members, as 8, 9, and 9', may be employed, and these may be of varying widths. Also a series of such cell members may be employed, one superimposed upon the other, in connection with a mass of absorbent material contained in a suitable holder or cover-sheet, as more fully illustrated in Fig. 2. In this figure the mass 10 of absorptive material is shown brought up over the edges of the cellular members as a means for cushioning the same. Said cellular members thus form a

space member, which is preferably located at the receiving-surface of the bandage and which also constitutes a side-bracing member for the bandage. In practice I prefer to employ one or more surface sheets of relatively soft and open-mesh fabric, (indicated in a general way by 6;) but in some cases this may be omitted.

In Figs. 2 and 3 the absorbent material is shown brought over the edges or sides of the members 8 9 at 16, and an open space 16' is provided between the said members and the surface sheet at the receiving-opening.

A further feature of my present improvements relates to the manner of connecting the successive members 8 and 9 of the cellular receiving-surface member of the bandage with some other member of the bandage at points relatively remote one from another. For instance, as indicated in Fig. 1, the upper cellular member 8 is shown connected at 11 with the cover-sheet 12, whereas the lower cellular member may be connected to said cover-sheet toward the opposite end of the bandage. By this means even a slight bending of the bandage as a whole will operate to cause one of the cellular members to move a considerable amount relatively to the other said member. In this way a very decided and effective abrasive movement is obtained between the two superimposed cellular members 8 and 9, the result being to strongly increase the tendency of said members to work semi-fluid and coagulative materials downwardly through the same, and finally disposing of them by absorption into the lower mass 10. In Figs. 4 and 6 this feature is illustrated at 11' and 13', and in practice thread to be used in sewing the bandage cover-sheet, as at 14; may be first secured to the respective cellular members.

The ends of the bandage are provided with securing members 17, in the instance illustrated in Fig. 1 made of the folded cover-sheet. These securing members may be utilized for holding the bandage to its point of application in various ways, as occasion may demand.

One of the objects and advantages sought to be obtained by means of the present improvement and also by the improvements in the same art set forth in my several concurrently pending applications for absorbent bandages is to provide for the manufacture of the bandages at a low cost and for the use in such manufacture of materials of a low cost and 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 propor-

tionate 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 semi-fluid 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 considerable quantities of material which would otherwise have to be taken up by the absorptive or fibrous portions of the bandage.

I do not claim, broadly, herein a cellular structure, as this constitutes in part the subject-matter of my copending application, Serial No. 212,276, filed June 13, 1904, nor do I claim herein, broadly, a side-bracing means, as this constitutes in part the subject-matter of my copending application, Serial No. 211,926, filed June 10, 1904, nor do I claim herein, broadly, a cellular side-bracing means, as this constitutes in part the subject-matter of my copending application, Serial No. 211,931, filed June 10, 1904.

Having thus described my invention, I claim—

1. A bandage comprising an absorbent, a number of members each having a plurality of cell-spaces imposed thereon, and means effective on the movement of the wearer to cause the said members to move one relative to the other and relative to the absorbent.

2. A bandage comprising an absorbent, means to support the same and having securing members, and a number of members having a plurality of cell-spaces and alternately connected to the respective securing member.

3. A bandage comprising an absorbent, means to support the same and having securing members, a series of superimposed members each having a plurality of cell-spaces and some of which are connected to the respective securing members and some of which are not so connected whereby upon movement of the bandage the cell-space members will slip one upon the other.

4. A bandage comprising an absorbent, a cover-sheet to contain the absorbent and having securing members at its ends, a number of members each having a plurality of cell-spaces the cell-spaces being differently located in the respective members, and said members having dissimilarity in width and being connected to the securing members.

5. A bandage comprising an absorbent mass, a cover-sheet surrounding and supporting the same and having a receiving-opening, and side-bracing means within the sheet at such opening to prevent the collapse of the opening and comprising a plurality of perforated plates imposed one upon the other and organized to permit their independent movement incident to change in side pressure upon the bandage.

6. A bandage comprising a body of absorp-

tive material, means to inclose and support the same and provided with an opening, a side-bracing member comprising a plurality of perforated members adapted to move one
5 upon the other and located at said opening and having a portion of the absorptive body between their sides and the casing.

7. A bandage comprising an absorbent body, a cover-sheet therefor having a receiving-opening, and side-bracing means within
10 the sheet to prevent the collapse of the open-

ing or bandage and comprising a plurality of perforated plates or members located in layers, and one or more having a different arrangement or construction from its companion
15 member or members.

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

WILLARD R. GREEN.

Witnesses:

FRED. J. DOLE,

JOHN O. SEIFERT.