

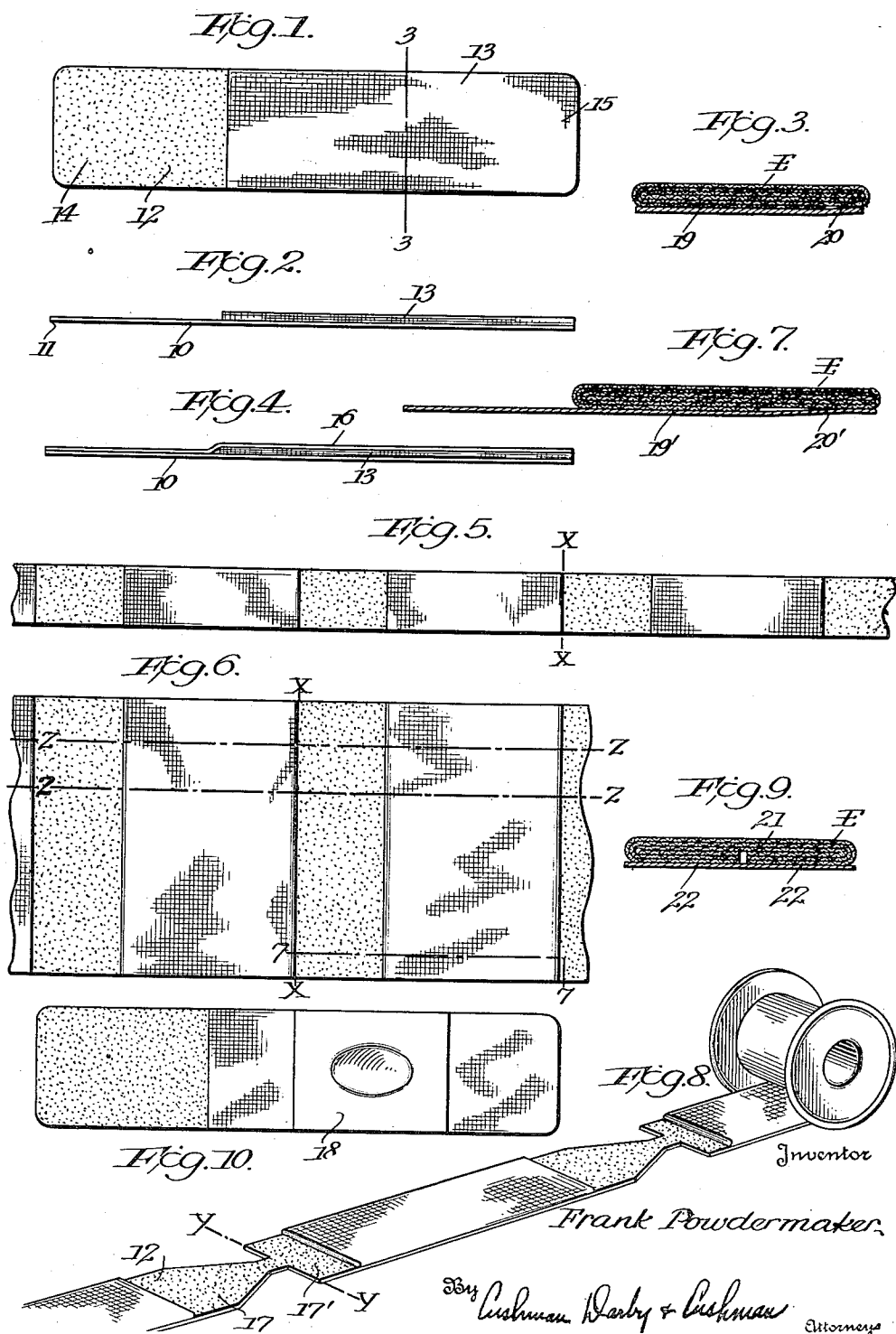
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BANDAGE

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BANDAGE

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2 Claims. (Cl. 128—268)

This invention relates to a new and useful surgical bandage which is adapted to be wrapped about a body member to be dressed and wherein contact of an adhesive with the skin is completely eliminated. The bandage comprises an adhesive coated layer to which is united by the adhesive, a superposed layer of medicated or sterilized gauze. The gauze layer is of a length to form a substantially complete wrapping, and a relatively short area of the adhesive surface layer or backing is left exposed to constitute when the bandage is wrapped, an externally positioned securing means.

An object of the invention is to provide a bandage which may be self-applied, i. e., a person may himself wrap the bandage about an injured member such as his finger in a manner that it will remain firmly in position and at the same time be easily removed for changing the dressing. Similarly, physicians and others may use the bandage with facility.

Another object of the invention is to do away with bandages requiring that the adhesive contact with the skin. While such bandages are in many instances satisfactory, contact of the adhesive with the skin causes pain when the bandage is removed and often leaves the skin about the wounded area or the wounded area in condition for further infection. To overcome these defects, the present bandage has a single adhesive securing means integral and continuous with the bandage and which securing means is exteriorly applied to the adjacent exposed surface of the wrapped backing layer opposite that on which the adhesive is coated. Hence, the bandage may be simply secured and as easily removed without the danger or discomfort heretofore experienced.

I am aware of bandages such as described in the patents to Dickson, Nos. 1,612,267 and 1,643,926 which are not of the wrapping type and moreover, present the objections of having adhesive contact with the skin and at multiple points.

Also, I am cognizant of the patent to Mace, No. 866,666 which discloses a wrapping bandage which likewise (1) provides for adhering the bandage at one end directly to the skin and (2) does not permit of the use of a delicate gauze layer. That is, the adhesive tabs are directly connected at the ends of the bandage which must necessarily be tough and relatively hard material as distinguished from a gentle gauze.

Also, I have observed the patent to Van Gorder, No. 978,794 having a relatively short pad of ma-

terial medially disposed upon a backing layer and at one end provided with a tie. This patent does not employ an adhesive as a securing means, and is not capable of self application, being designed as a horse bandage.

As stated, bandages of the prior patents are useful in many cases and the present bandage is an improvement adding to the comfort and safety as well as ease of application and removal of bandages in general.

The various forms which my invention may assume are illustrated in the following drawing which will be described in detail.

Figure 1 is a top plan view of one of my complete bandages ready for use.

Figure 2 is a side view of the same.

Figure 3 is a cross section through the line 3—3 of Figure 1.

Figure 4 is a side view of the bandage of Figures 1 and 2 with a protective strip of material such as crinoline applied on the exposed adhesive end of the bandage and having a free end overlapping the bandage portion.

Figure 5 is a plan view of my invention in the form of a continuous strip.

Figure 6 is a plan view of a variation of the invention.

Figure 7 is a section on the line 7—7 of Figure 6.

Figure 8 shows a further modification of the bandage rolled up on a suitable spool.

Figure 9 is a cross section similar to Figure 3 and showing another built up structure for the bandage layer.

Figure 10 is a plan view of a bandage as shown in Figure 1 provided with a superposed medicated pad.

Referring to the drawing, I have shown in Figures 1, 2 and 3, a bandage comprising a flexible backing layer 10 consisting of a closely woven fabric layer 11 having a coextensive coating of tacky adhesive 12 or adhesive capable of being rendered adherent by heat, moisture etc. Superposed upon the layer 10 and united thereto by the adhesive 12, is a layer of bandage material, e. g., medicated gauze 13. This gauze covers the adhesive surface of the backing 10 in a manner to leave at one end of the bandage, an exposed layer of adhesive constituting the adhesive securing means 14. The length of the gauze layer 13 is preferably sufficient to form a complete wrapping about the member to be dressed for example, a finger, arm or other appendage, and in applying the bandage, the end 15 is first placed upon the member and thereafter the bandage is wound about the member and the adhesive secur-

ing portion 14 then applied to the adjacent exposed surface of the closely woven layer 11. In this manner, the bandage may be self-applied and there is no opportunity for the adhesive to contact with the skin.

In Figure 4, there is employed a covering layer 16 of crinoline or similar material which is adhesively united to the exposed area 14 and has the remainder thereof freely superposed over the bandage layer 13 as shown. This provides a hygienic cover for the sterilized or medicated bandage layer and may be readily removed by simply pulling the crinoline layer away from the adhesive.

In Figures 5 and 6, I have shown a multiplicity of bandages as illustrated in Figure 1 for example, formed as a continuous strip. In order to use the bandage in this form, one bandage may be severed from another by cutting along the line X—X, or this line may be a weakened area, e. g., perforated or notched so that the bandages may be torn apart, or the bandages may be otherwise separably united.

In Figure 8, I have shown a modification of the constructions shown in Figures 5 and 6 wherein the backing layer 10 carrying the exposed adhesive surface 14, between each bandage portion 13, has a substantially tapered area 17 merging into a short strip of full width 17'. The construction shown in Figures 5, 6 and 8 lend themselves for ready reeling upon a spool. The construction shown in Figure 8 permits a very easy severing of individual bandages from the continuous strip along line Y—Y and the portion 17' then becomes a means for fastening the free end of the strip onto the periphery of the bandage roll. A similar marginal area 17' may be left also in the case of Figures 5 and 6. Such marginal area 17' is severed before the bandage is applied to a member. The dimension of the marginal area 17' is, however, negligible so far as causing discomfort or infection is concerned, but, preferably, the area 17' is severed.

In Figure 10, I have illustrated a bandage similar to that described in connection with Figure 1 having superposed thereon, separately, or permanently by adhesive or other union with the gauze layer 13, a special type of medicated material, pad, bandage or other article indicated as a whole at 18. This member 18 is preferably positioned intermediate the bandage layer but may be coextensive therewith.

Referring to Figure 3, I have illustrated one method of forming the gauze layer 13 into a built up structure. In this figure, a continuous strip of gauze is shown as wound upon itself and one exposed free end 19 and one fold layer 20 are adhesively united to the backing layer 10. This produces a double bond extending longitudinally of the bandage and assures that the gauze will be tightly held throughout its length to the backing.

In Figure 7, I have shown a modification wherein a continuous strip of gauze is likewise folded upon itself and has one exposed free end 19' and one fold layer 20' adhesively connected with the backing. In this construction, the adhesively united portions 19' and 20' extend transversely of the backing layer.

In Figure 9, the built up structure is formed by superposing a plurality of individual layers 21 of different lengths of gauze and then folding the ends of the layers inwardly so that the intermediate layers are enclosed in the external layer

whose ends 22 are adhesively united to the backing 10.

In connection with Figures 3, 7 and 9, as many layers of bandage material such as gauze may be used as desired. I have found six layers to be satisfactory for many purposes.

It is to be observed that with each of the built up gauze structures shown in Figures 3, 7 and 9, that the interior layers are entirely enclosed or enveloped in an outer layer of gauze and that this is true whether a continuous strip of gauze is folded upon itself as in Figures 3 and 7 or individual layers are folded as shown in Figure 9. Also, it will be observed that the envelope which is designated E is connected adhesively by individual areas thereof to the adhesive coating 12. This is important in maintaining the shape of the bandage, and its cushion characteristics as well as providing for secure adherence of the bandage portion 13 to the backing 10.

It is preferred to have the bandage constructed so that the gauze layer is coextensive with the adhesive coated surface 12 except for the exposed securing portion 14. It is also preferable to have the bandage portion 13 of a length such that it will form a complete wrapping and the exposed adhesive securing portion 14 of a length so that it will assure the bandage being firmly held in position. Thus, the relative length of the bandage and exposed adhesive portions will, of course, vary, depending upon the particular part of the body which the bandage is adapted to cover. In most cases the exposed adhesive area is substantially less than the bandage material area, for example, the bandage material 13 will be at least two or three times as long as the exposed portion 14.

With any of the bandages, the exposed adhesive area is at one end only of the bandage to form a securing means and hence, contact of the adhesive with the skin is eliminated.

It is to be observed that by folding the gauze layer in any of the ways illustrated in Figures 3, 7 or 9, that no exposed or rough edges are presented and likewise, in each of the built up structures shown in these figures, there takes place a double bonding of the bandage material either longitudinally or transversely of the bandage, with the adhesive coated surface of the backing.

In forming a bandage, the backing layer 10 and bandage layer 13 may be cut to preformed size and then adhered together with or without a crinoline cover 16 as in Figures 1 to 4. Again, a strip of the backing layer 10 may have deposited thereon at properly spaced points, the preformed bandage layers 13 as shown in Figures 5, 6 and 8. On the other hand, a wide sheet of backing material 10 will have applied in spaced relation, strips of the gauze folded in the manner described, and such sheet will then be severed transversely into strips as shown by the dotted lines Z—Z in Figure 6. The operation for forming the bandages either as individual articles or continuous strips or sheets, may be carried out as a continuous operation upon a moving web of the backing material, using suitable folding, associating and cutting apparatus.

While I have described herein the use of a bandage material which is preferably gauze, it will be understood that other types of bandage materials will be used and similarly applied, as for example a layer of sterilized or medicated raw cotton, but usually the bandage material comprises a woven material.

While in the preferred form of the invention, the marginal portion 17' is not employed, it is within the scope of the invention to utilize such a small marginal portion 17' with any of the 5 bandages described for the purpose of securing bandages to each other in their packaging and also in any case where a provision of a relatively narrow adhesive area on one side of the bandage will be of assistance. It is, of course, appreciated 10 that such relatively narrow adhesive portion 17' is too slight in area to cause any discomfort, and that principal reliance will be placed upon the relatively larger adhesive securing area 14.

The invention is capable of various modifications and changes, all of which are comprehended within the scope of the appended claims. 15 I claim:—

1. A bandage comprising a backing having an absorbent bandage material superposed on said 20 backing and united thereto, said absorbent bandage material being of a length to constitute substantially a wrapping about a member to be dressed and extending substantially from one end of the backing and stopping short of the other

end of the backing, said backing having an adhesive coated surface exposed at said other end of the backing on the same side thereof as said absorbent bandage material and constituting a securing means adapted for adhesive union with 5 an adjacent exposed surface of the opposite side of the backing exteriorly of the bandage when applied.

2. A bandage comprising a backing having one surface coated with an adhesive, an absorbent 10 bandage material superposed on said adhesive coated surface and of a length to constitute substantially a wrapping about a member to be dressed, said absorbent bandage material extending substantially from one end of the back- 15 ing and stopping short of the other end of the backing, a portion of the adhesive coated backing at said other end of the backing being exposed and constituting a securing means adapted for adhesive union with an adjacent surface of 20 the backing exteriorly of the bandage when applied.

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