Feb. 25, 1930. H. DOMIZLAFF 1,748,470

BANDAGE

Filed Nov. 18, 1926

Fig. 1.

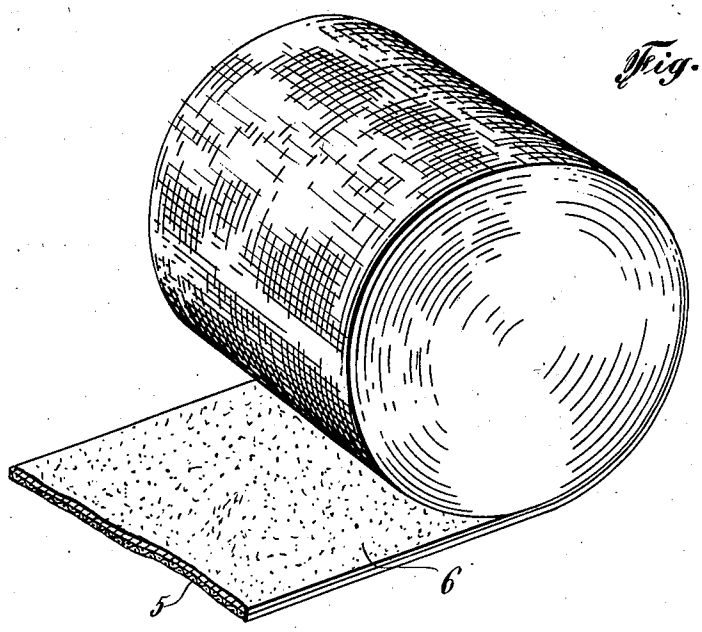


Fig. 2.

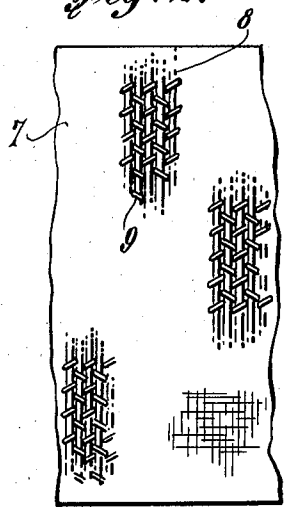
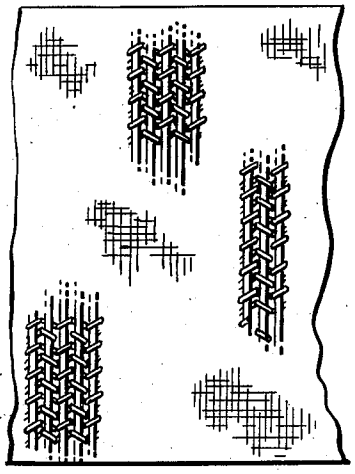


Fig. 3.



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BANDAGE

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This invention relates to improvements in bandages, particularly those applicable for use in treating sprains, strains or other body injuries requiring a firm retention of the injured member in a positive position.

As is known at the present time, injuries such as broken bones or sprains require the use of splints or plaster casts for the retention of the injured member in its rigid position for proper healing. Of course, bandages comprising the ordinary adhesive or non-adhesive gauze are wound over the splints to maintain the splints in proper position for acting correctly upon the injured member. It is for the purpose of eliminating the use of these reinforcing members such as splints or plaster casts, and at the same time for bringing about a more simple and facile manner of treating such injuries that the applicant has devised a plaster comprising an elastic porous woven bandage having formed on one surface thereof a coating of adhesive and at the same time healing properties.

Generally, it is the aim of this invention to provide for a bandage for the above specified purposes, which bandage due to its elasticity or flexibility may be wound about the injured body member and upon being drawn taut will, due to its adhesive properties, bring about a positive reinforcement and protection with respect to the injured member.

Further, it is an object of this invention to so provide this elastic bandage so as to introduce the feature of porosity therein, whereby the injured member may not be completely segregated or separated from air contact. Of course the adhesive remedial which comprises the well known rubber or gum member impregnated with a medicinal preparation will more or less form an air-tight coating on one face of the bandage, that is, the face which is in direct contact with the injured body member, but the property of flexibility and elasticity inherent in this bandage will cause the formation of air spaces or passages therein capable of allowing the passage therethrough of air.

Generally, among the objects of the invention it is aimed to provide a novel form of bandage containing adhesive and medicinal ingredients whereby a positive rigidity may be imparted to the injured member about which this bandage is wound; to provide a novel form of bandage comprising a warp and woof so wound with respect to one another as to provide a longitudinal flexibility whereby the application of the bandage with its adhesive coating under tension to the injured member will bring about an immovable and practically rigid positioning of the injured body member; to provide a novel form of bandage having adhesive medicinal preparation thereon, which combines the property of a covering for the injured member and at the same time imparts thereto the rigidity formerly provided by splints, plaster casts and other independent extraneous members with which the bandage was usually associated; thus the elimination of a splint or plaster cast between inner and outer bandages thereby to form a reinforcing medium therefor.

These and other advantages, capabilities, and features of the invention will appear from the subjoined detail description of one specific embodiment therefor illustrated in the accompanying drawings, in which

Fig. 1 is an isometric view of the bandage element.

Fig. 2 is a bottom view looking upwards of Fig. 1 of the bandage in its normal position.

Fig. 3 is a bottom view looking upwards of Fig. 1 of the bandage in extended or stretched condition.

Referring to Fig. 1, numeral 4 represents the bandage element of which the base portion 5 represents a woven member and the upper portion 6 represents a layer of adhesive material placed thereon by various methods of which spraying or coating is typically representative of one of the methods of applying the same to the woven base.

As shown in Fig. 3, the base member 5 comprises a woven member having a heavy weft or woof 7 which is crossed over and under successively by alternate layers forming the warp 8, which alternate layers of thread are considerably thinner in diameter than that of the woof, the said warp being woven in diagonal formation, as at 9, over the respective

woof threads, as shown in Figs. 2 and 3, so that there is considerable stretch in the warp with respect to the woof.

Since this bandage is formed by this particular method of weaving, wherein the heavy weft or woof 7 is crossed in alternate position by much finer warp members, a considerable porosity is introduced within the woven member, especially when the woven member is stretched upon the application of the bandage with the adhesive member 6 at one surface thereof.

When a broken body member is to be bandaged the operator merely takes a length of this bandage with the adhesive element on one face thereof and winds the same under tension about the injured member; since the bandage has considerable elasticity due to the formation of the woven base and since the adhesive member in its nature is elastic, the bandage upon being applied about the injured member in a taut manner obviously the use of splints or other fixed supporting members usually associated with bandages is eliminated. In actual application the applicant has taken a length of bandage and wound the same under tension about an injured, particularly a broken member, and due to the firmness of the bandage and after it had been stretched into position, the usual splints or plaster casts have been eliminated and the same results that are usually obtained with the above are produced with a minimum of effort and a considerable economy of cost and time.

Further, the bandage being of adhesive type remains fixed and cannot move, due to the adhesive member associated therewith and due to the fact that it has been stretched due to its elasticity so that the bandage will never be loose and will always introduce a firm constant pressure of undiminished quantum.

To clearly illustrate the function of this particular bandage Figs. 2 and 3 have been drawn to illustrate the comparative porosity and elasticity of the member. It should be noted that in Fig. 2 the warp members 8 are quite close to one another and to the woof member 7, whereas in Fig. 3 when the bandage is under tension as is the case in actual use, the warp members 8 are considerably apart from one another and with respect to the woof member, so that the elastic and porous qualities of the same are readily appreciated.

It will be noted that the fabric illustrated is one which will stretch in one direction without appreciably contracting in the other, so that the fabric is rendered more porous on stretching. As a result, the adhesive coating, on the fabric is broken up into separated bands or sections, the spaces between the latter making the whole mass of bandage porous when the bandage is stretched about a limb.

It is obvious that various changes and modifications may be made to the details of construction without departing from the general spirit of the invention as set forth in the appended claims.

What I claim is:

1. A bandage comprising an elastic porous fabric formed of parallel strands of comparatively heavy weave, having passing alternately over and under the same, two sets of comparatively fine woven threads, said sets of fine woven threads being angularly disposed with relation to one another and to said heavy woven threads, and a layer of adhesive material super-imposed on the combined threads, forming the fabric.

2. A bandage comprising a strip of woven fabric composed of comparatively heavy weft threads, parallel to one another, and having passing through alternate weft threads, a plurality of sets of comparatively fine warp threads, each set of fine warp threads being angularly disposed with respect to the weft threads, and to adjacent warp threads, whereby to provide an elastic fabric, and an adhesive material formed as a coating on said strip.

3. A bandage comprising a woven, elastic, porous fabric and a layer of adhesive material on said fabric, said fabric being extensible in one direction without appreciable contraction in the other, whereby upon the application of said bandage in stretched condition to a member the adhesive material stretches and cracks whereby a porous covering is obtained.

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