March 6, 1951 H. J. HELDMANN 2,544,315

ADHESIVE BANDAGE

Filed July 16, 1948

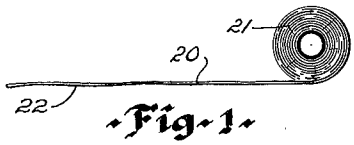

Fig. 1.

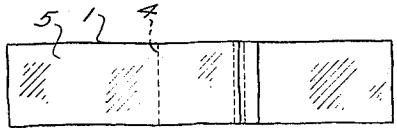

Fig. 3.

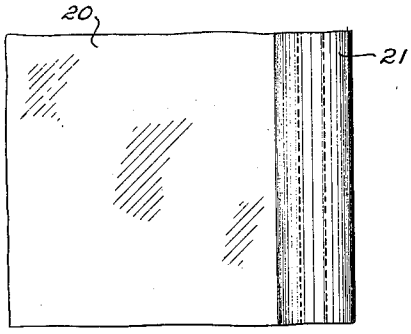

Fig. 2.

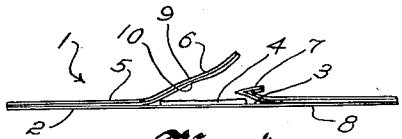

Fig. 4.

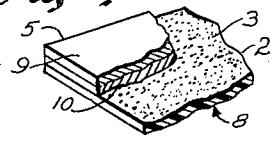

Fig. 10.

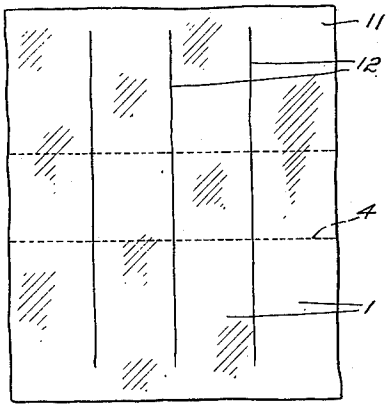

Fig. 5.

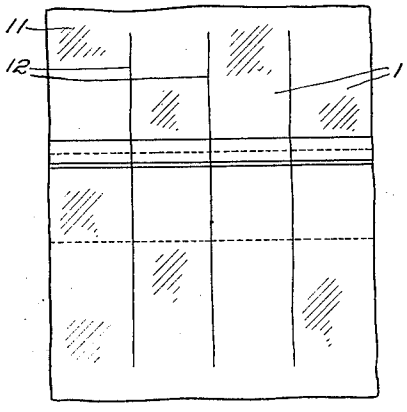

Fig. 6.

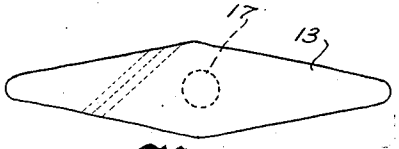

Fig. 7.

Fig. 8.

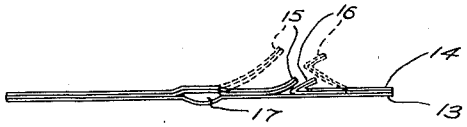

Fig. 9.

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Patented Mar. 6, 1951 2,544,315

UNITED STATES PATENT OFFICE

2,544,315

ADHESIVE BANDAGE

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Application July 16, 1948, Serial No. 39,130

2 Claims. (Cl. 128—156)

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This invention relates to medicated wound aids of the adhesive bandage type.

Various types of adhesive bandages and of wound aid pads with adhesive strip carrying means have heretofore been proposed. Such bandages and carrying strips are usually bulky and unattractively noticeable in use and the medicament provided is frequently of limited effectiveness.

It is an object of this invention to provide an improved adhesive bandage comprising a thin transparent highly flexible strip.

It is a further object of the present invention to provide a wound aid comprising a medicament of substantial effectiveness and a carrying medium therefor comprising a thin transparent highly flexible adhesive strip whereby the wound aid in use causes a minimum of annoyance to the wearer due to its small bulk and pliability and which is relatively inconspicuous due to its transparency. A further object resides in the provision of a metallic foil sheet overlying the adhesive surface of the carrying strip and adapted to contribute to the effective use of the wound aid.

The invention will be described with reference to the accompanying drawing, in which

Figure 1 is an elevation of a medicated adhesive bandage in accordance with the invention,

Figure 2 is a plan view of the medicated adhesive bandage,

Figure 3 is a plan view of a wound aid in accordance with the invention,

Figure 4 is a longitudinal sectional view of the wound aid in exaggerated thickness for clarity of illustration,

Figure 5 is a plan view of one side of an assembly of wound aids,

Figure 6 is a plan view of the other side of the assembly,

Figure 7 is a plan view of one side of a modified form of wound aid,

Figure 8 is a plan view of the other side of the wound aid shown in Figure 7,

Figure 9 is a longitudinal sectional view of the wound aid shown in Figure 7, and

Figure 10 is a greatly enlarged sectional view, in perspective, of a portion of the wound aid.

Referring to Figures 1 and 2, the bandage shown comprises a thin, flexible, transparent strip **20**, preferably provided in roll form **21**.

The strip **20** preferably comprises a plastic pressure sensitive adhesive film having one surface **22** neutralized by coating with silica or other like medium to render it non-adhesive. While several such films are available for the purpose,

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one formed from the following ingredients in parts by weight has been found to be particularly effective:

1½ parts hydrocarbon thermoplastic terpene resin
4½ parts adhesive comprising polybutene, hydrocarbon thermoplastic terpene resin, dioctyl phthalate, zinc stearate, naphtha
3 parts china clay
6 parts trichlorethylene

Referring to Figures 3, 4 and 5, each wound aid **1** comprises a thin, flexible, transparent strip **2** having an adhesive upper surface **3**, a medicated cotton pad **4** disposed on the surface **3** intermediate its ends, and a non-adhesive covering strip **5** overlying the surface **3** and divided to provide free end portions **6** and **7** overlying the pad **4**. The strip **2** is similar in composition to strip **20** and has its under surface **8** neutralized in the same manner as surface **22**.

The pad **4** is preferably formed of cotton textile material impregnated with a suitable medicament. In one form of the invention, it is proposed to dip the cotton material in a solution containing about 10% of a quaternary ammonium salt, i. e., 12.05 ounces of quaternary ammonium salt to one gallon of water. The material is then dried and cut into pads.

The covering strip **5** preferably comprises an aluminum foil, such as a thin paper **9** coated with aluminum **10**.

For convenience of manufacture, sale and use, the article is preferably made up in assembly form as shown in Figures 5 and 6 wherein large sheets **11** are provided in which a plurality of slits **12** are formed, such slits terminating in spaced relation to the ends of the sheets, thus providing a unitary assembly of wound aids **1**, each readily detachable from the assembly.

The adhesive bandage **20** is applied in the normal way. In using the wound aid, the foil strips **5** are removed and the wound aid applied in the usual manner. The transparency of the film **2** or **20** renders the device inconspicuous and the pliability thereof makes possible the normal flexing movement of any part of the body to which the wound aid is affixed, thus occasioning a minimum of discomfort and annoyance to the wearer.

In the case of the wound aid, the overlying aluminum foil releases a small amount of aluminum salts, such as aluminum oxide, which become an important ingredient of the adhesive strip. Aluminum oxide is compatible with china clay, both of which act as drying agents to prevent the adhesive strip from becoming too sticky. The

aluminum salts also function to harden the adhesive mass and tend to increase its transparency.

Referring to Figures 7, 8 and 9, a slightly modified form of the invention is shown for use particularly as a corn pad. The device comprises a transparent plastic strip 13 similar to strip 2, and an overlying metallic foil covering strip 14 similar to strip 5 having free end portions 15 and 16. A medicated disc or pad 17 is carried by the strip 13 for application to the affected part. While various types of medicaments may be employed, a satisfactory pad comprises cotton fabric impregnated with a solution containing the following ingredients:

3 parts hydrocarbon thermoplastic terpene resin
7 parts adhesive comprising polybutene, hydrocarbon thermoplastic terpene resin, dioctyl phthalate, zinc stearate, naphtha
16 parts trichlorethylene
32 parts salicylic acid.

The strips 13 and 14 are preferably in elongated form as shown, tapering towards each end.

What is claimed is:

1. A bandage assembly having a substantially transparent plastic film sheet, one surface of said sheet being of pressure sensitive adhesive character, and a sheet of paper having only one surface thereof provided with a metallic coating substantially completely overlying said film sheet with said metallic coating in adhesive contact with said adhesive surface, said superimposed sheets being longitudinally slit along a plurality of uniformly spaced lines, each slit extending throughout the major portion of the length of the sheets and terminating inwardly of each end of the sheets, said slits defining a plurality of bandage strips having minor end portions in attached relation and each readily separable from the assembly by tearing said minor end portions therefrom, said metallic coated paper sheet being readily removable to expose said adhesive surface.

2. A bandage having a substantially transparent plastic film strip, one surface of said strip being of pressure sensitive adhesive character, and a sheet of metallic foil substantially completely overlying said surface and adhesively secured thereto, said sheet being readily removable to expose said adhesive surface and comprising a thin paper base and an aluminum coating on only one surface thereof, said aluminum coating being in contact with the adhesive surface of the strip.

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