

Jan. 28, 1936.

W. EUSTIS ET AL

2,029,260

METHOD OF MAKING ADHESIVE TAPE AND GAUZE DRESSINGS

Filed Oct. 28, 1933

3 Sheets-Sheet 1

Fig-1

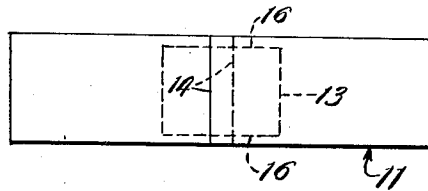


Fig-2

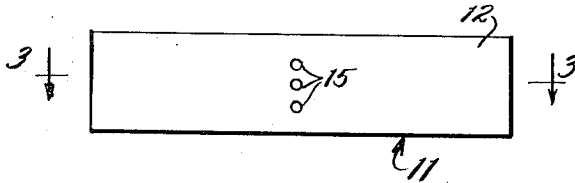


Fig-3

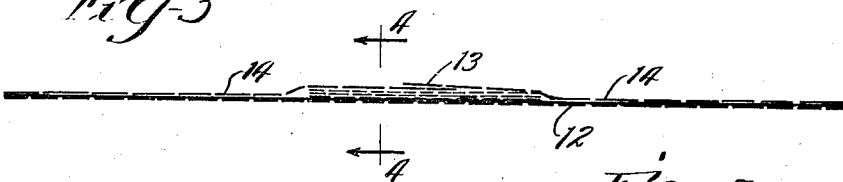
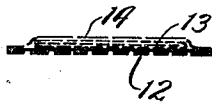


Fig-5



Fig-4



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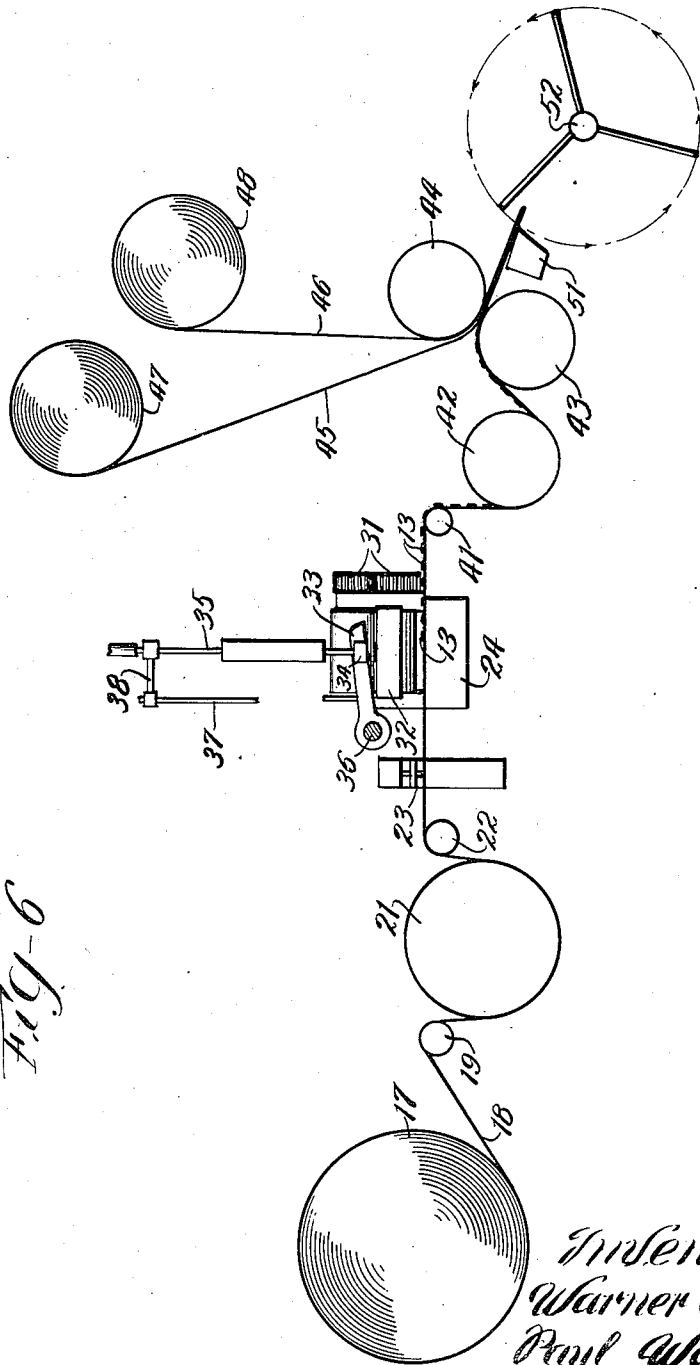
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METHOD OF MAKING ADHESIVE TAPE AND GAUZE DRESSINGS

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METHOD OF MAKING ADHESIVE TAPE AND GAUZE DRESSINGS

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3 Sheets-Sheet 3

Fig-7

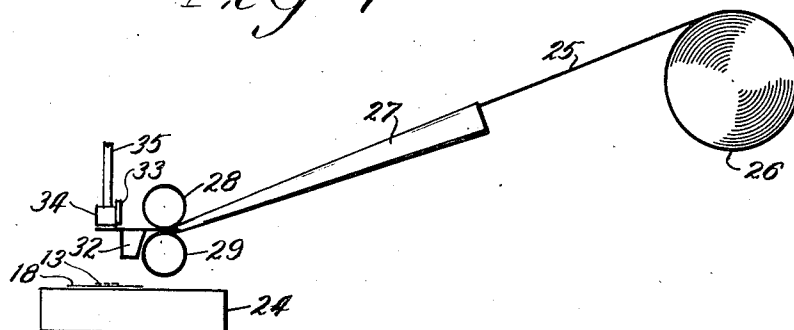


Fig-8

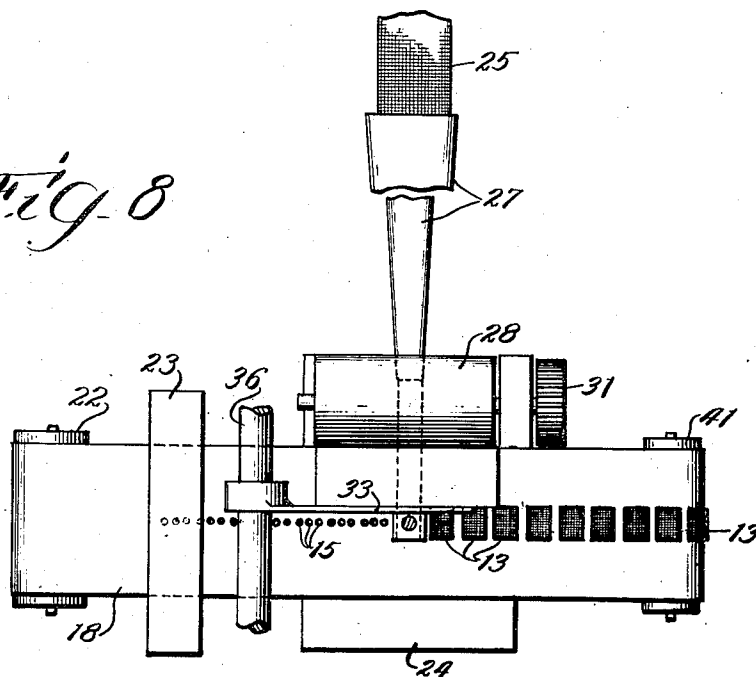
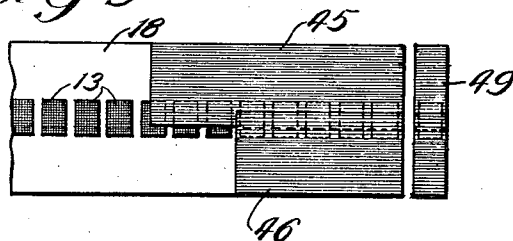


Fig-9



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UNITED STATES PATENT OFFICE

2,029,260

METHOD OF MAKING ADHESIVE TAPE AND
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Application October 28, 1933, Serial No. 695,660

4 Claims. (Cl. 154—2)

This invention relates to a method of making adhesive tapes of the type which have a pad of gauze or the like positioned on the adhesive side thereof to serve as a dressing for a wound on the finger or other part of the body to which the tape may be applied; also to a method of making tape dressings of this character.

It has heretofore been the practice in making such dressings to place upon the center of a sheet or web of adhesive-coated fabric, as the latter is unwound from a roll, a strip of folded gauze extending lengthwise of the web, and to thereafter cut the web and gauze strip thereon transversely, thereby forming individual tapes, the longitudinal dimension of which is the width of the web. This leaves the edge of the gauze pad flush with the edge of the tape and, since the gauze strip has been cut across the folds, it sometimes happens that the threads unravel and become embedded in the wound, or protrude beyond the side or edges of the tape when the latter is applied, thus making the dressing unsightly or lacking the neat appearance which is to be desired. Furthermore, since the edges of the gauze pad are in a line with the edges of the tape, the pad is enclosed only at the ends, leaving it possible for dirt or moisture to creep in at the sides.

One of the objects of our invention is to provide a method of making an adhesive tape dressing in which these difficulties are overcome by forming and positioning the gauze pad in such manner that the folded edges extend lengthwise of the tape and are spaced from the edge thereof to provide a marginal area of adhesive on all sides of the pad.

Other objects and advantages of the invention will be apparent as it is better understood from the following description, which, taken in connection with the accompanying drawings, discloses a preferred embodiment thereof.

Referring to the drawings:

Fig. 1 is a bottom plan view of an adhesive tape embodying and made in accordance with our invention;

Fig. 2 is a top plan view thereof;

Fig. 3 is an enlarged diagrammatic view taken on the line 3—3 of Fig. 2;

Fig. 4 is a transverse section taken on the line 4—4 of Fig. 3;

Fig. 5 is a perspective view of the gauze pad separate from the tape and folded by the method of our invention;

Fig. 6 is a schematic view showing parts of an apparatus by which the method of our invention

may be carried out, and also the web rolls from which the adhesive-coated fabric and crinoline covering (to be later described) are supplied;

Fig. 7 is a diagrammatic view of the mechanism used for folding, cutting and applying the gauze pads, the web roll from which the gauze is supplied being also shown;

Fig. 8 is a plan view of the mechanism shown in Fig. 7; and

Fig. 9 is a plan view of a portion of the adhesive-coated web showing the pads applied thereto and a part of the crinoline coating, one of the severed tapes being also shown.

Upon said drawings the reference numeral 11 indicates generally an adhesive tape dressing comprising a fabric backing 12 having adhesive on one side thereof and having a pad 13 of gauze or the like positioned centrally on its adhesive-coated side, said pad having under-folded edges extending lengthwise of the tape and said edges being some distance away from the edge of the tape, as shown in Fig. 1. The adhesive is of the pressure-sensitive type and the pad is caused to adhere to the tape by being pressed thereon in manner which will hereinafter appear. The adhesive side of the tape, including the pad 13, is protected by means of strips 14 of crinoline or like material, the inner edges of which overlap as shown in Figs. 1, 3, and 4 of the drawings. The back of the tape is, or may be, perforated, as indicated at 15 in Fig. 2, to provide for ventilation of the wound and the area adjacent thereto.

The crinoline protective strips are adapted to be removed when the tape is to be used, by taking hold of the free ends thereof overlying the pad 13, and pulling them away with a sort of peeling action, leaving the adhesive surface of the tape exposed. The pad 13 may then be placed over the wound, and the tape pressed upon the adjacent parts of the body in well-known manner. With the pad formed by the method of our invention, the side edges will be neatly held down in a straight line, and there will be no loose threads or ravelings to get into the wound or protrude from the side of the tape, as might happen with the prior constructions above-mentioned. The marginal adhesive-coated area, indicated by the reference numeral 16, at the sides of the pad, make it possible for the tape to adhere to the body on all sides of the pad, thus providing a complete and effective enclosure of the wound preventing any dirt or foreign matter from getting to it. Also, in a water-proof tape, this construction shuts out all

moisture, the perforations 15 in this case being omitted. Even with small perforations, such as those shown, it is entirely possible that the gauze pad would soak up any small amount of water which might get through the holes, thus keeping the wound dry as well as clean.

Referring now to Figs. 6-9, inclusive, illustrating an apparatus, by means of which the method of our invention may be practiced, the reference character 17 indicates a web roll from which a web 18 passes over a guide roller 19 under a drum 21 and over a roller 22, from which it passes through a perforating device 23 and over a bed 24 above which the mechanism for forming, cutting and applying the gauze pads is positioned.

Referring next to Figs. 7 and 8, it will be observed that a gauze strip 25 is fed from a web roll 26 and passes through a folding member 27, from the lower end of which it passes in folded condition between feed rollers 28 and 29 driven from a suitable source of power (not shown) by means of gearing 31. The folded strip then passes over a block 32, at the edge of which is mounted a vertically reciprocating knife 33 adapted to cut the pads from the folded strip, the operation of said knife being so timed with the feeding of the gauze that pads of uniform size will be cut from the strip upon successive reciprocations of the knife. The projecting portion of the folded gauze strip, prior to being severed, passes beneath a suction head 34 carried at the lower end of a pipe 35 connected with a vacuum pump, or other suitable device, for creating suction in said head. The pad, upon being severed, is thus held against the head and the latter is adapted to be reciprocated by suitable mechanism (not shown) to carry the pad down and deposit it on the adhesive strip 18. At the bottom of the stroke the vacuum is released by an automatic valve of any known or preferred construction, thereby releasing the pad, the head 34 being again opened to communication with the vacuum pump on the upstroke so as to be ready to attract the next pad and to deposit the same on the adhesive strip 18.

The knife 33 is pivoted at 36, and is adapted to be operated in unison with the head 34 by means of a rod 37, one end of which is connected with said knife, and the other end of which is connected by a cross rod 38 with the pipe 35, which carries said head 34. The gauze pads or dressings 13, upon being pressed against the adhesive strip 18, by means of the head 34, adhere to said strip, and the latter passes from the station 24 over a guide roller 41, thence beneath a larger roller 42 and between feeding rollers 43 and 44, between which are also fed strips of crinoline, or other protective material, said strips being identified by the numerals 45 and 46 and being drawn from rolls 47 and 48 diagrammatically illustrated in Fig. 6. Said strips 45 and 46 are applied to the web 18 in overlapping relationship, as shown in Fig. 9, so that when individual tapes, one of which is identified by the numeral 49 in said Fig. 9, are severed from the web 18, the adhesive part of the individual tape will be completely covered, and the crinoline coating will be in the form of two strips, the ends of which overlie the gauze pad 13 and each other, as shown in Fig. 3.

The web 18 with the pads 13 and the protective strips 45 and 46 thereon passes over a block 51 at the end of the apparatus, and the individual tapes are severed at the edge of this block by

means of a rotary knife, generally indicated at 52 in Fig. 6.

It will be observed that the folded edges of the gauze pads 13 extend transversely of the strip or web 18 so that when said web is severed between the pads said folded edges will be disposed lengthwise of the tape thereby formed, it being apparent from Fig. 9 that the length of the tape is the width of the web. The feeding of the web and the timing of the knife 52 are so related that the web is severed mid-way between adjacent pads, thus leaving a margin on each side of the pad on the severed tape. In this manner not only are the longitudinal edges of the pad underfolded, but an area of adhesive is left at the sides as well as at the ends of the pad, thereby both preventing the unraveling of the edges, with resultant likelihood of loose threads getting into the wound or protruding beyond the edges of the tape, and also making it possible to fasten the tape down all around the pad, thus excluding all dirt and foreign matter from the wound. Inasmuch as the pads 13 are preformed and applied to the adhesive strip or web 18 individually, the difficulties involved in cutting the web with a longitudinally extending strip of folded gauze thereon (the old method) are avoided. This results in a far superior tape dressing, yet the cost of manufacture is not materially, if at all, increased.

The foregoing detailed description has been given for clearness of understanding only, and no unnecessary limitations should be understood therefrom, but the appended claims should be construed as broadly as permissible in view of the prior art.

We claim:

1. The method of making adhesive tape and gauze dressings which consists in feeding a web of adhesive-coated material past a pad-applying station, forming folded gauze pads, pressing said folded gauze pads one after another onto the adhesive-coated side of said web as the latter passes said station, and severing the web intermediate said pads to form individual tape and gauze dressings having an adhesive-coated area on all sides of the pad.

2. The method of making adhesive tape and gauze dressings which consists in feeding a web of adhesive-coated material past a pad-applying station, pressing folded gauze pads one after another onto the adhesive-coated side of said web as the latter passes said station, with the edges of the pads which extend transversely of the web being underfolded, and severing the web intermediate said pads and lengthwise of the underfolded edges thereof to form individual tape and gauze dressings having an adhesive-coated area on all sides of the pad, and with the latter having smooth, non-raveling side edges.

3. The method of making adhesive tape and gauze dressings which consists in feeding a web of adhesive-coated material past a pad-applying station, pressing folded gauze pads one after another onto the adhesive-coated side of said web as the latter passes said station, with the edges of the pads which extend transversely of the web being underfolded, applying removable protective strips over the adhesive side of the web and said pads, said strips having free edges overlying the pads, and severing the web intermediate said pads and lengthwise of the underfolded edges thereof to form individual tape and gauze dressings having an adhesive-coated area on all sides of the pad, and with the latter having smooth, non-raveling side edges.

4. The method of making adhesive tape and gauze dressings which consists in feeding a web of adhesive-coated material past a pad-applying station, feeding a strip of folded gauze to a cut-off
5 station spaced from said web, cutting said gauze strip to form individual gauze pads having underfolded side edges, transferring the severed pads to the web and pressing the same onto the adhesive-coated surface thereof with said underfolded edges

extending transversely of the web, and severing the web transversely intermediate the adjacent pads and at points spaced from the edges of the latter to form individual tape and gauze dressings having an adhesive area on all sides of the
5 pad and with the underfolded edges of the latter extending lengthwise of the tape.

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