June 14, 1949. C. L. KENNEDY ET AL 2,473,062

SURGICAL BANDAGE

Filed June 14, 1947

Fig. 1.

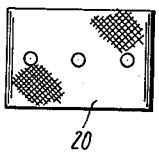


Fig. 2.

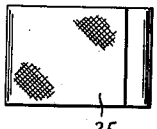


Fig. 3.

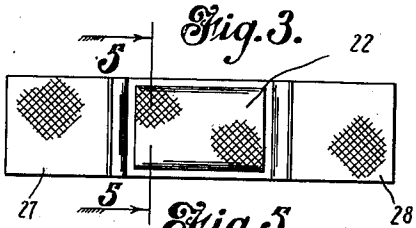


Fig. 4.

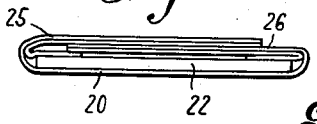


Fig. 5.

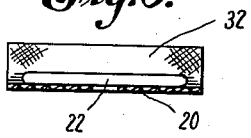


Fig. 6.

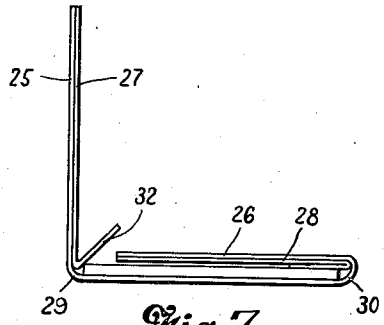


Fig. 7.



Fig. 8.

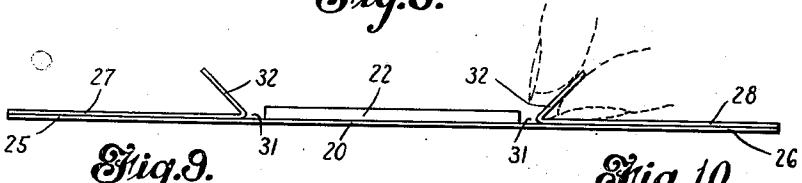
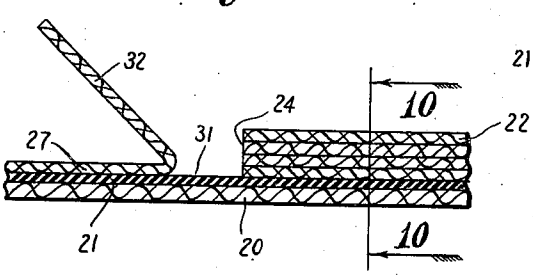
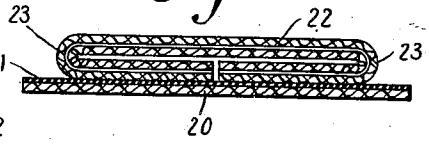


Fig. 9.

Fig. 10.





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Patented June 14, 1949

2,473,062

UNITED STATES PATENT OFFICE

2,473,062

SURGICAL BANDAGE

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Application June 14, 1947, Serial No. 754,662

2 Claims. (Cl. 128—156)

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This invention relates to surgical bandages of the type referred to as quickly applied bands or first-aid bands, where the article is in the form of a strip furnished with a pad of gauze or the like, and with a coating of adhesive material whereby the strip is adhered to the finger, toe or other part of the body.

In such bandages, that part which is to be applied over the wound, and the part carrying the adhesive coating, require protection in advance of the use of the bandage, and this is customarily supplied by protective portions of crinoline or other stiff cloth, which portions are anchored by the adhesive material and are pulled off preliminary to the application of the bandage.

It is very important in articles of this class to prevent contamination of the pad portion by contact with the person's fingers or otherwise, which contamination may take place in the operation of stripping off the crinoline layers, of which two are customarily used, the same being in overlapping relation over the pad. In stripping off the usual crinoline layers, the fingers are apt to make contact with the pad and thereby destroy its aseptic condition.

One of the objects of the present invention is to provide a bandage in which there is definitely less likelihood of the pad portion becoming contaminated in the manner above stated.

Another object is to provide a bandage in which the stripping off of the crinoline material, or equivalent material, placed over the adhesive is facilitated.

Another object is to provide a bandage in which, prior to use of the bandage, the pad is protected in an effective manner by doubled-over portions of the bandage strip.

Another object is to provide an improved bandage of the general character above mentioned.

In the accompanying drawing:

Fig. 1 is a face view of a bandage embodying the invention, showing it as it appears when removed from its protective wrapper of paper or the like;

Fig. 2 shows the opposite face of the article;

Fig. 3 shows the bandage flatwise after it has been opened up but before removing the crinoline;

Fig. 4 is an edge view of Fig. 2, the overlapped end portions of the strip being uppermost;

Fig. 5 is a section on line 5—5 of Fig. 3;

Fig. 6 is an edge view similar to Fig. 4, showing the strip partially opened;

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Fig. 7 is a view similar to Fig. 6, showing the strip opened to a further extent than Fig. 6;

Fig. 8 is a view similar to Fig. 7, showing the strip fully opened, and the start of the operation of stripping off the crinoline;

Fig. 9 is a sectional fragmentary view, showing on a larger scale certain parts illustrated in Fig. 8; and

Fig. 10 is a section on line 10—10 of Fig. 9.

The bandage shown in the drawing is of elongated shape and of a size suitable for being extended about a cut finger or the like. Generally speaking, it comprises a strip provided on one face intermediate of its ends with a pad constructed of gauze or similar material, the surface which is not covered by the pad being covered with a layer of pressure-sensitive adhesive, and the adhesive being covered over and protected by layers of crinoline or other stiff, coarse cloth. The bandage strip, as it is taken out of its enclosing wrapper or envelope of paper or the like (not shown), is in a folded condition, the ends of the strip being folded upon the body, and lying one upon the bandage and the other over and against the first, the hinges of the two folds being near the ends of the pad. The end portions or tabs of the strip which are folded over in this manner have their adhesive inner surfaces covered with crinoline, as more particularly described hereinafter. The bandage in the folded form lies quite flat, and for application to the wound requires unfolding, and removal of the crinoline.

In the drawing, the strip portion is indicated at 20, the same being made of a finely woven textile material that may be waterproofed if desired. At its inner face the strip body or textile backing is coated over with a layer 21 of a suitable pressure-sensitive adhesive. The adhesive usually contains a certain amount of rubber or rubberlike material. In this particular case the adhesive coating 21 covers the entire inner face of the backing and is used for anchoring adhesively the pad 22. The pad preferably has a number of layers, as shown in Figs. 9 and 10. The pad may have rounded side edge portions 23 spaced inwardly to a certain extent from the side edges of the backing, and the pad may have cut or squared-off ends 24 facing toward the ends of the backing strip. However, variations may be made in these respects.

The folded-over end portions of the strip are shown at 25 and 26, and the crinoline layers, applied to these portions for the purpose of covering over their adhesive surfaces, are indicated

at 27 and 28, respectively. The folding line or hinge of the portion 25 is indicated at 29, and that of the portion 26 at 30. The folding lines 29 and 30 are close to but not at the ends of the pad, there being clear spaces 31 between the ends of the pad and the adjacent crinoline layers, so that folds can be readily made in those regions. In this particular case also there are clear spaces on the backing strip along the sides of the pad, as has already been referred to in connection with the side edge portions 23 of the pad. While in this particular case the pad is held by the same adhesive layer to which the crinoline layers 27 and 28 are applied, variation may be made in this respect if desired.

The crinoline used in the layers 27 and 28 is a coarse, stiff cloth to which sizing is applied. Each of these crinoline layers extends approximately from the remote end of the strip to the folding line 29 or 30, and at or near the folding line has a relatively short reverse bend or fold, as indicated in the drawing at 32, thus providing a stiff, relatively short leaf or tab that is adapted to serve as a protection for a part of the pad when the bandage is in the folded position, and as a stripping tab when it is desired to strip off the crinoline.

In the bandage shown in the drawing, the folded condition is shown in Fig. 4, where the right-hand end portion or tab is folded over so as to cover a considerable portion of the face of the pad, a part of the crinoline tab 32 being held closely against the face of the pad, the tab 25 being superimposed upon tab 26 and the crinoline tab portion 32 being held against the face of the pad and having its tip engaged slightly under the tab portion 26. The bandage in this condition lies quite flat, the end portions being held down as a result of the pressure to which they have been subjected in the folding operation.

In opening the bandage, the left-hand end portion of the strip is first lifted, and swung over through the position shown in Fig. 6 to the position shown in Fig. 7. In this operation the crinoline portion 32 is moved out from under the opposite end portion of the strip and the portion 32 takes the position shown in Fig. 7. The right-hand end portion of the strip is then moved over to the position shown in Fig. 8, the crinoline tab portion 32 of that portion moving to the position of Fig. 8. The crinoline layers can then readily be removed one after the other, using the tabs 32, which may be readily gripped by the fingers for this purpose. Inasmuch as the crinoline tab portions are located laterally away from the ends of the pad, this operation can be readily performed without touching the pad, and the pad therefore remains in its original aseptic condition when applied to the wound.

The unfolding of the strip is sufficient in itself to move the reversely turned crinoline tabs to the position shown in Figs. 3 and 8, where these tabs have completely disengaged the end portions of the pad. It is not necessary for the hands of the operator to do this, as the crinoline tabs swing away from the pad as a result of the swinging of the strip on its hinging lines. There is, therefore, much greater likelihood of the pad retaining its sterility than in those cases where crinoline portions that are in overlapping relation to each other over the pad require removal by the fingers.

Another advantage is that in the bandage as supplied to the user the pad portion is protected by portions of the strip, while at the same time the length of the bandage is reduced and the

form of the same made more compact. As a subsidiary advantage, moreover, there is a saving in crinoline, inasmuch as the length of crinoline employed is substantially less than the length of the bandage strip. Furthermore, owing to the manner in which the inner end portions of the crinoline pieces swing to the stripping position of Fig. 8 when the strip is unfolded, the peeling off of the crinoline can be accomplished with maximum convenience.

In the improved bandage, the pieces of crinoline or other stiff cloth provide a pair of protecting elements for the adhesive coating that extends from the respective ends of the strip in an inward direction to lines that are spaced laterally from the ends of the pad, which lines are substantially coincident with the hinge lines previously mentioned, the protecting elements being provided at their inner ends with reversely turned or reversely angled stiff, outstanding tab portions used for stripping purposes, as previously explained. It is important to note, furthermore, that the tab portions or finger-grip portions, just referred to, take the reversely angled position, as shown, for example, in Fig. 8, when the textile backing strip lies flat, as shown in Fig. 8. When the bandage is in the folded condition, one of these finger grips, namely, the one upon the outermost end portion or panel 25, is held under the edge portion of the innermost end portion or panel, but the underlap is such that, when the outermost end portion is lifted, the finger-grip portion of the protecting element is pulled out from under the other end portion of the bandage. The innermost end portion of the bandage is of a length to permit this. Either end portion, when turned inwardly against the pad, has its free extremity somewhat short of the end of the pad, the distance by which the extremity of the end portion is short of the pad extremity being slightly less than the length of the finger-gripping tab on the crinoline.

The bandage is held in the flat folded condition partly owing to the presence of the adhesive coating in regions laterally beyond the side edges of the pad.

The pad can advantageously be treated with a suitable medicament.

Various changes can be made without departing from the principles of the invention or the scope of the claims.

What we claim is:

1. A bandage of the type described, comprising an adhesive-coated strip provided intermediate of its ends with a pad, the end portions of the strip adapted for folding down to an overlapping position over the face of the pad, said end portions carrying interiorly relatively stiff protective layer elements for the adhesive, each element at its end adjacent the pad having a short reversely angled outstanding tab portion free from the strip and adapted to assume its outstanding position with reference to the strip when the bandage is in unfolded position, the tab portions in the folded position of the bandage overlapping only respective small areas at the ends of the pad face, and both tab portions being released and brought to their respective outstanding positions to facilitate stripping off of said protective elements when and as the bandage is unfolded.

2. A bandage of the type described, comprising an adhesive-coated strip provided intermediate of its ends with a pad, the end portions of the strip adapted for folding down to an overlapping position over the face of the pad, said end portions

carrying interiorly relatively stiff protective layer elements for the adhesive, said elements at their ends adjacent the pad having short reversely angled outstanding tab portions free from the strip and overlying only limited end areas of the pad when the bandage is in folded position, the reversely angled tab portion pertaining to the outer end portion of the strip when in folded position extending under the free end of the other end portion to a limited extent so as to be held thereby, and both tab portions being released and brought to their respective outstanding positions to facilitate stripping off of said protective elements when and as the bandage is unfolded.

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KENNETH W. MACDONALD.

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The following references are of record in the file of this patent:

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