Sept. 2, 1941. L. T. SAWYER 2,254,915

SURGICAL DRESSING

Filed May 2, 1938

FIG. 1

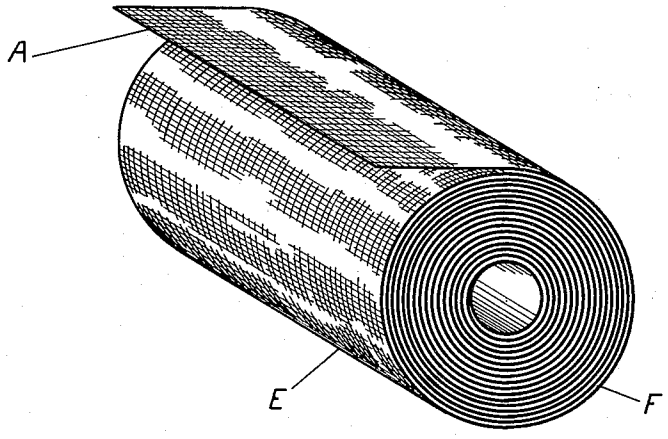


FIG. 2

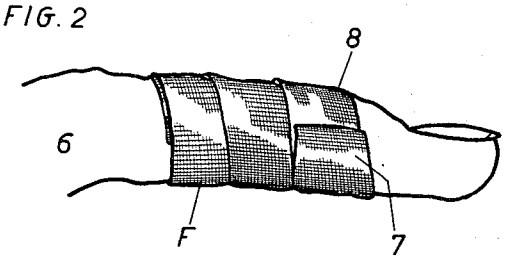


FIG. 3

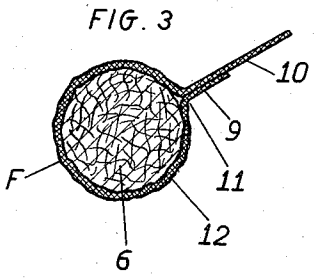


FIG. 4

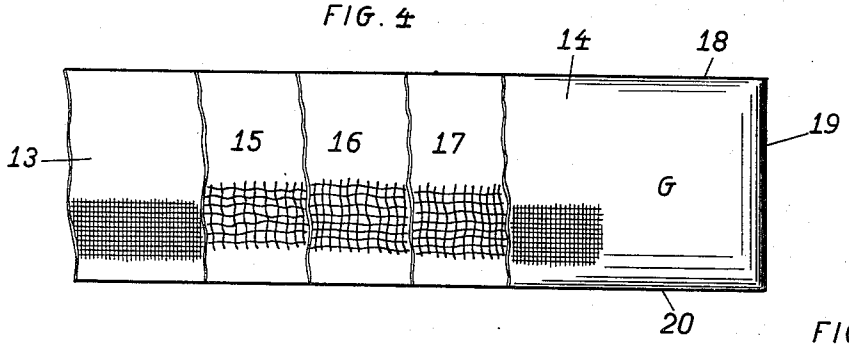


FIG. 6

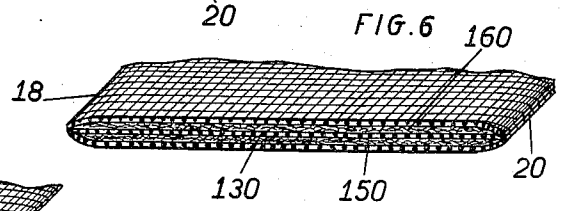
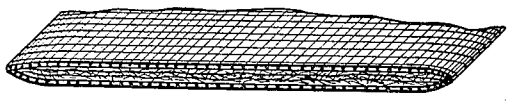


FIG. 5



INVENTOR
LESTER T. SAWYER
BY Bruce Day
ATTORNEY

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SURGICAL DRESSING

Lester T. Sawyer, Fitchburg, Mass.

Application May 2, 1938, Serial No. 205,509
In Canada May 3, 1937

1 Claim. (Cl. 128—156)

This invention relates to surgical dressings, and relates particularly to a surgical dressing made up of a plurality of layers of coherent pervious gauze fabric.

The general object of the invention is to provide a surgical dressing or compress which is easy to fix in position, economical as to both cost and quantity required to be used and capable of being removed with ease and without paining the bandaged person.

Heretofore strips of elastic raw rubber have been suggested for use in bandaging perhaps because of their capability of adhering surface to surface without adhering to the skin of the user. Objects of my invention are to provide in a surgical bandage not only the quality of adhering surface to surface without being capable of adhering to the skin of the wearer but also the quality of substantial inelasticity whereby the bandaged part may be held firmly without the necessity of being subjected to undesired constant compression from elasticity; also the quality of partial porosity; and also the quality of cost economy.

In carrying out my invention I not only employ the strength and flat lying quality of a textile fabric strip but I employ a subcoating of fixing gum-like material which closely adheres to the threads of the textile fabric strip and which in addition has the quality of fixing the quality of tackiness for a super-imposed coating of unvulcanized latex. This fixing subcoating may take any one of several forms. I have discovered that a subcoating formed by two thin sheets of vulcanized latex pressure rolled into place is suitable. I have also found that a coating of vulcanized latex in emulsion or solution from which the solvent has been removed after the coating has been applied is also suitable.

I have also found that one or more coatings all alike of raw unvulcanized latex mixed with a vulcanizing agent in not sufficient amount to vulcanize all the latex is satisfactory.

A further object is to produce individual dressing made in part of sheets of my cohesive waterproof gauze bandaging and built up with the cohesive sheets outside to enclose inner sheets of absorbent gauze.

In the drawing, Fig. 1 is a diagrammatic perspective of a roll of my bandage; Fig. 2 is a view of a finger to which my bandage has been applied; Fig. 3 is a finger illustrating the use of my bandage in a way automatically to adjust for proper tension; Fig. 4 is a plan view with parts broken away of one form of my surgical dressing; Fig. 5 is a fractional view in cross-section and partly in perspective; and Fig. 6 is a view similar to Fig. 5 showing a modification.

In preparing the dressing of my invention, preferably I first apply a sub-coating of a fixing gum-like substance which adheres firmly to the threads of the gauze base or open mesh fabric. This sub-coating must have at least two qualities. It must be both adherent to the threads of the fabric, and it must have the quality of substantial non-viscosity so as to stay on the threads and not spread and bridge across the interstices in the fabric; and in addition it must have the quality of preserving or fixing substantially permanently a stickiness or tackiness for a superimposed coating of unvulcanized latex.

Suitable sub-coatings are vulcanized latex applied either by pressing on a sheet of vulcanized latex or by spraying on or dipping on an emulsion or solution of vulcanized latex and then drying out the liquid vehicle.

I have found that instead of two different coatings I may apply one or more light coatings of unvulcanized latex containing vulcanizing agents in insufficient quantity to effect complete vulcanization so that from these one or more like coatings there is an exposed surface of unvulcanized latex rendered permanent by the closely associated vulcanized latex. Whichever process of manufacture is employed, the outer surfaces are coherent and retain their tackiness substantially indefinitely so that they readily cohere one part to another but do not have the quality of adhesion. Also the interstices in the meshes are left open by the coating so as to provide and preserve ventilating qualities for the finished strip which is shown in a roll in Fig. 1.

Figs. 2 and 3 show alternative methods of utilizing the strip F of my invention but the preferred form is shown in Figs. 4, 5 and 6.

In Figs. 4 and 5 I have illustrated a surgical dressing making use of advantageous qualities of my bandage. The entire dressing G comprises a bottom strip or sheet 13 of my latex treated cohesive waterproof gauze and a similar top sheet 14; between these outer sheets are located one or more sheets such as 15, 16 and 17 of ordinary absorbent sterilized cotton gauze or its equivalent, but preferably having coarser mesh than that of the top and bottom sheets, although sheets of any absorbent material such as paper or cotton operate.

Forceful shearing action such as that exerted by ordinary shears is applied along the terminal

edges desired, such as the edges 18, 19 and 20, to shear through all sheets of the dressing. The localized pressure of this shearing action from not too sharp shearing blades forces masses of tacky unvulcanized latex incorporated in and upon sheets 13 and 14 into cohesion one with another through and around the fibres of the absorbent fillers 15, 16 and 17 and forms an unraveling permanent dressing which has in addition to the aforementioned qualities of my bandage the power of absorbing excrements from a wound which may pass through the open mesh of the vulcanized sheets to be absorbed within the dressing, not only in the interstices but in the fiber of the layers 15, 16 and 17.

In Fig. 6 I have shown a modification which is exactly the same as that shown in Figs. 4 and 5, except that I intersperse one or more internal sheets 130 of the latex treated bandage in alternation between sheets of the now-coated absorbent material 150 and 160. In this way I may build up a surgical dressing of practically unlimited thickness and such that shearing along the edges such as 18 and 20 with sufficient pressure manipulation makes a self-sustaining unraveling dressing.

While there are above disclosed but a limited number of embodiments of the device of the invention, it is possible to produce still other embodiments without departing from the inventive concept herein disclosed and it is therefore desired that only such limitations be imposed upon the appended claim as are stated therein or required by the prior art.

What I claim and desire to secure by United States Letters Patent is:

An internally absorbent and non-adhesive surgical compress the edges of which will not ravel comprising a plurality of walls of open mesh non-absorbent rubberized cohesive gauze, which walls include the outer walls of said compress; one or more internal sheets of absorbent material; and provisions for closing the compress along its outer wall edges exposing externally solely said non-absorbent walls.

LESTER T. SAWYER.