June 11, 1946. E. SINGER 2,401,841

ADHESIVE TAPE DISPENSER

Filed Dec. 1, 1943

Fig. 1.

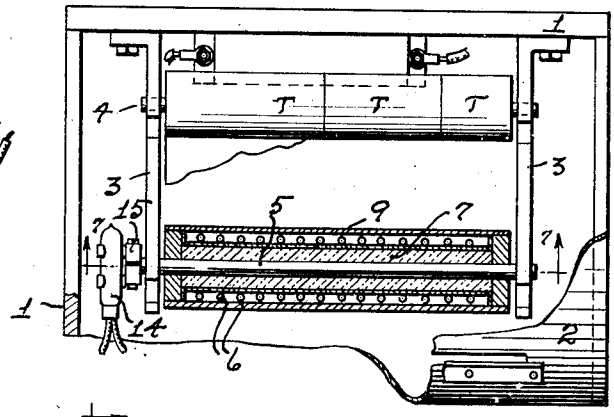


Fig. 4.

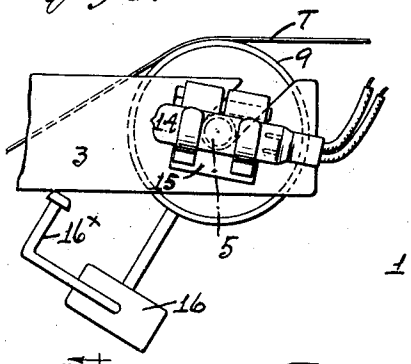
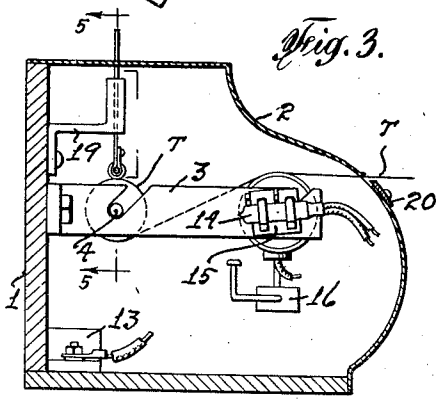


Fig. 3.



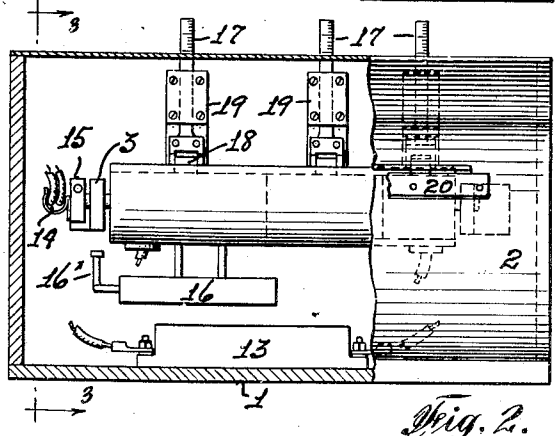


Fig. 2.

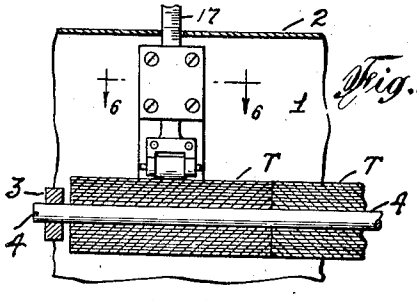


Fig. 5.

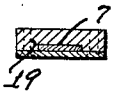


Fig. 6.

Fig. 7.

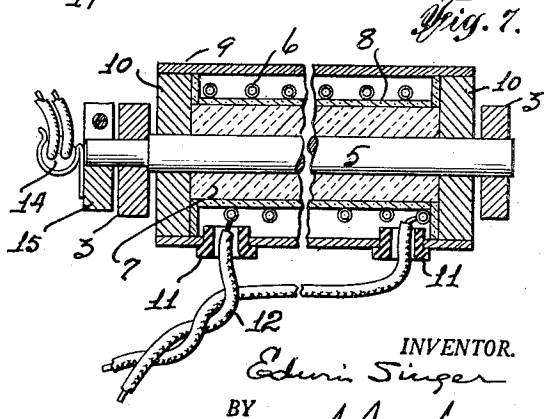
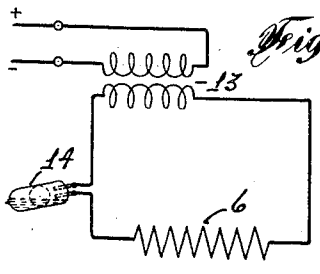


Fig. 8.



INVENTOR.
Edwin Singer
BY
W. Lee Helms
ATTORNEY

Patented June 11, 1946

2,401,841

UNITED STATES PATENT OFFICE

2,401,841

ADHESIVE TAPE DISPENSER

Edwin Singer, Brooklyn, N. Y.

Application December 1, 1943, Serial No. 512,438

3 Claims. (Cl. 219—19)

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The object of the present invention is to provide a simple and effective device for holding adhesive tape, particularly long-rolled lengths used in hospitals, and for automatically heating the tape as it is pulled out of the device, so that the tape may be more readily prepared for immediate use.

Invention will be described with reference to the accompanying drawing, in which—

Fig. 1 is a plan view showing an embodiment of the invention partly broken away.

Fig. 2 is a front elevation, partly broken away.

Fig. 3 is a sectional elevation extending transversely on the line 3—3, Fig. 2.

Fig. 4 is an enlarged fragmentary end view of the heating roller showing the mercury switch, and stop device.

Fig. 5 is a fragmentary view and elevation, partly in section, showing a roll of adhesive tape adjacent a second roll, and the lower part of a gauge rod-device.

Fig. 6 is a fragmentary horizontal cross-section, on the line 6—6, Fig. 5.

Fig. 7 is a longitudinal cross-section through the heating cylinder, the latter being broken away at its central area.

Fig. 8 is a wiring diagram.

Referring to the drawing, I have shown at 1 a casing which may have a removable front and top member 2 preferably of transparent plastic and slotted for passage of the adhesive tape T.

Secured to the back wall of the casing, are spaced bracket arms 3 formed with slots to receive a carrying shaft 4 upon which a roll or rolls of the adhesive tape are mounted.

At the front ends of the bracket arms 3, the latter are apertured or slotted to receive the shaft 5 of the heating roller. This heating roller is heated by means of a coil 6 of resistance wire. The core of the roller consists of a tube-like member 7 of non-conducting material of any suitable kind, or it may be of conducting material wrapped with a sheet 8 of non-conducting material. The facing of the heating roller, indicated at 9, is of a material which will freely conduct heat, and it is in the form of a sleeve internally supported at its ends by disks 10.

The facing 9 of the heating roller receives apertured nipples 11 through which the conducting wires 12 are led to the coil 6, as shown in Fig. 7.

Within the casing is an electrical resistance device 13, and the current from the resistance device to the heating coil 6 is normally broken

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by a mercury bulb switch 14, the latter being mounted on the shaft of the heating roller by bracket device 15 as shown more particularly in Figs. 4 and 7. The heating roller is fixed to shaft 5, and the rotation of the roller is limited by a stop device 16.

When a length of adhesive tape is drawn off the roll thereof mounted on shaft 4, the contact with the tape with the heating roller will partially rotate the roller until arms 16x of the stop device contacts with one of the bracket arms 3. This movement will throw the mercury bulb switch to circuit closing position and current will flow through the coil 6 with the result that heat will be transmitted to the adhesive tape, the latter having its adhesive face uppermost and not in contact with the roller. Continued movement of the tape will cause it to slide over the heating roller and in such movement to receive heat from the roller.

In the initial operation of the device, the user may give a slight movement to the projecting tape sufficient to close the switch, and hold the tape in such position for very such short interval of time as to enable full passage of heat outwardly from coil 6, whereupon the tape may be pulled out to the required length.

My tape holding, heating and dispensing device is particularly desirable for enabling ready bandaging after surgery and in all cases where it is desirable that the adhesive be heated and the tape made ready for instant use. Important factor of my invention is that a tape may be employed having a relatively non-tacky characteristic at ordinary room temperatures so that it may be unrolled without resistance from the adherence of convolutions of the tape, the required tacky characteristic being imparted to the adhesive face of the tape only after it has been pulled from the convolutions of the roll.

The top of the cover member 2 is formed with a plurality of apertures to receive gauge rods 17, the rods at the lower ends carrying rollers 18, adapted to contact with the upper sections of the tape rolls. These gauge rods are slidingly mounted in holding brackets 19 carried by the rear wall of the casing. The front of the casing carries a cutter blade 20 by means of which a length of tape may readily be severed.

Having described my invention, what I claim and desire to secure by Letters Patent is as follows:

1. A dispensing holder for adhesive tape of the type having one or a plurality of rolls of adhesive tape and means for holding the same for rota-

tion, said dispensing holder being provided with a heating device over which the tape may be drawn, said heating device comprising a roller inclosing an electrical resistance core and a switch controlling the current to said resistance core, said roller being rotatable by the tape and said rotation of the roller being the switch-closing movement.

2. A dispensing holder for adhesive tape of the type having one or a plurality of rolls of adhesive tape and means for holding the same for rotation, said dispensing holder being provided with a heating device over which the tape may be drawn, said heating device comprising a roller inclosing an electrical resistance core and a switch controlling the current to said resistance core, said roller being rotatable by the tape, the

latter lying in contact therewith, and said switch device comprising a mercury-bulb carried by the roller.

3. A dispensing holder for adhesive tape of the type having one or a plurality of rolls of adhesive tape and means for holding the same for rotation, said dispensing holder being provided with a heating device over which the tape may be drawn, said heating device comprising a roller enclosing an electrical resistance core and a switch controlling the current to said resistance core, said switch comprising a mercury-bulb carried by the roller and said roller being rotatable by the tape and said rotation of the roller being the switch-closing movement.

EDWIN SINGER.