

March 1, 1949.

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2,463,285

APPLICATOR AND DISPENSER

Filed April 14, 1945

2 Sheets-Sheet 1

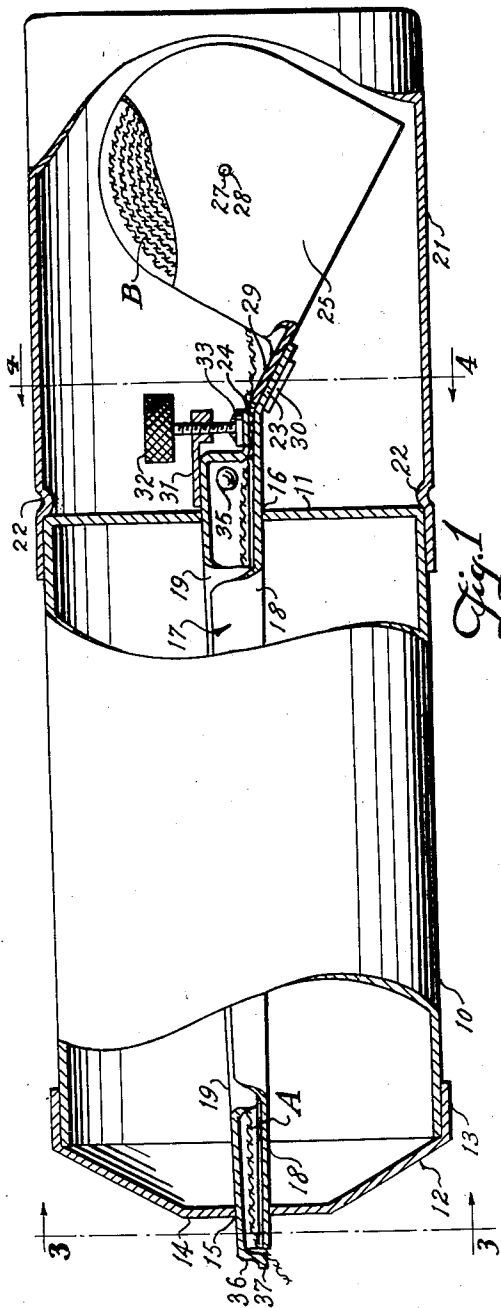


Fig. 1

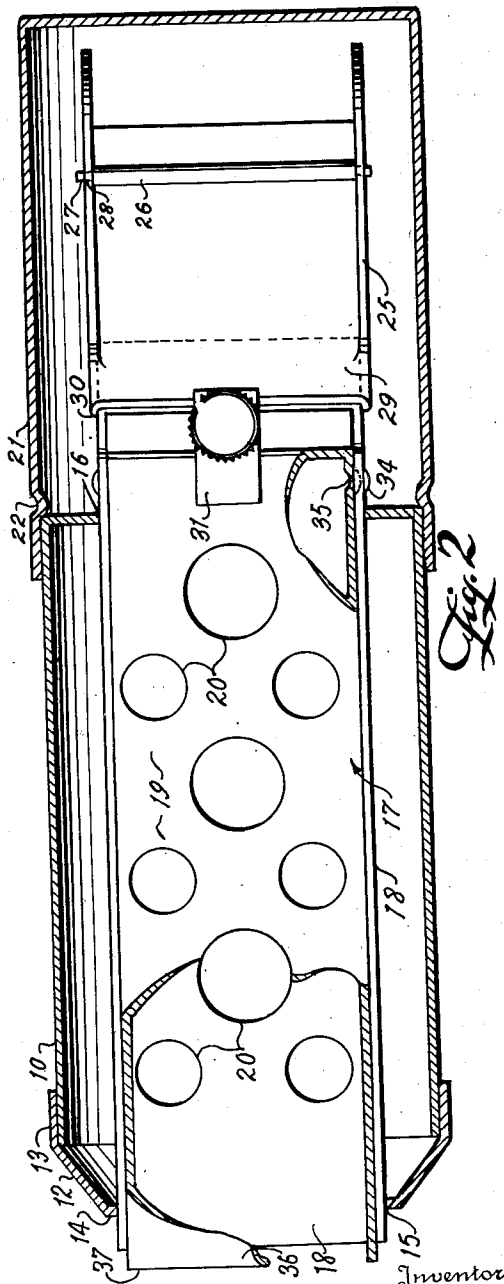


Fig. 2

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2 Sheets-Sheet 2

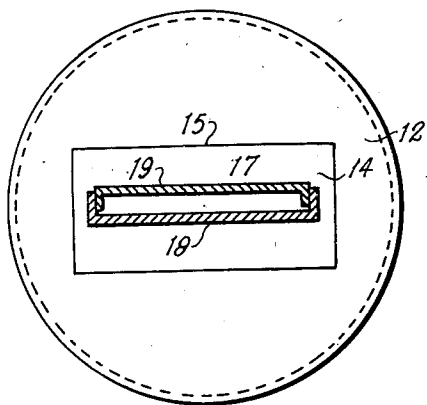


Fig. 3

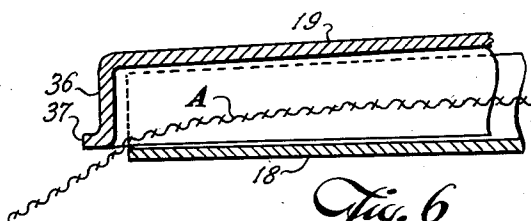


Fig. 6

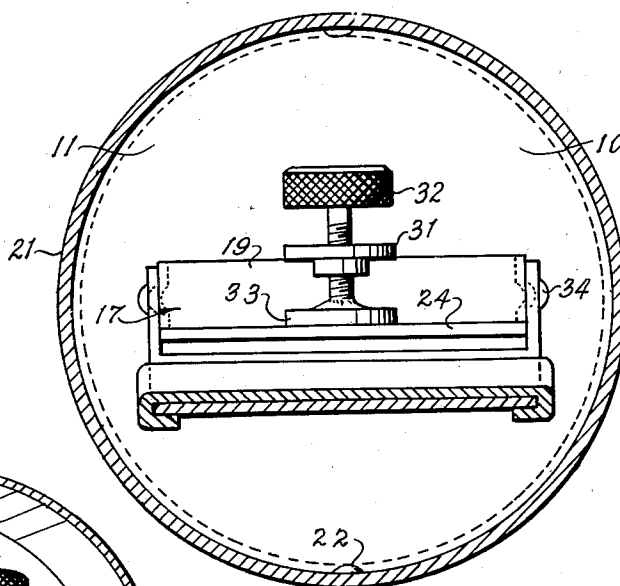


Fig. 4

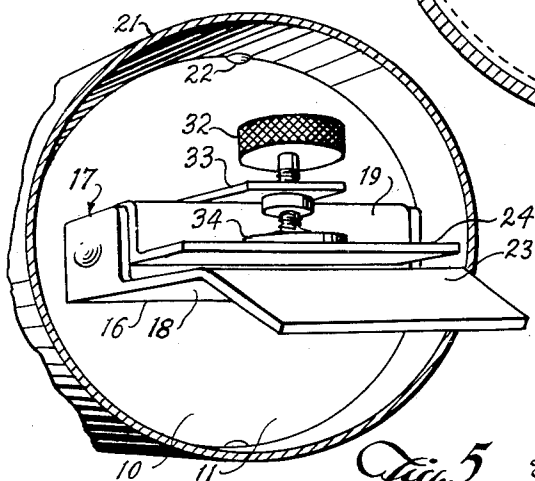


Fig. 5

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APPLICATOR AND DISPENSER

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13 Claims. (Cl. 91—62.5)

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This invention relates to new and useful improvements in applicators and dispensers.

One object of the invention is to provide an improved device for applying a liquid plastic material to medical gauze to produce strips for making casts and splints and dispensing such strips.

A particular object of the invention is to provide a portable and simple applicator and dispenser for cast and splint strips, which may be made relatively small, so as to be readily and expeditiously handled without waste or mess.

A further object of the invention is to provide an applicator and dispenser including an applicator container, in which the liquid plastic may be placed and a separate compartment, in which a roll of gauze may be mounted and a strip of gauze therefrom, drawn through the container for saturating and coating said gauze in a simple, sanitary and expeditious manner.

Another object of the invention is to provide a device of the character described wherein the strip of gauze passes through a guide removably mounted and extending through the plastic container, whereby said guide may be withdrawn for cleaning as well as for leading the strip of gauze therethrough.

Still another object of the invention is to provide a holder for a roll of gauze adapted to be detachably connected with the guide, together with means for controlling the feed of the strip of gauze to the guide.

A construction designed to carry out the invention will be hereinafter described together with other features of the invention.

The invention will be more readily understood from a reading of the following specifications and by reference to the accompanying drawings, wherein an example of the invention is shown, and wherein:

Figure 1 is a side view of an applicator and dispenser constructed in accordance with the invention, partly in elevation and partly in section,

Figure 2 is a horizontal sectional view of the same,

Figure 3 is a view taken along the line 3—3 of Fig. 1,

Figure 4 is a transverse sectional view taken on the line 4—4 of Figure 1,

Figure 5 is a detailed perspective view of the pressure regulator, and

Figure 6 is an enlarged sectional view of the dispensing end of the guide.

In the drawings, the numeral 10 designates a cylindrical container having a closure or plate 11 at its rear end which may be made integral with

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the container or separate therefrom and suitably secured thereto. The forward end of the container is open and adapted to be closed by a truncated cap 12 having an annular flange 13 which is frictionally engaged around the open end of said container. The cap has a rectangular flat panel 14 provided with a slot 15 extending diametrically of the cap.

The end plate 11 is provided with a diametrical slot 16, aligned longitudinally of the container with the slot 15. A wedge-shaped guide or support 17 is inserted through the slot 16, pushed through the container and slot 15, so as to extend a short distance beyond the panel 14 at the front end of the container. Owing to the wedge shape of the guide it is frictionally held in the slots and may be removed rearwardly from the container. The guide is composed of two elongate members 18 and 19, which are channel shape in cross section, the lower member 18 being slightly greater in width than the upper member 19, so as to receive the latter. The members 18 and 19 are provided with complementary holes 20, some of which may be larger than others, as is indicated in the drawings. When the container 10 is filled with the liquid to a level above the guide 17, such liquid will pass through the openings and saturate and coat the strip of gauze A extending through the guide. The guide is made wide enough to permit free passage of the strip of gauze therethrough.

An elongate cylindrical bonnet or receptacle 21 is open at its forward end so that the rear end of the container 10 may be inserted or telescoped therinto. The bonnet is provided with stops 22 which limit the insertion of the container into the bonnet.

The lower member 18 of the guide 17 has its rear end extended and bent downwardly to provide an inclined tongue 23; while the rear end of the upper member 19 is bent downwardly and rearwardly to form a transverse lip 24, overhanging the extended portion of the bottom member 18 and also forming a closure for the rear end of the guide.

A holder or magazine 25 for a roll of medical gauze is removably mounted in the bonnet. This holder is U-shaped in cross section and is made of light-weight spring metal so that its sides may be sprung apart for the insertion and removal of a transverse shaft 26. This shaft is provided with reduced trunnions 27 which engage in apertures 28 in the sides of the magazine. The flat bottom of the magazine is formed with a forwardly extending transverse extension 29, which

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is provided at each side with depending and inwardly bent clips 30, whereby a slip socket is formed for receiving the tongue 23 of the guide. In this manner the magazine is removably supported on the rear end of the guide and disposed at an inclination, whereby the shaft 26 is horizontally aligned with the guide 17.

A roll of medical gauze B is supported on the shaft so as to be unwound from the bottom, passed over the extension 29 and then between the lip 24 and the flat bottom of the member 18 to provide the strip A, which extends from the forward end of the guide and may be pulled therethrough. A bracket plate 31 is fastened on the rear end of the guide member 19 so as to overhang the lip 24. A thumb screw 32 is screwed-threaded through this bracket and has a disk head 33 on its lower end bearing on said lip. The lip is made of resilient metal so that by adjusting the screw, pressure may be applied upon the strip of gauze passing under said lip and this pressure varied by adjusting said screw.

It will be noted that the guide 17 and the magazine 25 are connected as a unit by reason of the engagement of the clips 30 with the tongue 23. By removing the bonnet 21 from the container 10, the magazine and the guide are made accessible and may be removed as a unit. For convenience in opening the guide, the upright sides of the member 18 are provided with indentations 34 at their rear ends, which are engaged by dimples 35 in the depending sides of the member 19, whereby said members are detachably connected and may be separated to open the guide. It will be observed that the forward end of the upper guide member 19 is bent downwardly to form transverse flange 36 and then bent forwardly to form a transverse lip 37. By this arrangement the opening at the front end of the guide, through which the strip of gauze A is dispensed, is reduced in height and thus, the lip 37 co-acting with the front edge of the lower member 18 provides a stripper, whereby the strip is pulled from the guide, surplus coating material is stripped therefrom. The forward edge of the lip may also be used as a support in tearing off the gauze. By varying the distance between the lip 37 and the forward edge of the member 18 the thickness of the coating applied to the gauze may be regulated. It is pointed out that by reason of the transverse closures at each end of the guide, a surplus of plastic material is prevented from escaping.

In using the device the roll of medical gauze B is inserted in the magazine 25 and unrolled from the bottom. The upper member 19 of the guide 17 is removed and the gauze pulled forwardly in the lower member 18 of the guide so as to extend from the front end thereof. The upper member 19 of the guide is then telescoped onto the lower member until the dimples 35 engage in the indentations 34. The guide is then inserted through the slot 16 in the plate 11 of the container 10 and the bonnet 21 placed on the container. Before the bonnet is placed on the container the thumb screw 32 may be adjusted to depress the lip 24 and place the desired pressure on the gauze strip.

The cap 12 having been removed, the container is turned to an upright position and enough plastic material deposited therein so that when the container is turned back to a horizontal position, the level of the plastic material will stand well above the guide 17. Owing to the frictional engagement of the guide 17, in the slot

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16, said guide will remain in position during the filling operation. When the container has been filled the cap 12 is replaced with the guide extending through the slot 15. The device is then turned to a horizontal position. The openings 20 will permit the plastic material to pass through the gauze as well as to flow between the guide members 18 and 19. The operator holds the container in one hand and pulls the strip of gauze A forwardly with the other hand until the desired length has been dispensed, whereupon the strip is torn off or cut across the lip 37. Any liquid plastic material suitable for making casts and splints may be employed.

The foregoing description of the invention is explanatory thereof and various changes in the size, shape and materials, as well as in the details of the illustrated construction may be made, within the scope of the appended claims, without departing from the spirit of the invention.

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

1. As a sub-combination in an applicator and dispenser, a guide including elongate separable members adapted to receive and guide a strip of gauze therebetween, said members each having openings spaced throughout the major portion of its length for admitting a fluent material thereto.

2. An applicator and dispenser including, a container for holding a fluent mixture having openings in opposite end walls, and an elongate guide extending through said container having openings for admitting said admixture and removably engaging in the opening thereof.

3. An applicator and dispenser including, a container for holding a fluent mixture having openings in opposite walls, an elongate guide extending through said container having openings for admitting said admixture and removably engaging in the openings thereof, and means exterior of the container for supplying a strip of gauze through the guide.

4. An applicator and dispenser including, a container adapted to hold a mixture for making surgical casts and splints and having slots in opposite walls, an elongate gauze guide extending across said container and through said slots, a bonnet detachably connected to said container, and a gauze magazine in said bonnet connected with said guide.

5. A medical plastic applicator and dispenser including, a portable container adapted to hold a body of fluent medical plastic, and a guide for a strip of fabric extending through the container and located to be immersed in the body of fluent medical plastic, said guide having openings intermediate its ends of such size as to admit fluent medical plastic to both sides of the fabric, whereby said strip is entirely coated with the plastic when moved through the guide.

6. An applicator and dispenser for coating both sides of a flexible strip and dispensing the coated strip including, a container adapted to hold a body of coating liquid, an elongate guide for the strip extending through the container and located to be immersed in the body of coating liquid, said guide having openings for admitting the coating liquid to the strip.

7. An applicator and dispenser as set forth in claim 6, with a support at one end for a roll of flexible strip material, and a bonnet completely enclosing the support and having one end open for removably embracing one end of the container.

8. An applicator and dispenser as set forth in

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claim 6, with a support at one end for a roll of flexible strip material, and a member connecting the support with the guide for conducting the strip from the roll to the guide.

9. An applicator for applying plastic coating to both sides of a strip of gauze and dispensing the coated strip including, a container adapted to hold a body of fluent plastic material, a guide for a strip of gauze extending through the container intermediate the top and bottom of said container and having openings communicating with said container for admitting a fluent plastic to said guide, and means for supplying a strip of gauze to the guide.

10. An applicator and dispenser as set forth in claim 9, with means carried by the guide for regulating the supply of gauze thereto.

11. An applicator and dispenser as set forth in claim 9, with a bonnet for enclosing the gauze supplying means detachably connected to the container.

12. As a sub-combination in a fluent plastic applicator and dispenser, an elongate independent guide including overlying interengaging members having a longitudinal passage therebetween, one of which members is movable from the other member, said members having a plurality of spaced openings therein disposed along their lengths above and below said passage, and a sup-

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port attached to one end of said guide for a roll of gauze.

13. As a sub-combination in a fluent plastic applicator and dispenser, an elongate independent guide including overlying interengaging members having a longitudinal passage therebetween, one of which members is movable from the other member, said members having a plurality of spaced openings therein disposed along their lengths above and below said passage, and a support attached to one end of said guide for a roll of gauze, one of said members having a transverse lip at its end opposite the support overhanging the edge of the other member.

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REFERENCES CITED

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

UNITED STATES PATENTS

Number	Name	Date
1,003,267	Jones -----	Sept. 12, 1911
1,118,163	Tuttle -----	Nov. 24, 1914
1,537,667	Golden et al. -----	May 12, 1925
1,900,121	Manvell -----	Mar. 7, 1933
2,031,597	Gray -----	Feb. 25, 1936
2,198,519	Tarr -----	Apr. 23, 1940
2,334,458	Van Tutyl -----	Nov. 16, 1943