Dec. 17, 1957 J. D. SCHULTZ 2,816,308

GLUE DISPENSER AND APPLICATOR

Filed July 6, 1956

Fig. 1

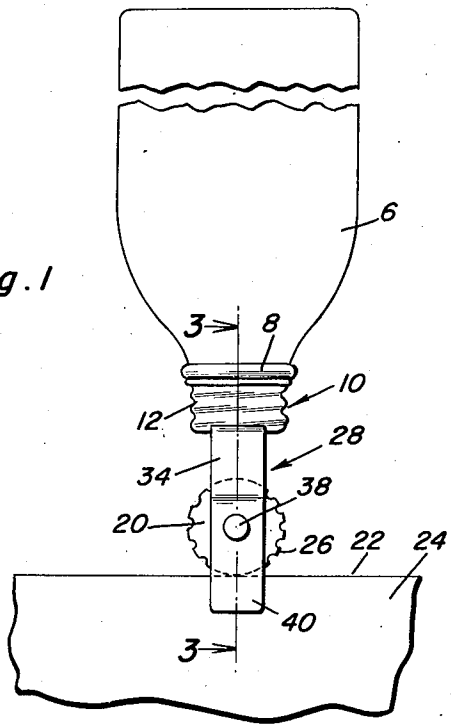

Fig. 2

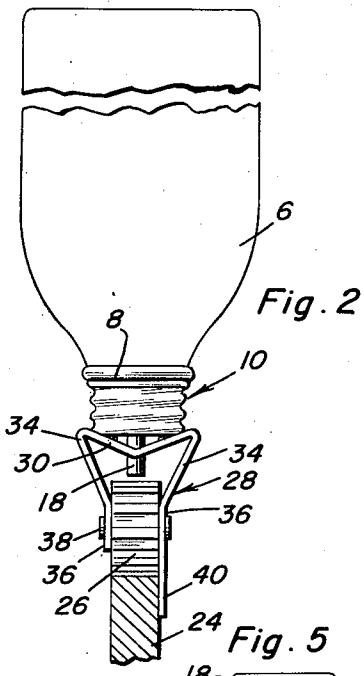

Fig. 3

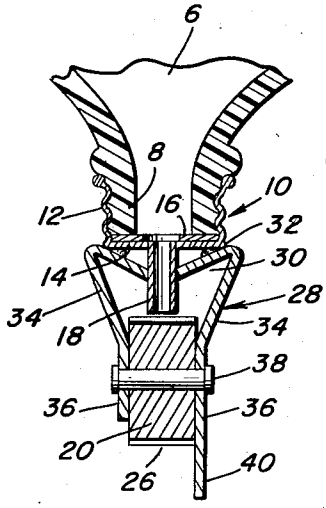

Fig. 4

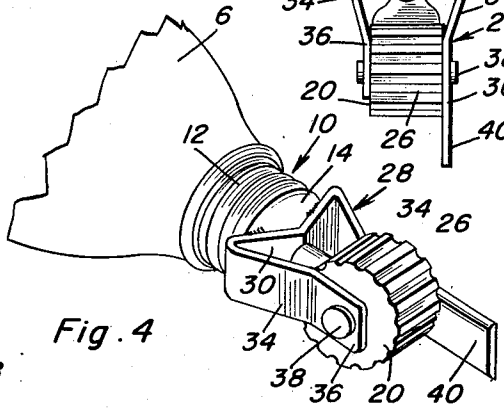

Fig. 5

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GLUE DISPENSER AND APPLICATOR

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2 Claims. (Cl. 15—131.05)

The present invention relates to certain new and useful improvements in novel material dispensing and applicator means and has reference, in particular, to a glue or an equivalent bottle or container having a discharge neck carrying the stated dispensing and applicator means.

The invention has to do with furniture manufacturing, generally speaking, where workmen usually apply the glue to connectible furniture parts by way of their fingers. It is common knowledge that this practice not only promotes a loss of valuable time but is a procedure where slivers and splinters on the often rough-edged parts injure the fingers. It follows, therefore, that it is an object of the instant invention to reduce the loss of man hours from finger injuries, to save time and expense, and to simplify and make more efficient the glue applying step.

To be sure, spreaders and applicators for glue and the like dispensed from bottles, tubes and containers are not new. Therefore, it is another object of the invention to structurally, functionally, and otherwise improve upon similarly made and performing prior art adaptations and, in so doing, to provide workmen with a practical, simple and economical glue bottle attachment which effectually serves the purposes for which it is intended.

In carrying out a preferred embodiment of the invention a simple and expedient screw cap is used. This is provided centrally with a feeder tube, with or without a nozzle. A freely turnable applicator and glue distributing roller is situated at the discharge end of said tube and is bracketed by a novel fixture on the cap.

Novelty is predicated on the specific construction of the fixture in that it is generally U-shaped, is provided with a V-shaped bight portion which embraces and stabilizes the feeder tube and has at least one of its arms formed with an extension providing a guide finger which rides against a cooperating surface of the workpiece being acted on.

Other objects, features and advantages will become more readily apparent from the following description and the accompanying sheet of drawings.

In the drawings, wherein like numerals are employed to designate like parts throughout the views:

Fig. 1 is an elevational view illustrating the invention, showing how it is constructed and how it is used;

Fig. 2 is a similar elevational view taken at right angles to Fig. 1;

Fig. 3 is a section on the vertical line 3—3 of Fig. 1;

Fig. 4 is a perspective view adequately illustrating the construction and arrangement of components which go to make up the over-all dispenser and applicator; and

Fig. 5 is an elevational view of what may be called the attachment per se and in which the feeder tube has a nozzle-end.

It will be obvious that the "container" may vary in construction. It may be a collapsible or squeezable tube (not shown) or a simple bottle 6 as shown. The product contained in the bottle will also vary. For purposes of simplification and presentation it is to be assumed that we are here concerned with a glue containing bottle.

This has a restricted discharge neck 8 as seen in Fig. 3 to accommodate a readily applicable and removable cap 10. The cap has a screw-threaded rim 12 screwed on the neck and a centrally apertured disk portion 14. The numeral 16 designates a washer interposed between the neck and the cap and 18 denotes the aforementioned feeder tube. This is a short open tube which registers with the discharge port in the cap and is preferably integrally connected therewith.

The aforementioned applicator takes the form of a simple roller of appropriate material and size. This is preferably a solid metal roller 20 which rolls the glue on the edge 22 of the furniture part or workpiece 24 in the manner shown in Figs. 1 and 2. The periphery or tread of the roller is roughened. It may be milled in one of many ways, that is, knurled or otherwise constructed. It is here shown as corrugated or fluted as at 26. This provides the desired applicator, spreader and traction surface. The roller is located so that the discharge end of the tube 18 delivers the glue to the surface so that it may be rolled on. The roller is bracketed to the cap 10. This is preferably accomplished by way of a fixture 28. The fixture, in turn, is preferably formed from strap metal which is bent upon itself between its ends to form a U-shaped member or yoke including a bight portion 30 and opposed laterally disposed arms or limbs. The bight portion is centrally apertured and the tube 18 passes through the aperture and thus the tube is braced and stabilized. Also, this V-shaped formation provides a satisfactory seat to accommodate the screw cap 10 permitting the cap to be welded or otherwise secured to the bight portion as at 32. This provides a clearance between the parts so that one can ascertain if the tube 18 is loose or leaky at its junctural connection with th cap. It will be noted, too, that the bight may be said to be longer than the diameter of the disk portion 14 thus providing a more satisfactory junctional connection between the bight portion and cap. The upper portions of the limbs or arms are inclined or converge toward the sides of the roller as shown at 34. Then the arms are disposed in spaced parallelism at 36 where they straddle the roller. These portions are provided with openings to accommodate an axle pin 38. The pin may roll in the opening or it may be fixed in the bearing openings to provide a satisfactory support and turning point for the freely rotatable roller 20. Or to put it otherwise, the roller may be fixed on the pin and the pin may have its ends journaled in the bearing holes in the portions 36. The arm to the right in Fig. 3 is longer than the other arm and therefore includes an extension 40 projecting well beyond the periphery or tread of the roller and functioning as a guide finger in the manner shown to advantage in Figs. 1 and 2.

The glue bottle is preferably of a squeeze type so that the glue can be expressed on the tread of the roller by way of the cap and feed tube 18, in an obvious manner. Then by rolling the roller along the edge 22 and keeping the finger 40 in contact with the flat surface of the workpiece the glue may be dispensed, applied and satisfactorily spread in an obvious and efficient manner.

It will be noticed that this roller is fairly well exposed because the width of the flat members forming the yoke is proportional to the size of the roller and therefore the roller is not sheathed or housed in some close fitting head or part which may cause it to jam or which keeps it from being clearly visible at all times. Here one may see exactly what is happening and this open construction is therefore highly desirable. Not only this, it allows the sides of the roller which may become covered with glue to be scraped and cleaned to prevent the roller from sticking, that is, sticking between the fixture arms.

The foregoing is considered as illustrative only of the

principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A material dispenser and applicator comprising, in combination, a material container having a discharge neck, a cap removably mounted on said neck and having a discharge orifice axially aligned with said neck, a material applying, spreading and distributing roller having a peripherally milled traction surface designed to roll along the surface being treated, a fixture secured to said cap in cooperative relationship, said roller being mounted for free rotation on said fixture, said roller being substantially exposed and, for the most part, visible, and a material feeding tube having its intake end communicatively joined to the cap by way of said orifice, the discharge end of said tube being focused to deliver said material on said traction surface, and a portion of said fixture having connection with said tube and serving to brace and stabilize said tube, said tube having its discharge end flattened and widened and defining a material spreading nozzle disposed in close proximity to the periphery of said roller, and said fixture embodying arms between which said roller is journaled for rotation, one arm having an extending terminal portion projecting beyond the periphery of said roller and constituting a guide finger.

2. An applicator attachment for a glue bottle or the like comprising a substantially U-shaped fixture formed from flat strap material and embodying a bight portion and opposed lateral arms having parallel portions carrying and bridged by an axle, an applicator roller mounted for free rotation on said axle and situated between said parallel portions, the free end portion of one of said arms projecting beyond the periphery of said roller and serving as a work contacting and roller guide finger, and means whereby said fixture may be operatively connected with said bottle, said means embodying a cap fastened to said bight portion, said cap having a feeder tube passing through an aperture in said bight portion and said bight portion being V-shaped in edge elevation, and the portions of said arms adjacent to said bight portion being spaced well away from diametrically opposite sides of said tube and converging toward the respective opposite sides of said roller.

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