

[54] **PAINT AND ADHESIVE APPLICATOR**
 [75] Inventor: **Leonard C. Mule**, Garfield, N.J.
 [73] Assignees: **Charles Fisher**, Fairlawn; **Peter J. Cossman**, Denville; **Linda Rembish**, Lake Stockholm, all of, N.J.

3,334,792	8/1967	DeVines	222/289
3,349,971	10/1967	Poletajev	222/191
3,363,279	1/1968	Bright	15/541
3,372,975	3/1968	Johnson	401/183
3,495,530	2/1970	Glenn et al.	101/131
3,459,483	8/1969	Brastad	401/198 X
1,761,499	6/1930	Sommerfield.....	401/198

[22] Filed: **May 8, 1972**

[21] Appl. No.: **251,322**

FOREIGN PATENTS OR APPLICATIONS

499,903	1/1939	England.....	401/198
526,736	8/1957	Italy.....	401/199
519,104	3/1953	Italy.....	401/198

[52] U.S. Cl. **222/187, 401/198**
 [51] Int. Cl. **B67d 3/00**
 [58] Field of Search..... 239/601, 538, 540;
 401/198, 199, 48, 54, 88, 118, 119, 123,
 130, 139, 183, 193, 196, 207, 261, 292;
 222/189, 187, 153, 402.1

Primary Examiner—Stanley H. Tollberg
Assistant Examiner—Norman L. Stack, Jr.

[56] **References Cited**

UNITED STATES PATENTS

219,505	9/1879	O'Neill.....	239/540
3,463,597	8/1969	Wakai.....	401/198
1,252,121	1/1918	Jacobs	194/DIG. 13
3,003,184	10/1961	Rosenthal.....	15/581

[57] **ABSTRACT**

An applicator for applying paints or adhesives to a surface in various width stripes includes a guide member and a dispensing element. Different width stripes are obtained by positioning the external surfaces of the dispensing element in predetermined spatial relationships relative to the edges of the guide member.

6 Claims, 3 Drawing Figures

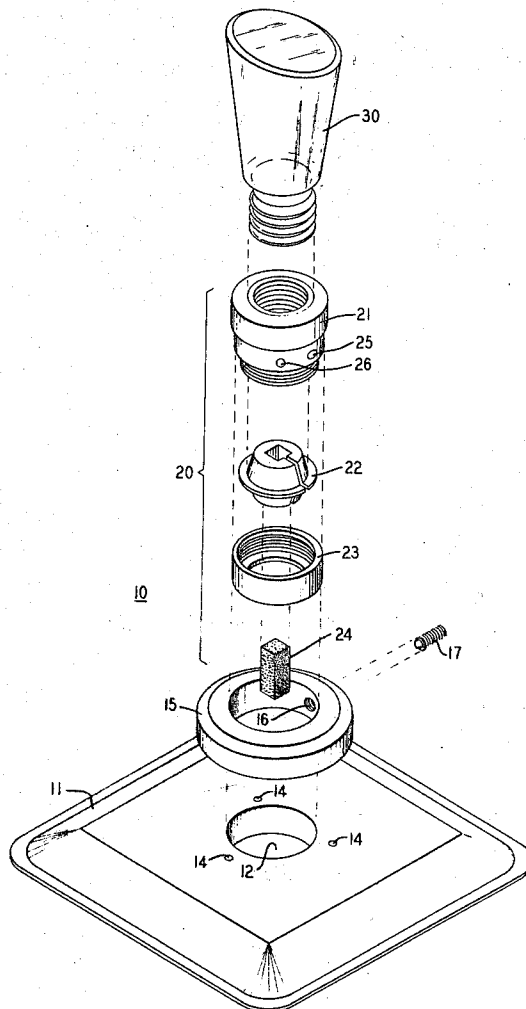


FIG. 1

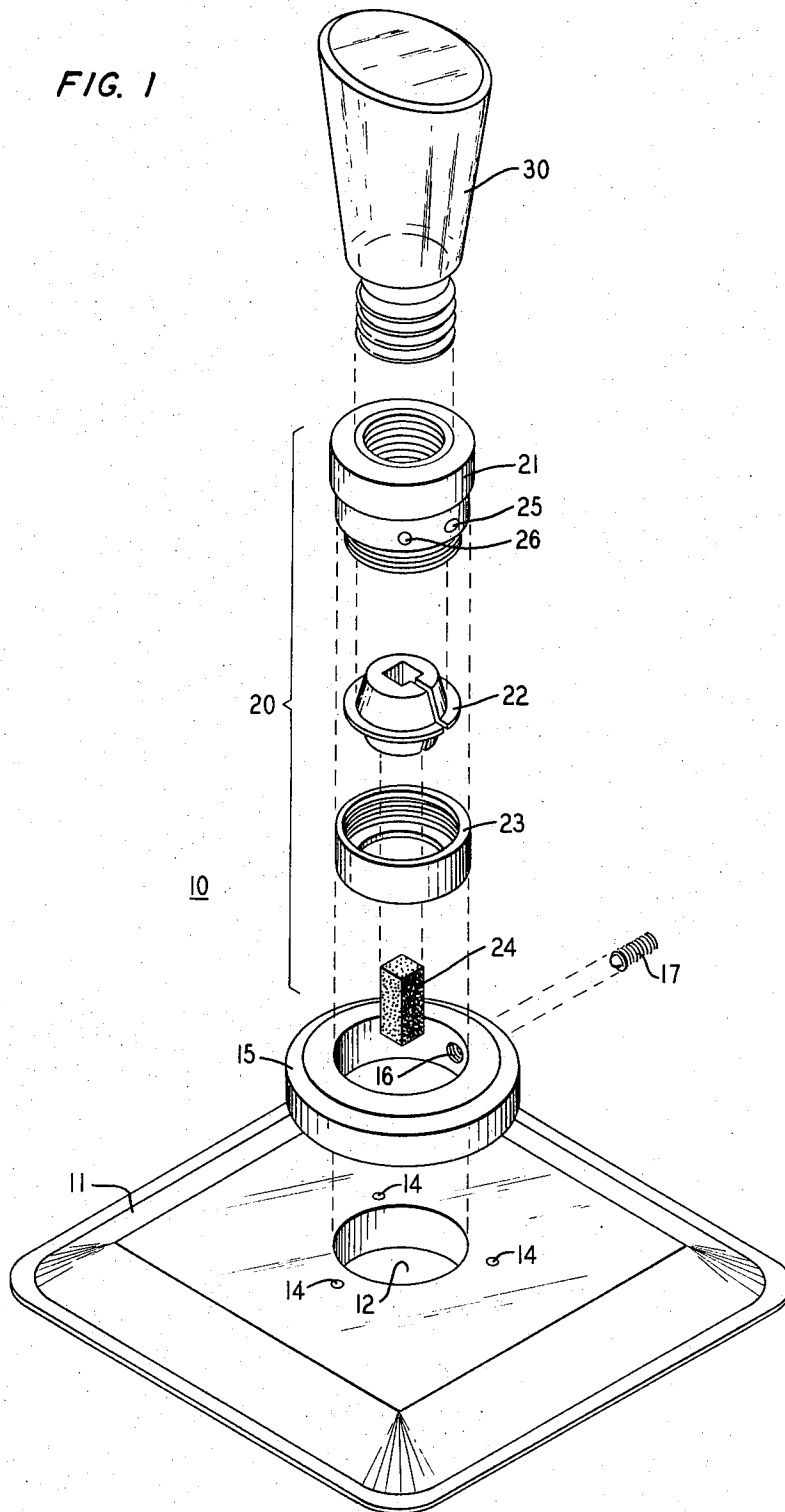


FIG. 2

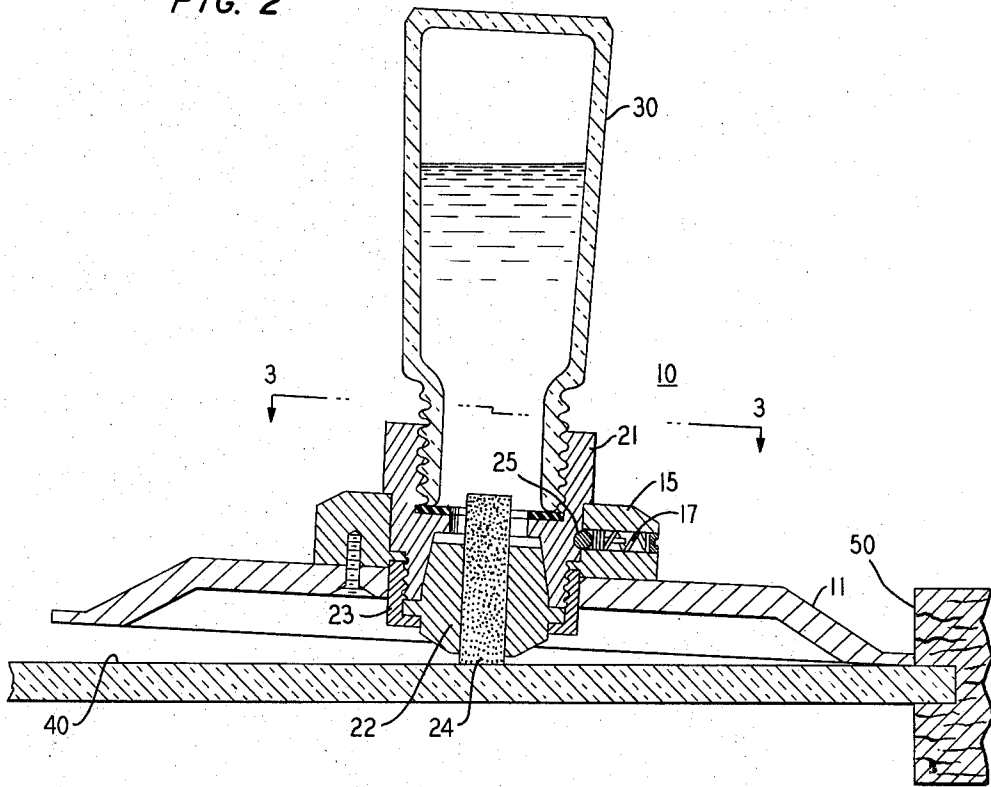
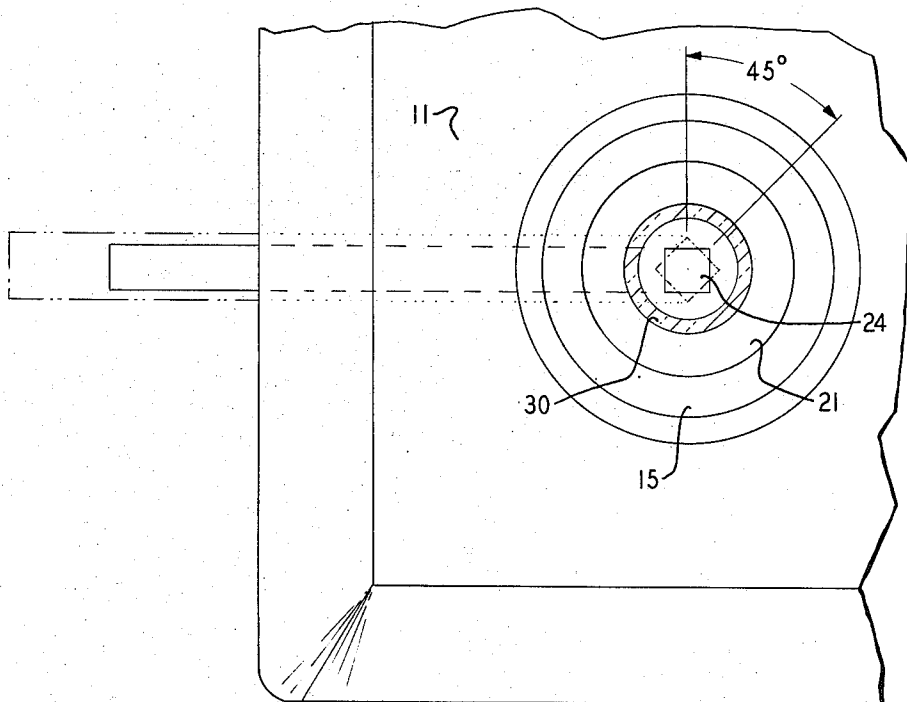


FIG. 3



PAINT AND ADHESIVE APPLICATOR

BACKGROUND OF THE INVENTION

This invention relates to adhesive and paint applicators and, more particularly, to applicators for dispensing adhesives and paints in various width stripes.

In numerous instances, it is both desirable and necessary to apply an adhesive or a paint to a surface in various width stripes. Historically, such stripes were obtained by the laborious technique of employing a small hand brush. Indeed, use of a hand brush consumes an inordinate amount of time. In addition to being inefficient, use of a hand brush also yields nonuniform stripes. More often than not, adhesives applied via the hand-brush technique were not properly distributed and, hence, poor adhesion resulted.

Numerous devices have been proposed in an attempt at overcoming the obvious disadvantages of the early hand brush application technique. For example, devices including various felt wheel arrangements have been employed to apply adhesives and paints in stripes on surfaces. For the most part, the prior wheel-type applicators are clumsy and awkward, requiring wheel size changes in order to obtain different width stripes.

Still other known devices utilize a variety of nozzle and similar arrangements for applying adhesives or paints to surfaces. Like the wheel devices, a change in the nozzle is required to obtain a different width stripe.

In general, the prior known adhesive and paint applicators lack symmetry. That is to say, the adhesive or paint could only be applied to a surface when holding the prior devices in a single position relative to the surface on which the stripe was being applied. Such arrangements become awkward when applying adhesives or paints to surfaces having numerous bends or turns, thereby requiring turning of the applicator in order to obtain a desired stripe.

SUMMARY OF THE INVENTION

These and other problems are resolved in accordance with the inventive principles to be described herein for applying adhesives or paints to a surface in various width stripes. An applicator, in accordance with the invention, includes a guide member having a predetermined geometric shape and a dispensing element also having a predetermined geometric shape advantageously mounted upon the guide member. Various width stripes of an adhesive, paint or other liquid being dispensed are obtained, in accordance with the invention, by selectively positioning the external surface of the dispensing element in predetermined spatial relationships with the edges of the guide member.

In one embodiment of the invention, a guide member and a dispensing element both having substantially square external shapes are employed to obtain different width stripes. The surfaces of the guide member are arranged advantageously to support the dispensing element so that a desired flow of adhesive or paint is realized. Accordingly, the dispensing element, which may be a felt wick or the like, is supportedly mounted in substantially the center of the guide member protruding from the lower surface by a predetermined distance. A container for holding a supply of the adhesive or paint being dispensed is also mounted on the guide member and is arranged so that the adhesive or paint is readily supplied to the dispensing element. The con-

tainer is also advantageously arranged to serve as a handle for the applicator.

Various width stripes are obtained, in accordance with the invention, by positioning the external edges of the dispensing element in predetermined spatial relationships with the edges of the guide member. For example, in this embodiment of the invention, a first width stripe is obtained by positioning the edges of the wick dispensing element so that they are substantially parallel to the edges of the guide member. A second larger width stripe is obtained, in accordance with the invention, by rotating the wick dispensing element so that its edges are positioned at at least a predetermined angle relative to the edges of the guide member.

A feature of the invention, therefore, is that different width stripes are obtained while maintaining symmetry of the applicator.

BRIEF DESCRIPTION OF THE DRAWING

These and other objects and advantages of the invention will be more fully understood from the following detailed description of an illustrative embodiment thereof taken in connection with the appended drawings in which:

FIG. 1 is an exploded perspective view of an applicator illustrating the principles of the invention;

FIG. 2 is a sectional view further showing details of the applicator of FIG. 1; and

FIG. 3 is a break-away view of the guide member of FIG. 1 illustrating the relationship between the wick and guide member.

DETAILED DESCRIPTION OF THE INVENTION

FIG. 1 illustrates an applicator assembly generally indicated as 10 which, in accordance with the invention, dispenses paints or adhesives in various desired width stripes. FIG. 2 is a sectional view showing an assembled version of applicator 10.

Accordingly, applicator 10 includes guide member 11 which, in this example, not to be construed as limiting the scope of the invention, is a template having a generally square shape. The edges of guide member 11 are rounded to allow for smooth movement along the boundary of various surfaces to which paint or adhesive stripes are being applied. Circular passage 12 is positioned substantially in the center of guide member 11 and is advantageously arranged to accommodate mounting of adapter assembly 20.

Base ring 15 is advantageously mounted on guide member 11 by screws (not shown) passed through holes 14. Ring 15 has a threaded passage 16 for accommodating ball plunger assembly 17. Ball plunger assembly 17 may be anyone of the numerous types known in the art. Preferably, a Jergens ball plunger is employed in this embodiment of the invention.

External and interior dimensions of ring 15 are arranged to accommodate adapter assembly 20. Assembly 20 includes adapter 21, collet 22, collar 23, and dispensing element 24. Dispensing element 24 is held by collet 22. When assembled element 24 is arranged to protrude from both the upper and lower surfaces of collet 22 by predetermined distances. In this example, dispensing element 24 is a felt wick having a substantially square cross section.

Adapter 21 is substantially cylindrical in shape having a stepped exterior surface for coacting advantageously with base ring 15. The lower portion of the ex-

ternal surface of adapter 21 is threaded to accept collar 23. Adapter 21 also has a lower interior passage which is tapered and dimensioned to accept collet 22. Collet 22 is arranged to hold dispensing element 24. When assembled, collet 22 and dispensing element 24, are inserted into the tapered lower passage of adapter 21 and held in place by collar 23. Because of the taper, tightening of collar 23 causes collet 22 to close about dispensing element 24, thereby securing element 24 in place, as shown in FIG. 2.

The central portion of the external surface of adapter 21 has a plurality of hemispherical indentures namely, indents 25 and 26, which coact with ball plunger 17 for positioning adapter 21 and, hence, dispensing element 24 in predetermined spatial relationships, in accordance with the invention, with the external edges of guide member 11. In this example, adapter 21 (FIG. 1) has been rotated by 90° relative to ball plunger 17 for purposes of illustration. The external diameter of the central portion of adapter 21 is substantially equal to the interior diameter of ring 15.

The upper portion of the external surface of adapter 21 has a predetermined diameter so that adapter 21 seats on ring 15, as shown in FIG. 2.

Adapter 21 has an upper threaded passage dimensioned to accommodate container 30. The upper and lower passages of adapter 21 are contiguous thereby allowing fluid communication between container 30 and wick 24. Container 30 may be constructed of any material capable of holding the paints or adhesives to be dispensed. It is preferred, however, that a glass container be employed having sufficient thickness so that container 30 may be used as a handle for applicator 10.

When assembled, applicator 10 takes the form shown in FIG. 2. Note that dispensing element 24, which in this example is a felt wick, is arranged to protrude below the lower edge of guide member 11. The paint, adhesive or other liquid to be dispensed flows from container 30 to element 24. The surfaces of guide member 11 are arranged so that only the lower surface of the felt wick, i.e., element 24, engages surface 40 (FIG. 2) when the edge of guide member 11 engages boundary 50 of surface 40.

A first width stripe of a paint or an adhesive is obtained, in this example, by arranging adapter 21 so that one of the indents, for example, indent 25 engages ball plunger 17 when the edges of element 24 are in substantially parallel alignment with the edges of guide member 11. Then, a second width stripe is obtained, in accordance with the invention, by rotating adapter 21 by a predetermined angular displacement. In this example, adapter 21 and, hence, element 24 is rotated by 45° (FIG. 3). Again, ball plunger 17 engages indent 26 to hold adapter assembly 20 in place.

FIG. 3 illustrates the various width stripes obtained, in accordance with the invention, by rotating element 24 relative to the edges of guide member 11. The stripe obtained when the edges of element 24 are substantially parallel to the edges of guide member 11 is shown by the solid lines, while the stripe obtained when element 24 is rotated by 45° relative to the edges of guide member 11 is shown in dashed outline.

As can be readily seen from FIG. 3, stripes having different widths are obtained while maintaining symmetry of applicator 10. This symmetry greatly simplifies the application of paints or adhesives in different width

stripes onto a surface because the applicator may be freely rotated relative to a reference position, for example, a horizontal plane.

In one example from practice, applicator 10 is advantageously employed in the installation of the foil strips used in burglar alarm systems. In installing the foil strip in such systems, a first width stripe of a varnish adhesive is used to secure the foil to a glass surface, for example, a window, a door or the like. Then, a second wider stripe of varnish is used to seal the foil to the window. As stated above, various width stripes are obtained, in accordance with the invention, by positioning dispensing element 24 (FIG. 3) in predetermined spatial relationships with the edges of guide member 11.

The above-described arrangements are, of course, merely illustrative of the application of the principles of the invention. Numerous other arrangements may be devised by those skilled in the art without departing from the spirit and scope of the invention.

What is claimed is:

1. An applicator for dispensing liquids in various width stripes on a surface which comprises, a guide member having edges forming a cross-section having a substantially square perimeter for interfacing with the surface to apply the liquid stripes in a prescribed pattern,

an elongated wick element having edges forming a substantially square cross-section, and means for securely mounting said wick element to said guide member, said mounting means including,

moveable adapter means having upper and lower contiguous passages, said lower passage being arranged to hold said wick dispensing element and said upper passage being arranged to accommodate a reservoir of liquid to be dispensed and

means for securing said moveable adapter means to said guide member so that said wick dispensing element is securely positionable in at least first and second predetermined spatial relationships relative to the edges of said guide member,

wherein a first width stripe of liquid is dispensed when said wick element is positioned so that its edges are substantially parallel to the edges of said guide member and a second width stripe is dispensed when said wick element is positioned so that its edges are at a predetermined angle relative to the edges of said guide member.

2. An applicator for dispensing liquids in various width stripes on a surface which comprises,

a guide member having edges forming a predetermined geometric shape including upper and lower surfaces arranged in a predetermined shape for interfacing with the surface to apply the liquid stripes in a prescribed pattern, said guide member having a passage located substantially in the geometric center of said surfaces,

a wick element having edges forming a cross-section having a predetermined geometric shape for dispensing the liquid on the surface in said stripes, a reservoir for holding the liquid to be dispensed, and

means for securely mounting said wick element to said guide member, said mounting means including,

a ring member being secured to said guide member about said passage,

5

6

moveable adapter means having upper and lower contiguous passages and an external shape arranged so that a portion of said adapter extends through said ring and guide members and coacts with said ring member, said wick dispensing element being secured in and protruding from said lower passage and said reservoir being connected to said upper passage, and

means coacting with said ring member and said adapter means for holding said adapter means in predetermined fixed positions so that the edges of said wick dispensing element are positionable in at least first and second predetermined predetermined spatial relationships relative to the edges of said guide member,

wherein a stripe of liquid having a first predetermined width is dispensed on the surface when the edges of said wick element are positioned in said first predetermined spatial relationship relative to the edges of said guide member and a stripe of liquid having a second width is dispensed on the surface when the edges of said wick element are positioned in said second predetermined spatial relationship relative to the edges of said guide member.

3. The invention as defined in claim 2 wherein said adapter means has at least two indents in its external surface and wherein said holding means includes a ball plunger arrangement mounted in said ring member and

arranged to engage said indents for securing said adapter in said fixed positions.

4. The invention as defined in claim 3 wherein said dispensing element is an elongated wick having an upper and lower surfaces, the upper surface of said wick being in fluid communication with said reservoir and wherein said guide member has edges which form a substantially square perimeter, the upper and lower surfaces of said guide member being contoured so that the lower surface of said wick protrudes a predetermined distance below the edges of said guide member for dispenses the liquid onto the surface and wherein said stripes of liquid are uniformly dispensed onto said surface in said prescribed pattern when any one of the edges of said guide member coacts with the perimeter of the surface to which the stripes are being applied.

5. The invention as defined in claim 4 wherein the edges of said wick form a substantially square cross section, wherein a first width stripe of liquid is dispensed when said wick is positioned so that its edges are substantially parallel to the edges of said guide member and a second width stripe is obtained when the edges of the wick are positioned at a predetermined angle relative to the edges of said guide member.

6. The invention as defined in claim 5 wherein said mounting means further includes a collet for holding said wick and a collar for securing said collet in the lower passage of said adapter means.

* * * * *

30

35

40

45

50

55

60

65