Dec. 10, 1957 L. L. REED 2,815,895

ADAPTER TYPE DISPENSING CAP FOR GLAZIER'S PUTTY CONTAINERS

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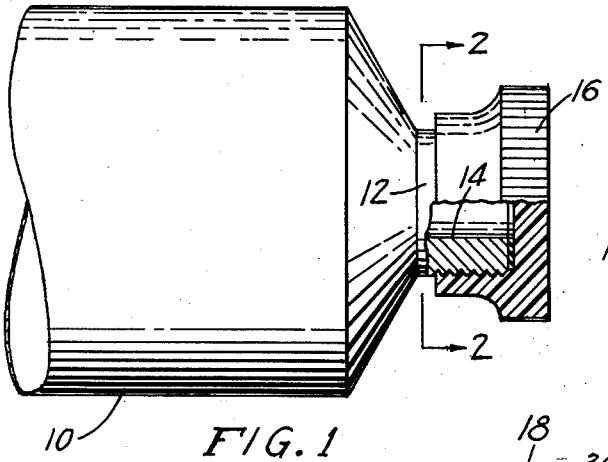


FIG. 1

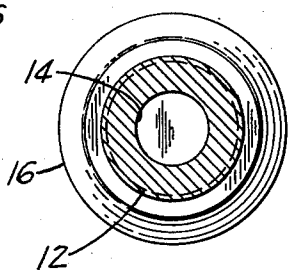


FIG. 2

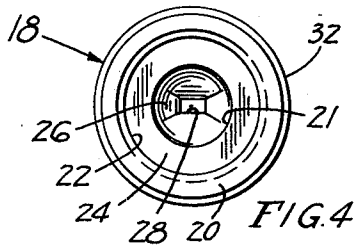


FIG. 4

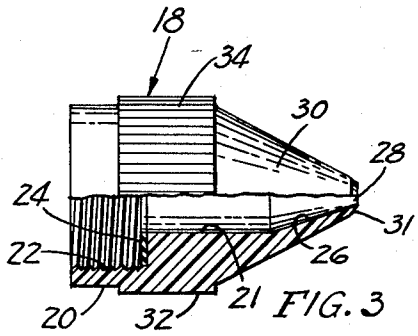


FIG. 3

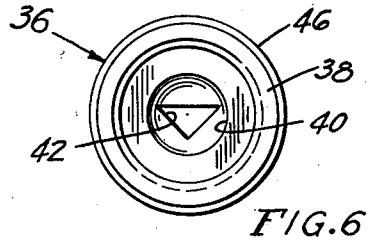


FIG. 6

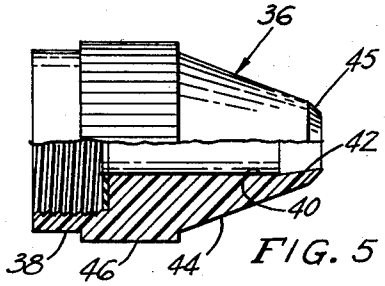


FIG. 5

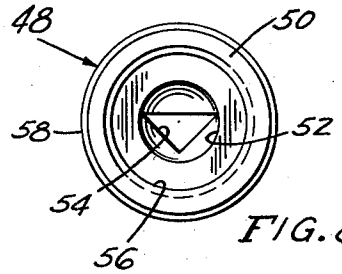


FIG. 8

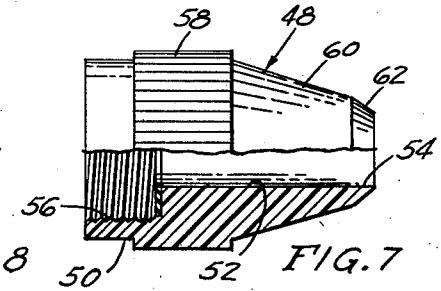


FIG. 7

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ADAPTER TYPE DISPENSING CAP FOR GLAZIER'S PUTTY CONTAINERS

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Application June 17, 1955, Serial No. 516,069

1 Claim. (Cl. 222—568)

This invention, relating generally to the art of installing a pane of window glass in an associated sash or frame, comprises a dispensing cap capable of being substituted for the conventional closure cap of a collapsible container holding a quantity of glazier's putty, to cause the putty to be dispensed from the container in a ribbon-like form having a predetermined cross sectional shape especially suited for facilitating the puttying of the glass in the frame.

When a pane of glass is being installed in a sash, the conventional practice is to apply the putty needed for carrying out the task in a manner which is highly dependent on the skill of the worker so far as molding the putty to a proper cross sectional shape, uniform over the full periphery of the glass, is concerned.

The main object of the present invention is to provide means which will speed up and otherwise facilitate the application of the putty in the desired, molded cross sectional shape, with correspondingly less dependence on the skill of the particular worker as regards the producing of a neat, efficient installation of the glass.

A more specific object is to provide a dispensing cap connectible to the neck of a collapsible tube holding a quantity of glazing compound, in substitution for a conventionally formed closure cap, which dispensing cap will have an outlet the configuration and cross sectional area of which are such as to produce, when the compound is squeezed out of the tube through the cap, a ribbon of corresponding cross sectional configuration, which may be laid down along the joints between the sash and window pane in such a manner that there exists only the further necessity of pressing the ribbon into sealing relation to the joint with a putty knife or like tool.

Another object is to provide a set of dispensing caps, any one of which may be used on a single tube of compound, having openings of different shapes and sizes, that will permit successive applications of the compound, one before the glass is inserted in the sash channel and a second to be applied following insertion of the glass to provide an exterior seal.

A further object is to provide, in said set, caps having outlets of different sizes but of corresponding configurations, to permit use of a cap selected according to the depth of the channel in which the pane is being installed.

A further object is to provide one or more dispensing caps as described, capable of being manufactured each from a single molded piece of plastic material or the like, at relatively low cost, and capable of being cleaned with minimum difficulty following use.

Other objects will appear from the following description, the claims appended thereto, and from the annexed drawing in which like reference characters designate like parts throughout the several views and wherein:

Figure 1 is a view showing a collapsible tube fragmentarily and in side elevation, equipped with a conventional closure cap and neck, shown partly in side elevation and partly in longitudinal section;

Figure 2 is a transverse sectional view on line 2—2 of Figure 1;

Figure 3 is a view partly in side elevation and partly in longitudinal section of a dispensing cap capable of being substituted for the cap of Figure 1;

Figure 4 is an end elevational view of the cap of Figure 3, as seen from the left of Figure 3;

Figure 5 is a view similar to Figure 3 showing a second form of dispensing cap;

Figure 6 is a view similar to Figure 4 of the cap of Figure 5;

Figure 7 is a view similar to Figure 3 showing a second form of dispensing cap; and

Figure 8 is a view of the Figure 7 cap, similar to Figure 4.

A collapsible tube **10** holding a quantity of putty or other glazing compound can be made in any desired size, and has at one end an externally threaded, cylindrical neck **12** having a cylindrical, axial bore **14** of constant diameter, normally closed at its outlet end by a conventional closure cap **16** having a cylindrical skirt internally threaded to engage the threads of neck **12**.

Adapted to be substituted for the closure cap is a dispensing cap shown in Figures 3 and 4, generally designated **18** and molded from a single piece of plastic material or the like. Cap **18** is formed with a cylindrical body **20** having an axial, end to end bore **21** one end of which is counterbored and threaded at **22** to engage the threads of neck **12**. An annular sealing gasket **24** seats upon the shoulder defined at the inner end of the counterbore.

At the end thereof remote from the counterbore **22**, the constant diameter, cylindrical intermediate portion of bore **21** merges into a tapered portion **26** of the bore having at its smaller, outer end an outlet **28** smaller in cross sectional area than the area of any other part of the bore along the full length of the bore. Outlet **28** is formed of a rectangular shape, extending as a transverse slot across the outlet end of the dispensing cap, the length of which slot is approximately twice that of the width.

Exteriorly, the body **20** is of cylindrical shape at the counterbored end thereof, while at its outer end, said body is frustro-conically tapered at **30**, in general correspondence with the tapered bore portion **26**. The tapered part **30** of the body, at the smaller end thereof, is beveled or chamfered as at **31**, to provide a steeper external taper of the body at the outlet end thereof facilitating the positioning of said outlet end in relatively confined areas such as at the corner of the sash, without loss of accuracy of the positioning of the device for laying down a ribbon of a cross sectional shape matching that of the outlet **28**. A roughened collar **32** on the body facilitates rotation thereof.

The dispensing cap **18** is initially used, before the glass has been inserted in the channel of the window frame, to lay down a bed of putty in the channel.

After the glass has been inserted following the bedding of a ribbon dispensed through cap **18** in the channel of the frame, glazier's points or nails are used to anchor the glass.

As a next step, the user removes cap **18** and applies to neck **12** a cap formed as shown either in Figure 5 or Figure 7, according to the depth of the particular channel. In Figure 5, the cap generally designated **36** has a body **38** formed with an end to end axial bore **40** merging at the outer end of the body into a tapered bore portion provided with an outlet **42** of right triangular configuration. The inner end of the bore **40** is counterbored similarly to the cap of Figure 3 to engage the neck **12**.

Externally, body **38** has a shape substantially duplicating that of cap **18**, being formed with a tapered outer

part 44 having at its smaller end a more steeply tapered lip 45. At the base of the tapered part 44 there is provided a knurled or otherwise roughened collar 46.

The cap 48 of Figures 7 and 8 is similar in every respect to the cap 36, except for having a larger outlet, desirable when the channel is of substantial depth. Cap 48 has a body 50 formed with an axial bore 52. Bore 52 does not merge into a tapered bore portion at the outlet end of the cap, but instead extends directly to an outlet 54 of right triangular configuration, greater in cross sectional area than outlet 42. Outlet 54, however, like the outlets 28, 42, is smaller in cross sectional area than the area of any other portion of the bore of its associated cap.

A counterbore 56 at the inner end of the bore 52 engages neck 12, while a roughened collar 58 is provided on the body intermediate opposite ends thereof.

The body 50 has an externally tapered portion 60 merging at its smaller end into a more steeply tapered lip 62 facilitating better vision of the ribbon being dispensed.

Ribbons dispensed through caps 36, 48 would have a cross sectional shape of a right triangle, so as to fit in the angle defined between the inserted pane and the associated portion of the frame or sash.

After the second ribbon has been applied, a putty knife is used to press the compound into place.

The entire operation can be carried out with the tube of glazing compound held in one hand, while the putty knife is held in the other hand, following the tube during the dispensing of the compound. Thus, the entire installation of the pane can be carried out in minimum time, by a relatively unskilled worker, while still assuring a neat, professional appearance to the finished installation, as well as an efficient seal of the pane in the frame.

It is believed apparent that the invention is not necessarily confined to the specific use or uses thereof described above since it may be utilized for any purpose to which it may be suited. Nor is the invention to be necessarily limited to the specific construction illustrated and described, since such construction is only intended to be illustrative of the principles, it being considered that the

invention comprehends any minor change in construction that may be permitted within the scope of the appended claim.

What is claimed is:

A cap adapted to be substituted for the closure cap of a collapsible putty-confining tube having a threaded neck for dispensing from said tube a quantity of glazier's putty in a ribbon having a predetermined cross sectional shape, comprising a relatively elongated body having an end-to-end axial bore counterbored and threaded at one end of the body to receive said neck, said bore having an intermediate portion of constant diameter terminating at one end of the counterbore and merging, at the end thereof remote from the counterbore, into a bore portion tapering in a direction toward the other end of the body and having at its smaller end an outlet of a configuration matching that of the cross sectional ribbon shape desired, said body having a surface portion exteriorly tapered from a location intermediate the ends of said intermediate bore portion toward said other end of the body, the exterior taper of the body being steeper than that of the tapered bore portion and terminating at its smaller end in closely spaced relation to said other end of the body, the tapered bore portion extending fully to said other end of the body, the body having a second surface portion exteriorly tapered from the smaller end of the first named surface portion fully to said other end of the body, the last named exterior taper of the body being steeper than the first named exterior taper and extending into convergence with the wall of the tapered bore portion at said other end of the body.

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