

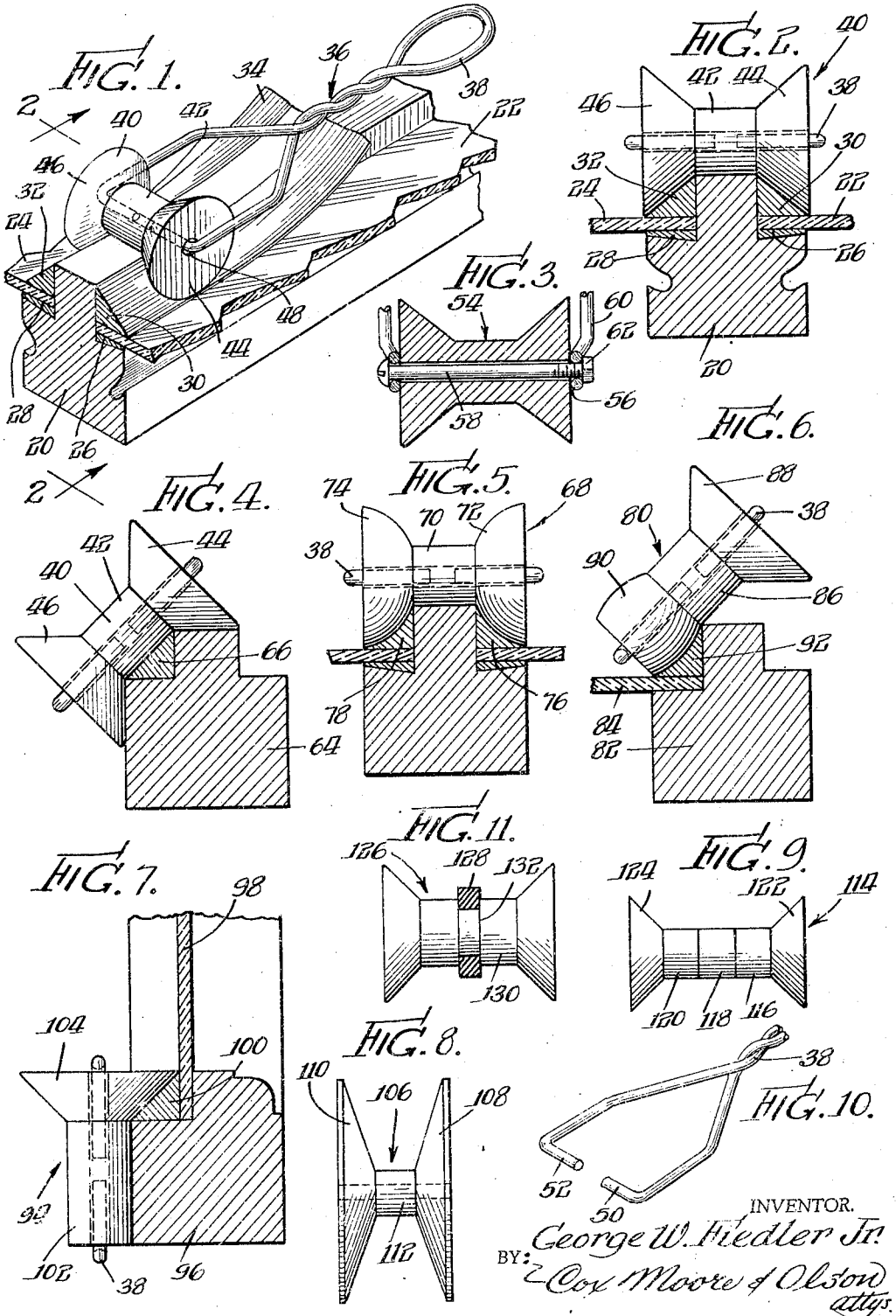
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GLAZING DEVICE

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GLAZING DEVICE

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This invention relates to a glazing device. More particularly, it relates to a roller for pressing putty into place and for forming and shaping the putty.

Putty is ordinarily supplied in bulk and, by means of a putty knife, is formed and smoothed into place about a window pane which it cements in place. This method of putting windows is not only slow and tedious but, in addition, requires considerable skill in the application of the putty in such a way as to give it a satisfactory appearance in a reasonable time. One of the difficulties is concerned with preliminarily forming the putty from the bulk so that it may be laid around the edge of the frame or pane in position where it may be pressed in place and smoothed off. This difficulty is overcome by employing preformed lengths of putty carried on suitable supports instead of using bulk putty. This not only avoids the necessity for forming the putty at the time it is used by hand but, in addition, avoids getting the putty on the hand in applying it. While the use of such preformed putty greatly facilitates the operation of cementing the panes in place, it does not eliminate the difficulty encountered in forming and smoothing the putty with a knife.

It is an object of this invention to provide an improved device for forming and smoothing putty into place about the edge of a pane of glass.

Another object is to provide a device for forming and smoothing putty into place, which does not tend to roughen the surface of the putty in passing over it and thus leaves the applied putty with a smooth, even surface.

A further object is to provide an improved device for forming and smoothing putty into place, which does not require any special skill in order to use it satisfactorily.

A still further object is to provide a device for forming and smoothing putty into place, which device is simple and easy to construct.

Still another object is to provide a device for forming and smoothing putty into place, which device may be used both with bulk putty or with preformed strips of putty carried on a suitable support.

Another object is to provide a device for forming and smoothing putty into place, which device may be given a variety of shapes, depending upon the particular use to which it is to be put or the shape desired in the formed putty.

Other objects will appear hereinafter.

It has now been found that these objects may

be accomplished by the device disclosed in the accompanying drawing, in which

Figure 1 is a view in perspective of a portion of a window frame showing the roller of this invention in use;

Figure 2 is a section on the line 2—2 in Figure 1;

Figure 3 is a cross-section on the axis of a roller, illustrating a modified handle construction;

Figure 4 is a view similar to Figure 2, illustrating another way in which the roller may be used;

Figures 5, 6 and 7 are views similar to Figure 2, illustrating other forms of rollers;

Figure 8 is an elevation of still another form of roller;

Figure 9 is a view of still another form of roller;

Figure 10 is a view in perspective of the handle of the roller shown in Figure 1; and

Figure 11 is an elevation, partly in section, of a still further form of roller.

Figures 1 and 2 show a window frame member 20 extending between a pair of adjacent panes of glass 22 and 24. In these figures the bed putty 26 and 28 under the two panes 22 and 24 is already in place. The two strips of face putty 30 and 32 are shown being applied. The putty being used consists of two preformed strips 30 and 32 carried on a support 34 and spaced apart a distance equal to the width of the frame member 20 between the panes of glass 22 and 24. The roller device, designated generally 36 and which forms the subject of this invention, is shown being moved from left to right to press the strips of putty down into place and form them.

This roller 36, as may be seen, includes a handle member 38 and a roller member 40. The handle may be of any desired form, that designated 38 and shown in Figures 1 and 10 being formed of a piece of wire twisted and shaped as shown in these two figures.

The roller member 40, as will become more apparent, is preferably designed for the particular type of glazing operation to be performed. Thus, the roller member 40 is provided with a generally cylindrical, central portion 42, the axial length of which is equal to the width of the frame member 20 between the panes of glass. On the ends of the cylindrical central portion 42 are outwardly flaring members 44 and 46 which may or may not be formed integral with the central portion. In the roller 40 these parts are integral, as shown. The angle at which the surfaces of portions 44 and 46 flare outwardly is de-

terminated by the shape desired in the putty. The flaring surfaces of portions 44 and 46 preferably are of sufficient length so that they terminate just short of the surface of the pane of glass to which the putty is being applied. A central opening 48 is provided in the roller member 40 into which the intumed ends 50 and 52 of the handle 38 are inserted.

Figure 3 illustrates a modified form of roller, designated generally 54, which includes a somewhat larger central opening 56. A bolt 58 extends through this opening 56 and through openings provided in the ends of a handle member 60 and is secured in place by a nut 62.

In Figure 4 the roller 40 is shown in use to lay in place on a frame member 64 a single strip 66 of bed putty. In this instance, as may be seen, the central portion 42 of the roller 40 serves to press the putty into position instead of the outwardly flaring portions 44 and 46 which serve as guides.

Figure 5 illustrates a different form of roller member 68 in which the central member 70 is generally similar to member 42 but in which the members 72 and 74, on either end of member 70, are provided with curved, instead of flat, outwardly flaring surfaces. Roller 68 is otherwise similar in construction to roller 40. As may be seen, the difference in the operation of the two rollers is that roller 40 gives the putty a flat surface, whereas roller 68 gives the two strips of face putty 76 and 78 a curved surface.

The roller 80, shown in Figure 6, is designed to provide a roller which is capable of giving the applied putty two different forms. This type of roller is particularly adapted for use in connection with a frame member, such as member 82, which is adapted to support only a single pane of glass 84. As may be seen, the roller 80 includes a central section 86 generally similar to the central section 42 of roller 40. The end member 88 is also generally similar to member 44. On the other end of central section 86, however, a member 90 is provided which is generally bulbous in shape, permitting it to be employed, as shown in Figure 6, to give a slightly different curvature to the face putty 92.

A very simple form of roller 94 is illustrated in Figure 7. Roller 94 is particularly adapted for use in applying putty to a window frame 96 adapted to support a single pane of glass 98. This glass is held in place by a single strip of putty 100 laid on the outer face of the glass. The roller is formed with a cylindrical guide portion 102, on one end of which an outwardly flaring member 104 is provided, the angle at which member 104 flares outwardly being determined by the shape desired for the surface of the putty 100. Since a putty forming member is provided on only one end of roller 94, the guide member 102 may be made somewhat longer.

The roller member 106 shown in Figure 8 is characterized by end members 108 and 110, the surfaces of which flare outwardly very sharply from the central section 112. This figure illustrates one of the extreme forms which the roller may take.

Figure 9 shows a roller member 114 which is formed in sections, in contrast with the other forms shown which are integral. This sectional construction permits rollers of a variety of sizes and types to be assembled on a single handle member and also gives the roller members flexibility. Thus, the central portion of roller member 114 consists of three separate sections 116,

118 and 120, each of which is similar in size and shape to section 42 of roller 40.

The end members 122 and 124 are also generally similar in form to the end members 44 and 46 excepting only that they are not integral with the central sections 116, 118 and 120. Thus, each of sections 116, 118, 120, 122 and 124 is provided with a central opening through which a portion of a handle member may extend to secure these sections together in the form of a roller. In view of the sectional construction of roller 114, it will be apparent that any desired number of central sections, such as 116, 118 and 120, may be assembled which will space apart the end sections 122 and 124 substantially any desired distance. Likewise, the end sections, such as 122 and 124, may be provided which are of various forms and shapes, thus making it possible to combine end and central sections in such a way as to provide a variety of different roller shapes and sizes. Thus, the outwardly flaring surfaces of the two end members 122 and 124 may have different forms, one being curved and the other flat, for example.

Figure 11 illustrates a feature of construction which is adaptable to roller members of all the various sizes and shapes included within the scope of the invention. It is illustrated in connection with a roller member 126 generally similar to roller member 40. The novel construction consists in providing a rubber ring 128 which extends circumferentially about the generally cylindrical central section 130 which, except for the central annular groove 132 provided to receive the ring 128, is the same in construction as section 42 of roller 40. The groove 132 is desirable to keep the ring 128 in position centrally of section 130, but it may be omitted, if desired.

In order to better illustrate the invention, the ring 128 is shown in section. It will be understood, however, that this ring extends entirely around the central section 130. The width of the ring axially of the roller may vary somewhat although it has been found that rings having axial widths from one-eighth to three-fourths of an inch are preferable.

The rubber ring may be formed of a piece of hollow tubing, the ends of which are suitably joined together, or it may be a continuous integral ring formed from a suitable rubber composition, for example, a sponge rubber. Moreover, instead of rubber, other resilient materials may be employed to form this ring, particularly synthetic rubber-like materials, such as neoprene or rubber-like materials formed from butadiene and its derivatives or from olefin polysulfid polymers or other like materials which have a relatively high resistance to oils, such as the oils which may be present in putty.

The roller member 126 is employed in substantially the same way that the roller member 40 is used, as illustrated in Figure 1. The rubber ring 128, instead of the surface of the central section 130, contacts the surface of the frame member between the adjacent panes, for example, and provides a resilient support for the roller instead of the solid support provided by a central section, such as central section 42. Because of this resilient support, it is possible to make the roller member or spool 126 ride high or low, according to the pressure exerted. In this way the putty can be forced into place gradually.

The roller members or spools, such as 40, 54, 68, et cetera, may be formed of any desired material, such as wood, plastics, rubber (preferably

a relatively stiff rubber composition), metal, et cetera. Wood is preferred, however, particularly wood boiled or soaked in glycerine, turpentine or kerosene, or otherwise treated so that the putty does not stick to it. Wood boiled in glycerine is preferred. The handle likewise may be formed of any desired material instead of the wire particularly illustrated; other suitable materials, including metals, plastics, et cetera, may be used.

The advantages of the invention will be apparent in large part from the foregoing description. An outstanding advantage, of course, is that the roller makes it possible to form and finish putty neatly and uniformly. This is possible, moreover, with this roller, whether the user be skilled in the application of putty or unskilled. The roller not only presses the putty uniformly but also determines the shape given the putty. Also, by reason of the fact that rollers may be provided to which putty does not stick, and by further reason of the fact that the roller rolls over the surface of the putty rather than sliding over it as a putty knife does, it is much easier to give the putty a smooth, even surface with a very few strokes than when employing a putty knife.

While the roller is suitable for use in the application of bulk putty, as well as preformed strips of putty carried on suitable supports, it is particularly well suited to the application of putty in the latter form. Where the roller is employed with the preformed strips of putty, the putty may be applied without getting it on the hands of the person applying it and from that person's hands to the glass so that the necessity for subsequently cleaning both the hands and the glass is avoided.

A still further advantage of the roller is that it may be given a wide variety of forms, whether constructed integrally or in sections, as illustrated in Figure 9. The latter construction, of course, obviously has the advantage that a variety of rollers may be assembled from a few sections, making it unnecessary to have a large number of complete rollers to meet the conditions encountered in different applications. Where the roller is provided with a rubber ring, as illustrated in Figure 11, it has the still further advantage that the putty may be positioned and formed and finished gradually as, for example, by increasing the pressure on successive strokes, while at the same time the roller is supported during its movements.

Still other advantages of the invention will be obvious from the description given herein.

It is apparent that many widely different embodiments of this invention may be made without departing from the spirit and scope thereof, and therefore it is not intended to be limited except as indicated in the appended claims.

The invention is hereby claimed as follows:

1. A device for applying putty, consisting of a handle and a roller member revolubly mounted on said handle, said roller member including a generally cylindrical portion, about the axis of which the roller member is symmetrical and rotates, and a portion adjoining said cylindrical portion, which adjoining portion projects radially outwardly beyond said cylindrical portion.

2. A device for applying putty, consisting of a handle and a roller member revolubly mounted on said handle, said roller member including a plurality of separate and distinct parts, one of which is a generally cylindrical portion about the axis of which the roller member is symmetrical and rotates, and another of which is a portion adjoining said cylindrical portion, which adjoining

portion projects radially outwardly beyond said cylindrical portion.

3. A device for applying putty, comprising a handle and a roller member revolubly mounted on said handle, said roller member including a generally cylindrical portion, about the axis of which the roller is symmetrical and rotates, a portion adjoining said cylindrical portion, which adjoining portion projects radially outwardly beyond said cylindrical portion, and an annular, resilient member extending around the cylindrical surface of said generally cylindrical portion centrally thereof.

4. A device for applying putty, comprising a handle and a roller member revolubly mounted on said handle, said roller member including a generally cylindrical portion, about the axis of which the roller is symmetrical and rotates, a portion adjoining said cylindrical portion, which adjoining portion projects radially outwardly beyond said cylindrical portion, and an annular, resilient member extending around the cylindrical surface of said generally cylindrical portion centrally thereof, said cylindrical portion having an annular groove in its cylindrical surface centrally thereof into which a portion of said annular, resilient member projects.

5. A device for applying putty, comprising a handle and a roller member revolubly mounted on said handle, said roller member including a generally cylindrical portion about the axis of which the roller is symmetrical and rotates, a portion adjoining said cylindrical portion, which adjoining portion projects radially outwardly beyond said cylindrical portion, and an annular, resilient member extending around the cylindrical surface of said generally cylindrical portion centrally thereof, the surface of said roller member being non-adherent to putty.

6. A device for applying putty, consisting of a handle and a roller member revolubly mounted on said handle, said roller member including a generally cylindrical portion, about the axis of which the roller is symmetrical and rotates, and portions adjoining said cylindrical portion on either end thereof, which adjoining portions project radially outwardly beyond said cylindrical portion, and the surfaces of which adjoining portions extend at an angle of 45° with respect to said axis.

7. A device for applying putty to a glazing bar, consisting of a handle and a roller member revolubly mounted upon said handle, said roller member including a generally cylindrical portion, about the axis of which the roller member is symmetrical and rotates, and a portion adjoining said cylindrical portion and projecting radially outwardly beyond said cylindrical portion, the parts of said roller member being of a size such that one of said portions is adapted to ride on the glazing bar as a guide while the other engages the putty and shapes it in place.

8. A device for applying putty, consisting of a handle and a roller member revolubly mounted on said handle, said roller member including a generally cylindrical portion, about the axis of which the roller member is symmetrical and rotates, and a portion adjoining said cylindrical portion, which adjoining portion projects radially outwardly beyond said cylindrical portion, the length of the surface of said portion projecting radially outwardly being at least equal to about one-third the axial length of the surface of said cylindrical portion.

9. A device for applying putty to a glazing bar,

consisting of a handle and a roller member rev-
olubly mounted upon said handle, said roller
member including a generally cylindrical por-
tion about the axis of which the roller member
is symmetrical and rotates and portions adjoin-
ing said cylindrical portion on either end thereof
and projecting radially outwardly beyond said
cylindrical portion, the surfaces of said cylindri-
cal portion and of each of said portions projecting
radially outwardly being of approximately the

same predetermined length whereby said cylindri-
cal portion is adapted to ride on the glazing
bar while said portions projecting radially out-
wardly engage putty and shape it in place on
either side of said glazing bar, and whereby in
the alternative said portions projecting radially
outwardly are adapted to ride on the glazing bar
while said cylindrical portion engages putty and
shapes it in place.

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