June 26, 1951 C. J. NIGHTINGALE 2,558,191

CONTROL DEVICE FOR PAINT BRUSHES

Filed Aug. 13, 1946

Fig. 1

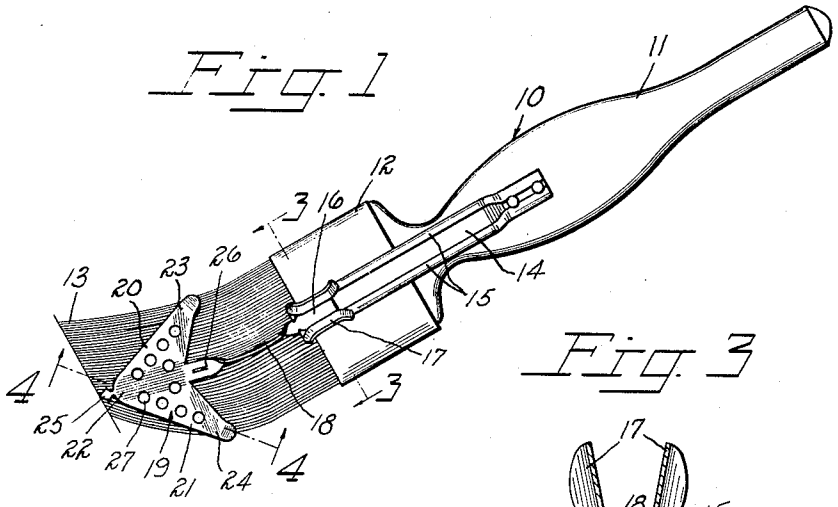


Fig. 3

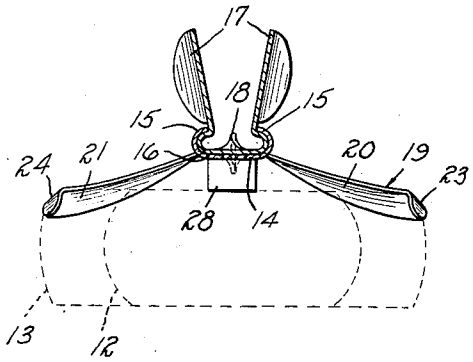


Fig. 2

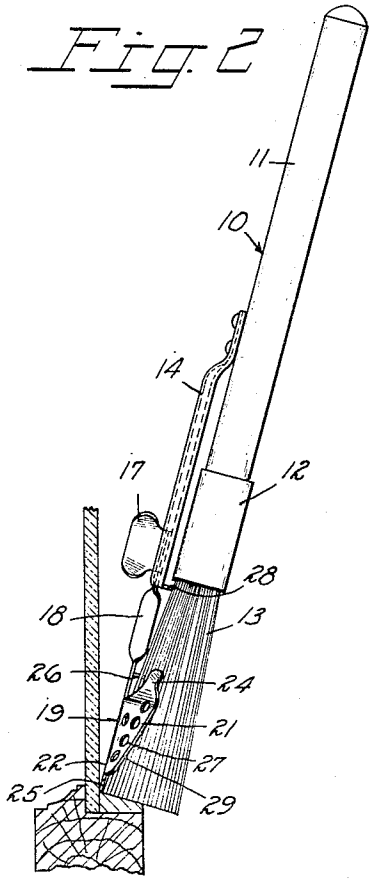
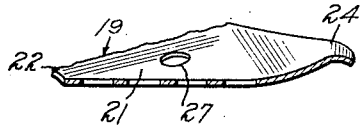


Fig. 4



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CONTROL DEVICE FOR PAINTBRUSHES

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3 Claims. (Cl. 15—166)

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The present application is a continuation-in-part of my co-pending application Serial No. 559,277, filed October 18, 1944, now abandoned.

The present invention relates to a control device for paint brushes, and more particularly to a device adapted to be attached to a paint brush for controlling the action of the bristles to facilitate painting along edges and corners.

When applying paint to surfaces, considerable difficulty is experienced in providing a sufficient flow of paint at corners, such as formed by windows, ridges, and the like, without, at the same time, causing paint to flow onto the adjacent surfaces of the window, etc. It is an object of the invention to provide a device which may be attached to a paint brush which provides a bearing surface adapted to follow along the edge or corner which is being painted, which device effectively restrains the bristles of the paint brush to provide an efficient painting action just to the edge or corner, as desired.

A further object of the invention is to provide a device of the character described which will not interfere materially with the normal operation of the paint brush, such as the ability of the bristles to pick up paint from a paint receptacle and to spread the paint evenly over a surface to be painted.

A further object of the invention is to provide an adjustable device and one which may be moved into an inoperative position to permit the brush to be used in a normal manner for other painting purposes.

The accomplishment of the foregoing and other objects of the invention will be understood from the following description of a specific embodiment of the invention shown in the accompanying drawings in which

Figure 1 is a front view of the device attached to a conventional paint brush with the device and bristles as deflected during a painting operation;

Fig. 2 is a side view of the device attached to a conventional paint brush and illustrating the position of the device and brush for painting one of two intersecting surfaces;

Fig. 3 is a cross sectional view of the device taken along the line 3—3 of Fig. 1 and looking in the direction of the arrows; and

Fig. 4 is a cross sectional view taken along the line 4—4 of Fig. 1 and looking in the direction of the arrows.

Referring to the drawings, there is shown a conventional paint brush 10 comprising the usual handle 11, ferrule 12 and bristles 13. Secured to the handle 11 of the paint brush 10 and parallel

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therewith is a channel member 14 having bent-over edges 15. The channel member 14 forms a guideway for the end of a flexible connecting member 16 which is formed with ears 17 pressing outwardly against the bent edges 15 of the channel member 14, thereby being frictionally engaged therewith.

The flexible connecting member 16 is formed of an elongated flat strip of flexible material which has a small portion 18 bent at a right angle thereto, whereby the flexible member 16 may be easily distorted in any direction. When the end of the connecting member 16 is at the lower extremity of the channel member 14, the bent portion 18 forms a slight obstruction to lateral movement of the connecting member 16 within the channel member 14 by engagement with the flange 28 and tends to lock the connecting member in the position shown in Figs. 1 and 2. However, by manually pressing together the ears 17 on the flexible member 16 and then applying a force upwardly thereon, the flexible member 16 can easily be slid along the channel member 14 to a position adjacent the top thereof, the portion 18 functioning to cam the device outwardly from the brush and permit it to slide freely over the channel member 14. Flange 28 assists in properly positioning the channel member 14 on the handle 11.

Supported on the end of the connecting member 16 is a generally triangular bristle-restraining member 19 which is formed of two diverging portions 20 and 21 extending upwardly and outwardly from the center axis of the device. The portions 20 and 21 are tapered toward a vertex 22 at the center of the device, whereby the lower edge 29 of the device is generally V-shaped. The diverging portions 20 and 21 are bent inwardly from the center axis of the device toward the bristles of the paint brush so that, when viewed from the top, the device is trough or V-shaped, as shown in Fig. 3. The extremities 23 and 24 of the diverging portions 20 and 21, respectively, are bent or curved outwardly away from the plane of the portions 20 and 21 respectively and are provided with rounded surfaces at the ends thereof which may function as bearing surfaces as described more particularly hereinafter.

At the lower extremity of the restraining member 19 at the vertex 22 there is provided a small flat extension or nib 25 which is generally triangular in shape, thereby providing a flat outer surface and a pointed lower edge, both of which also function as bearing surfaces, as fully explained hereinafter.

Adjacent the top of the restraining member 19 on the inner side thereof there is provided a short thin lug 26 adapted to extend inwardly for a short distance into the bristles of the paint brush.

The restraining member 19 is shown to have a plurality of perforations 27 spaced throughout. It has been found that an improved action of the device results when the amount of metal is kept to a minimum so long as the general outline of the device, as described above, is maintained. When the paint brush with the device attached is dipped into a paint container, the perforations 27 permit better contact of the paint with the paint brush bristles and also, when the paint brush and control device are subsequently used, there is less metal present upon which paint might tend to cling.

When the device is to be utilized for painting a surface, such as a window sill where it is the object to provide a full flow of paint to the extremity of the surface without, at the same time, getting paint on the adjoining member such as a window or window frame, the flexible connecting member 16 is slid downwardly on the channel member 14 to the locking position shown in Figs. 1 and 2, at which position the restraining member 19 is disposed with the nib 25 having its pointed lower edge in substantially the same plane as the lower edges of the bristles 13. The diverging portions 20 and 21 extend laterally across the bristles and the device covers the lower area of the bristles. When the painting operation is started, the bristles and the nib 25 of the restraining member 19 are drawn across the surface to be painted. During this operation, the bristles 13 tend to spread laterally but are restrained by the restraining member 19, which, because of its angular shape, forces the bristles into an apex adjacent the nib 25 of the restraining member 19 with the remaining bristles pushed backwardly therefrom. The nib 25 is then brought to bear against the edge where the painting is to take place and the flat outer surface of the nib 25 forms a bearing surface for guiding the paint brush 10 along the edge.

The crowding together of the bristles 13 provides the usual milking action and the action of the device is such that paint flows freely to the ends of the bristles, especially at the vertex, where it is spread over the surface in the usual manner. As will be apparent, the paint is not milked directly onto the surface because the flat nib spaces the vertex away from the surface to be painted, the paint being carried to the surface and spread thereon in the usual manner by the bristle tips which are unconfined in the direction of painting because of the flat formation of the nib. The lug 26, previously described, tends to avoid overcrowding of the bristles by providing a spreading or spacing force operative to lift the bristles at the trailing edge when pressure is applied to the brush during the painting operation. As will be apparent, since the lug 26 is positioned into the bristles between the handle and the tips, any pressure on the upper part of the bristles tends to pry the tips up using the lug as the fulcrum.

Even though sufficient pressure is utilized to pivot the restraining member 19 to such an extent that the lower edge of the diverging portion 21 is adjacent the intersection of the surface to be painted and the intersecting window, ridge, etc., the bearing surface provided by the tip of the extremity 24 insures that the main area of diverging portion 21 will extend inwardly toward the bristles 13 and effectively prevent the bristles

from contacting the intersecting surface. The ends of the extremities 23 and 24, in addition to providing the bearing surfaces previously described, also by reason of their being disposed outwardly from the portions 20 and 21 prevent the edges of the restraining member 19 from catching underneath the bristles 13. In other words, the restraining member 19 is free to pivot over the outer surface of the bristles 13 without interference and without permitting any of the bristles to escape to the outer side of the restraining member 19.

Since the control device and particularly the nib 25 and the rounded extremities 23 and 24 are adapted to be dipped in the paint along with the brush, some paint usually will be retained thereon. It has been found, however, that this will not materially interfere with the effectiveness of the device to prevent marking of adjacent surfaces as the capillary attraction between the metal and the paint is as great or greater than that between the paint and the adjacent surface with the result that the paint tends to cling to the metal of the device and not be deposited therefrom.

In view of the above disclosure, it will be seen that there is provided a device which may be utilized to effectively accelerate the painting of intersecting surfaces inasmuch as free flowing and spreading of the paint by the bristles of the brush is permitted while, at the same time, the spread of the bristles is effectively controlled so that the bristles are not in position to come in contact with the adjacent surfaces and are effectively separated therefrom. In addition, the device is readily movable to an inoperative position where it is out of the way and will permit the paint brush to be used in the normal way for ordinary painting operations.

Having thus described the invention, it will be apparent that one skilled in the art may modify the device within the scope of the invention, and all such modifications are intended to be included within the following claims.

I claim as my invention:

1. A control device for a paint brush comprising a flexible connecting member adapted to be secured to the handle of a paint brush, and a bristle-restraining member supported by the flexible connecting member having at its lower extremity a small nib adapted to be guided along the edge of a surface to be painted, said restraining member comprising two diverging perforated portions adapted to overlie the lower portion of the bristles of a paint brush, the lower edges of said diverging portions forming a generally V-shaped lower edge of the member having a vertex adjacent the nib, said diverging portions being bent inwardly in position to form an apex of bristles adjacent the nib during a painting operation and to prevent contact of the bristles with a surface other than the surface to be painted, said diverging portions having outwardly disposed bearing surfaces at the upper extremities thereof to permit the restraining member to slide over the surfaces of the bristles and to position the diverging portions away from adjacent surfaces when the device is flexed from normal position during a painting operation.

2. A control device for a paint brush comprising a perforated restraining element of generally triangular shape, laterally flexible means for positioning same on a paint brush, said element having a flat nib at its lower apex adapted to function as a guiding element, and having in-

wardly bent side portions with outwardly disposed extremities whereby the bristles of a brush may be constrained into an apex adjacent the nib and spaced from a surface adjacent to the surface to be painted, and an inwardly extending lug on said element adapted to space the bristles when the device is flexed from normal position during a painting operation.

3. A control device for a paint brush of the type having a handle and a group of bristles fastened at one end to the handle, said group being generally rectangular in cross-section, comprising a restraining member of generally triangular shape, a laterally flexible element extending centrally from the base of the triangular member and arranged to be mounted on the handle to dispose the triangular member against the long side of the group of bristles and with its apex adjacent the free ends of the bristles,

said restraining member being bent inwardly toward the bristles along a line extending substantially parallel to the bristles from said apex to said base to thereby constrain the bristles during a painting operation, and a nib depending from the apex of the triangular member and providing a guiding edge spaced from said apex.

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