GUIDE ATTACHMENT FOR PAINT BRUSHES

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This invention relates to guiding devices for paint brushes, and more particularly has reference to a device adapted for attachment to a paint brush of the type having a handle of circular cross section, used for painting relatively narrow surfaces, striping, and for other types of painting work in which it is necessary that the paint brush be controlled with a high degree of accuracy.

It may be noted, in this regard, that the painting of moldings, trim, window casings, sashes, etc., requires very careful control of the paint brush, this being true not only with respect to the surface on which the paint brush is guided, but also with respect to the pressure with which the tip end of the brush is positioned against the said surface, for the purpose of providing uniform distribution of the paint. While highly skilled painters are able to control the brush with sufficient accuracy, relatively inexperienced painters, such as the ordinary householder, find it difficult to perform tasks of this type, and the present invention is designed to permit the ordinary householder to do a highly accurate job of painting in the type of situation referred to. It will be noted, however, that the device is usable to equal advantage by skilled painters, since it permits the painting of the surface to be accomplished with more rapidity, ease, and less concentration than has heretofore been required.

The invention devised to accomplish the above indicated desirable results includes clamp means adapted for connection to a paint brush of the circularly cross-sectioned type, with said clamp means being adapted to be readily shifted in a longitudinal direction upon the paint brush handle, whereby to permit adjustment of the guiding tip of the device in said longitudinal direction, thereby to allow the guiding tip to be properly located relative to the tips of the paint brush bristles. Pivoted upon the clamp means for swinging movement about an axis normal to the length of the brush and occurring upon the longitudinal median of the brush is a guide blade of planiform disposed at one side of the brush head. The guide blade includes a triangularly shaped guiding tip, having side edges converging in a direction toward the tip end of the brush head. Thus, either side edge can be disposed against a surface being painted, in a position such that the point of the guiding tip of the device will be in registration with the tip ends of the bristles. Spring means is operatively associated with the blade, designed to normally bias the blade against the pivot axis thereof to a neutral position in which its longitudinal median coincides with that of the paint brush. The blade is pivoted in either direction from its neutral position against the restraint of the spring means. Thus, in use, the blade is slightly tilted, with the opposing spring pressure being adapted to control the flexible action of the guide and the pressure upon the paint brush bristles. The bristles thus flex only according to the pressure applied by the user through the handle. In this way, a better "feel" of the brush is given to the user. The spring pressure is so directed as to permit the user to flex the paint brush bristles to the exact extent desired, without danger of over-flexing the same or, perhaps, erring in the opposite direction.

A further object of importance is to provide a device as stated that will be usable for any of various painting operations in which accurate control of the brush is essential, as for example striping, "cutting-in" around window sash, casings, moldings, trim, etc., "lining" during two-tone painting operations, etc.

A further object is to provide the device to be swiftly attached to or detached from the brush, whenever desired.

Still another object is to permit the device to be shifted upon the brush to a retracted position with speed and ease, when the bristles are being dipped into the paint, with the device being shiftable back to its operative position with equal ease and speed.

A further object of importance is to provide a device of the character described that will be so disposed as to insure that the paint brush handle will be disposed in a proper angle to the surface. The angle may thus be no smaller than the minimum angle found suitable by experienced painters, and can be increased according to the desires of the particular user. Increase of the angle is accompanied by a corresponding increase in the pressure with which the spring bears against the guide blade to hold the same against the work.

Yet another object is to provide a device of the character stated which will be designed in such a manner as to insure maximum visibility for the user during the painting operation.

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 side elevational view of a guiding attachment for paint brushes according to the present invention as it appears when in use, a paint brush being illustrated fragmentarily;

Figure 2 is a top plan view of the device in association with a paint brush;

Figure 3 is an enlarged, detail sectional view longitudinally of the device, substantially on line 3—3 of Figure 1; and

Figure 4 is an enlarged transverse sectional view through the clamp means, on line 4—4 of Figure 1.

Referring to the drawings in detail, designated generally by the reference numeral 10 is a conventional, round handle paint brush. A paint brush of this type includes an elongated handle 12, which tapers gradually toward its outer end, that is, the end remote from the bristles, although it is not essential that a brush of this type so taper. In any event, the brush handle 12 at its inner end is fixedly engaged in a ferrule 14. This is flattened and receives, at its flattened end, the bristles 16.

The guide attachment constituting the present invention has been generally designated at 18. It includes a mounting or clamp means comprising an elongated, cylindrically shaped sleeve 22 longitudinally split from end to end thereof to define opposed, transversely curved clamp arms 23. The clamp arms have a slight springability thereto. This permits them to be spread slightly for the purpose of loosening them sufficiently to permit the clamp means to be adjusted longitudinally of the handle or remove completely therefrom.

In any event, the elongated clamping jaws 22 are formed at opposite sides of the longitudinal median of the clamp, with parallel slots 24.

Corresponding to and disposed in contact with the inner surfaces of the respective clamping jaws are spreading members 28. At their outer ends these have outwardly directed lips bearing against the outer longitudinal edges of the clamp jaws 22. The inner ends of the
members 28 merge into elongated, flattened handle portions 32, which extend through and are loosely pivoted in the slot 24. The handle portions 32 diverge in a direction outwardly and substantially radially of the clamp.

From the above, it will be apparent that when it is desired to spread the jaws 22 against the inherent spring action, one presses the handle portions 32 to shift the same toward each other. This rocks the members 28 outwardly from one another. By engagement of the lips 30 against the jaws 22, the jaws 22 are spread sufficiently to loosen the same upon the handle 12. The clamping means may now be shifted longitudinally of the handle or removed entirely therefrom, whichever is desired.

The mounting or clamp means is adjacent one end of an elongated extension plate 34 and connects the extension plate to the brush handle 12 for selective longitudinal adjustment therealong. Specifically, the blank portion of the clamp is integrally formed with the extension plate 34 which projects in the direction of the bristles when the device is applied to the paint brush. The flattened extension plate 34, at the end thereof remote from the clamp, is integrally formed with an open-sided, shallow spring housing 36. Housing 36 is formed merely by the material of the plate 34 outwardly, then in the reverse direction, and then back to the plane of the extension plate proper.

In face to face contact with the inner surface of the extension plate 34 is a guide blade. The blade at its inner end, that is, the end adjacent the clamp means, has a semi-circular projection 38 integral with a triangularly shaped blade portion 40. The triangularly shaped blade portion and the semi-circular projection 38 are symmetrically disposed in respect to the longitudinal median of the guide blade. The projection, it will be noted, is of skewed configuration, being formed upon the base portion of the triangle. The sides of the triangle define straight guide edges 42 adapted to be disposed in full contact with the surface of the work W when the device is in use.

The diameter of the semi-circular projection 38, as will be shown from Figure 1, is slightly less than the overall distance between the divergent ends of the guide edges 42. Thus, there are defined shoulders 44 extending substantially in alignment with a line extending diametrically of the semi-circular projection 38.

Referring now to Figure 3, a torsion spring 46 is circumposed about a connecting rivet or equivalent fastening element 48. Element 48 extends through transversely aligned openings formed in the outer wall of housing 36, the extension plate 34, and the guide blade. Thus, it holds these several components assembled with one another while at the same time providing a support for the spring. The axis of the pivotal connection of the guide blade to the extension plate falls upon the center of the semi-circular projection 38. As will be noted, the spring has elongated arms 50 extending in opposite directions through the open sides of the housing, and terminating at their outer ends in lateral fingers 52 bearing against the shoulders 44. The spring is provided with a balanced tension such that when the device is not in use, the arms 50 will both bear against the respective shoulders 44. They, therefore, hold the guide plate in a neutral position in which its longitudinal median coincides with the longitudinal median of the clamping means and of the associated brush.

In use of the device, it is slipped onto the paint brush, and is shifted to a position adjacent the ferrule 14. On release of the handle portions 32 of the clamp, the spring tension of the clamp jaws 22 is permitted to exert itself, causing the clamp jaws to tightly grip the paint brush handle.

Thereafter, the device can be used in painting, for example, a stripe S on the work W. In use, the handle 12 is held at a selected angle to the work W, such as shown in Figure 1. This angle is selected such as to cause the lower guide edge 42 of the guide blade to be disposed in full contact with the surface of the work.

The guide blade is tilted slightly about the pivot axis defined by the pin 48, against the restraint of one of the spring arms 50, in the manner shown in Figure 1.

By rearward movement of the handle 12, a continuous pressure exerted, tending to return the guide blade to its normal, neutral position. The user can detect such pressure. This imparts a highly desirable "feel" to the device whereby the user can control the angularity of the bristles to the work. The pressure with which the bristles bear against the work is controlled with a high degree of accuracy, usually obtained only by years of experience.

The device is thus well adapted for use by the relatively inexperienced painter. This is so because the painter can recognize whether or not the bristles are being held against the work properly, or whether they are, on the other hand, not properly disposed relative to the work surface. Not only is the direction of the bristles and the width of the stripe S thus accurately controlled, but further, the extent of pressure of the bristles against the work is simultaneously controlled, so that an excessive amount of paint is not applied thereto. Conversely, controlling in this manner the pressure of the bristles against the work insures that there will not be transmitted to the work an inadequate amount of paint.

When the bristles are to be dipped into the paint to provide a new supply of paint in the brush head, the arms 50 are pressed together. The device is then retracted sufficiently to allow the dipping of the brush, without causing paint to get on the guide attachment. Then the device is returned to the Figure 1 position thereof, and the painting operation is continued.

To use the device properly, the pointed end of the triangularly shaped blade portion 40 should be in line with the tips of the bristles, in the manner shown in Figure 1.

It will be observed that when the blade portion 40 is tilted about its pivoted axis during use of the device, one of the arms 50 of the spring is placed under increased tension. However, the lateral projection of finger 52 of the other arm 50 moves away from its adjacent shoulder 44, following the curvature of the semi-circular projection 38. This is due to the fact that the arm 50 that is not in use, that is, that shown at the right in Figure 1, bears against the end wall 54 of housing 36.

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, and the means presently devised to carry out said principles, it being considered that the invention comprehends any minor change in construction that may be permitted within the scope of the appended claims.

What is claimed is:

1. A guide attachment for a paint brush comprising an elongated extension plate, mounting means adjacent one end of said plate for connecting said plate to a brush handle for selective longitudinal adjustment therealong, said plate having at the end thereof remote from the mounting means an open sided housing; a pivot pin extending within the longitudinally length of said extension plate; a guide blade rockably mounted upon the pivot pin in face to face contact with the extension plate, said guide blade including at the end remote from its pivoted end a triangular shaped blade portion having convergent side edges selectively engaging against a work surface; and a torsion coil spring coiled about the pivot pin within the housing and operatively connected to said guide blade for normally maintaining the guide blade in a neutral position in which it is symmetrically disposed in respect to the longitudinal...
median of the mounting means, whereby to place the coil spring under increased tension responsive to tilting of the guide plate to dispose a selected guide edge thereof in engagement with the work while the brush handle is at a correspondingly selected angle of inclination to the work surface.

2. A paint brush attachment comprising a split sleeve clamp adapted to be fitted over a brush handle; means associated with the clamp for spreading the jaws thereof, whereby to permit adjustment of the clamp longitudinally of the handle to a selected position; an extension plate integral with and projecting beyond one end of the sleeve; and a guide blade rockably mounted upon the extension plate in face to face contact therewith, said guide blade pivoting upon an axis normal to the length of the sleeve and including a triangularly shaped blade portion defining converging side edges selectively engageable against the work surface; and spring means circumposed about the pivotal connection of the guide blade to the extension plate and including arms projecting in opposite directions into engagement with the opposite side edge portions of the guide blade, whereby to maintain the guide blade normally in a neutral position in which it is symmetrically disposed in respect to the clamping sleeve; said guide blade being rockable from said position so as to locate a selected side edge thereof in engagement with the work surface with the sleeve at a correspondingly selected angle to the work surface.

3. A paint brush attachment comprising a split sleeve clamp adapted to be fitted over a brush handle; means associated with the clamp for spreading the jaws thereof, whereby to permit adjustment of the clamp longitudinally of the handle to a selected position; an extension plate integral with and projecting beyond one end of the sleeve; and a guide blade rockably mounted upon the extension plate in face to face contact therewith, said guide blade pivoting upon an axis normal to the length of the sleeve and including a triangularly shaped blade portion defining converging side edges selectively engageable against the work surface; and spring means circumposed about the pivotal connection of the guide blade to the extension plate and including arms projecting in opposite directions into engagement with the opposite side edge portions of the guide blade, whereby to maintain the guide blade normally in a neutral position in which it is symmetrically disposed in respect to the clamping sleeve, said guide blade being rockable from said position so as to locate a selected side edge thereof in engagement with the work surface with the sleeve at a correspondingly selected angle to the work surface, the guide blade including a generally semi-circular projection at the base of the triangular blade portion, the spring arms including lateral fingers adapted to travel about the curved edge of said projection responsive to tilting of the guide blade in a selected direction.

4. A paint brush attachment comprising a split sleeve clamp adapted to be fitted over a brush handle; means associated with the clamp for spreading the jaws thereof, whereby to permit adjustment of the clamp longitudinally of the brush handle to a selected position; an extension plate integral with and projecting beyond one end of the sleeve; and a guide blade rockably mounted upon the extension plate in face to face contact therewith, said guide blade pivoting upon an axis normal to the length of the sleeve and including a triangularly shaped blade portion defining converging side edges selectively engageable against the work surface; and spring means circumposed about the pivotal connection of the guide blade to the extension plate and including arms projecting in opposite directions into engagement with the opposite side edge portions of the guide blade, whereby to maintain the guide blade normally in a neutral position in which it is symmetrically disposed in respect to the clamping sleeve, said guide blade being rockable from said position so as to locate a selected side edge thereof in engagement with the work surface with the sleeve at a correspondingly selected angle to the work surface, the guide blade including a generally semi-circular projection at the base of the triangular blade portion, the spring arms including lateral fingers adapted to travel about the curved edge of said projection responsive to tilting of the guide blade in a selected direction.

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