PAINT ROLLER TRAY WITH SELF-CONTAINED ROLLER CLEANING MEANS

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References Cited

UNITED STATES PATENTS

2,669,736 2/1954 Wabnitz
2,798,239 7/1957 Freund
3,732,593 5/1973 Habstad

FOREIGN PATENTS OR APPLICATIONS

1,159,380 7/1969 Great Britain

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ABSTRACT

An elongated paint containing roller brush accommodating tray which, broadly stated, is structurally and functionally similar to commonly used trays and pans but is unique in that it has a relatively deep fixedly covered sump at its forward end and a companion tapering relatively shallow trough-like roller guide at its rearward end provided with a slidable shiftable lid. The longitudinal side walls of the roller guide are provided with flange means on channel-type tracks on said lid which are slidingly keyed. The extreme rearward end is provided with a tray stabilizing and supporting prop. Emptying and draining means are provided on the forward end. The adjacent coacting ends of the fixed sump cover and shiftable slideable lid provide a space for passage of a stream of water from a manually held properly aimed garden hose. When the brush is used and held in the covered sump the forcefed stream of water serves to spin and cleanse the brush and also the interior surfaces of the walls of the overall tray.

8 Claims, 3 Drawing Figures
PAINT ROLLER TRAY WITH SELF-CONTAINED ROLLER CLEANING MEANS

This application for patent is a continuation-in-part of my copending application Ser. No. 142,593, filed May 12, 1971, and now U.S. Pat. No. 3,732,593.

The present invention relates to a roller brush paint tray structurally and functionally similar to elongated paint trays which are currently being used and has to do, more particularly, with a tray characterized by unique self-contained features which when properly utilized convert the tray into a novel covered enclosure for the roller brush and so that by properly utilizing and aiming the nozzle of a garden hose, the user can wash and clean the brush and, in addition, wash and cleanse the paint-covered walls of the tray itself.

It is not new, as is known, to insert and confine a roller brush or a regular paintbrush in an enclosed and confined space and to subject the brush to a force-fed stream of water or a special cleaning solution and, in doing so, to clean the brush for subsequent handling and use, for example, one such adaptation of interest is shown in U.S. Pat. No. 3,075,534 granted to me and on which the present invention is an improvement. For further background information of general interest the reader may desire to evaluate U.S. Pat. No. 2,798,239 granted to Henry L. Freund. Also and having a bearing on the matter reference can be made to the paint tray disclosed in U.S. Pat. No. 2,669,736 granted to George H. Wabnitz. Then, too, reference may be made to my copending application Ser. No. 142,539, now U.S. Pat. No. 3,732,593.

An object of the herein disclosed invention is to improve upon the above-mentioned prior patents and, in doing so, to appropriate and utilize an elongated pan or tray which, as is evident, is structurally and functionally similar to roller brush paint trays which are currently being used and to incorporate therein added and practical features which coordinate in providing a brush and cleaning means self-contained enclosure in such a manner that the captured and enclosed brush can be satisfactorily subjected to a force-fed stream of water for brush and tray cleaning purposes.

The herein disclosed paint tray and accompanying roller cleaning means is deemed to be an innovation in that it enables one to effectually clean paint rollers and paintbrushes in a kitchen sink or a laundry tube and to achieve the end result desired without splashing paint laden water.

To the ends desired a shallow trough-like end of the tray is provided on an underside with a stand or depending bracket which coordinates with the bottom of the relatively deep sump and provides the desired self-supporting feature when the tray is being used in horizontal position. In carrying out the principles of the invention the relatively deep sump at the forward end is provided with fixed cover means whose rearward terminal edge is spaced from and coordinates with a relatively shiftable lip-like edge of the slideable trough lid in a manner to provide a space to accommodate the nozzle on the garden hose and to facilitate aiming the stream of water against the free turning paintbrush.

Briefly the concept has to do with an elongated roller brush paint containing and brush immersing tray which is designed and adapted to contain paint and, in addition, to accommodate to a handle-equipped frame-supported roller brush. The tray has an elongated bottom wall marginally provided with and encompassed by upstanding longitudinal side walls joined at their respective end portions by transverse forward and rearward end walls. The forward end portion of the tray is comparably deep and provides a paint accumulating sump. The median and complemental rearward end portion of the tray is proportionally shallow, is tapered and provides a trough-like roller guide. The sump has a flat bottom wall portion which is adapted to rest firmly on a stationary support surface when being used. The coordinating bottom wall portion of the trough-like roller guide is elevated to a plane above the plane of said first-named bottom wall and inclines toward and merges with the first-named bottom wall portion. A depending roller guide elevating stand serves as a stabilizing prop. Cover means is fixed atop the sump and companion cover means is shiftable slideable atop and normally closes and accordingly covers the brush guide means. The overall cover means serves to enclose an insertable and removable roller brush in a manner that the brush portion can be temporarily housed within the confines of the sump, that is, in a manner that it is capable of being washed and cleaned by a manually guided and controlled stream of water under pressure. Other structural and functional features will be evident from the following description.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout.

FIG. 1 is a view in perspective of the improved paint roller tray with self-contained roller cleaning means, showing the slideable lid open and showing the paintbrush positioned to assume a temporarily retained cleaning position.

FIG. 2 is a cross section on a slightly large scale with parts appearing in elevation and taken approximately on the plane of the section line 2—2 of FIG. 1 looking in the direction of the indicating arrows.

FIG. 3 is a view which is taken on the vertical section line 3—3 of FIG. 2 and showing the coordinating position and relationship of the component parts when the hose is being held for use for brush cleaning purposes and, in addition, when the entire device has been inserted in a laundry tub for draining the brush washing and cleansing water.

The overall sheet material portable manually usable tray or pan is denoted, broadly stated, by the numeral 4. As is evident this tray or pan is structurally and functionally similar to roller brush trays which are commonly in use (not shown). In carrying out the principles of the instant invention the tray proper is of one-piece construction and the forward end portion is generally rectangular in appearance and is relatively deep and constitutes a box-like end portion or section designated as a sump 6 which is in alignment and is cooperating with the tapering, reduced elongated shallow and trough-like end portion here differentiated as a roller guide 8. The longitudinal side walls of the overall tray are denoted on both sides by the numeral 10. One transverse end wall, which may be designated as the forward end wall is denoted by the numeral 12. The opposite shallower end wall at the inward or rearward end is denoted by the numeral 14. The horizontal flat bottom wall portion of the sump is denoted at 16, the
slightly elevated inclined bottom portion of the guide or trough is denoted at 18 and the intervening or connecting web is denoted at 20. It will be observed that the upper edge portions of the side walls of the sump are provided with several coplanar outstanding flanges 22 to accommodate coacting outstanding and assembling flanges 24 carried by the depending integral marginal portions of an upper rectangular hood-type cover panel 26. The flanges 22 and 24 are lined up and joined together by an appropriate securing or fastening means 28. The rearward edge portion 30 terminates at the median portion of the overall tray as brought out in FIGS. 1 and 3. Thus the sump is closed by stationary cover panel means for satisfactorily entrapping the rotary roller A carried by the frame portion B of the roller brush C. The shank portion of the frame D is equipped with an appropriate handgrip E. It will also be noted that the respective left and right (FIG. 1) portions of the forward end wall are provided with outstanding necks (screw-threaded or not), said necks denoted at 32 and serving to accommodate attachable and detachable but properly retained closing caps 34. These caps are suitable for emptying the contents from the overall tray in the manner shown in FIG. 3. This step necessitates removing one or both of the caps 34 and bringing into play an attachable and detachable curved discharge hose 36. The manner in which the necks, caps and elbow or hose 36 come into play is believed to be evident from FIGS. 1 and 3.

The aforementioned stand or prop is denoted by the numeral 38 and it is U-shaped and has a height portion 40 which is horizontal and in a common plane with the bottom wall portion 16. These features permit the overall tray or pan to assume a self-standing position particularly when the pan or tray is being used for painting. The vertical leg portions of the stand 38 are denoted at 42. It will also be evident that this stand functions as a sort of a retaining bracket when it is engaged over the edge of the tub while the contents of the pan are being emptied in the manner suggested in FIG. 3.

It will also be noted that the upper edge portions of the vertical longitudinal side wall portions of the roller brush guide are provided with coplanar outstanding flanges as at 44 as brought out in FIG. 1. These flanges serve to accommodate the channel-like assembling and guide tracks 46 carried by the edge portions of a second slidding cover panel or lid 48. This lid is provided at the transverse end 50 with an appropriately bent part which constitutes a handling grip 52. It will be noted that the forward edge portion 58 of the lid is cut out to provide a notch at 54 and that an edge portion of the notch is provided with a plurality of spaced coplanar upstanding tongues 56 which constitute keepers and serve to permit the bent portion B of the frame C of the brush to be temporarily and manually positioned in a given locale to permit placement and holding of the overall roller brush and lining up of the brush with the existing forward edge portion 58 of the lid 48. It will be noted that the edge portion 58 serves in conjunction with the edge portion 30 of the hood or cover panel 26, when the lid 48 is slid to the paintbrush cleaning position shown in FIG. 3, as a satisfactory stream guide and also an anti-splashing shield. There is also a notch 60 on the opposite edge portion of the lid which assists in defining this anti-splash shield 58.

It is within the purview of the concept to provide the sump with a permanently mounted or fixed cover panel as at 26. In addition there may be conditions when the manufacturer would prefer to provide a snap-on type cover under which circumstances the coordinating flanges 22 and 24 could be constructed to achieve this end result (not shown).

By removing the slidingly keyed lid 48 the overall pan or tray is amply open to permit it to be used as a paint tray while painting and to the ends desired it is shaped like a common painter's tray. When the painting job is completed, the applicable and removable lid can be replaced. It is reiterated that when the overall cover panel means, the cover 26 and lid 48, are in the position and relationship shown in FIG. 3 both compartments, that is the sump and the trough are covered but the ends or edges 30 and 58 are spaced apart to permit use of a garden hose F equipped with the usual discharge nozzle G. With the space thus provided the stream of water to be used is passed through the space or opening. It follows that with the brush C in position the hose F and nozzle G are in position as shown in FIG. 3 and also with the tray inclined and in the tub the desired brush washing result can be attained.

To clean the paint roller it is only necessary to pour paint thinner or a similar cleansing fluid in the bottom of the tray and using the roller, to roll it back and forth until the surfaces are soaked with the fluid. Then the attachable lid 48 is placed in position in a manner to confine and hold the roller brush in the position and locale shown. The user can employ any water hose attached to any house tap with an ordinary garden hose nozzle to make the roller spin. It is desirable to move the nozzle across the width or length of the roller. Centrifugal force on the roller will act on and spin the paint off the roller and leave it in a clean and fluffy condition, in fact, aptly dry that one can change from one color to another with little or no trouble or difficulty. In order to clean inside of the tray, the removable lid can be detached thereby enabling one to enter the water hose at the rear end of the tray and to wash out the inside of the tray. The brushes may also be cleaned by the water hose by holding them under the cover to avoid splashing of paint and water. To achieve a good cleaning job, the user can, if desired, soak the roller in a small amount of paint thinner or fuel oil. This is done with the brush in the tray and also this fluid at the same time will loosen the paint in the tray bottom and on the wall surfaces thereby making it easier to clean not only the brush but the tray too. It will be noted that the discharge outlets or necks are positioned toward each side of the front or forward end of the tray and are usually about two inches up from the bottom of the sump. By having two discharge outlets the waste water can be directed into a sink drain whether the drain is on the left or right side or the middle of the sink. During the cleaning operation the tray is placed in the kitchen sink or laundry tub with the rear end of the tray resting on the edge of the sink in the manner shown in FIG. 3.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.

What is claimed as new is as follows:
3,837,035

1. In combination, an elongated roller brush paint containing and brush immersing tray designed and adapted to contain paint and, in addition, to accommodate a handle-equipped frame-supported roller brush, said tray having an elongated bottom wall extending between marginally disposed upstanding longitudinal opposite side walls joined at their respective end portions by upstanding transverse forward and rearward end walls, the upper marginal edges of said forward end wall and said side walls including integral outstanding and at least substantially coplanar flange portions, the forward end portion of said tray being relatively deep and providing a paint accumulating sump, the median and complemental rearward end portion of said tray being proportionally shallow, tapered and providing a trough-like roller guide, said sump having a flat bottom wall portion adapted to rest firmly on a stationary support surface when in use, the coordinating bottom wall portion of said trough-like roller guide being disposed at an elevation above the forward flat bottom wall portion of the sump and inclining forwardly and downwardly toward and merging with said flat bottom wall portion, a depending roller guide elevating and stabilizing prop supported from the rear end of said tray, a cover panel fixed atop said sump, cover means shiftably slidably atop and normally closing and covering said roller guide, the cover panel and cover means, when conjointly in use, serving to enclose an insertable and removable roller brush in a manner that the brush portion can be temporarily housed within the confines of said sump in a manner that it is capable of being washed and cleaned by a manually guided and controlled stream of water under pressure, said sump cover panel including front and opposite side depending marginal flanges and being disposed on a level above the level of the normally open top side of said roller guide, said prop comprising an elongated U-shaped bracket having depending vertical legs joined by a horizontal bight portion, said bight portion being disposed at an elevation substantially coincident with the bottom wall portion of said sump so that the overall tray is self-standing when disposed in a horizontal in-use position, the lower marginal edge portions of the depending marginal flanges of said cover panel including coplanar outstanding flanges fastened in stationary position to the coplanar flange portions of said forward end wall and the forward portion of the side wall flange portions between which said sump is defined.

2. The tray defined in claim 1, and wherein the cover means for said roller guide is characterized by a plate-like lid, said lid having longitudinal edges defining inwardly opening lengthwise guide tracks which are shiftably keyed on the portions of the outstanding side wall flanges between which said roller guide is defined.

3. The tray defined in claim 2, and wherein the adjacent coating end portions of (1) the cover panel on said sump and (2) the roller guide lid are vertically spaced apart a prerequisite distance in a manner to provide an accessible unobstructed space by way of which a stream of water can be aimed toward and concentrated on the brush in a manner to permit use of the space and so that the properly directed stream of water can be collected in the receptacle portion of the sump for controlled brush as well as over-all tray cleaning needs.

4. The tray defined in and according to claim 3 and wherein the forward transverse end wall of said sump is provided with an outstanding nipple-like discharge neck which, in turn, is provided with a readily attachable and detachable closing cap, said cap when removed permitting a manually attachable and detachable elbow to be temporarily attached to the neck, said elbow being adapted to facilitate emptying the accumulated contents of the over-all tray into a sink or laundry tub drain pipe.

5. The tray defined in and according to claim 4, and wherein said forward transverse end wall is also provided with a second outstanding nipple-like discharge neck which is optionally usable and is likewise provided with a closing cap which when removed permits an applicable and removable pouring elbow to be operatively connected thereto for convenient emptying.

6. In combination, an elongated portable painter's tray adapted to accommodate a conventional handle-equipped frame-supported roller brush, said tray having a bottom wall marginally provided with complementary upstanding longitudinal side walls and transverse end walls defining a rim, a forward end portion of said tray being relatively deep and providing a paint accumulating sump, the rearward portion being elongated, shallow, and trough-like and providing roller guide, the bottom wall portion of said sump being flat and adapted to rest firmly on a stationary support surface, the bottom wall portion of the trough-like roller guide being inclined downwardly toward and merging with said flat bottom wall portion, a depending tray-end elevating and stabilizing prop, said prop being U-shaped and embodying vertical depending legs joined at lower ends by a bight portion, said bight portion being disposed at an elevation common with the bottom wall portion of said sump, the upper portion of said sump being provided with rigidly mounted hood-type cover panel disposed at an elevation higher than the upper open end of the roller guide, the upper edge portions of the forward end wall and said side walls being provided with elongated coplanar outstanding flanges, the opposite side and forward marginal edges of said cover panel including depending marginal flanges stationarily fastened along their lower marginal portions to the forward outstanding flange and the forward end portions of the side outstanding flanges, coacting longitudinal edge portions of a lid having turned-in guide tracks slidingly shiftable on the rear end portions of said outstanding side flanges and disposed at an elevation below the elevation of the cover panel of said sump, the adjacent edge portions of the sump cover panel and said lid being parallel, aligned and spaced apart and functioning to permit a stream of water from the nozzle of a garden hose to pass by way of the unobstructed space into said sump, said forward end wall of said sump being provided with at least one discharge neck, said neck provided with a removable closure cap and, when the cap is removed, with a selectively usable attachable and detachable water emptying elbow.

7. The tray defined in claim 6 and wherein one corner portion of said lid is struck-out and providing a notch, one edge portion of said notch being provided with a plurality of cooperatively aligned spaced upstanding, longitudinally arranged tongues, said tongues constituting keepers and serving to permit the usual bent portion of the handling frame of said roller brush to be temporarily and manually positioned in a given locale to permit placement and holding of the over-all roller brush and lining up of the brush with the existing
space between the sump cover and forward edge portion of said lid.

8. The tray defined in claim 6 and wherein one corner portion of said lid is struck-out to provide a notch, one edge portion of said notch being provided with a plurality of aligned spaced upstanding, longitudinally oriented tongues, said tongues conjointly constituting keepers and serving to permit the usual bent frame portion of a handle of a roller brush to be temporarily and manually positioned in a given locale to permit placement and holding of the over-all roller brush and lining up of the brush with the existing space between the sump cover and forward edge portion of said lid, the forward edge portion of said lid being fashioned into and providing a lip-like extension which is cooerperable with the rearward marginal edge portion of the sump cover, said extension being capable of underlying the coacting edge portion of the cover and coacting therewith in providing a stream guide and also an anti-splashing shield.