Nov. 24, 1953 V. R. DRUM 2,659,917

PAINT TRAY

Filed April 13, 1950

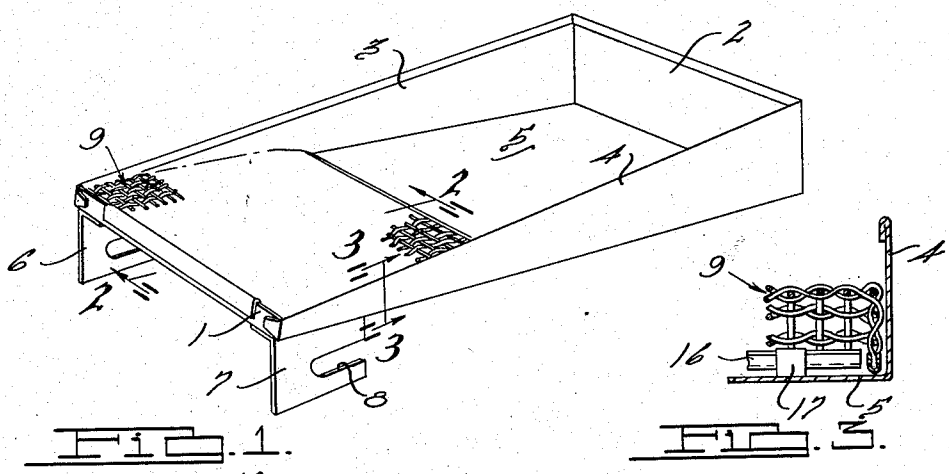


Fig. 1.

Fig. 3.

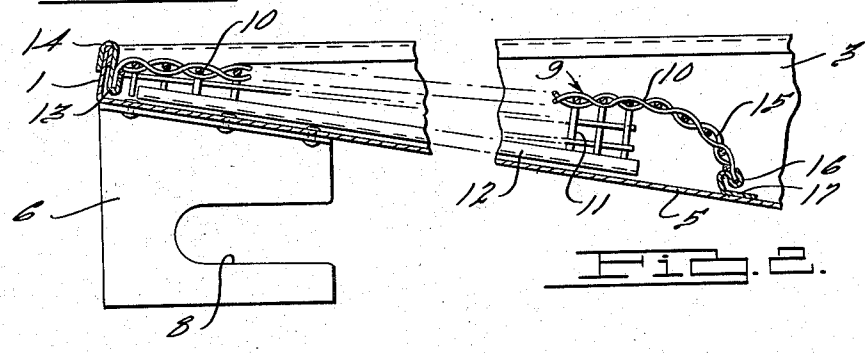


Fig. 2.

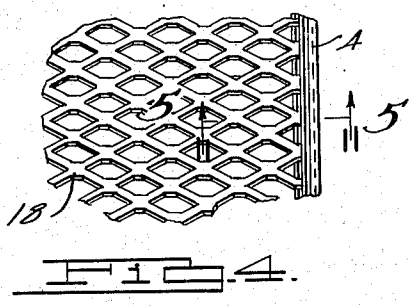


Fig. 4.

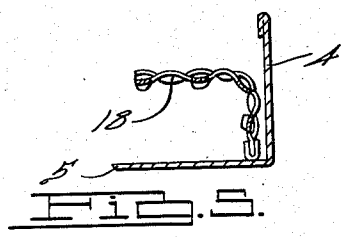


Fig. 5.

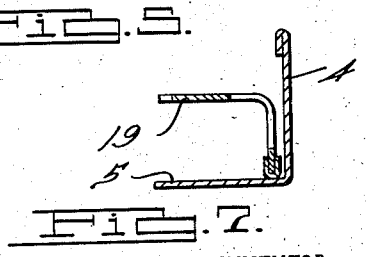


Fig. 7.

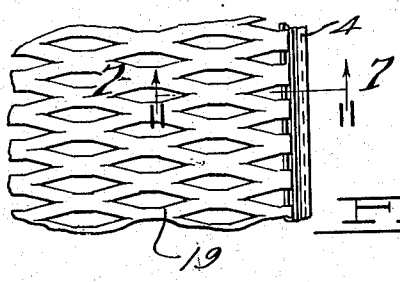


Fig. 6.

INVENTOR.
Vern R. Drum.
BY
Harness, Dickey & Pierce
ATTORNEYS

Patented Nov. 24, 1953 2,659,917

UNITED STATES PATENT OFFICE

2,659,917

PAINT TRAY

Vern R. Drum, Marine City, Mich., assignor to The Drum Corporation, Richmond, Mich., a corporation of Michigan

Application April 13, 1950, Serial No. 155,694

8 Claims. (Cl. 15—121.2)

1

The present invention relates to improvements in paint trays and painting devices, particularly of the type which are adapted for use in connection with a conventional type of paint roller.

Paint trays have heretofore been provided in which such trays have a shallow end and a relatively deeper end with means to support the tray, so that the top edges are substantially level. This provides a portion in the deeper end of the tray within which the paint is disposed. In the use of such paint trays, conventional paint rollers are employed; and, in their use, are positioned within the tray so that the surface of the roller is covered with the paint to be applied to the work surface. In drawing the roller toward the shallow end of the tray, the roller is supposed to turn so that the paint on the periphery of the roller will be evenly disposed thereabout. However, in practice it has been found that the roller tends to slip rather than roll over the bottom surface of the pan, with the result that the paint is not evenly distributed around the roller; and with the further result that excess paint is not removed.

According to the present invention, an open-work or perforate member is disposed adjacent the shallow end of the container and as the roller is pulled toward the shallow end it runs up over the open-work member and the perforations insure a rolling action on the roller. Furthermore, the open member causes the excess paint to be removed from the roller, and such excess paint drops down through the open mesh and flows back to the paint supply at the deeper end of the container. By manipulating the roller back and forth over the open-work member, the operator may obtain an even distribution of paint, both around and along the length of the roller; and, furthermore, may remove all excess.

One of the primary objects of the present invention is to provide an improved painting device particularly for use with paint rollers, whereby the paint may be evenly distributed over the roller, both rotatively and lengthwise thereof, and whereby excess paint may be readily removed and returned to the paint supply.

Other objects of the invention will become apparent from the following specification, the drawing relating thereto, and from the claims hereinafter set forth.

In the drawing, in which like numerals are used to designate like parts in the several views throughout:

Figure 1 is a top perspective view of a painting device, including the paint tray and open-work

2

member associated therewith, according to the present invention;

Fig. 2 is an enlarged broken cross-sectional view taken substantially along the line 2—2 of Fig. 1;

Fig. 3 is an enlarged fragmentary cross-sectional view taken substantially along the line 3—3 of Fig. 1;

Fig. 4 is a plan view of a portion of a modified form of open-work member;

Fig. 5 is a cross-sectional view taken substantially along the line 5—5 of Fig. 4;

Fig. 6 is a view similar to Fig. 4 illustrating another modified form of open-work member; and

Fig. 7 is a fragmentary cross-sectional view taken substantially along the line 7—7 of Fig. 6.

Referring to the drawing, and referring particularly to Figs. 1–3 thereof, a paint tray is illustrated which comprises end walls 1 and 2, side walls 3 and 4, and a bottom 5. The container is preferably formed of sheet metal, but may be formed of other material. The end wall 1 is of less height than the end wall 2 so that when the top edges of the side and end walls are substantially level, the sloping bottom 5 provides a relatively shallow end adjacent the wall 1, and a relatively deeper end adjacent the wall 2. It will be appreciated that when the tray is in use the paint is poured into the container and takes a position adjacent the deeper end thereof.

In order to support the container so that the top edges of the side and end walls are substantially level, end supports 6 and 7 are provided on the bottom adjacent the shallow end. In the embodiment illustrated, such end supports are in the form of plates having their edges inturned and riveted to the bottom 5. The end members 6 and 7 are of such a depth that when the tray is supported on a level surface the surface will be engaged by the bottom of members 6 and 7 and the bottom edge of end wall 2, so that the top edges of the end walls and side walls are substantially level. The end members 6 and 7 are provided with cutout portions 8 on the front, vertical edges thereof, and such cutout portions 8 provide hooks which may be clamped over the edge of a ladder top.

An open-work or perforate member, generally indicated at 9, is disposed within the container adjacent the shallow end thereof. In the embodiment of Figs. 1–3, such member is formed of an open-work wire mesh 10 which is substantially flat transversely and over the major portion of its length. The sides are turned down,

as indicated at 11, and molding strips 12 are secured to the bottom edges thereof. The transverse edge of the member 9 adjacent the shallow end wall 1 has a molding strip 13 clamped along its edge and is formed with a reversely-turned hook portion 14 for removable attachment to the top edge of the adjacent wall 1. The reversely-turned hook portion 14 preferably projects upwardly from the paint-distributing surface a sufficient distance as to provide a stop for the roller as it rolls up the sloping end portion of said surface onto the main portion thereof. The opposite end of the member 9 is curved or sloped downwardly, as indicated at 15, to a position adjacent the bottom 5. A molding strip 16 is clamped along the adjacent edge of the member 9. Spacer clips 17 are mounted on the strip 16 at spaced points across the member 9, so that the transverse edge of the member 9 adjacent the bottom is spaced slightly therefrom.

It will be appreciated that the major portion of the member 9 is spaced from the bottom 5; and, furthermore, the edge along molding 16 is spaced from the bottom 5 so that paint may flow back into the deeper end of the container.

In the use of the device above described, the paint roller is rolled into the deeper end of the container and its surface covered with the paint contained therein. The roller is then drawn back toward and over member 9. The tapered portion 15 permits an easy rolling action in moving up to and over the top of member 9, and as the roller is passed to and fro over the top of member 9 the paint is evenly distributed around and along the roller, and any excess paint will drop down through the open mesh and flow back to the deeper end.

A comparison of Figs. 2 and 3 illustrates that the strands of wire forming the open mesh present uniformly spaced, alternate projections and depressions over the surface of the member 9. This facilitates a turning action on the roller and furthermore assists in the distribution of the paint thereover and a release of excess paint therefrom.

After the container has been used, the member 9 may be removed therefrom so that both parts may be easily cleaned.

In Figs. 4 and 5, a modified form of open-work member is provided. In this form, a member 18 is provided which is constructed with the same shape as that above described except that the member 18 is formed of expanded metal having the edges of the openings turned to provide alternately raised and depressed portions, as best shown in Fig. 5.

In Figs. 6 and 7, another form is shown in which a member 19, corresponding to member 9, is provided, except that it shows a different form of expanded metal, which may be employed. In this instance, the surface is not formed with the relatively raised and depressed portions. Mesh of this form is satisfactory, but the relatively raised and depressed portions are preferred and give the best results.

In all cases the wire mesh, or the expanded metal members, which may take different forms, provide an open-work member which effects a rotation of the roller as it passes thereover and permits excess paint to drip therethrough.

Formal changes may be made in the specific embodiment of the invention described without departing from the spirit of the invention, the scope of which is commensurate with the appended claims.

What is claimed is:

1. In a painting device, a container having a shallow end and a relatively deeper end joined by a sloping bottom, and an open-work member disposed within said container adjacent said shallow end and extending over a portion of the length of said bottom in spaced relation thereto, said open-work member having a flat portion and a curved portion contiguous therewith, said curved portion facing the deeper end of said container and sloping upwardly and away from said bottom adjacent said deeper end, whereby said curved portion is adapted to guide a paint roller from said container bottom onto said flat portion.

2. In a painting device, a container having a shallow end and a relatively deeper end joined by a sloping bottom, an open-work member disposed within said container adjacent said shallow end and extending over a portion of the length of said bottom in spaced relation thereto, said open-work member having a flat portion and a curved portion contiguous therewith, said curved portion facing the deeper end of said container and sloping upwardly and away from said bottom adjacent said deeper end, whereby said curved portion is adapted to guide a paint roller from said container bottom onto said flat portion, and supporting means for holding the lower edge of said curved portion in spaced relation with said container bottom.

3. In a painting device, a container having a shallow end and a relatively deeper end joined by a sloping bottom, and an open-work member having raised and depressed portions disposed within said container adjacent said shallow end and extending over a portion of the length of said bottom in spaced relation thereto, said open-work member having a flat portion and a curved portion contiguous therewith, said curved portion facing the deeper end of said container and sloping upwardly and away from said bottom adjacent said deeper end, whereby said curved portion is adapted to guide a paint roller from said container bottom onto said flat portion.

4. A portable paint tray structure for use with a paint roller, said structure comprising a paint-holding tray having end walls, side walls and a bottom wall, and a paint-distributing member having an uneven paint-distributing surface over which the roller is caused to roll as it travels thereover, said paint-distributing surface overlying the tray bottom wall and extending from one end wall of the tray toward but terminating a substantial distance short of the other end wall of the tray, the space between said paint-distributing surface and said last mentioned tray end wall being a paint-holding space in which the paint roller may be positioned for the application of paint thereto, the said paint-distributing surface of said member having the main portion thereof spaced above the tray bottom wall a sufficient distance as to be outside of the paint which the tray holds in use thereof and said surface also having an end portion sloping downwardly at a relatively steep angle from said main portion and extending into close proximity with the tray bottom wall, said sloping end portion enabling the roller, after moving along the tray bottom wall, to roll up the sloping end portion onto said main portion.

5. A portable paint tray structure for use with a paint roller, said structure comprising a paint-

holding tray having end walls, side walls and a bottom wall, and a paint-distributing member having an uneven paint-distributing surface, said surface being provided throughout substantially its entire extent with elevations to thereby effect rolling movement of the roller as it travels thereover, said paint-distributing surface overlying the tray bottom wall and extending from one end wall of the tray toward but terminating a substantial distance short of the other end wall of the tray, the space between said paint-distributing surface and said last mentioned tray end wall being a paint-holding space in which the paint roller may be positioned for the application of paint thereto, the said paint-distributing surface of said member having the main portion thereof spaced above the tray bottom wall a sufficient distance as to be outside of the paint which the tray holds in use thereof and said surface also having an end portion sloping downwardly at a relatively steep angle from said main portion and extending into close proximity with the tray bottom wall, said sloping end portion enabling the roller, after moving along the tray bottom wall, to roll up the sloping end portion onto said main portion.

6. A portable paint tray structure for use with a paint roller, said structure comprising a paint-holding tray having end walls, side walls and a bottom wall, and a paint-distributing member having an uneven, open work paint-distributing surface over which the roller is caused to roll as it travels thereover, said paint-distributing surface overlying the tray bottom wall and extending from one end wall of the tray toward but terminating a substantial distance short of the other end wall of the tray, the space between said paint-distributing surface and said last mentioned tray end wall being a paint-holding space in which the paint roller may be positioned for the application of paint thereto, the said paint-distributing surface of said member having the main portion thereof spaced above the tray bottom wall a sufficient distance as to be outside of the paint which the tray holds in use thereof and said surface also having an end portion sloping downwardly at a relatively steep angle from said main portion and extending into close proximity with the tray bottom wall, said sloping end portion enabling the roller, after moving along the tray bottom wall, to roll up the sloping end portion onto said main portion.

7. A portable paint tray structure for use with a paint roller, said structure comprising a paint-holding tray having end walls, side walls and a bottom wall, and a paint-distributing member having a wire mesh paint-distributing surface, the wire mesh character of said surface effecting rolling movement of the roller as it travels thereover, said paint-distributing surface overlying the tray bottom wall and extending from one end wall of the tray toward but terminating a substantial distance short of the other end wall of the tray, the space between said paint-distributing surface and said last mentioned tray end wall being a paint-holding space in which the paint roller may be positioned for the application of paint thereto, the said paint-distributing surface of said member having the main portion thereof spaced above the tray bottom wall a sufficient distance as to be outside of the paint which the tray holds in use thereof and said surface also having an end portion sloping downwardly at a relatively steep angle from said main portion and extending into close proximity with the tray bottom wall, said sloping end portion enabling the roller, after moving along the tray bottom wall, to roll up the sloping end portion onto said main portion.

8. A portable paint tray structure for use with a paint roller, said structure comprising a paint-holding tray having end walls, side walls and a bottom wall, and a paint-distributing member having an uneven paint-distributing surface over which the roller is caused to roll as it travels thereover, said paint-distributing surface overlying the tray bottom wall and extending from one end wall of the tray toward but terminating a substantial distance short of the other end wall of the tray, the space between said paint-distributing surface and said last mentioned tray end wall being a paint-holding space in which the paint roller may be positioned for the application of paint thereto, the said paint-distributing surface of said member having the main portion thereof spaced above the tray bottom wall a sufficient distance as to be outside of the paint which the tray holds in use thereof and said surface also having an end portion sloping downwardly at a relatively steep angle from said main portion and extending into close proximity with the tray bottom wall, said sloping end portion enabling the roller, after moving along the tray bottom wall, to roll up the sloping end portion onto said main portion, said paint-distributing member being provided with an inverted hook-shaped portion at that end wall of the tray from which the paint-distributing surface extends, said hook-shaped portion being positioned over such tray end wall for the support thereon of the paint-distributing member and said hook-shaped portion projecting upwardly from the paint-distributing surface a sufficient distance as to provide a stop for the roller as it rolls up the sloping end portion of the paint-distributing surface onto the main portion thereof.

VERN R. DRUM.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
1,014,294	Garvey	Jan. 9, 1912
1,813,670	Kessler	July 7, 1931
2,114,891	Vaughn	Apr. 19, 1938
2,255,091	Vaughn	Sept. 9, 1941
2,444,584	Touchett	July 6, 1948
2,490,546	Rubin	Dec. 6, 1949
2,546,041	Newton et al.	Mar. 20, 1951