Sept. 20, 1966 H. D. ANDREWS, JR 3,273,746

PAINT CAN BIB

Filed June 2, 1964

FIG. 1

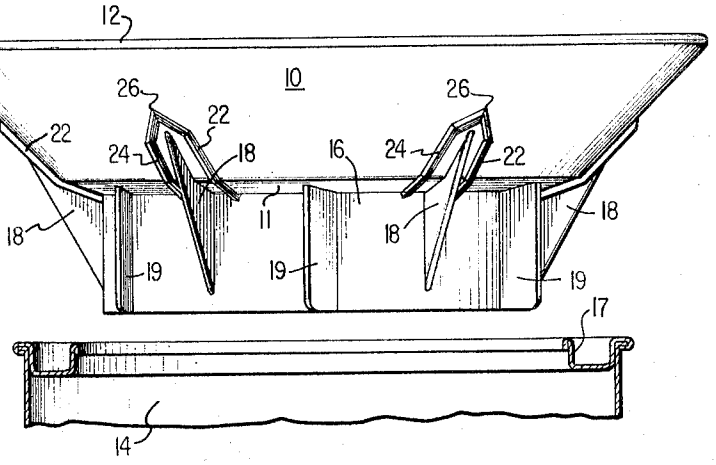


FIG. 2

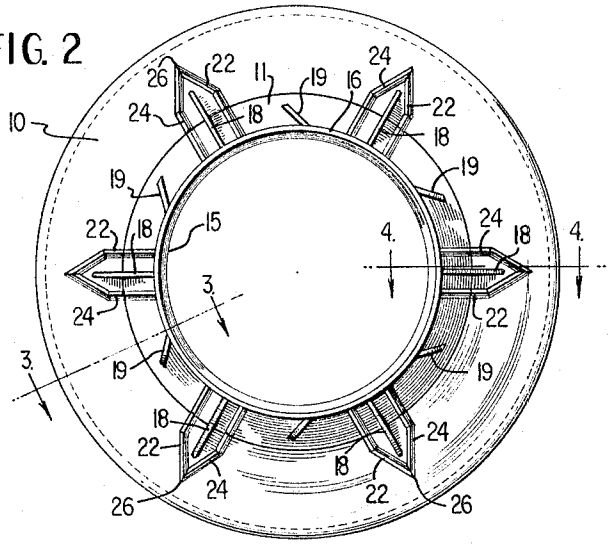


FIG 5

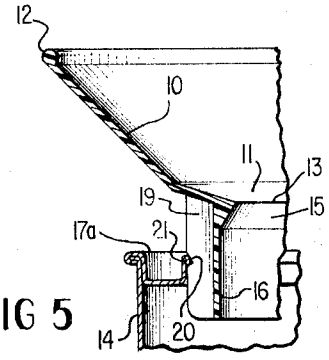
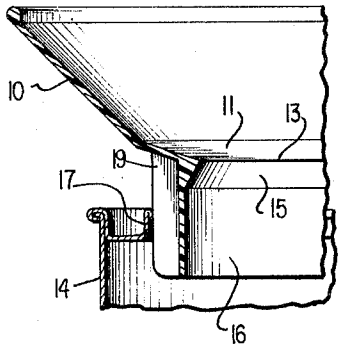


FIG. 3



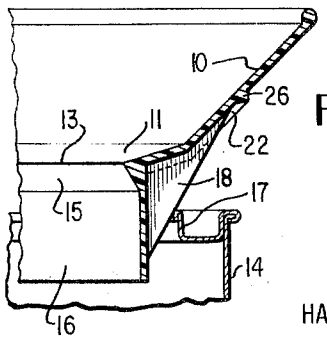


FIG. 4

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PAINT CAN BIB

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The present invention is a brush holder and wiper attachment for paint cans, fashioned to seat on and over the open top of a conventional paint can when in use.

When a paint brush is dipped in a can and wiped across its top edge excess paint collects in the closure groove and overflows down the outside of the can, fouling the same and dropping upon a surface on which the can may be seated. This condition is objectionable, wasteful of paint, and when a brush handle is leaned against the inner top edge of the can it soon becomes smeared with paint above its bristle head. The prior art has sought to eliminate the problem of can and brush handle fouling by providing various forms of dished or funnel-shaped annular members adapted to seat tightly down over the open top edge of a can to cover and seal off its closure groove against entry of paint. The members provide means for supporting a brush in draining position when not in use and incorporate some form of wiping edge or lip for removing excess paint from the bristles of a brush drawn thereover when the brush is removed from the can. The inner side walls and bottoms of the members are made self-draining for return of wiped off paint into the can.

However, in every such brush holder and wiper attachment its top edge invariably is used at times as a secondary or finishing wiper edge; so that after a period of use some paint flows down over the outer face of the attachment and onto the exterior of the can giving rise to the objectionable condition which the attachment is intended to forestall. Moreover, such attachments are somewhat difficult to apply and remove because of their relatively tight gripping or frictional engagement with the can.

Objects of the invention are:

A brush holder and wiper attachment adapted to seat on, over, and in the open top of a paint can and having provision for self-drainage of paint from both the inner and outer surfaces of the attachment back into the interior of the can without contacting any part of the can top edge.

A brush holder and wiper attachment insertible in the open top or a paint can and having means for seating engagement with the top edge of the can in a manner supporting the body of the attachment spaced from the can top edge.

A brush holder and wiper attachment for seating on, over, and in the open top of a paint can, in which spaced apart supports on the exterior face of the attachment prevent contact between the outer face of the attachment and the top edge of the can when the attachment is seated thereon.

Other and incidental objects will be apparent from the following description taken in connection with the accompanying drawings, in which:

FIG. 1 is a side elevation of the attachment above and prior to application in the open top of a paint can shown in fragmentary sectional view;

FIG. 2 is a bottom plan view of the attachment;

FIG. 3 is a sectional view taken on line 3—3 of FIG. 2;

FIG. 4 is a sectional view on line 4—4 FIG. 2; and

FIG. 5 is a view similar to FIG. 3 but illustrating an optional snap lock between the attachment and the closure groove flange of the can.

A preferred embodiment of the invention, illustrative but not restrictive, is here disclosed as an annular body of molded plastic, thin sheet metal, or other suitable material having an upper funnel-shaped drain portion 10, the side wall of which slopes inward and down at an incline of approximately forty-five degrees with respect to the axis of the body and merges integrally into an intermediate portion constituting a continuous narrow bottom shelf 11. The shelf is inclined inward and down as an unbroken continuation of the wall 10 but at a lesser angle of inclination, approximately fifteen degrees, and constitutes a holder for receiving and supporting the bristle end of a paint brush, not shown, when laid diametrically across the drain portion with its handle resting over a bead rim 12 on the top edge of the wall.

The inner peripheral edge 13 of the shelf 11 circumscribes an aperture for passage of a brush that may be dipped into and withdrawn from a paint can 14 upon which the attachment is mounted when in use. This edge 13 is also the edge of a wiper lip 15 integral with the shelf and with a cylindrical baffle 16 which depends axially from the shelf sufficiently far to extend well below the closure groove flange 17 of the can and prevent splashing of paint into the flange groove during stirring of the can contents. Beneath edge 13 the under face of the wiper lip flares radially outward for a short distance and merges into the inner face of the paint baffle, so that the body of the shelf 11 and the lip 15 has a cross section thicker in the plane of the edge 13 than at any other point. This, in effect, provines annular reinforcement for the body of the attachment in the zone of the wiper lip.

The outside diameter of baffle 16 is smaller than the inside diameter of the closure groove flange 17 in order to provide a circumferential clearance space therebetween. Circumferentially spaced supports 18, here shown as flat-sided, thin, radial webs integral with the baffle and the inclined wall portion 10, extend from the outer face of these elements axially between the lower end portion of the baffle and the wall 10 midway between its top edge and its plane of juncture with the shelf 11. These supports have their outer edges upwardly and outwardly divergent from bottom to top, providing inclined seating surfaces engageable against the top inner edge of the can closure groove flange to center the body of the attachment on the can and hold it in an elevated position such that the under face of the shelf portion 11 is spaced above and over the inner top edge of the closure groove flange when the attachment is applied to the can. Each of the supports is flanked at its point of contact with the underside of the shelf 11 and the wall 10 by a pair of diversionary ribs 22 and 24 which converge at a point 26 above the uppermost extremity of the support 18. These diversionary ribs are each substantially triangular in shape and serve to divert paint flowing down the underside of the wall 10 and shelf 11 from contact with the supports 18 thereby precluding the possibility of paint flowing down the surface of supports 18 and into contact with the flange 17 of the can closure groove.

When the attachment is in service position, the inclined wall 10 extends radially over and well outwardly of the outer top edge of the can and effectively prevents any dripping of paint into the closure groove flange. Rota-

tion of the attachment relative to the can is prevented by means of holding ribs **19** on the outer face of the baffle **16**. These ribs are interspersed between the supports **18** circumferentially around the baffle and extend axially from the under face of the brush shelf to the lower end of the baffle, with their outer edges bearing against the inner side wall of the closure groove flange **17**. The depth of each rib is greater radially than the radial depth of the clearance space between the inner wall of the closure groove flange and the outer face of the cylindrical baffle, and each rib is angled alternately at approximately forty-five degrees to its radial. The ribs have sufficient inherent resiliency to flex slightly under a spring tension which forces the outer edges of the ribs into binding frictional engagement against the closure groove flange whereby to hold the attachment against rotation. By alternating the angling of the ribs the torque of flexing is equalized. The lower outer ends of the ribs are rounded to facilitate insertion past the closure groove flange.

FIG. 5 illustrates an optional arrangement wherein the outer edge of one or more of the holding ribs **19** has a notch **20** for snap action latching engagement over a bead **21** on the top inner edge of groove flange **17***a* to secure the attachment against axial displacement.

In service, the attachment is applied by inserting the baffle **16** in the open top of a paint can and moving it down until the inclined outer edges of the supports **18** seat upon the top inner edge of the can closure groove flange, at which point the lower end of the baffle will be disposed appreciably below the flange and will shield the flange groove against fouling by paint splashed during stirring.

Inasmuch as the radial depth of the holding ribs **19** exceeds the radial depth of the clearance space between the baffle **16** and the inner wall of the closure groove flange the lower ends of the holding ribs would seat on the top of the flange wall and prevent insertion of the baffle were it not for the rounded off lower outer ends of the ribs. Because of the fact that the ribs are angled relative to their radials the rounded ends of the ribs engage the flange wall as cams which force the ribs to flex under their inherent spring tension so that they may pass the flange wall in sliding frictional contact therewith and thus become effective to hold the attachment against rotation on the can.

As best shown in FIGS. 1 and 2, the lower end portions of the holding ribs **19** extend below the lower ends of the support webs **18**. The camming surfaces constituted by the lower outer ends of the ribs engage the inner top edge of the can flange **17** in advance of the inclined seating faces of the webs, so that the holding ribs are forced inwardly and into spring tensioned holding engagement against the can flange before the support webs seat thereon. Thus, although the ribs **19** function primarily as means operative to hold the attachment against shifting movement on a can to which it is applied, they serve also, because of their spring tension, as supports independent of the webs **18** and are themselves capable of holding the drain portion **10** and shelf **11** spaced axially above the can flange. This is apparent in FIG. 3, and in the optional snap lock shown in FIG. 5.

The degree of inclination of the outer edge seating faces of the support webs **18** determines the extent of the clearance space between the can flange **17** and the exterior surfaces of the drain portion **10**, shelf **11**, and baffle **16**. In the present invention, as best shown in FIG. 2, the upper ends of the webs **18** meet the outer face of the drain portion at points of juncture which lie on the periphery of a circle having a diameter much greater than the inside diameter of the closure groove flange of a can with which the attachment is to be used.

The webs **18** function not only as means for spacing the inclined under drain surfaces of the attachment body above the cylindrical stirring baffle axially from the can top, but also as braces reinforcing the thin material of the drain portion **10** against bending down under the weight of a brush handle when rested on the rim across its bead **12**. This bead reinforces the rim.

Further with reference to FIG. 2, it will be seen that the radially outer edges of the holding ribs **19** lie on the periphery of a circle the diameter of which is slightly greater than the inside diameter of the closure groove flange of a can with which the attachment is to be used.

The wiper lip **15** is the primary means for removing excess paint from a brush when its bristles are drawn across the edge **13**. The bead rim **12** at the top of the drain wall provides a secondary or finishing wiper. As in the case of every top edge wiper, some paint will inevitably pass over and down its outer face. When the outer face of a wiper is substantially flush against the outer face of its associated paint can (as it is in wiper attachments of the prior art), the exterior of the can soon becomes fouled with paint flowing down from the outer face of the wiper.

Such an objectionable condition cannot arise with the present invention, because paint flowing down the inclined outer face of the wall **10** also flows along the inclined under face of the shelf **11** onto the outer face of the baffle **16** and drains back into the can. The clearance space between the outer face of the attachment body portions and the closure groove flange of the can enables free drainage of paint back into the can from the outer face of the attachment without contacting any part of the upper edge portion of the can. Moreover, since each of the support elements **18** is flanked by the diversionary ribs **22** and **24** converging at **26**, paint flowing down the outer or under surface of wall **10** and shelf **11** is diverted around the support **18** and thus precluded from flowing down support **18** to contact the flange **17** of the can closure groove.

It is to be understood that the herein disclosed embodiment of my invention is illustrative of a practical example and that the invention is not restricted thereto. It may comprise any structure falling within the scope of the invention as claimed.

I claim:

1. A brush holder and wiper atachment for paint cans comprising: an annular body having an axial passage dimensioned to receive a paint brush or the like, said body including an upper substantially funnel-shaped drain portion, an intermediate portion providing an internal circular shelf the upper face of which merges into the inner face of the drain portion at its lower end, the inner edge of the shelf circumscribing a paint brush passage aperture, a cylindrical baffle portion depending from the bottom of said shelf and concentric with the brush aperture, supports extending axially between and connecting the outer faces of the drain portion and the baffle, said supports being spaced apart circumferentially around said body and extending radially therefrom, and the radially outermost faces of the supports being upwardly and outwardly divergent from the lower end portion of the cylindrical baffle to their points of juncture with said drain portion, portions of said radially outermost faces being spaced sufficiently from said body to permit paint or the like to flow freely between the outside of the holder and the surrounding mouth edge of a paint can or the like.

2. In the attachment of claim **1**, wherein said supports are generally triangular with said outermost faces constituting the longest sides of each support and wherein the points of juncture of the outermost faces of the supports with said drain portion lying on the periphery of a circle having a diameter much greater than the inside diameter of the closure groove flange of a can with which the attachment is to be used.

3. In the attachment of claim **2**, said supports being thin webs integral with the body.

4. A brush holder and wiper attachment for paint cans comprising: an annular body having an axial passage

dimensioned to receive a paint brush or the like, said body including an upper substantially funnel-shaped drain portion, an intermediate portion providing an internal circular shelf at the lower end of the drain portion, the inner edge of the shelf circumscribing a paint brush passage aperture, a cylindrical baffle portion depending from the bottom of the shelf and concentric with said aperture, axially extending ribs on the outer face of the baffle and spaced apart circumferentially around the body, each rib being angled relative to its radial and its outer edge being parallel to the outer face of said cylindrical baffle.

5. In the attachment of claim 4, said ribs being rounded at their bottom outer end edges to form cam surfaces facilitating insertion in a paint can or the like.

6. A brush holder and wiper attachment for paint cans comprising: an annular body having an axial passage dimensioned to receive a paint brush or the like, said body including an upper substantially funnel-shaped drain portion, an intermediate portion providing an internal circular shelf at the base of the drain portion, the inner edge of the shelf circumscribing a paint brush passage aperture, a cylindrical baffle portion depending from the bottom of the shelf and concentric with said aperture, supports extending axially between and connecting the outer faces of the drain portion and the baffle, the supports being spaced apart circumferentially around the body and extending radially therefrom, the radially outermost faces of the supports being upwardly and outwardly divergent from the lower end portion of the baffle to their points of juncture with said drain portion, portions of said radially outermost faces being spaced sufficiently from said body to permit paint or the like to flow freely between the outside of the holder and the surrounding mouth edge of a paint can or the like, axially extending ribs on the outer face of the baffle intermediate said supports circumferentially around the body, each rib being angled relative to its radial and its outer edge being parallel to the outer face of the cylindrical baffle.

7. In the attachment of claim 6, said supports being thin inherently resilient webs integral with the body, said ribs being rounded at their bottom outer end edges to form cam surfaces facilitating insertion in a paint can or the like.

8. In combination, an open top paint can having at its top edge an internal annular closure groove flange, an annular funnel-shaped drain member mounted on the can and extending above, over, and outward of the flange and having an axial passage dimensioned to receive a paint brush or the like, said drain member having at its base an internal circular shelf the inner edge of which circumscribes a paint brush passage aperture, a cylindrical baffle depending from the under face of the shelf concentric with said aperture, said baffle extending into the can for a distance below its closure groove flange and spaced radially from the flange, supports extending axially between and connecting the outer faces of the drain member and the baffle, the supports being spaced apart circumferentially around the baffle and extending radially therefrom, the radially outermost faces of the supports being upwardly and outwardly divergent from the lower end portion of the baffle to their point of juncture with the drain member and seating on the inner top edge of said closure groove flange whereby the drain member and shelf are spaced axially above the top of the can, portions of said radially outermost faces being spaced sufficiently from said drain member and baffle to permit paint or the like to flow freely between the outer faces of the drain member and baffle and the surrounding mouth edge of a paint can or the like and means on the baffle in engagement with said closure groove flange holding the attachment against shifting relative to the can.

9. In combination, an open top paint can having at its top edge an internal annular closure groove flange, an annular funnel-shaped drain member mounted on the can and extending above, over, and outward of the flange and having an axial passage dimensioned to receive a paint brush or the like, said drain member having at its base an internal circular shelf the inner edge of which circumscribes a paint brush passage aperture, a cylindrical baffle depending from the under face of the shelf concentric with said aperture, said baffle extending into the can for a distance below its closure groove flange and spaced radially from the flange, supports extending axially between and connecting the outer faces of the drain member and the baffle, the supports being spaced apart circumferentially around the baffle and extending radially therefrom, the radially outermost faces of the supports being upwardly and outwardly divergent from the lower end portion of the baffle to their point of juncture with the drain member and seating on the inner top edge of said closure groove flange whereby the drain member and shelf are spaced axially above the top of the can, portions of said radially outermost faces being spaced sufficiently from said drain member and said baffle to permit paint to flow freely between the outside of said drain member and baffle and the surrounding mouth edge of a paint can or the like and external ribs on the baffle intermediate said supports, each rib being angled relative to its radial and its outer edge being in frictional engagement with the closure groove flange of the can.

10. A brush holder and wiper attachment for paint cans comprising: an annular body having an upper substantially funnel-shaped drain portion, an intermediate portion providing an internal circular shelf at the base of the drain portion, the inner edge of the shelf circumscribing a paint brush passage aperture, said intermediate portion including a bottom portion flaring outwardly from the inner edge of the shelf to provide reinforcement to the body, a cylindrical baffle portion depending from said bottom portion of the shelf and concentric with said aperture, supports extending axially between and connecting the outer faces of the drain portion and the baffle, the supports being spaced apart circumferentially around the body and extending radially therefrom, the radially outermost faces of the supports being upwardly and outwardly divergent from the lower end portion of the baffle to their points of juncture with said drain portion, axially extending ribs on the outer face of the baffle intermediate said supports circumferentially around the body, each rib being angled relative to its radial and its outer edge being parallel to the outer face of the cylindrical baffle, said supports being thin webs integral with the body, and said ribs being rounded at their bottom outer end edges and having inherent resilience.

11. A paint brush holder for paint cans and the like comprising: an annular body having an upper drain portion and a lower baffle portion and an axial passage extending between the ends of the drain and baffle portions, said axial passage being dimensioned to receive a paint brush or the like, a number of supports projecting radially from the body and extending axially from adjacent the lower end portion of said baffle portion to a juncture with said drain portion, said supports being spaced circumferentially around said body and having radially outermost face portions diverging upwardly and outwardly in the general direction of said drain portion, said radially outermost face portions being spaced sufficiently from said body to permit paint or the like to flow freely between the outside of the body and the surrounding mouth edge of a paint can or the like.

12. A brush holder and wiper attachment for paint cans comprising: a substantially funnel-shaped body for seating on the open top of a paint can, said body having an axial passage dimensioned to receive a paint brush or the like, and can-engageable means on the exterior of said body holding the body spaced away from the top and sides of a can on which the body may be seated, said can-engageable means having sufficient radial dimension to permit paint or the like to flow freely between the outside of the holder and the surrounding mouth edge of a paint

can or the like, said can-engageable means being flanked by a pair of diversionary ribs converging at a point above the uppermost extremity of the can-engageable means.

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