

Aug. 11, 1959

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2,899,109

PAINT TANK AND DISPENSING LINER THEREFOR

Filed Jan. 15, 1958

2 Sheets-Sheet 1

Fig. 1.

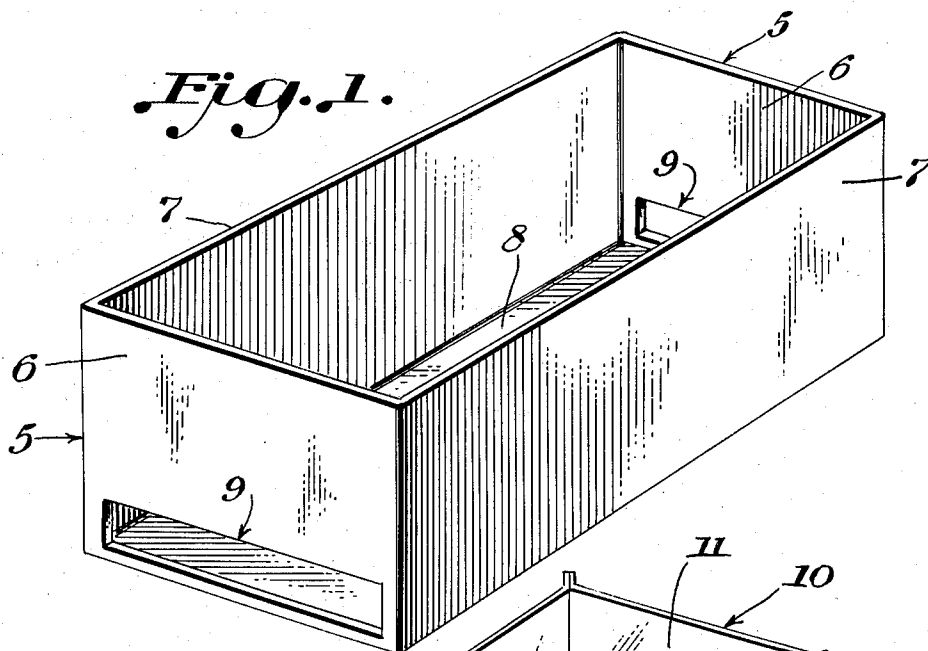
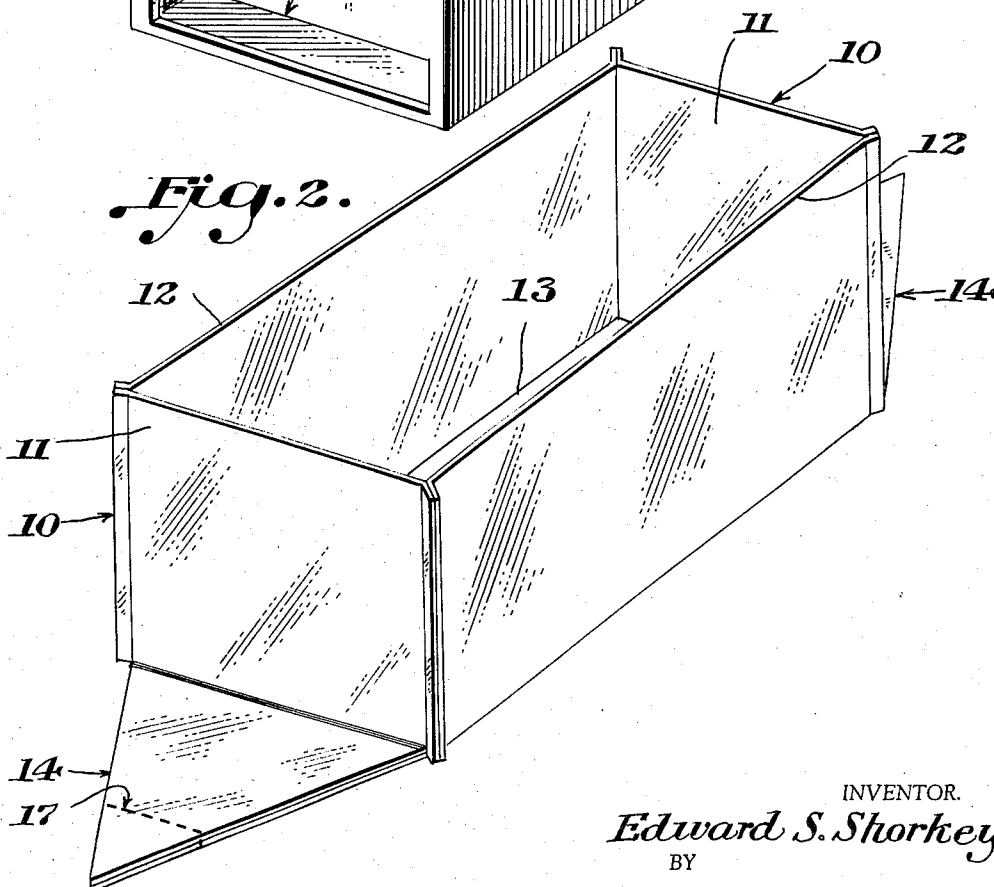


Fig. 2.



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Fig. 3.

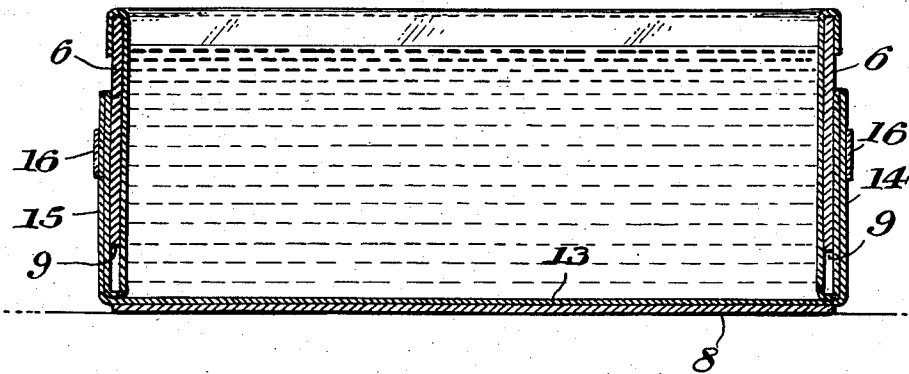


Fig. 4.

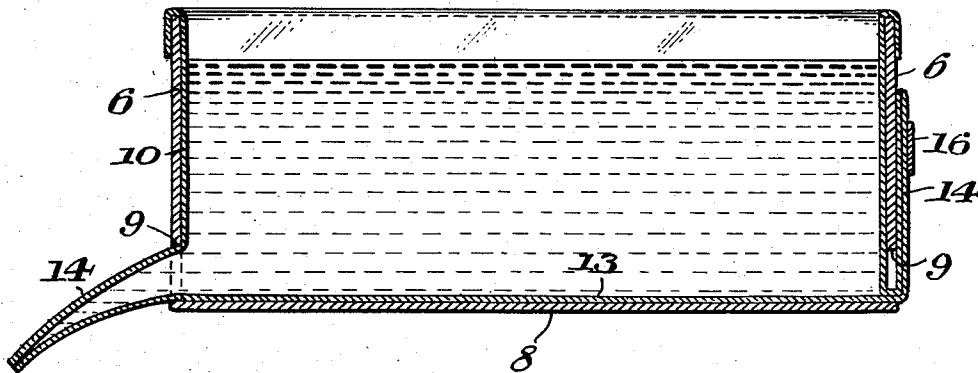


Fig. 5.

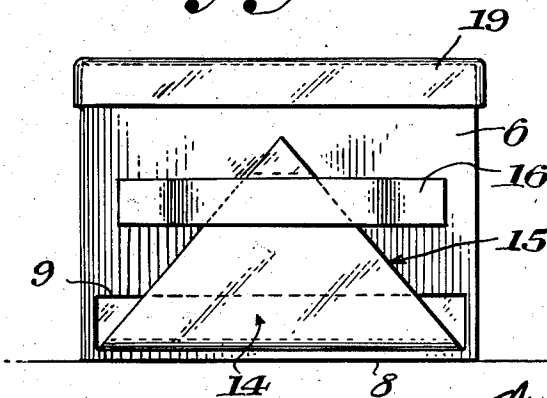
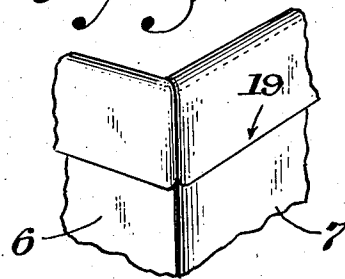


Fig. 6.



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PAINT TANK AND DISPENSING LINER THEREFOR

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Application January 15, 1958, Serial No. 709,033

7 Claims. (Cl. 222-183)

The invention relates generally to dispensing container structures and primarily seeks to provide a novel paint tank and liner arrangement wherein paint can be mixed to proper consistency, color and shade without direct contact of the paint with the interior of the tank, and then conveniently dispensed through a funnel-like extension of the liner extended through a clearance opening in a wall of the tank.

In the mixing of paint it has been common practice to put the paint in an open tank, introduce thinning and other conditioning liquids and pigments into the paint and paddle stir or agitate the mix in order to obtain the desired consistency, color and shade. This practice requires that the tank be thoroughly cleaned after every use in order that the obtaining of desired true color and shade in subsequently mixed batches will not be rendered difficult or impossible by contact of the paint being mixed with remnants of a previously mixed batch of paint clinging to the interior walls of the tank. Naturally there is a considerable labor loss in the necessary cleaning of tanks and it is a purpose of the present invention to avoid the problems of the stated common practice by providing a novel mixing tank having a liner placeable in the tank before each mixing operation to prevent direct contact of the paint with the interior walls of the tank, said liner having a funnel-like extension projected through an opening in a wall of the tank and through which the mixed paint can be poured out with facility after the mixing operation and being removable as a whole from the tank for substitution of another clean liner prior to another mixing operation, and disposable or subject to a suitable cleaning operation.

Another object of the invention is to provide a tank and liner arrangement of the character stated wherein the paint dispensing extension of the liner is in the form of a generally triangular flap extension projected through an opening in a wall of the tank and folded flat against a tank wall portion exteriorly of the tank and attached to said wall portion.

A further object of the invention is to provide a liner structure of the character stated wherein the extension initially is sealed against egress of paint but includes a corner portion subject to being cut off to provide the desired paint dispensing opening.

A still further object of the invention is to provide a tank and liner arrangement of the character stated wherein the tank and the liner are generally rectangular in shape, each having opposed end and side walls and a bottom, the tank having a dispensing opening near the bottom in at least one wall thereof and the liner having a dispensing flap extension on at least one wall thereof in position for being projected through the dispensing opening in a tank wall and be removably attached to said wall.

With the above and other objects in view that will hereinafter appear, the nature of the invention will be more clearly understood by reference to the following detailed description, the appended claims and the several views illustrated in the accompanying drawings.

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In the drawings:

Figure 1 is a perspective view illustrating a paint mixing tank to which the invention is applied.

Figure 2 is a perspective view of a liner structure mountable in the tank of Figure 1.

Figure 3 is a vertical longitudinal sectional view illustrating the tank of Figure 1 with the liner of Figure 2 mounted therein, the funnel-like flap extensions of the liner being projected through dispensing openings formed in the tank ends and turned up against external wall portions of the tank and removably attached thereto.

Figure 4 is a view similar to Figure 3 showing one of the funnel-like flap extensions released from its temporary attachment to the tank wall lowered into position for dispensing paint from the tank.

Figure 5 is an end elevation of the tank structure shown in Figure 3.

Figure 6 is a fragmentary perspective view illustrating one corner of the tank with the liner folded down over the open top edge portion of the tank.

In the example of embodiment of the invention herein disclosed, the mixing tank generally designated 5 is rectangular in shape and includes opposed end walls 6, opposed side walls 7 and a bottom wall 8. A dispensing opening is formed in one of said walls near the bottom, said opening being indicated at 9. In the example illustration, the dispensing opening 9 is formed in one of the end walls 6, and if desired, such an opening can be provided in each of the end walls 6 as shown in Figures 1, 3 and 4.

The liner, shown in detail in Figure 2, and generally designated 10 may be formed in any approved manner from flexible film such as polyethylene. The particular manner of fabrication of the liner is of no material importance except for the provision of the funnel-like extensions which are to extend through the tank openings 9 and serve as dispensing means. In the particular disclosure herein made, the liner includes opposed end walls 11, opposed side walls 12 and a bottom 13. Flap extensions 14 which are funnel-like in shape are provided at each end of the liner in position for projecting through the tank openings 9 in the manner clearly illustrated in Figures 2, 4 and 5. While the liner may be formed in various ways, it may be formed by folding up the sides 12 from a single blank also including the bottom 13 and the triangular extensions for forming the bottom ply of the funnel-like flap extension 14. Each end 11 could have a triangular extension to form the upper ply of the funnel-like extension 14, the engaging marginal edges of the end and side walls and those of the opposing triangular ply extensions being heat sealed together to secure the assembly in the manner illustrated in Figure 3.

When two dispensing extensions or funnel-like flaps 14 are provided they could be selectively projected through a single tank opening 9, the projecting extension being folded up against the tank end wall as at 15 and adhesive tape secured at 16 to said end wall. The other extension 14 could be folded up inside or between the liner end wall and adjacent tank end wall, or should the tank be provided with two openings 9 as indicated in Figure 1, both funnel-like flap extensions could be projected through the openings and secured against the respective tank end walls by the tape as indicated at 16 in Figure 3.

When it is desired to dispense paint from the tank, the tape 16 at the dispensing end is torn away and the funnel-like extension flap is lowered as shown in Figure 4. By then cutting off the closed end or corner, as by cutting across the dotted line at 17 in Figure 2, an opening can be provided through which the paint can be dispensed in the manner clearly illustrated in Figure 4. It is desirable to fold the liner down over the open top edge of the tank, as at 19, as indicated in Figures 3, 4, 5 and 6 of

the drawing, and by thus providing and mounting the liner, it will be readily apparent that paint can be mixed in the tank and dispensed therefrom without contacting the interior walls of the tank. In this manner, the labor expense of carefully cleaning the interior of the tank after each mixing of paint is avoided. In this manner also, it is impossible for pigments adhered to interior wall portions of the tank admixing with subsequently mixed batches and altering the desired color or shade thereof.

It is to be understood that should the tank be mounted on a tumbling means during the mixing of the paint, a suitable closure (not shown) can be applied over the open end thereof.

While a preferred form of the invention is disclosed herein, it is to be understood that variations in the form and arrangement of the parts can be effected without departing from the scope of the invention as defined in the appended claims.

I claim:

1. In a paint mixing and dispensing tank and liner arrangement of the character described, a tank having side and bottom wall portions, one said wall portion having a dispensing opening therethrough near the bottom wall portion, a liner mounted in the tank and having a funnel-like dispensing extension projected through said dispensing opening and means for removably attaching the outer end of said extension to a tank wall portion exteriorly of the tank so that it can be readily detached to permit paint to pour out of the tank through the extension without any contact of paint with interior wall portions of the tank.

2. An arrangement as defined in claim 1 wherein the dispensing extension is triangular in shape and has an imperforate delivery end extremity subject to being cut off after the extension has been released from its removable attachment means to the tank wall portion to permit the desired outpouring of paint.

3. An arrangement as defined in claim 1 wherein the tank has an open top and the liner is formed of flexible material and of a size to permit folding thereof outwardly and downwardly over top edge portions of the tank side walls.

4. In a paint mixing and dispensing tank and liner arrangement of the character described, a tank having opposed end wall portions, opposed side wall portions and a bottom, one end wall portion having a dispensing opening therethrough adjacent the bottom, a liner removably

mounted in the tank and shaped to fit against the side and end wall portions and the bottom of the tank and including a funnel-like dispensing projection projected through said opening and means for removably attaching said extension to the end wall portion in which the opening is formed exteriorly of the tank so that it can be readily detached to permit paint to pour out of the tank through the extension without any contact of paint with interior wall portions of the tank.

5. An arrangement as defined in claim 4 wherein the dispensing extension has an imperforate delivery end extremity subject to being cut off after the extension has been released from its removable attachment means to the tank wall portion to permit the desired outpouring of paint, and wherein the tank has an open top and the liner is formed of flexible material and of a size to permit folding thereof outwardly and downwardly over top edge portions of the tank side walls.

6. An arrangement as defined in claim 4 wherein the liner has two of the funnel-like dispensing projections, one thereof projecting from each of two opposing end wall portions of the liner and being selectively projectable through the dispensing opening in the tank, the dispensing projection not projected out through the dispensing opening of the tank being folded interiorly of the tank between a liner wall portion and an opposing tank wall portion.

7. An arrangement as defined in claim 4 wherein the liner has two of the funnel-like dispensing projections, one thereof projecting from each of two opposing end wall portions of the liner and the tank also has two dispensing openings one in each end wall portion thereof so that either or both extensions can be projected through the tank openings and a selected one or both used for dispensing, or one only thereof can be projected through a selected tank opening, the other being folded interiorly of the tank between a liner wall portion and an opposing tank wall portion.

References Cited in the file of this patent

UNITED STATES PATENTS

65,836	Saunderson	June 18, 1867
175,684	Field	Apr. 4, 1876
1,466,084	Burrows	Aug. 28, 1923
2,288,042	Spilman	June 30, 1942
2,740,229	Wittwer	Apr. 3, 1956
2,816,691	Ward	Dec. 17, 1957