

[54] **DISPOSABLE FLEXIBLE LINER FOR PAINT TRAYS**

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[51] Int. Cl. **B65d 25/16, A44b 21/00, B65b 67/12**

[58] Field of Search **220/63, 65, 1 T; 15/257.06; 248/101; 24/255 TC; 206/15.1**

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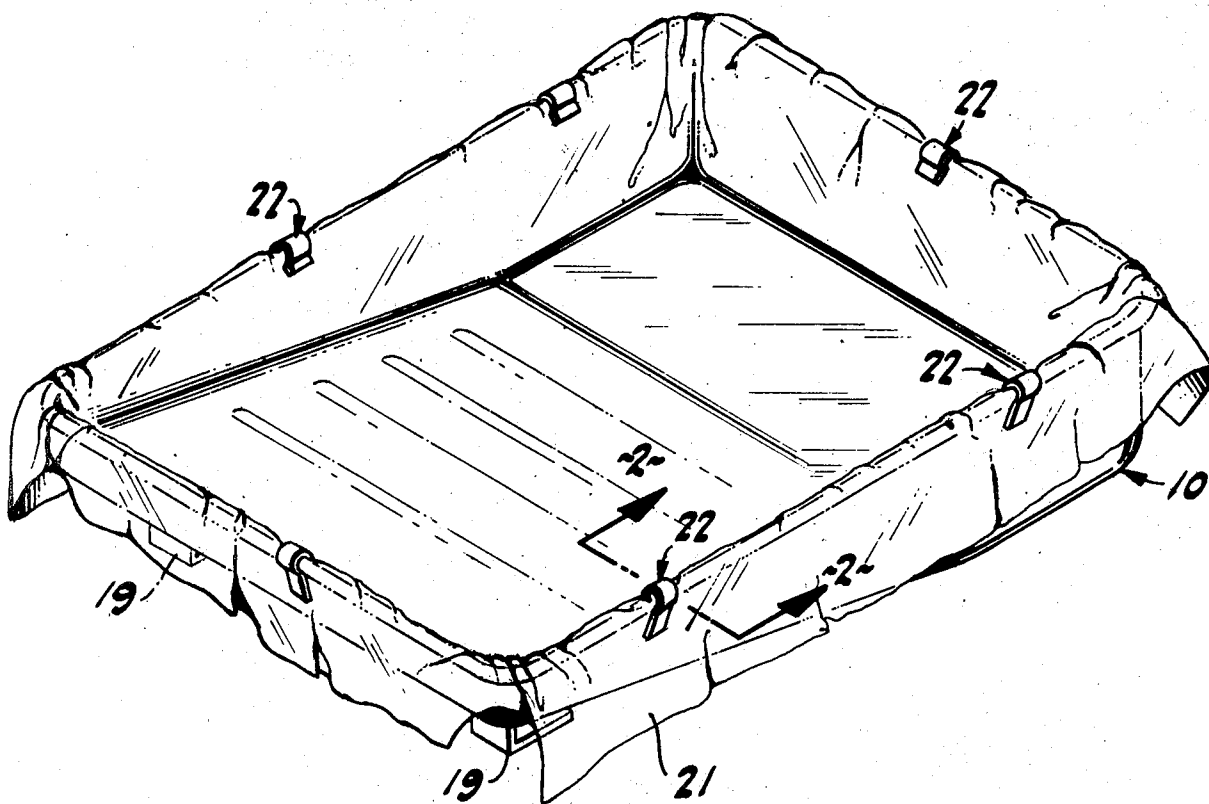
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[57] **ABSTRACT**

Assembly including a flexible liner for protecting a paint tray and mechanical means for removably attaching the flexible liner to the tray. The mechanical means includes a plurality of clips for clamping the liner to the walls of the tray, a resilient band or drawstring for clamping the liner to the outside of the tray, and adhesive means for attaching the liner to the tray. A disposable bag is provided for disposing of used liners.

2 Claims, 9 Drawing Figures



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3,757,990

2 Sheets-Sheet 1

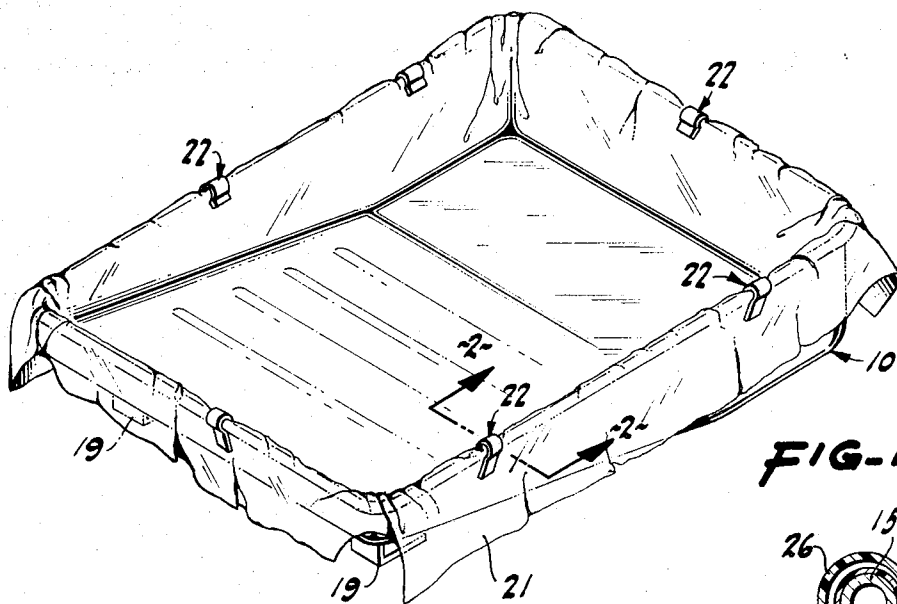


FIG. 1

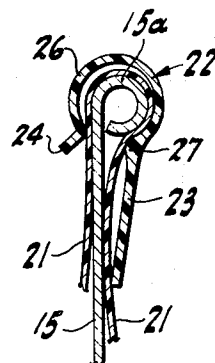


FIG. 2

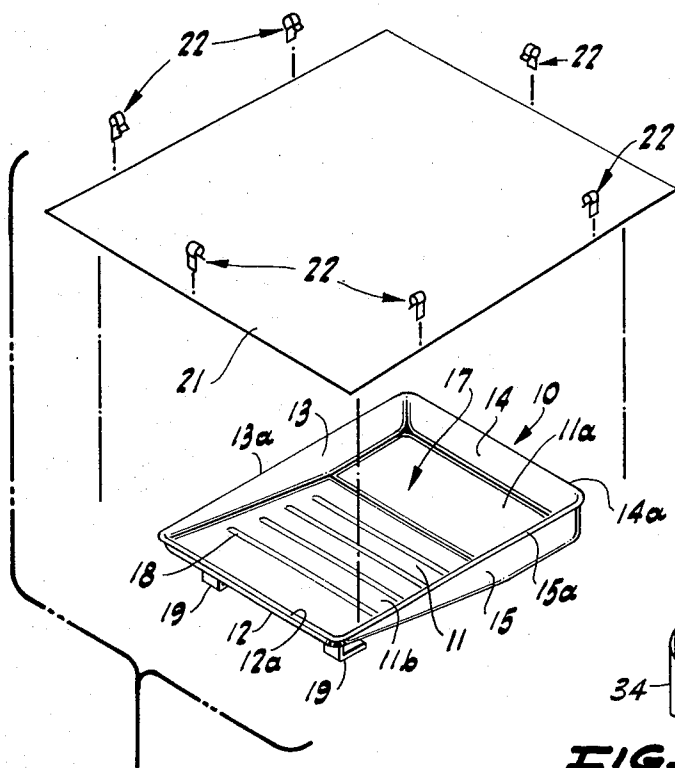


FIG. 3

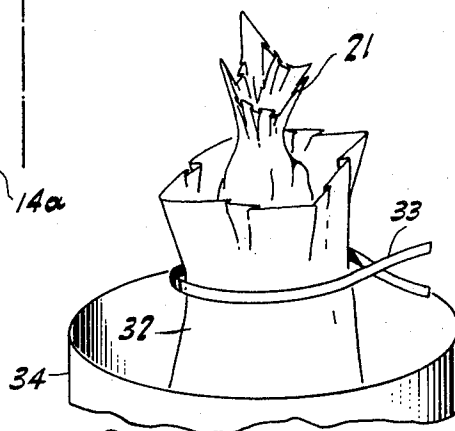


FIG. 6

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FIG. 4

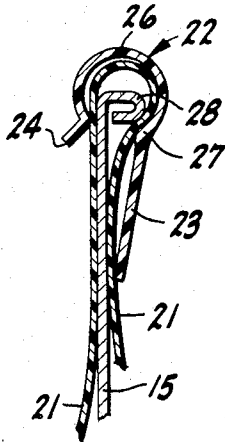


FIG. 5

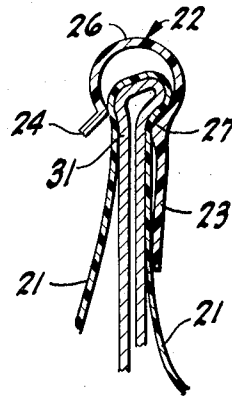


FIG. 7

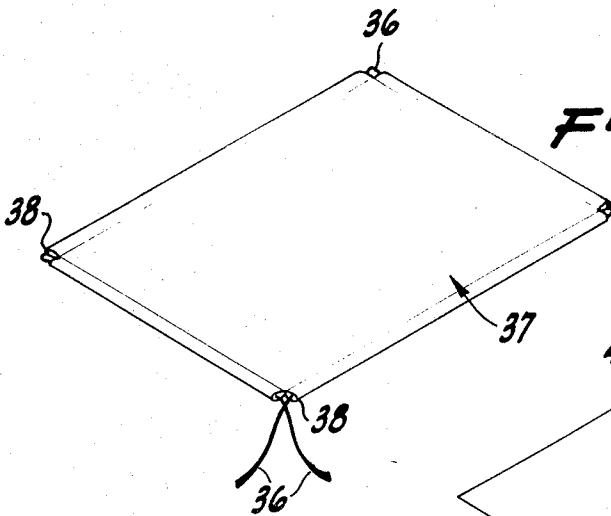


FIG. 8

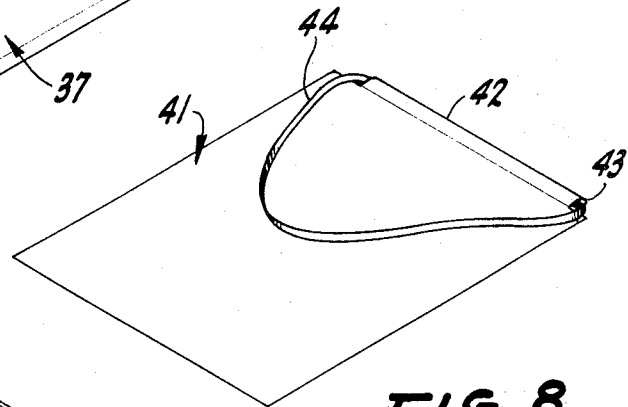
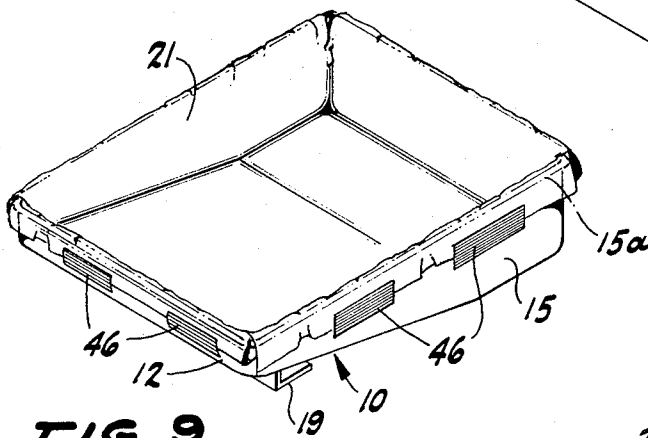


FIG. 9



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DISPOSABLE FLEXIBLE LINER FOR PAINT TRAYS

BACKGROUND OF THE INVENTION

This invention pertains generally to painting supplies and more particularly to a disposable flexible liner for protecting paint containers of the type commonly known as paint trays.

In recent years, rollers have come into wide use for applying paint and like coatings and coverings to large areas such as walls, ceilings, floors and the like. These rollers generally include a handle and a rotatably mounted cylindrical member which is covered with a paint absorbent material. Paint is transferred from the rollers to the surface to be painted by rolling the cylindrical member across the surface. Because rollers are typically larger than brushes and capable of holding more paint, they permit a given area to be painted in substantially less time than if painted with a brush. Also, rollers facilitate the application of paint in substantially uniform layers.

Paint is generally applied to a roller from a shallow pan or tray. The tray generally has a well for holding the paint, with one wall of the well being elongated and inclined to permit rolling of the roller in the tray. This rolling action assures even distribution of the paint throughout the roller and provides means for wringing excessive paint out of the roller before it is removed from the tray.

A problem exists with the paint trays commonly used today. These trays are typically used for relatively short periods of time, following which they must be cleaned if they are to be reused. With almost all paints and like coatings and coverings, including water based paints, this cleaning is a messy and time consuming process. In addition, it involves water pollution when water is used in the cleaning and air pollution when solvents are used.

SUMMARY AND OBJECTS OF THE INVENTION

The present invention provides a disposable flexible liner kit which enables paint trays to be used repeatedly without having to be cleaned. This kit includes a flexible liner for covering the walls of the tray and mechanical means for holding the liner to the walls. In one embodiment, the mechanical means comprises a plurality of plastic clips for clamping the liner to the tray walls. In other embodiments, a resilient band, drawstring, and adhesive means are provided for attaching the liner to the tray. A non-porous disposable bag is provided for disposing of the liner after it has been used in the paint tray.

It is in general an object of the present invention to provide a protective flexible liner for paint trays.

Another object of the invention is to provide a protective liner assembly for paint trays.

Another object of the invention is to provide an assembly of the above character which includes a flexible liner and mechanical means for holding the liner to the general contour of the paint tray.

Another object of the invention is to provide a flexible liner of the above character which is disposable.

Additional objects and features of the invention will be apparent from the following description in which the preferred embodiment is set forth in detail in conjunction with accompanying drawing.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a perspective view of a paint tray with one embodiment of a protective liner incorporating the present invention.

FIG. 2 is an enlarged cross-sectional view taken along line 2—2 in FIG. 1.

FIG. 3 is an exploded perspective view of the paint tray and protective liner illustrated in FIG. 1.

FIG. 4 is a cross-sectional view illustrating the present invention with another type of paint tray.

FIG. 5 is a cross-sectional view illustrating the present invention with yet another type of paint tray.

FIG. 6 is a perspective view illustrating one embodiment of a disposable receptacle for disposing of a used liner.

FIG. 7 is a perspective view of one embodiment of a paint tray liner incorporating the present invention and having a drawstring for securing the liner to a paint tray.

FIG. 8 is a perspective view of one embodiment of a paint tray liner incorporating the present invention and having a resilient band for securing the liner to the tray.

FIG. 9 is a perspective view of one embodiment of a paint tray liner incorporating the present invention and having an adhesive material for securing the liner to the paint tray.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The protective flexible liner of the present invention is illustrated in conjunction with a conventional paint tray 10. This paint tray includes a bottom wall 11 and side walls 12-15 which cooperate with the bottom wall to form a paint well 17.

The bottom wall 11 is formed to include a horizontal portion 11a and an inclined portion 11b. The horizontal portion 11a forms the bottom for the paint well, and inclined portion 11b provides a surface upon which a paint roller can be rolled to assure even distribution of paint without excessive dripping. The inclined portion is formed to include a plurality of raised ribs 18 which extend transversely thereof. These ribs facilitate the rolling of the roller on the inclined portion, and they add structural rigidity to the tray. The tray rests at one end upon the horizontal portion of the bottom wall, and at the other end a pair of feet 19 are provided for maintaining the tray in a level position.

The side walls 12-15 extend vertically upward from the bottom wall 11. Each of these side walls is formed to include a beaded portion, designated by the suffix "a", extending along its upper extremity.

The protective liner includes a sheet of flexible material 21 which can be almost any non-porous material. In the preferred embodiment, this sheet is fabricated of polyethylene film and has a thickness on the order of 0.002 inches. Other suitable materials for the liner include plastic coated paper and metallic foil. The protective liner is adapted to be placed in the paint well 17 in such manner that it covers the bottom wall 11 and side walls 12-15 and adheres closely to the contour of these walls.

Means is provided for retaining the protective liner in and to the tray. As illustrated in FIG. 1-3, this means includes a plurality of clips 22 which clamp the liner to the upper portions of the walls 12-15. In the preferred embodiment, the clips 22 are fabricated of a resilient

plastic material and are formed to include a large tab portion 23, a small tab portion 24, and a rounded bulb portion 26 intermediate the tab portions. The tab portion 24 is disposed at an angle on the order of 90° with respect to the bulb portion 26 to facilitate placement of the clip over the beaded portion 15a of the tray wall. The clip is formed to include a bead portion 27 intermediate the large tab portion 23 and the bulb portion 26. This bead portion cooperates with the beaded portion 15a for retaining the clip on the tray wall. It will be noted that the bulb portion of the clip extends through a generally circular arc of somewhat less than 360°. When the clip is in its rest condition, that is when it is not mounted on a paint tray, the spacing between the bead portion 27 in the junction of the bulb portion and small tab portion is on the order of 0.030 inches. Alternatively, if desired, the clips can be fabricated of other resilient materials such as metal or wire.

Because of its unique construction, the clip 22 is also suitable for use with paint trays of different constructions. Thus, in FIG. 4, the clip is shown mounted on a paint tray having a generally flat lip 28 at the top of the side wall 13. With this type of wall, the clip clamps the liner at the junction between the small tab portion 24 and the bulb portion 26, the upper portion of the beam portion 27, and the lower portion of the large tab portion 23. Again, the small tab portion 24 facilitates placement of the clip on the wall, and the beaded portion 27 retains the clip on the wall. In FIG. 5, the clip is illustrated in connection with a paint tray having a double side wall 31 with an angular upper portion.

Means is provided for disposing of the liner after it has been used. This means includes flexible, non-porous bag 32 fabricated of a material such as thin plastic. A tie strip 33 is provided for sealing the bag 32 to prevent leakage or dripping when a used liner has been placed therein. Like the protective liner, the bag 32 is disposable.

Operation and use of the flexible liner of the present invention can be described briefly. The protective sheet 21 is placed in the well 17 of the paint tray 10. It is smoothed by hand to conform to the contour of the side and bottom walls. The edges of this liner extend beyond the side walls of the tray, and the clips 22 are snapped over the beaded portions of the side walls to retain the flexible liner in place. When in place, the flexible liner conforms closely to the contour of the bottom and side walls of the tray. Paint is poured into the lined tray and applied to the paint roller in the conventional manner. When the painting is completed, the liner is removed from the tray and placed in the disposable bag 26. The bag is sealed by means of the tie strip 33 and thrown away. In the drawing, the disposable bag is shown being inserted in a conventional trash receptacle 34. Once the protective liner has been removed from the tray, the tray is ready to be put away or to be used again without the need for cleaning. It is to be noted that the clips 22 are reusable.

Alternative embodiments of the liner and means for attaching it to the paint tray are illustrated in FIGS. 7-9. The embodiment shown in FIG. 7 includes a drawstring 36 for attaching the liner to the tray. In this embodiment, the liner 37 is formed to include passage ways 38 for receiving the drawstring. These passage ways are conveniently formed by folding the edge portions of the liner back and seaming them to the remainder of the liner. The drawstring can be fabricated of

any conventional material such as cloth, string, or wire. This embodiment is used by placing the central portion of the liner in the well of the paint tray, with the drawstring and edges of the liner outside the well. The drawstring is then pulled tight, drawing the edges of the liner against the outer portion of the tray, and the string is tied to retain the liner in place.

In the embodiment shown in FIG. 8, the liner 41 is formed to include a tab portion 42 at one end thereof. This tab portion is folded back and secured to the remainder of the liner to form a passage way 43 through which a resilient band 44 extends. In the preferred embodiment, the tab portion 42 is secured to the remainder of the liner by seaming, and the resilient band is a rubber band. In use, this liner is placed in the well of the tray, with the tab portion 42 and edges of the liner extending beyond the side walls of the tray. The rubber band is placed over the edges of the liner to retain the liner on the tray.

The embodiment shown in FIG. 9 is generally similar to that shown in FIG. 1, except that the edges of the liner 21 are attached to the outer side walls of the tray by strips of an adhesive material 46, such as tape.

The components of the present invention are conveniently packaged in a kit containing a plurality of flexible liners, a disposable bag, and a means for attaching the liner to the tray. The kit can also contain additional disposable bags for holding the roller or paint brush during periods of non-use.

It is apparent from the foregoing that a new and improved protective liner for paint trays has been provided. While only the presently preferred embodiment of the invention has been disclosed, as will be apparent to those familiar with the art, certain changes and modifications can be made without departing from the scope of the invention as defined by the following claims.

I claim:

1. In combination with a paint tray having a well defined by side and bottom walls, a disposable protective liner removably disposed in the tray to prevent paint in the well from directly contacting the walls of the tray, and a plurality of clips clamping the liner to the side walls, each of said clips having a body fabricated of resilient material formed to include a large tab portion and a small tab portion, a rounded connecting portion joining the tab portions together along one edge thereof, and a beaded portion extending along the junction of the large tab portion and the rounded connecting portion.

2. In combination with a paint tray having a well defined by bottom and side walls, said well being open at the top and adapted for holding a volume of paint for application to the roller, a flexible liner removably disposed in said well and covering said bottom and side walls, said liner generally conforming to the contour of said walls, and a plurality of clips engaging the liner at spaced apart locations along the upper margin of the side walls and clamping said liner to said walls, each of the clips including a pair of generally planar tab portions, a resilient connecting portion joining the tab portions together along one edge thereof, and an elongated bead extending along the junction of the connecting portion and one of the tab portions, the other of said tab portions extending from the connecting portion at an angle on the order of 90°.

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