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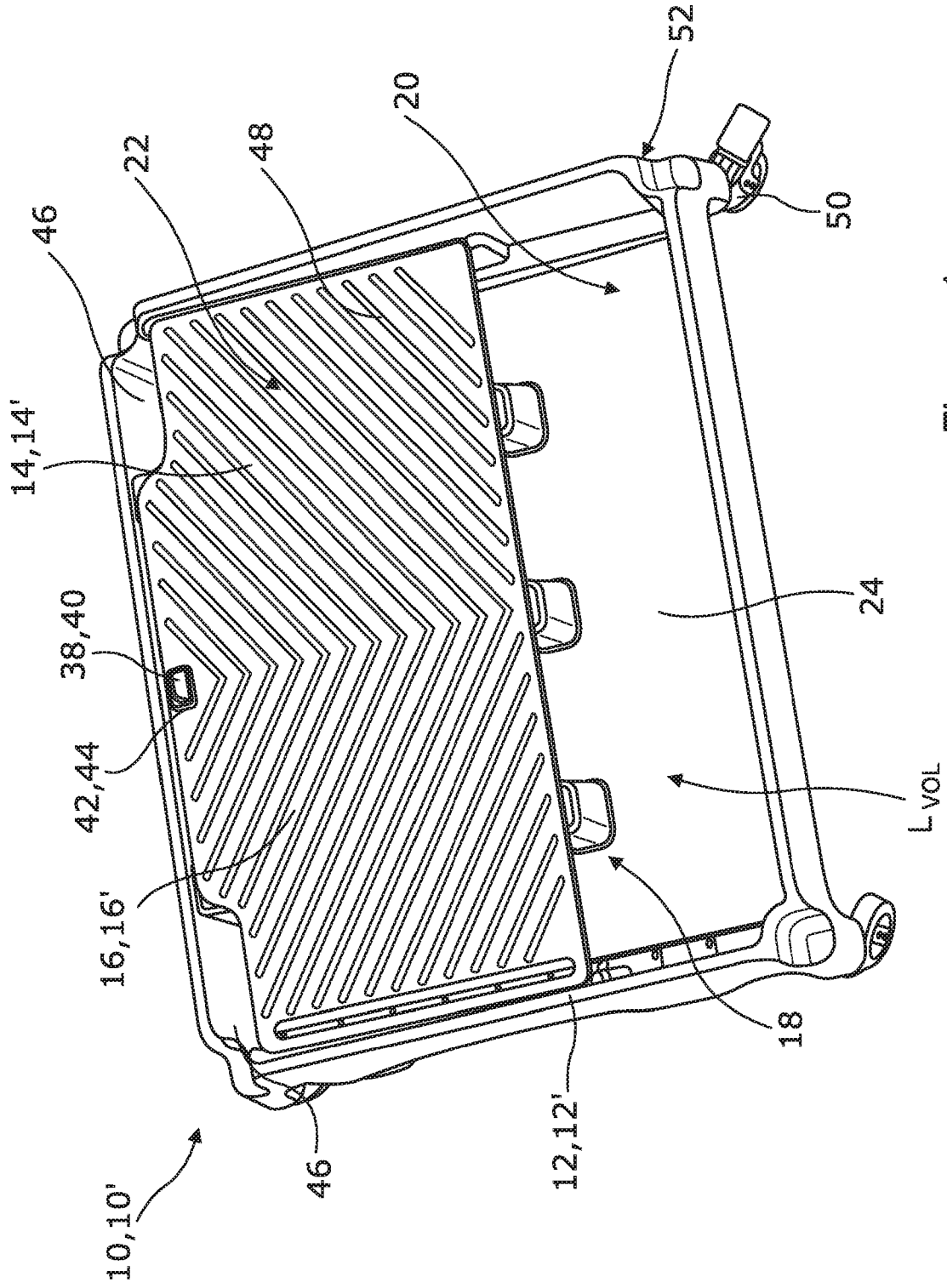


Figure 1

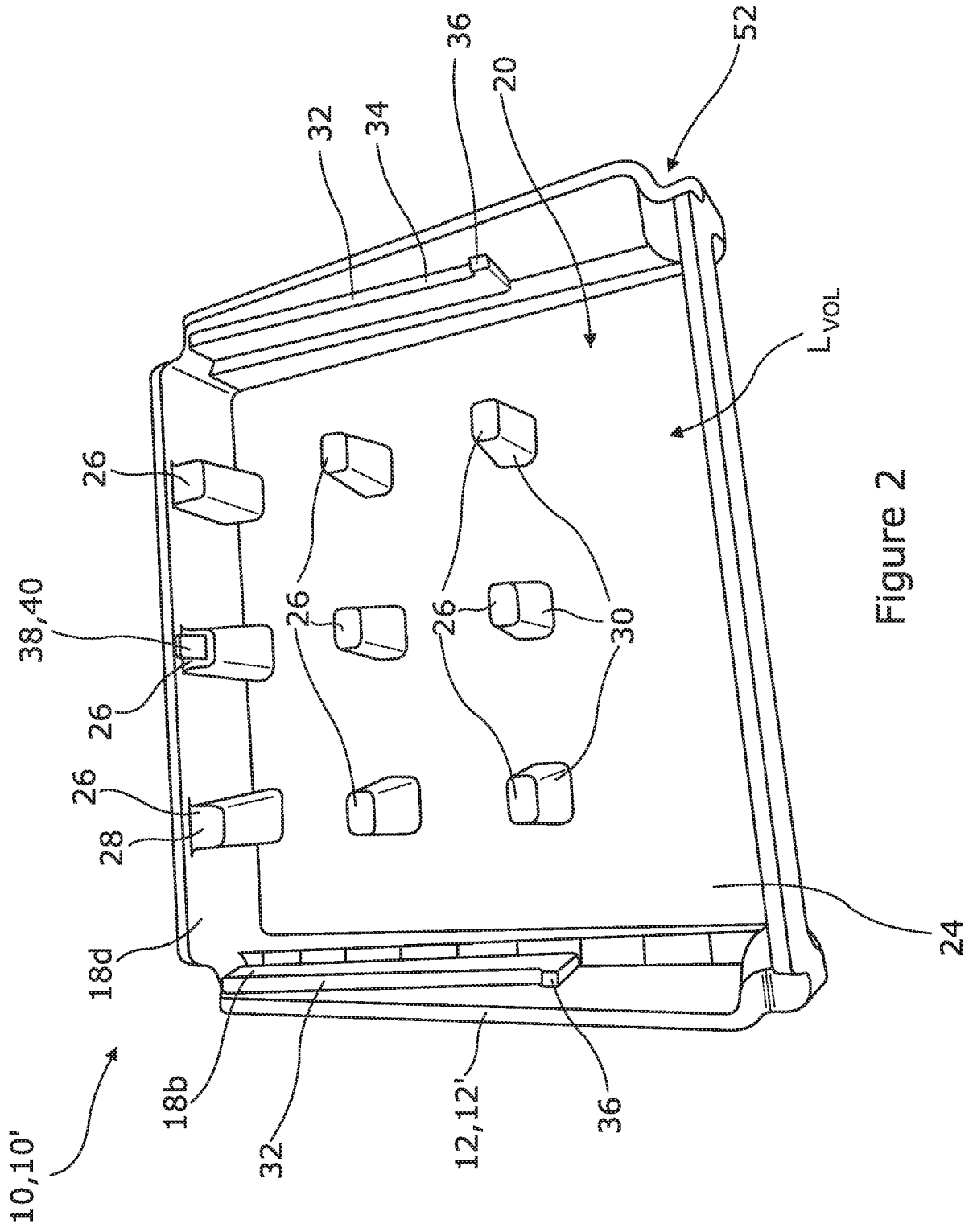


Figure 2

A LIQUID APPLICATION ASSEMBLY

This invention relates to a liquid application assembly.

5 It is known to pour liquid into a holder, such as a tray, to make it easier to apply that liquid to a surface using a liquid application tool, such as a brush, roller, cloth or sponge. Once liquid is picked up by the liquid application tool from the holder, it is known to work the liquid, e.g. by rolling or dabbing the liquid application tool, on a surface to help apply the liquid to the liquid application tool evenly and remove any excess liquid from the tool.

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According to a first aspect of the invention there is provided a liquid application assembly comprising:

a liquid holder having a liquid holding capacity for holding a volume of liquid in use;

a liquid application member having a liquid application surface for aiding the

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application of a liquid to a liquid application tool in use; and

a support member configured to elevate the liquid application member relative to the liquid holder so that the liquid holding capacity extends underneath the liquid application member,

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wherein the support member includes a plurality of discrete first support members each extending between a base surface of the liquid holder and the liquid application member and being positioned within the liquid holding capacity of the liquid holder to provide intermittent support between the edges of the liquid applicator member and across the length and breadth of the liquid application member.

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Providing a liquid holder allows a desired volume of liquid to be held in the liquid holder, while providing a liquid application member having a liquid application surface provides an area in which a liquid can be worked onto a liquid application tool before the liquid application tool is used to apply the liquid onto a surface. Such working of the liquid may be carried out to, e.g. remove excess liquid from the liquid application tool and/or to help

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apply the liquid more evenly onto the liquid application tool.

Meanwhile, the liquid application assembly having a support member which elevates the liquid application member relative to the liquid holder so that the liquid holding capacity extends underneath the liquid application member improves the liquid holding capacity of the liquid holder. This is because the liquid can reside under the liquid application member.

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Thus, the liquid holding capacity is not restricted by the liquid application member.

Moreover, including a plurality of support members means that support can be provided over a large area of the liquid application member while causing minimal interference with the liquid holding capacity of the liquid holder.

- 5 Preferably the liquid application member is positioned relative to the liquid holder to define a liquid pick up area allowing access to the liquid in the liquid holder.

Positioning the liquid application member in this manner allows ready access, e.g. by a liquid application tool, to the liquid in the liquid holder without having to remove or alter the
10 position of the liquid application member.

The liquid holder may include a sloped surface configured to urge the volume of liquid towards one end of the liquid holder. Preferably, the sloped surface is configured to urge the volume of liquid towards the liquid pick up area.

15 Providing such a sloped surface means that the liquid is urged to a desirable area of the liquid holder so that the liquid is ready to be picked up by, e.g. a liquid application tool.

Optionally the liquid application member is removeable from the liquid holder.

20 The liquid application member being removeable from the liquid holder aids in the cleaning of both the liquid application member and the liquid holder since both can be cleaned separately.

25 In one embodiment of the invention, the support member is configured to slope the liquid application member relative to the liquid holder. Preferably the support member is configured to slope the liquid application member towards the liquid pick up area.

The support member being so configured urges any liquid on the liquid application member
30 (e.g. after working of a liquid application tool on the liquid application surface) to return to the liquid holder. Thus, such liquid can be picked up and reused.

The support member may be configured to elevate the liquid application member by allowing the liquid application member to rest on the support member.

35 Such a configuration of support member makes it easy for a user to place the liquid application member on and off the support member as desired.

The liquid application assembly may further include an abutment member configured to prevent movement of the liquid application member relative to the liquid holder in at least one direction.

5 Providing such an abutment member helps to hold the liquid application member in place, and particularly helps to prevent dislodging of the liquid application member due to a liquid application tool being worked on the liquid application member. In this regard, if the intended use of the liquid application assembly means that a liquid application tool will be worked on the liquid application member primarily in, say, a back and forth direction, then the abutment
10 member can be configured to resist movement of the liquid application member in such a direction.

In an embodiment of the invention, the abutment member forms part of the support member. Such an arrangement reduces the number of components of the liquid application assembly.

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The liquid application assembly may further include a locking member to lock the liquid application member in place relative to the liquid holder.

20 Providing such a locking member secures the liquid application member completely in place so as to prevent undesirable disconnection of the liquid application member from the liquid holder.

In an embodiment of the invention, the locking member forms part of the support member. Such an arrangement reduces the number of components of the liquid application assembly.

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The support member may be integrally formed with the liquid holder. Such an arrangement reduces the number of components of the liquid application assembly.

30 Optionally the liquid holder includes a first stacking member portion on one side, and a second stacking member portion on the opposite side, the first stacking member portion being cooperable with the second stacking member portion of another liquid holder to permit stacking of more than one liquid holder.

35 Such an arrangement permits space-efficient stacking of more than one liquid holder for the purpose of storage and/or transportation. It also provides stability to the stacked liquid holders.

A preferred embodiment of the invention will now be described, by way of a non-limiting example, with reference to the accompanying drawings in which:

Figure 1 shows a liquid application assembly according to the invention; and

5 Figure 2 shows the liquid application assembly of Figure 1 with a portion removed.

A liquid application assembly according to the invention is shown in Figures 1 and 2 and is designated generally by reference numeral 10.

10 The liquid application assembly 10 includes a liquid holder 12 that has a liquid holding capacity L_{VOL} for holding a volume of liquid (not shown), and a liquid application member 14 that has a liquid application surface 16 for aiding the application of a liquid to a liquid application tool (not shown) in use.

15 The liquid application assembly 10 further includes a support member 18 which is configured to elevate the liquid application member 14 relative to the liquid holder 12 so that the liquid holding capacity L_{VOL} extends underneath the liquid application member 14.

In the embodiment shown, the liquid application assembly 10 is a paint tray assembly 10' which is intended to hold paint which can be picked up by a paint roller for the paint to then
20 be applied to a surface, such as a wall. The liquid holder 12, in this embodiment, is therefore a paint tray 12', and the liquid application member 14 and liquid application surface 16 are a paint roller tray 14' and a paint roller tray surface 16', respectively.

25 The features of the invention are therefore referred to in the remainder of the description as relating to "paint" (i.e. rather than "liquid").

It is however understood that the liquid application assembly 10 may be used in a different context and with different liquids and/or liquid application tools. For example, the liquid
30 application tool may be a brush, cloth, sponge, pad, mitt or mop. The liquid holder 12 may be intended to hold liquids such as wallpaper paste, water, adhesive or a cleaning fluid.

Returning to the embodiment shown, the paint holding capacity L_{VOL} of the paint tray 12' is defined by the volume of the whole paint tray 12'. In this embodiment, the paint tray 12'
35 is substantially cuboid in shape, and so the volume (and thus the paint holding capacity L_{VOL}) is generally defined as the length L x width W x height H of the paint tray 12' (minus the volume occupied by the support members -discussed later).

The paint tray 12' may of course take another form such as a cube, cylinder, cone or any other form that has a volume.

5 The paint roller tray 14' is positioned relative to the paint tray 12' so as to define a paint pick up area 20 which allows access to the paint being held in the paint tray 12'. In particular, the paint roller tray 12' is sized so that it defines a paint pick up area 20 which is large enough to fit a paint roller so as to allow the paint roller to enter the paint pick up area 20.

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Referring to Figure 1, the paint tray assembly 10' consists of two main areas: the paint pick up area 20 and a paint application area 22 -the latter being defined by the paint roller tray surface 16'. As indicated above, and unlike conventional paint trays, the paint holding capacity of the paint tray 12' includes the paint pick up area 20 and the paint application area 22 because the paint can reside underneath the paint roller tray 14'.

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The paint tray 12' has a base surface 24 which is sloped towards the paint pick up area 20.

20 Turning to Figure 2, the paint tray assembly 10' shown includes a plurality of first and second support members 18a, 18b.

The first support members 18a take the form of support pillars 26 which extend from the base surface 24 of the paint tray 12'. There are nine support pillars 26 in the embodiment shown and they are equally spaced in a three by three configuration.

25

Each of the support pillars 26 includes a resting surface 28 onto which the paint roller tray 14' can be placed. The plane defined by the combination of each resting surface 28 is sloped towards the paint pick up area 20.

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Of the support pillars 26, the three positioned adjacent to the paint pick up area 20 include respective first abutment members 30. The first abutment members 30 shown are integrally formed with the respective support pillar 26 and extend from the respective resting surface 28 in an upstanding manner. Moreover, the first abutment members 30 are positioned on the respective support pillar 26 so that they abut the paint roller tray 14' as it slopes towards the paint pick up area 20 due to the sloping plane defined by the combined resting surfaces 28 of the support pillars 26. Thus, the first abutment members

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30 prevent movement of the paint roller tray 14' in the direction of the slope defined by the resting surfaces 28, i.e. the direction towards the paint pick up area 20.

5 Since each of the support pillars 26 extends from the base surface 24 of the paint tray 12', the total paint holding capacity of the paint tray assembly 10' is the volume of the paint tray 12' (as defined above) minus the volume defined by each support pillar 26. As can be seen from Figure 2, the total volume defined by the support pillars 16 is very small compared to the volume of the paint tray 12'.

10 The second support members 18b take the form of two support ledges 32 which extend from opposing sides of the paint tray 12' inwards towards the support pillars 26. The two support ledges 32 run alongside the support pillars 26 so that the end of each support ledge 32 which is adjacent to the paint pick up area 20 is in line with the three support pillars 26 also adjacent to the paint pick up area 20.

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Each support ledge 32 includes a resting surface 34 onto which the paint roller tray 14' can be placed. Each resting surface 34 of the support ledges 32 is sloped towards the paint pick up area 20, and the slope corresponds to the same slope defined by the combined resting surface of 28 of the support pillars 26.

20

Each support ledge 32 includes a second abutment member 36. In the embodiment shown, each second abutment member 34 is integrally formed with the respective support ledge 32 and extends from a resting surface 34 of the respective support ledge 32 in an upstanding manner. The second abutment members 36 are in line with each first abutment member 30. In a similar manner to the first abutment members 30, the second abutment members 36 prevent movement of the paint roller tray 14' in the direction of the slope of the resting surfaces 34, i.e. in a direction towards the paint pick up area 20.

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30 The support pillars 26 and support ledges 32 support the paint roller tray 14' which sits on top of the support pillars 26 and ledges 32. As can be seen from the figures, the support pillars 26 and ledges 32 elevate the whole of the paint roller tray 14', and so even though the resting surfaces 28, 34 of the support pillars 26 and ledges 32 are sloped towards the paint pick up area 20, the paint roller tray 14' does not touch the base surface 24 of the paint tray 12'.

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The support pillars 26 and support ledges 32 are all integrally formed with the paint tray 12'.

The support members 18 may take any other form and may be all the same or differ in their form. For example, there may only be support ledges 32 and no support pillars 26 present so that the paint holding capacity includes the entire volume of the paint tray 12'.

5 There may also be more or fewer number of support members 18. For example, there may be single support member 18. Moreover, the support members 18 may not be sloped or may instead be sloped towards the opposite end to the paint pick up area 20. Moreover, the paint tray assembly 10' may include an abutment member that is separate to the support members 18.

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The paint tray assembly 10' further includes a locking member 38 which locks the paint roller tray 14' in place. In the embodiment shown, the locking member 38 is a clip 40 which is integrally formed with one of the support pillars 26. The clip 40 is arranged to act as a snap fit with the paint roller tray 14', as explained in more detail below. The locking member
15 38 may take any other suitable form and may be separate from the support pillars 26.

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Returning to Figure 1, the paint roller tray 14' includes a locking member portion 42 which is mutually engageable with the locking member 38 to lock the paint roller tray 14' to the paint tray 12'. The locking member portion 42 is a locking aperture 44 which is able to
20 receive the clip 40 in a snap-fit manner.

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The paint roller tray 14' further includes discharge apertures 46 to allow excess paint, i.e. which has been removed from the paint roller when it is worked on the paint roller tray surface 16', to drip back into the paint tray 12' to be reused.

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The paint roller tray 14' also includes ridges 48 extending from the paint roller tray surface 16' which help remove excess paint from the paint roller. The ridges 48 shown in this embodiment are in the form of chevrons, but may take any other suitable form such as dimples, straight horizontal or vertical lines, diagonal lines, diamonds, criss-cross pattern
30 etc.

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Although not clearly seen in the figures, the paint tray 12' includes first stacking member portions in the form of feet on an underside of the tray 12' positioned at each corner of the tray 12'. The paint tray 12' further includes second stacking member portions in the form
35 of recessed corners 52 on the topside of the tray 12. The feet and corners 52 are shaped to cooperate with one another to allow for efficient stacking of more than one tray 12'.

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The paint tray assembly 10' further includes wheels 50 to help manoeuvre the paint tray assembly 10' in use. The wheels 50 may incorporate a brake (not shown) to prevent the paint tray assembly 10' from rolling away. The wheels 50 may also be detachable from the feet of the paint tray 12' so that they can be removed to allow for stacking of more than one tray 12'.

Although not shown, the paint tray assembly 10' may further include a lid which covers the paint tray 12'.

The paint tray 12' in the embodiment shown is configured to have a paint holding capacity of around 10 litres. The dimensions of the paint tray 12' shown are approximately 480 mm (length) x 580 mm (width) x 110 mm (height). The locking member 38 may extend higher than the height of the paint tray 12', such that it may have an overall height of around 124 mm. Such a paint tray assembly 10' is intended for large paint projects, e.g. commercial paint jobs, as opposed to small domestic paint jobs. The paint tray 12' can of course have a different paint holding capacity and dimensions.

The paint tray 12' is moulded from a single plastic material, such as polypropylene (PP). The paint roller tray 14' is also moulded from a single plastic material.

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CLAIMS:

1. A liquid application assembly comprising:
a liquid holder having a liquid holding capacity for holding a volume of liquid in use;
5 a liquid application member having a liquid application surface for aiding the application of a liquid to a liquid application tool in use; and
a support member configured to elevate the liquid application member relative to the liquid holder so that the liquid holding capacity extends underneath the liquid application member,
10 wherein the support member includes a plurality of discrete first support members each extending between a base surface of the liquid holder and the liquid application member and being positioned within the liquid holding capacity of the liquid holder to provide intermittent support between the edges of the liquid application member and across the length and breadth of the liquid application member.
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2. The liquid application assembly according to Claim 1 wherein the liquid application member is positioned relative to the liquid holder to define a liquid pick up area allowing access to the liquid in the liquid holder.
- 20
3. The liquid application assembly according to Claim 1 or Claim 2 wherein the liquid holder includes a sloped surface configured to urge the volume of liquid towards one end of the liquid holder.
4. The liquid application assembly according to Claim 3 when dependent on Claim 2
25 wherein the sloped surface is configured to urge the volume of liquid towards the liquid pick up area.
5. The liquid application assembly according to any preceding claim wherein the liquid application member is removeable from the liquid holder.
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6. The liquid application assembly according to any preceding claim wherein the support member is configured to slope the liquid application member relative to the liquid holder.
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7. The liquid application assembly according to Claim 6 when dependent on Claim 2 wherein the support member is configured to slope the liquid application member towards the liquid pick up area.

8. The liquid application assembly according to any preceding claim wherein the support member is configured to elevate the liquid application member by allowing the liquid application member to rest on the support member.

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9. The liquid application assembly according to any preceding claim further including an abutment member configured to prevent movement of the liquid application member relative to the liquid holder in at least one direction.

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10. The liquid application assembly according to Claim 9 wherein the abutment member forms part of the support member.

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11. The liquid application assembly according to any preceding claim further including a locking member to lock the liquid application member in place relative to the liquid holder.

12. The liquid application assembly according to Claim 11 wherein the locking member forms part of the support member.

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13. The liquid application assembly according to any preceding claim wherein the support member is integrally formed with the liquid holder.

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14. The liquid application assembly according to any preceding claim wherein the liquid holder includes a first stacking member portion on one side, and a second stacking member portion on the opposite side, the first stacking member portion being cooperable with the second stacking member portion of another liquid holder to permit stacking of more than one liquid holder.

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