

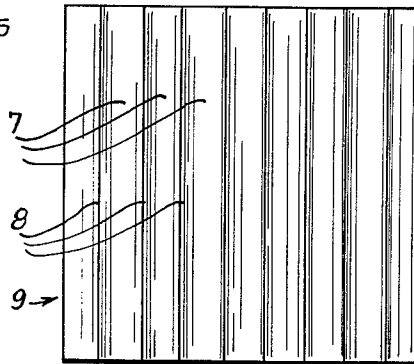
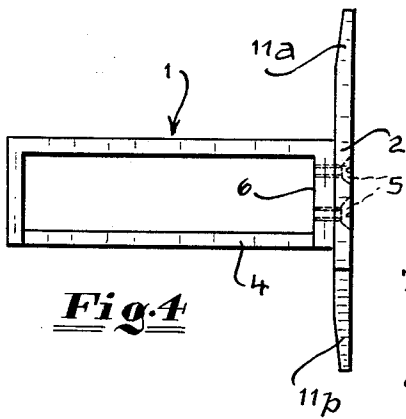
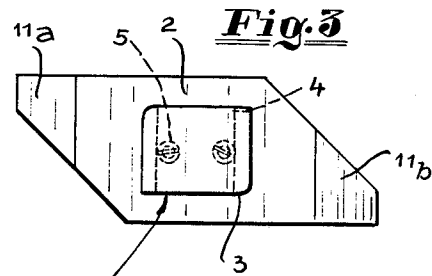
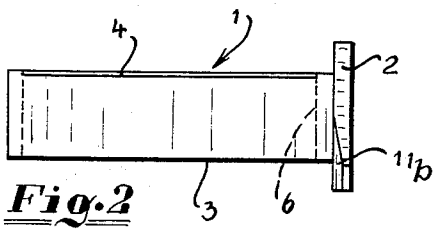
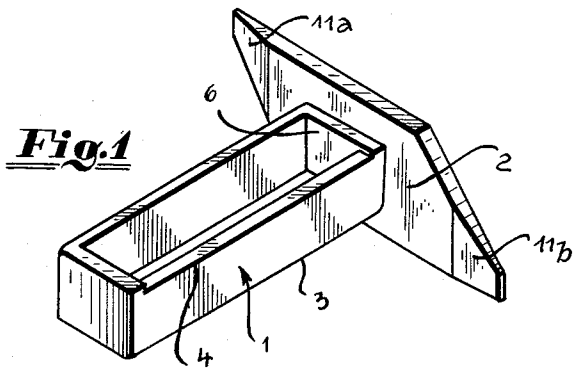
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COATING TOOL

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COATING TOOL

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9 Claims. (Cl. 15—560)

This invention relates to coating tools and to associated methods.

It is a primary object of the invention to provide an inexpensive and convenient tool for the application of coatings to bases having plane surfaces.

It is a further object of the invention to provide an improved tool of the above-noted type adapted especially for laboratory work.

It is yet another object of the invention to provide an improved tool of the above-noted type especially suited for use in thin layer chromatography.

It is still another object of the invention to provide an improved tool of the above-noted type suitable for dispersing semi-liquid or pasty masses or compounds.

Yet another object of the invention is to provide an improved tool for coating lined glasses.

In accordance with one embodiment of the invention, there is provided a coating tool comprising a container provided with a chamber extending therethrough for accommodating and dispersing a coating material. This chamber may be provided with two openings oppositely disposed, the container having one edge bounding one of these openings and positioned substantially in a single plane, the container having a further edge bounding the other of the openings and provided with a recess of predetermined depth for constituting a discharge opening. Moreover, in accordance with the invention, the container is provided with a lateral guide which protrudes beyond the aforesaid edges.

According to one feature of the invention, the container is generally in the form of a parallelepiped.

According to another feature of the invention, the guide is preferably a generally planar element in the form of a parallelogram.

Yet another feature of the invention relates to providing the extremities of the guide with tapered thicknesses for a purpose which will become hereinafter apparent.

A preferred method of use of the tool involves the application of a coating to a plate having thereon a multitude of ribs of the same height and of determinable spacing therebetween. This method comprises supporting on the ribs a container having a flat and open bottom and which is filled with a semi-liquid material which is dispersed between the ribs as the container is moved across the plate to deposit a coating thereon.

The above objects, features and advantages of the invention will become apparent from the following detailed description of a preferred embodiment thereof which is illustrated in the accompanying drawing in which:

FIGURE 1 is a perspective view of a coating tool according to a preferred embodiment of the invention;

FIGURE 2 is a side view of the tool of FIG. 1;

FIGURE 3 is a top view of the tool of FIG. 1;

FIGURE 4 is a front view of the tool of FIG. 1;

FIGURE 5 is a sectional view of a lined glass plate to which a coating is applied in accordance with the invention; and

FIGURE 6 is a top view of the plate of FIG. 5.

The applicator of the invention comprises basically two integrally connected elements, namely, a container 1 for accommodating and dispersing a coating compound and a lateral guide 2.

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The coating compound container 1 has preferably the form of a parallelepiped-shaped trough which is open at the bottom and at the top thereof, the edges 3 of the side and end walls of the container bounding one opening being located in a common plane, whereas in the case of the edges bounding the other opening a longitudinal portion 4 is recessed by an amount corresponding to the size of a desired outlet slot.

The lateral guide 2 consists of a generally planar element having a vertically arranged surface and preferably developed as a parallelogram. Said guide is connected to the end wall 6 of the coating compound container, for example, by bolts 5. The guide extends above and below wall 6 and has parallel edges which are parallel to the edges of wall 6.

As illustrated in the drawing, the applicator of the invention may be used for filling the intermediate spaces 7 (shown in FIG. 5) between the raised lines 8 of a lined glass plate 9.

Due to the fact that the bottom edge 3 of the downwardly open container 1 rests on the raised lines 8 of the glass plate 9, a pasty or semi-liquid mass can be deposited in the groove-like spaces 7 upon appropriate displacement of the applicator, whereas the raised lines 8 remain uncovered. The maintaining of a coating direction extending perpendicularly to the parallel lines 8 is insured in that the lateral guide 2 engages a longitudinal edge of the glass plate during the coating process.

If, on the other hand, a plane plate is to be coated with a layer of a predetermined thickness, the coating tool of the invention is merely rotated through 180° so that the outlet slot associated with the edge 4 is located at the bottom. If the applicator with the filled coating compound container is then moved so that the lateral guide 2 is guided along the longitudinal edge of the plate to be coated, the pasty mass or compound emerges from the outlet slot and covers the base in a uniform manner. The size of the outlet slot may, of course, be dimensioned as desired.

According to a preferred embodiment, the extremities 11a and 11b of the parallelogram-like lateral guide 2 are tapered with respect to their thickness from the inside to the outside in order to prevent the end regions of the lateral guide from undesirably sliding along the plate to be coated.

As has been indicated above, the invention involves a method whereby a plate such as is illustrated in FIGS. 5 and 6 is provided with a coating.

To this end the ribs 8 are of the same height with a determinable spacing being provided therebetween to form the grooves 7.

The method of use of the tool which is a method for effecting thin-layer chromatography involves supporting on the ribs 8 the container of FIGS. 1-4, which is filled with a semi-liquid material, the container being moved across the plate and ribs to disperse the material between the ribs as a coating.

It will be noted that the container will preferably have a dimension exceeding the spacing between the ribs so that the container can be supported with stability on said ribs.

There will now be obvious to those skilled in the art many modifications and variations of the structure and method set forth above. These modifications and variations will not depart from the scope of the invention if defined by the following claims.

What is claimed is:

1. A coating tool comprising a container provided with a chamber extending therethrough for accommodating and dispersing a coating material, said chamber having two openings oppositely disposed, said container hav-

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ing one edge bounding one of said openings and disposed substantially in a single plane, said container having a second edge bounding the other of said openings and provided with a recess of predetermined depth, and a lateral guide on said container and protruding beyond both said edges.

2. A tool as claimed in claim 1 wherein said container is generally in the form of a parallelepiped.

3. A tool as claimed in claim 2 wherein said guide is a generally planar element.

4. A tool as claimed in claim 3 wherein said guide is in the form of a parallelogram.

5. A tool as claimed in claim 4 wherein said guide includes extremities having a tapered thickness.

6. A coating tool comprising two side and two end walls connected to each other at right angles to constitute a container having an open top and bottom, said walls having respective first edges disposed in a common plane, said walls having respective second edges of which three are in a common plane parallel to the first said plane and the fourth is at least in part recessed, and a lateral

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guide affixed to one of said walls and extending above and below the same.

7. A tool as claimed in claim 6 wherein said guide is in the form of a parallelogram and is affixed to one of said end walls, one of said side walls being provided with the said recess.

8. A tool as claimed in claim 7 comprising bolts connecting the guide to said one end wall.

9. A tool as claimed in claim 7 wherein the guide has parallel edges which are parallel to the edges of the end wall to which the guide is affixed.

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