

E. F. MÜLLER.
LIQUID COATING MACHINE.
APPLICATION FILED APR. 8, 1922.

1,421,811.

Patented July 4, 1922.

Fig.1

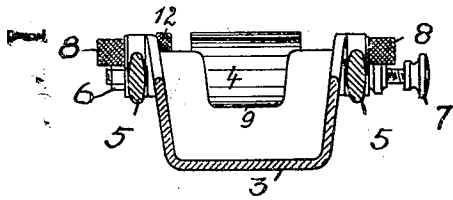


Fig.2

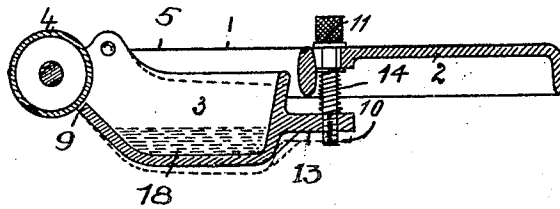


Fig.3

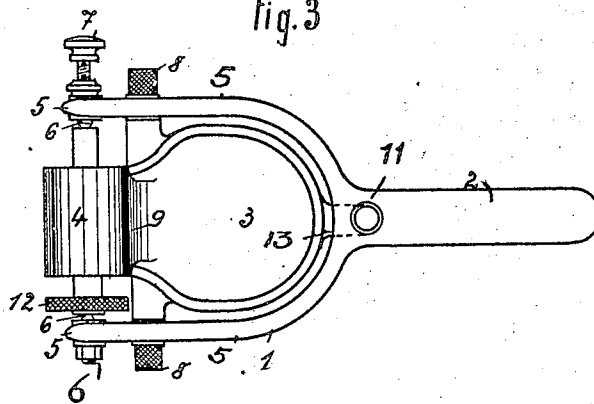
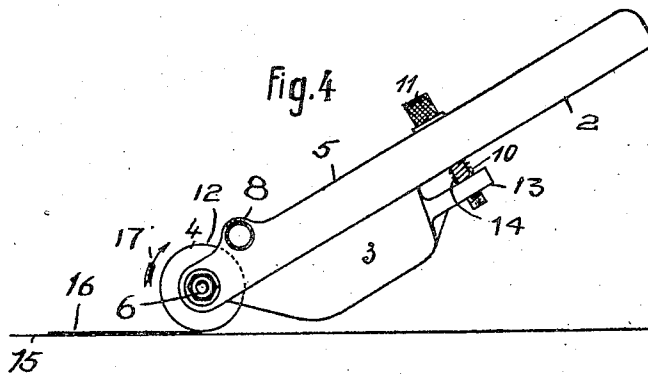


Fig.4



INVENTOR:

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UNITED STATES PATENT OFFICE.

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LIQUID-COATING MACHINE.

1,421,811.

Specification of Letters Patent.

Patented July 4, 1922.

Application filed April 8, 1922. Serial No. 550,782.

To all whom it may concern:

Be it known that I, EDUARD FELIX MÜLLER, a citizen of the Republic of Germany, residing at 16 Otto Street, Leipsig-Lindenau, Germany, have invented new and useful Improvements in Liquid-Coating Machines (for which I have filed an application in Germany December 20, 1920), and of which the following is a specification.

My invention relates to liquid-coating machines by which glue, paste, paint, ink, water or the like may be transferred from a reservoir to the surface of paper, pasteboard, cloth, leather or the like.

It is one object of this invention to provide an improved device of the class just referred to whereby the liquid may be evenly spread upon the desired material by the positive action of the liquid-applying roller, the roller being caused to rotate by friction on a dry portion of the surface wetted by the said fluid; another object is to provide ready means for adjusting the feed of the fluid to the roller; and a still further object is to provide a device of the class described that is simple in construction, easy to operate, and efficient in service.

Referring to the accompanying drawing, Fig. 1 is cross-section of a hand-operated machine built in accordance with the principles of my invention; Fig. 2, a central longitudinal section of Fig. 3; Fig. 3, a top plan view of the said machine; and Fig. 4, side-elevation thereof showing the machine in operating position.

On the drawing, 1 designates a frame having the handle 2 at one end and the parallel forked members or arms 5 at the other end. 3 is a fluid holder for glue, paste, paint, ink, water, or other fluid which is to be transferred to the surface of paper, cloth, leather, or other suitable material. Its sides fit between the arms 5 to which its forward portion is pivotally connected by the pivot screws 8.

The forward ends of the arms 5 carry horizontal pointed pivot screws 6 arranged axially in line with the axis of the roller 4 and forming pivots on which the reduced ends of the roller are pivoted. One of the screws has the head 7 by which the screw may be adjusted or the screw may be operated to release the roller from the frame for repairs or replacement or other purpose. The axle of the roller 4 carries a knurled

traction collar or wheel 12, which serves to drive the roller 4 even though the latter is spreading such a slippery liquid as to deprive it of any driving adherence to the surface on which the liquid is being spread. The front end of the liquid holder, 3, is curved to fit the curved surface of the roller 4, the forward end of the holder being cut away to form the notch 9 as shown in Figs. 1 and 2.

The rear end of the holder 3 has the projection 13 in which works the screw 10 extending through the handle 2 and having the head 11 which bears on the top face of the handle. A spring 14 surrounds the screw between the handle and the projection 13 to hold the holder 3 at the position to which it is adjusted by the screw 10.

On Fig. 4 the line 15 represents a surface upon which the machine is spreading a coat 16 of liquid 18 by drawing the device to the right, the roller 4 rotating in the direction indicated by the arrow 17. By tilting the device as shown in Fig. 4, the liquid 18 is caused to flow against the roller 4; and as the device travels on the surface 15 the liquid adhering to the roller is transferred to the surface to form the coat 16. The thickness of the coat may be varied by adjusting the screw 10. When the projection is adjusted toward the handle 2, the bottom of the notch 9 moves slightly away from the roller, thereby increasing the quantity of liquid carried by the roller to the surface 15. If the screw be adjusted to lower the holder 3 as shown by the dotted lines in Fig. 2, the space between the roller and the bottom of the notch 9 is narrowed, thereby the film of liquid carried by the roller is made thinner.

I claim—

1. In a machine for applying a liquid coat on a surface, a roller, a frame pivotally connected thereto, a liquid-containing reservoir pivotally carried by the frame and having a portion close to the curved surface of the roller, there being an opening in the said portion whereby the liquid in the reservoir may contact with the roller, and means for adjusting the reservoir angularly about its pivot, whereby the relative distance between the roller and the said portion of the reservoir will vary the thickness of the coat of liquid carried by roller as it is drawn over a surface to be coated.

2. In a machine for applying a liquid coat on a surface, a roller, a frame connected to the ends of the roller, a liquid-holding reservoir pivoted to the frame and having an opening close to the roller, and means for raising and lowering the rear end of the reservoir to adjust the distance of the opening from the roller.
3. In a machine for applying a liquid coat on a surface, a roller, a frame pivotally connected thereto, a liquid-containing reservoir pivotally carried by the frame and having a portion close to the curved surface of the roller and below the pivot of the reservoir, there being an opening in the said portion whereby the liquid in the reservoir may contact with the roller, and a screw threaded connection between the frame and the reservoir to adjust the distance of the edge of said opening away from the roller.
4. In a machine for applying a liquid coat on a surface, a roller, a frame pivotally connected thereto, a liquid-containing reservoir pivotally carried by the frame and having a portion close to the curved surface of the roller and below the pivot of the reservoir, there being an opening in the said portion whereby the liquid in the reservoir may contact with the roller, a screw threaded connection between the frame and the reservoir to adjust the distance of the edge of said opening away from the roller, and a spring for yieldingly holding the reservoir from moving so as to increase the said distance.

Signed at Leipsig-Lindenau, Germany, this 14 day of March, 1922.

EDUARD FELIX MÜLLER.

Witnesses:

E. H. LORD,

WALTER E. DUFFIE.