March 25, 1958 E. W. PERRY 2,827,649

PAINT APPLICATOR

Filed June 17, 1953

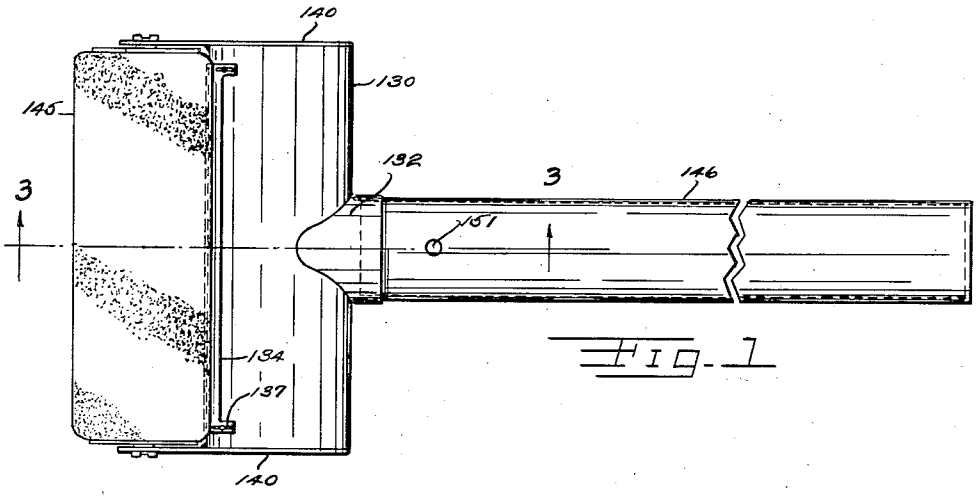


FIG. 1

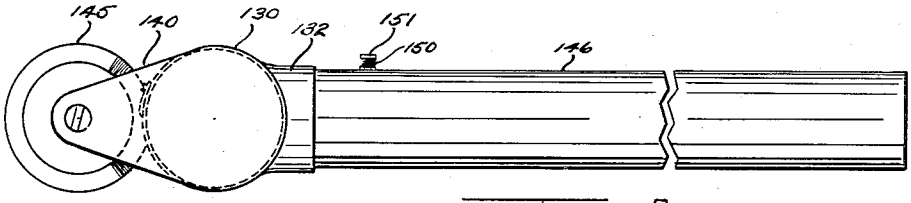


FIG. 2

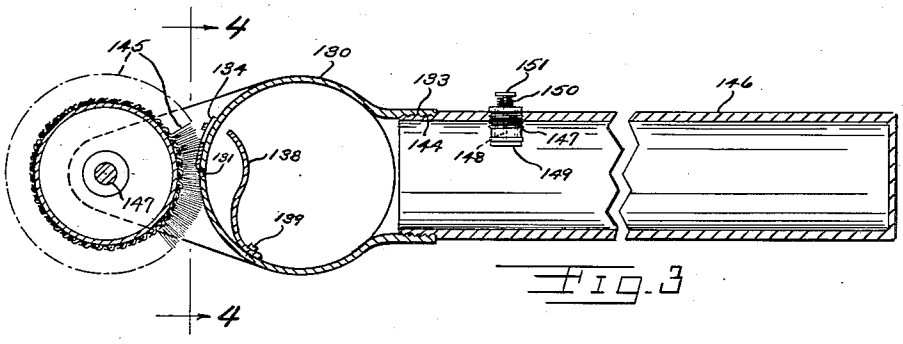


FIG. 3

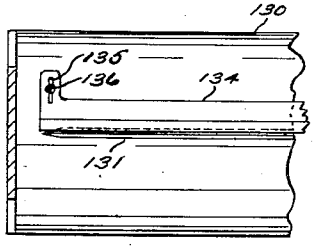


FIG. 4

INVENTOR.
EDWARD W. PERRY
BY
Hyde, Myers, Baldwin & Doran
ATTORNEYS

United States Patent Office

2,827,649

Patented Mar. 25, 1958

2,827,649

PAINT APPLICATOR

Edward W. Perry, Cleveland, Ohio

Application July 17, 1953, Serial No. 362,349

4 Claims. (Cl. 15—132.5)

This invention relates to surface coating apparatus and more particularly to a paint applicator which not only applies paint but also contains a supply of paint.

The principal object of this invention is to provide an improved roller type painting device for applying paint to various types of surfaces.

Another object is to provide an improved means for more evenly transferring and dispersing paint upon the dispensing roller of a painting device.

Another object is to provide a painting device containing a reservoir which feeds paint to a dispensing roller by gravity during the painting operation.

A further object is to provide a painting device which receives paint at one point on its periphery and dispenses it to a receiving surface at another point on its periphery, in one continuous operation.

Another object of the present invention is to provide a painting device characterized by its structural simplicity, the ease of assembly of its parts, its strong and sturdy nature and its low manufacturing cost. Other features of this invention reside in the arrangement and design of the parts for carrying out their appropriate functions.

Other objects and advantages of this invention will be apparent from the accompanying drawing and the description of the essential features will be set forth in the appended claims.

In the drawings,

Fig. 1 is a top plan view of an embodiment of my novel painting device.

Fig. 2 is a side elevational view of the painting device illustrated in Fig. 1.

Fig. 3 is a vertical sectional detail view, taken along the plane of line 3—3 of Fig. 1 looking in the direction of the arrow.

Fig. 4 is an enlarged detail view of a portion of the paint reservoir taken along line 4—4 of Fig. 3 showing the novel adjustable paint transfer means.

In Figs. 1 to 4, an embodiment of my invention is shown, wherein a hollow cylindrical reservoir **130** is provided with an inlet port **132** having internal threads **144** which are adapted to engage external threads **133** at one end of an elongated hollow cylindrical handle **146**. Said handle **146** serves as a paint containing means and supplies the reservoir **130** with paint to be dispersed upon the roller **145**. The roller **145** is rotatably mounted on an axle **147** which has its ends retained in radially extending end plates **140** of the reservoir **130**. The roller is positioned adjacent and in contiguous relationship with the reservoir **130**. Approximately 1/12 of the peripheral area of the roller is in contact with the reservoir as most clearly seen in Fig. 3. The outer wall of reservoir **130** is provided with a longitudinally extending slot **131** along that portion which contacts roller **145**. Said slot **131** provides fluid communication between the reservoir and the roller. The rate of flow through said slot is controlled by an adjustable plate **134** which extends along the entire length of said slot. The plate is movable in a direction perpendicular to the longitudinal axis of the slot **131** so as to cover all or any part of said slot. Said plate is mounted on the outer periphery of the reservoir by means of pins or bolts **136** fastened to said reservoir and slidable elongated slots **137** contained at each end of plate **134**.

In order to assure a constant flow of paint to the roller, and particularly when the roller portion is held higher than the handle, a longitudinally extending plate **138** is fastened to the interior wall of the reservoir. One longitudinally extending edge of the plate is fastened to the interior wall by means of screws **139** while the other edge extends beneath slot **131** in spaced relation thereto, so as to form a pocket. Liquid from the reservoir is gathered in said pocket during normal use, and in extreme situations as when painting ceilings, the pocket which confines paint in a relatively small space will provide means for disseminating paint to the surface of the roller.

The elongated hollow cylindrical member **146** functions both as a handle and an initial supply means for the paint which is to be dispensed by the reservoir **130** into the roller **145**.

An air valve for preventing air locks which restrict the flow of fluid is provided in the hadle **146**. Said valve comprises a hollow chamber **147** threaded into the wall of member **146**. A sliding rod **148** is inserted with the chamber **147**. The rod carries a piston at one end which cooperates with the inner end of the chamber **147** to form a seal. An expansion spring **150** is interposed between the outer edge of chamber **147** and the finger piece **151** and normally tends to actuate the valve piston to its outer or sealing position.

With the above described device it is possible to retain a relatively large supply of paint within the device itself, which enables uninterrupted painting, thus making possible a great saving of time and effort. In addition, it insures delivery of paint to the roller at substantially all angles except when held absolutely vertical to the ceiling.

In view of the foregoing description taken in conjunction with the accompanying drawings, it is believed that a clear understanding of the construction, operation and advantages of the device will be quite apparent to those skilled in this art.

It is to be further understood, however, that even through there is herein shown and described a preferred embodiment of the invention, the same is susceptible to certain changes fully comprehended by the spirit of the invention.

What I claim is:

1. A paint applicator comprising an elongated hollow cylindrical handle, an elongated hollow cylindrical fluid reservoir in fluid communication with said handle, said reservoir detachably mounted to said handle, transversely spaced end plates mounted on said reservoir, an elongated cylindrical dispensing roller rotatably and detachably mounted between said end plates, said roller and reservoir having their axes parallel to one another, and having surface contact over approximately 1/12 of their total peripheral area, an adjustable discharge orifice in said reservoir at the point of surface contact with said roller, said orifice comprising a slot extending axially of said roller in the wall of said reservoir, an adjustable plate on the outer surface of said reservoir extending longitudinally adjacent said slot, said plate being slidable perpendicular to the longitudinal axis of said slot so as to cover all or any part of said slot, said orifice providing fluid communication with said roller, pocket means comprising a plate having one side edge fastened to the interior wall of said reservoir adjacent said slot, and extending parallel to and in spaced relationship from

said slot, suitable end walls at the distal ends of said plate to thereby form a pocket around said slot. said plate in position to gather liquid from said reservoir as the applicator is actuated during use and facilitating dissemination of the liquid through said orifice onto the surface of said roller, air valve means positioned in said handle to assure continuous flow of the fluid.

2. A paint applicator comprising a hollow handle, a fluid reservoir in fluid communication with said handle, said reservoir detachably mounted to said handle, end plates mounted on said reservoir, a dispensing roller rotatably and detachably mounted between said end plates, said roller and reservoir having surface contact, an adjustable discharge orifice in said reservoir at the point of surface contact with said roller, said orifice comprising an elongated slot in the wall of said reservoir, an adjustable plate on the outer surface of said reservoir extending parallel to said slot, said plate being slidable across said slot so as to cover all or any part of said slot, said orifice providing fluid communication with said roller, pocket means comprising a plate having one side edge fastened to the interior wall of said reservoir adjacent said slot, and extending parallel to and in spaced relationship from said slot, the distal ends of said plate sealingly engaging the end walls of said reservoir and thereby forming a pocket around said slot, said plate in position to gather liquid from said reservoir as the applicator is actuated during use and facilitating dissemination of the liquid through said orifice onto the surface of said roller, and air valve means positioned in said handle to assure continuous flow of the fluid.

3. A paint applicator comprising a handle, an elongated hollow cylindrical fluid reservoir mounted on said handle, transversely spaced end plates mounted on said reservoir, an elongated cylindrical dispensing roller rotatably mounted between said end plates, said reservoir in approximately tangential contact with said roller, a discharge orifice in said reservoir at the point of tangential contact with said roller, said orifice comprising an elongated slot in the wall of said reservoir, said orifice providing fluid communication with said roller, pocket means comprising a plate having one side edge fastened to the interior wall of said reservoir adjacent said slot and extending parallel to said slot thereby forming a pocket beneath said slot, and said pocket in position to gather liquid from said reservoir as the applicator is actuated during use and facilitating dissemination of the liquid through said orifice onto the surface of said roller.

4. A paint applicator comprising an elongated hollow cylindrical handle, a fluid reservoir in fluid communication with said handle, said reservoir detachably mounted to said handle, transversely spaced end plates mounted on said reservoir, a dispensing roller rotatably and detachably mounted between said end plates, an adjustable discharge orifice in said reservoir at the point of surface contact with said roller, said orifice comprising a slot in the wall of said reservoir, said orifice providing fluid communication with said roller, means retaining the liquid in said reservoir above the level of said slot said means comprising a baffle between said slot and said hollow handle, an open space above said baffle wherein fluid may flow from said hollow handle over said baffle and thereby be retained in the area between said baffle and said slot, said baffle in position to gather liquid from said reservoir as the applicator is actuated during use and facilitating dissemination of the liquid through said orifice onto the surface of said roller, and air valve means positioned in said handle to assure continuous flow of the fluid.

References Cited in the file of this patent

UNITED STATES PATENTS

396,860	Coston	Jan. 29, 1889
538,297	Terry	Apr. 30, 1895
1,536,403	McMillan	May 5, 1925
1,769,293	Isenman	July 1, 1930
1,991,355	Alexander	Feb. 19, 1935
2,389,409	Brzeski	Nov. 20, 1945
2,528,657	Hobe	Nov. 7, 1950

FOREIGN PATENTS

43,314	Norway	Oct. 25, 1926