

Nov. 7, 1950

E. T. HOBE, SR
PAINT APPLICATOR

2,528,657

Filed March 12, 1948

2 Sheets-Sheet 1

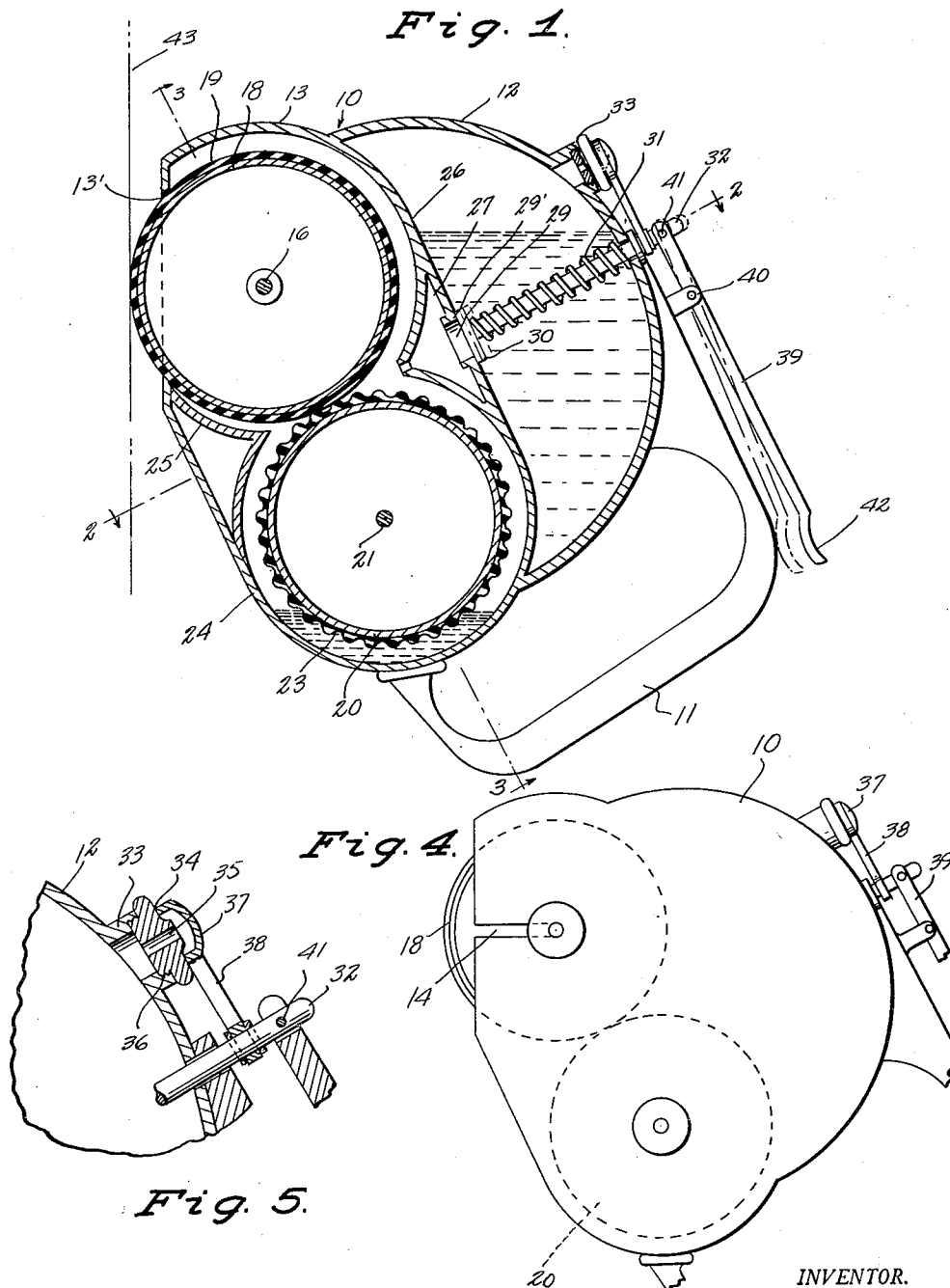


Fig. 4.

Fig. 5.

INVENTOR.
EDWARD T. HOBE, SR.
BY
M^cMorrow, Bernice & Davidson
ATTORNEYS.

Nov. 7, 1950

E. T. HOBE, SR
PAINT APPLICATOR

2,528,657

Filed March 12, 1948

2 Sheets-Sheet 2

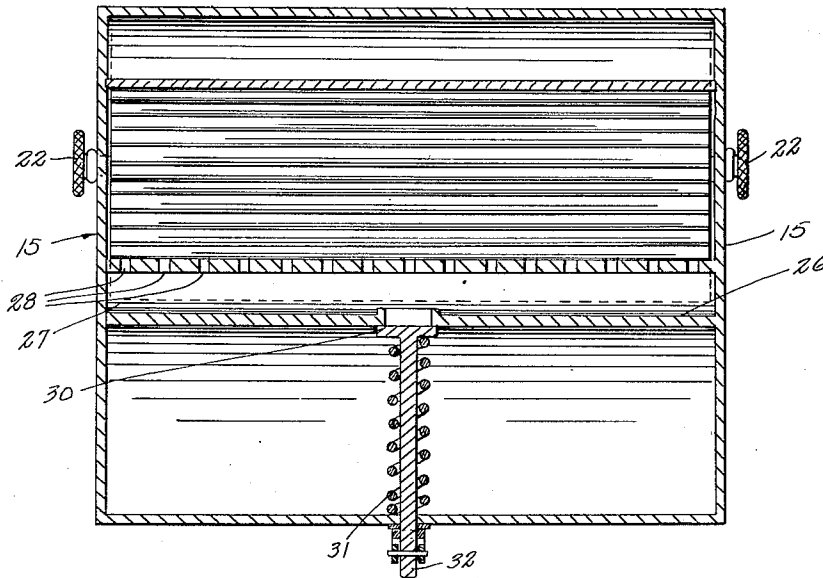


Fig. 2.

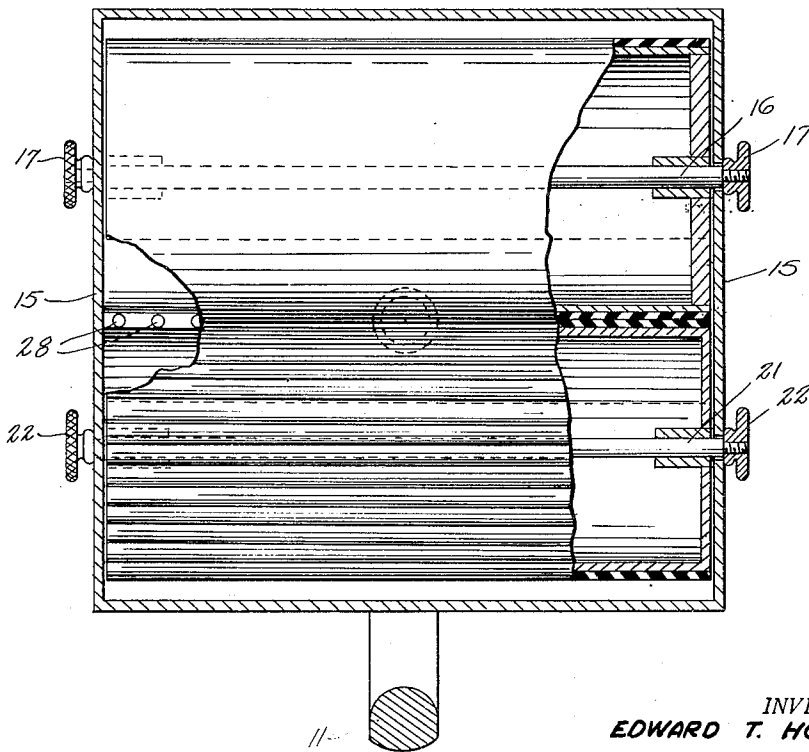


Fig. 3.

INVENTOR.
EDWARD T. HOBE, SR.

BY *McMorrow, Bernice & Davidson*

ATTORNEYS.

UNITED STATES PATENT OFFICE

2,528,657

PAINT APPLICATOR

Edward T. Hobe, Sr., Erie, Mich.

Application March 12, 1948; Serial No. 14,420

3 Claims. (Cl. 91—62.5)

1

This invention relates to a device for automatically applying paint to a surface in a thin, uniform layer or coating, and more particularly to a portable paint applicator having an improved paint-feeding system therefor.

An object of this invention is to provide a mechanical hand-actuable device for applying paint to a surface in a thin and uniform layer or coating without dripping.

Another object of the invention is to provide a hand-actuable device for applying paint to a surface which is easy to manipulate and is highly efficient.

A further object of the invention is to provide a hand-actuable device for applying paint to a surface which is simple in structure and is readily assembled or disassembled.

In the accompanying drawings, forming a part of this specification, and in which like numerals are employed to designate like parts throughout the same:

Figure 1 is a side elevational sectional view of the device according to the present invention;

Figure 2 is a sectional view taken on the line 2—2 of Figure 1;

Figure 3 is a view taken on the line 3—3 of Figure 1, with parts in section and parts broken away;

Figure 4 is an end elevational view of the device according to the present invention;

Figure 5 is an enlarged fragmentary sectional view of a portion of the valve-actuating mechanism.

In the drawings, wherein for the purpose of illustration is shown a preferred embodiment of the invention, the device, broadly stated, comprises a receptacle having a paint-applying means mounted therein, and a reservoir containing paint provided with means for feeding paint to the paint-applying means.

The applicator is indicated generally by the numeral 10 and comprises a receptacle or roller compartment 13 having an opening 13' in the bottom thereof.

The receptacle 13 has a slot 14 in each opposed side wall 15 extending from the edge of the side wall adjacent the open mouth 13' of the receptacle 13.

On the shaft 16 is rotatably mounted a hollow paint-applying roller 18, the shaft being releasably secured within the slot 14 by means of thumb screws 17. The roller 18 is provided with a soft rubber or fabric covering 19 which acts as a friction driving means for a paint-feeding roller 20 rotatably mounted on a shaft 21 and releasably secured to the side walls 15 of the receptacle 13 by means of thumb screws 22. The feeding roller 20 is housed within the receptacle 13 and is arranged in parallel relation with respect to the paint-applying roller 18 which is

2

also housed within the receptacle 13. The roller 20 is provided with a soft rubber covering 23 which is corrugated or ridged, as shown in Figure 1. The roller 18 is so arranged that a portion of its periphery protrudes through the open mouth 13' of the receptacle 13.

Depending from the top wall 26 of the receptacle 13 at a point contiguous to the meeting surfaces of the rollers 18 and 20 and extending longitudinally between the side walls 15 is a trough 27. The trough 27 has sloping sides terminating in a bottom provided with a plurality of feed orifices 28 spaced therealong.

Extending longitudinally between the side walls 15 and the receptacle 13 and disposed opposite the trough 27 is a guard or apron 25. The guard or apron 25 is shaped in the form of an inverted V and is secured to the bottom wall 24 of the receptacle 13.

Arranged in superposed relation with respect to said receptacle 13 is a reservoir 12 for paint. The wall 26 of the receptacle 13 is provided with a discharge opening 29, said opening being in alignment with the V-shaped paint trough 27 and having a valve seat 29'. Mounted for movement toward and away from the valve seat 29' is a valve 30 carried by an end of a valve rod 32 extending through the reservoir 12. Circumposed about the valve rod 32 is a coil spring 31, one end of said spring 31 bearing against the upper wall of the receptacle 13 and the other end of said spring 31 bearing against the valve 30. The coil spring 31 acts to bias the valve 30 to closed position with respect to the valve seat 29'.

Projecting from the paint-containing reservoir 12 is an internally-threaded, cylindrical boss 33. A cap 34 having an inlet opening 35 is secured within the boss 33, the exteriorly-threaded portion 36 of the cap 34 being in threaded engagement with the internally-threaded boss 33. Seated on the cap 34 is an air vent cover 37 which is connected to the projecting other end of the valve rod 32 by means of a link 38. The link 38 is adjustably mounted on the valve rod 32 for swinging movement about the axis of the valve rod so that access can be gained to the cap 34 when it is desired to remove the cap to refill the paint-containing reservoir 12.

The paint applicator is provided with an operating handle 11 secured to the housing 10.

An actuating lever 39, which is pivotally mounted on lugs 40 carried by the handle 11, is pivotally connected at 41 to the other end of valve rod 32. The other end of the actuating lever is provided with a thumb-engaging portion 42.

The operation of the paint applicator is as follows:

Pressure by the thumb on the portion 42 of the actuating lever 39 is effective to move the lever

into the dotted line position of Figure 1 to lift the valve 30 from the valve seat 29' and simultaneously lift the air vent cover 37, thereby allowing paint to flow from the paint-containing reservoir 12 through the opening 29 into the trough 27. Upon release of the pressure on the actuating lever 39, the valve 30 is biased to closed position with respect to the valve seat 29'. The paint thus admitted to the trough 27 flows through the orifices 28 to the external surface 23 of the corrugated feed roller 20. Movement of the applicator along the surface 43 causes the paint-applying roller 18 to frictionally drive the feed roller 20 and thereby transfer paint from the surface 23 of the feed roller to the surface of the roller 18 and then to the surface 43 which is being painted. The paint-applying roller 18 applies the paint to the surface 43 in a thin and uniform layer or coating. Any excess paint which may flow from the corrugated roller 20 will drop upon the apron or guard 25 and be conveyed to the portion of the receptacle 12 below the rollers 18 and 20, thereby eliminating any possibility of dripping. When this reservoir is sufficiently filled by the excess paint, the actuating lever 39 for the valve 30 may be released and the feed roller will be fed from the supply of paint in the receptacle 12. When it is desired to replenish this supply of paint, the valve 30 is reopened and the paint is allowed to flow over the feed roller 20 and the excess is again deposited in the receptacle 12.

It is to be understood that the form of my invention, herewith shown and described, is to be taken as a preferred example of the same, and that various changes in the shape, size and arrangement of parts may be resorted to without departing from the spirit of my invention, or the scope of the subjoined claims.

I claim:

1. A coating device comprising an elongated housing having a laterally projecting handle intermediate the ends, a partition extending longitudinally and transversely in said housing defining an upper coating fluid reservoir and a lower roller chamber, a pair of longitudinal rollers mounted in said housing on axes parallel to each other and in rolling contact with each other, one of said rollers being an applicator having a portion of the surface thereof projecting outwardly through an opening provided in the housing wall on the reservoir side of said partition and in alignment with said reservoir and the other roller being a coating fluid feed roller and located in said chamber, a fluid trough extending longitudinally on the chamber side of said partition and projecting into the space between said rollers and formed with openings through which fluid can pass to the rollers, a valve seat opening in said partition establishing communication between said fluid reservoir and said trough, a spring closed valve mounted on said housing and normally closing said valve seat opening, said valve comprising a stem projecting outwardly of said housing, a lever pivoted on said housing and extending along said handle and pivotally connected to said valve stem for opening the valve to permit fluid to flow into said trough from said reservoir.

2. A coating device comprising an elongated housing having a laterally projecting handle in-

intermediate the ends, a partition extending longitudinally and transversely in said housing defining an upper coating fluid reservoir and a lower roller chamber, a pair of longitudinal rollers mounted in said chamber on axes parallel to each other and in rolling contact with each other, one of said rollers being an applicator having a portion of the surface thereof projecting outwardly through an opening provided in the housing wall on the reservoir side of said partition and in alignment with said reservoir and the other roller being a coating fluid feed roller and located in said chamber, a fluid trough extending longitudinally on the chamber side of said partition and projecting into the space between said rollers and formed with openings through which fluid can pass to the rollers, a valve seat opening in said partition establishing communication between said fluid reservoir and said trough, a spring closed valve mounted on said housing and normally closing said valve seat opening, said valve comprising a stem projecting outwardly of said housing, a lever pivoted on said housing and extending along said handle and pivotally connected to said valve stem for opening the valve to permit fluid to flow into said trough from said reservoir, an air vent on said housing providing communication between the interior of said reservoir and the outside air, a vent closure on said lever normally closing said air vent.

3. A coating device comprising a transversely elongated hollow housing, said housing being closed except for a longitudinal opening in its bottom wall at one side of said housing, a handle secured to project from the opposite side of the housing, a partition dividing said housing into an upper coating fluid reservoir and a lower roller chamber, said reservoir being in alignment with said longitudinal opening, a fluid feed roller mounted in said chamber for rotation about an axis longitudinal of said housing, an applicator roller mounted in said reservoir for rotation about an axis parallel to said first named axis and longitudinal of said housing and in rolling contact with said feed roller, said applicator roller having a limited portion of the surface thereof projecting outwardly of said housing through said opening, a longitudinal fluid trough on the chamber side of said partition and projecting into the space between said rollers and formed with openings through which fluid can pass from the trough to said feed roller, a valve seat opening formed in said partition and providing communication between said reservoir and said trough, a spring pressed valve normally closing said valve seat opening, and an operating lever connected to said valve and mounted on the exterior of said housing and extending in the region of said handle for operating said valve to open position.

EDWARD T. HOBE, Sr.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,175,723	Dohn et al. _____	Mar. 14, 1917
1,899,392	Larkin _____	Feb. 28, 1933
2,118,719	Wraal _____	May 24, 1938