

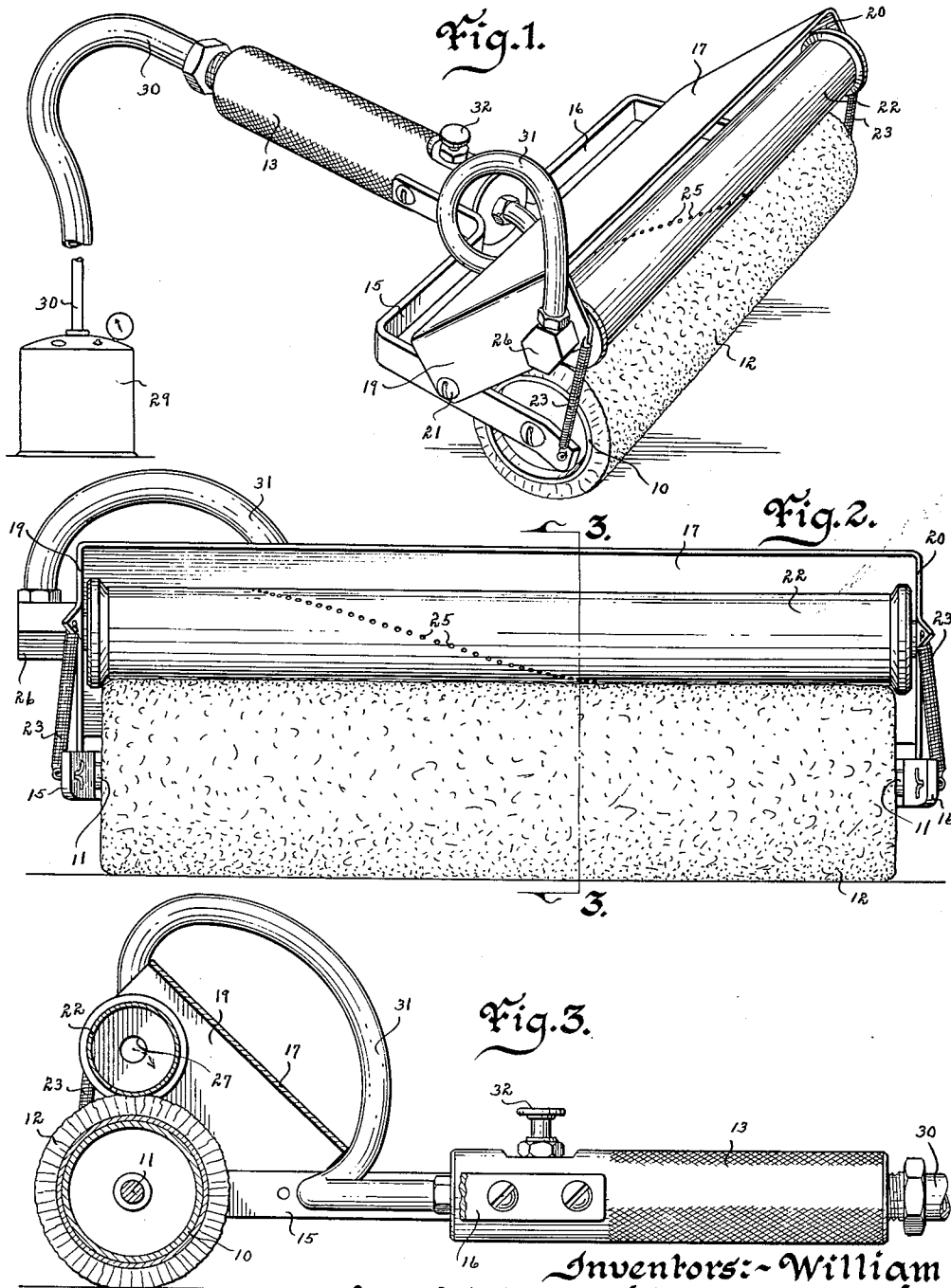
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PAINT APPLYING MEANS

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PAINT APPLYING MEANS

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This invention relates to a means for applying paint products to surfaces, and more particularly to paint applicators of the cylindrical roller type.

The problem of applying paint and like surface coatings is of long standing. Three distinct methods exist, i.e., brushing it on, spraying it on, and rolling it on. The brush method is the oldest one, but is slow and tedious. Also, it is difficult to avoid paint droppings. The method of spraying the paint by compressed air is rapid, but due to fogging it cannot be used for inside wall painting and even out of doors it is often not feasible due to the fog drifting beyond the area of use and onto other objects. Furthermore, spraying is only possible when large mass areas are to be painted inasmuch as one cannot draw fine lines with a spray gun. Also, such equipment is costly and requires the services of a skilled technician. In recent years, many have turned to the paint roller. In general, it consists of a handle, and a wool like covered cylinder rotatably mounted to the handle. The paint to be applied is placed on the absorbent wool padding, and the tool manually rolled over the wall surface. The actual rolling of the paint onto the wall is rapid and drippings are not normally encountered. The difficulty is the time consumed in constantly replenishing the wool cylinder with a new supply of paint. Some effort has been made to have the cylinder perforated and a supply of paint inside the cylinder. There are several objections to these fountain paint rollers. First and foremost, the paint must be of a proper consistency in order to pass through the perforations and through the wool like cylinder covering. Even then, there is a tendency toward paint clogging and it is almost impossible to clean the unit after use. Furthermore, with the cylinder full of paint, the tool is entirely too heavy for ease of operation.

Therefore, one of the principal objects of our invention is to provide a means for supplying paint to a cylindrical paint roller during the actual rolling of the tool over the surface to be painted.

More specifically, the object of this invention is to provide a paint distribution supply cylinder in contact with a cylindrical paint roller and which is in communication at times with a paint supply source.

A further object of this invention is to provide a fountain paint applicator of the cylindrical roller type that is light of weight.

A still further object of this invention is to provide a fountain paint roller device that uniformly distributes the proper amount of the paint product over and onto its cylindrical roller.

A still further object of our invention is to provide a fountain paint roller that is under the control of the operator at all times relative to the amount of paint to be applied over a given surface.

Still further objects of our invention are to provide a fountain paint applying tool of the roll type that is economical in manufacture, durable in use, and refined in appearance.

These and other objects will be apparent to those skilled in the art.

Our invention consists in the construction, arrangements, and combination, of the various parts of the device, whereby the objects contemplated are attained as

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hereinafter more fully set forth, specifically pointed out in our claims, and illustrated in the accompanying drawings, in which:

FIG. 1 is a perspective view of our device ready for use;

FIG. 2 is an enlarged front end view of our fountain paint applicator; and

FIG. 3 is an enlarged cross-sectional view of our device taken on line 3—3 of FIG. 2 and more fully illustrates its construction.

In these drawings we have used the numeral 10 to designate an ordinary paint roller applicator cylinder rotatably mounted on the shaft 11 and having a wool or like sleeve 12 detachably embracing its periphery. The numeral 13 designates a hollow handle portion secured to the forward end of which are the bracket arms 15 and 16. These two arm members 15 and 16 provide a forwardly extending U-bracket frame for rotatably holding and supporting the shaft 11 with the cylinder 10 between its two ends as shown in FIG. 2. Thus far the description of our device is substantially that of the ordinary cylindrical paint applicators now on the market. It is to such equipment that we apply our invention and which we will now describe in detail. We have used the numeral 17 to designate a plate having the two downwardly extending flanges 19 and 20 at its two ends, respectively, and as shown in FIG. 1. The rear lower ends of the flanges 19 and 20 are pivotally secured to the arm members 15 and 16, respectively, and rearwardly of the cylinder 10 by any suitable means such as screws or like 21. The numeral 22 designates a hollow cylinder having its two ends closed and rotatably mounted on and between the forward lower end portions of the flanges 19 and 20, respectively, as shown in FIG. 2. The plate 17 extends forwardly and upwardly and the cylinder 22 is positioned adjacent and directly above the paint applicator cylinder as shown in FIG. 3. At the forward end area of each of the flanges 19 and 20 is a downwardly extending coil spring 23 secured at its lower end to one of the arms of the U-bracket. The purpose of these springs is to yieldingly hold the forward end of the plate member 17 downwardly toward the paint cylinder applicator in order that the paint supply roller 22 will be maintained in lowered yielding engagement with the top of the paint applicator roll. This yieldable holding of the supply roller 22 in contact with the absorbent sleeve 12 of the cylinder 10 is most important, not only for supplying paint to the sleeve when needed, but also to squeeze paint already on the sleeve 12 evenly and uniformly across and throughout the area of the sleeve 12. The numeral 25 designates a row of spaced apart holes through the wall of the cylinder 22. This row of paint passageways always extends spirally around the cylinder 22 as shown in FIG. 2. The numeral 26 designates a hollow fitting on the flange 19 and communicating with the inside of the cylinder 22 through the hole openings 27 in one of the sealed ends of the roll 22 as shown in FIG. 3. The numeral 29 designates any suitable paint supply container such as a tank, and also containing an air pressure greater than that of atmospheric pressure. The numeral 30 designates a flexible conduit having one end operatively communicating with the inside bottom area of the tank or like 29 and its other end communicating with the inside rear end of the handle 13 as shown in FIG. 1. The numeral 31 designates a flexible hose having one end communicating with the inside forward end of the handle 13 and its other end communicating with the inside of the fixture 26. The numeral 32 designates a manual depressible valve imposed in the handle 13 as shown in FIG. 3.

The practical operation of the device is as follows: With the paint product under compression in the tank 29

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it is merely necessary to depress the valve 32 in order to permit the paint product to flow from the supply container 29, thence through the flexible conduit 30, thence through the handle 13, thence through the flexible pipe 31, thence through the fixture 26 and thence into the inside of the cylinder 22. From the inside of the cylinder 22 the paint will slowly pass through the small holes 25 onto and into the absorbent sleeve 12. During this operation, the device should be moved forth and back over the surface to be painted with the paint applicator roll in engagement with the surface as shown in FIG. 1. With the paint applicator roll revolving it will also by engagement therewith rotate the supply cylinder 22. By the holes 25 being spirally arranged the paint will be more evenly and uniformly distributed across the top of the absorbent sleeve as it rolls across the surface receiving the paint product. As soon as the sleeve has been suitably saturated with the paint product, the spring loaded valve 32 should be released thereby preventing further passage of the paint onto the absorbent sleeve. As the absorbent sleeve gives up its paint product to the surface being painted and commences to become depleted of paint, the valve 32 should again be temporarily depressed to permit additional paint to flow into the supply and distribution cylinder 22. We recommend that the flexible hose pipe 31 be of transparent material so that the user of the device can observe any paint flowing from the inside of the handle 13 into the cylinder 22. The plate 17, besides connecting the flanges 19 and 20, acts as a shield between the user and the two cylinder portions as shown in FIG. 1.

Some changes may be made in the construction and arrangement of our paint applying means without departing from the real spirit and purpose of our invention, and it is our intention to cover by our claims, any modified forms of structure or use of mechanical equivalents which may be reasonably included within their scope.

We claim:

1. In a painting means, a hollow handle member, a roller supporting bracket secured to said handle, a paint applicator cylinder rotatably mounted in said bracket, a second bracket member hingedly secured to said first bracket, a paint distribution cylinder rotatably mounted on said second bracket and in engagement with said applicator cylinder, paint exit passageways extending through the wall of said paint distribution cylinder, means for yieldingly holding said paint distribution cylinder into contact with said paint applicator cylinder, a flexible pipe having one end communicating with the inside forward end of said handle and its other end communicating with the inside of said paint distribution cylinder, a flexible conduit adapted to have one end in communication with a source of paint supply and its other end communicating with the inside rear end of said handle, and a manually actuated valve imposed in said hollow handle.

2. In a painting means, a hollow handle member, a roller supporting bracket secured to said handle, a paint applicator cylinder rotatably mounted in said bracket, a second bracket member hingedly secured to said first bracket, a paint distribution cylinder rotatably mounted on said second bracket and in engagement with said applicator cylinder, paint exit passageways extending through the wall of said paint distribution cylinder, means for

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yieldingly holding said paint distribution cylinder into contact with said paint applicator cylinder, a flexible pipe having one end communicating with the inside forward end of said handle and its other end communicating with the inside of said paint distribution cylinder, a flexible conduit adapted to have one end in communication with a source of paint supply and its other end communicating with the inside rear end of said handle, and a manually actuated valve imposed in said hollow handle, said second bracket member being in the form of an inverted U-shaped plate.

3. In a painting means, a hollow handle member, a roller supporting bracket secured to said handle, a paint applicator cylinder rotatably mounted in said bracket, a second bracket member hingedly secured to said first bracket, a paint distribution cylinder rotatably mounted on said second bracket and in engagement with said applicator cylinder, paint exit passageways extending through the wall of said paint distribution cylinder, means for yieldingly holding said paint distribution cylinder into contact with said paint applicator cylinder, a flexible pipe having one end communicating with the inside forward end of said handle and its other end communicating with the inside of said paint distribution cylinder, a flexible conduit adapted to have one end in communication with a source of paint supply and its other end communicating with the inside rear end of said handle, and a manually actuated valve imposed in said hollow handle, said second bracket member being in the form of an inverted U-shaped plate extending forwardly and upwardly relative to said handle.

4. In a painting means, a hollow handle member, a roller supporting bracket secured to said handle, a paint applicator cylinder rotatably mounted in said bracket, a second bracket member hingedly secured to said first bracket, a paint distribution cylinder rotatably mounted on said second bracket and in engagement with said applicator cylinder, paint exit passageways extending through the wall of said paint distribution cylinder and arranged in a spiral path around said paint distribution cylinder, means for yieldingly holding said paint distribution cylinder into contact with said paint applicator cylinder, a flexible pipe having one end communicating with the inside forward end of said handle and its other end communicating with the inside of said paint distribution cylinder, a flexible conduit adapted to have one end in communication with a source of paint supply and its other end communicating with the inside rear end of said handle, and a manually actuated valve imposed in said hollow handle, said second bracket member being in the form of an inverted U-shaped plate.

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