

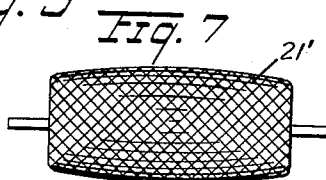
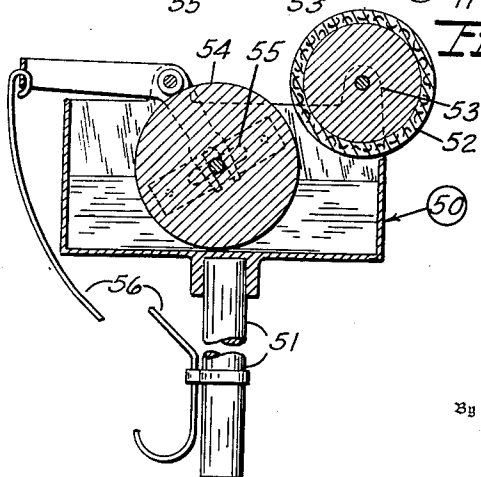
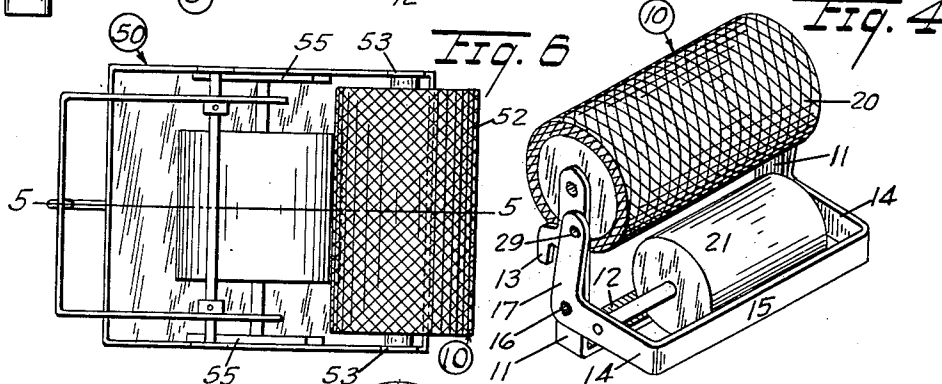
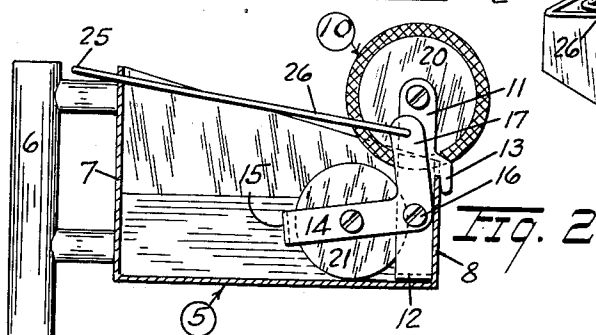
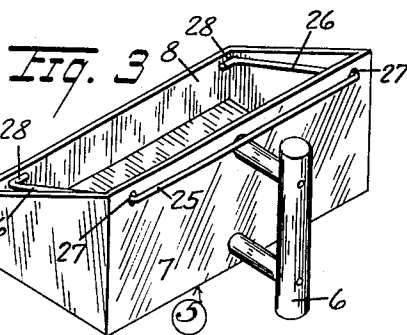
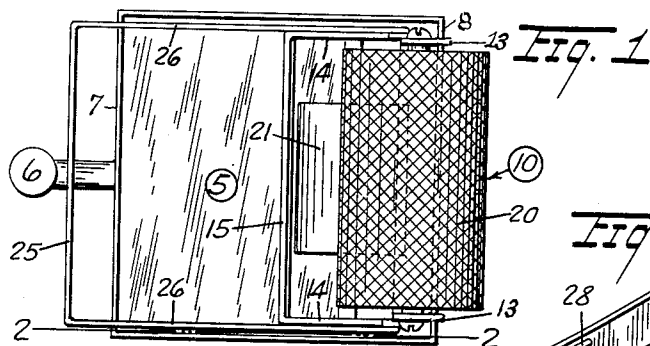
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2,424,323

ROLLER PAINT-COATING DEVICE

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ROLLER PAINT-COATING DEVICE

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2 Claims. (Cl. 91—50)

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My invention relates generally to known devices for applying paint or other coating material by means of an applicator roller instead of the usual brush, and more particularly to an improved device for such purpose embodying novel construction features greatly increasing its efficiency.

The simple handled roller heretofore employed, has limitations and deficiencies due to necessary frequent dipping into a separate source for resupplying said roller, with consequent messy dripping and spattering, and with faulty feeding of the roller, causing streaky and uneven coating application requiring cross rolling to more or less successfully evenly spread the material.

My main objects are to overcome the aforesaid limitations and deficiencies, and provide added and improved means for carrying and feeding an adequate supply of coating material to the roller while in operating motion, and in a new and special manner, so as to facilitate and simplify a neat, speedy application and even spreading of the material, and to substantially enlarge its surface covering capacity in uninterrupted material applying use.

With the aforesaid stated objects in view, and with other objects that will later herein appear, my improved roller painting device more specifically comprises a handled receptacle for carrying a supply of coating material and for mounting an applicator roller with cooperating means for feeding the same from said supply in a new, improved and more efficient manner, without interrupting its continuous use in applying the material, all as will be more fully described hereinafter in connection with the accompanying drawing, and the novel features thereof defined in the appended claims.

In the drawings:

Fig. 1 is a plan view of my roller painting device embodying a preferred construction thereof.

Fig. 2 is a cross sectional elevation of the same, taken on the line 2—2 of Fig. 1.

Fig. 3 is a separate rear perspective view of the manipulating carrier unit of my device shown in Figs. 1 and 2, adapted to carry a supply of coating material, and

Fig. 4 is a corresponding separate rear perspective view of the material applicator unit adapted to be mounted on the manipulating carrier unit.

Fig. 5 is a cross sectional elevation of a modified embodiment of my improvements taken on the line 5—5 of Fig. 6 and

Fig. 6 is a plan view of the same.

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Fig. 7 indicates a modified construction of the applicator roller.

In the construction indicated in Figs. 1 to 4 inclusive, I have shown my device as preferably made up of separable units, Fig. 3 indicating one which may be called the manipulating carrier unit, generally indicated by reference 5, adapted to carry a supply of coating material, shown with a handle 6 on its rear wall 7, and its front wall 8 being adapted to mount a desirably removable unit, which may be called the material applicator, shown separately in Fig. 4, and generally designated by reference 10.

Material applicator 10 is shown as embodying a supporting frame formed by upwardly bent ends 11, 11 of a cross bar 12, said ends having hooked extensions 13, 13, midway of their height to overhang wall 8 of carrier 5 and hold said frame in vertical position in said carrier against normal strains of displacement, but may obviously have clamping means if desired. A second frame formed by bent ends 14, 14, of a cross bar 15, is pivotally connected at 16, 16 to ends 11, 11, and said ends 14, 14, have angular extensions 17, 17, by means of which said second frame may be pivotally swung on its pivot connections 16, 16.

Applicator roller 20 is shown axially mounted in ends 11, 11 and a feed roller 21 for said applicator, is shown axially mounted in ends 14, 14,

Manipulating carrier 5 is shown with a push bar 25 located on the outer face of its wall 7, adjacent handle 6, for convenient operation, and is supported in position by its bent ends 26, 26, extending loosely through apertures 27, 27, in said wall 7. Said bent ends 26, 26, are shown with hooked extensions 28, 28, at their free ends adapted to detachably engage in apertures 29, 29 of the roller carrying angular extensions 17, 17.

When said units 5 and 10 are assembled, as shown in Figs. 1 and 2, it will be readily seen, that a supply of material stored in carrier 5 may be controllably fed to the operating applicator roller 20 through pressure on push bar 25 acting to lift feed roller 21 into contact therewith, by swinging its frame on pivotal connections 16, 16. Applicator roller 20 extends above carrier 5 so it may readily contact a surface to be coated, and feed roller 21 is normally out of contact with said roller 20 and lies sunk into the coating material on the bottom of said carrier, lowered there by force of gravity, though spring depressing tension may be provided, if desired. As thus normally lowered, said roller 21, when lifted into contact with roller 20, will feed material from the very bottom of said carrier, and will be

rotated by such contact to stir up said carrier material to maintain its suitable consistency for applicator use.

As thus described, my device will accomplish aforesaid stated objects of avoiding the mess of drip and spatter involved in frequent dipping into a separate supply, by neatly feeding the applicator roller 20 without interrupting its continuous application use, thus very materially increasing its efficiency with a saving of time and effort. My aforesaid stated objects however included other and very important intents of overcoming heretofore faulty, streaky and uneven spread of the material and for materially improving its even spread with less effort, thus further increasing its efficiency.

Such heretofore faulty feeding of the roller, inherent in its known supply by dipping, resulted in an even spread of the material across the entire width of the roller, requiring instructions to space the roller strokes and cross roller the same to cover and even the coating. In my improved feeding of material to the applicator roller, I provide for "feathered" roller strokes or strokes having more thinly applied coating at its side edges than in the medial portion, permitting lap of such strokes, not heretofore feasible, and avoidance of cross roller strokes, thus reducing the time and effort of coating a surface, and simplifying and improving the even spread of the material without faults.

The means for such improved feeding, as shown in Figs. 1 and 2, is provided for by making feed roller 21 proportionally narrower than applicator roller 20, so only the medial portion of the latter will have the material directly applied thereto, and its ends extending beyond said feed roller will be supplied only by capillary spread of said material, covering said edges with a thinner covering of material than the medial portion of the roller, thus producing the desired feathered rolling strokes, permitting lapping, and such lapping evening the thickness of the coating effected by the medial portion of the roller, and coating the surface with less roller strokes. This feathered roller stroke is an important improvement and essential to the simplified, improved, and more effective roller painting a surface made possible with my novel device. And such feathered roller stroke may be secured by other means, for instance, in Fig. 7, I have shown a roller with a curved or barrel shape, not necessarily requiring a narrower feed roller, and useful for light, springy surfaces, such as wall board, or where the surface is more or less uneven. The essential feature of my improved feeding is that the medial portion of the applicator roller shall have a heavier covering of material, fed directly thereto, than its side edges fed only by capillary spread of the material to simplify application, with neatness, speed and little effort, and to greatly improve the coating by an evenly spread layer of material free of streaks.

My improved device, above fully described, may be used for any paint coating use, but is particularly adapted for well-known paints or coating material mixed with water, and may be used on all surfaces for which the previously known roller coaters were useful, but with much greater efficiency and improved results. Paint and coating material as employed throughout the foregoing description is intended to include any liquid material of a paint-like nature used for protective or decorative coating of a surface.

In Figs. 5 and 6, I have indicated a container

50 as mounted on a long pole 51 for extended reach in applying to ceilings and high wall surfaces, and I further show a modified construction with its application roller 52 axially mounted in fixed extension 53, 53, of said container, and its feed roller 54 movable in slide ways 55, 55 formed on the container walls. For this extended reach, a pull rod 56 is indicated to extend to the lower end of pole 51.

The surfaces of the several rollers, above described, will of course be adapted, either in themselves, or by a suitable cover, for particular needs. A plain wooden roller may suffice for the feeding roller, but a different material, or a covering of more absorbent material may be found better adapted for certain paint uses. And the applicator roller will generally be supplied with a cover, as felt, woven pile fabric, or a surface of a spongy or an absorbent nature, as best adapted for the needs, and having in mind the particular finish desired.

From the foregoing description, it is believed the nature of my improvements and their manner of accomplishing my stated purpose will be readily understood. It will also be apparent that the specific construction described therein in detail, may be modified in other manner than as briefly indicated, and included within the scope of my invention as defined in the following claims.

What I claim is:

1. A roller paint-coating device having means for applying a rolled stroke of thinner application at its side edges relative to a heavier mid-width application, said means comprising a manipulatable carrier unit adapted to hold a supply of coating material, and a material applicator unit removably mounted in said carrier and comprising, an applicator roller axially rotatable by applied contact with a surface to be coated, a pivotally movable feed roller of less width than said applicator roller normally immersed in said carrier supply material, and operating means for swinging said feed roller into contact with the rotating applicator roller to directly feed said supply material to a mid-width portion only of said applicator roller.

2. A roller paint-coating device having means for applying a rolled stroke of thinner application at its side edges relative to a heavier mid-width application, said means comprising a manipulatable carrier for a supply of coating material having a material applying roller spaced from said coating material, and a cooperating narrower feed roller having means for manually moving it from normal rest in said coating material to intermittent rolling engagement with a mid-width portion of said applying roller so as to directly feed said coating material to said mid-width portion only of said applying roller.

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