Nov. 20, 1945. J. BRZESKI 2,389,409

PAINTING MACHINE

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FIG. 1.

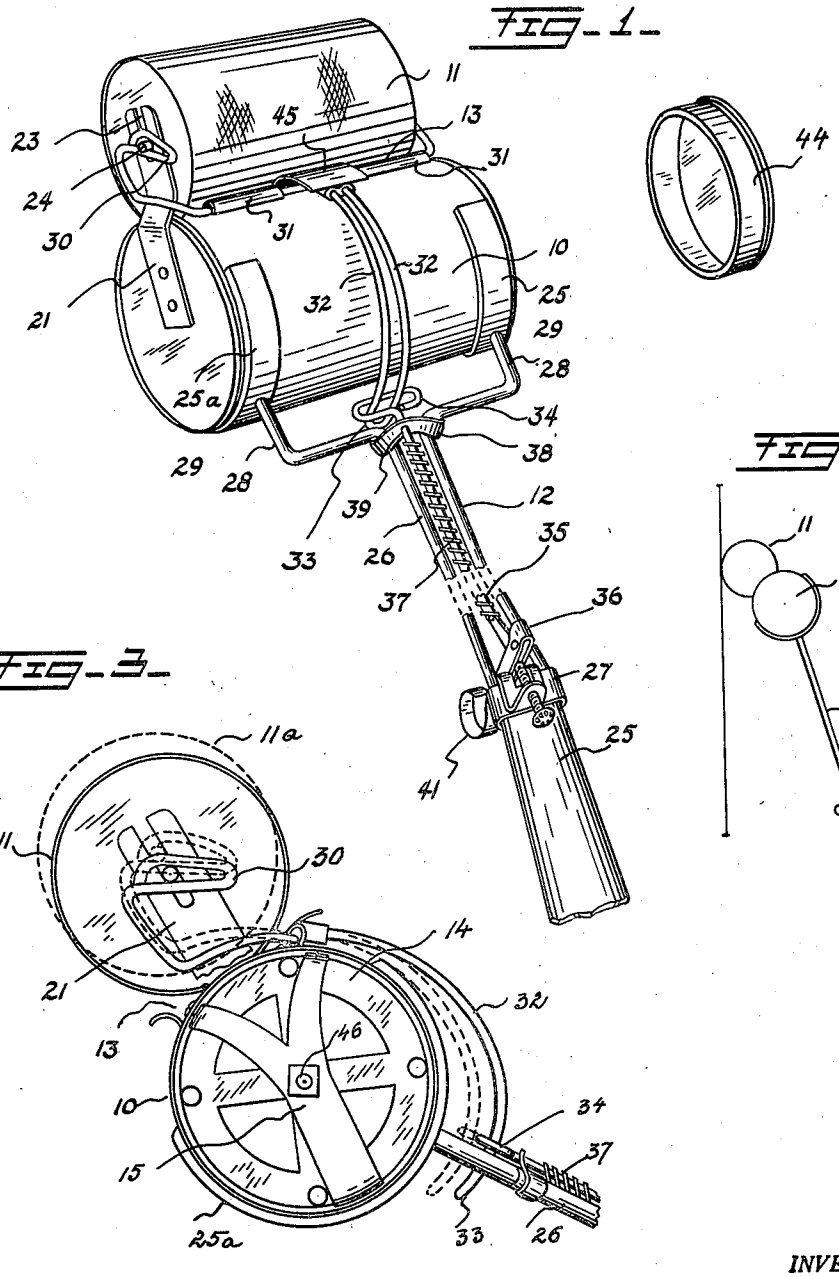


FIG. 2.

FIG. 3.

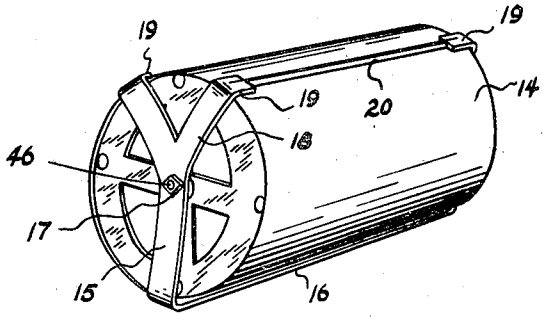
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Fig. 4.



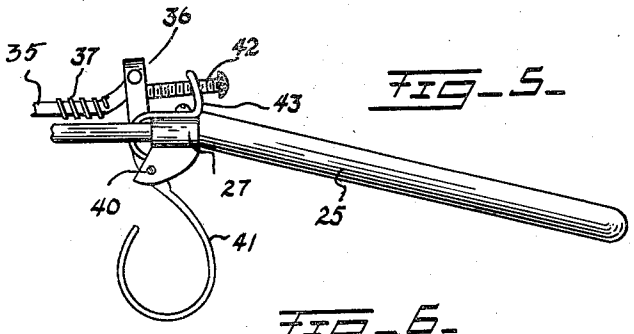


Fig. 5.

Fig. 6.

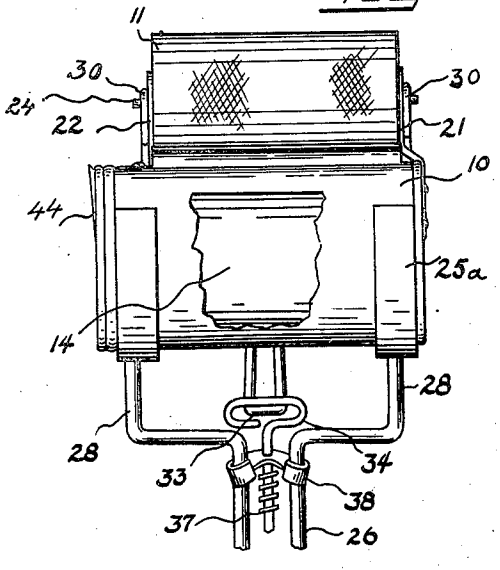
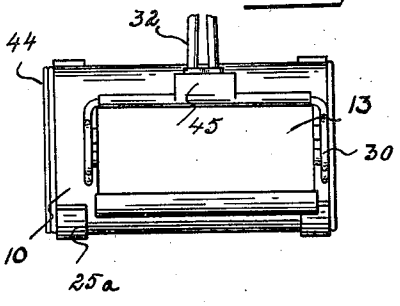


Fig. 7.



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UNITED STATES PATENT OFFICE

2,389,409

PAINTING MACHINE

John Brzeski, Toronto, Ontario, Canada

Application January 13, 1945, Serial No. 572,675

2 Claims. (Cl. 91—50)

The purpose of my improvement is to provide a light portable device suitable for painting ceilings and walls of buildings, which device contains both means to apply paint and a supply of paint for that purpose.

Another object of my invention is to provide a device of simple construction and a few parts, in such a combination that they do not get easily out of order.

A further object of my improvement is to provide a machine including means for control of its operation, particularly with respect to means of applying paint to the surface to be painted.

I shall now describe my invention with reference to the accompanying drawings, in which:

Fig. 1 is a perspective view of the whole machine, with some parts being shown in less than full relative length.

Fig. 2 is a diagrammatic view of the machine with respect to the surface to be painted with the aid of said machine.

Fig. 3 is an end view of the upper part of the machine shown in Fig. 1, including a tank for paint, with an end wall thereof removed to show parts within.

Fig. 4 is a perspective view of a drum, being a part of my machine.

Fig. 5 is a side elevation of a detail of my machine.

Fig. 6 is a front elevation of the upper part of my machine, this being the side to face the wall to be painted.

Fig. 7 is the top view of a tank, which is a part of my machine.

Similar numerals refer to similar parts throughout the several views.

The machine consists generally of a tank 10, designed as a receptacle for liquid paint, a roller 11 mounted above the tank, and an elongated shank 12. Tank 10 is cylindrical in shape and open at one end, for which end a removable cap 44 provides a closure. Normally, the tank is disposed in a horizontal position. Its cylindrical wall is open at what is normally its upper side. The opening 13 is substantially rectangular, as shown in Fig. 7, and extends substantially the whole length of the tank. Axially disposed within the tank is a drum 14. The latter is mounted for rotation around its axis in a spider 15, which is made of a band of metal or suitable material. The band runs along the surface of drum 14, as shown by numeral 16, turning up at both ends to provide bearing 17 for axle 46 of the drum and spreads apart into a V-formation 18, each leg of said V-formation being bent inwardly over the surface of drum 14, the bent over portions forming short extensions 19. These serve as anchorage points for elastic skimmers 20, preferably made of rubber. The skimmers are in close proximity to the surface of drum 14. The radial distance of extensions 19 and member 16 from axle 46 are such that said extensions and the band fit closely against the inside surface of tank 10 and are in a frictional contact with said surface. Said extensions 19 are intended to straddle the longer sides of opening 13, as shown in Fig. 3.

Mounted above opening 13 in tank 10 is a roller 11. The roller is hollow, its outer surface being covered with a textile material of the kind used for conventional rollers employed for painting walls, and includes an axle protruding at each end. At one end, the protruding part of the axle fits into a slot 23 in a bracket 21 extending radially from the end wall of tank 10. At the other end, bracket 22 rises from the upper surface of tank 10 adjoining opening 13. With the ends of its axle in slots of respective brackets, roller 11 is mounted right above said opening 13, which is somewhat longer than said roller 11, said roller abutting frictionally the surface of drum 14 within tank 10.

The machine includes means whereby the contact between the drum within tank 10 and the roller 11 may be discontinued should it be so desired. The means are controlled by a trigger adjacent handle 25. Said means include a lever made of one continuous length of wire. The wire is made into a loop 30 at one end of the roller so as to enclose the end of axle 24, turns parallel to the axis of said roller running within bead 31, to a point mid-way the length of tank 10, extends at right angle to said axis in a curve 32 approximately following the outline of tank 10, makes a hairpin turn 33 and returns upwardly to form a symmetrical counterpart, terminating in a loop to enclose the other end of said axle. The lever so made is fulcrumed in said beads 31 on both sides of shield 45, arching over the wire where it starts on its downward curve 32.

The tank 10 is held in a cradle composed of semi-circular bands 25. The bands are held in a spaced relation by prongs 28 of shank 12, made of two parallel wires 26, anchored to handle 25. A trigger 36 held between the ends of band 27 by means of pin 40 and including a finger-piece 41, is connected to a rod 35 running between wires 26, and forms at its outer end an eye 34. The latter encloses the hairpin turn 33 of the lever fulcrumed in beads 31. A spring 37 coiled

around said rod 35 is at one end affixed to the rod. At the opposite end, it bears against a cross-member 38, binding together said shank wires 26. The cross-member contains an aperture 39 for sliding passage of said rod 35. A screw 42 in an upright lug 43 on handle 25, is used to regulate the extent of the movement of trigger 36.

I shall now describe the manner in which my machine may be used; First, cap 44 is put into its place and a quantity of liquid paint is poured into said tank through opening 13. To gain access to said opening, the roller 11 must be shifted upwardly, away from contact with drum 14 within the tank. This shifting may be done manually or indirectly by means of trigger 36, as will be hereinafter described. With the tank properly filled with paint, the machine is held in an upright position at an angle to bring the roller 11 into contact with the wall to be painted. As the machine is pushed upwardly, or pulled downwardly, the roller, being in frictional contact with the wall, is made to rotate. Because the roller is also in a frictional engagement with the drum, the rotation of the roller causes the rotation of the drum. As the latter is immersed in liquid paint, it gathers, in the course of its rotation, a quantity of paint on its surface and brings it upwardly to feed said roller 11. Excess quantity of paint is brushed off by skimmers 20. The remaining quantity of paint is picked up by the surface of roller 11 and is applied to the surface which is to be painted.

If in the course of the operation it is desired to apply the roller to the surface to be painted, but to discontinue the contact of the roller with the paint supplying drum, this may be effected by the action of the trigger 36. As the trigger is pulled by means of finger-piece 41, eye 34 of rod 35 pushes down the lower end of the lever which controls position of roller 11, and causes loops 30 to rise upwardly and to remove said roller 11 from contact with drum 14. This is shown in Fig. 3, where the position of roller 11 away from drum 14 is shown in dotted lines 11*a*. When the finger-piece 41 is released, the roller, under the action of coiled spring 37, returns automatically to its normal position, that is, into contact with said drum 14.

It is obvious that some changes may be made in the construction of my machine without departing from the inventive principle disclosed herein. What I, therefore, wish to claim is as follows:

1. A machine of the kind described, comprising a cylindrical tank for liquid paint, the tank being open at upper side, a bracket mounted on the tank at each end thereof, and extending radially therefrom, each bracket being provided with a slot therein, radially disposed with respect to said tank, a roller for application of paint to the surface to be painted, said roller being disposed over said opening and being mounted for rotation in said brackets by means of its axle, extending at each end into the respective slot, a drum axially disposed within the tank and being in a frictional contact with the surface of the roller to be rotated by the rotation thereof, a handle to support the tank, and lever means extending from said handle to the axle ends of the roller to discontinue the frictional contact between the roller and the drum.

2. A machine of the kind described, comprising a tank for liquid paint, the tank being open at its upper side, a roller mounted horizontally over said opening on its axle ends in brackets having downwardly extending slots therein, a paint supplying drum mounted for rotation within the tank, parallel to the roller and in frictional contact with its surface, to be rotated thereby, lever means applicable to the roller to lift said roller above the drum, to discontinue frictional contact therewith, and means to support the tank with the roller thereon for operation.

JOHN BRZESKI.