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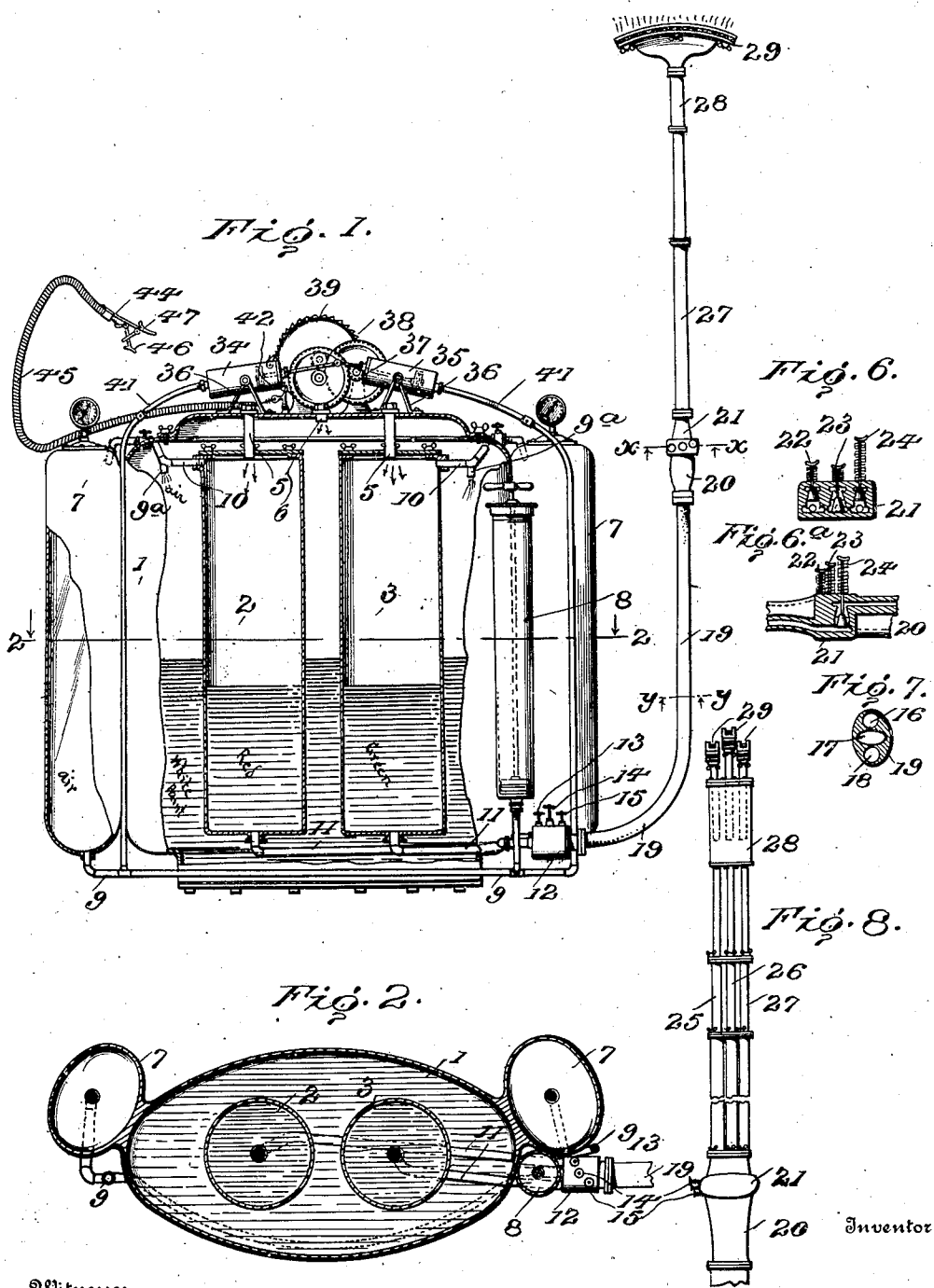
PATENTED MAY 26, 1908.

V. ARANGUREN Y BUSTINZA.

PAINT MACHINE.

APPLICATION FILED SEPT. 9, 1907.

2 SHEETS—SHEET 1.



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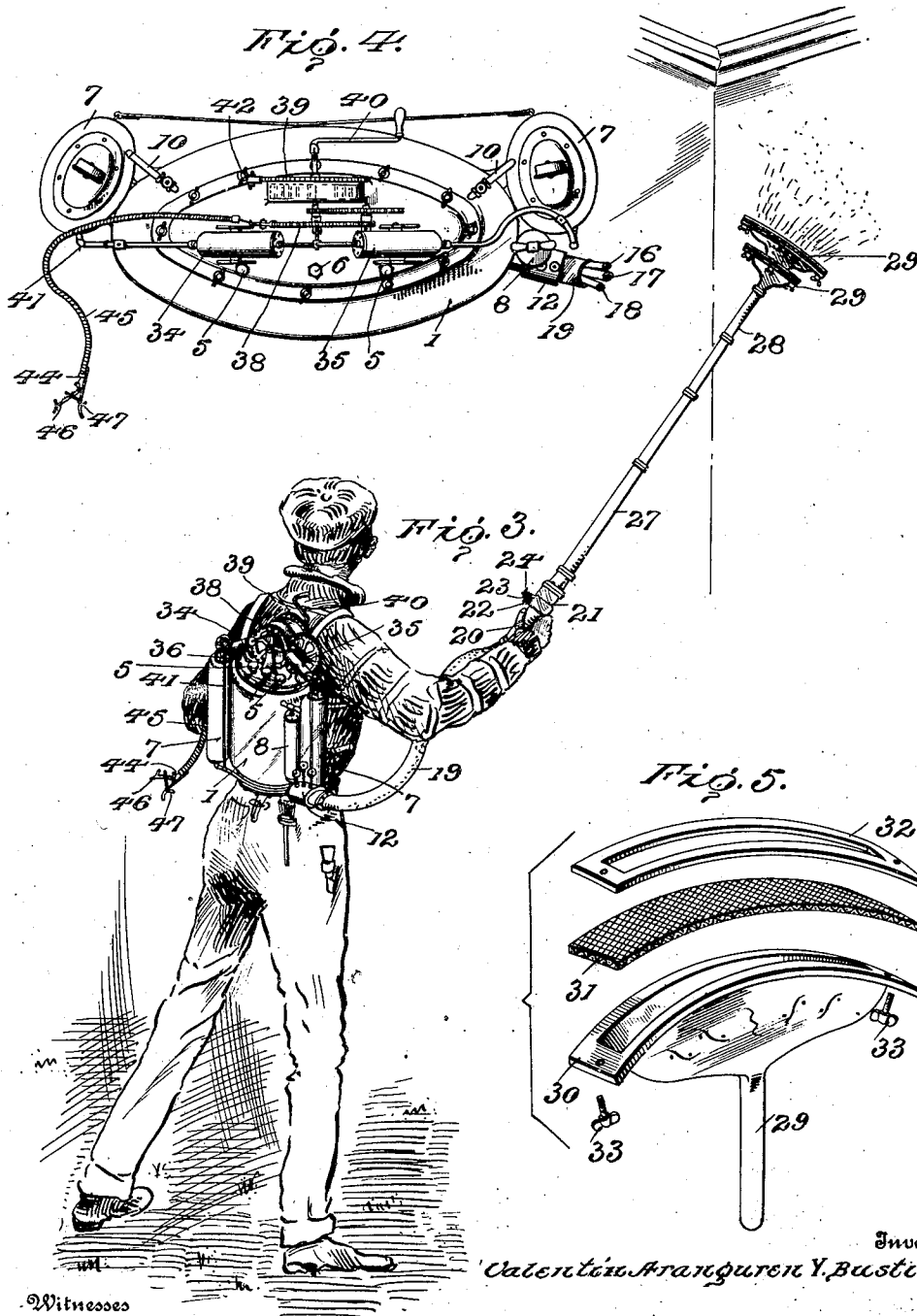
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UNITED STATES PATENT OFFICE.

VALENTIN ARANGUREN Y BUSTINZA, OF NEW YORK, N. Y.

PAINT-MACHINE.

No. 888,693.

Specification of Letters Patent.

Patented May 26, 1908.

Application filed September 9, 1907. Serial No. 391,995.

To all whom it may concern:

Be it known that I, VALENTIN ARANGUREN Y BUSTINZA, citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Paint-Machines, of which the following is a specification.

This invention relates to that class of machines or apparatus that are designed to apply paint, calcimine, or the like to walls, ceilings and other surfaces through the action of compressed air which atomizes the fluid coloring material and applies it in the form of spray over the surface to be coated in an even manner and without any of the streaky effects that are so noticeable from the use of a brush and that are so hard to overcome.

The present invention has for its object a multi-color machine of this character which will be of comparatively simple, durable and efficient construction and which will be capable of applying two or more colors by the use of the same machine, all as will be hereinafter fully described and claimed.

For a full understanding of the invention reference is to be had to the accompanying drawings, in which:

Figure 1 is a sectional side elevation of my improved paint machine; Fig. 2 is a horizontal sectional view on the line 2—2 of Fig. 1; Fig. 3 is a perspective view illustrating the use of the machine; Fig. 4 is a top plan view of the machine; Fig. 5 is an enlarged detail perspective view of one of the spray nozzles; Figs. 6 and 6^a are detail sectional views of one of the valve casings on the line x—x of Fig. 1; Fig. 6^a is a detail longitudinal sectional view through the valve casing; Fig. 7 is a detail transverse section on the line y—y of Fig. 1; Fig. 8 is a detail view of the staff.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

My improved paint machine comprises a main tank 1, which together with its related parts is designed, when used, to be strapped to the back or the shoulders of the operator, and auxiliary tanks 2 and 3 which are mounted within the main tank 1 and which are preferably spaced therefrom on all sides. These tanks are designed to contain, respectively, paints or other fluid coloring substances of the different colors. The auxil-

iary tanks 2 and 3 are provided respectively with filling tubes 4 which extend upwardly through the cover or lid of the tank 1, screw caps 5 or other closures being supplied to close the upper ends of the said filling tubes, in an air tight manner after the paints or the like have been poured in. 6 designates a similar filling tube for the main tank. Manifestly, the lids of the respective tanks are secured thereto with an air tight joint.

Secured in any desired manner to the main tank 1 and preferably at opposite sides thereof, are the air drums 7, two in number in the present instance. A hand operated air pump 8 is secured in operative relation to the drums 7 and is connected thereto by means of the pipes 9 that are preferably secured to the lower ends of the drums as shown. The drums 7 are connected to the auxiliary tanks 2 and 3 by means of the air pipes 10, each of said pipes being formed with a branch 9^a extending into the main tank 1, so that air may be forced into the tanks 1, 2 and 3 simultaneously. The air drums 7 are provided with the usual gages as shown, and the air pipes 10 are provided with shut-off cocks:

The several tanks 1, 2 and 3 are connected by distinct or separate tubes 11, preferably attached thereto at their lower ends, to a valve casing 12, which is provided with three distinct passages or ports covered by three distinct cocks, 13, 14 and 15, the several tubes 11 communicating with the respective ports or passages. Flexible tubes or pipes 16, 17 and 18 preferably of rubber hose, are attached at one end to the valve casing 12 and at the respective ports thereof, and are preferably contained within a sheath 19. The said shut-offs and the other ends of the tubes 16, 17 and 18 are attached to a hollow handle 20 also formed with three distinct passages and provided at one end with a valve casing 21 in which three spring tension keys 22, 23, and 24 work, so as to control the flow of the paints or the like through the hollow handle out through the said valve casing 21. A series of substantially rigid pipes 25, 26 and 27 are attached to one end of the handle 20 in communication with the three passages thereof, and the ports of the valve casing 21, said pipes being constructed in longitudinally extensible and telescoping sections, so that they may be lengthened or shortened, as the case may require. A sleeve 28 is slipped over the outer end of the pipes

25, 26 and 27 and is preferably slidably mounted thereon for extensible movement, and three spray nozzles 29 are detachably and adjustably held, preferably by frictional engagement, within the said sleeve, in communication with the respective pipes 25, 26 and 27. Each of the spray nozzles 29 is fan shaped as shown, and is provided with a flange 30 on which the wire screen section 31 is adapted to fit, so as to finely divide the fluid coloring substances as they issue from the nozzles and evenly distribute it over the surface to be coated. The said screen 31 is preferably secured to the flange 30 by means of an arched shaped frame 32 secured to the flange by means of a clamping screw 33. It is of course to be understood that the air drums 7 are charged by means of the hand pump 8 before the operator starts to work. It is manifestly expedient to maintain a proper amount of compressed air within the drums, and to provide for the depletion of air supply during the operation of the apparatus, I preferably provide a motor actuated air pumping apparatus in connection with the hand pump 8. This air pumping apparatus preferably comprises two air pump cylinders 34 and 35, mounted to oscillate upon standards 36 rising from the lid or cover of the main tank 1. The two piston rods 37 of the pump cylinders 34 and 35, are both connected by a wrist pin or the like, to the gear wheel 38 which is driven by the spring drum 39 mounted upon the main tank 1.

40 designates a handle by which the motor may be wound up.

From the outlet ends of the respective cylinders 34 and 35 flexible tubes 41 lead. These tubes are connected to the respective air drums 7; preferably through the instrumentality of the pipes 9, so that when the motor is permitted to operate, air will be forced into the drums.

Normally the spring motor is held at rest. This is accomplished by means of a spring pressed locking pawl 42. In order to release the pawl from engagement with the gear wheel 38 and permit the motor to operate, I provide a flexible pull cord 44, which extends through the flexible sheath 45 and down over the apparatus in convenient reach of one of the operator's hands. The outer end of the pull cord 44 is attached to a bell crank 46 provided at one end with a finger grip designed to coact with a relatively stationary finger grip 47 secured to the sheath 45 and by pinching the two finger grips together the cord 44 will be operated and the pawl 42 disengaged from the gear wheel 38.

In the practical use of my improved multi-color painting machine, the drum 7 will of course first be supplied with compressed air and the apparatus will be strapped to the

operator's back. One hand, naturally the right hand, will grasp the handle 20, leaving the left hand free to manipulate the motor releasing means. If it be intended to apply only one color, two of the three cocks 13, 14 and 15 will be shut off. If, however, it be desired to apply a plurality of colors to the surface to be coated, one color at a time, the three cocks 13, 14 and 15 will be opened and the operator will depend entirely upon the three cocks, 22, 23 and 24, for his control of the passage of fluid out of the respective spray nozzles 29. By manipulating any one of these cocks, the fluid of the desired color will be permitted to issue from its nozzle in an evident manner, and one color may be substituted for another very quickly by simply manipulating the several spring cocks of the valve casing 21 of the handle 20. As the pipes 25, 26 and 27, which, together with the handle 20 comprises the color applying staff of the apparatus, are extensible, it is evident that the devices may be used with a comparatively high ceiling and with other places which are more or less inaccessible to the painter supplied with the ordinary appliances.

Having thus described the invention, what is claimed as new is:

1. In a machine of the character described, the combination with a plurality of tanks for different colored coating substances, means for supplying said tanks with compressed air, a paint applying staff provided with spray nozzles, and having separate connection with the respective tanks, and means for controlling the passage of fluid from each one of the tanks to the several spray nozzles.

2. A machine of the character described comprising a plurality of tanks, means for supplying said tanks with compressed air, a paint applying staff provided with a hollow handle having distinct communication with the respective tanks, and provided with a valve casing at the handle, said valve casing being provided with a plurality of ports for the passage of paint from the respective tanks, keys controlling said ports and designed to be actuated by the fingers of the operator grasping the handle, and spray nozzles secured to said staff and operatively communicating with the respective parts of said valve casing.

3. A machine of the character described, comprising a main tank, one or more auxiliary tanks, mounted in said main tank, means for supplying the several tanks with compressed air, tubes extending from the respective tanks, a valve case secured to said tubes and provided with cocks designed to control the respective tubes, a paint applying staff having a flexible sheath connection with the said valve case, separate tubes within said sheath, and communicating with the said staff, and valve case respectively, said

staff being provided with a series of outlet pipes, one for each of the tanks, and a spray nozzle for each outlet pipe, and a handle forming an element of the staff, said handle
 5 being hollow and designed to have the paint passed therethrough and provided with a plurality of keys designed to be manipulated by the operator's fingers and controlling the passage of the paint to the respective outlet
 10 pipes.

4. In a machine of the character described, an applying staff comprising a handle portion provided with a valve case having a series of distinct passages, and independent valves
 15 controlling said passages, a plurality of outlet tubes connected to said handle, and spray nozzles connected to said tubes.

5. In a machine of the character described, an applying staff comprising a handle portion
 20 provided with a valve case having a series of distinct passages, and independent keys controlling said passages, a plurality of outlet tubes connected to said handle, and spray nozzles detachably connected with said tubes.

25 6. In a painting machine, the combination of a supply tank, an air drum operatively connected to said supply tank, a motor mounted on the tank, an air pump arranged to be actuated by said motor and operatively
 30 connected to the air drum, means for holding said motor in inaction, a staff by which the paint is applied, said staff being operatively connected to the supply tank and designed to be grasped by one hand of the operator,
 35 and means for releasing the motor holding means.

7. In a machine of the character described, a supply tank adapted to be strapped on the

back of the operator, an applying staff operatively connected to said tank and designed
 40 to be manipulated by one hand of the operator, a motor supported on said tank, an air drum secured to said tank, an air pump operatively connected to said drum to be driven
 45 by said motor, a device automatically held in engagement with an element of the motor to hold the same inoperative, and a pull cord
 50 connected to said device to release the same, said pull cord extending downwardly from the device, within convenient reach of the operator's other hand, substantially as described.

8. In a machine of the character described, a supply tank, an applying staff operatively
 55 connected thereto, the tank being designed to be strapped to the back of the operator, an air pump operatively connected to said tank, an air pump supported by the tank and operatively connected to said drum, a motor carried by the tank and arranged to actuate
 60 said pump, a locking pawl designed for engagement with an element of the motor, to hold the same inoperative, a pull cord connected at one end to said pawl a tubular
 65 sheathing through which said pull cord extends, and a device connected to the outer end of the pull cord and adapted to be actuated by the operator's hand to pull said cord and release the pawl from the motor.

In testimony whereof I affix my signature
 70 in presence of two witnesses.

VALENTIN ARANGUREN Y BUSTINZA. [L. s.]

Witnesses:

JUAN GALOW,
 NICOLAS LOPEZ ARMAS.