Feb. 20, 1951 R. T. EPPERSON 2,542,862

PRESSURE PAINTBRUSH

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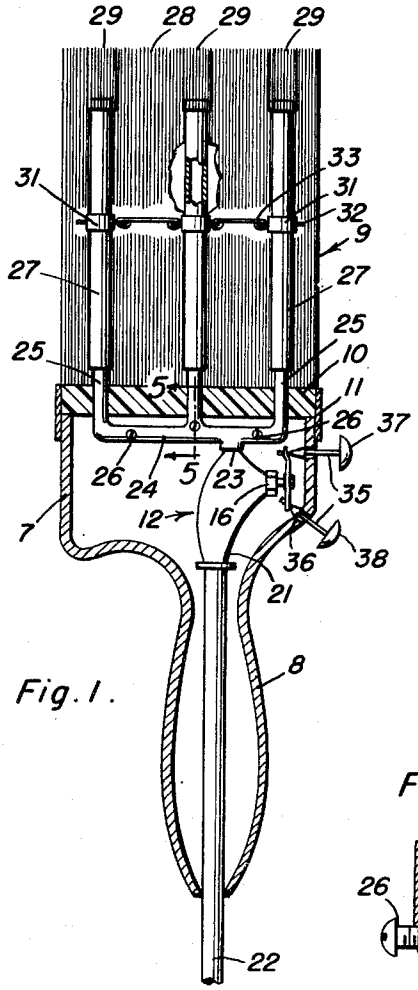


Fig. 1.

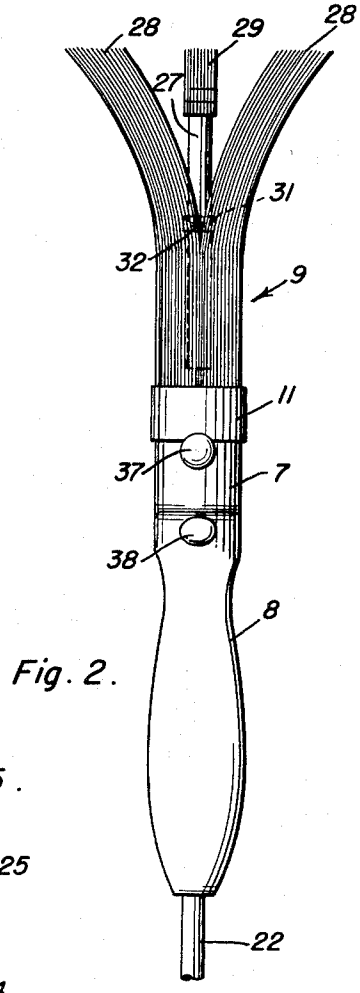


Fig. 2.

Fig. 5.

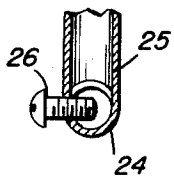


Fig. 3.

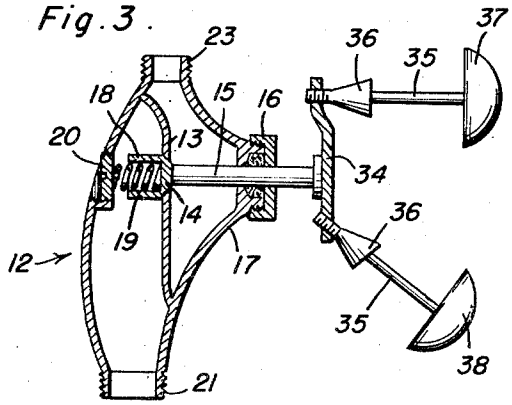
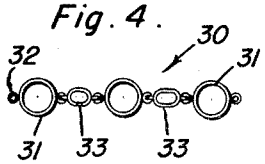


Fig. 4.



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PRESSURE PAINTBRUSH

Robert Taylor Epperson, Ponca City, Okla.

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4 Claims. (Cl. 15—128)

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The present invention relates to certain new and useful improvements in a pressure-type paint brush, and the principal object of the invention is to structurally, functionally and otherwise improve upon similarly constructed fountain brushes presently known to me.

It is a matter of common knowledge, to persons skilled in the art to which the invention relates, that various styles and forms of fountain brushes of pressure types have been devised and are in use. In carrying out the principles of the instant invention, I have devised and constructed a fountain brush which, while basically and otherwise similar to known styles, is characterized by features of refinement and improvement which, collectively considered, serve to provide a brush which is susceptible of easier handling and control, is not too heavy for convenient and practical use, and is a better all-around brush.

More specifically, one improvement has to do with a satisfactory cut-off and regulating valve, which has dual thumb-buttons which are so placed and situated in relation to the brush handle and head that they may be selectively utilized to best advantage and to prevent undue tiring of the user's hand.

A further object of the invention is to provide a well-constructed multiple-branched manifold, which is connected with the valve, which is provided with individual flow control screws and which distributes the paint to the bristles with requisite nicety, whereby to make for uniform painting accomplishments.

Another object of the invention is to provide, in addition to the aforementioned features, rubber or equivalent flexible paint delivery tubes which are suitably harnessed together and which serve to provide the requisite supply while insuring, at the same time, expected flexibility of the applicator and brushing bristles.

In addition, novelty is thought to reside in the stated arrangement of tubes whose outer ends terminate inwardly of the corresponding outer ends of the main bristles, said terminal ends having auxiliary bristles which intimately intermingle with the main bristles in providing better coaction of the tubes with said main bristles.

Other objects and advantages will become more readily apparent from the following description and the accompanying illustrative drawings.

In the drawings:

Figure 1 is a view in section and elevation, illuustrating a paint brush constructed in accordance with the principles of the present invention.

Figure 2 is an edge elevation, observing the structure of Figure 1 in a direction from right to left.

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Figure 3 is a detailed view, in section and elevation, showing the valve means.

Figure 4 is an elevational view, showing the tube retention and harnessing means.

Figure 5 is an enlarged detailed section on the line 5—5 of Figure 1.

Referring now to the drawings by distinguishing reference numerals and accompanying lead lines, the head of the brush is of suitable material and is hollow, and is denoted by the numeral 7. It includes an appropriate handle 8. The bristles, which are more or less conventional, are denoted by the numeral 9 and are anchored in an appropriate base or mount 10 of synthetic resin or plastic, secured by a rim 11 to the head, as shown in Figure 1.

Reference being had now to the cut-off valve disclosed in Figure 3, this comprises an appropriate bulbous-shaped casing 12, having an internal partition 13 provided with a valve seat for the valve element 14. The latter is provided with an operating stem 15 operable through a packing gland 16 provided on the lateral branch 17. The valve element on the left of the partition 13 is provided with a socket 18, housing a coiled spring 19 which is held in place by a screw-plug 20, which serves to normally seat and thus close the valve. The valve casing is situated in the head, as shown in Figure 1, and a neck 21 at one end serves to accommodate the pressure paint supply line 22. In practice, this receives paint under pressure from an appropriate source of supply (not shown). The neck 23 at the opposite end of the valve casing is connected with an appropriate connection provided in the distributor manifold 24. This embodies a series of three distributing branches 25, having associated therewith appropriate flow regulating controls 26. As shown in Figure 5, these are simple screws to cut down or increase the flow, as desired.

The aforementioned delivery tubes are denoted by the numeral 27, and are the same in construction, and they are placed at equally spaced distances and longitudinally embedded in the main bristles. They are connected at their intake ends with the branches 25 and have their outer ends terminating short of the tips 28 of the main bristles. At these points, I provide auxiliary bristles 29, which are properly bunched and secured around the discharge end of each tube, and the bristles 29 terminate even with the tips 28. In fact, they cooperate intimately with the main bristles in the paint application step, in an obvious manner. The tubes are preferably of rubber or equivalent material and are interconnected in spaced relation by the harness means 30, shown in Figure 4. This means comprises collars 31 surrounding the respective tubes, and provided

with eyes **32** connected by assembling and retaining links **33**.

As before specified, pressure-type fountain paint brushes are not new. As a matter of fact, the prior art teaches the provision of brushes equipped with manually controlled cut-off valves, paint distributing means and delivery tubes for feeding the distributed paint into the brush bristles.

Compared to brushes, in this category of invention known to me, the present invention is novel in that a triple-branched manifold is connected directly to a control and cut-off valve and serves to accommodate flexible rubber distributing tubes, there being regulating or equivalent members **26** in the manifold for cooperation with the flanges. The use of the auxiliary bristles **29** on the outer ends of the tubes **27** terminating inwardly of the main bristles is a featured improvement. In addition, the use of rubber tubes and the harness means **30** of Figure 4, is worthy of studied attention.

A feature of greater importance is the provision of an actuator **34** on the valve stem **15**, with presser rods **35** connected to opposite ends of the actuator, especially by way of shouldered members **36** which coact with the apertured wall of the shell or head **7** to assist in smooth control of the valve means. In addition, the rods are provided with selectively usable thumb-buttons **37** and **38** which are located at points of vantage, and make it possible for the user to operate one button with the thumb, and the other with the palm of the hand. As previously stated, this dual valve control feature avoids undue tiring from repeated thumb operations.

A careful consideration of the foregoing description in conjunction with the invention as illustrated in the drawings will enable the reader to obtain a clear understanding and impression of the alleged features of merit and novelty sufficient to clarify the construction of the invention as hereinafter claimed.

Minor changes in shape, size, materials and rearrangement of parts may be resorted to in actual practice so long as no departure is made from the invention as claimed.

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

1. In a fountain paint brush of the class described, a handle equipped hollow head, flexible main painting bristles connected with and carried by said head, a paint delivering, regulating and cutoff valve mounted wholly for manual operation within the confines of said head, means connected to and supplying the valve with paint under pressure, a plurality of spaced parallel flexible paint supplying and distributing tubes movably embedded in said bristles, manifold means located essentially in said head and operatively connecting the inner ends of the tubes with said cutoff valve, the outer ends of said tubes being comparatively flaccid and terminating at points spaced inwardly from the tip ends of said bristles, and individual batches of auxiliary bristles respectively mounted on the outer discharge ends of said tubes and embedded in the main bristles and terminating at their outer ends in flush relation with the tips of said main bristles, a collar surrounding the intermediate portion of each rubber tube, and means flexibly connecting the respective collars to one another to permit the tubes to yield both singly and collectively in conformity with the flexuous movements of said main bristles.

2. A paint brush of the class described comprising a hollow head, paint applying bristles connected to said head, said head being provided with a handle, a manifold mounted within the confines of the head, tubes connected at their inner ends with the manifold and projecting for operation into the bristles, a bulbous-shaped cutoff valve mounted within the confines of said hollow head and including a casing operatively connected with said manifold, a supply line connected with the casing, a valve seat in the casing, a spring closed valve operable in said casing against the seat and including a stem, said stem being operable within the confines of said head, an actuator member carried by the valve stem, a rod connected at one end with the actuator and operable through an opening in the head and provided with a thumb button, a second rod connected with the actuator and operable through an opening in the head and provided on the exterior of the head with a second button, said buttons being selectively actuable.

3. A paint brush of the class described comprising a hollow head, paint applying bristles connected to said head, said head being provided with a handle, a manifold mounted within the confines of the head, tubes connected at their inner ends with the manifold and projecting for operation into the bristles, a bulbous-shaped cutoff valve mounted within the confines of said hollow head and including a casing operatively connected with said manifold, a supply line connected with the casing, a valve seat in the casing, a spring closed valve operable against the seat and including a stem, said stem being operable in said casing and within the confines of said head, an actuator member carried by the valve stem, a rod connected at one end with the actuator and operable through an opening in the head and provided with a thumb button, a second rod connected with the actuator and operable through an opening in the head and provided on the exterior of the head with a second button, said buttons being selectively actuable, said rods being provided intermediate their ends with shoulders and the shoulders being in abutting engagement with the apertured portions of the head, in the manner and for the purpose described.

4. The structure specified in claim 1, together with individual valve controlling rods slidably mounted in a portion of said head, said rods being operatively connected at inner ends to the valve and having their opposite outer ends projecting to the exterior of said head and provided with individual selectively usable buttons.

ROBERT TAYLOR EPPERSON.

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