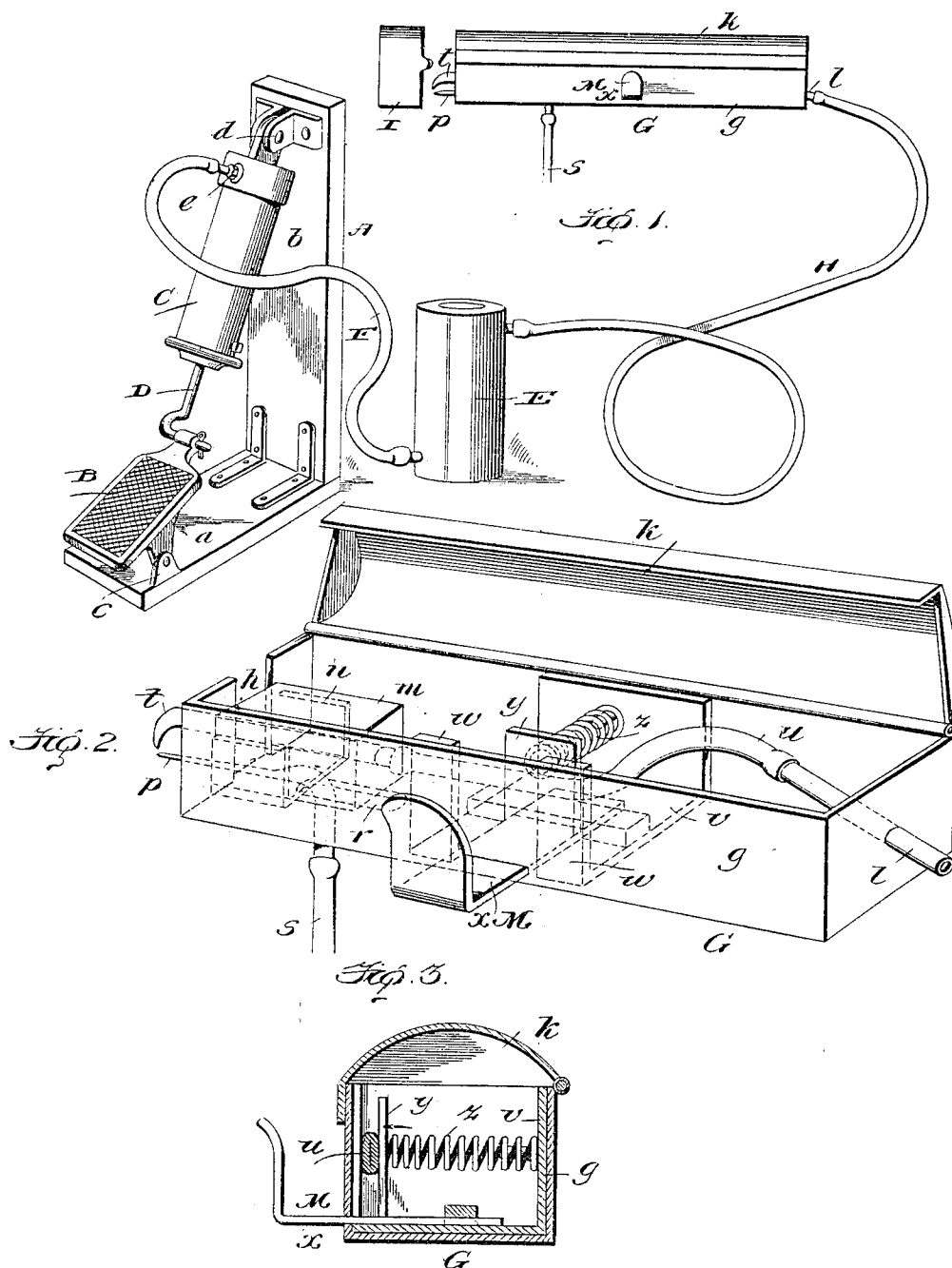


No. 818,649.

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F. WOLF.
PNEUMATIC COLOR APPLYING APPARATUS.
APPLICATION FILED JAN. 30, 1906.



Witnesses:

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Inventor:

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by *James Shuchy* - Atty.

UNITED STATES PATENT OFFICE.

FELIX WOLF, OF NEW YORK, N. Y.

PNEUMATIC COLOR-APPLYING APPARATUS.

No. 818,649.

Specification of Letters Patent.

Patented April 24, 1906.

Application filed January 30, 1906. Serial No. 298,731.

To all whom it may concern:

Be it known that I, FELIX WOLF, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented new and useful Improvements in Pneumatic Color-Appling Apparatus, of which the following is a specification.

My invention pertains to the fine arts; and it consists in the peculiar and advantageous apparatus hereinafter described and claimed for depositing color, preferably ink, on various surfaces, and thereby producing darker or lighter shades at the pleasure of the operator.

In the accompanying drawings, forming part of this specification, Figure 1 is a perspective view of the apparatus constituting the present and preferred embodiment of my invention, the same being shown with the cap of the air-brush removed. Fig. 2 is an enlarged perspective view illustrating the air-brush of the apparatus with its cover in an open position, and Fig. 3 is a central transverse section of the air-brush with the cover thereof closed.

Similar letters designate corresponding parts in all of the views of the drawings, referring to which—

A is a portable stand which comprises a base *a* and an upright *b*, fixed to and rising from one end of the base.

B is a treadle fulcrumed on suitable standards *c*, rising from the base of stand A.

C is the cylinder of an air-compressing pump, which is pivoted at *d* to the upper portion of the upright *b* of stand A and is provided at *e* with a suitable check or non-return valve.

D is a piston movable in cylinder C and having its rod connected to the treadle B.

E is an air-storage tank which is also portable, and F is a hose interposed between and connecting the check or non-return valve *e* of the pump and the air-storage tank E.

In virtue of the construction thus far described it will be observed that the user of the apparatus is enabled to readily move the same from point to point in an apartment or building, and it will also be observed that by actuating the treadle B with his foot the operator is enabled to store air under pressure in the tank E.

G is the air-brush of the apparatus, and H is a hose intermediate the tank E and the air-brush for conducting fluid-pressure from the former to the latter. The air-brush G may

be of any construction compatible with the purpose of my invention without involving a departure from the scope thereof, though I prefer to have it comprise an oblong box-like body *g*, having a notch *h* in its forward end wall, a cover *k*, hinged to said body, an inclined metallic tube *l* extending through the opposite ends of the body *g* with reference to the notch *h* and having its outer ends connected to the hose H, a body *m*, of cement or other suitable plastic material, arranged in the body *g* adjacent to the notched end wall thereof and held by a metallic clamp *n*, a nozzle *p*, preferably of glass, invested in the body of plastic material and having its forward portion arranged in the notch *h* of the body and its rear portion depending through a slot *r* in the bottom of the body *g*, a flexible tube *s* connected to the depending portion of nozzle *p* and designed to be arranged in a bottle of ink or otherwise connected with a source of ink or color supply, a nozzle *t*, also invested in the body of plastic material *m* and having its discharge arranged immediately adjacent to that of the nozzle *p*, a hose or compressible tube *u* connecting the rear end of the nozzle *t* and the forward end of the tube *l* and arranged longitudinally in the body *g*, and a valve M for normally closing the said tube *u* and preventing the passage of air therethrough. The said valve M in turn comprises a frame *v*, fixed in the body *g* and having upright spaced bars *w*, a thumb-slide *x*, movable through an aperture in the front wall of body *g* and also between the uprights *w* of frame *v* and having an upright portion *y*, and a coiled spring *z*, interposed and secured between the said upright portion *y* of the thumb-slide and the back wall of frame *v*. The tube *u* rests between the portion *y* of the thumb-slide and the uprights *w* of frame *v*, and by virtue of the construction described in the foregoing it will be apparent that the tube will be compressed and closed between the portion *y* of the slide and the uprights *w*, so as to preclude the passage of compressed air through the tube. When, however, the thumb-slide is pressed inwardly against the action of spring *z*, the tube *u* is relieved of pressure and air is free to pass through the same.

I, Fig. 1, is a cap which is designed to be placed over one end of the air-brush G when the device is not in use with a view of protecting the nozzles *p* and *t* and preventing the same being closed by dust or the like.

In the practical use of my improved apparatus the operator actuates the treadle B in the manner described and in that way stores air under pressure in the tank E. When the tank E is charged with air under sufficient pressure, the apparatus is ready for use. The mode of using the apparatus is as follows, viz: The operator takes the air-brush G in one hand and dips the tube s in the ink or other color to be applied. He then presses the thumb-slide x inwardly for an instant, so as to enable the suction created at the forward end of the nozzle p to draw ink up into the said nozzle. With this done the air-brush is properly positioned relative to the surface to be covered, when, as will be readily appreciated, the air-brush will discharge the ink in the form of an exceedingly fine spray and will deposit the same on the surface, so as to delicately shade the same. It will be noted that by holding the air-brush adjacent to the surface the shade will be darker than when the air-brush is held at a considerable distance from the surface, also that by holding the air-brush at various distances from the surface different shades may be produced.

It will be gathered from the foregoing that in addition to the practical advantages ascribed to my novel apparatus the same is simple and inexpensive in construction, is so light in weight that it may be conveniently moved from place to place, and is made up of parts which are well adapted to withstand the usage to which such devices are ordinarily subjected.

I claim—

1. A pneumatic color-applying apparatus, comprising a portable stand having a base and also having an upright fixed to and rising from one end of the base, an air-pump having a piston and also having a cylinder containing the piston and pivoted at its upper end to the upright of the stand, a treadle mounted on standards rising from the base of the stand and connected to the piston of the pump, a portable air-storage tank connected with the eduction-orifice of the pump, and an air-brush connected through a flexible conduit with the tank and having a tube adapted to be connected with a source of color-supply.

2. In a pneumatic color-applying apparatus, an air-brush comprising a hollow body, a nozzle carried by the body and having a tube

adapted to be connected with a source of color-supply, a nozzle carried by the body and having its discharge arranged adjacent to that of the first-mentioned nozzle, a compressible tube connected to the second-mentioned nozzle and arranged longitudinally in the hollow body and adapted to be connected with a source of fluid-pressure supply, and a spring-pressed thumb-piece carried by the body and normally exerting lateral pressure against the compressible tube so as to prevent the passage of air therethrough.

3. In a pneumatic color-applying apparatus, an air-brush comprising a hollow body, a nozzle carried by the body and having a tube adapted to be connected with a source of color-supply, a second nozzle carried by the body and having its discharge arranged adjacent to that of the first-mentioned nozzle, a compressible tube connected to the second-mentioned nozzle and arranged longitudinally in the hollow body and adapted to be connected with a source of fluid-pressure supply, a frame fixed in the body and having parallel uprights at one side thereof, a thumb-slide movable through an aperture in one wall of the body and having an upright opposed to the uprights of the frame, and a spring backing the upright of the thumb-slide and interposed between the same and the back wall of the frame.

4. In a pneumatic color-applying apparatus, an air-brush comprising a hollow body having a notch in its forward wall and an opening in its bottom, a clamp arranged in the body adjacent to the notched wall thereof, a body of plastic material removably arranged in said clamp, nozzles invested in said body of plastic material; one of said nozzles having a depending portion extending through the opening in the bottom of the body, a compressible tube connected to the other nozzle, and arranged in the body, and a spring-pressed thumb-piece carried by the body and normally exerting lateral pressure against the compressible tube so as to prevent passage of air therethrough.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

FELIX WOLF.

Witnesses:

DANIEL SOMMER,
BARNETT RUSSIANOFF.