

Sept. 23 , 1924.

1,509,671

G. C. FISH ET AL

PAINT GUN

Filed April 17, 1922

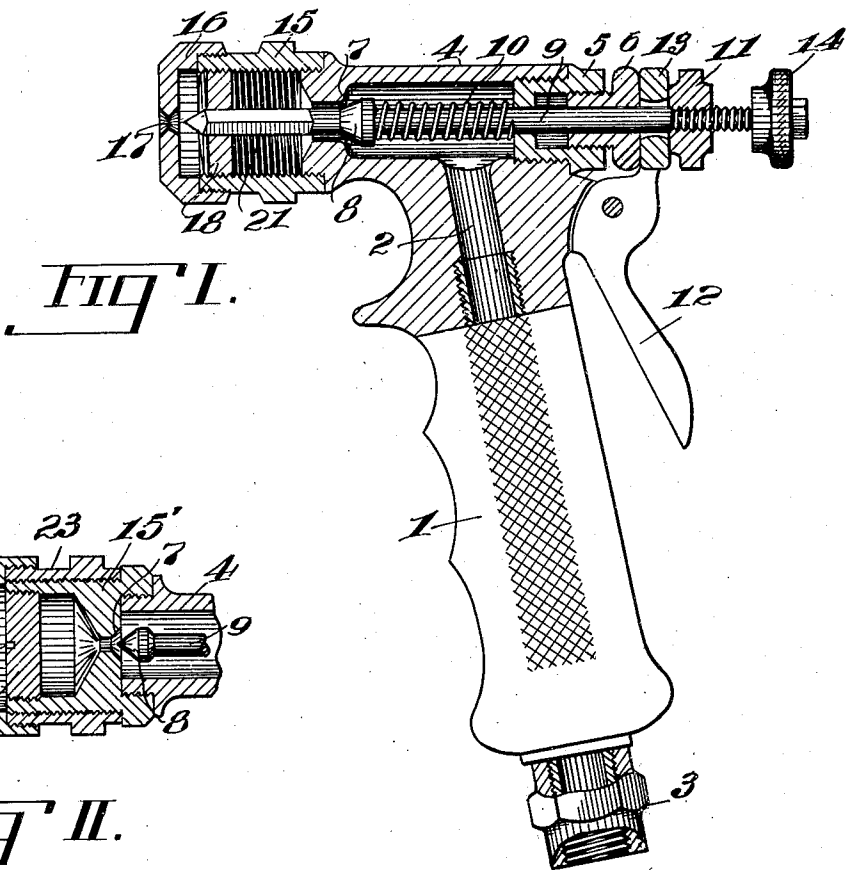


FIG. I.

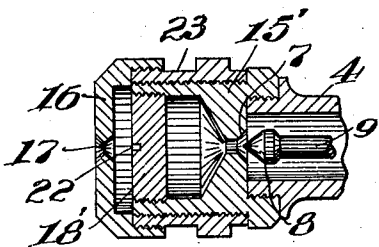


FIG. II.



FIG. IV.

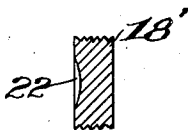


FIG. III.

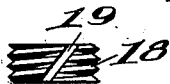


FIG. V.

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UNITED STATES PATENT OFFICE.

GRANT C. FISH AND ALFRED H. CUMMINGS, OF CHICO, CALIFORNIA.

PAINT GUN.

Application filed April 17, 1922. Serial No. 553,517.

To all whom it may concern:

Be it known that we, GRANT C. FISH and ALFRED H. CUMMINGS, citizens of the United States, residing at Chico, in the county of Butte and State of California, have invented certain new and useful Improvements in Paint Guns, of which the following is a specification.

The present invention relates to devices for spraying fluid materials, such as for example as paint, upon surfaces.

The object of the invention is to provide a simple and effective instrument or device for this purpose, adapted for ready manipulation and easy regulation; and to this end the invention consists in the novel spray or paint-gun which is hereinafter fully described, it being understood that changes and modifications in the details of construction and arrangement may be made without affecting the essential nature of the invention as defined by the claims hereto appended.

In order fully to comprehend the invention, reference is had to the accompanying drawings, wherein—

Fig. 1 is a part-sectional side elevation of our complete paint gun, the valve being held in open position.

Fig. 2 is a central section of the nozzle portion of a modified form of our device.

Fig. 3 is a central section of the nozzle adjusting plug shown in Fig. 2, and is taken in a plane perpendicular to the plane of said Fig. 2.

Fig. 4 is a front elevation of the nozzle adjusting plug shown in Fig. 1.

Fig. 5 is a side elevation of the same.

In the drawings, the reference numeral 1 designates the stock or handle of our spray or paint gun, which is preferably in the form of a pistol-grip, as shown in Fig. 1. Said handle has a duct 2 leading through it, with a suitable connection 3 for attaching a hose or conduit, not shown, through which the liquid is supplied under suitable pressure. At the upper end of the handle 1 is a horizontally disposed barrel 4, the rear end thereof being closed, by a suitable packing gland 5 into which is screwed a packing adjusting nut 6. The forward end of the barrel 4 is constructed to form a discharge opening with a valve seat 7, this constructed opening being normally closed by a valve 8 carried upon a stem 9 which passes through said barrel and the parts 5 and 6, and ex-

tends rearwardly therefrom. A spring 10 surrounding the stem 9 within the barrel 4 normally holds the valve 8 against its seat 7.

The projecting rear end portion of the valve stem 9 is threaded, and carries a nut 11. A trigger 12, positioned to be grasped by the hand when holding the stock 1, is provided with an arm 13 adapted to bear against the nut 11, and thus open the valve by pressure of the hand upon said trigger 12. If the operator so desires, he can hold the valve open continuously by screwing up the nut 11 while the trigger is released, thereby relieving himself of the necessity of holding said trigger continuously pressed. Thus the valve may be controlled either by means of the trigger 12, as when doing intermittent work, or by means of the nut 11, as when continuous operation is desired.

The rear end of the stem 9 has fixed upon it a knurled knob 14, which acts both as a stop, to prevent the nut 11 from being shifted too far toward the end of said stem, and as a means for rotating the entire stem for a purpose to be presently set forth.

The forward end of the barrel 4 carries a spray nozzle. This comprises a tubular extension 15, upon which is secured the nozzle cap 16, having a suitable central discharge aperture 17. The tubular extension 15 is interiorly threaded to carry a movable disk or plug 18, which is provided with angularly disposed passages 19, Figs. 4 and 5, through which the fluid may pass, and also with a squared central opening 20; Fig. 4, adapted to fit freely over a squared extension 21 of the valve stem 9. Thus by rotating said stem 9, by means of its knob 14, the plug 18 is moved toward or away from the nozzle cap 16, and the character and form of the spray jet issuing from the aperture 17 is correspondingly changed.

In the form of our device shown in Fig. 2, the valve stem 9 terminates at the valve head 8, and the plug 18', which corresponds to the plug 18 of the previously described form, is fixedly mounted within the tubular barrel extension 15', which is carried upon the end of the barrel 4, similarly to the extension 15 of said previously described form. Said plug 18' is provided with fluid apertures similar to the apertures 19 of the plug 18, but said apertures do not appear in Figs. 2 and 3 of the drawings. Said plug 18' has no central opening corresponding to the opening 20 of the plug 18, but is preferably

formed with a screw-driver slot 22, Figs. 2 and 3, by means of which it can be screwed into the barrel extension 15' when the device is assembled. Said extension 15' is exteriorly threaded, as shown in Fig. 2, and carries a movable sleeve 23, upon which is fixed the nozzle cap 16. In this form, therefore, adjustment of the spray jet is accomplished by rotating the sleeve 23 upon the threaded barrel extension 15', thereby moving the cap 16 toward or away from the plug 18'. In all other particulars this form of the device is similar to that described above.

We claim:—

- 15 1. A spray-gun comprising a handle with a duct, adapted for connection with a source of liquid supply; a barrel carried by the handle, in communication with said duct and provided with a discharge opening; a valve for controlling said discharge opening; means for moving said valve to and from said opening; an apertured nozzle tip carried by the barrel in communication with the discharge opening thereof; an adjustable spraying member within said tip; and a connection between said valve and said spraying member to adjust said member by a movement of the valve independently of its movement to control said opening.
- 20 2. A spray-gun comprising a handle with a duct, adapted for connection with a source of liquid supply; a barrel carried by the handle, in communication with said duct and provided with a discharge opening; a

linearly reciprocative and axially rotatable valve to control said discharge opening; means for reciprocating said valve; means for rotating it; an apertured nozzle tip carried by the barrel in communication with the discharge opening thereof; a spraying member threaded within the tip for rotative adjustment; and an extension member of the valve, engaging said spraying member to adjust it by the rotation of said valve.

3. A spray-gun comprising a handle with a duct, adapted for connection with a source of liquid supply; a barrel carried by the handle, in communication with said duct and provided with a discharge opening; a valve for controlling said discharge opening, said valve having a stem slidably and rotatively mounted in and projecting from the barrel; a spring to hold said valve normally closed; a nut threaded on the projecting end of the stem; a trigger carried by the handle and acting against said nut to open the valve; a knob on the end of the stem to rotate the valve; an apertured nozzle tip carried by the barrel in communication with the discharge opening thereof; a spraying member threaded within the tip for rotative adjustment; and an extension member of the valve, engaging said spraying member to adjust it by the rotation of said valve.

In testimony whereof we have signed our names to this specification.

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