

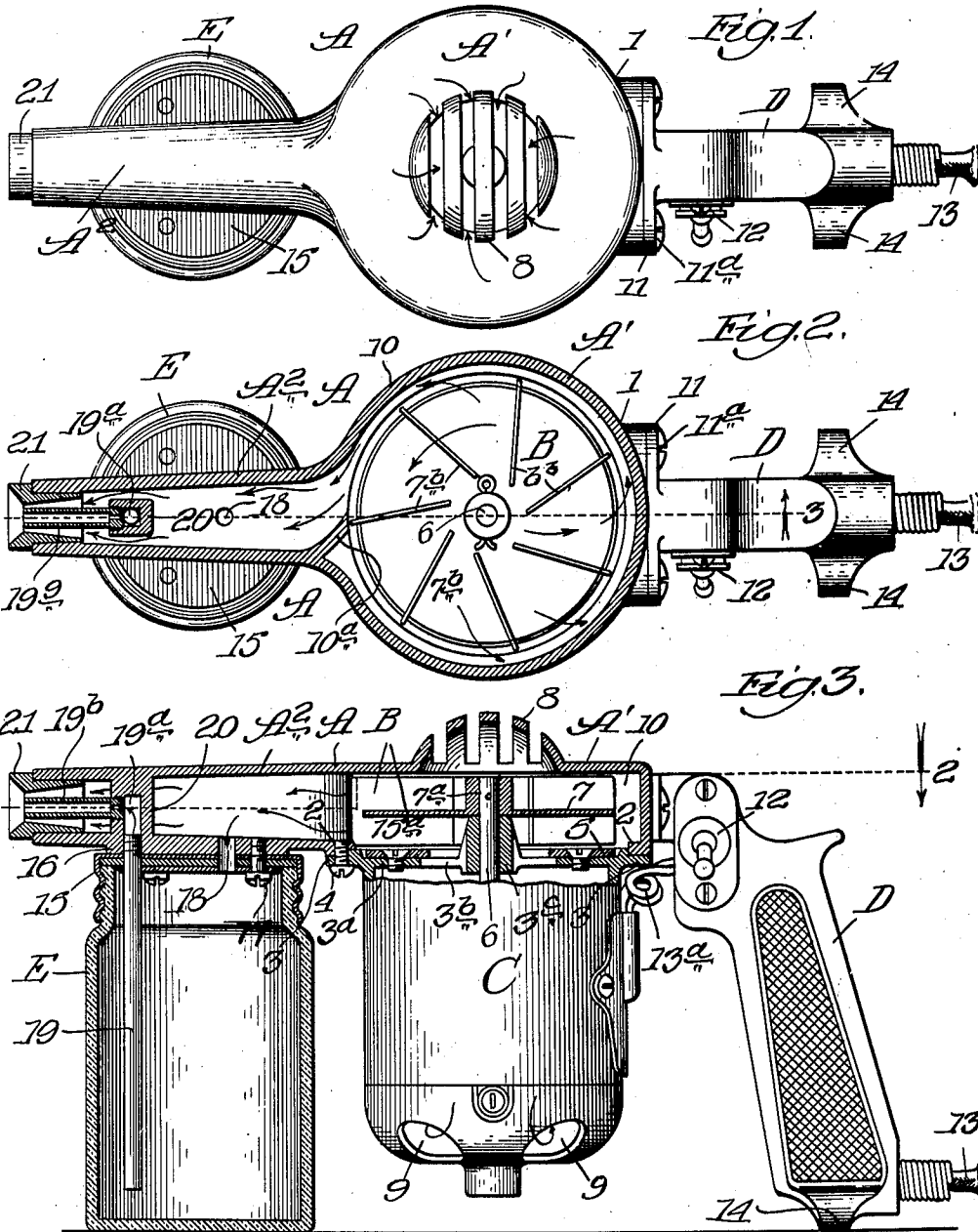
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SPRAYING DEVICE

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SPRAYING DEVICE

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This invention relates particularly to spraying devices which do not require high pressure for effective operation; and the primary object is to provide a simple, compact and highly efficient device of this character which is in the form of a hand-carried unit.

Such a device is adapted for spraying insecticide liquids, and for other analogous purposes.

The invention is illustrated in its preferred embodiment in the accompanying drawings, in which—

Fig. 1 is a plan view of the improved spraying device; Fig. 2, a plan section taken as indicated at line 2 of Fig. 3; and Fig. 3, a vertical section taken as indicated at line 3 of Fig. 2.

In the embodiment illustrated, A designates a frame comprising a fan-casing A' and an air-nozzle A²; B, a fan housed in said casing; C, an electric motor suspended from the fan-casing; D, a handle secured to a boss 1 with which the fan-casing is provided opposite the nozzle; and E, a liquid-container depending from the nozzle.

The device is adapted to stand on a table, or the like, when not in use, as will be understood from Fig. 3.

The fan-casing and nozzle may be formed integrally of cast aluminum, if desired. The lower side of the casing is cut away, except for a flange 2 to which is secured the flange 3 of the adjacent end wall 3^a of the motor-casing. Screws 4 connect the parts.

The wall 3^a has a spider portion 3^b upon which is secured a flat ring 5 by means of screws 5^a. The spider carries a bearing 3^c in which is journaled the armature shaft 6 of the motor.

The armature shaft is extended into the fan-casing. The fan B comprises a disk 7 having a hub 7^a fastened on the upper end of the shaft and bearing on the end of the bearing 3^c; and blades 7^b secured to the disk and projecting above and below the same.

The blades are set at angles with reference to radii of the disk. In effect, the blades incline forwardly somewhat (in direction of rotation).

The fan-casing is provided at its upper side with a grated air-intake 8 which is shown integral with the casing. Air is also drawn in through the spider 3^b. This air is drawn into the motor casing through openings 9.

Preferably the fan is of less diameter than the casing so that a peripheral air passage 10 is provided. An internal deflector 10^a at the base of the nozzle serves to direct the air into the nozzle.

The handle D is equipped at its upper end with lugs 11 secured by screws 11^a to the boss 1. The handle is hollow and is equipped at its upper end with a switch 12. An electric cable 13 leads into the lower end of the handle. The wires 13^a lead through the handle to the motor. One of the wires is divided and connected with the switch in a known manner.

The lower end of the handle is equipped with lugs 14 which serve as a foot for the handle.

The nozzle has secured to its lower side the closure or cap 15 of the container E. As shown, the nozzle has cast integrally with its lower side a disk 16 to which the cap is secured by screws 17. An air passage 18 admits pressure from the nozzle to the container. A liquid-tube 19 leads through the cap 15 and nozzle-wall to a passage 19^a in a post 20 which is disposed centrally in the nozzle A². This post has a tapped opening into which is screwed a liquid-nozzle 19^b which has at its inner end a reduced passage communicating with passage 19^a. A Venturi tube 21 forms the extreme tip of the nozzle A². The extremity of the liquid-nozzle 19^b is properly located within the member 21.

The operation is controlled by the motor-switch 12. It is obvious that liquid will pass

through the tube 19 and sprayed by the air passing through the Venturi tube.

The improved device may be usefully employed for various purposes.

5 The device is well balanced and possesses an ornamental appearance. It is comparatively light and may be supported in the hand at arm's length in operation. It thus constitutes a hand-carried unit consisting of a
10 handle, blower, liquid-container, and motor.

The foregoing detailed description has been given for clearness of understanding only, and no unnecessary limitations should be understood therefrom, but the appended claims
15 should be construed as broadly as permissible, in view of the prior art.

What I regard as new, and desire to secure by Letters Patent, is:

1. A spraying device comprising a horizontal fan-casing equipped at one edge with
20 an air-nozzle and at the other edge with a depending handle, an air passage from the interior of the fan-casing into the nozzle, a liquid-container depending from said nozzle,
25 a conduit leading from said liquid-container and communicating with the interior of the nozzle, a motor depending from and capped by said fan-casing, and a fan in said casing coupled directly to the motor armature.

30 2. A spraying device comprising a horizontal fan-casing equipped at one edge with an air-nozzle and at the opposite edge with a depending handle, an air passage from the interior of the fan-casing into the nozzle, a
35 liquid-container depending from said nozzle, a conduit leading from said liquid-container and communicating with the interior of the nozzle, a motor having a casing depending from and capped by said fan-casing, the motor-casing having at its upper end a central
40 bearing projecting into the fan-casing through which the armature-shaft extends into the fan-casing, and a fan having a hub-portion surmounting said bearing and having
45 blades extending above and below the upper end-surface of said bearing.

3. A spraying device comprising a horizontal fan-casing open at its lower side and having its upper side provided centrally with an
50 air-inlet, a motor-casing depending from and closing the lower side of the fan-casing, said motor-casing having a spider and a central bearing supported thereby and having also
55 air-inlets, a handle attached to one edge of the fan-casing, a nozzle projecting from the other edge of the fan-casing, an air passage leading from the interior of the fan-casing into said nozzle, and a fan in the fan-casing secured to the armature-shaft above said
60 bearing.

4. A spraying device comprising a horizontal fan-casing equipped at one edge with an air-nozzle and at the other edge with a depending handle, an air passage from the interior of the fan-casing into said nozzle, a

liquid-container depending from said nozzle, a conduit leading from said liquid-container and communicating with the interior of the nozzle, a motor depending from and capped by said fan-casing, and a fan in said casing coupled directly to the armature-shaft, a
70 peripheral channel being provided between the fan and circumferential wall of the fan-casing.

5. A spraying device as specified in claim 1, in which the liquid-container and handle depend below the lower end of said motor.

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