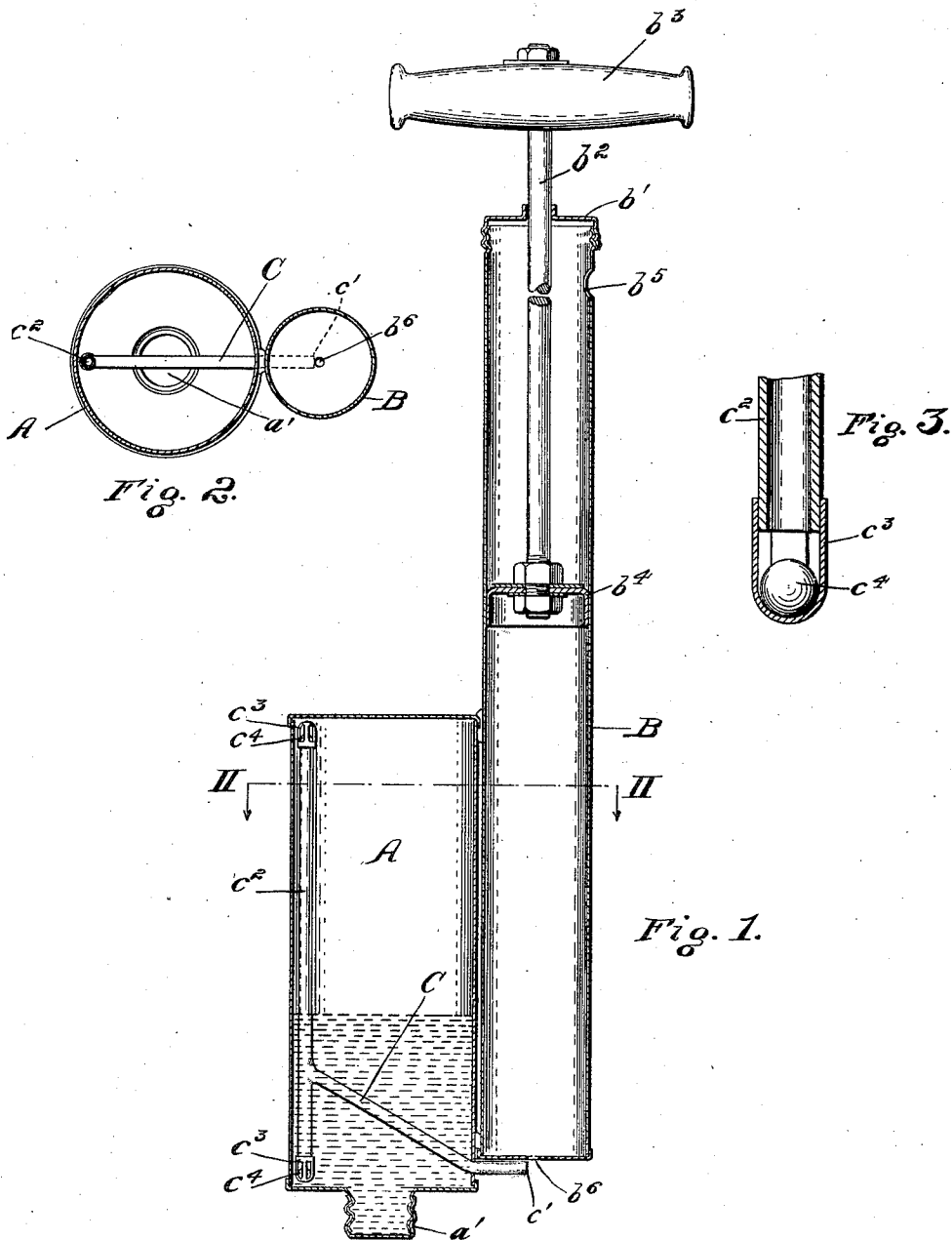


H. J. HABER.
 SPRAYING DEVICE.
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1,019,322.

Patented Mar. 5, 1912.



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HENRY JOHN HABER, OF PITTSBURGH, PENNSYLVANIA.

SPRAYING DEVICE.

1,019,322.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HENRY J. HABER, a citizen of the United States, resident of Pittsburgh, county of Allegheny, and State of Pennsylvania, have invented a new and useful Improvement in Spraying Devices, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle, so as to distinguish it from other inventions.

My invention relates to a spraying device, and particularly to the type adapted to diffuse a liquid through the medium of a jet of air.

The special object is to provide a simple device of this character which will be wholly efficient whether inclined in an upward or downward direction.

The said invention consists of means which are hereinafter fully described and particularly pointed out in the claims.

The annexed drawings and the following description set forth in detail certain means embodying my invention, the disclosed means, however, constituting but one of various mechanical forms in which the principle of the invention may be applied.

In said annexed drawings:—Figure 1 is a vertical section of my entire spraying device. Fig. 2 is a horizontal section on line II—II of Fig. 1. Fig. 3 is an enlarged vertical section of one specific part.

The construction comprises a receptacle A having a screw-cap a' through which the fluid to be sprayed may be supplied.

Secured in any approved manner to the receptacle A is a conventional type of air-compressor, composed firstly of the cylinder B, which immediately abuts and extends substantially parallel with the receptacle A. This cylinder is provided with a cap b' having an opening through which the stem b^2 extends. This stem is as usual provided at its outer extremity with a handle b^3 , and at its inner extremity with any approved form of piston-washer b^4 . An opening b^5 is provided, its purpose being to serve as a vent. At the end of the cylinder opposite that into which the stem b^2 extends, is another cap provided with a smaller centrally disposed opening b^6 . As will now be apparent, an alternate reciprocal stroke imparted to the stem b^2 will contrive to force air out through the opening b^6 in the form of a jet.

A nozzle C extends into the interior of the

otherwise air-tight receptacle A, and is so arranged that its mouth c' is immediately adjacent the opening b^6 . Communicating with this nozzle is a duct c^2 which extends substantially the depth of the receptacle, and is furthermore open at both ends. The communication between the nozzle C and the duct c^2 is somewhere intermediately of the ends of the latter, as clearly shown in Fig. 1. Mounted at each end of this duct and specifically at the very extremity, is an inclosing cylindrical cap c^3 , and located within said cap is a ball c^4 . This ball is of such a size as to accurately sit in the open end of the duct c^2 , and in so doing effectually close the same. As will now be understood, this is in fact a simple ball and socket construction.

In operation, my spraying device acts as follows: The receptacle A having been supplied with a given amount of liquid, and the device directed either upwardly or downwardly, it will be noted that the upper of the two ends of the duct c^2 will always be automatically closed, whereas the end chancing to be the lower is similarly opened. This consequently insures the liquid being drawn with positive assurance at all times, from the actual bottom of the receptacle. The suction operation of the air-compressor will serve to draw the liquid out through the nozzle C, as will be manifest.

Having fully described my invention, what I claim and desire to secure by Letters Patent is:—

1. A spraying device comprising the combination of a receptacle, a nozzle leading into said receptacle, a duct in communication therewith and extending across the same, said duct being open at its ends, and a ball-and-socket closure mounted at each such end.

2. A spraying device comprising the combination of a receptacle, a nozzle leading into said receptacle, means for projecting air past the mouth of said nozzle, a duct in communication with the latter, said duct extending the depth of said receptacle, and being open at each end, and gravity means for alternatively closing one or the other of said ends.

3. A spraying device comprising the combination of a receptacle, a nozzle leading into, and having a discharge opening positioned laterally of, said receptacle; a duct in communication with said nozzle and extending longitudinally within said recepta-

cle, said duct being provided with an opening near each end of said receptacle; gravity means for alternatively closing such openings; an air-compressor comprising a cylinder and piston secured to said receptacle and disposed substantially parallel with said duct, said cylinder being provided with a discharge opening located in opposition to said nozzle discharge opening.

10 4. A spraying device comprising the combination of a receptacle, a primary duct communicating therewith and projecting laterally therefrom; a secondary duct open at each end and communicating intermediately

of its ends with said primary duct, such open ends being respectively adjacent opposite sides of said receptacle; a compressor secured to the latter, and parallel with said secondary duct, said compressor having an opening in operative proximity to the projecting end of said primary duct; and gravity means for alternatively effecting the closure of opposite ends of said secondary duct.

Signed by me, this 25th day of April, 1911.

HENRY JOHN HABER.

Attested by—

CURT B. MUELLER,
WINIFRED WALTZ.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."