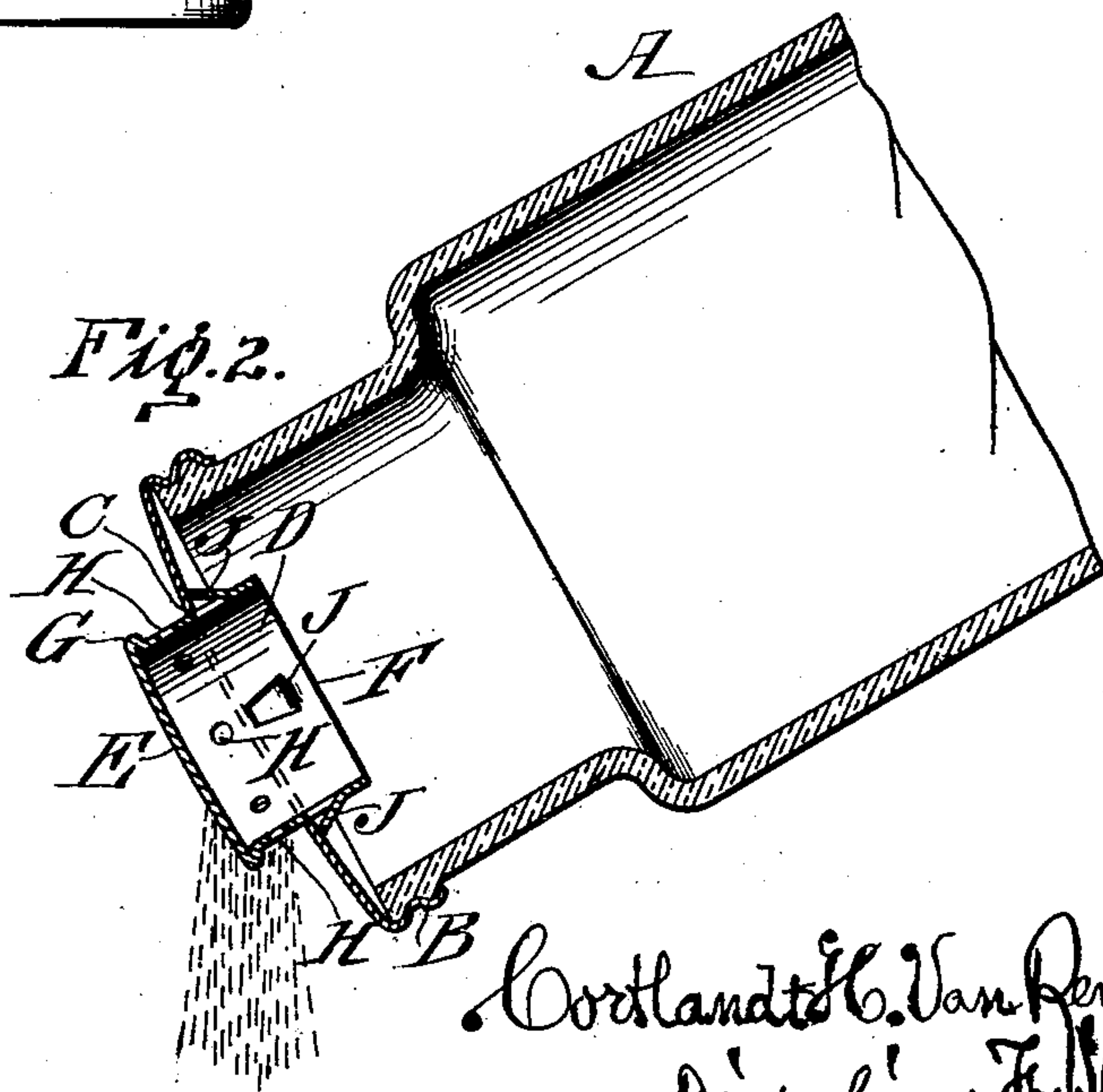
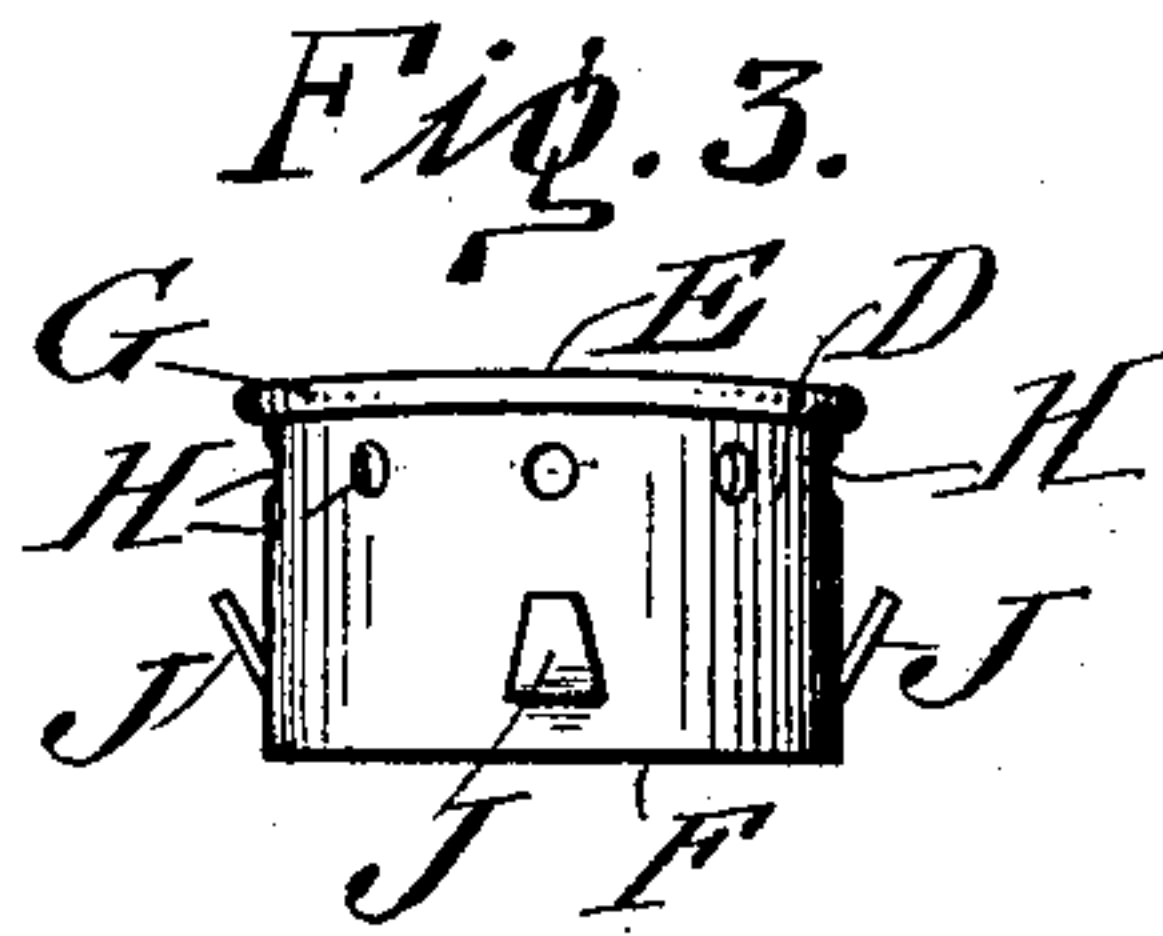
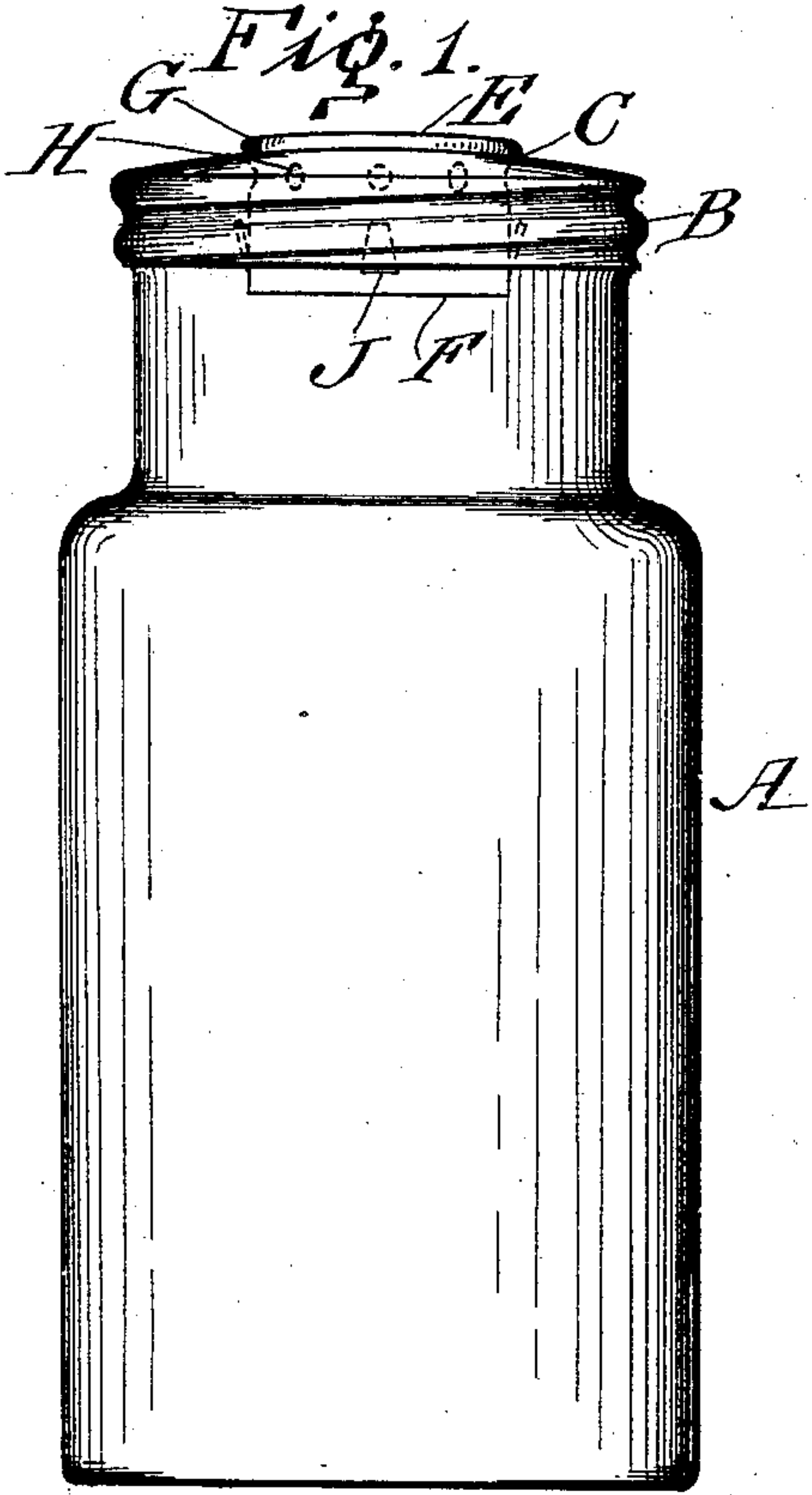


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POWDER DISTRIBUTER AND CLOSURE FOR BOTTLES, CANS, &c.
APPLICATION FILED FEB. 8, 1908.

914,766.

Patented Mar. 9, 1909.



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UNITED STATES PATENT OFFICE.

CORTLANDT H. VAN RENSSELAER, OF PHILADELPHIA, PENNSYLVANIA.

POWDER-DISTRIBUTER AND CLOSURE FOR BOTTLES, CANS, &c.

No. 914,766.

Specification of Letters Patent.

Patented March 9, 1909.

Application filed February 8, 1908. Serial No. 414,894.

To all whom it may concern:

Be it known that I, CORTLANDT H. VAN RENSSELAER, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Powder-Distributor and Closure for Bottles, Cans, &c., of which the following is a specification.

My invention relates to a bottle, can or other receptacle adapted to contain a powder or pulverulent substance and it consists in providing said receptacle with a cap having a shifting nozzle, which has a discharge outlet, which in the normal position of the receptacle is within the latter and the receptacle is closed, and which, when the bottle is overturned or canted, is uncovered, due to an outward motion of said nozzle, so that the powder may be discharged and distributed, said motion being limited by means which also serve to connect the nozzle with the cap, said means also serving as breakers or agitators for the substance in the receptacle should the same pack, mat or clog therein against the cap and in the opening thereof, as will be hereinafter described, the novel features being pointed out in the claim.

For the purpose of explaining my invention, the accompanying drawing illustrates a satisfactory reduction of the same to practice, but the important instrumentalities thereof may be varied, and so it is to be understood that the invention is not limited to the specific arrangement and organization shown and described.

Figure 1 represents a side elevation of a bottle having a distributor and closure device embodying the invention applied thereto. Fig. 2 represents a section thereof, the bottle being shown in canted condition. Fig. 3 represents a side elevation of a detached member of the device.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawing:—A designates a bottle, to which is affixed in any suitable manner the cap B, in the top of which latter is an opening C.

D designates a nozzle or spout, which is of tubular form having a closed top E, an open bottom F, a laterally extending rim G below said top, openings or ports H and lips J, said openings and lips being in the side of the nozzle, and said lips being preferably punched-out of the material of said side and

extending upwardly and outwardly so as to flare at top and being somewhat resilient in its nature.

The operation is as follows:—The bottle is supplied with the desired powder, preferably through the opening C, the nozzle having been removed therefrom, said nozzle then being inserted in said opening, when its side slides downwardly in the same and the lips J yield inwardly as they ride upon the wall of said opening. As soon as the lips clear said wall, they spring outwardly to normal position, while the nozzle descends to its full extent limited by the contact of the rim G with the top of the cap B, thus covering the opening C and consequently closing the bottle, thus preserving the contents of the latter from external influences. When it is desired to dispense or distribute the powder, the bottle is overturned, as in Fig. 2, when the nozzle slides outwardly to an extent limited by the lips J, as the latter abut against the inner face of the cap B, and thus the nozzle is prevented from entire disconnection from the cap, while the ports or openings H are outside of the latter and so uncovered that when the bottle is shaken the powder may be readily discharged therefrom through said openings H, as also illustrated in said Fig. 2. The lips J punched-out of the side of the nozzle D leave openings in said side by the portions of the material punched-out, said openings, however, being so located that when the nozzle is in operative position shown in Fig. 2, said openings are within the top of the cap B, and the wall of the opening C in said top covers said openings as a cut-off therefor, and so prevents the powder from escaping therethrough, the proper distribution of said powder then being solely through the uncovered ports H. By returning the bottle to its normal upright position, the nozzle again shifts downwardly, when the openings are inside of bottle, and the latter is closed as before.

Attention is directed to the fact that by the use of the outturned lips J, there is avoided the swaging of the inner end of the nozzle D from within the latter for movably connecting the nozzle with the cap, since said lips are preferably punched-out of the side of the nozzle and so made integral with the same, while they provide stops, which not only retain the nozzle in the cap, but serve to limit the outward shifting or

sliding of the former. Again, when the openings or ports H are uncovered, while they permit the proper distribution of the powder or powdered-substance, they are so small that it will be quite inconvenient to refill the bottle therethrough, it being designed to have the cap B unremovably affixed to the bottle, while the opening C, under all conditions, is practically closed by the nozzle and constitutes no inlet as such into the bottle.

Attention is directed to the fact that when the bottle is overturned, and the lips J abut against the underside of the cap B, said lips limit the outward sliding motion of the nozzle, so that only a small portion of the side of said nozzle appears exterior of said cap, and the ports H are quickly uncovered. Again, should it be desired to remove the nozzle to replace it for another one or for other purposes, the cap may be detached, when the lips J are accessible by hand; when they are pressed inwardly, so that they may slide with the adjacent portions of the nozzle through the opening C, thus entirely disconnecting the nozzle from the cap. Furthermore, should the material or substance in the bottle become packed or matted or clog the opening C, which is possible owing to shaking of and pounding on the bottle to force the substance into the nozzle and out of the ports H, the nozzle may be rotated by hand, when the lips J will work through said substance to break and agitate the same, and, in a measure, serve as scrapers around said opening C. Then the nozzle may be pushed in and out and the lips may act against another portion of the material packed or matted in the neck of the bottle to break-up and agitate the same, as in the previous case. The punched-out lips J leave auxiliary ports in the sides of the nozzle, so that the material that is directed against the

under side of the cap when the bottle is overturned and shaken is prevented from packing or matting on said cap since said ports form outlets for said material through the side of the nozzle into the interior of the latter, while as has been stated the lips act as scrapers so that when the nozzle is rotated or worked and said scrapers break and agitate the material about the wall of the opening in the cap, the loosened material may enter the nozzle through the aforesaid ports, thus clearing the inner side of the packed or matted material, while also permitting the lips to reach the cap so that the nozzle will fall out or may be drawn out to the required extent.

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

The combination with a receptacle and a cap attached thereto, said cap having an opening therein, of a hollow nozzle slidably occupying said opening and composed of a side wall, a closed top, a peripheral rim thereon, an open unobstructed bottom, a discharge port in said side wall below said rim, and a resilient lip on said wall below said port, said nozzle and said lip thereon being adapted to be inserted through the opening in said attached cap from the upper outside of the latter and said lip to extend below said cap to prevent subsequent withdrawal of the nozzle and permit passage of the contents through said port and act as a scraper, said lip being integral with said wall and turned out from the same, said wall having in its side an auxiliary port below the aforesaid discharge port formed by said turned-out lip.

CORTLANDT H. VAN RENSSELAER.

Witnesses:

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