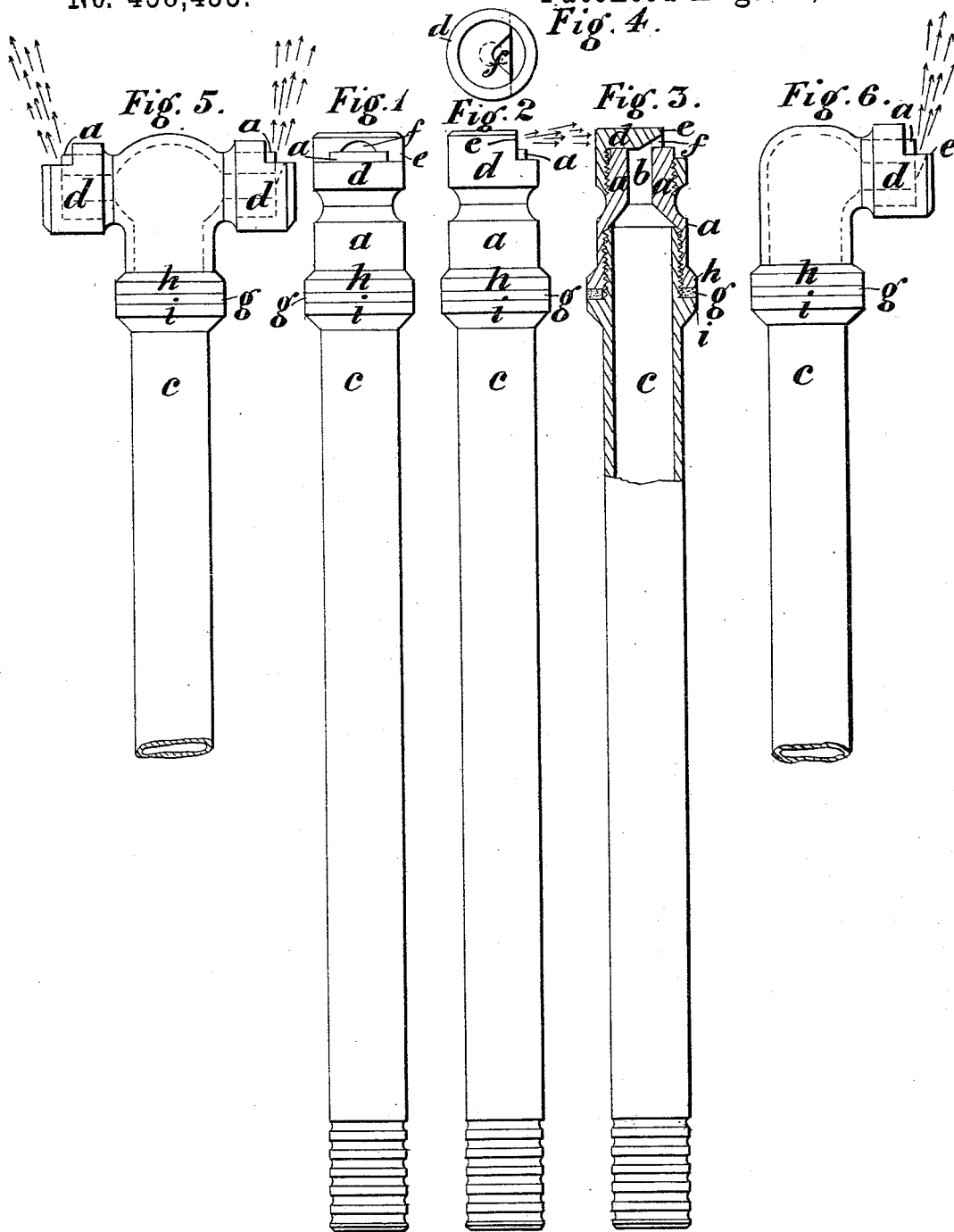


(No Model.)

S. H. STOTT.
SPRAY PRODUCING APPARATUS.

No. 458,433.

Patented Aug. 25, 1891.



Witnesses
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UNITED STATES PATENT OFFICE.

SAMUEL HOWARD STOTT, OF PRESTON, ENGLAND.

SPRAY-PRODUCING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 458,433, dated August 25, 1891.

Application filed October 6, 1890. Serial No. 367,285. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL HOWARD STOTT, a subject of the Queen of Great Britain and Ireland, residing at Fulwood, Preston, in the county of Lancaster, England, have invented Improvements in Spray-Producing Apparatus, of which the following is a specification.

My improved spray-producing apparatus consists of a round metal nozzle having a central screw-threaded hole for connecting it to the screw-threaded outlet end of the liquid conducting or delivery pipe and a smaller central hole through its own outlet end. The outlet end of the nozzle is made flat in a plane at right angles to its axis, and a metal cap with a flat top is screwed down upon the outlet end of the nozzle, the said cap having a portion of its side and top cut away, so as to form an opening in the cap, the opening being of such a size as to leave a part of the flat end of the nozzle exposed, but so that the central hole is covered. The water or other liquid issuing from the central hole meets the inner or under side of the cap and forces its way sidewise through a narrow space left between the end of the nozzle and the under side of the cap, being thereby caused to be delivered in the form of spray. The under side of the cap may be sloped or chamfered, if desired, so as to gradually increase the width of the outlet part where the water or other liquid escapes from between the nozzle and the cap. By the above-described arrangement compound liquids—as, for instance, water mixed with fertilizing or insect-destroying or fire-extinguishing compositions—may be diffused in the form of spray with less liability of the spray-producer becoming clogged or choked than is the case with nozzles of the perforated class, and in the event of any obstruction occurring in my improved spray-producer the obstructing matter may be readily washed away by slightly unscrewing the cap and increasing the opening between its under side and the end of the nozzle.

In the accompanying drawings, Figure 1 is a side view, Fig. 2 another side view, and Fig. 3 a sectional side view, of spray-producing apparatus constructed as above described. Fig. 4 is an underneath view showing the under side of the screw-down cap hereinbefore mentioned. In the arrangement shown in

Figs. 1, 2, and 3 the water issues in the form of spray in a direction at right angles to the axis of the delivery-pipe. Fig. 5 illustrates an arrangement in which the water issues from two nozzles in line with or in the same direction as the delivery-pipe, and Fig. 6 illustrates a single-nozzle arrangement in which the water issues in the same direction as in Fig. 5.

In the said drawings, *a* represents the round metal nozzle, having the central hole or passage *b*, and *c* the liquid conducting or delivery pipe.

d is the metal cap, cut away at the top and side at the part marked *e*.

f indicates the sloped or chamfered part of the under side of the metal cap, (answering as the outlet-aperture,) which I find in actual use to answer the most satisfactorily, if done in the manner shown in Figs. 1, 3, and 4 of the drawings. By varying the amount of outlet aperture or space between the end of the nozzle *a* and the under side of the cap *d* the fineness of the spray may be adjusted as required.

g is a washer interposed between the collars or flanges *h* and *i* for the purpose of making a water-tight joint between the outlet or nozzle part of the apparatus and the delivery-pipe. The nozzle *a* may be conveniently unscrewed from the delivery-pipe *c* when any foreign matter or undissolved substance happens to choke up the outlet. The obstructing matter may be readily removed by simply blowing through the outlet in the opposite direction to that of the issuing spray. The other or inlet end of the delivery-pipe may have a series of annular grooves, as shown, to facilitate the attachment thereto of a flexible hose-pipe in the usual way.

The arrangement shown at Figs. 1, 2, and 3, in which the spray issues at right angles to the delivery-pipe, is particularly efficacious for enabling the spray to be directed upon the under side of the leaves or branches of plants.

My apparatus is intended to issue the spray in a given and limited direction, as on the under side of the foliage of plants. Hence herein reference is made to one arrangement in which the spray issues at right angles to the axis of the delivery-pipe and in others in line with or

in the same direction as the delivery-pipe. The sloped or chamfered part *f* is intended to contract the area of the diffusing-spray, so that the latter may be sent in a given direction.

What I claim is—

A spraying device consisting of the nozzle having squared end, the cap screwed and adjustable on nozzle having the square closed outer end, and the cut-out portion at one edge extending through cap to form single lateral aperture, the inner end wall of the cap formed sloping at *f*, so that the edge of

the nozzle projects into such aperture and the distance between the end edge of the nozzle and said sloping portion can be varied, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SAMUEL HOWARD STOTT.

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