

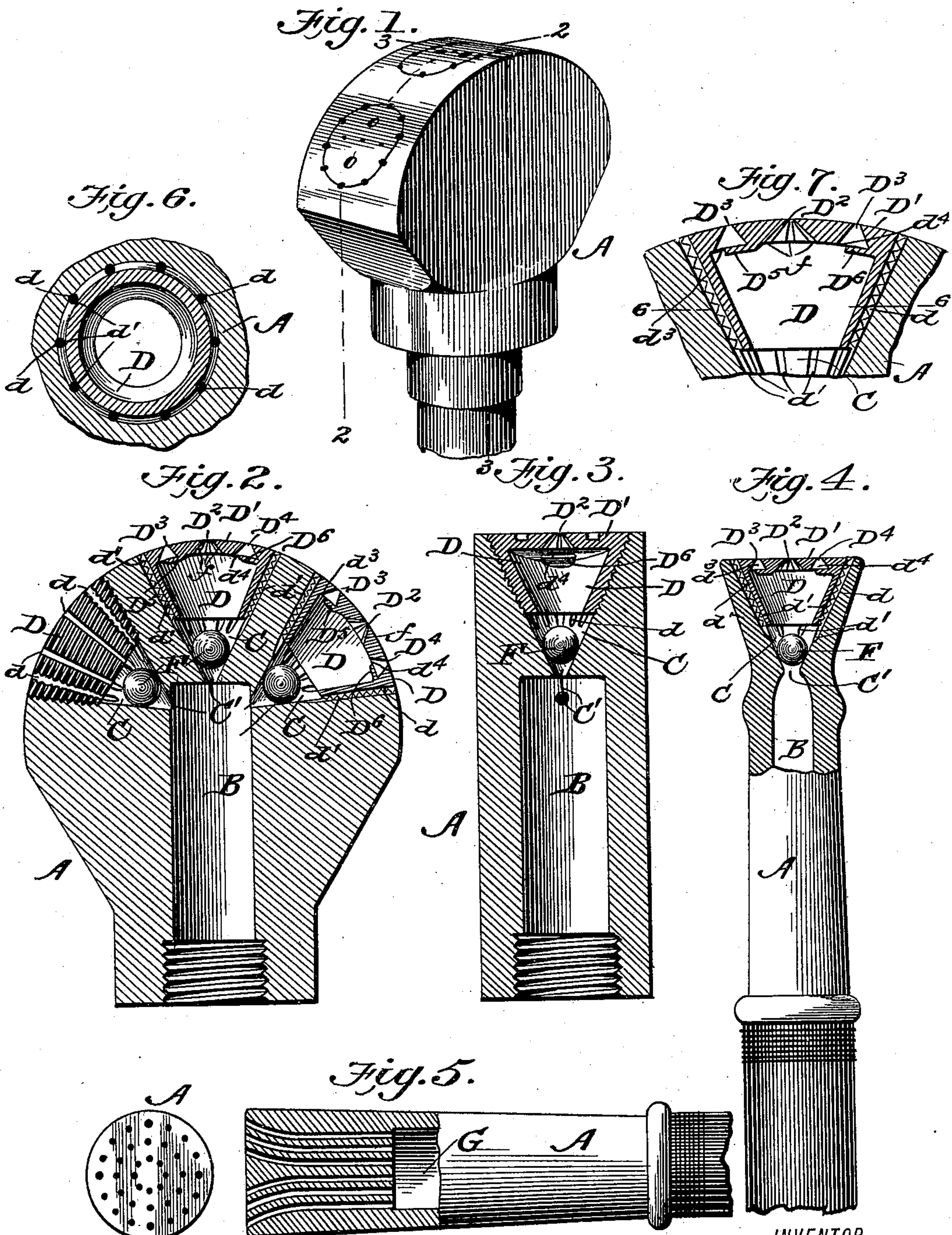
(No Model.)

2 Sheets—Sheet 1.

A. W. JOY.
NOZZLE.

No. 598,873.

Patented Feb. 8, 1898.



WITNESSES:
W. S. Blouel
P. B. Furpin

INVENTOR
Arthur W. Joy.
BY Munn & Co.
ATTORNEYS.

(No Model.)

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Fig. 8.

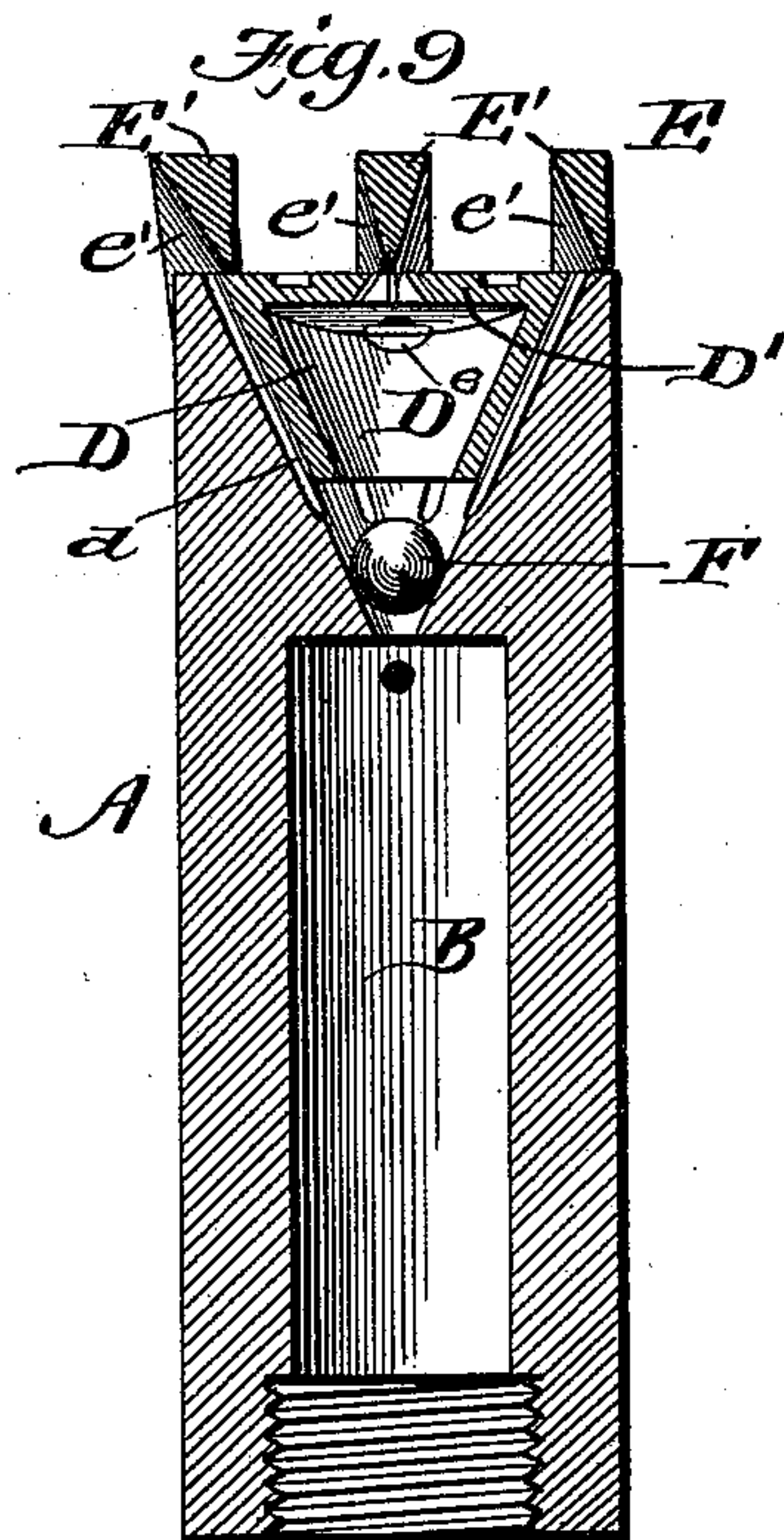
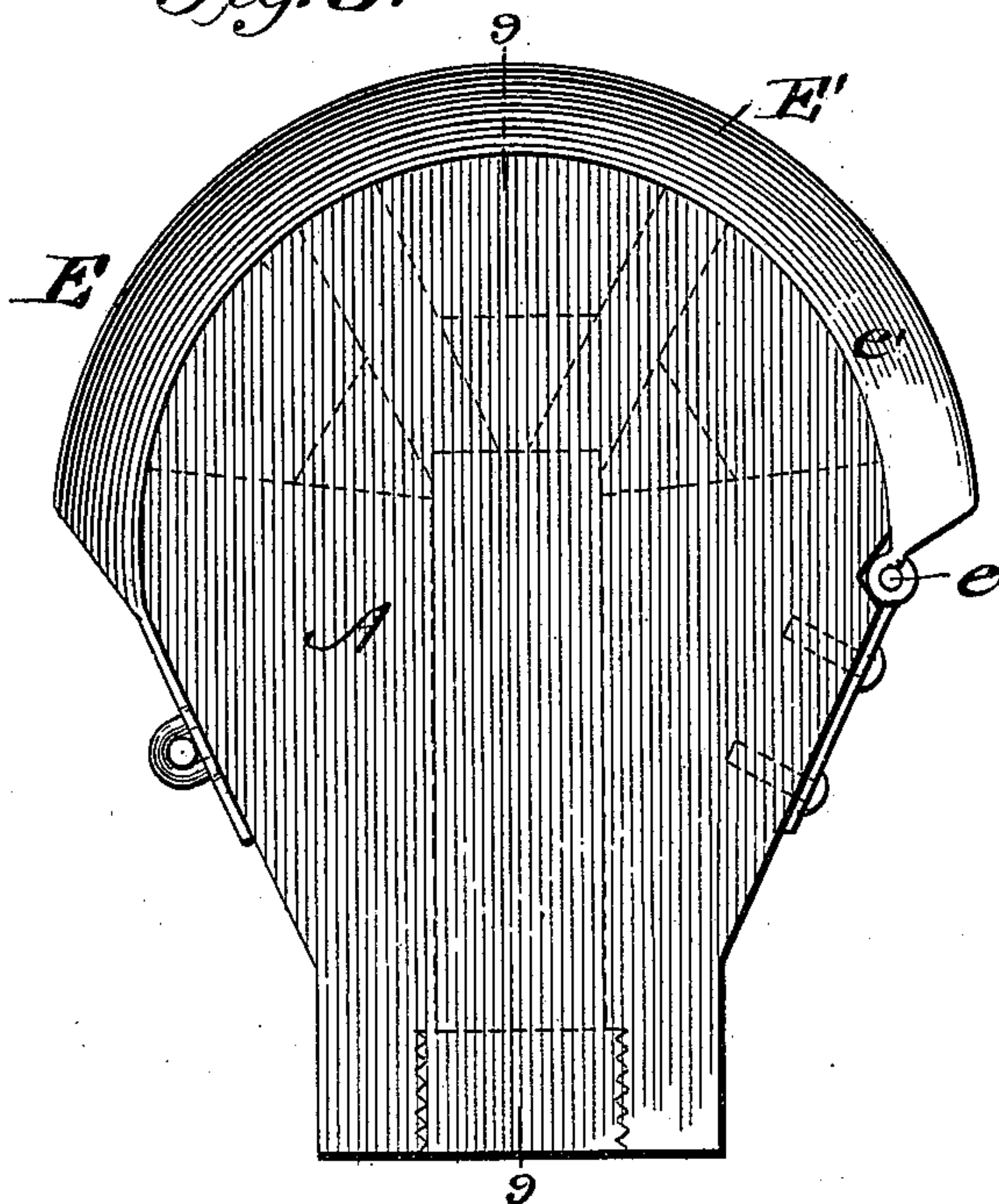
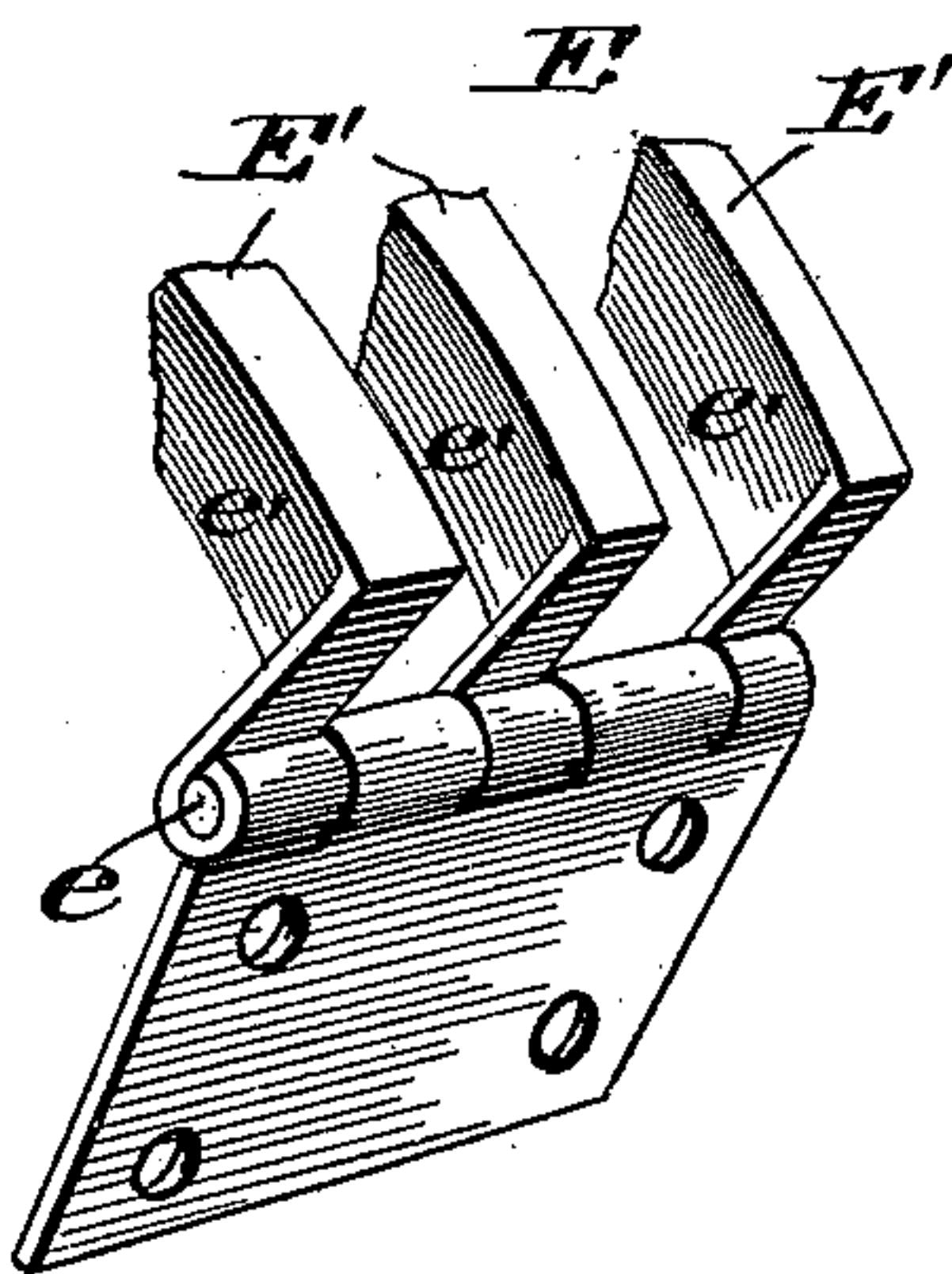


Fig. 10.



WITNESSES:

M. D. Cloudell
P. B. Turpin

INVENTOR

Arthur W. Joy.

BY

Munn & Co.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

ARTHUR W. JOY, OF BANGOR, MAINE.

NOZZLE.

SPECIFICATION forming part of Letters Patent No. 598,873, dated February 8, 1898.

Application filed March 8, 1897. Serial No. 626,435. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR W. JOY, of Bangor, in the county of Penobscot and State of Maine, have invented a new and useful Improvement in Nozzles, of which the following is a specification.

My invention is an improved nozzle for sprinkling, &c.; and the invention consists in certain novel constructions, combinations, and arrangements of parts, as will be hereinafter described, and pointed out in the claims.

In the drawings, Figure 1 is a perspective view of my nozzle as adapted for street and lawn sprinkling purposes. Fig. 2 is a sectional view on about line 2 2 of Fig. 1. Fig. 3 is a sectional view on about line 3 3 of Fig. 1. Fig. 4 shows the nozzle adapted for use upon a hose. Fig. 5 illustrates a somewhat different form of nozzle. Figs. 6 and 7 are detail sections, and Figs. 8, 9, and 10 illustrate a means for securing the hollow heads in the body and for aiding in distributing the water.

The nozzle shown in Fig. 1 comprises a body A, having a chamber B in communication with the water-supply, and is provided with the sockets C, communicating by ports C' with the chamber B, such sockets being flared toward their outer ends and receiving the hollow conical heads D, which may be screwed in the sockets C, as shown, or be held in other suitable manner, and are provided on their outer sides with grooves d , extending to or nearly to their outer ends and opening at the outer side of the head and forming spray-passages. I have also shown the walls of the socket as grooved at d' , and the grooves d d' may be arranged to register or either of such grooves may be employed to form intermediate spraying-ways along the outer sides of the heads.

The heads D are hollow, and their end plates D' are provided with outlets D², D³, and D⁴, the outlet D² being at the center and being countersunk at its inner end, forming a seat for the rounded valve F, which may be a ball, as shown; but any body having a convex form to fit in the countersink would answer. The walls of the countersunk seat are grooved at f , leading to the outlet D², forming spraying passages or ways around the ball. The

width of the spraying from this center hole D² may be varied by varying the width of the countersinking and correspondingly increasing the size of the ball and hole D².

The end of the body A is rounded, it being designed to attach it to a pipe under the sidewalk, so it will lie flat on the curbing or project slightly from the outside of the curbing, when it would not obstruct foot travel and its circular form would not interfere with passing vehicles; but the end of the body A might in some instances be straight and so force the water or spray in a straight stream.

The outlets D³ and D⁴ are countersunk or chambered at their inner ends at d^3 and d^4 , such chambers being partly covered by plates D⁵ and D⁶, as shown. The number of the outlets D³ and D⁴ may be increased, if desired.

While I have shown the head A as provided with three sockets C, it will be understood that the number of such sockets and accompanying heads may be varied, increased or reduced, as desired. In Fig. 4 I show the nozzle with but one spraying-head and adapted for application to a street-washing hose.

In the construction shown in Fig. 5 the nozzle is formed with a chamber G and a number of small holes extended therefrom at different angles and opening out of the end of the nozzle, as shown.

In practice the nozzle may be used in watering roadways, lawns, or fields by suitably arranging underground pipes supplied at proper intervals with the nozzles, as will be readily understood.

In Figs. 8, 9, and 10 I illustrate the body provided with the frame E, hinged at one side e , and having its portion, which extends over the end plate D' of such body, formed in plates or bars E', beveled in cross-section and forming tapering passages e' for the water discharged from the outlets D² D³ D⁴. This frame, it will be seen, also serves to hold the heads D in the body, and suitable means are provided for securing the swinging end of the frame E.

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

1. The nozzle herein described consisting of the body having a socket, the hollow conical

- head secured in said socket and having its outer side grooved forming waterways leading to the outer side of the body and having its end plate provided with an outlet countersunk at its inner end, the walls of such countersunk being grooved forming waterways, and the rounded valve operating in such countersunk all substantially as and for the purposes set forth.
- 10 2. A nozzle substantially as described comprising a body having a socket, a hollow head fitted in said socket and provided in its outer or end plate with outlets countersunk at their inner ends and the plates partially covering
- 15 the inner ends of such countersunk ends substantially as shown and described.
3. The nozzle herein described comprising the body having a socket and a hollow head fitted therein and having water-outlets and
- 20 the frame secured to said body and adapted to retain the hollow head in the socket substantially as shown and described.
4. In a nozzle the combination of the body having sockets and perforated hollow heads
- 25 fitted therein and the frame held to said body and having bars extending over the said heads and tapered substantially as shown and described.
5. A nozzle composed of the body having
- 30 sockets, the hollow heads fitted in said sockets and the frame hinged at one end to the body and having tapered bars extending across the hollow heads substantially as shown and described.

6. The improved nozzle herein described 35 consisting of the body having a chamber and a plurality of sockets in communication therewith, the hollow conical heads held in said sockets and provided in their outer sides with grooves forming waterways or channels and 40 having its end plate provided with a central outlet countersunk at its inner end and having its walls grooved forming waterways or channels and the rounded valve operating therein, and also having the outlets countersunk at their inner ends and partially covered at such end substantially as shown and 45 described.

7. A nozzle comprising the body having a socket, and a head fitted in said socket, 50 grooves being formed between said socket and head forming water-outlets leading along-side said head substantially as described.

8. A nozzle comprising the body provided with the outlets and the frame extending from 55 side to side of the body across said outlets and arranged to be impinged upon by the water discharged through said outlets substantially as described.

9. A nozzle comprising a body having a 60 socket, a head fitted in said socket and a frame secured to the body and extended across the head whereby to retain the same in the socket substantially as described.

ARTHUR W. JOY.

Witnesses:

F. G. CLEMENT,
H. J. PREBLE.