

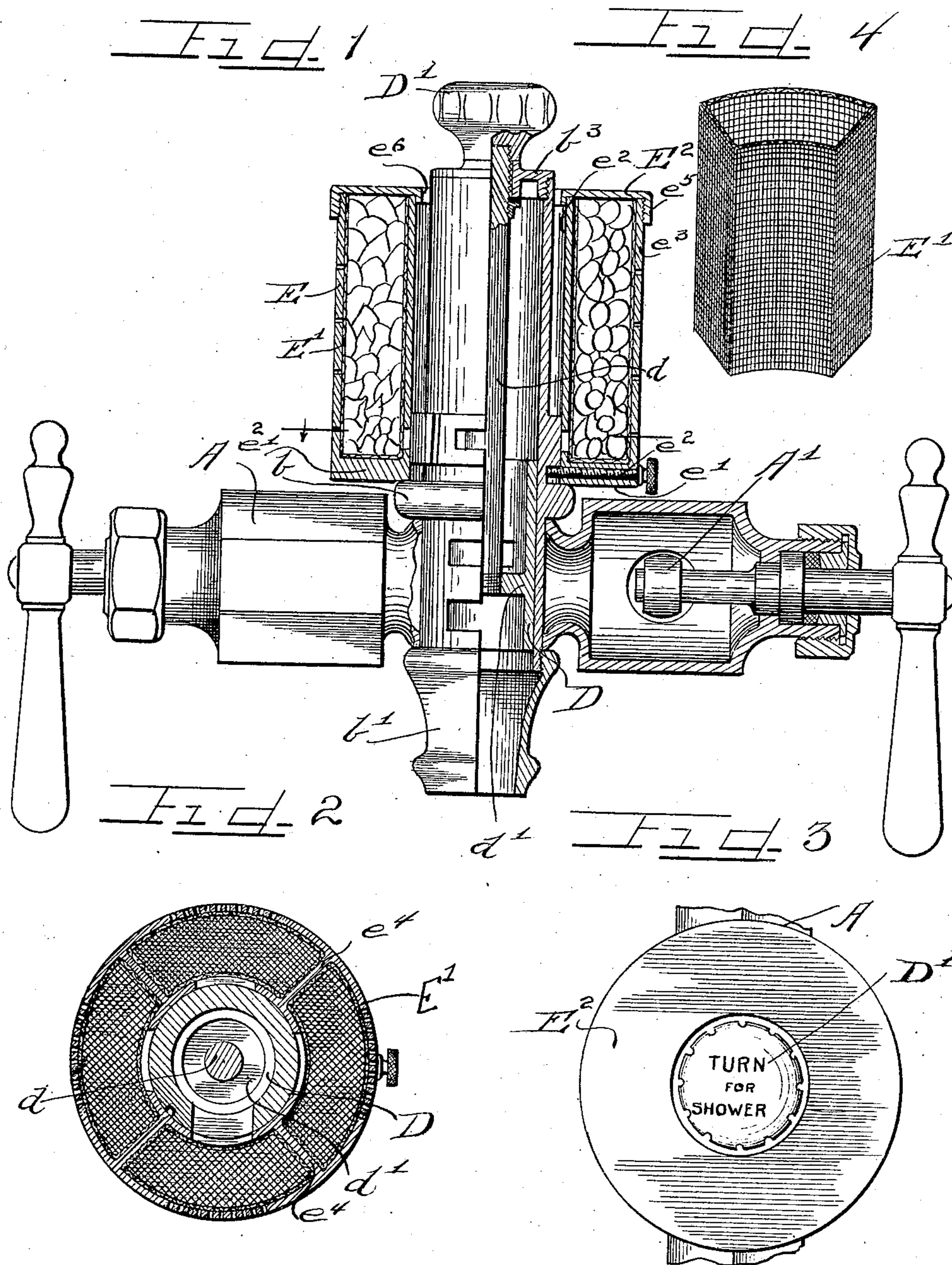
No. 877,045.

R. A. BROOKS.
SPRAY.

PATENTED JAN. 21, 1908.

APPLICATION FILED OCT. 10, 1906.

2 SHEETS—SHEET 1.



WITNESSES
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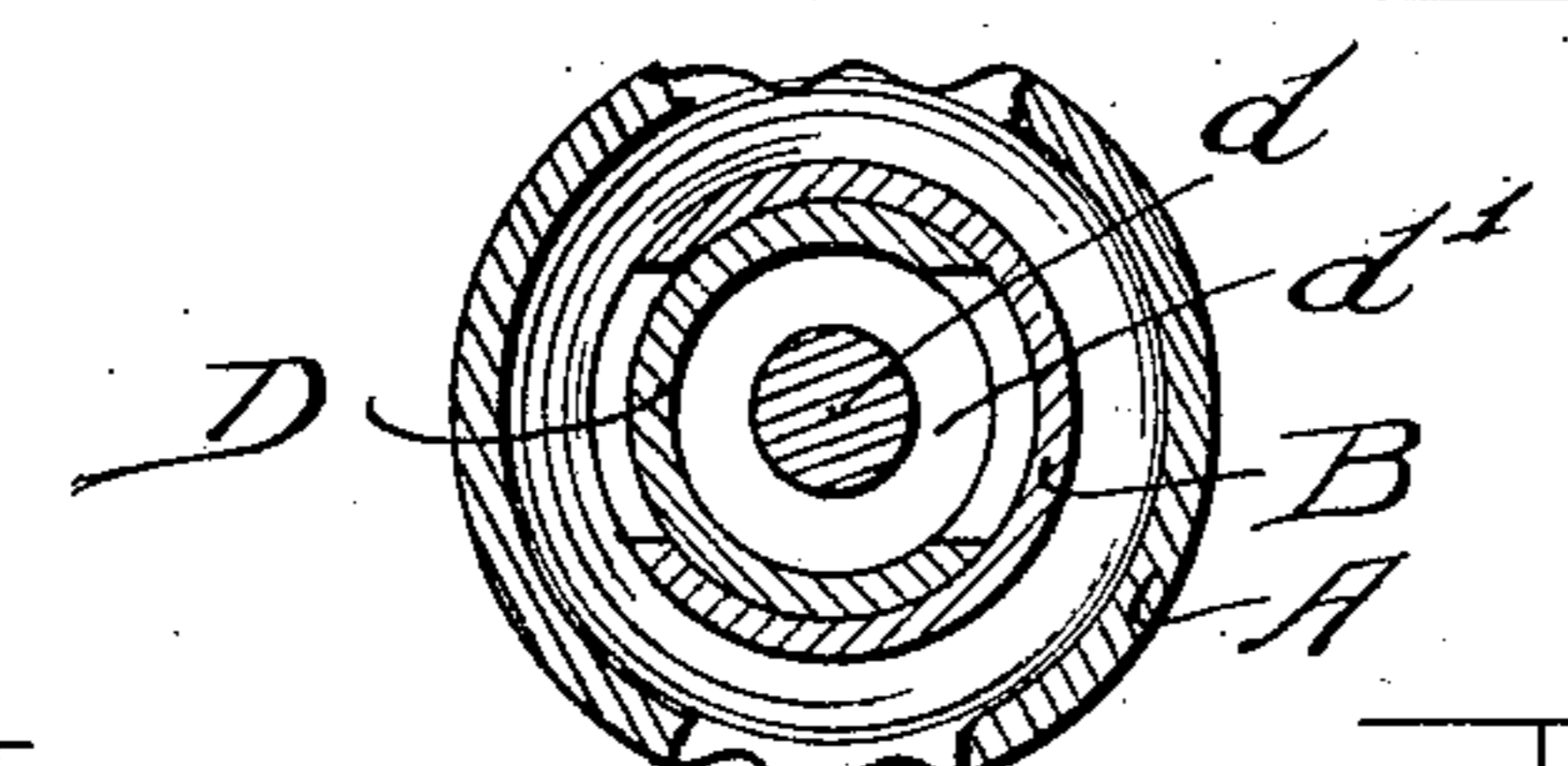
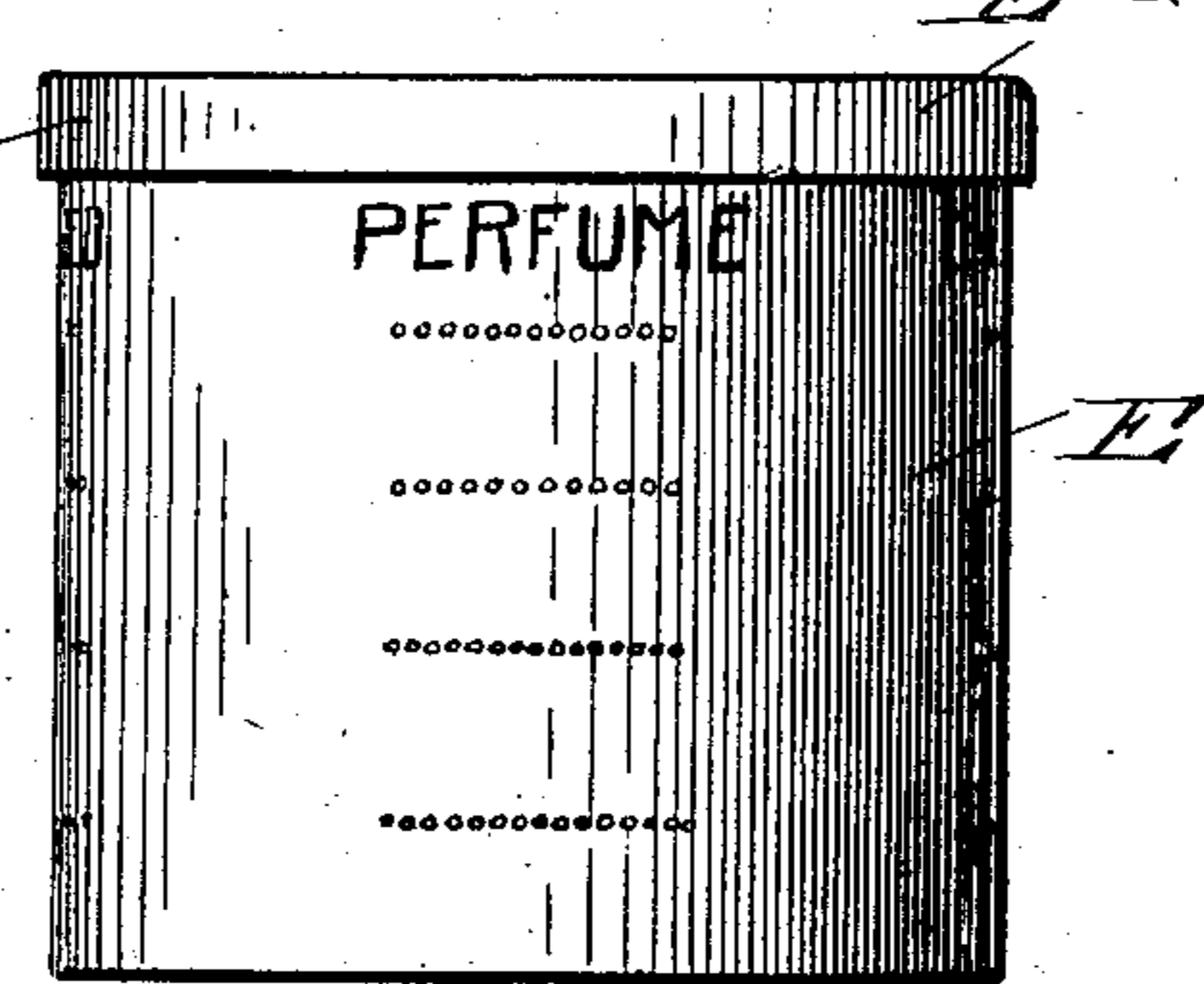
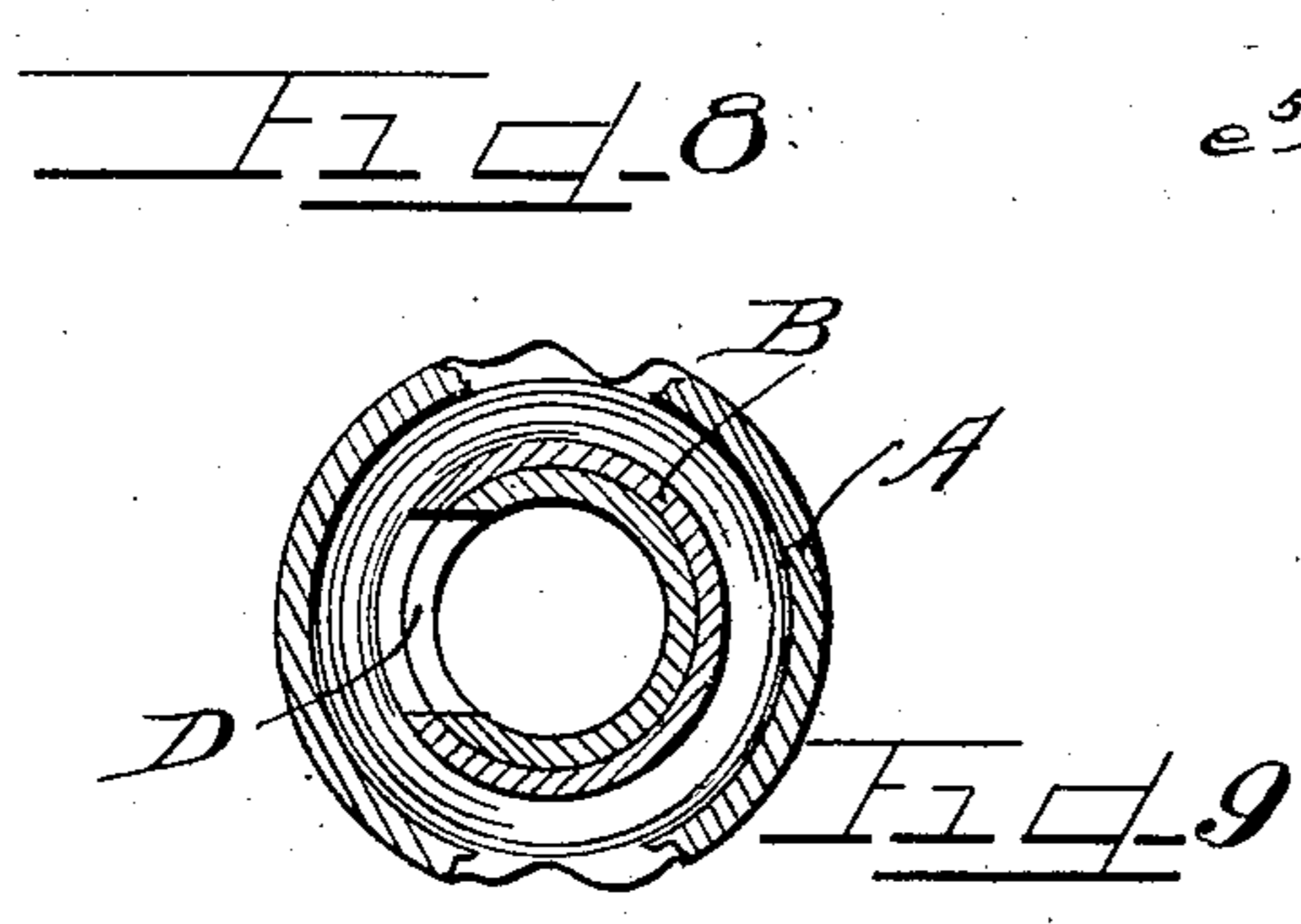
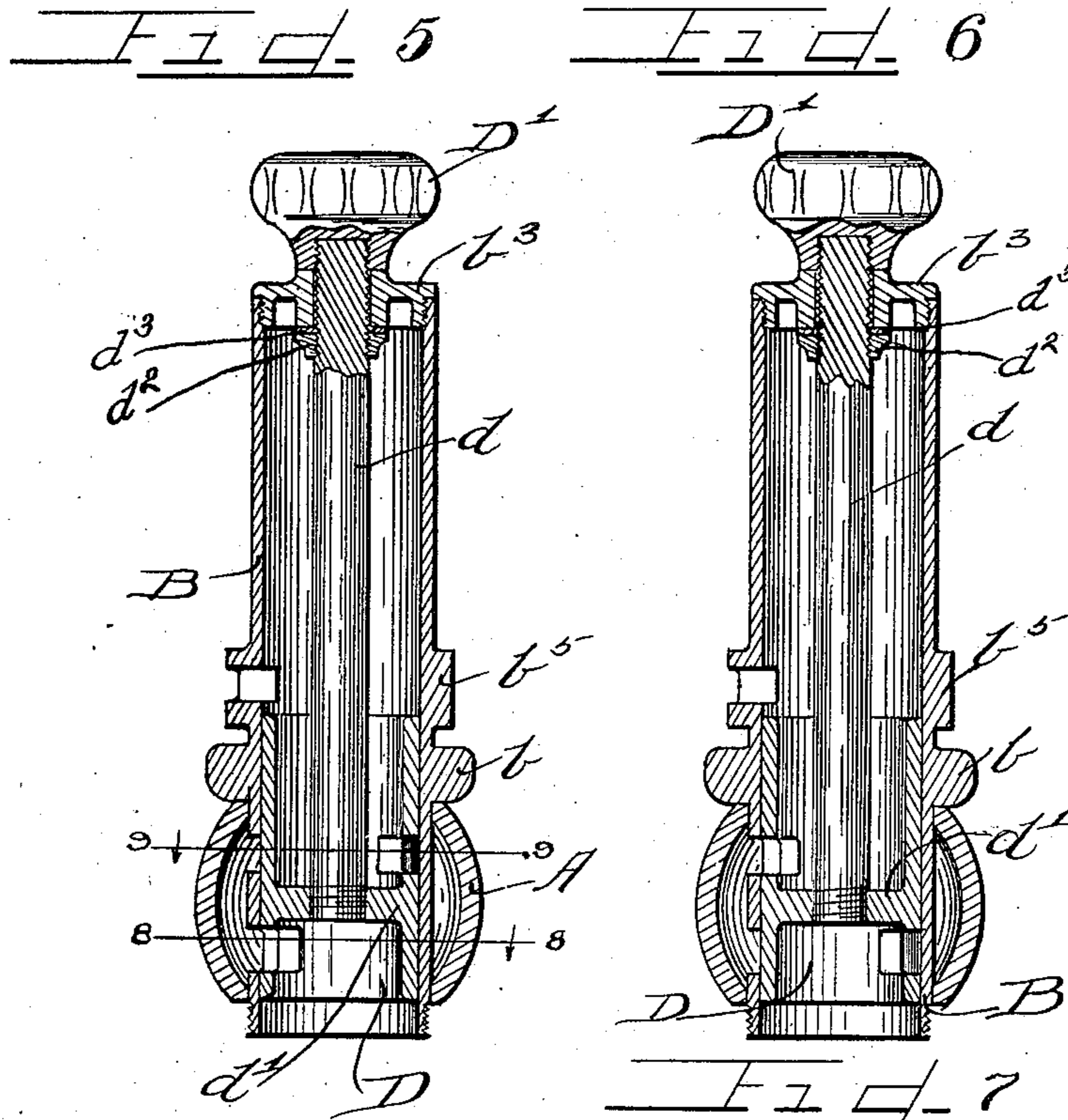
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

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SPRAY.

No. 877,045.

Specification of Letters Patent.

Patented Jan. 21, 1908.

Application filed October 10, 1906. Serial No. 338,228.

To all whom it may concern:

Be it known that I, ROBERT A. BROOKS, a citizen of the United States, and a resident of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Sprays; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates more particularly to a bath spray adapted for use in connection with a bath cock or any suitable cock or water supply pipe.

Sprays heretofore have been unsanitary because requiring the use of more or less rubber piping or rubber sheets or other materials not easily kept in a sanitary condition and with most sprays the force of the jet is expended obliquely on the body, furthermore ladies have not been able to use sprays because of wetting the hair.

The object of this invention is to provide a bath spray adapted to direct the jet with any desired force, directly against the user in fan shaped sprays, each composed of fine streams or jets.

It is an object of the invention to provide a spray adapted for use in connection with any standard hot and cold water cock and capable of perfectly regulating the flow independently of the cocks, to stop the flow to deliver into the fixture or deliver in a spray.

It is also an important object of this invention to afford a spraying device capable of instantaneous adjustment to deliver any of a plurality of kinds of sprays to the user, for example a sea salt spray, one or more perfumed sprays or a medicated spray may be used at will, or having used a medicated or salt spray the bather may finish the bath with a perfumed spray by mere adjustment of the parts of the device relatively each other.

It is an important object of the invention to provide a very attractive and durable device but of exceedingly cheap and simple construction and which can be at all times kept in a perfectly sanitary condition.

The invention embraces many novel features and consists in the matters hereinafter described and more fully pointed out and defined in the appended claims.

In the drawings: Figure 1 is a view partly in front elevation and partly in vertical section of a device embodying my invention. Fig. 2 is a section taken on line 2—2 of Fig. 1. Fig. 3 is a top plan view of the same with the cocks broken away. Fig. 4 is a perspective view of the cage. Fig. 5 is a central vertical section of the cylinder with the spray head removed and showing adjustment to discharge direct into the tub. Fig. 6 is a similar view showing the adjustment for spraying. Fig. 7 is a side elevation of the spray head. Fig. 8 is a section taken on line 8—8 of Fig. 5. Fig. 9 is a section taken on line 9—9 of Fig. 6.

As shown on the drawings: A,—A' indicate any suitable hot and cold water cocks which are connected intermediate the same to discharge through a connection orifice into the fixture. Said connection being at the center and open at the top and bottom to receive therein a cylinder having apertures in its side, within said connection and through which the water is conducted into the spraying device or delivered to the fixture. Said spraying device, as shown, embraces a tube or cylinder B, shaped at its lower end to fit in and extend through said apertured connection between the cocks and is provided with a peripheral bead *b* whereby the same is supported on the cock. The lower end of the cylinder is threaded and a discharge nozzle *b'* is threaded thereon and serves to firmly engage said cylinder in place. Said cylinder extends above the cocks and its upper end is closed by a cap *b³*, threaded thereon and having a central aperture therethrough to receive the stem *d*, of the valve for directing the flow into the spray or into the fixture through the nozzle or stopping the flow entirely. Said valve, as shown, consists of a revolvable closure comprising a hollow cylinder D which fits closely within the cylinder B, and is provided with a central transverse partition *d'* in which the lower end of said stem is rigidly secured. Said closure is provided on each side the partition and on opposite sides thereof with apertures, the upper of which registers with the upper aperture in the cylinder when the lower is closed and vice versa. As shown, the closure may also be rotated one quarter turn to close both apertures in the cylinder.

The stem is provided at its upper end with a threaded collar or nut *d²* and packing

washer d^3 , which closes the aperture through the cap. On the outer end of a stem, a button D' is rigidly secured for manual engagement in rotating the closure.

5 Above the bead b , and affording a narrow groove between the two, is a flat peripheral rib b^5 of less diameter than the bead b , and having an aperture through one side thereof opening into the cylinder. Seated on said
10 bead b and inclosing the rib b^5 , is a revoluble spray receptacle E , which is held in place by a screw e , the inner end of which projects into said groove and the outer end of which is provided with a head suitable to be manually
15 engaged. Said spray receptacle comprises a bottom e' and inner and outer walls e^2 — e^3 , the inner of which is of an interior diameter, sufficient to receive the upper end and rib b^5 , of the cylinder, as shown in Fig. 1. The cyl-
20 inder may be of any diameter externally. Said inner and outer walls are connected by radial partitions e^4 , dividing the interior space into equal chambers and at the bottom of each an aperture is provided capable of reg-
25 istering with the aperture through said rib, when the spray receptacle is rotated. Within each chamber is provided a close fitting removable basket E' , of reticulated material, such as wire net, adapted to contain the
30 material for impregnating or treating the spray. The outer wall of the spray receptacle in each compartment is provided with aper- tures to afford a plurality of sprays, one above the other, as shown in Figs. 1 and 7. A fan
35 shaped spray is afforded by providing said apertures in horizontal lines closely arranged as shown in Fig. 7. The upper end of the spray receptacle is closed by means of a cap E^2 provided with a flange e^5 at its
40 outer edge, which threads on the outer wall and a downwardly turned flange e^6 , which fits over the inner wall of the receptacle con- fining the bath crystals in the compartments.

The operation is as follows: The bather
45 may adjust the closure by rotation, so that the water from the cocks enters the cylinder below the partition d' in which case the water discharges directly into the tub, from this po- sition further rotation first entirely stops the
50 flow, then brings the aperture above the par- tition d' into register to take the flow from the cocks. This causes the water to flow into which ever spray chamber is adjusted with its intake aperture in register with the
55 aperture in the rib b^5 .

The different chambers in the spray recep- tacle may be filled with different ingredients. Sea salt may be placed in one, boracic acid in another, perfume in one and medicament
60 perfume or any material it is desired to use in the bath, is placed in the remaining recep- tacles. The character of the spray is thus capable of instant change. Should it be desired a medicated spray may be first used
65 to be followed by a perfumed spray. The

changes can be effected instantly by a slight rotation of the spray receptacle.

As shown, no packing is used, nor is it necessary, though, of course, any suitable packing may be used should it be desired, 70 in consequence the device being constructed wholly of metal can easily be kept in a per- fectly sanitary condition, inasmuch as it can be removed from the cocks by the removal of the nozzle and cleaned or boiled to insure 75 with proper ingredients an antiseptic bath. Of course, the spray apertures may be ar- ranged to afford any desired effect, the needle point sprays, as shown, are however, prefer- able in many cases. 80

Obviously the spray may be removably secured on the cocks in any suitable manner and many details of construction may be varied without departing from the principles of this invention, I therefore do not purpose 85 limiting this application otherwise than ne- cessitated in the prior art.

I claim as my invention:

1. A bath spray comprising a tube and a concentric cylinder having chambers therein 90 adapted to communicate with the tube, said cylinder rotatable to spray a plurality of kinds of medicinal or other sprays.

2. A bath spray comprising a tube adapt- ed to communicate with a bath cock and a 95 cylinder adapted to communicate with the tube and adapted to contain a plurality of kinds of medicinal or other salts, and to afford by rotation thereof a plurality of dif- ferently impregnated sprays. 100

3. A bath spray comprising a perforated receptacle containing chambers each adapt- ed to contain a chemical ingredient and means directing a flow of water through any of said chambers under pressure to spray 105 from the side thereof.

4. A bath spray embracing a source of water supply, a revoluble spray receptacle carried thereon, peripherally arranged cham- bers therein having apertures through their 110 outer walls, materials for treating the spray therein and a valve for controlling the flow to the spray receptacle.

5. The combination with a cock of a recep- tacle connected thereon and through which 115 the cock discharges, and having a chamber provided with perforated spraying walls, above the cock, and a valve connectd to control the inlet into the receptacle and adapted for adjustment to discharge into the 120 fixture, to discharge through the spraying wall, or to shut off the water.

6. A bath spray embracing a casing hav- ing transversely arranged apertures therein, a cylinder adapted to communicate with the 125 same and open at its bottom and adapted for connection with a bath cock intermediate its ends, a rotary hollow plug in the lower end of the cylinder and having apertures to reg- ister with the inlet and adapted to direct the 130

flow to the spray or into the tub or to shut it off altogether.

7. The combination with a bath cock, a vertical tube connected therewith to receive the flow therefrom, a revoluble receptacle secured on said tube above the cock and comprising a plurality of chambers each having a perforated outer wall and each provided in the inner wall with an aperture to register with an aperture in said tube, a rotary valve in the said tube adapted for adjustment to permit free discharge therefrom, to entirely shut off the water, or to direct the flow into any one of said chambers, and chemical substances in said chambers adapted for solution in the bath.

8. The combination with a bath cock, a tube or cylinder connected therewith to discharge the flow from the cock through the bottom thereof into the tub and having apertures in its side walls, a revoluble receptacle secured on said cylinder above the cock and comprising a plurality of chambers each having a perforated outer wall, and provided with an aperture near its bottom to register with an aperture in said cylinder, a valve in the cylinder adapted for adjustment to permit free discharge into the tub, to entirely shut off the water, or to direct the flow into any selected chamber to spray the same therefrom and chemical substances in and differing in each of said chambers adapted to impregnate the bath.

9. The combination with a bath cock, a cylinder closed at its top connected therewith to discharge the flow from the cock into the tub through the bottom thereof and having an aperture in its side wall above its inlet, a receptacle revolubly secured on said cylinder above the inlet and comprising a plurality of chambers, each having a perforated outer wall and having an aperture in its inner wall to register with said aperture in the cylinder, a rotary plug valve in the cylinder adapted for adjustment to permit free discharge from the cylinder to the tub to entirely shut off the water, or to direct the flow into any selected chamber in said receptacle and a perforated basket in each chamber adapted to contain chemical substances to impregnate the bath.

10. A bath spray comprising a cylinder adapted to communicate with a bath cock, a receptacle or casing concentric therewith, said receptacle adapted to contain different salts and adapted to communicate therewith to deliver any one of a plurality of medicated or perfumed sprays to the bather.

11. The combination of a bath cock, a cylinder connected therewith to discharge the flow from the cock into the tub through the bottom thereof, and having an aperture in its wall above the inlet, a revoluble receptacle secured on said cylinder above the cock and comprising a plurality of chambers each

having a perforated outer wall and provided with an aperture in its inner wall to register with said aperture in the cylinder, a valve in the cylinder adapted for adjustment by rotation thereof, to permit free discharge from the cylinder into the tub, to entirely shut off the water, or to spray the flow from any one of said chambers, and a rod connected with the valve closure and extending into position to be manually engaged for adjustment.

12. In a device of the class described a spraying device having chambers therein adapted to contain a substance to impregnate the spray and a removable perforated basket adapted to contain said material or substance said spraying device adapted to spray through the side of either chamber upon rotation thereof.

13. In a device of the class described a spraying device adapted to be constructed as a part of a bath cock and having rotatable chambers adapted to contain different chemicals to impregnate the spray and a basket having perforations therethrough adapted to contain said salts.

14. In combination with a hot and cold water cock having a mixing chamber thereon, a cylinder extending through the chamber having apertures for communication therewith, a peripheral bead or enlargement on said cylinder supporting the same on the cock, a nozzle adapted to be rigidly secured to the lower end of the cylinder thereby firmly securing the same in place, a stem extending into the cylinder having a handle for manual actuation, a closure secured to the inner end of the stem having ports to register with the apertures in the cylinder and a receptacle having chambers therein each adapted for communication with the cylinder and having spraying apertures for each chamber.

15. In a device of the class described the combination with a bath cock of a tubular cylinder open at its lower end and connected therewith to receive the flow, a revoluble valve closure seated to fully close the passage from the cock into said cylinder, to open the same to direct the flow freely downward to the fixture, and to open the same to direct the flow upwardly to the spray, and external means for adjusting said closure.

16. In a device of the class described the combination with bath cocks of a short upwardly directed tubular spray cylinder open at its lower end and connected with the cock to receive the flow, a revoluble valve closure seated to fully close the passage from the cock into said cylinder and to open the same to direct the flow freely downward to the fixture, and to open the same to direct the flow upwardly to afford the spray and external means for adjusting said closure.

17. In a device of the class described the combination with a bath cock of a tubular

cylinder open at its lower end connected with the cock to receive the flow, a revoluble valve closure seated to fully close the passage from the cock into said cylinder, and to open
 5 the same to direct the flow freely downward into the fixture, without spraying and to open the same to direct the flow upwardly to the spray, external means for adjusting said closure, and a revoluble casing on said cylinder
 10 and containing a plurality of compartments each adapted to contain a different soluble substance and perforated to direct the spray therefrom through the soluble contained therein.

15 18. In a device of the class described the combination with a cock, of a cylinder engaged thereto having vertically alined inlet apertures, a rotatable plug in the cylinder, a partition in said plug, said plug having oppositely disposed apertures adapted one to register with one of said inlet apertures to direct the fluid to the tub and the other to register with another of said inlet apertures to direct the fluid into said cylinder an adjustable
 20 receptacle surrounding the cylinder adapted to communicate therewith and means firmly securing said receptacle in any adjustment.

19. In a bath spray the combination with a cock of a receptacle provided with a plurality
 30 of chambers each adapted to spray fluid therefrom and means directing the fluid into any of said chambers.

20. The combination with a source of supply of a rotatable receptacle having a
 35 plurality of chambers, each provided with spraying apertures, an inlet port for each chamber, a cylinder having an aperture adapted to register with any of said inlet ports and a valve directing the fluid from the
 40 source of supply into any of said chambers or to discharge independently thereof.

21. The combination with a cock of a receptacle engaged thereto containing a plurality of chambers, means whereby each
 45 chamber may be filled with the desired salts, means affording communication between the cock and receptacle, said receptacle adapted to be rotated to spray from any of said chambers.

22. In combination with a source of supply a receptacle having a plurality of chambers, adapted by rotation thereof to spray through any of the chambers and means adapted to afford communication between said source of
 50 supply and the desired chamber and to cut off the supply.

23. The combination with a cock of a spraying cylinder engaged thereto having circumferential chambers therein, a hollow rotatable
 60 plug valve having oppositely disposed apertures, a partition separating the apertures, manually operated means adapted to rotate said plug valve to admit fluid through one of

said apertures to the spraying cylinder, to admit fluid through the opposite aperture
 65 to discharge in a steady stream or to shut off the cock and a perforated basket having a closed bottom adapted to closely fit each chamber and to contain salts.

24. The combination with a cock of a cylinder engaged thereto, means directing the fluid into either end of the cylinder and a rotatable receptacle concentric with the cylinder and adapted to communicate therewith and having a plurality of non communicating spray chambers.
 70 75

25. The combination with a cock of a valve adapted to direct the fluid upward or downward therefrom and a spraying receptacle rotatable above the valve to receive the upwardly directed fluid having a plurality of spray chambers therein adapted to spray differently impregnated sprays therefrom.
 80

26. The combination with a cock of a cylinder engaged thereto having ports, a receptacle concentric therewith having chambers adapted by rotation of the receptacle to communicate with the cylinder and a manually operated valve adapted to direct the fluid into said cylinder.
 85 90

27. The combination with a cock of concentric cylinders engaged thereto, a plurality of chambers in one cylinder and spraying apertures opening through a wall of each chamber and one of said cylinders adapted
 95 to be rotated to admit fluid into any of said chambers.

28. The combination with a cock of concentric cylinders engaged thereto, a valve in one adapted to direct the fluid to either end, one of said cylinders having a port, the other cylinder having a plurality of ports spaced equal distances apart and each port adapted upon rotation of one of said cylinders to register with said port to spray differently impregnated sprays.
 100 105

29. The combination with a cock of a cylinder engaged thereto having inlet apertures and an external peripheral groove, an adjustable receptacle supported by the cylinder, a screw carried by the receptacle and extending into said groove to prevent the removal of said receptacle and to secure the same in any adjustment, said screw having a head for manual engagement, a rotatable
 110 115 valve in the cylinder adapted to open either of said inlet ports and a stem engaged thereto extending through the cylinder and adapted to be manually actuated.

In testimony whereof I have hereunto subscribed my name in the presence of two subscribing witnesses.
 120

ROBERT A. BROOKS.

Witnesses:

C. W. HILLS,
 ANNA B. HILLS.