

(No Model.)

G. A. OGELSBY.

HYDRANT.

No. 353,581.

Patented Nov. 30, 1886.

Fig. 3.

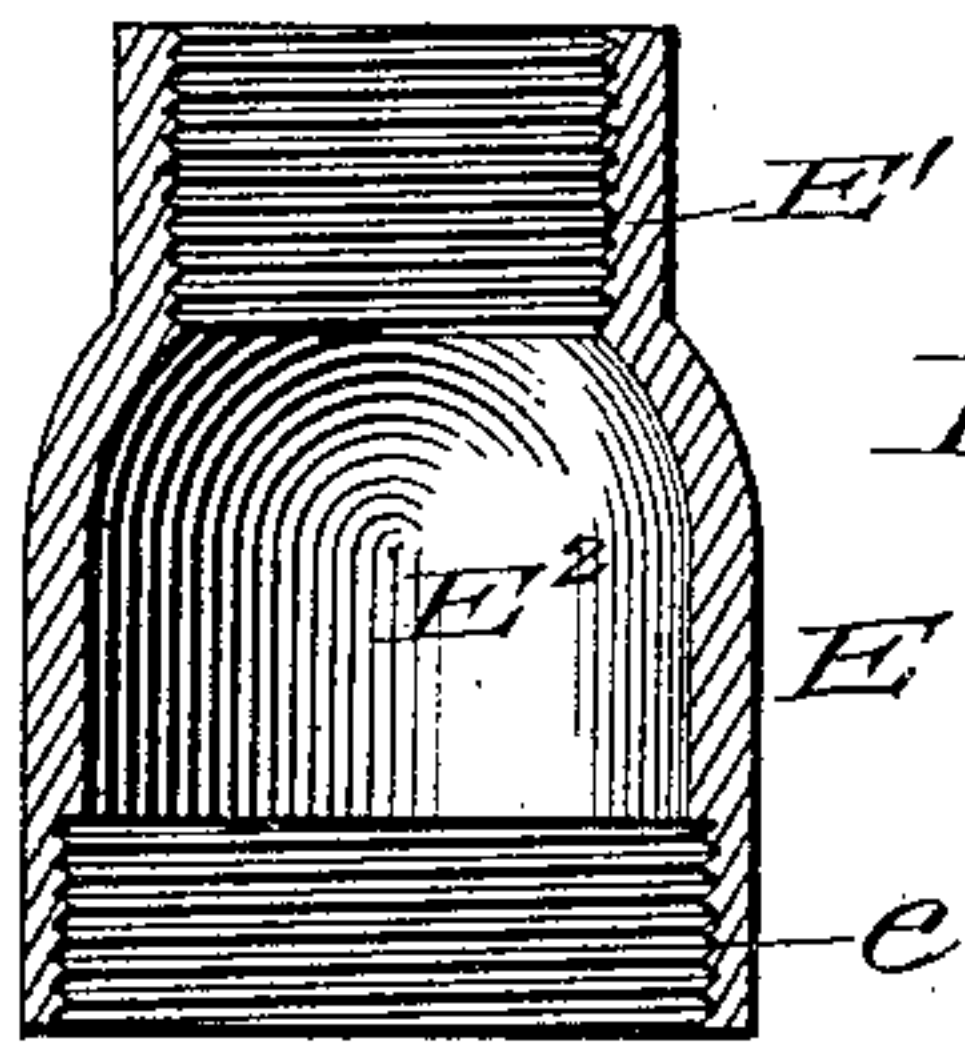


Fig. 1.

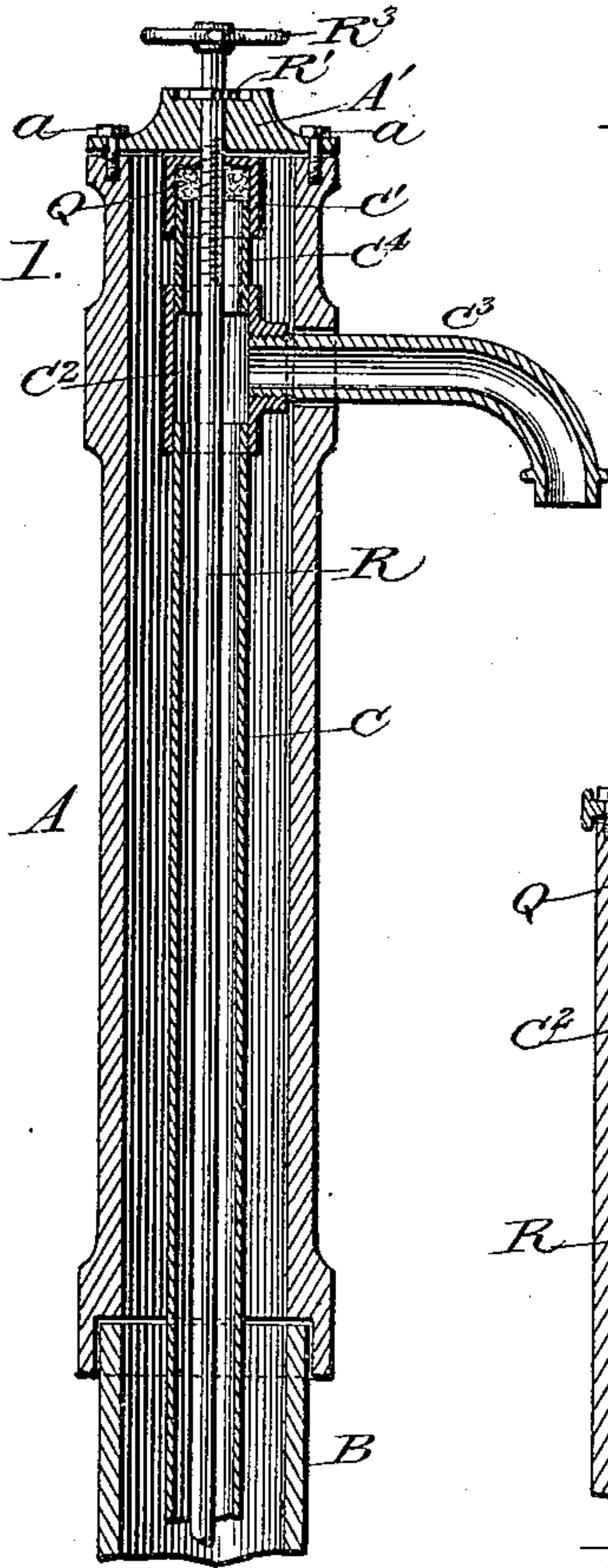


Fig. 11.



Fig. 12.

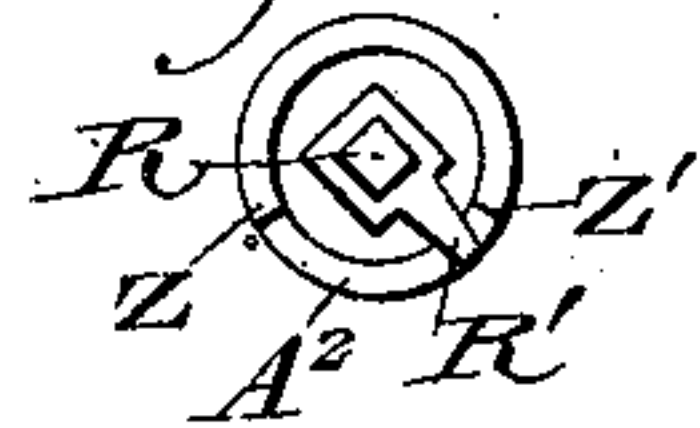


Fig. 4.

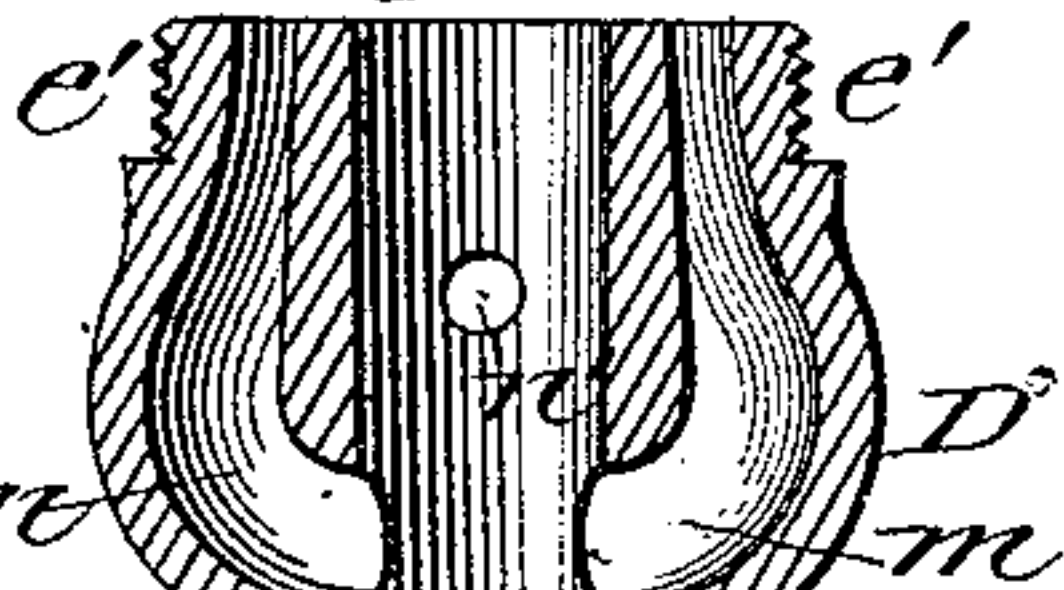


Fig. 10.

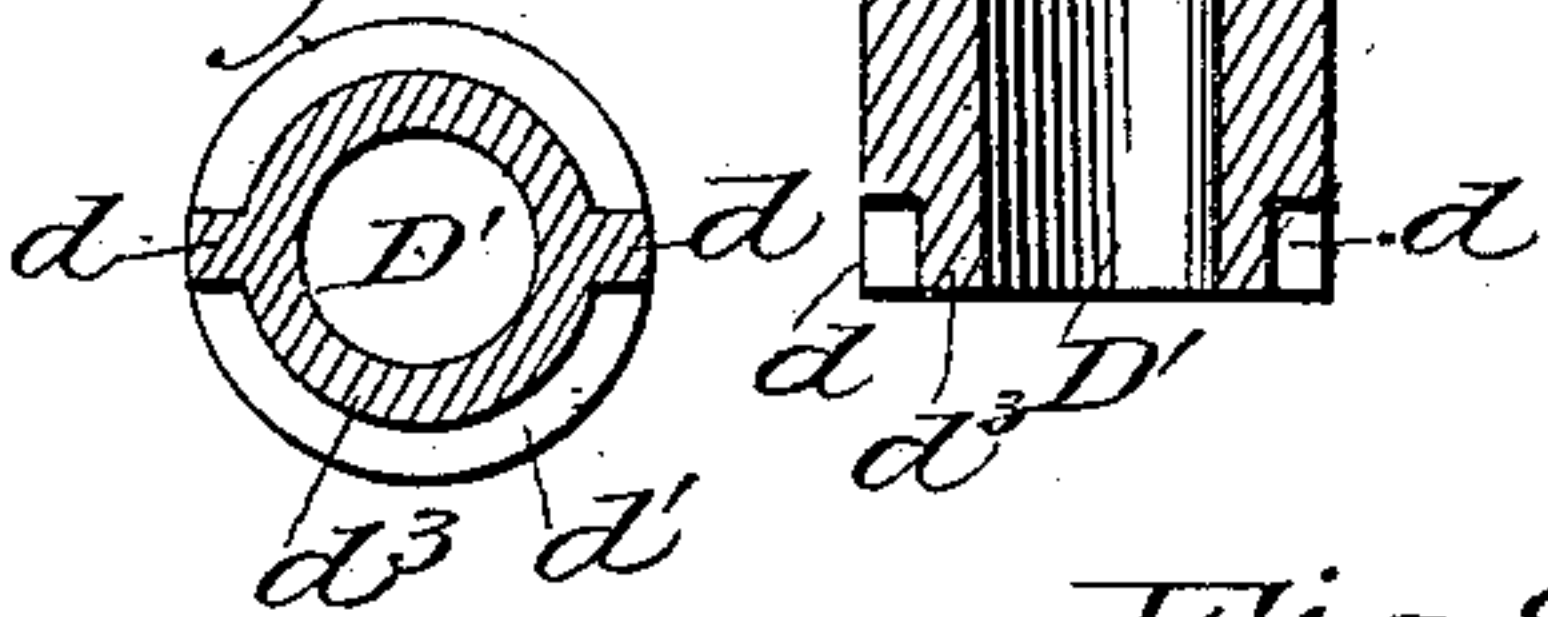


Fig. 8.

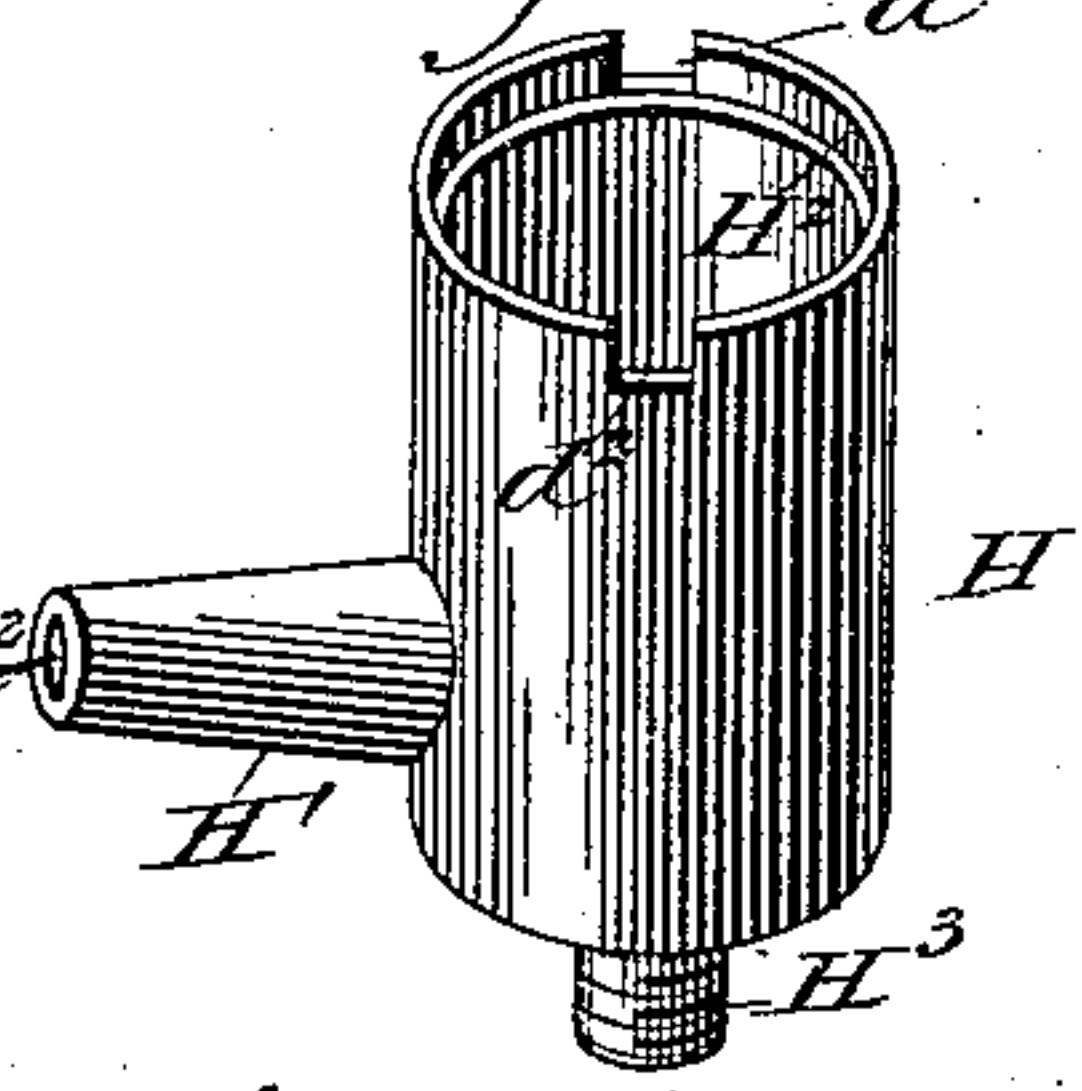


Fig. 5.

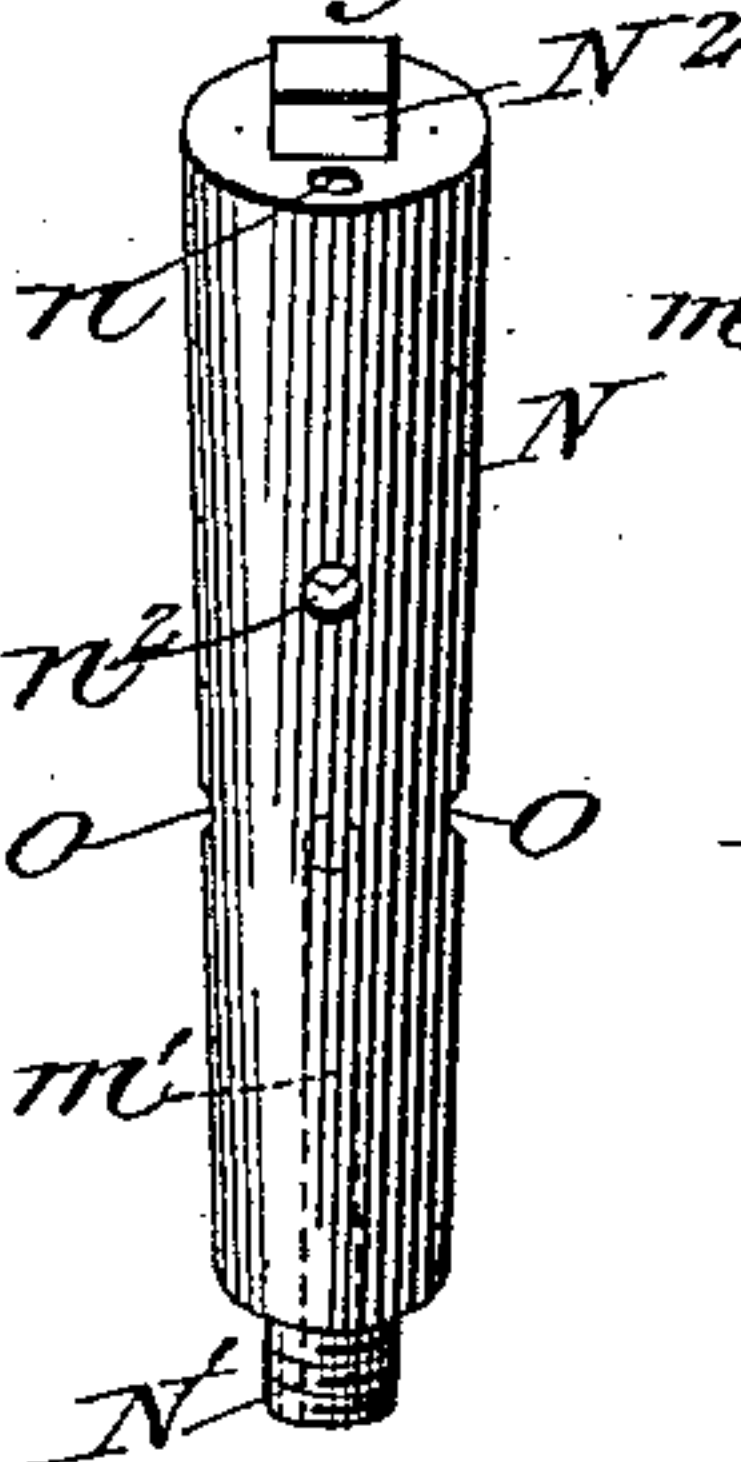


Fig. 9.

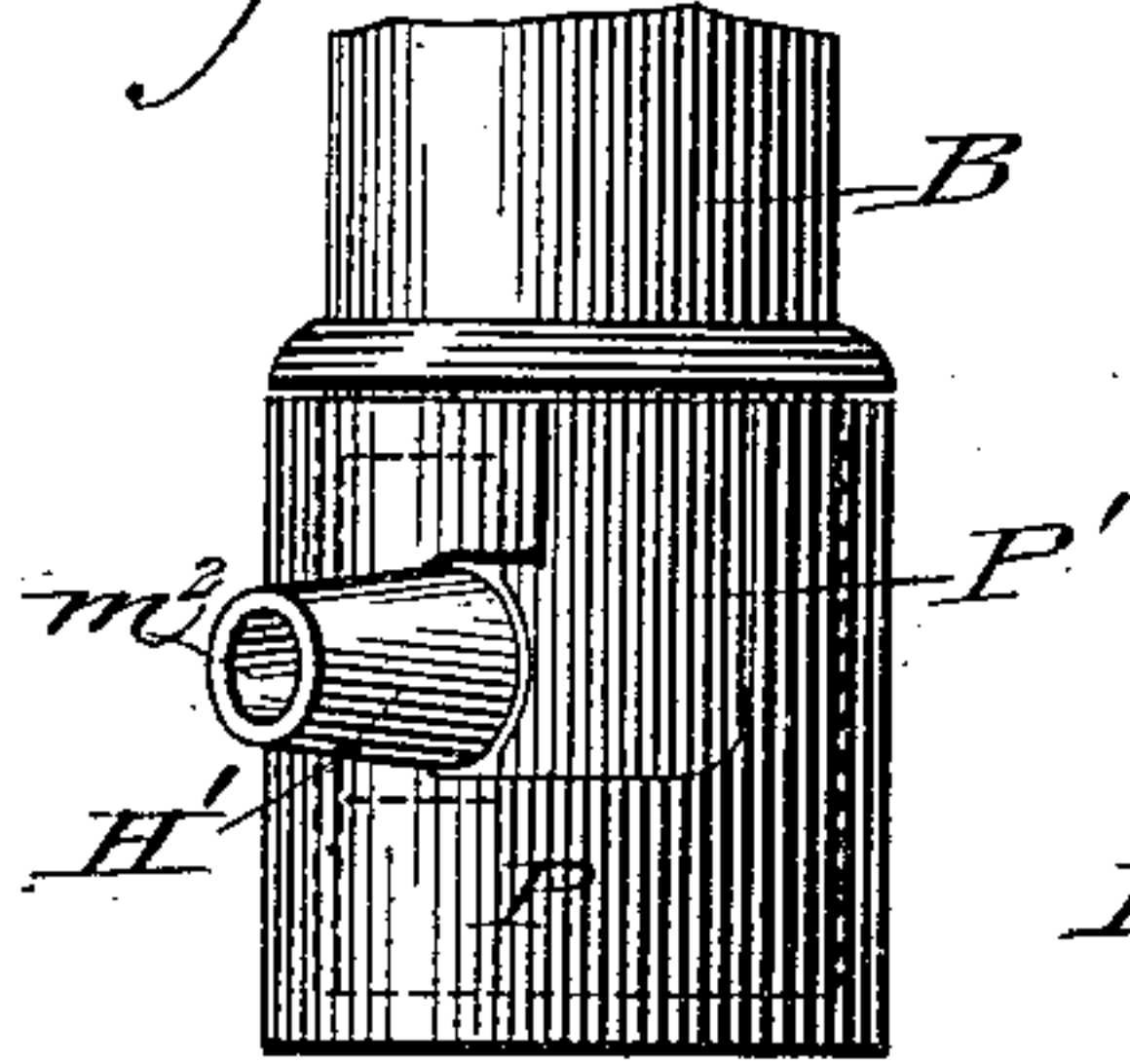


Fig. 2.

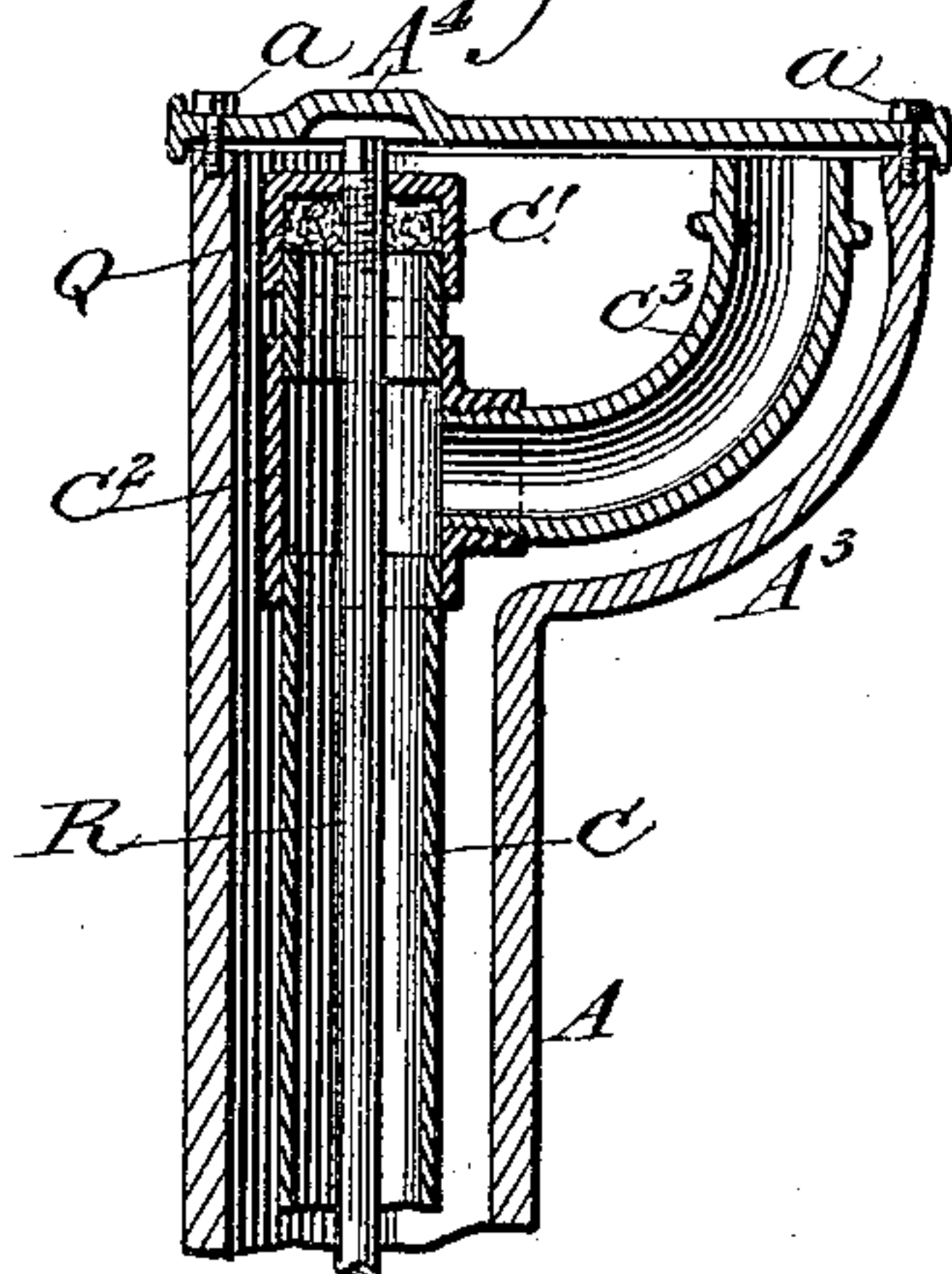


Fig. 6.

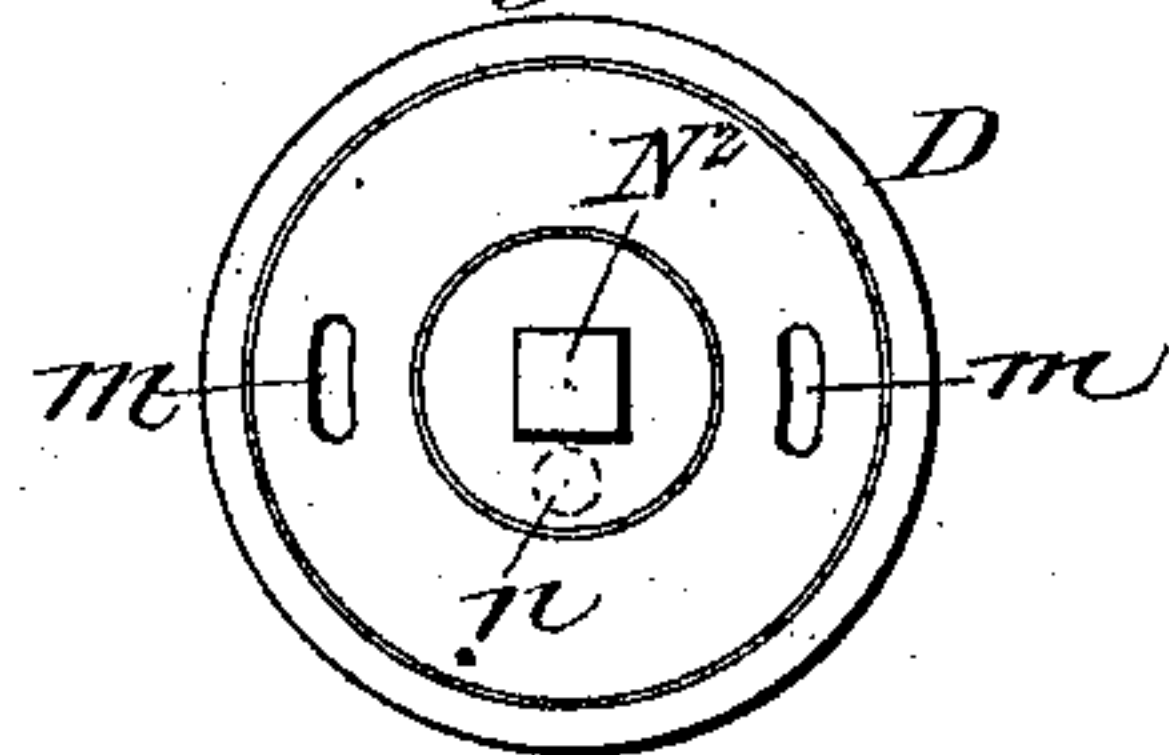
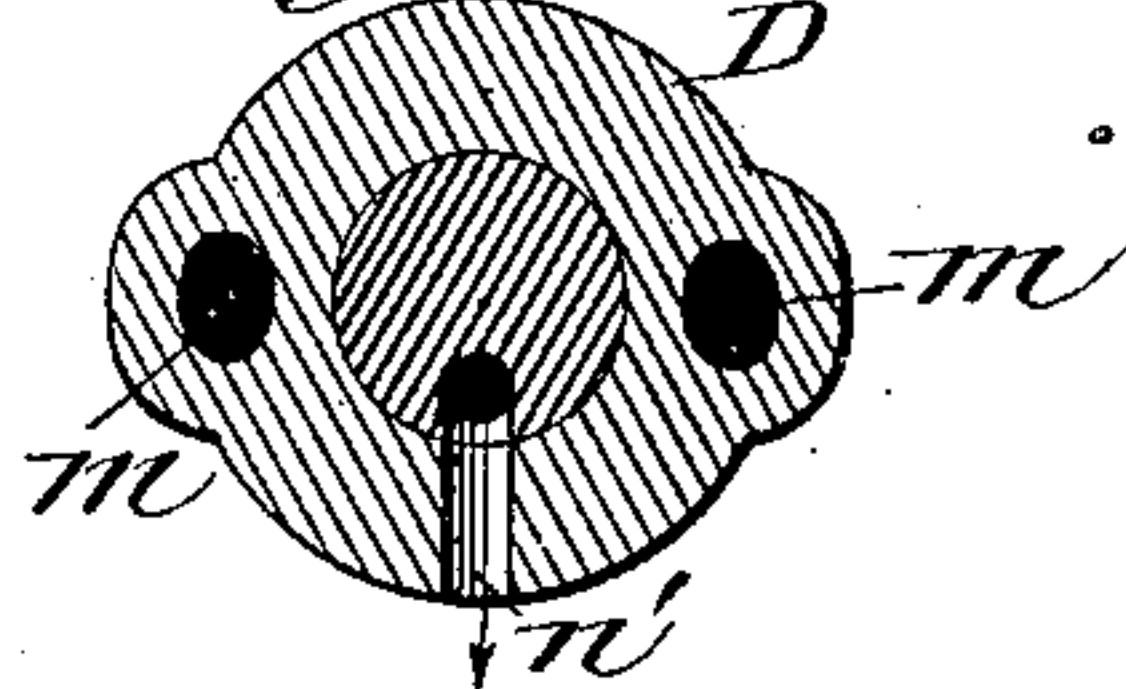


Fig. 7.



Witnesses:

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UNITED STATES PATENT OFFICE.

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HYDRANT.

SPECIFICATION forming part of Letters Patent No. 353,581, dated November 30, 1886.

Application filed May 24, 1886. Serial No. 203,171. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. OGELSBY, a citizen of the United States, residing at Harrisburg, in the county of Dauphin and State of Pennsylvania, have invented certain new and useful Improvements in Hydrants, of which the following is a specification.

My invention relates to that class of hydrants which are adapted for speedy removal of the valve or cock and its seat from the stock without removing the latter from the ground, and without severing therefrom the supply-pipe.

The particular features of my said invention will be more particularly set forth in the following description of its parts and their functions, and will be pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical section of my hydrant, a part being broken away at mid-height of stock. Fig. 2 is a like view of the same, adapted at top as a pavement-washer, its lower part being like the hydrant. Fig. 3 is a like view of the gland for coupling the valve-seat with the service-pipe. Fig. 4 is a like view of the valve-seat. Fig. 5 is a perspective view of the valve or cock. Fig. 6 is a top view of the valve and its seat. Fig. 7 is a cross-section of the same, taken through the waste-outlet. Fig. 8 is a perspective view of the base-joint or the reception-chamber wall. Fig. 9 is a like view of the cast base-section of the stock clothed with the removable jacket. Fig. 10 is a cross-section of the foot of the valve-seat. Fig. 11 is a top view of the wrench-handle on the valve-rod. Fig. 12 is a like view of the check-piece on the valve-rod, with stops for the same on the cap of the stock.

The same reference-letters denote the same parts in all the views.

My hydrant is composed, mainly, of an outer stock or casing designed to remain stationary, and fixedly attached to the supply-pipe, and of an inner detachable stationary column, to which the delivery-nozzle is attached through the wall of said stock, the nozzle being made detachable, that the column may be lifted into and out of said stock without displacing the latter, in which the column is held down by a removable cap-plate on the stock's top.

My hydrant-stock is formed of a cast-iron trunk, A, of a cast stand, L, closed at the bottom, except an angular eye in the center thereof, for admitting therein the attaching-tenon on a separate base-joint, H, and of a section of wrought-iron pipe, B, onto the ends of which said trunk and stand are shrunk in the act of casting them, so that the stock becomes thus a permanently combined structure. Upon the top of the trunk A is secured the cap-plate A' by the screw-bolts *a*. Said stand L has in its sides the vertical slots L', through which is inserted the detachable nozzle H', either on the right or on the left side, as the situation of the hydrant may require, said nozzle being the means for connection with the supply-pipe. Said stand L is provided with the removable jacket P, which is slipped onto it from below, its top abutting against the shoulder L² on the stand. The said jacket has in its side the L-form slot P', in which said nozzle is admitted, and against which the jacket is turned, as shown, both for locking the jacket to said stand and for closing the surplus openings of the slots L' after said nozzle has been inserted in one of them into the wall of the base-section H of the stock of hydrant. In the interior of said stock is the service-pipe column, composed of the lower section, C, provided above with the T-coupling C², into which the exit-nozzle C³ is screwed, and of the short section C⁴ at top of column, onto which is screwed the recessed nut C', in which the packing Q is held compressed for sealing water-tight both said short section above, and also the bearing in said nut for the valve-rod R, which turns therein. The lower end of said service-pipe is screwed into the threaded top of the gland E, which latter is screwed onto the exteriorly-threaded top of the valve-seat D, and it serves as the cover for the cock or plug-valve N', held in said seat by the spiral spring D², inserted around the threaded pin N' at foot of valve, and retained thereon by the nut D⁴, said spring bearing against it and against the tenon *d*³ of the valve-seat. The valve-rod C has the enlargement or socket R² on its lower end, for engaging thereby the nipple N² of the valve. Said enlargement fills the major part of the cavity in said gland, the surplus space therein

communicating with the pipe C and with the nozzle C³.

The valve-seat D is provided below with the annular shoulder d', and with the opposite lugs, d, massed on the body of the tenon or cylindrical part d³, and the top of the cylindrical wall H of the base-joint of the stock is provided with the rim H², having in it the notches d², oppositely arranged, in which said lugs d may hold while the said tenon is set into said annular rim for interlocking the valve-seat with said base-joint, and also said gland and the service-pipe to be stationary, said base-joint itself being kept stationary by the square-shouldered tenon H⁴ thereon, inserted in a square hole made for it in the bottom of the base-section L of the hydrant-stock. The nut h on the threaded end H³ of said tenon secures said base-joint H against vertical displacement when the valve-seat is lifted off.

The packing-nut C' on the top of the service-pipe column bears against the under side of the cap A', which is secured on the top of the stock-section A by the screws a, thus keeping the valve-seat D to its place on said base-joint H. To remove it, the gland E, the service-pipe column, and the inclosed valve and its rod all combined from the stock, it is necessary only to undo said cap A' and the nozzle C³, and lift said parts out of the stock, which and said base-joint are left intact in the ground. A gasket or rubber ring (not shown) is interposed between said base-joint and the foot of the valve-seat to make the joint between them water-tight.

The internal structure of the valve-seat D and of the cock or plug-valve N is as follows: The valve has a longitudinal bore in its lower end extending about half its height, and denoted by m', and it has the transverse bore or slot O, intersecting said vertical bore, which latter communicates below with the reception-chamber M in joint H and with the inlet m². The valve-seat D has in it the lateral opposite ways, m, leading from said transverse bore O of the valve up into the gland E, and thence up through the service-pipe C to the exit-nozzle C³. Said valve is provided with the square nipple N² on top, and the lower end, R², of the valve-rod has in it a socket fitting said nipple, for turning the valve, as described. Said rod is provided at top with the operating handle or wrench R³, and a little below said handle on said rod is the arm or check-piece R', which is arranged to work in a recess or cut-away, A², in the cap A'. The ends of said recess serve as stops Z Z', which are so situated that the valve-rod may turn only about a quarter-turn from stop Z to stop Z', and that when said arm has come against stop Z', as shown in Figs. 1 and 12, the supply-water will have free course through the valve, the valve-seat, and the service-pipe, and that when said arm is reversed and has come to the other stop, Z, the supply will be shut off, and the waste-water passages will be open, to let the caught water pass from the hydrant into the ground.

The waste-passages consist of the vertical bore n in the upper part of the valve, communicating with the side opening, n², arranged a little above the valve's mid-height, and registering with the outlet opening n' in the valve-seat when the valve is fully reversed. The waste and the supply passages are therefore all in the valve and in its seat, and operate by reciprocation or to alternately shut off and turn out the supply and the waste, respectively.

The device shown in Fig. 2 is similar to the hydrant described, excepting that the cap or lid A⁴ is adapted to cover the outlet-nozzle C³ and the widened part A³ of the stock A.

I claim—

1. The combination, with the lower part of the stock or stand L, cast with the exterior shoulder, L², thereon, and having the vertical slots L' arranged oppositely in its wall above its bottom, and with the base-joint H, secured to the bottom of said stand interiorly, and provided with the attaching-nozzle H', projected through either of said slots, of the removable jacket P, provided with the slot P', opening upward and applied around said stand against said shoulder, and closing the unused slot in the stand, substantially as herein set forth.

2. The hydrant valve-seat D, having its upper end a screw for uniting thereby with the interiorly-threaded gland E, and having its lower end a slip-joint formed with a tubular tenon provided with exterior lugs adapted to fit in and interlock with the top end of the fixed support H, having on it a tubular rim formed with notches in it, the said valve-seat also having in it the downwardly-tapering receptacle D', extending from its top centrally through it, and the upward-curving ways m in its wall, leading from ports at said receptacle to exits into said gland, in combination with the plug-valve N, fitted into said receptacle, and having in it the vertical bore M', intersecting with the transverse bore O, and registering thereby with said ways, and with means applied to the lower end of the valve for holding it down in said seat, all constructed and co-operating substantially as herein shown and described.

3. In a hydrant, the valve-seat D, having its upper end connected by screw-joint with the gland E, and its foot end connected by the interlocking slip-joint set forth with the fixed support H therefor, said seat being formed with the conical receptacle D', extending centrally through its entire length, and with the opposite vertical ways m, extending from ports at the mid-height of said receptacle through the wall of the seat to exits at its top, and also with the waste-orifice n' in said wall, arranged between said ways and above said ports, in combination with the valve N, fitted into said receptacle, and having in it the central bore, m', intersecting with the transverse bore O, and thereby communicating with said ways, and also having in it the vertical bore n, intersecting with the transverse bore n², and thereby communicating with said orifice, and with

means adapted to hold said valve in its seat, and means to limit its throw, substantially as herein shown and described.

4. The hydrant set forth, comprising the
5 stock formed of both cast and wrought sections, united solidly into one structure and having a cap-plate removably secured on its top, and having secured therein at its bottom a tubular base-joint provided with a detachable inlet-nozzle projected through a slot
10 in the wall of said stock, of a tubular jacket applied around the stock below, of an inner tubular delivery-column formed of sections, all screwed together and the whole set on said
15 base-joint, to which its lowest section, which is the valve seat, is fitted by means to resist turn-

ing, and on which it is held by said cap-plate bearing on said column, of a plug-valve fitted into said seat provided with a conical receptacle therefor, and with water ways in its wall 20 having intercourse both ways with intersecting bores in the valve adapted to let the supply up into said column and to let the waste off, and of a rod fitted to said valve as a key for turning it, all said parts being constructed 25 and arranged with reference to removal of said column without displacing the stock, substantially as set forth.

GEORGE A. OGELSBY.

In presence of—

THEOPHILUS WEAVER,
D. C. MAURER.