(No Model.)

J. BURNETT & G. EICHERT.

HYDRANT.

No. 341,403. Patented May 4, 1886.

Fig. 1.

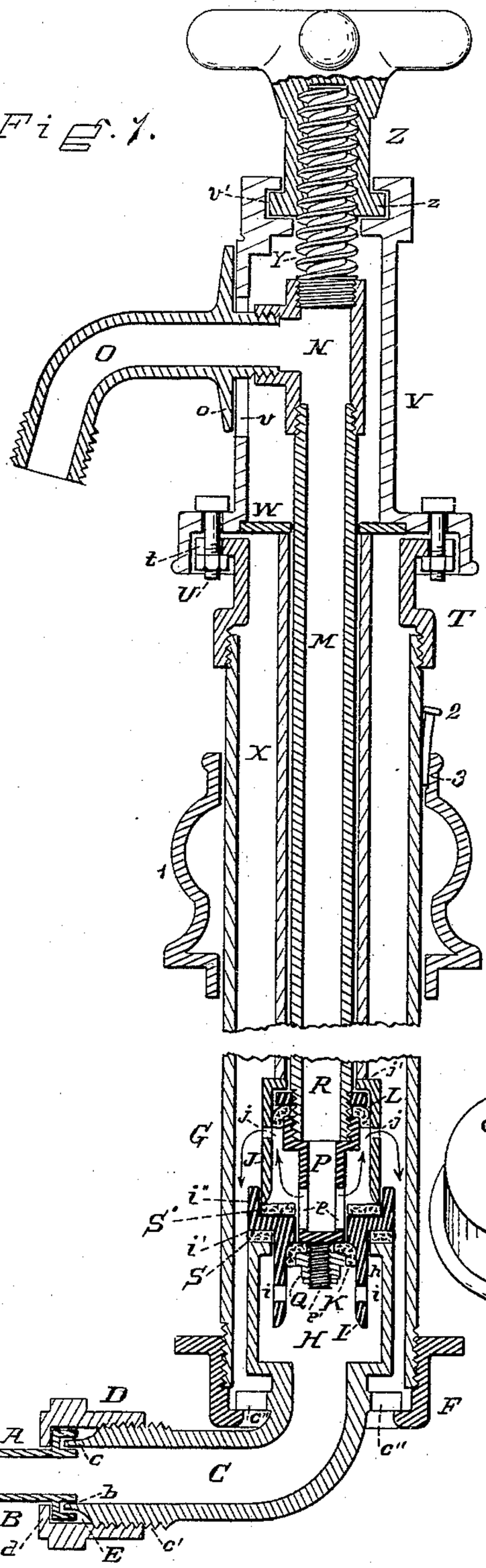

Fig. 2.

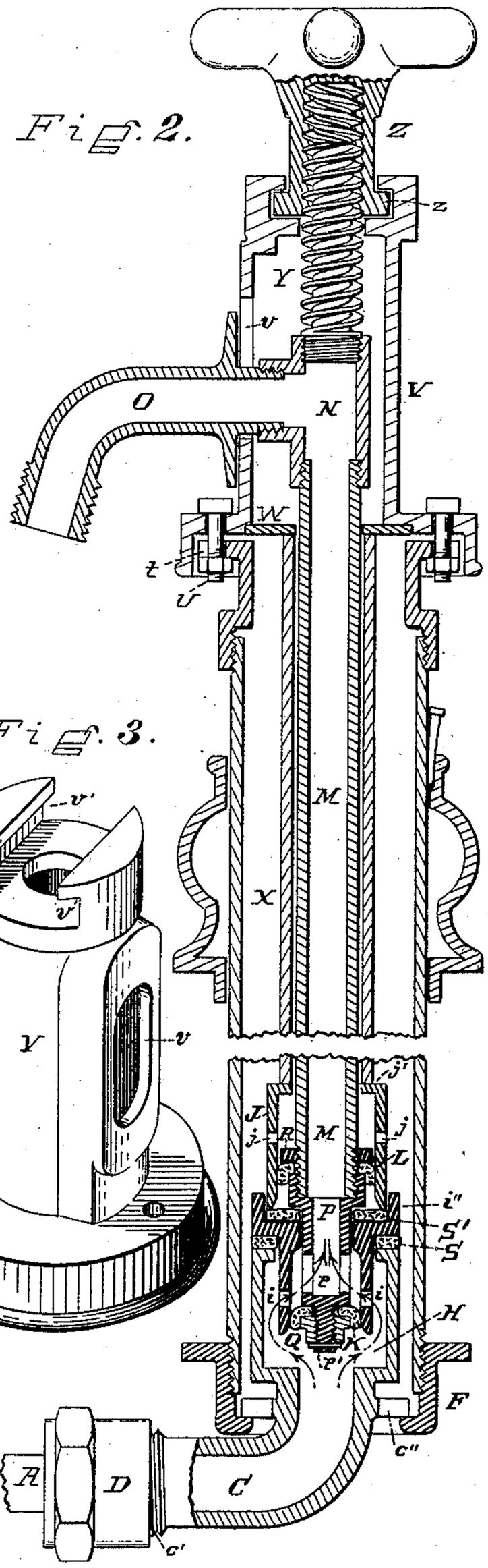

Fig. 3.

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UNITED STATES PATENT OFFICE.

JOHN BURNETT AND GEORGE EICHERT, OF CINCINNATI, OHIO.

HYDRANT.

SPECIFICATION forming part of Letters Patent No. 341,403, dated May 4, 1886.

Application filed June 15, 1885. Serial No. 168,729. (No model.)

To all whom it may concern:

Be it known that we, JOHN BURNETT and GEORGE EICHERT, both of Cincinnati, Hamilton county, Ohio, have invented a new and useful Improvement in Hydrants, of which the following is a specification.

Our invention relates to a construction of hydrants whereby the parts which control the passage of water are made capable of being secured in their effective positions by means which are located wholly in sight and above ground, and whose disengagement enables the withdrawal of said parts at any moment, for any desired purpose—such as inspection, lubrication, or repair.

Other features of our invention are described and specified in the sequel.

In the accompanying drawings, Figure 1 is an axial section of a hydrant embodying our invention, the parts being in the condition in which the water supply is closed and the wasteway open. Fig. 2 is a similar section, the parts being in the condition in which the water-supply is open and the wasteway closed. Fig. 3 is a perspective view of the head.

A portion is broken away from each section for compactness of representation.

The service-pipe from the main is made preferably as shown at A, with a rectangular collar, B, having in its end an annular groove, *b*, to receive the tapered extremity *c* of the L-formed inlet or suction tube C, whose screw-threaded portion *c'* takes a correspondingly screw-threaded cap, D, whose lip *d* engages behind the collar B, so as to inclose an annular space or interstice, E, for reception of a luting of soft metal, which is compressed and protected by the nut or cap D. Lugs *c''* on the upturned portion of tube C rest in a step, F, which is interiorly screw-threaded to receive the correspondingly screw-threaded lower end of the shaft or shell G.

The tube C terminates above in an expanded head or chamber, H, the aperture *h* in whose top receives the lower member, I, of our duplex barrel I J, within which work the cup-packings or piston-heads K L of the combined water-way and plunger, which consists of a principle pipe, M, of any requisite length, screwing above into a T-coupling, N, into which is screwed the discharge-spout O, and below into a nipple or valve-stem, P, having side orifices, *p*, which serve alternately as outlets for the waste water and as inlets for the supply water, as shown in Figs. 1 and 2, respectively.

The lower member, I, of the duplex barrel I J has side orifices, *i*, which, in the depressed condition of the plunger, (shown in Fig. 2,) serve as the inlet-ports for the supply water. The upper member, J, of said barrel has side orifices, *j*, which, in the elevated condition of the plunger, (shown in Fig. 1,) serve as outlet-ports or wasteways for the residue of water that remains above the duplex piston after closure of the hydrant.

Both members I and J of the duplex barrel are formed open and bell-mouthed below to facilitate the drawing into them of the cup-leathers. The lower cup-leather or piston-head, K, is secured by a nut, Q, upon the screw *p'* at the lower extremity of the plunger-nipple or valve-stem P. This cup-leather K coacts with the inturned shoulder or offset at top of the barrel member I, to limit the upstroke of the plunger in the act of closing, as shown in Fig. 1.

The upper cup-leather, L, of the duplex piston-head K L is secured upon the plunger-tube M by being pinched between the nipple P and a washer, R.

A leather or other suitable gasket, S, is interposed between the top of the suction-tube C and the shoulder *i'* of the lower barrel, I. A rim, *i''*, on the top of barrel I confines a gasket, S', on which rests the lower edge of the upper barrel, J.

Screwed upon the upper extremity of the shaft G is a neck, T, whose flange *t* receives screw-bolts U, which fasten the head V. The attachment of said head is furthermore made the means of holding in place the distant members constituting the barrels I J and their above-described adjuncts. This is accomplished by the insertion of a washer, W, which presses upon sleeve X, whose lower extremity rests upon the upper barrel, J, which in turn holds the parts below it, including the lower barrel, I, firmly seated upon the suction-tube C.

When it is desired to withdraw the plunger and its attachments from the fixed portions of the hydrant, it is merely necessary to remove

the two bolts U, after which the plunger and the barrels can be lifted bodily out, and can be returned to their places without necessity of engaging screw-threaded inaccessible portions—such as are liable to become clogged with sand, or to be rendered useless by riding of the screw-threads or otherwise. A slot, *v*, in head V receives and guides the spout O, said slot being concealed by a collar, *o*, on said spout.

Screwed into the top of the T-coupling N is a screw-stem, Y, which occupies a hand-nut, Z, whose flange *z* is contained in grooves *v'* in the head V. By this means the plunger is capable of being elevated or depressed by simply rotating the nut Z to right or left, so as to open or close the hydrant.

1 is a shiftable plinth, which, being made to rest upon the brick or other pavement surrounding the hydrant, is secured in place by a nail or key, 2, being driven into a notch, 3.

For summer use, when it is no longer necessary to get rid of the residue, a common closable faucet may be substituted for the spout O and the plunger be permanently depressed to the position shown in Fig. 2.

We are aware that it has been proposed to secure a plinth to the stems of pumps, hydrants, &c., by means of fusible material poured into an annular space or cavity between the adjacent faces of said plinth and stem; but this is not the equivalent of our invention.

We claim as new and of our invention—

1. The combination, with the withdrawable hydrant-plunger, of the head V, washer W, sleeve X, means for supporting said sleeve, and the fastening-bolts U, as and for the purpose described.

2. In a hydrant, the combination, with the fastening devices U V W X, of the separable bell-mouthed barrels I J, gaskets S S', and the two cup piston-heads K L, as set forth.

3. In a hydrant, the combination, with suction-tube C H and the fastening devices U V W X, of the duplex barrel I J, having the side orifices, *i* and *j*, the gaskets S S', and the piston-heads K L, as set forth.

4. The combination, with the stem G, of the shiftable plinth 1, having the notch 3, and the key 2 driven in said notch, as set forth.

5. The combination, with the pipe C H and the stem G, of the two-part barrel I J, having orifices *i j*, respectively, and the plunger M P, having the packings K L and the openings *p*, substantially as and for the purposes set forth.

In testimony of which invention we hereunto set our hands.

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Attest:
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