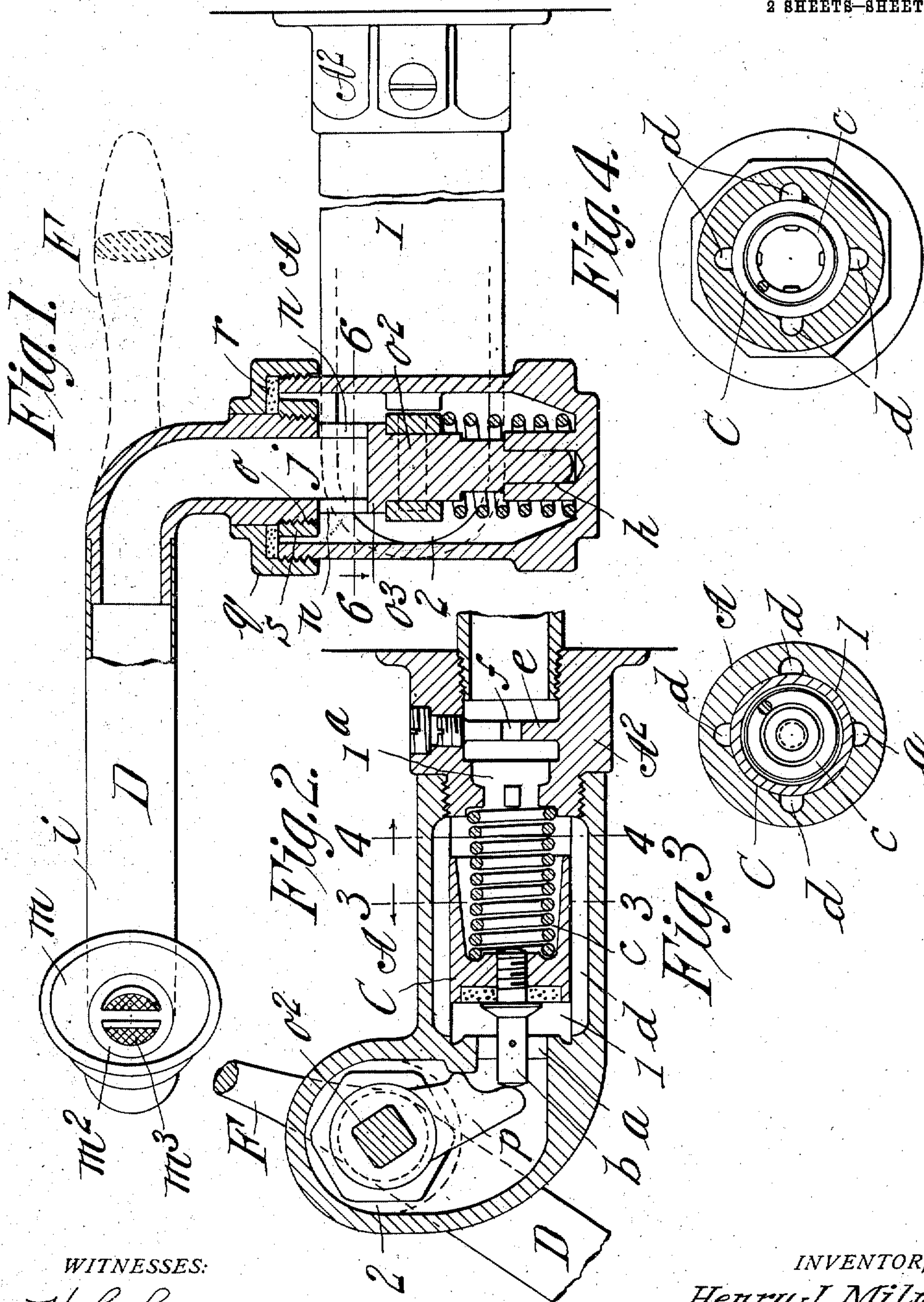


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 DRINKING FOUNTAIN.  
 APPLICATION FILED AUG. 7, 1909.

985,534.

Patented Feb. 28, 1911.

2 SHEETS—SHEET 1.



WITNESSES:

*H. L. Sprague*

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INVENTOR,

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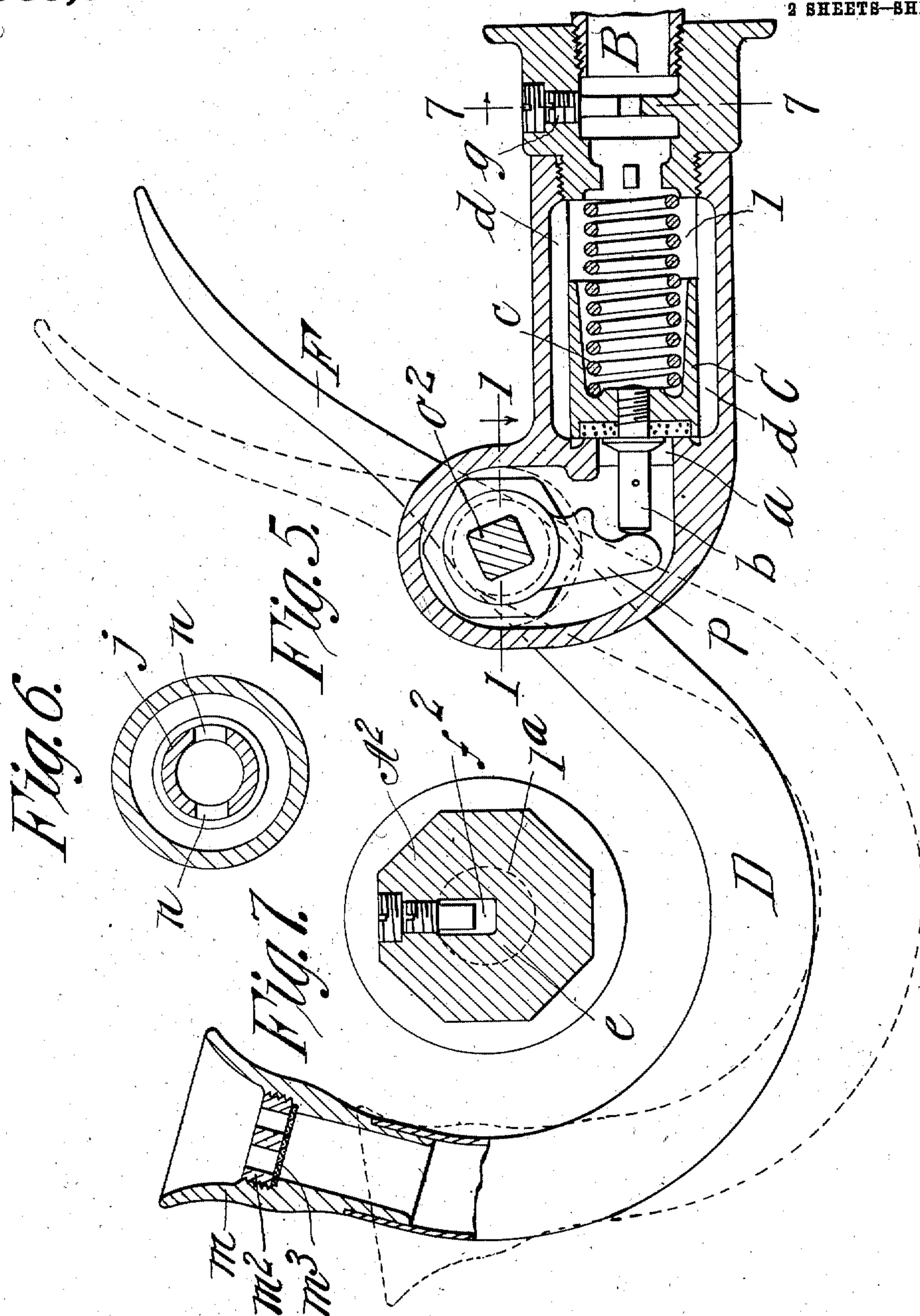
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# UNITED STATES PATENT OFFICE.

HENRY J. MILNER, OF CHICOPEE, MASSACHUSETTS, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO JOHN HALL, JR., OF WEST SPRINGFIELD, MASSACHUSETTS.

## DRINKING-FOUNTAIN.

985,534.

Specification of Letters Patent.

Patented Feb. 28, 1911.

Application filed August 7, 1909. Serial No. 511,668.

*To all whom it may concern:*

Be it known that I, HENRY J. MILNER, a citizen of the United States of America, and resident of Chicopee, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Drinking-Fountains, of which the following is a full, clear, and exact description.

The object of this invention is to provide a drinking fountain which, by reason of its sanitary character is desirable and acceptable and to so construct the device or apparatus as to render it capable of comparatively inexpensive production, simple and easy of assemblage and operatively practicable and efficient.

The apparatus is characterized by the inclusion of a conduit comprising sections, one of which is movable relatively to the other, one of the sections being adapted for connection with the water supply pipe and the other having a drinking water delivery opening at its end, a valve for closing and opening the water way through the two part conduit, and means actuated by the one section which is movable relatively to the other for operating such valve.

The invention, furthermore, consists in certain combinations and arrangements of parts and the constructions of the parts all substantially as hereinafter described in conjunction with the accompanying drawings and set forth in the claims.

In the drawings:—Figure 1 is a plan view of the drinking fountain with one chambered portion of the valve casing and parts inclosed therein and adjacent thereto in central horizontal section. Fig. 2 is a vertical sectional view through the valve comprising portion of the device; Figs. 3 and 4 are cross sections respectively on lines 3—3 and 4—4, Fig. 2. Fig. 5 is a sectional view similar to Fig. 2 but showing the valve as in its closed position. The line 1—1, Fig. 5 indicates the plane on which Fig. 1 is taken. Fig. 6 is a vertical sectional view on line 6—6, Fig. 1; Fig. 7 is a cross section on line 7—7, Fig. 5.

Similar characters of reference indicate corresponding parts in all of the views.

In the drawings, A represents a casing having a chamber 1 adjacent, and for communication with, the water supply pipe B, and having a second chamber 2 with a wall

separating said chambers and having a connecting opening *a*, a portion of the wall surrounding such opening constituting a seat for the valve C which is guided within the substantially cylindrical wall surrounding the chamber 1 and has a stem *b* projecting through the chamber connecting opening *a* and protruding for a slight distance into the chamber 2. The walls surrounding the chamber 1 have longitudinal grooves *d d* to create adequate water ducts endwise through the casing and outside of the valve which is guided on the wide rib-like parts of the casing between the grooves, this being a well known and approved feature in valves. The valve casing at the portion at which the chamber 1 is comprised is formed with a supplemental screw connected section A<sup>2</sup> adapted for connection with the water supply pipe B, having a water way *1<sup>a</sup>* leading into the chamber 1 and having a wall *e* across said water way provided with an aperture *f<sup>2</sup>* therethrough; and a screw plug *g* penetrates one side of the section A<sup>2</sup> and has its extremity entering and for restricting the water passage through the said aperture so that the apparatus may be regulated for the proper flow of water therethrough when the valve C is opened, irrespective of a high or low pressure in the water supply.

The casing inclosing the chamber 2,—the axis of which is slightly above and at right angles to the axis of the chamber 1,—has internally at its end, provided with a closing wall, an inwardly opening socket *h*, and said portion of the casing is formed externally screw threaded at its other end.

D represents a pipe which in the chambered casing constitutes the two part conduit, said pipe D being revolvably movable relatively to the casing A. The said pipe D is formed with limbs arranged in planes at right angles to each other, the outer one *i* being also of a curved or U shape and it has at its outer end a nozzle or mouth piece *m* provided with a perforated diaphragm *m<sup>2</sup>* suitably within its flaring orifice and having in conjunction therewith a strainer *m<sup>3</sup>* of gauze or the like. The apertured diaphragm *m<sup>2</sup>* by its screw thread engagement in the mouth piece as shown is readily removable so that the gauze may be taken out for cleansing or replacement. The other limb *j* of the pipe is of less diameter than, and extends axially within, the chamber 2,



its extremity being, in the example here represented, made solid, and it has ports  $n$  to make communication between the chamber and the passage through the pipe D.

5 The solid extremity of the limb  $j$  of the pipe is necked down and fitted in the aforesaid inwardly opening socket  $h$  and it has its portion adjacent the threaded end of the casing formed with external screw threads  $o$  while its portion between its externally threaded portion  $o$  and its socket entering end is of square or equivalent polygonal form, and has a shoulder  $o^3$  next thereto.

10  $p$  represents an arm, the butt end of which is made with a polygonal opening to fit the correspondingly shaped part  $o^2$  of the pipe limb  $j$ , such arm projecting radially from the pipe and having operative engagement with the valve stem so that when the pipe is swung or partially revolved on its limb  $j$  as its center of movement, the arm  $p$  will exert a force endwise against the valve stem to open the valve C against the water pressure and also against the reaction of the valve spring  $c$ .

15  $q$  represents an annular coupling nut screw engaging the threaded end of the casing and closely fitting the adjacent portion  $j$  of the pipe.

20 A ring  $s$  is engaged on the screw threads  $o$  externally of the pipe for constituting an interlocking shoulder internally of the annular nut, there being a compressible packing  $r$  between the inner face of the nut and the adjacent ends of both the casing and the said ring.

25 A spring is provided in compression between the closed end of the casing and the polygonally apertured arm, forcing the latter against the shoulder  $o^3$  of the pipe limb  $j$  and consequently forcing such pipe limb in an outward direction so that the end of the shoulder constituting ring is always in a firm bearing against the packing.

30 The pipe D which carries the mouth piece at its free end is provided with a handle F in any suitable part thereof, which may be elected as most convenient, the same being utilized for readily swinging the pipe to the position thereof which results in the opening of the valve and the giving of an outflow of water at the mouth piece to be drunk. In the present illustration the handle is shown as extending radially relatively to the limb  $j$  of the pipe at about the junction of such limb with the one  $i$ .

35 Preparatory to drinking, a person will, by the handle rotatively operate the pipe and cause an opening of the valve, and the water delivery will usually effect a rinsing of the mouth piece before the head is lowered to the position for drinking.

40 It will be noted that the pipe carrying the mouth piece is of a right angled form with reference to the supply pipe which disposes

the mouth piece vertically and thus enables the drinker to swing the mouth piece in a vertical plane so that the water will be supplied in a vertical and upwardly directed stream or distributed body; and this is of paramount importance as it would be practically impossible to satisfactorily use the device if the mouth piece swung horizontally. Also the disposing of the mouthpiece vertically permits the water to spray or scatter over the entire surface of the mouthpiece to effectually cleanse it after drinking.

45 It is evident that my drinking fountain is particularly useful and desirable in public schools, public buildings, parks, stores and factories, as it dispenses with drinking cups or glasses, and can instantly be swung into the most convenient and natural position, the flow of water regulated to suit the user and the mouth piece is perfectly flushed and cleansed after each using, thus providing a useful, sanitary and practical drinking fountain.

I claim:—

1. In a drinking fountain, the combination with a valve casing having a water way therethrough, and a valve for closing the water way, of a vertically movable pipe having at one end an upstanding drinking mouthpiece and at its other end coupled for a rotative movement to the valve casing, and means, actuated by the rotative movement of the pipe for operating the said valve.

2. In a drinking fountain, the combination with a valve casing having a water way for connection with a water supply therethrough and having intermediately therein a valve seat opening to have communication between separate chambers in said casing, of a valve in one of the chambers adapted to close against the valve seat and having a stem projecting through the valve seat opening into the second chamber in said casing, a vertically swinging pipe having an upstanding drinking mouthpiece at its one end having its other extremity coupled and rotative vertically relatively to the second chamber in the valve casing and having a member operatively engaging the valve stem.

3. In a drinking fountain, in combination, a valve casing having a chamber adjacent and for connection with the water supply and having a second chamber and a wall separating said chambers and having a connecting opening therethrough and constituting a valve seat, a valve in the first chamber closing against said valve seat and having a stem projecting through said chamber connecting opening, said second chamber having internally at one end an inwardly opening socket, an angular pipe having at the end of its one limb a drinking opening and having its other limb extending within the



second chamber having ports in sidewise communication with such chamber, having its extremity fitted in said socket and having a member projecting therefrom for coaction with the said valve stem, and means for coupling the angular pipe to the portion of the valve casing which incloses said second chamber.

4. In a drinking fountain, in combination, a chambered casing having an opening for admitting water thereinto, and a valve for closing said opening, and said chambered casing having internally at its one end an inwardly opening socket, and formed externally screw threaded at its other end, an angular pipe having at the end of its one limb a drinking opening and having its other limb of less diameter than, and extending within, said chamber, having its passage in communication with said chamber, having its extremity fitted in said socket, having its portion adjacent the threaded end of the casing externally screw threaded and having a member projecting therefrom for operating said valve, an annular coupling nut, screw engaging the threaded end of the casing and closely fitting the adjacent portion of the pipe, and a ring screw engaged on the externally threaded portion of the pipe for constituting an interlocking shoulder internally of the annular nut.

5. In a drinking fountain, in combination, a chambered casing having an opening for admitting water thereinto, and a valve for closing said opening, and said chambered casing having, internally at its one closed end an inwardly opening socket, and formed externally screw threaded at its other open end, an angular pipe having at the end of its one limb a drinking opening and having its other limb of less diameter than, and extending within, said chamber, having its passage in communication with said chamber, having its extremity fitted in said socket, having its portion adjacent the threaded end of the casing externally screw threaded and having its portion between its externally threaded part and its end of polygonal form and provided with a shoulder next thereto, a member having a polygonal opening to fit the correspondingly shaped part of the pipe limb and having an arm projecting therefrom for operating said

valve, an annular coupling nut, screw engaging the threaded end of the casing and closely fitting the adjacent portion of the pipe, a ring screw engaged on the externally threaded portion of the pipe for constituting an interlocking shoulder internally of the annular nut, a packing between the inner face of the nut and the adjacent ends of the casing and said ring, and a spring in compression between the closed end of the casing and the polygonally apertured member.

6. In a drinking fountain, in combination, a casing comprising an internal wall separating one chamber therein from another and which has a chamber connecting opening therethrough and a portion of said casing at one side of said opening being formed in screw connected sections, the one farther from the valve seat opening having a water way therethrough, adapted for connection with a supply pipe and having a wall across said water way with an aperture therethrough, a screw plug penetrating one side of such section and having its extremity entering and for restricting the water passage through said aperture, a valve in the chamber which is adjacent the inlet water way, having a stem projecting into the second chamber, a pipe having a drinking opening at its one end and having its other extremity coupled and rotative relatively to the second chamber in the valve casing and having a member operatively engaging the valve stem.

7. In a drinking fountain, the combination with a fixed pipe section, of a pipe section connected thereto and having a substantially vertical, swinging movement with relation to said fixed section, said vertically swinging section terminating in an upstanding drinking mouthpiece, a valve, means for opening said valve when said vertically swinging section is moved downwardly, and means for returning said swinging section to its uppermost position, to thereby close the valve when pressure is removed from said swinging section.

Signed by me at Springfield, Mass., in presence of two subscribing witnesses.

HENRY J. MILNER.

Witnesses:

G. R. DRISCOLL,  
WM. S. BELLOWS.