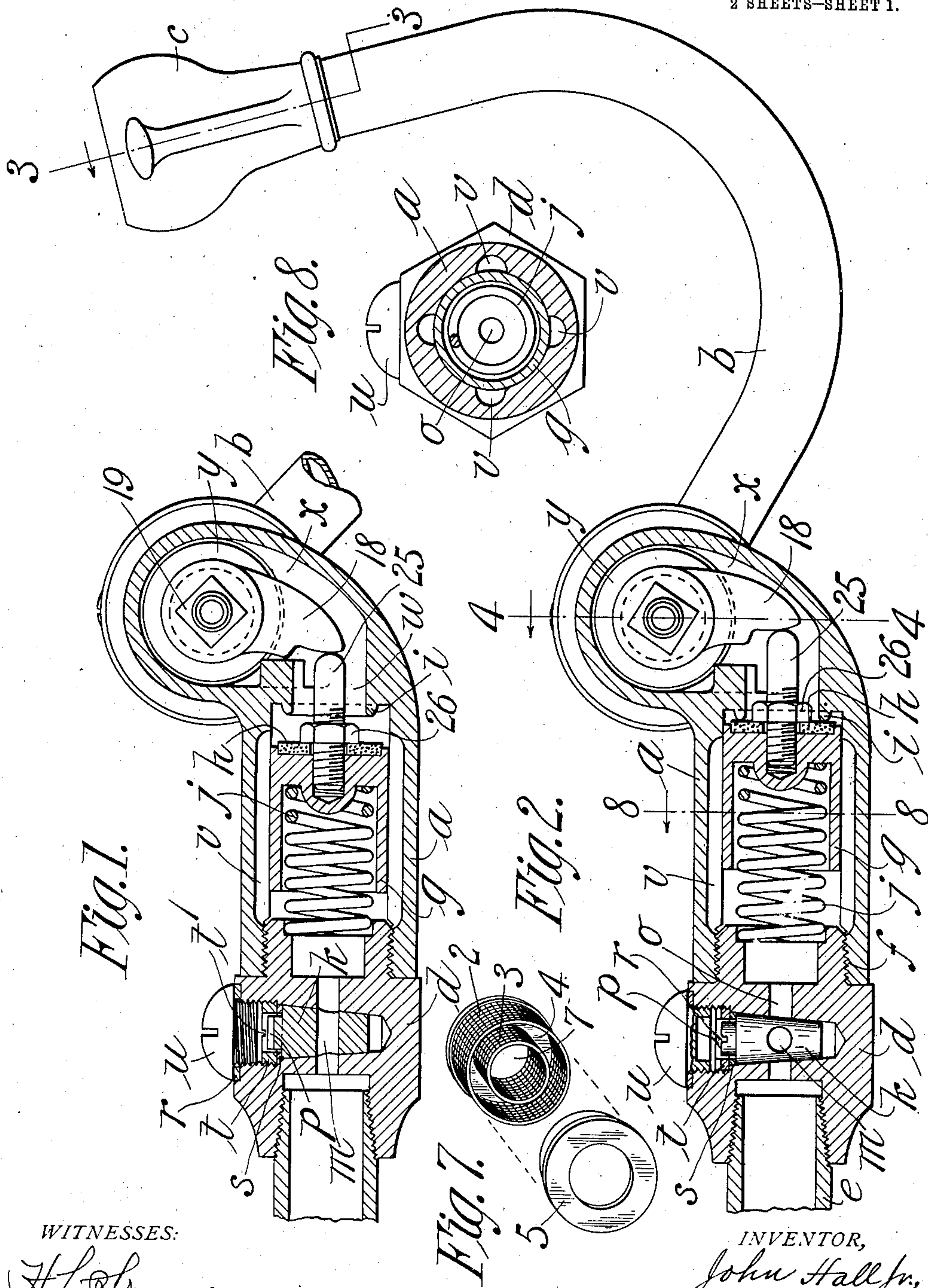


J. HALL, JR.
 SANITARY DRINKING FOUNTAIN.
 APPLICATION FILED FEB. 26, 1910.

985,166.

Patented Feb. 28, 1911.

2 SHEETS—SHEET 1.



WITNESSES:
H. L. Sprague
Harry W. Bowen

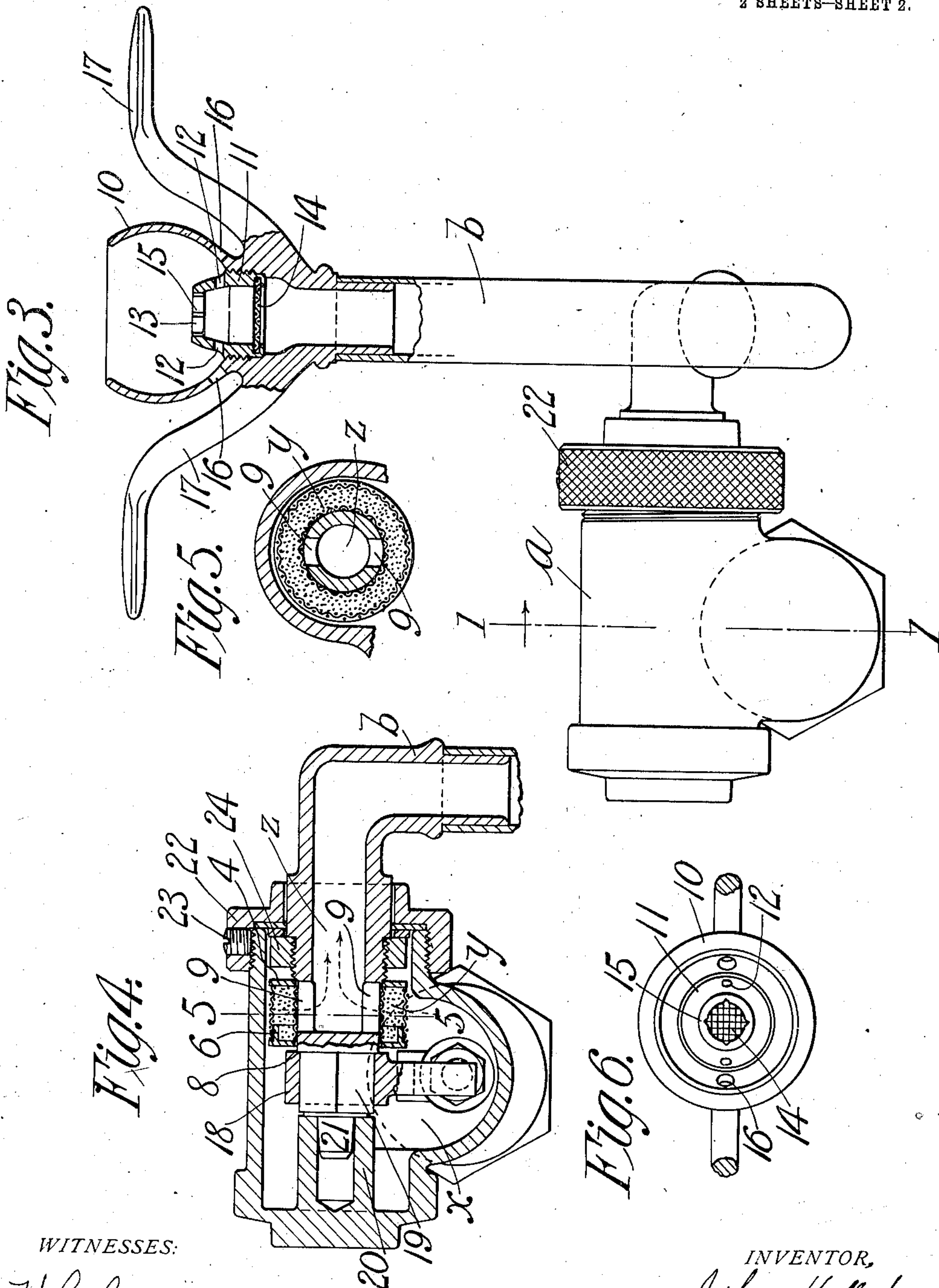
INVENTOR,
John Hall Jr.
 BY *Chapin & Co.*
 ATTORNEY.

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UNITED STATES PATENT OFFICE.

JOHN HALL, JR., OF WEST SPRINGFIELD, MASSACHUSETTS.

SANITARY DRINKING-FOUNTAIN.

985,166.

Specification of Letters Patent.

Patented Feb. 28, 1911.

Application filed February 26, 1910. Serial No. 546,128.

To all whom it may concern:

Be it known that I, JOHN HALL, JR., a citizen of the United States of America, residing at West Springfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Sanitary Drinking-Fountains, of which the following is a specification.

This invention relates to improvements in sanitary drinking fountains of the type in which the flow of water is automatically shut off when the device is not in use.

My present invention is especially adapted for use in public places, as school houses, railroad stations, public halls, parks, etc., and is so designed as to require little or no alteration or repairs.

In the drawings forming part of this application,—Figure 1 is a longitudinal, sectional view of the barrel portion on the line 1—1, Fig. 3, showing the valve open and the shut-off plug also open. Fig. 2 is a view on the same sectional line but showing the valve closed and the shut-off plug also closed. Fig. 3 is an end elevation of Fig. 1 looking toward the arm and its cup element, the latter and the nozzle therein being shown in section taken on the line 3—3, Fig. 2. Fig. 4 is a transverse sectional view on the line 4—4, Fig. 2 looking in the direction of the arrow and clearly indicating the filter element in place and the set screw for the adjusting nut for maintaining the arm element in place. Fig. 5 is a transverse, sectional view on the line 5—5, Fig. 4, showing the filter and a portion of the barrel element in section. Fig. 6 is a plan view looking downward toward the mouth-piece and nozzle of Fig. 3. Fig. 7 is a perspective, detail view of the filter element with one end or cap portion removed to illustrate the interior structure. Fig. 8 is a transverse sectional view on the line 8—8 of Fig. 2 showing the chambered or recessed part of the barrel element, whereby the water pressure is reduced after passing through the shut-off plug or throttling valve.

Referring to the drawings in detail, *a* designates the barrel element; *b* the arm pivotally attached thereto and provided with a mouth-piece *c* at its outer end.

d designates the connecting element between the barrel *a* and the pipe *e* through which the water supply flows.

f designates the threaded connection between the barrel *a* and the connecting piece *d*.

g is a valve, preferably of the barrel type, that is slidably mounted in the barrel *a* and is provided with a packing *h* which engages a seat *i*.

Located between the valve *g* and the connecting element *d* is a coiled spring *j* which normally holds the valve to its seat. The connecting element *d* is provided with a tapered plug-valve *k* and an opening *m* therethrough, which is adapted to register with the opening *o*. The upper end of the valve *k* is reduced, as shown at *p*, and a groove *r* is provided, whereby the plug may be rotated by any suitable tool, as a screw-driver. Surrounding the reduced portion *p* is a ring *s*, and located above this ring is a second ring *t* having a groove *t'* therein (see Fig. 1) so that the plug can be locked by the ring *t* after the plug-valve *k* is adjusted. The upper end of the valve *k* extends into a recess which is closed by means of a threaded cap *u*, as clearly shown in Figs. 1 and 2. By removing this cap and with the use of a suitable tool, as a screw-driver, the valve *k* may be readily rotated, either to cause the opening *m* to register with the opening *o*, or to place the opening *m* transversely therethrough for cutting off the flow of water. The ring *t*, by means of the groove *t'* and a screw-driver, may be rotated to lock the plug in its adjusted position.

Extending parallel with the axis of the barrel *a* are a series of passages *v* (see Fig. 8) which are suitably spaced from each other around the valve *g* so that when this valve is opened, the water, as it flows through the opening *m*, in the plug, will enter the passage *v* thus materially reducing its pressure much below that in the supply pipe *e*. As the water flows through these passages *v* and through the opening *w*, it passes into the outer upwardly curved end of the barrel element *a*, as shown at *x*, and from thence through the filter *y* into the arm *b*, as indicated by the arrows *z*, (see Fig. 4). This filter (the details of which are shown in Fig. 7) is constructed with an outer and inner ring or shell element 2 and 3 of wire gauze of fine mesh,—one end of the opening being closed by means of a washer 4, and the opposite end by means of a removable cap-piece 5 having a rim 6 which enters the interior part of the filter, as shown in the assembled view in Fig. 4. The opening 7 of the filter is adapted to receive the circular part 8 of the arm *b*.

9 designates radial openings which allow the filtered water to pass into the arm *b* to the mouth-piece 10 and the nozzle 11 which is threaded into the lower part of the mouth-piece. This nozzle, it will be noticed, is provided with lateral openings 12, the object of which is to prevent the water from issuing from the orifice 13 with force, should the orifice be partially closed, as by a finger or other means. The nozzle 11 is provided with a gauze piece 14 at its inlet end so that foreign substances or small articles can not be inserted in the arm *b*, impeding the flow of the water. The orifice 13 is provided with grooves or kerfs 15 for receiving a suitable implement for effecting its removal and insertion, when necessary. The mouth-piece 10 has lateral openings 16 there-through, the purpose of which is to allow the water to issue, when the upper part of the mouth-piece is closed by the hand or otherwise. On the opposite sides of the arm *b* are arms 17 by means of which the arm *b* is depressed when in use. This depression of the arm causes the valve *g* to open by means of the arm 18 which rotates with the arm *b*. The arm 18 is provided with a rectangular opening therein which receives a correspondingly shaped surface on the inner end of the arm *b*, as shown at 19, Fig. 4. The purpose of this rectangular opening is to enable the arm *b* to be placed in different positions relative to the barrel *a*, as occasions require.

20 designates a bearing for the pivot 21 on the inner end of the arm *b*.

In order to retain the arm *b* in rotative engagement with the barrel element *a*, an internally threaded nut 22 is employed and a set-screw 23 for locking the same, after its position has been determined by hand. The inward rotation of the nut 22 determines the amount of friction that is exerted on the nut 24, and consequently the ease with which the arm *b* rotates in the barrel element.

25 designates a threaded stem extending from the valve *g*, and a set-nut 26 for locking the stem 25 after the stem has been adjusted in the valve. The object of this adjustment is to compensate for any wear that may occur between the stem 25 and the arm 18, whereby the travel of the valve *g*, when the arm *b* is depressed, will always be the same. Should occasion arise in which it is necessary to disconnect the barrel and arm element from the connecting piece *d*, it is only necessary to turn the valve *k* so that it is in a shut-off position and then unscrew the barrel element from the piece *d* without disturbing any of the plumbing connections.

Such occasion may arise during cold weather, or when it is necessary to make repairs, as repacking the valve, etc. The valve *g* is provided with a boss 25¹ having a threaded recess 26¹ therein for the stem 25. This construction permits a water-tight construction and prevents any leakage past the valve which would be the case should the threaded stem extend through the head portion of the valve.

What I claim, is:—

1. A drinking fountain having in combination with a barrel element, a valve mounted therein, an arm-piece for conveying the liquid, and an adjustable connection between the arm piece and said valve, whereby any wear therebetween may be compensated for, as described.

2. In a drinking fountain, a pivotal arm element having radial openings there-through for conveying the liquid, and a squared portion for receiving a valve-operating arm, a filter composed of reticulated material surrounding the openings and located back of the squared portion, said filter comprising an outer and inner shell, whereby an annular space is provided for receiving filtering material, and a removable cap-piece on one end of the filter.

3. In a drinking fountain, the combination with a barrel element having grooves therein, a valve in the barrel element and partially closing the grooves, a connecting element between the barrel and the source of supply, a perforated plug in the connecting element whereby when the liquid passes through the plug its pressure will be reduced when it enters the grooves and flows past the valve, as described.

4. In a drinking fountain, the combination with a barrel element, of an arm for conveying the fluid and having a rectangular portion, a valve-stem, a second arm engaging the stem and having a rectangular opening engaging the rectangular portion of the first mentioned arm whereby the first arm may be placed in different positions of adjustment relative to said barrel, as described.

5. In a drinking fountain, the combination with a barrel element, an arm pivotally connected thereto and through which the fluid flows, a valve in the barrel provided with a boss having a threaded recess therein, and a threaded stem engaging the recess and operable from said arm and, means for locking and adjusting the stem to the valve.

JOHN HALL, JR.

Witnesses:

K. I. CLEMONS,
HARRY W. BOWEN.