

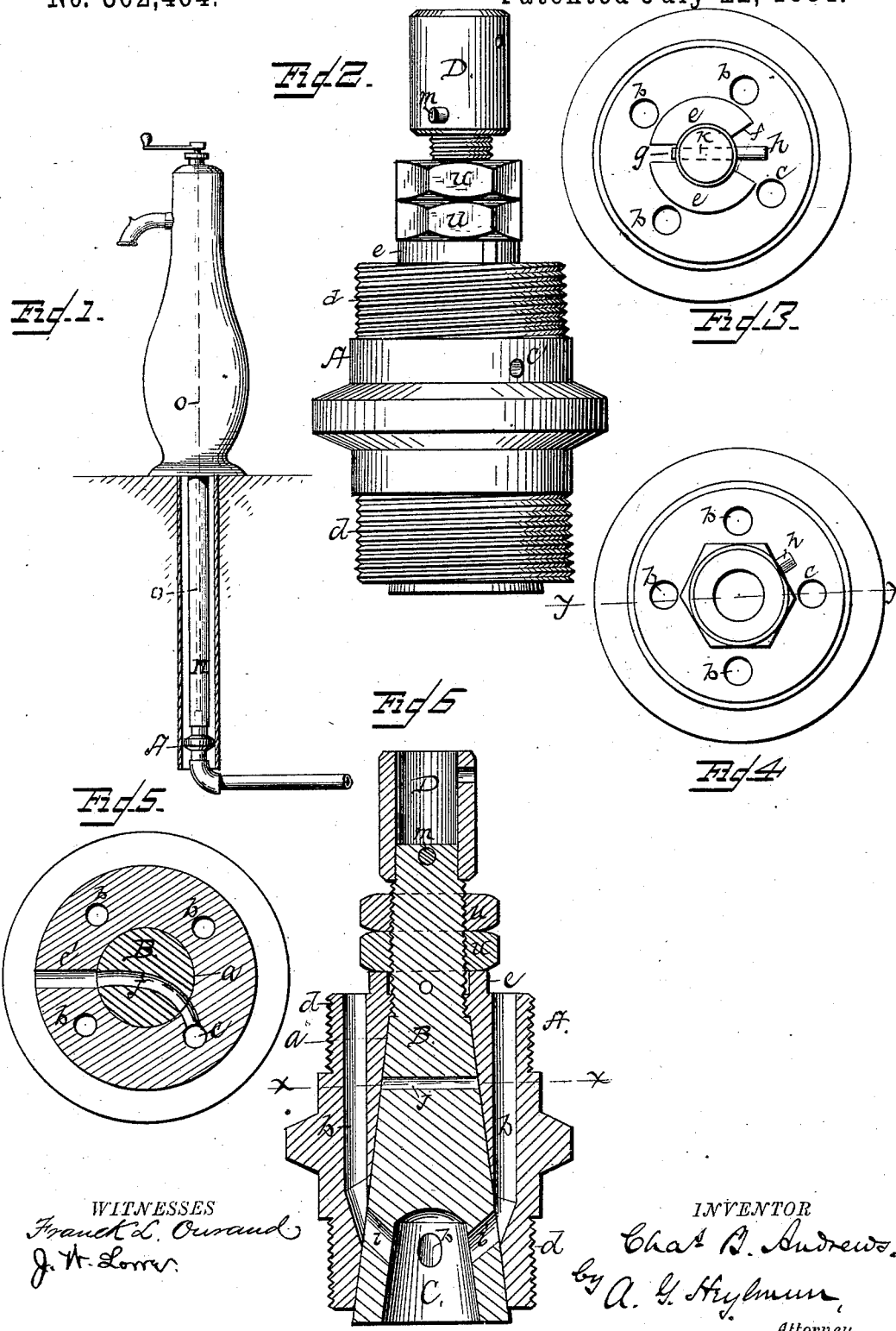
(No Model.)

C. B. ANDREWS.

VALVE.

No. 302,464.

Patented July 22, 1884.



WITNESSES
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UNITED STATES PATENT OFFICE.

CHARLES B. ANDREWS, OF LEBANON, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO ALFRED B. HAUCK, OF SAME PLACE.

VALVE.

SPECIFICATION forming part of Letters Patent No. 302,464, dated July 22, 1884.

Application filed January 15, 1884. (No model.)

To all whom it may concern:

Be it known that I, CHARLES B. ANDREWS, a citizen of the United States of America, residing at Lebanon, in the county of Lebanon and State of Pennsylvania, have invented a new and useful Valve, of which the following is a specification.

My invention relates to improvements in valves of that class usually employed to connect the vertical pipe of a hydrant to the ground-pipe running to the main pipe; but it may be advantageously used in other pipe-connections.

The objects of my invention are to provide a valve with a tight-fitting joint, and one which may be removed from its connections for repairs or renewal without the trouble of digging, as is now customary and necessary.

My invention therefore consists in the novel construction and combination of parts, as will be hereinafter more fully described, and specifically pointed out in the claims.

I accomplish the purposes of my invention by means of the novel mechanism illustrated in the annexed drawings, wherein—

Figure 1 is a view of a hydrant with my improved valve set in the angle of the vertical and ground pipes. Fig. 2 is a side view of my improved valve casing or chamber, showing the means for securing the valve in its place. Fig. 3 is a top end view showing the stop-pin in the neck of the valve. Fig. 4 is a similar view showing the screw-threaded nuts which lock or adjust the valve in its seat. Fig. 5 is a sectional view taken through the line *xx* of Fig. 6, showing the drip-port; and Fig. 6 is a vertical sectional view taken through the line *yy* of Fig. 4.

The letter A represents the shell or casing, formed with a central conical chamber, *a*, which serves as a seat for the valve, and is provided with water ways or ports *b*, preferably three in number; but of course in this respect the capacity of the pipe may be taken into consideration, and the ports be more or less in number. The drip-port in the casing is shown at *c*, and extends downward and through the casing, and connects with a port cut in the valve, as hereinafter stated, and then terminates in the side port, *c'*, as shown in Fig. 5 of the drawings. On each end of the casing are cut screw-threads *d*, the lower set being left-

handed, in order that the operation of unscrewing the valve may be properly accomplished, and formed on the upper end about the bore is a circular wall, *e*, having a cut-away portion, *f*, between the walls of which the movements of the stop-pin *h* are limited, and by this means the turn of the valve is also limited. On the side opposite to the way *f* is a groove, *g*, cut in the wall *e*, serving the purpose for an inlet or outlet to set or withdraw the stop-pin, if necessary.

The letter B represents the valve, which is made conical and conforms to the dimensions of the conical chamber in the casing. This valve is chambered out at the base, substantially as seen at C in Fig. 6, and has ports *i* registering with the ports in the casing when turned for that purpose. The drip-port is shown at *j*, and this port registers with the ports *c* and *c'* in the casing. The upper end of the valve is provided with screw-threads, and has a hole, *k*, put through it at a point on a line with the base of the way in the wall on the casing, and in this hole is secured a pin, *h*, which projects over the way in the walls of the casing, being limited in its movements between these walls, and also limits the turn of the valve accordingly. The upper end of the extension or neck of the valve is turned down to receive a coupling-sleeve, D, which is secured to the valve by a pin, *m*, passed through both. On the screw-threaded extension or neck of the valve are two screw-threaded nuts, *u*, which secure the casing and valve at any desired degree of union, or they serve as means to "take up" the valve should it become worn.

In Fig. 1 I have shown an ordinary hydrant, the pipe *n* of which is secured to the casing of the valve, and the rod *o*, extending through it, is coupled to the extension of the valve, substantially as shown in dotted lines.

The connection and arrangement of the parts of my improved valve may be readily perceived by perusal of the description of the distinctive elements making up the operative whole; but it may be briefly stated that the valve is set in its casing, and then the stop-pin driven in place, after which the screw-nuts are put on the screw-threaded extension of the valve; then the coupling-sleeve put on and secured; then the hydrant-rod, and then the

pipe, when the whole may be screwed into the elbow-joint fixed to the ground-pipe below the surface, as seen in Fig. 1.

It will be observed that the hydrant may be unscrewed, and the valve taken off at the elbow and withdrawn without removing the pipe-casing or digging to get access to the valve.

Although I provide means for holding and regulating the valve tight in its seat, it will be seen that the pressure of the water acts to accomplish the same purpose.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The casing A, provided with means at both ends to connect it to the pipes, and formed with a central conical chamber extending from its base, and having water ways or ports extended vertically wholly within the walls thereof from the top and opening into the conical chamber, in combination with the conical valve B, fitted to the conical chamber of the casing and adjustably secured therein, and formed with the chamber C at its base, and provided with a series of water ways or ports adapted to be turned to register with or to

close the ports in the casing, substantially as described.

2. The casing A, provided with means at both ends to connect it to the pipes, and formed with a central conical chamber extending from its base, and having water ways or ports extended vertically wholly within the walls of the casing from its top, and opening into the conical chamber near the base thereof, and a vertical drip-tube, *c*, and side drip-tube, *c'*, in combination with the conical valve B, fitted to the conical chamber of the casing and adjustably secured therein, and formed with the chamber C at its base, provided with a series of ports or ways adapted to register with or to close the ports in the casing, and having the transverse drip-way *j* registering with the ways *c* and *c'* in the casing, substantially as and for the purpose set forth.

In witness whereof I have hereunto set my hand in the presence of two attesting witnesses.

CHARLES B. ANDREWS.

Attest:

C. W. FEW,
LEWIS REHR.