

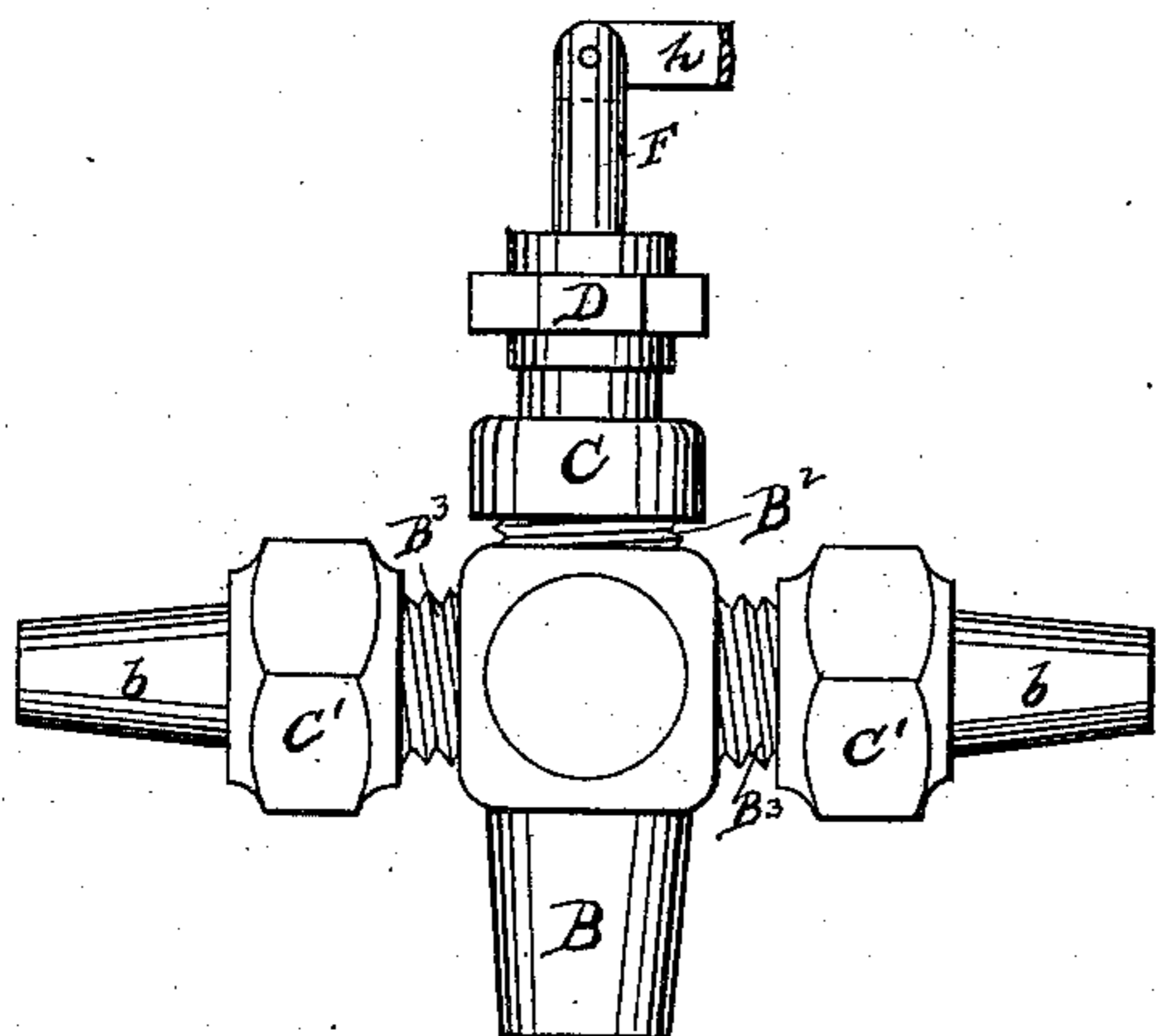
(No Model.)

J. HELTZLE.  
STOP AND WASTE COCK.

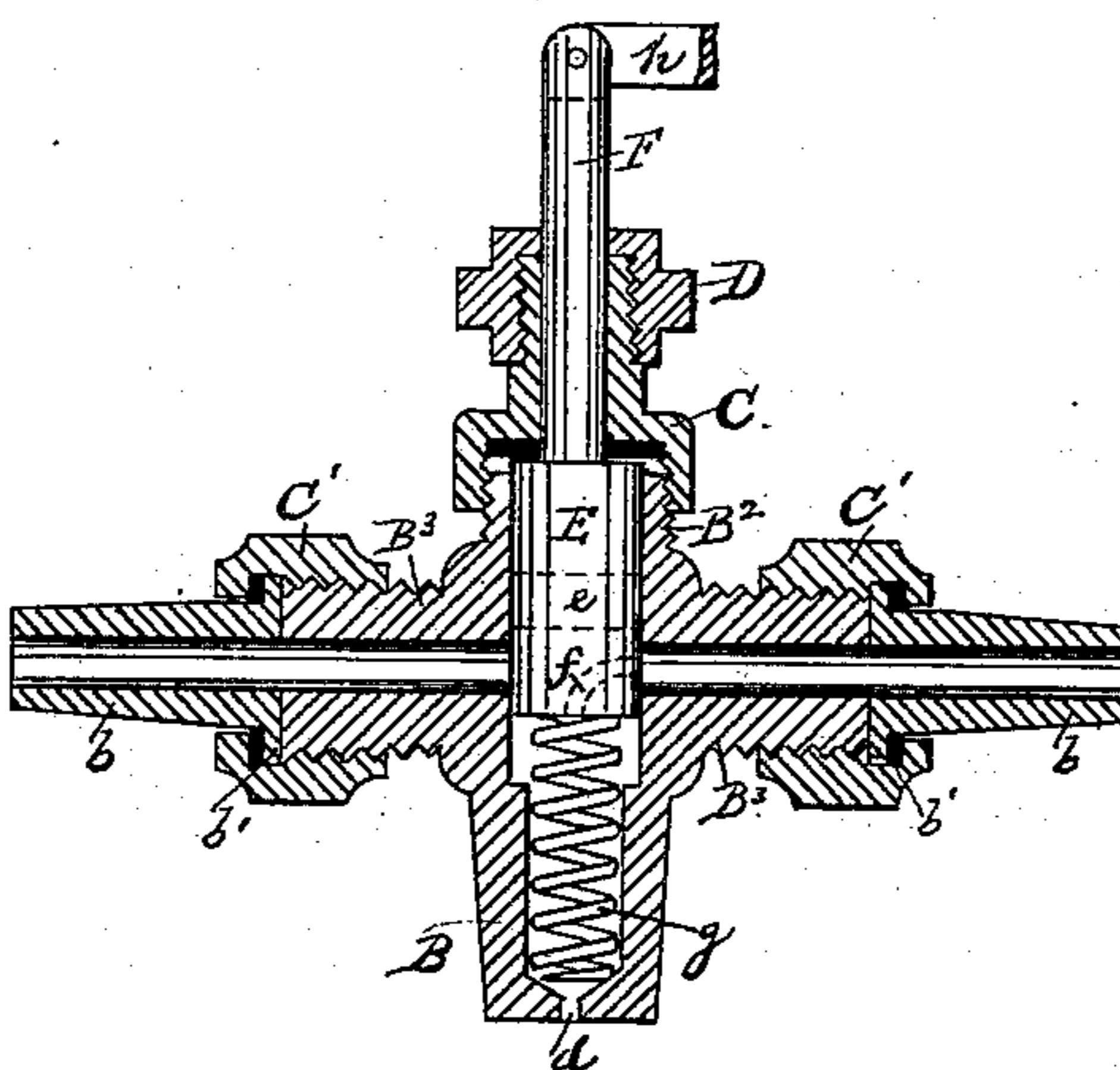
No. 389,652.

Patented Sept. 18, 1888.

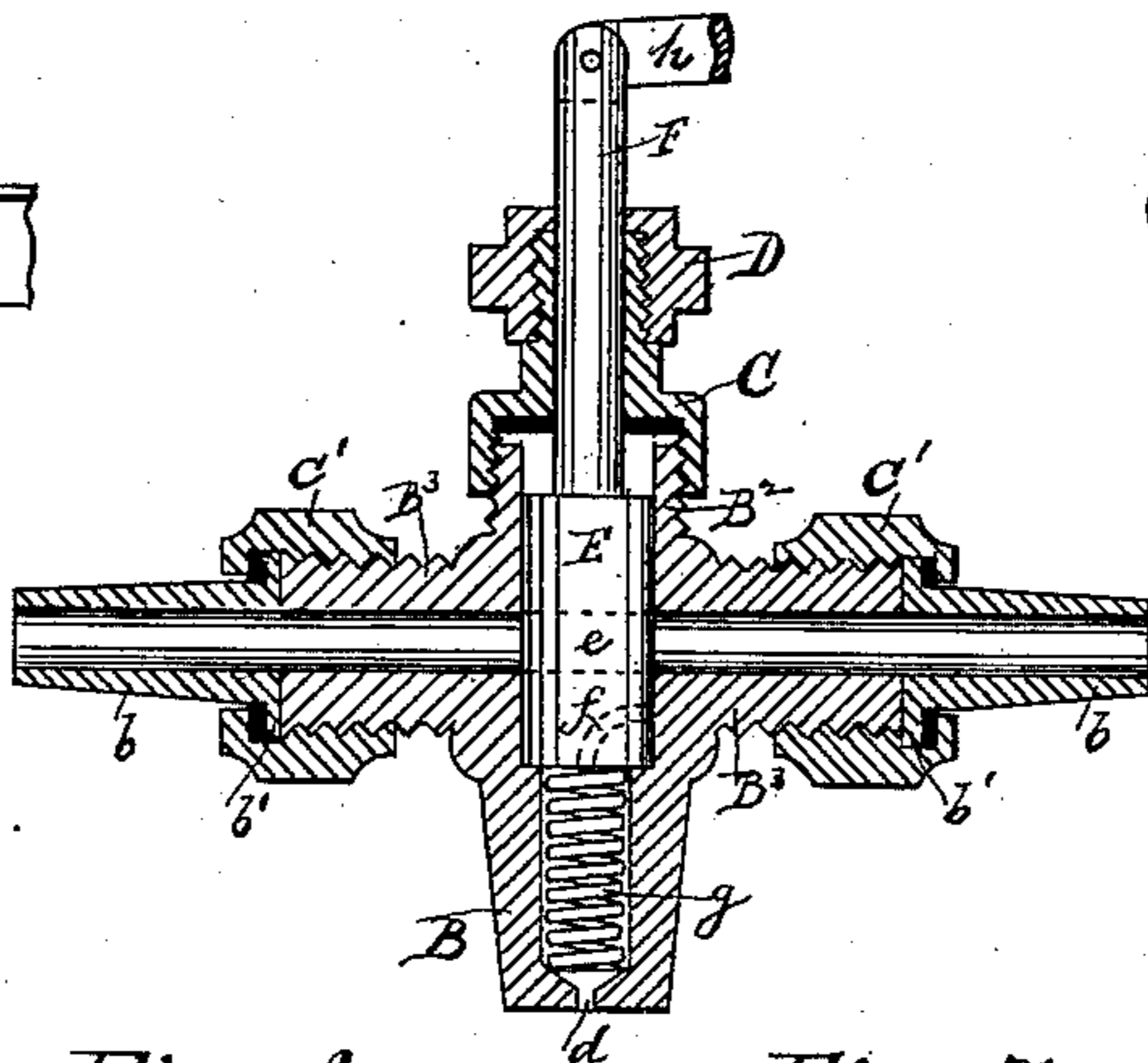
*Fig. 1.*



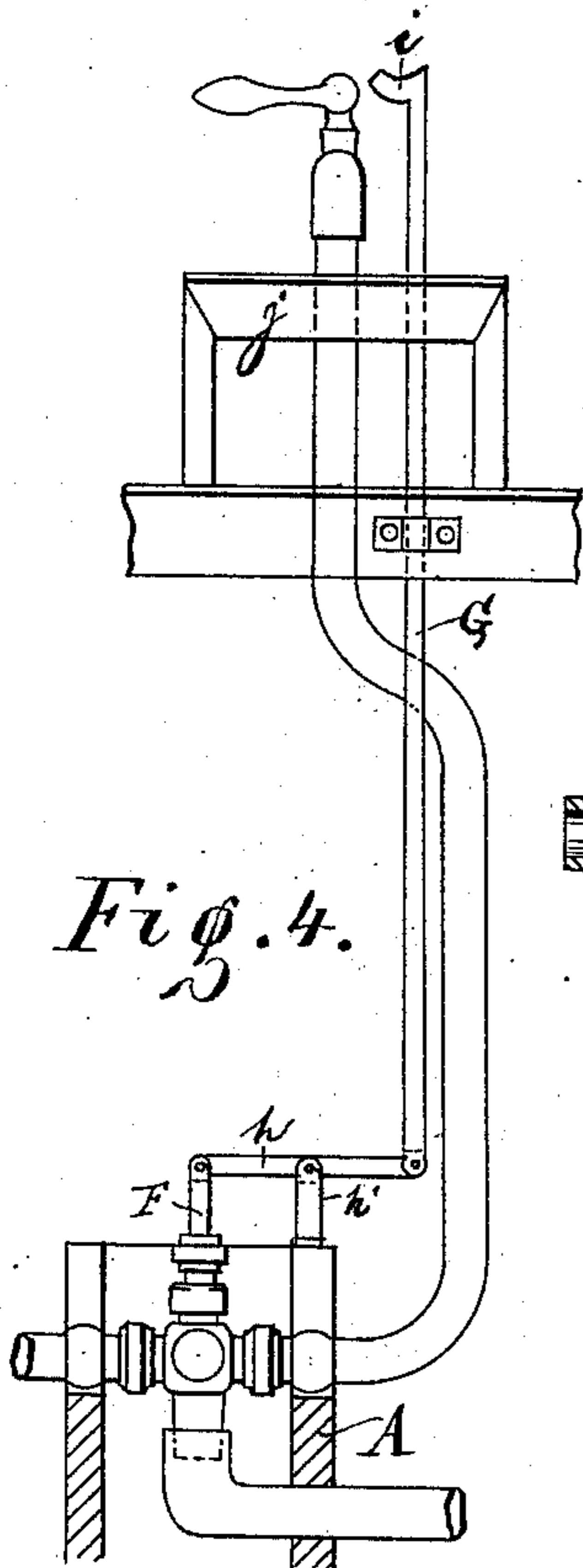
*Fig. 2.*



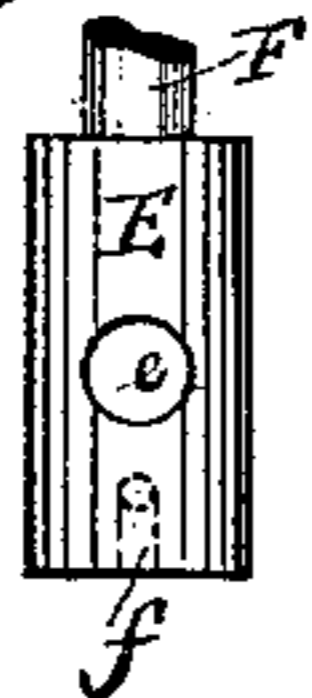
*Fig. 3.*



*Fig. 4.*



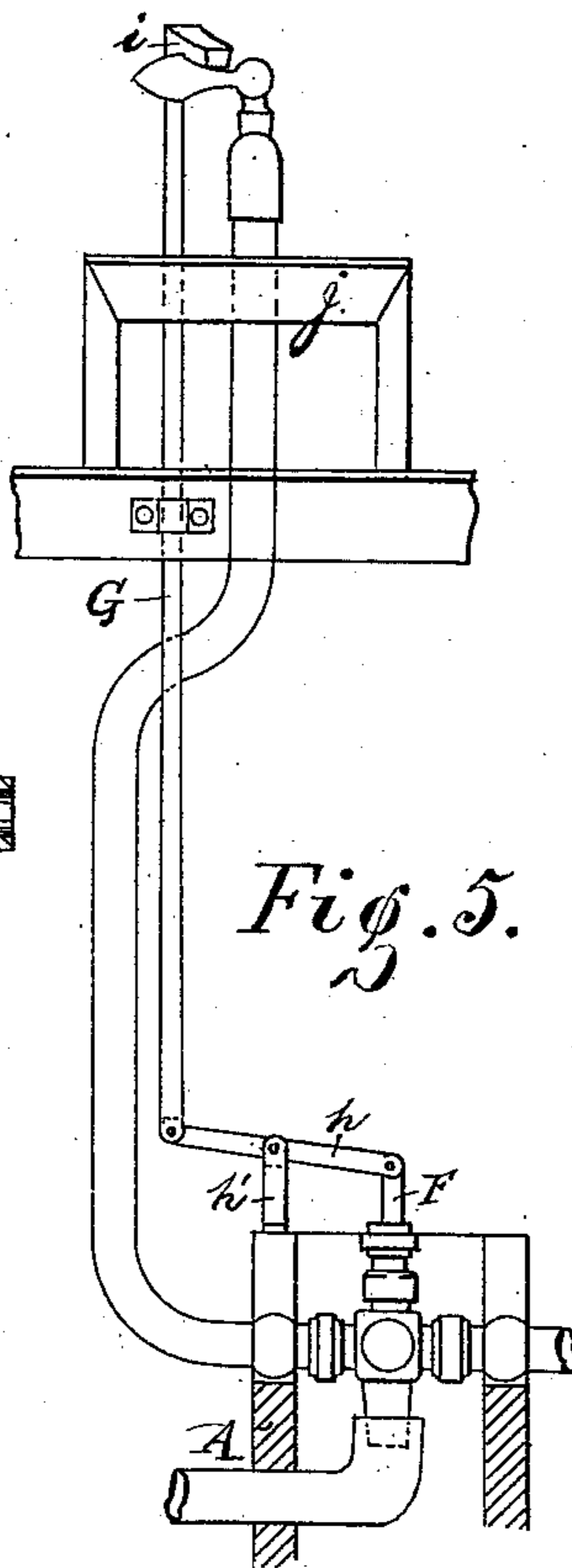
*Fig. 6.*



*Fig. 7.*



*Fig. 5.*



*Attest:*  
*August H. Zell,*  
*Charles H. Zell*

*Inventor:*  
*Julius Helzle*  
*per Herkel & Co*  
*attys.*

# UNITED STATES PATENT OFFICE.

JULIUS HELTZLE, OF ST. LOUIS, MISSOURI.

## STOP AND WASTE COCK.

SPECIFICATION forming part of Letters Patent No. 389,652, dated September 18, 1888.

Application filed September 27, 1886. Serial No. 214,695. (No model.)

*To all whom it may concern:*

Be it known that I, JULIUS HELTZLE, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented a new and useful Improved Stop and Waste Cock, of which the following is a specification.

My invention relates to improvements in stop and waste cocks, which are placed in cellars of buildings, having the inlet-water pipe connected at one end and water-supply for upper stories connected at the other end; and the object of my improvements is, first, to provide means for controlling the water-supply by automatic arrangement between my stop and waste cock and draw-cock of sink in upper stories; also, to disconnect the same, as will be explained hereinafter; second, to drain said supply-pipe of water to prevent freezing in cold weather, and, third, to provide ready means in upper stories, by means of which said supply-pipe can be drained of water, obviating the necessity of going to basement or cellar of a building, as usual in the old way. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a front view of my improved stop and waste cock. Fig. 2 is a sectional view showing valve with valve stem as seated upon spring for stoppage of inflow of water and the drainage of supply-pipe. Fig. 3 is a similar sectional view showing valve with valve-stem as depressed in its seat upon spring, bringing orifice of valve on line of orifice of supply for inflow of water through supply-pipe. Fig. 4 is a front view as applied in building, showing my automatic arrangement of rod and lever connected with stem of valve; also showing rod extended to upper story and placed beside draw-cock of sink, said rod having crook at its end, by means of which it is raised by turning the handle of said draw-cock. Fig. 5 is a similar view showing handle of draw-cock turned and engaged with crook of rod at its end, having raised the same, and by means of my automatic arrangement of rod and lever connected with stem of valve depressed the valve in its seat upon spring. Fig. 6 is a front view of valve with stem broken off at end. Fig. 7 is a plan view.

Similar letters refer to similar parts throughout the several views.

A is the box or housing.

B represents valve-body, cored out, as shown, having screw ends  $B^2$   $B^3$ , the screw-cap C, coupling D, valve E, and stem F, fitted to operate through the cap and its packing, as shown. To said stem F, I connect rod G, having crook  $i$  at its end, through lever  $h$ , turning on fulcrum  $h'$ , and extend same to upper story, placed beside draw-cock of sink  $j$ . The valve-stem F carries the valve E, seated upon spring  $g$ , having circular orifice  $e$  and channel  $f$  (shown in dotted lines, Figs. 2 and 3) arranged over each other, so that as valve E, through its stem F, is depressed upon spring  $g$  by the action of draw-cock of sink  $j$ , raising rod G and operating upon lever  $h$  through fulcrum  $h'$ , as seen in Figs. 3 and 5. Orifice  $e$  of said valve will range in line with orifice of supply-pipe, thereby allowing the inflow of water. Again, when, by the action of spring  $g$  and the release of draw-cock from crook  $i$  of rod G, operating upon lever  $h$  through fulcrum  $h'$  and stem F of valve E, said valve E is raised to its normal position, channel  $f$  presents its opening toward supply-pipe to be drained of its water, and valve at the same time shuts off water from inlet-pipe, as seen in Figs. 2 and 4. The water drained passes out at channel  $f$  of valve E through opening cored out of valve-body B for seat of spring  $g$  and small hole  $d$ , and may from thence be drained off by pipe connected with sewer, as shown in Figs. 4 and 5.

Screw ends  $B^3$  are for connection of water-supply pipes. Their threaded ends receive screw-caps C and its packing and sleeves  $b$ , said sleeves  $b$  having tapered ends and flange or shoulder  $b'$ . To said sleeves  $b$ , I solder supply-pipes at both ends.

To disconnect my automatic arrangement between stop and waste cock and draw-cock of sink, I depress the valve E through stem F in its seat upon spring  $g$ , so that its orifice  $e$  will be continuous with orifice of supply, as shown in Fig. 3, holding the same firmly in place by screwing down screw-cap C and coupling D, thereby allowing the continued inflow of water through supply-pipe to upper stories.

It is well known that the water-supply pipes of buildings are more or less placed in exposed places, and that the water contained therein is liable to freeze in the fall and winter season,

causing damage by the bursting of the pipes. It is therefore especially desirable, in extreme cold weather, both day and night, that said pipes should be drained at all times and water-supply thereto controlled. This I have achieved in times of fall and winter season by my automatic arrangement between stop and waste cock and draw-cock of sink, having, by means thereof, full control over water in supply pipes, and also drainage of same; also that at other times in spring and summer of the year, when the control of water and drainage of supply pipes becomes unnecessary, I can disconnect the same and render the same inoperative.

What I claim is—

1. The combination of the valve E, the stem

F, spring *g*, with draw-cock of sink *j*, operating upon the stem F and the valve E by rod G, with crook *i* at its end through lever *h* and fulcrum *h'*, as and for the purpose set forth.

2. The combination, with the valve-stem of a stop and drain cock of the class described, and the valve of a supply-pipe connected therewith, of a lever connected to the valve-stem, and a rod connected to the lever and having a crook, *i*, arranged in the path of the operating-lever of said valve, substantially as specified.

In testimony of said invention I have hereunto set my hand.

JULIUS HEITZLE

Witnesses:

AUGUST E. ZELL,

JOHN W. HERTHEL.