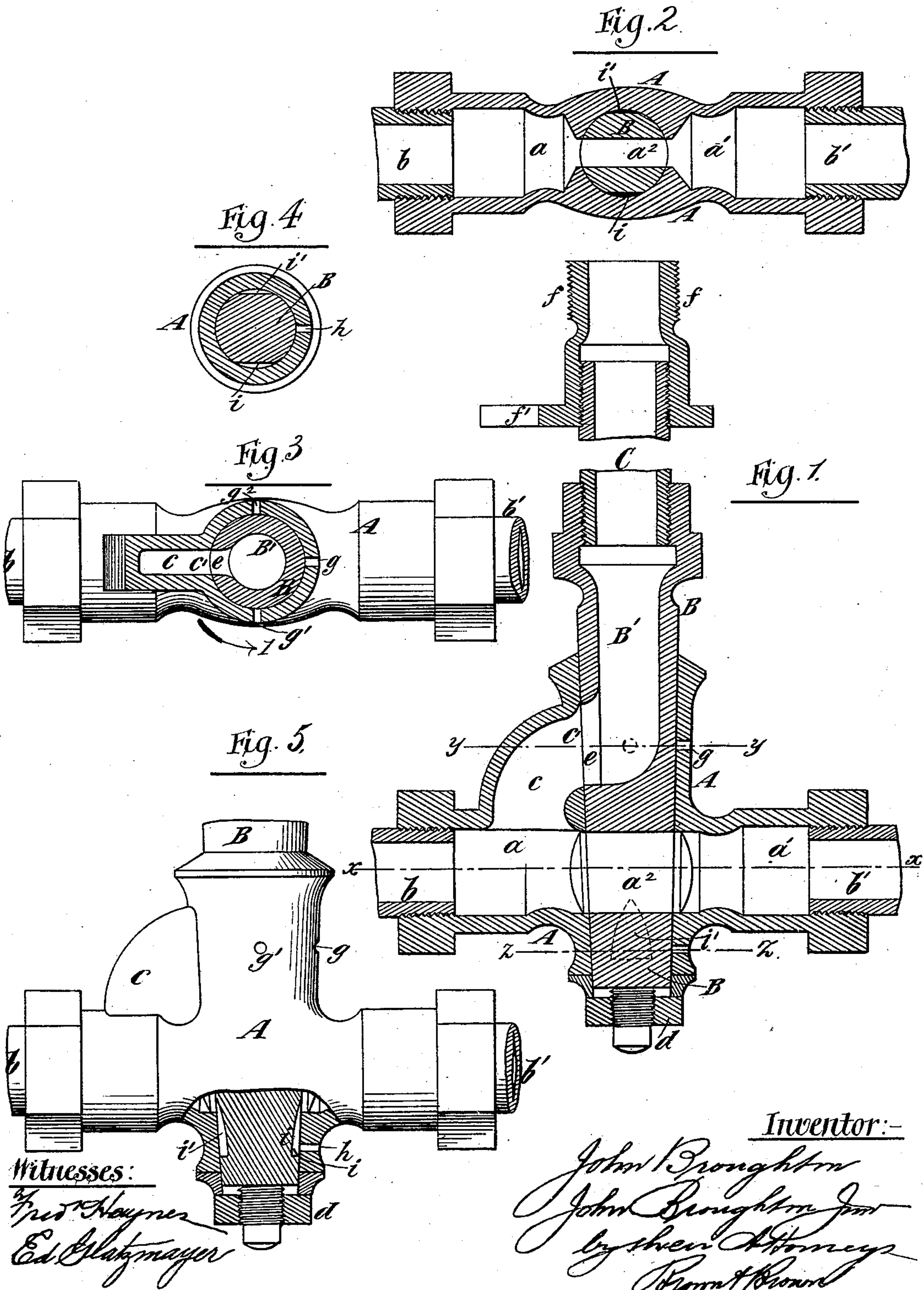


(No Model.)
J. BROUGHTON & J. BROUGHTON, JR.

Stop Cock.

No. 236.543.

Patented Jan. 11, 1881.



UNITED STATES PATENT OFFICE.

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SAID BROUGHTON, JR., ASSIGNOR TO SAID BROUGHTON.

STOP-COCK.

SPECIFICATION forming part of Letters Patent No. 236,543, dated January 11, 1881.

Application filed June 3, 1880. (No model.)

To all whom it may concern:

Be it known that we, JOHN BROUGHTON and JOHN BROUGHTON, Jr., both of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Stop-Cocks, of which the following is a specification.

This invention relates to house-service cocks with street-washer connections in which the plug and shell, in addition to the usual straight-way port or opening through them, are provided with other ports or openings, by which water, in addition to the house-service supply, may be discharged upwardly through the plug and a stand-pipe attached thereto for a street-washer, and forming the stem by which said plug is turned.

The invention consists in certain novel details of construction, whereby the cock-plug is adapted to be turned a half-turn in either direction to shut off the water from the street and open the house-service port or opening without admitting any water to the stand-pipe; and also in a novel arrangement of waste openings or vents, to be fully hereinafter described.

In the accompanying drawings, Figure 1 represents a vertical section through a combined stop-cock and street-washer embodying our invention. Fig. 2 represents a horizontal section thereof on the dotted line *xx*, Fig. 1. Fig. 3 represents a similar section on the dotted line *yy*, Fig. 1. Fig. 4 represents a similar section on the dotted line *zz*, Fig. 1; and Fig. 5 represents a side view, partly broken away, and having the plug turned at right angles to the position which it occupies in Fig. 1.

Similar letters of reference designate corresponding parts in all the figures.

A designates the shell of a combined stop-cock and street-washer, and B designates the plug thereof, which is hollow or has a cavity, B', in its upper part, and has extending upwardly from it a stand-pipe, C, through which the street-washer is supplied, and which also serves the purpose of a stem or rod to turn the plug. The cock is constructed with a water way or passage, *a a'*, transversely through the shell A, and a corresponding water way or passage, *a²*, extending transversely through the plug B; and communicating with the water way or passage *a a'* in the shell are pipes *b b'*,

the first, *b*, leading from the main, and the latter, *b'*, leading to the house or outlet. The shell A of the cock is also constructed with a passage, *c*, leading from the water-inlet *a* upward, and terminating in a port, *c'*, in the plug-seat above the transverse water way or passage *a a'*.

The plug B is retained in its taper-seat in the shell A by a nut, *d*, and leading from the cavity B' in the plug B is a port, *e*, which ranges with the port *c'* in the shell.

It will be observed that the stand or delivery pipe C forms a continuation of the cavity B' in the plug, is screw-threaded at the top *f*, to provide for the attachment of a hose, and is provided with an index or pointer, *f'*, to indicate the position of the plug in the shell.

As illustrated in Fig. 1, the plug is turned so that the water may flow through the ways or passages *a a' a²* to the house, and also through the way or passage *c*, cavity B', and the ports *c' e*, and upward through the stand or delivery pipe C to the street-washer; but it is obvious that if the plug be turned half-round in the shell the flow of water to the house may continue; but the flow of water through the stand or delivery pipe C to the street-washer will be shut off.

It will also be understood that the turning of the plug B a quarter of a turn in either direction from the position shown in Fig. 1 will close both the water way or passage *a²* through the plug and the port *e*, through which water passes from the passage *c* and port *c'* and stand or delivery pipe C to the street-washer.

It will also be understood that inasmuch as there is only a single port, *e*, in the plug in range with the port *c'* in the shell, there is no danger of the water being admitted to the cavity B' in the plug and into the stand-pipe C in turning the plug half a turn in either direction from the position shown in Fig. 1, in order to shut off the flow of water to the street-washer and permit the flow to the house alone, and that the water is admitted to the stand or delivery pipe C only when the plug B occupies the position shown in Fig. 1.

It is desirable that whenever the flow of water to the street-washer is shut off the water in the stand-pipe should flow out through a vent or waste-opening; and, to provide for vent-

ing the said pipe whenever the flow of water thereto is shut off, I form in the shell A three waste-openings, g g' g^2 , all in range with the port e in the plug.

5 When the plug is turned so as to shut off the flow of water to the street-washer and permit the flow to the house alone the port e is opposite the waste-opening g . When the plug is turned to the right, in the direction of the
10 arrow 1, Fig. 3, to shut off the supply of water to both the house and street, the port e in the plug is opposite the waste-opening g' in the shell, and when the plug is turned in the opposite direction, also to shut off the supply of
15 water to both the house and street, the port e in the plug is opposite the waste-opening g^2 in the shell.

In order to enable the water in the pipe b' , leading to the house, to waste when the plug
20 B is turned to the position shown in Fig. 5, to shut off the supply to the house, we provide in the shell a waste-opening, h , (see Figs. 4 and 5,) and in the plug B, in range with said waste-opening h , are two waste-notches i i' . When the
25 plug is turned so as to bring the port e therein opposite the waste-opening g' in the shell, the waste-notch i in the plug will be opposite the waste-opening h in the shell, as shown in Fig. 5; and when the plug is turned so as bring the
30 port e in the plug opposite the waste-opening g^2 in the shell, the waste-notch i' in the plug will be opposite the waste-opening h in the shell. By this means we provide for wasting the water in the pipe b' through the waste-notch i or i' and
35 through the waste-openings h , whether the plug is turned to the right or left, to shut off the flow of water to the house.

In case the advantage of being able to turn the plug in either direction, to shut off the wa-
40 ter from the street-washer or both the house and street-washer, should not be clearly understood, we would remark that it is because the wrench applied to the upper end of the stand-pipe C to turn it might be prevented from be-
45 ing turned in one or the other direction by the hinged cover of the sidewalk-box used in street-washers, or the box might be placed in such a position that the wrench could be turned in one direction only; and for this reason it is
50 very desirable to construct the cock so that it may be turned in either direction with equal facility.

It will be clearly understood that by our invention we provide for the plug of the cock being turned half-round in either direction from
55 the position which it occupies when both the street-washer and house are supplied with water, without admitting any water to the hollow plug and stand or delivery pipe, and that the perfect wastage of water from both the said
60 pipe and the house-supply pipe is provided for whenever the supply of water to the street-washer or both the street-washer and house is shut off.

What we claim as our invention, and desire
65 to secure by Letters Patent, is—

1. The combination, in a cock, with a shell having a transverse water-way, a port above said water-way, and a passage from the inlet
70 side of said water-way to said port, of a plug having a transverse water-way corresponding to that in the shell, and a cavity open at the head and having a single port ranging with the port in the shell, whereby provision is afforded
75 for turning the plug a half-turn in either direction from the position which it occupies when both its port and transverse water-way are open without admitting water to the cavity in said plug, substantially as specified.

2. The combination of the shell A, con-
80 structed with the transverse water-way a a' , the passage c , the port c' , and the waste-openings g g' g^2 , of the plug B, constructed with a central cavity, B' , the single port e , and the transverse water-way a^2 , and which may be
85 turned in either direction to bring its port e opposite either of the waste-openings g g' g^2 , substantially as specified.

3. The combination of the shell A, constructed with the transverse water-way a a' ,
90 the passage c and port c' , and the waste-opening h , of the plug B, constructed with a central cavity, B' , the single port e , and transverse water-way a^2 , and the waste-notches i i' in opposite sides, and which may be turned to
95 bring either of said notches opposite the waste-opening h , substantially as specified.

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Witnesses:

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E. P. JESSUP.