

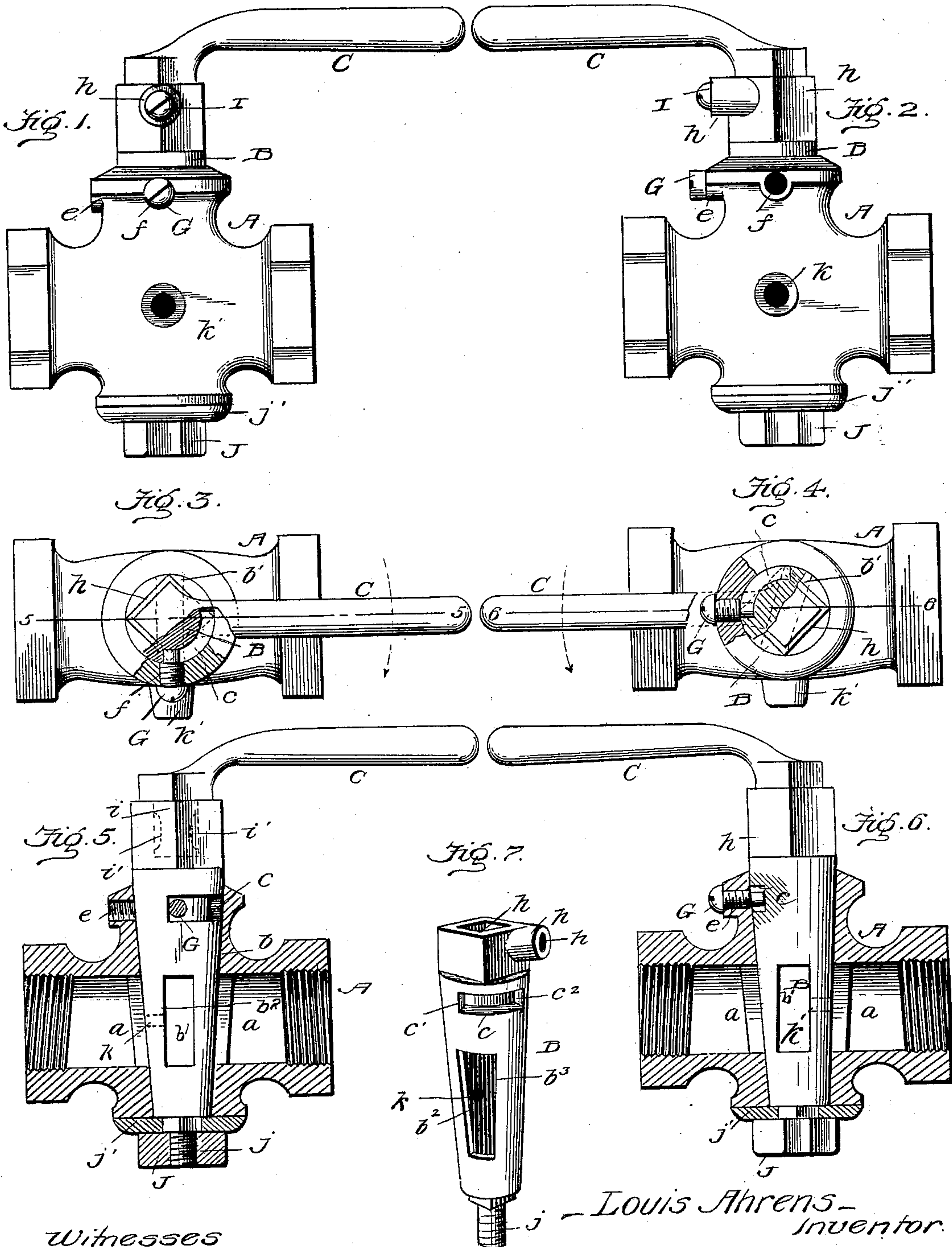
(No Model.)

L. AHRENS.

RIGHT OR LEFT STOP AND WASTE COCK.

No. 600,131.

Patented Mar. 8, 1898.



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UNITED STATES PATENT OFFICE.

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RIGHT OR LEFT STOP AND WASTE COCK.

SPECIFICATION forming part of Letters Patent No. 600,131, dated March 8, 1898.

Application filed July 13, 1896. Serial No. 599,033. (No model.)

To all whom it may concern:

Be it known that I, LOUIS AHRENS, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Right or Left Stop and Waste Cocks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in stop and waste cocks of that class which employ a tapered turning plug fitted in a correspondingly-shaped seat within a suitable shell or casing; and the object of my improvement is to provide a simple and inexpensive construction whereby the cock can be used interchangeably as a right or left hand stop and waste cock by simply changing the position of a readily-accessible stop-screw and reversing the position of a handle which is detachably attached to the turning plug.

To the accomplishment of these ends the invention consists in a novel construction of the plug with a stop-groove peculiarly arranged on the cylindrical surface of the plug and in relation to the transverse liquid-port therethrough, combined with a casing or shell having seats lying in planes at right angles to each other and corresponding to the plane of the stop-groove, an adjustable stop detachably fitted in one of the seats to engage with the stop-groove in the plug and adapted to be fitted in the other seat, and a reversible handle attached to the turning plug, all as will be hereinafter fully described and claimed.

To enable others to understand my invention, I have illustrated the preferred embodiment thereof in the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is an elevation of a stop or waste cock constructed in accordance with my invention and showing the adjustable stop placed to adapt the cock to be used in one position. Fig. 2 is a similar view with the adjustable stop reversed to enable the cock to be used in another position. Fig. 3 is a plan view, partially in section, of the cock adjusted and adapted for service as shown by

Fig. 1. Fig. 4 is another plan view, partly in section, with the parts adjusted as in Fig. 2. Figs. 5 and 6 are vertical sectional elevations on the planes indicated by the dotted lines 5 5 and 6 6, respectively. Fig. 7 is a detail perspective view of the turning plug removed from the shell or casing.

Like letters of reference denote corresponding parts in all the figures of the drawings, referring to which—

A indicates the shell or casing. B is the plug fitted in the seat *b* of said shell or casing in the usual or any preferred way, and C is the adjustable handle detachably fastened to the plug B. The plug is preferably of tapered form and circular in cross-section, as usual, and it is formed with a transverse fluid-port *b'*, which is adapted to coincide or aline with the fluid-passage *a* in the shell or casing, as is usual in stop or waste cocks.

One of the features of my invention is the stop groove or recess *c*, which is formed in the cylindrical surface of the plug and at a suitable point in the length of the plug, preferably above the fluid-port *b'* therein. It is noted that the fluid-port *b'* in the plug extends through the plug and opens through the opposite faces or sides of the same. The stop-groove *c* extends only part way around the plug, and I arrange it so that one end, *c'*, of the groove terminates on a line within the edge *b²* of the port *b'*, where it opens through one side of the plug, while the other end, *c²*, of the groove or recess *c* does not extend around to the port *b'*, where it opens through the opposite side of the plug, but, on the contrary, said end *c²* of the groove *c* terminates within and out of line with the edge *b³* of the port *b'*, where it opens through said side of the plug. The ends *c'* *c²* of the groove *c* form abrupt walls or terminations of the groove in order to provide stop-shoulders against which the stop device is adapted to abut when the plug is turned in adjusting the same within the shell A. Said shell A is provided with two transverse seats *e f*, which lie at right angles to each other, one of the seats, *e*, being in a plane in the direction of the longitudinal axis of the shell, while the other seat, *f*, is in a plane at right angles to the longitudinal axis of the shell. These seats are preferably

embodied in the form of screw-threaded apertures tapped in the shell A, near its upper end, in order that the stop-screw G may be screwed into and held in said apertured and threaded seats *e f*. The threaded seats are formed in the shell in the horizontal plane of the groove *c* in the plug, and the stop-screw G is of such length that when it is screwed into either of the seats *e* or *f* its inner smooth end fits in the groove *c*, so as to abut against the terminals or shoulders *c' c²* thereof, and thus arrest the turning movement of the plug.

When the stop-screw G is fitted in the seat *e* and works in the groove *c* of the plug, as shown by Figs. 1 and 3, the handle and plug may be turned to the left-hand side of the shell or casing, and the screw is adapted to abut against the ends *c' c²* of the groove when the plug is turned to bring the port *b'* therein into and out of alinement with the liquid-passage through the shell, whereby the stop-screw G limits the plug to a quarter-turn in the shell and arrests the turning movement of the plug at the proper points to open and close the cock. By changing the position of the stop-screw—that is, by fitting it in the seat *f* of the shell, as shown by Figs. 2 and 4—the handle and plug may be turned to the right-hand side of the shell or casing, in which position of the screw it is adapted to abut against the ends *c' c²* of the stop-groove when the plug is turned back and forth to bring the port *b'* into and out of alinement with the liquid-passage in the shell, so that in this position the stop-screw G also limits and arrests the turning movement of the plug at the proper points to open and close the cock. It will therefore be understood that by the described construction and arrangement of parts the cock may be used either as a right or left hand cock by simply changing the position of the stop device, which, as will be noted, is readily accessible at all times, and in addition to permitting of this adjustability or adaptation of the device the screw G serves to limit the turning movement of the plug in either direction, no matter whether it is used as a right or left cock.

The handle C is reversible on the plug to enable its position to be changed, according as the cock is used either right or left. The upper or larger end of the cock is extended or prolonged and formed with an angular or polygonal socket *h* and with a transverse boss and threaded aperture *h'*. The handle has an angular or polygonal stem *i*, which is adapted to be fitted snugly in the socket *h*, and in opposite corners of this stem *i* are the notches *i'*, either of which may be brought

opposite to the aperture *h'*, according to the adjustment of the handle. In this aperture *h'* is screwed a retaining-screw I, the inner end of which fits in one of the notches *i'* to hold the handle securely attached to the plug.

The lower or smaller end of the plug B has a threaded stem *j*, which passes through the shell, and on this stem is fitted a washer *j'* and a nut J, which presses the washer against the shell or body and draws the plug B firmly to its seat *b* in the shell or body.

It is thought that the operation and advantages of my invention will be readily understood and appreciated by those skilled in the art from the foregoing description, taken in connection with the drawings.

If desired, the plug B may be provided with the vent-port *k* and the shell A may have the vent exit-opening *k'*, through which waste liquid may escape when the plug is turned to a position to bring the port *k* into alinement with the opening *k'*.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a cock or faucet, the combination of a shell or body having stop-seats arranged in planes at right angles to each other, a plug seated in said shell or body and provided, in addition to its fluid-port, with a stop-groove which coincides with either of said stop-seats, an adjustable stop fitted in one stop-seat to engage the groove and adapted to fit in the other stop-seat to also engage with the stop-groove, and a reversible handle connected with said plug, as and for the purposes described.

2. In a right or left cock, the plug B provided, in addition to the fluid-port *b'*, with the stop-groove *c* terminating in abrupt shoulders *c', c²*, the stop-groove extending around the plug from a point nearly opposite one edge of the port *b'* where it opens through one side of the plug and having its opposite end terminating on a plane within and to one side of the opposite end of said port *b'* where it opens through the opposite face or side of the plug, combined with a body or shell having threaded seats lying at right angles to each other and in the plane of the stop-groove, a stop-screw G adapted to fit in either threaded seat of the body, and a reversible handle, as and for the purposes described.

In testimony whereof I affix my signature in presence of two witnesses.

LOUIS AHRENS.

Witnesses:

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