W. D. ABBATT.

Hot, Cold and Waste Water-Cock.

No. 209,539. Patented Nov. 5, 1878.

Fig. 1.

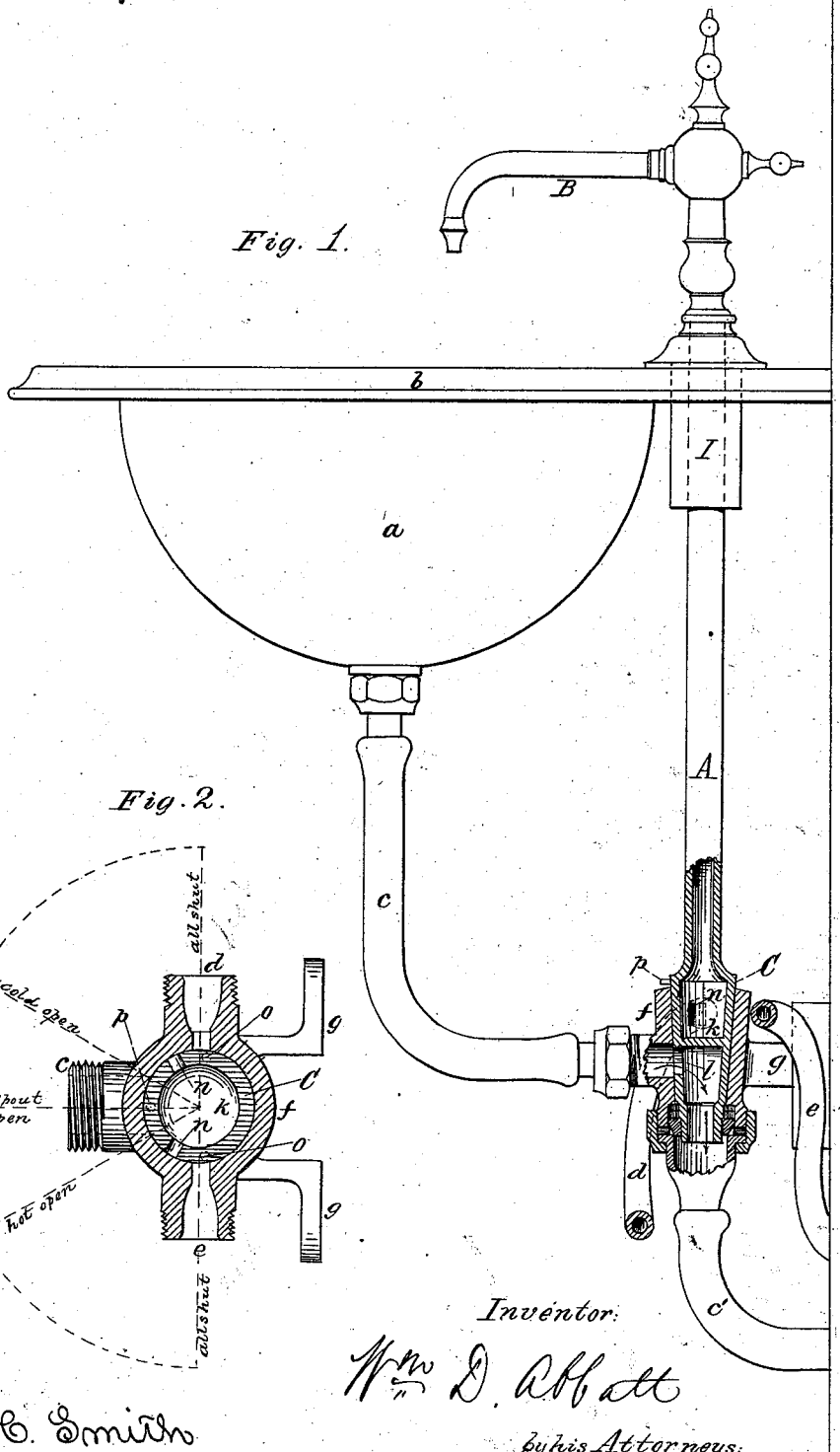
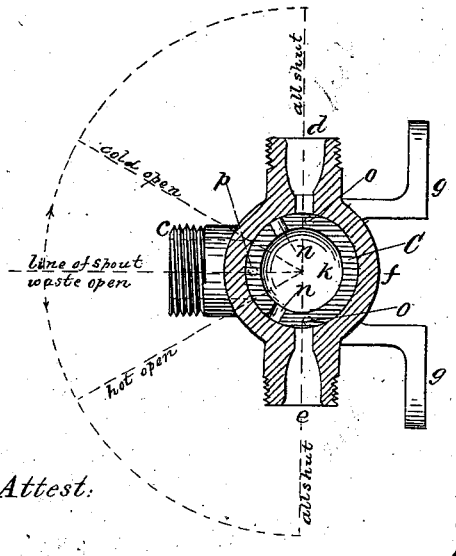


Fig. 2.



Attest:

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WILLIAM D. ABBATT, OF WEST CHESTER, NEW YORK.

IMPROVEMENT IN HOT, COLD, AND WASTE WATER COCKS.

Specification forming part of Letters Patent No. **209,539**, dated November 5, 1878; application filed September 7, 1878.

To all whom it may concern:

Be it known that I, WILLIAM D. ABBATT, of West Chester, Westchester county, New York, have invented certain new and useful Improvements in Combination Hot, Cold, and Waste Water Cocks for Wash-Basins, &c., of which the following is a specification:

My invention consists in the special construction of the valve-plug, as hereinafter described and claimed.

Figure 1 of the annexed drawings presents an elevation of my improved combination-valve applied to a wash-basin, a portion of the valve proper being shown in section. Fig. 2 is a sectional plan of the valve on line *x x* of Fig. 1.

In the drawings, *a* indicates the basin; *b*, the supporting-slab thereof. *c* is the branch of the waste-pipe leading from the basin to the valve, and *c'* the branch which extends from the valve to the sewer. *d* is the cold-water, and *e* the hot-water, pipe. *f* indicates the fixed cylinder or casing of the valve, which is provided with projecting lugs *g g*, by which the valve is rigidly attached to the wall or other fixed situation, as shown. A is the stem of the valve, which rises through the slab *b*, and is supported in a nice-fitting socket, I, fixed in the slab, and in which the stem is free to turn. The upper end of the stem terminates in the lateral discharge-spout B, which is rigid with the stem and forms the operating-handle thereof. The spout and stem are hollow throughout, as indicated, and the stem terminates at the bottom in the hollow conical valve-plug C, which fits in the conical bore of the valve-cylinder *f*. The hollow valve-plug is formed with a central transverse partition, *k*, as shown, which closes the bottom of the bore of the valve-stem, and forms the divisions between the waste and hot and cold water connections. The waste-pipe connects with the valve just below this partition, as shown, and the plug of the valve is perforated with a lateral hole, *l*, just beneath the partition, which coincides with the opening of the waste-pipe when the spout of the stem is placed in line with the waste-connection, as seen in Fig. 1 and indicated by dotted line in Fig. 2. The waste therefore enters the lower hollow of the plug through the hole *l*, and escapes axially through the open end of the plug into the sewer-connection *c'*. When the valve-plug makes a quarter-turn in either direction, as indicated by the diametric line in Fig. 2, the wasteway becomes closed, thus completely shutting off all communication to or from the sewer, and hence preventing the rise of any gas or odor therefrom. The hot and cold water pipes connect with the valve above and at right angles to the waste-pipe, as shown, and diametrically opposite to each other. The inlet-opening of the water-pipes in the valve is reduced to a narrow slit, as seen in Fig. 1, which opens toward the valve-plug above the partition *k*, while the plug is provided with corresponding slits *n n*, both arranged slightly to one side of the diameter of the plug, as seen in Fig. 2, so that when the wasteway is open both water-ways will be closed, as indicated. A partial rotation of the valve, however, one way or the other, as indicated by the radial lines in Fig. 2, causes either the hot or cold water way to be opened, thus admitting the hot or cold water to the hollow of the plug, from which it rises through the tubular bore of the stem, and discharges from the spout into the basin, as will be readily understood.

The tubular valve-stem A, with its spout B and valve-plug C, is preferably cast in one continuous piece, and the lower end of the valve-plug is provided with the usual split ring and nut to hold it in place, as seen in Fig. 1.

A pin, *p*, projecting from the top of the valve-plug in line with the wasteway, strikes against diametric stops on the casing, (indicated at *o o*, Fig. 2,) which limits the movement of the valve, and determines the correct position of complete shut-off of both waste and water ways, which occurs when the valve is turned to the limit of its semicircular movement in either direction.

It will thus be seen that a single valve controls the flow of hot or cold water, and also the discharge of the waste, as well as serving to completely close the waste-pipe against the back-flow of liquids or gases, thus securing important sanitary advantages.

It will also be seen that the valve-stem, discharge-pipe, and operating-handle are com-

prised in one single part, thus securing great simplicity of construction and operation, compactness of form, and economy of manufacture.

I have shown my valve applied to wash-basins; but it will be understood that it is equally fitted for other applications.

What I claim as my invention is—

A multi-way valve formed with a hollow rotatable valve plug and stem, through which the discharge of the valve takes place, the said valve-plug being constructed with a transverse partition, *k*, and with water-ways entering the side of the plug above the partition and discharging upwardly through the hollow stem, and with a wasteway entering the side of the plug below the partition and discharging downward through the open end of the plug, so arranged that the water or waste ways may be opened or closed by partial rotations of the hollow stem and plug, substantially as shown and described.

WM. D. ABBATT.

Witnesses:
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W. H. C. SMITH.