G. E. POTTER.

Waste-Pipe Connection for Wash-Basins, &c.

No. 218,400. Patented Aug 12, 1879.

Fig 1

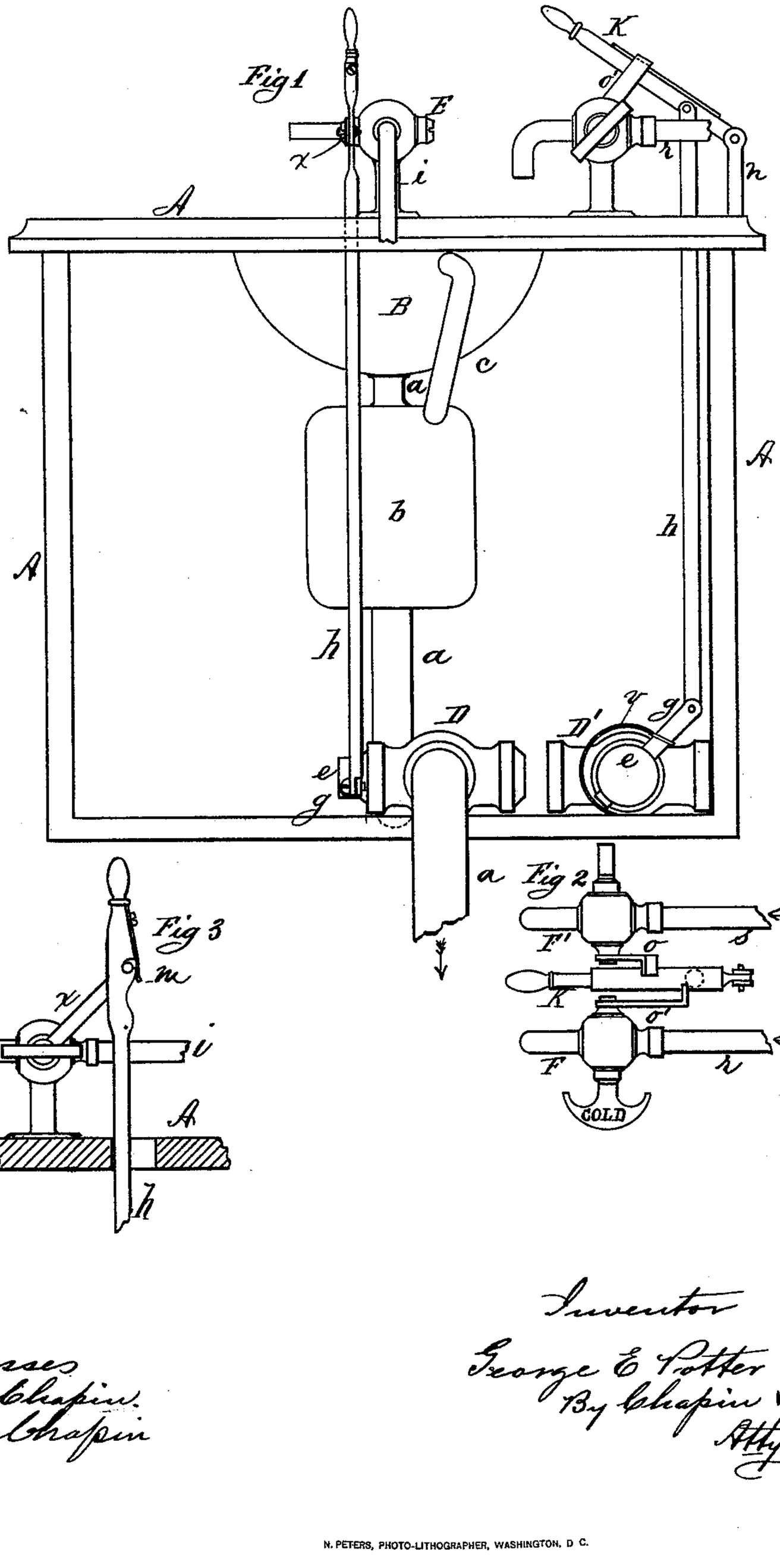

Fig 2

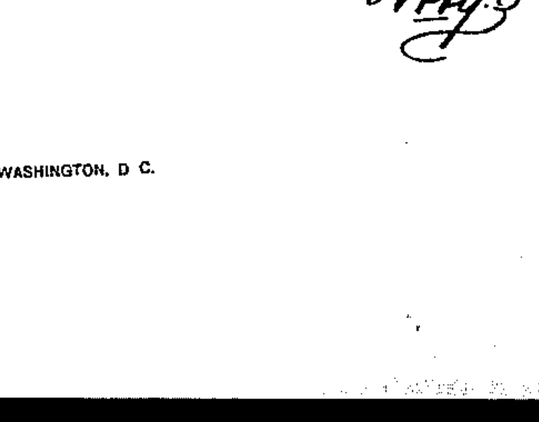

Fig 3

Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE E. POTTER, OF SPRINGFIELD, MASSACHUSETTS, ASSIGNOR OF ONE-HALF HIS RIGHT TO EVERETT H. BARNEY, OF SAME PLACE.

IMPROVEMENT IN WASTE-PIPE CONNECTIONS FOR WASH-BASINS, &c.

Specification forming part of Letters Patent No. **218,400**, dated August 12, 1879; application filed April 10, 1879.

To all whom it may concern:

Be it known that I, GEORGE E. POTTER, of Springfield, county of Hampden, and State of Massachusetts, have made new and useful Improvements in Waste Pipe Connections for Wash-Basins and Water-Closets, and in devices for operating the same, which improvements are fully set forth in the annexed specification, and in the accompanying drawings.

The object of my invention is to prevent the escape of sewer-gas into buildings through the waste-pipes connecting sinks, wash-basins, bath-tubs, and water-closets with sewers; and it consists in connecting stop-cocks in the lines of the aforesaid waste-pipes, and so connecting the plugs of said stop-cocks with the faucets through which water is drawn into wash-basins, sinks, and bath-tubs, or discharged into water-closet pans, that simultaneously with the opening and closing of said faucets the said plugs are operated to be turned to open and close the passage-way through said waste-pipes.

Referring to the drawings, which consist of three figures, Figure 1 is a rear elevation of a wash-basin stand, illustrating my improvements as applied thereto, showing devices for operating a single faucet and those for hot and cold water combined, with a stop-cock in the waste-pipe. Fig. 2 is a plan view of the hot and cold water basin faucets and that portion of the waste-pipe-cock operating devices therefor shown above the top of the stand at the right in Fig. 1. Fig. 3 is a side elevation of a single basin-cock connected with a cock in the waste-pipe. Stop-cock D′, in Fig. 1, is the same as that lettered D, with the addition of spring *v*, and illustrates a side view of cock D, showing its lever and connecting-rod connection with the opening devices operated by two basin-faucets.

In the drawings, A designates the top and sides of the basin-stand. B is the basin. *a* is the waste-pipe connected to the basin. *b* is a water-receptacle interposed in pipe *a*. *c* is an overflow-pipe. D is a stop-cock in waste-pipe *a*. D′ is a side view of stop-cock D. *e* is the plug to stop-cock D. *g* is a lever attached to the end of plug D, at a right angle to its axis. *h* is a connecting-rod pivoted to the end of lever *g* and to a lever, *x*, attached to the plug of faucet E, or pivoted to lever K, depending upon the fitting up of the basin with one or more faucets. E is a single faucet for cold water. *i* is a supply-pipe to faucet E. *m* is a spring covering a pivot-slot on rod *h*. F and F′ are two faucets, (hot and cold water,) standing side by side on stand A. K is a lever pivoted on a post, *n*, on stand A, and arranged to swing between faucets F F′. *o o′* are crank-shaped levers attached to the plugs of faucets F and F′. *r* is a supply-pipe to faucet F, and *s* to faucet F′. *v* is a spring for shutting cock D′ when lever K is released.

Like letters refer to like parts in the several figures.

In adapting my improvements to wash-basins, I set the latter in the usual way, but insert the water-receptacle *b* in the waste-pipe *a* leading therefrom, and conduct the overflow-pipe *c* into said receptacle. Below said receptacle, and between it and stop-cock D, an ordinary trap may be formed in the waste-pipe, or not, as may be deemed best.

A stop-cock of ordinary construction may be employed in the waste-pipe, having inserted in the outer end of its plug, transversely, a lever, *g*, by which a rotary motion is given to said plug.

When the basin is provided with only a single faucet, E, I attach to the plug of said faucet a lever, *x*, at a right angle to its axis.

Having fitted the above-named parts as described, I pivot a connecting-rod, *h*, to said levers *g* and *x*, so that when the plug to faucet E is rotated the plug to stop-cock D will rotate in like manner.

I provide a means for disconnecting rod *h* from lever *x* on faucet E, as shown in Fig. 3, by making a pivot-slot in the edge thereof, which receives the pivot in rod *x*, and a spring, *m*, serves to keep rod *h* hooked onto said pivot when in use, but permits of unhooking it from lever *x*.

When the wash-basin is fitted with both hot and cold water faucets, it is desirable that the waste-pipe stop-cock should operate when either or both of said faucets are used. Therefore I arrange the waste-pipe stop-cock so that it will close automatically by a spring, *v*, when

no pressure is exerted on the upper end of rod *h*, and connect said upper end to a lever, K, which is pivoted to a post, *n*, on stand A. Said lever K extends between faucets F and F′, and has a free vertical movement therebetween.

Attached to the ends of the plugs to faucets F and F′, as shown in Fig. 2, are two crank-shaped levers, *o* and *o′*, their ends bent to project over the top of lever K.

The basin is provided with the ordinary plug and chain.

The operation of my devices when used with one basin-faucet is as follows, viz.: The usual plug being inserted in the basin-outlet, faucet E is turned open, drawing water into the basin, and in so turning said faucet plug *e* to stop-cock D is likewise turned open through the operation of rod *h*, pivoted to levers *x* and *g*, allowing any water standing above stop-cock D, either in waste-pipe *a* or in receptacle *b*, to freely flow off while water is being drawn into the basin; but immediately that faucet E is shut, stop-cock D is also closed through the connections above described, shutting off all passage through waste-pipe *a*.

When it is desired to empty the basin, the basin-plug is withdrawn, permitting the water therein to escape into receptacle *b*, from whence it flows when more water is drawn into the basin, as above set forth. Thus it will be seen that when the basin-faucet is closed the waste-pipe from said basin is also effectually closed, so that there can be no escape of sewer-gas therefrom into the room where said basin may be located.

When wash-basins are fitted with hot and cold water faucets connected to stop-cock D′, as above described, the operation of said parts is as follows: As before described, lever K is in a position between faucets F and F′, but under the bent ends of levers *o* and *o′*, and is held up by connecting-rod *h*, which, in turn, is sustained by spring *r* operating on the plug to stop-cock D′, and lifting the arm of lever *g*, to which the lower end of rod *h* is pivoted. While lever K is in a lifted position the stop-cock D′ is closed. Upon opening either one of faucets F F′, one of arms *o o′* will swing over, bearing down lever K, and operating through the connections with stop-cock D′, heretofore described, to open said cock, and consequently a free passage through the waste-pipe in which it may be connected, thus allowing water standing above, either in the waste-pipe *a* or in receptacle *b*, to freely flow off, and, when the basin-faucet is closed, lifting arm *o* or *o′* off from lever K, spring *v* is free to operate to close cock D′, as above set forth, thus effectually shutting the passage through the waste-pipe in which it is connected.

Lever K may be operated by bearing down on its end to open stop-cock D′ independently of the means therefor provided by the arms *o o′* on the faucets F F′, so that any water that may accumulate in the waste-pipe or in receptacle *b* above said stop-cock may be let off without drawing any water into the basin; and the same is true of rod *h*, as connected to faucet E, the manner of disconnecting which is above described, excepting that the stop-cock D is both opened and closed by operating rod *h*, whereas stop-cock D′ closes automatically by the action of spring *v*.

In a single-basin faucet fitting the same arrangement for opening and closing the stop-cock in the waste-pipe that is shown in that where hot and cold water faucets are used may be adopted, if desired.

The application of the hereinbefore-described improvements to water-closet pans and the usual devices operating therewith is not the invention of this application, being reserved for a separate protection.

It is obvious that a substitute for the receptacle *b* in waste-pipe *a* may be provided by having an ample-sized waste-pipe, and by locating the stop-cock therein so that between it and the basin there would be sufficient capacity for containing the full contents of the basin.

What I claim as my invention is—

1. The combination, with the basin-faucet E, provided with lever *x*, and the stop-cock D, provided with lever *g*, of connecting-rod *h*, pivoted to said levers, arranged to be temporarily detached from lever *x*, substantially as and for the purpose specified.

2. The combination, with connecting-rod *h*, of lever K and a crank-shaped lever, *o* or *o′*, on faucet F or F′, substantially as and for the purpose set forth.

3. The combination, with stop-cock D′, of spring *r*, lever *g*, connecting-rod *h*, lever K, and a crank-shaped lever, *o* or *o′*, on faucet F or F′, substantially as and for the purpose specified.

4. The water-receptacle *b*, constructed in a waste-pipe to a wash-basin or other analogous utensil, in combination with a stop-cock in said waste-pipe located below said receptacle, substantially as and for the purpose set forth.

GEO. E. POTTER.

In presence of—
H. A. CHAPIN,
WM. H. CHAPIN.