(No Model.)

C. I. KANE.

CONNECTION BETWEEN BASINS AND SEWERS.

No. 304,653. Patented Sept. 2, 1884.

Fig1

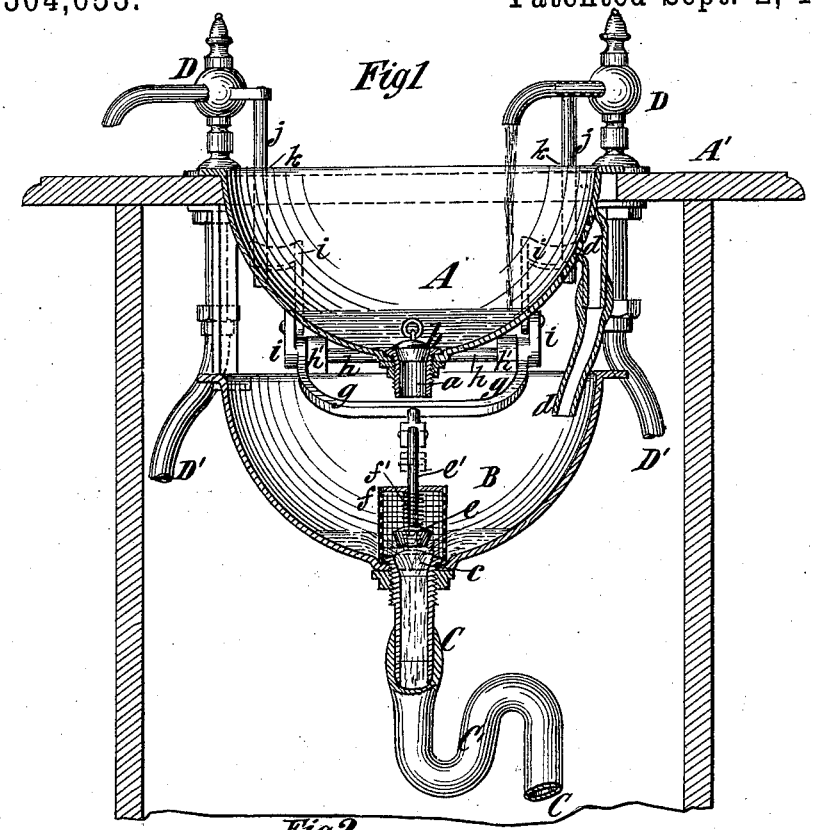
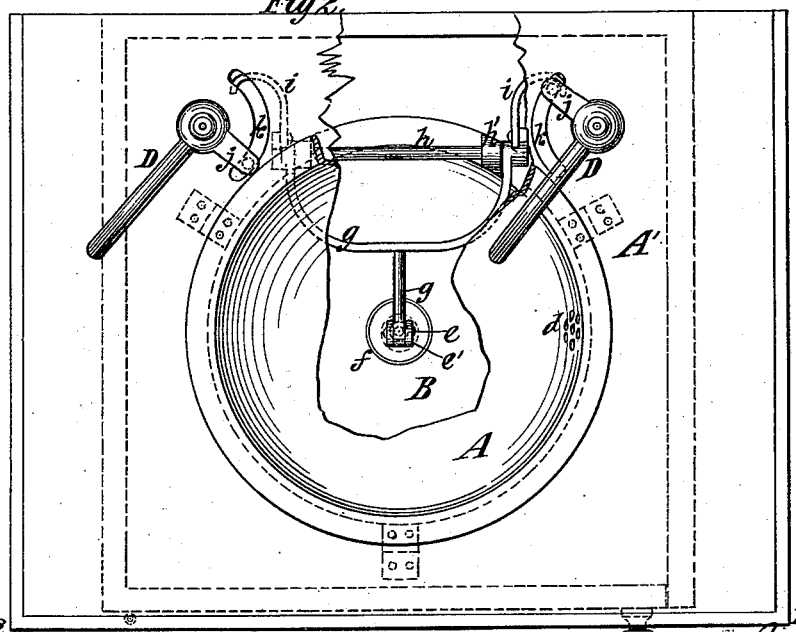


Fig2



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CONNECTION BETWEEN BASINS AND SEWERS.

SPECIFICATION forming part of Letters Patent No. 304,653, dated September 2, 1884.

Application filed August 3, 1883. (No mode'.)

To all whom it may concern:

Be it known that I, CHARLES I. KANE, of the city and county of New York, in the State of New York, have invented a new and useful Improvement in Connections Between Basins and Sewers, of which the following is a specification.

The traps which are commonly used in connection with wash-basins are unreliable, because of the liability of a siphoning action taking place.

My invention relates to that class of connections in which the waste water from the basin is discharged into a lower receptacle or chamber, which is permanently connected with the waste-pipe.

The invention consists in the combination, with a wash-basin, of an open receiving-basin arranged below, but unconnected with the outlet of the wash-basin, and into which water may flow from such outlet, the said receiving-basin being permanently connected with the waste-pipe, and a valve or plug within said receiving-basin for closing the outlet therefrom.

The invention also consists in combining with the aforesaid valve or plug a spring or other means for closing it automatically, and connections whereby it will be opened when the basin-cock is turned to draw water into the wash-basin, as more fully hereinafter described.

In the accompanying drawings, Figure 1 is a vertical section of a wash-basin connected with a soil-pipe according to my invention, and Fig. 2 is a plan thereof, partly in section.

Similar letters of reference designate corresponding parts in both figures.

A designates an ordinary wash-basin set in the usual way, and B designates the receiving-basin or receptacle which I employ, and which receives waste water from the outlet *a* of the basin A. The outlet *a* is to be closed by the usual plug, *b*. The receiving-basin B is open at the top, and although it is arranged immediately below the outlet *a* of the wash-basin, and receives waste water therefrom, it is not connected in any way with said outlet, nor is it connected with the wash-basin. The receiving-basin is supported by hangers or downwardly-extending arms, which depend from the slab or shelf in which the wash-basin A is placed. The outlet *c* of the receptacle B is connected with the soil-pipe C, and through it with the sewer. I have here shown a trap, C′, in the soil-pipe, as there would commonly be if my invention were applied to a soil-pipe already in place, but in fitting up new work the trap would be unnecessary, although it might be used. The overflow-pipe *d* from the basin A delivers its water into the basin or receptacle B. The overflow-pipe *d* extends downward to a point somewhat below the top of the receiving-basin B, and it also is unconnected with said open basin in any way; hence it will be readily understood that although the receiving-basin is so arranged as to receive all the water from the wash-basin outlet and overflow *a d* there are no joints between the two basins, and the wash-basin may at any time be lifted out for the purpose of putting in a new one or cleaning the receiving-basin without breaking any joints. The outlet *c* of the open-top receiving-basin B is fitted within the basin with a valve or plug, *e*, which may be of any suitable form, and which is operated by a rod, *e′*, and the said outlet is surrounded by a cage or screen, *f*, of wire-cloth or other reticulated or perforated material, which prevents any refuse that would be liable to remain under the valve and hold it from its seat from entering the outlet *c*. In this example of my invention a spring, *f′*, is applied to the valve-rod *e′* for automatically closing the valve when it is not held open. This spring bears at one end against the valve and at the other end against the top of the screen or cage *f*.

In lieu of the spring *f′*, a weight, which is the equivalent of the spring, may be used.

D designates the basin-cocks, to which water is supplied by the pipes D′, and which are mounted in the usual manner upon the basin top or slab A′.

Although the valve *e* may be operated in other ways, I prefer to provide connections

whereby it will be opened whenever water is turned on the basin A, and any suitable arrangement of connections may be employed for this purpose. In this example of my invention the valve-rod *e'* is connected with an arm, *g*, secured on a rock-shaft, *h*, which is fitted to turn in bearings *h'*, and to the ends of which are secured arms *i*. From each cock D there projects an arm, *j*, which extends downward through a slot, *k*, in the basin top A', as best shown in Fig. 2. As here shown, the arms *i* consist of short portions cast with the arm *g*, and separate pieces riveted thereto. When either cock is turned to draw water, the arm *j* moves in its slot *k* without effecting any movement of the valve *e* until the cock reaches the position of the right-hand cock, (shown in Fig. 2,) whereupon the said arm comes in contact with the arm *i*, and turns the rock-shaft *h* sufficiently to open the valve *e*. As soon as the cock is turned to shut off water, the arm *i* is relieved of the pressure of the arm *j*, and the valve *e* is closed by the spring *f'*. If only one cock, D, were used, of course the rock-shaft *h* would require but one arm, *i*. When the plug *b* is drawn out, the water passes from the basin A to the lower basin or receptacle, B, and the valve *e*, being closed, remains therein. Hence the gas is prevented from escaping upward not only by the valve, but by the water seal above the valve. Fresh water cannot be drawn into the basin A without opening the valve *e* and emptying the lower basin or receptacle, B, and hence there is no danger of the latter overflowing. If it is desired to clean or flush the soil-pipe C, the plug *b* is drawn out, and the cock D turned to allow water to flow directly through the basins and down the soil-pipe. By the term "wash-basin," as herein used, I mean to include any basin, sink, or other vessel used for washing or analogous purposes.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, with a wash-basin, of an open receiving-basin, arranged below but unconnected with the outlet of the wash-basin, and into which water may flow from such outlet, the said receiving-basin being permanently connected with the waste-pipe, and a valve or plug within said receiving-basin for closing the outlet therefrom, substantially as herein described.

2. The combination, with a wash-basin and basin-cock, of an open receiving-basin, arranged below but unconnected with the outlet of the wash-basin, and into which water may flow from such outlet, the said receiving-basin being connected with the waste-pipe, a valve or plug controlling the outlet from said receiving-basin, and connections through which said valve or plug is opened by the opening movement of the basin-cock, substantially as herein described.

3. The combination, with a wash-basin and basin-cock, of an open receiving-basin, arranged below but unconnected with the outlet of the wash-basin, and into which water may flow from such outlet, the said receiving-basin being permanently connected with the waste-pipe, a valve or plug arranged in the said receiving-basin and controlling the outlet thereof, a spring or weight for automatically closing said valve or plug, and connections through which said valve or plug may be opened by the opening movement of the basin-cock, substantially as herein described.

4. The combination, with the basin A and its main and overflow outlets *a d*, and the basin-cock D, of the open-top receiving-basin B, arranged below but unconnected with said outlets *a d*, the waste-pipe C permanently connected with said receiving-basin, the valve *e* for closing the outlet *c* of said receiving-basin by a downward movement, and connections between the basin-cock D and valve *e*, substantially as and for the purpose herein described.

5. The combination, with the basin A, the cock D, and its downwardly-projecting arm, of the receiving-basin B, the valve *e*, and the rock-shaft *h*, with its arms *g i* for operating said valve, substantially as described.

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