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MEANS FOR DISINFECTING DUMB WAITER SHAFTS AND THE LIKE.

APPLICATION FILED JULY 22, 1915.

1,166,757. Patented Jan. 4, 1916.

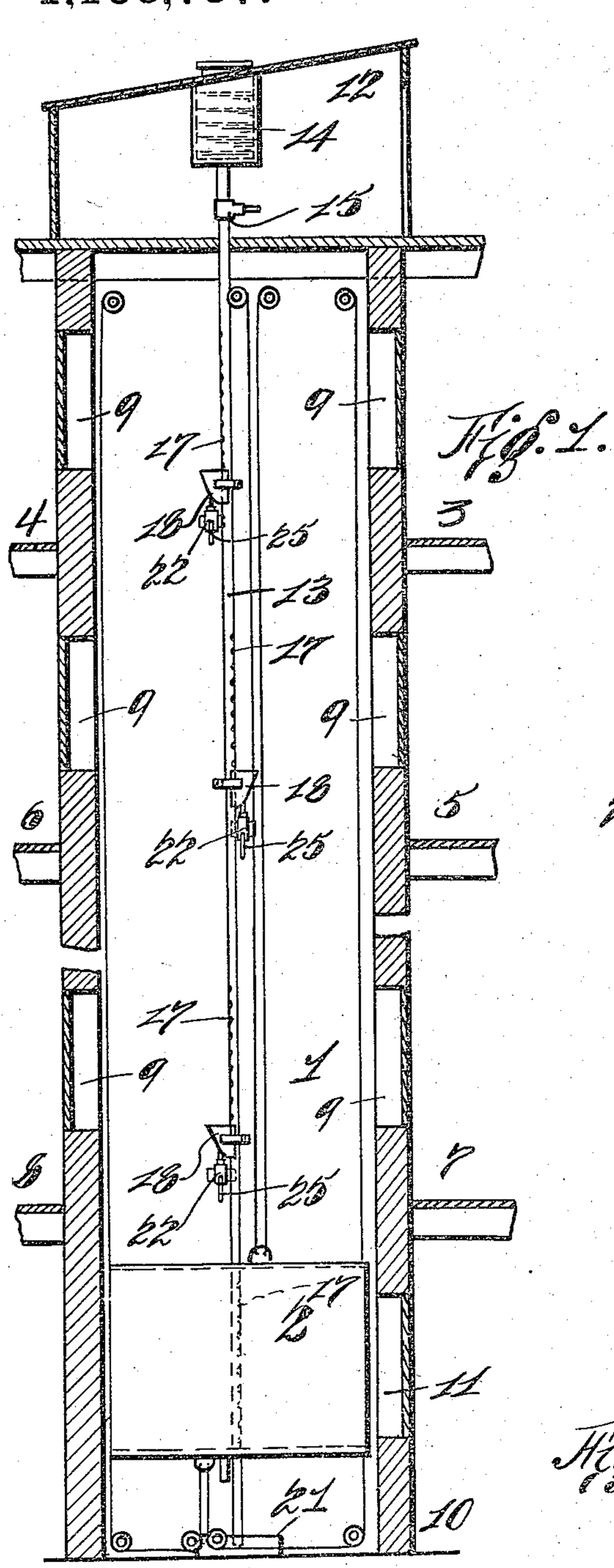

Fig. 1.

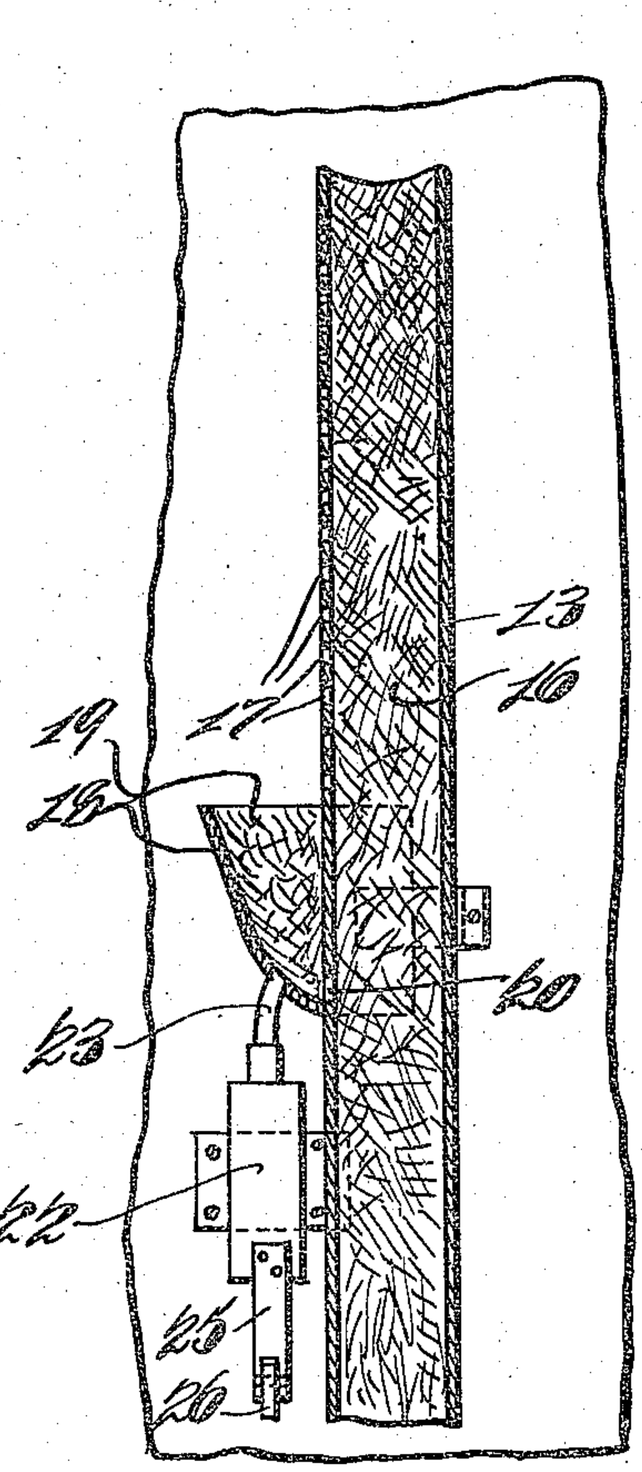

Fig. 2.

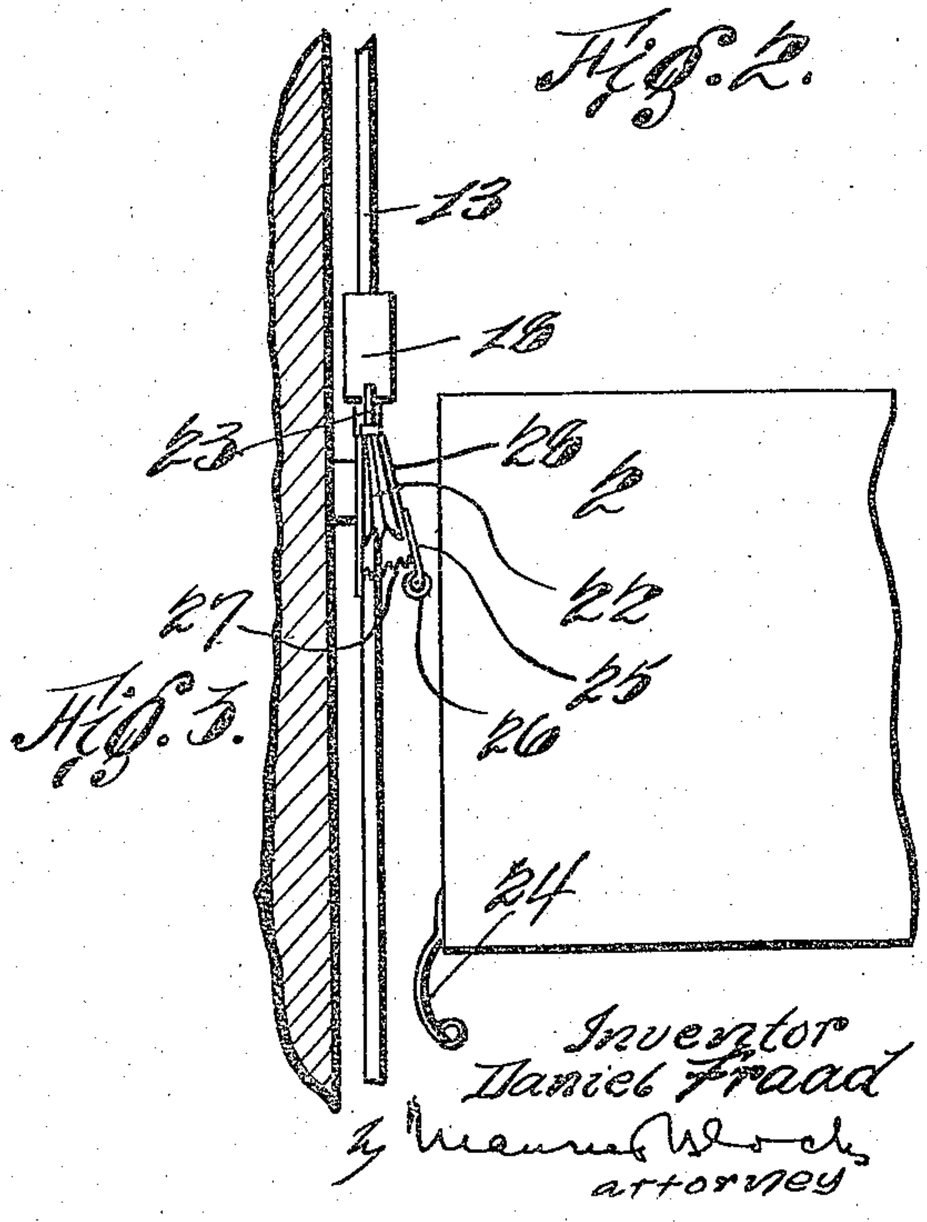

Fig. 3.

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DANIEL FRAAD, OF BROOKLYN, NEW YORK.

MEANS FOR DISINFECTING DUMB-WAITER SHAFTS AND THE LIKE.

1,166,757. Specification of Letters Patent. Patented Jan. 4, 1916.

Application filed July 22, 1915. Serial No. 41,323.

To all whom it may concern:

Be it known that I, DANIEL FRAAD, a citizen of the United States of America, residing at Brooklyn, Kings county, and State of New York, have invented certain new and useful Improvements in Means for Disinfecting Dumb-Waiter Shafts and the like, of which the following is a full, clear, and exact description.

This invention relates to an apparatus for disinfecting shafts, such as the dumb-waiter-shafts of apartment houses, but my improvement may, by slight rearrangement, be made adaptable for use in connection with public toilet-rooms, stables, etc.

The object of my invention is to provide effective means whereby a disinfecting medium can be introduced into a dumb-waiter shaft or the like to counteract the effects of gases or deleterious odors arising from the garbage which is usually passed through the shaft on the dumb-waiter, from the several apartments having access to the shaft.

My improved device is of course adapted to disinfect such shafts against any impurities which may find their way into the shaft.

One of the features of my invention is the diffusion of the disinfecting medium by a plurality of air-blast devices, special means being provided to produce such air-blasts.

I will now proceed to describe my invention in detail, the essential features of which will be summarized in the appended claims, reference being had to the accompanying drawings, forming part hereof; wherein—

Figure 1 is a diagrammatic sectional view, broken away, of a dumb-waiter-shaft having my improvement installed therein; Fig. 2 is an enlarged vertical sectional view of a portion of my improved device; and Fig. 3 is a side view, on a reduced scale, looking from the left in Fig. 2.

In the accompanying drawing, a dumb-waiter-shaft is indicated by 1, and the dumb-waiter, which travels in the shaft, by 2; a plurality of apartments are indicated by 3, 4, 5, 6, 7 and 8, and 9 indicates the opening or door at each floor communicating with the shaft. The numeral 10 indicates the basement, and 11 the opening in the shaft at the basement.

12 indicates a shed or room on the roof with which most apartment buildings are usually provided.

One feature of my improvement comprises a stand-pipe 13 leading from a tank 14 in the shed 12 to the basement 10, the said pipe being preferably located against one of the side-walls of the shaft, as shown in Fig. 3. The tank 14 is arranged to contain a suitable disinfectant, in liquid form, and to deliver same to the pipe 13, a valve 15 being employed to control the flow of the liquid.

Within the pipe 13 I place a suitable absorbent 16 (Fig. 2) which will become impregnated or soaked with the disinfectant. The disinfectant will, by natural process of evaporation, pass through the openings 17, in the pipe 13 and into the shaft 1.

At intervals throughout the length of the pipe 13, I place catch-basins or cups 18 which are also filled with an absorbent 19. Each set of openings 17 has located adjacent thereto a catch-basin 18. A set of openings 17 and a catch basin 18 are located preferably opposite each pair of dumb-waiter-shaft openings 9, as shown in Fig. 1, the said sets being preferably alternated in position.

The function of the basins 18 is to catch any of the disinfectant that may drip through the openings 17. Should the drippings be excessive and saturate the absorbent 19 in the cups 18, the surplus liquid will find its way back into the pipe 13 through a passage 20 (Fig. 2). At the bottom of the pipe 13, I place a pan 21 to catch any of the disinfectant that may, in liquid form, find its way to the bottom of the shaft.

A further feature of my invention consists of means to diffuse the disinfectant through the shaft. To diffuse the disinfectant I employ air-blasts supplied by suitable mechanism preferably operated by the movement of the dumb-waiter 2. I preferably employ a plurality of bellows 22, each of which, by means of a duct 23, is connected to each catch-basin 18; that is to say each basis 18 has connected thereto a bellows 22. Each bellows may be secured to the adjacent wall of the shaft or to the pipe 13. To operate the bellows, I provide the dumb-waiter with a rail 24 wide enough to actuate all of the bellows 22. Each bellows carries an arm 25 provided with a roller 26 located in the path of movement of the rail 24. A spring 27 keeps the bellows normally expanded or extended. When the rail 24 strikes the roller 26, either upon the upward or downward movement of the dumb-waiter, the movable member 28 of the bellows will be forced inwardly thereby forcing a blast of

air into its attached basin 18, which will agitate the absorbent contained in the basin and the fumes will escape through the top thereof into the shaft 1, thus diffusing the disinfectant. Each time the dumb-waiter is operated up or down, the bellows 22 will automatically be operated, thereby forcing a blast of air into the basins 18. To prevent the manipulation of the controlling valve 15, excepting by the proper person, I may provide the same with a removable handle, or I may lock the same.

Having now described my invention, what I claim and desire to secure by Letters Patent is:

1. A disinfecting apparatus, consisting of a pipe arranged to receive a disinfecting medium, said pipe being provided with openings, and a catch basin adjacent said openings.

2. A disinfecting device, consisting of a pipe provided with perforations, a basin adjacent thereto and in communication with said pipe, and means to force air into said basin.

3. A disinfecting device consisting of a receptacle provided with openings at intervals throughout its length, an auxiliary receptacle adjacent each set of openings, and means to force air into said auxiliary receptacles.

4. In combination with a dumb-waiter, a shaft therefor, a receptacle within said shaft arranged to receive a disinfectant, an auxiliary receptacle also arranged to receive a disinfectant, and means operable by the movement of the dumb-waiter to force air into the auxiliary receptacle.

5. In combination with a dumb-waiter, a shaft therefor, a stand-pipe within said shaft extending through substantially the length thereof, a supply tank for said pipe, a plurality of groups of alternately positioned openings in said pipe, an absorbent material in said pipe, means to introduce a liquid disinfecting medium into said pipe, and a catch-basin adjacent each set of openings arranged to receive any of the liquid disinfectant that may drip through said openings, there being a duct leading from said basin to said pipe.

6. In combination with a dumb-waiter, a shaft therefor, a stand-pipe within said shaft extending through substantially the length thereof, a supply tank for said pipe, a plurality of groups of alternately positioned openings in said pipe, an absorbent material in said pipe, means to introduce a liquid disinfecting medium into said pipe, a catch-basin adjacent each set of openings arranged to receive any of the liquid disinfectant that may drip through said openings, there being a duct leading from said basin to said pipe, and means to force air into said catch-basins.

7. In combination with a dumb-waiter, a shaft therefor, a stand-pipe within said shaft extending through substantially the length thereof, a supply tank for said pipe, a plurality of groups of alternately positioned openings in said pipe, an absorbent material in said pipe, means to introduce a liquid disinfecting medium into said pipe, a catch-basin adjacent each set of openings arranged to receive any of the liquid disinfectant that may drip through said openings, there being a duct leading from said basin to said pipe, and means operable by the movement of the dumb-waiter to force air into said catch-basins.

8. In combination with a dumb-waiter, a shaft therefor, a stand-pipe within said shaft extending through substantially the length thereof, a supply tank for said pipe, a plurality of groups of alternately positioned openings in said pipe, an absorbent material in said pipe, means to introduce a liquid disinfecting medium into said pipe, a catch-basin adjacent each set of openings arranged to receive any of the liquid disinfectant that may drip through said openings, there being a duct leading from said basin to said pipe, and means operable by the movement of the dumb-waiter to agitate the disinfectant within the catch-basins.

9. In combination with a dumb-waiter, a shaft therefor, a stand-pipe within said shaft arranged to receive a disinfectant, catch-basins adjacent said stand-pipe, a bellows communicating with each catch-basin, and means carried by the dumb-waiter to operate said bellows.

10. In combination with a dumb-waiter, a shaft therefor, a stand-pipe within said shaft arranged to receive a disinfectant, catch-basins adjacent said stand-pipe, a bellows communicating with each catch-basin, means carried by the dumb-waiter to operate said bellows, and a spring to restore the bellows to normal condition after each actuation thereof.

Signed at New York city, N. Y. this 19 day of July, 1915.

DANIEL FRAAD.

Witnesses:
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