F. X. WAHL.

DUST COLLECTOR.

APPLICATION FILED JUNE 17, 1915.

1,187,208. Patented June 13, 1916.

Fig. 1.

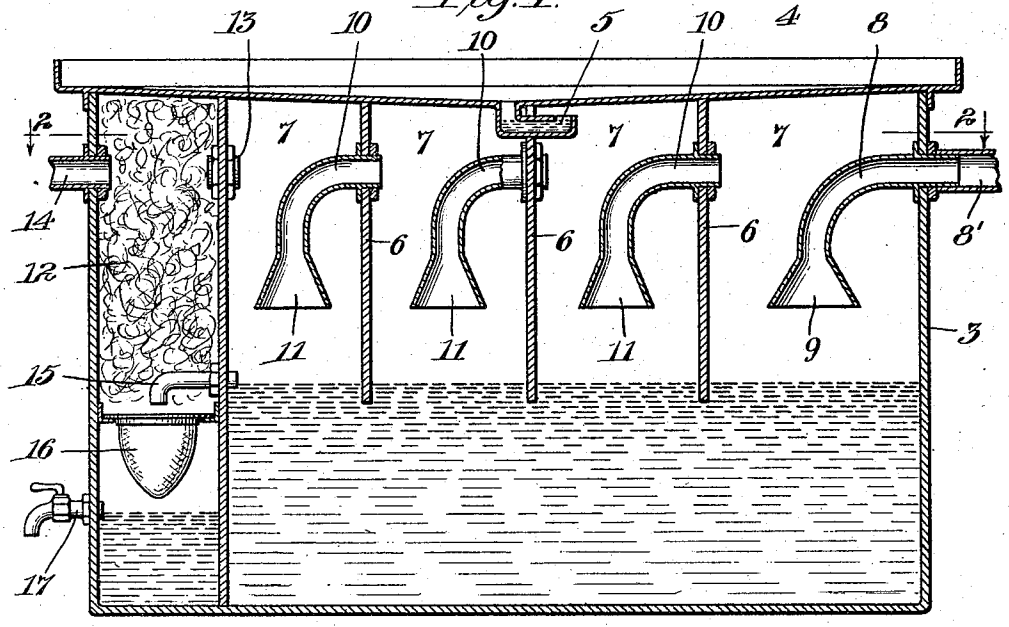
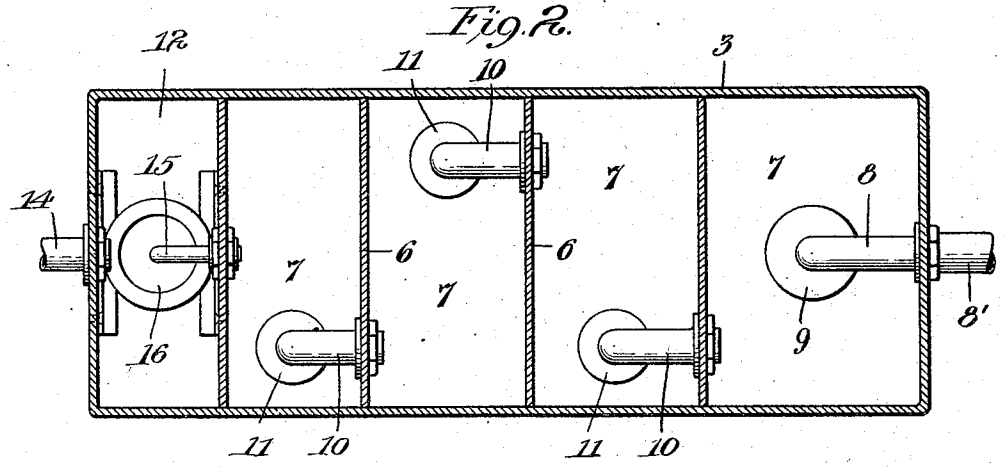


Fig. 2.



Witnesses:

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FRANK X. WAHL, OF CHICAGO, ILLINOIS.

DUST-COLLECTOR.

1,187,208. Specification of Letters Patent. Patented June 13, 1916.

Application filed June 17, 1915. Serial No. 34,674.

To all whom it may concern:

Be it known that I, FRANK X. WAHL, a citizen of the United States, and a resident of the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Dust-Collectors, of which the following is a specification.

My invention relates to improvements in dust collectors especially adapted for use by jewelers, the object of the invention being to provide a simple and efficient means for collecting and saving all dust of valuable metals, such as gold, platinum, silver and the like, employed in jewelry.

The invention consists in the combinations and arrangements of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawing forming a part of this specification, and in which,

Figure 1 is a vertical section of a device embodying my invention, and Fig. 2, a horizontal section of the same taken substantially on line 2—2 of Fig. 1, with parts removed.

The preferred form of construction, as illustrated in the drawing comprises a collecting tank 3 adapted to contain water and provided with a removable cover in the form of a shallow sink 4 having a trapped drain 5 leading into said tank and by means of which water will automatically drain from said sink into said tank, but the admission of air thereto will be prevented. The upper portion of tank 3 is provided with a plurality of transverse partitions 6 dividing the same into a plurality of air compartments 7, said partitions extending but part way to the bottom of the tank, the lower portion of said tank being filled with water to form a common water seal for the bottoms of compartments 7, thus hermetically separating said compartments from each other. An inlet pipe 8 leads into the first compartment 7 at the right, as shown, and is turned downwardly and provided with a divergent discharge end 9 adapted to project a spreading current of air on the top of the water in the bottom of tank 3. An air conduit 8′ is connected with inlet pipe 8, said conduit leading to the different buffing and polishing machines and serving to direct the air collected from said machines into the device, as will be readily understood. A downwardly turned air pipe 10 connects each of the compartments 7 with its adjoining compartment, each of said pipes being provided with a downwardly divergent discharge end 11 adapted to direct a spreading current of air onto the top of the water in the bottom of tank 3, and said pipes being arranged in staggered relation, as indicated in Fig. 2, so as to cause the air to travel tortuously through said compartments. At the discharge end of the apparatus an air filtering compartment 12 is formed and filled with wet excelsior, a passage 13 leading from the adjoining compartment 7 into said compartment 12 and an air discharge pipe 14 also leading therefrom. An overflow pipe 15 is provided for the water seal in the bottom of tank 3 in position to maintain the level of said water seal slightly above the lower ends of partitions 6, as indicated. Overflow pipe 15 discharges into a removable felt filter 16 and a stop cock 17 is provided for withdrawing the filtered water from the apparatus.

In use, the pipe 14 is connected with an exhaust fan and pipe 8′ with the usual buffing, polishing or similar machines in a jewelry shop. By this arrangement the air drawn from such machines, with the valuable dust contained therein, will be subjected to a tortuous passage through the apparatus and will repeatedly be directed downwardly against the surface of the water seal in tank 3, being finally filtered through the wet excelsior 12 before passing to the exhaust fan, thus effectually removing all solid particles from said air and preserving the same in the apparatus. Likewise the overflow from tank 3 will be filtered and any solid particles retained in said filter.

The sink 4 is provided so that the different articles of jewelry may be washed or scrubbed over said sink and the jewelers may wash their hands therein so that the dust of the valuable metals therefrom may be collected in tank 3. At suitable intervals the water from tank 3, the asbestos from compartment 12 and the filter 16 will be removed and treated for the recovery of the valuable metals contained therein, as will be readily understood.

While I have illustrated and described

the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

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

1. A device of the class described comprising a collecting tank; a cover for said tank in the form of a sink having a trapped drain leading into said tank; means for drawing air through said tank; and dust collecting means in said tank; substantially as described.

2. A device of the class described comprising a collecting tank; a cover for said tank in the form of a removable sink having a trapped drain leading into said tank; means for drawing air through said tank; and dust collecting means in said tank, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANK X. WAHL.

Witnesses:
JOSHUA R. H. POTTS,
HELEN F. LILLIS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."