

J. H. BRIEDE.
DUST COLLECTOR.
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1,049,988.

Patented Jan. 7, 1913.

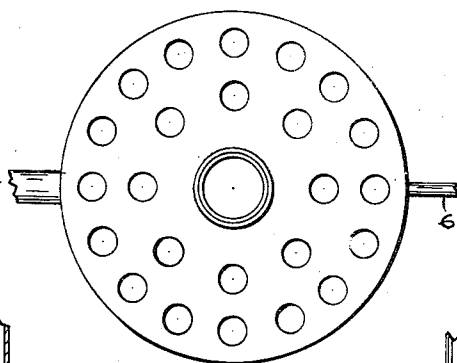


Fig. 2

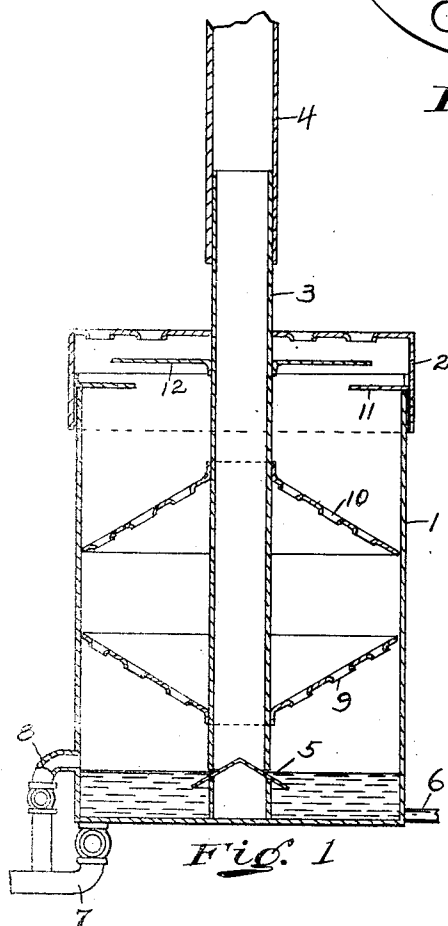


Fig. 1

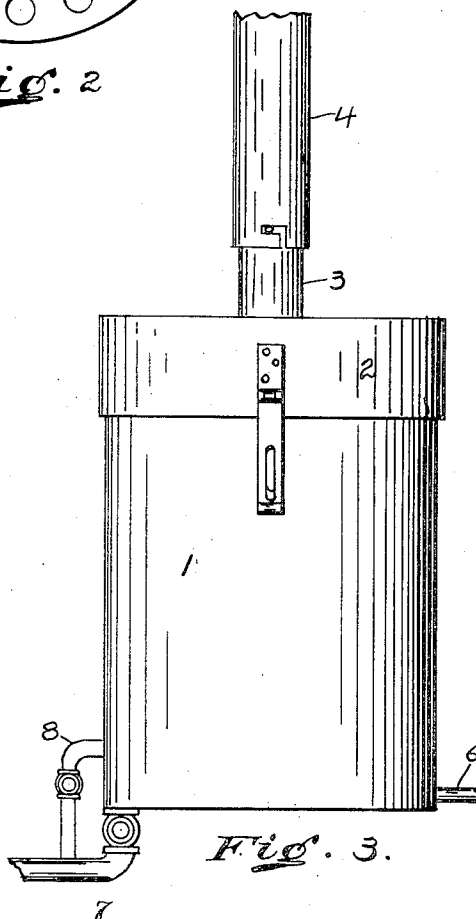


Fig. 3.

Witnesses
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UNITED STATES PATENT OFFICE.

JOSEPH H. BRIEDE, OF BELLEVUE, KENTUCKY, ASSIGNOR OF ONE-FOURTH TO ALBERT HAUSER AND ONE-FOURTH TO ARTHUR C. HALL, BOTH OF BELLEVUE, KENTUCKY, AND ONE-FOURTH TO FRANK B. FREEMAN, OF DAYTON, KENTUCKY.

DUST-COLLECTOR.

1,049,988.

Specification of Letters Patent.

Patented Jan. 7, 1913.

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To all whom it may concern:

Be it known that I, JOSEPH H. BRIEDE, a citizen of the United States, residing at Bellevue, in the county of Campbell and State of Kentucky, have invented certain new and useful Improvements in Dust-Collectors, of which the following is a specification.

My invention relates to the class of dust collecting and separating machines which are used in connection with suction fans to collect the dust from machines such as sanding and buffing machines, and the object of the invention is to provide a simple and compact device which will completely separate from the air all of the dust particles including the fine and impalpable particles which ordinarily escape with the air.

My invention consists in the parts and combination and arrangement of parts hereinafter described and claimed.

In the drawings Figure 1 is a vertical section of the machine; Fig. 2 a top plan view; and Fig. 3 a side elevation.

The reference numeral 1 indicates the wall or casing of the machine, 2 a removable cap or cover having a perforated top to permit escape of air, 3 a tube detachably connected with a pipe 4 leading from the suction fan (not shown) and adapted to conduct the dust laden air into the machine, 5 a cone or mushroom mounted slightly beneath the discharge end of tube 3 and with its apex projecting thereinto but so placed as to leave a space between the periphery of the tube and the mushroom, 6 a pipe for admission of water, 7 a pipe through which the collected dust may be removed by flushing, 8 an overflow pipe for convenience in securing the proper level of the water, 9 a perforated deflector of conical form mounted with its apex downward, 10 a like deflector but preferably mounted with its apex upward, 11 an annular flange extending inwardly from the periphery of the cap and 12 a circular plate extending outwardly from the tube 3.

The surface of the water bath should be approximately flush with the lower end of

tube 3. The dust laden air, forced through tube 3 by the fan, is deflected by the mushroom and the pressure of the air forces the water upward about the periphery of the casing until it contacts with the deflector 9 by which it is deflected inward and downward so that the air, in order to escape, must pass through a spray and all the dust particles are moistened. Any of these particles which may be carried upward by the air are arrested by deflectors 9 and 10, or by the perforated top. The perforations are preferably made with the burs on the under side to facilitate the arrest of the dust particles. The flange 11 and plate 12 serve to lengthen the path of the air before it finally escapes through the perforated top which serves as the final screen. In ordinary use, the air is practically pure before it passes through the deflector 9.

The cap 2 and deflectors 9 and 10 are preferably mounted upon the tube 3 so that they may be readily removed from the casing. This construction permits clearance of the machine from accumulated dust when water under pressure, for flushing, is not available or owing to the limited size of the machine, is not desirable.

I claim as my invention:

1. In a dust collector, the combination of a casing having a perforated top, and adapted to contain a water bath; a tube adapted to receive the dust laden air; and a mushroom projecting into the discharge end of the tube.

2. In a dust collector, the combination of a casing having a perforated top, and adapted to contain a water bath; a tube adapted to receive the dust laden air; a mushroom projecting into the discharge end of the tube; and one or more perforated deflectors.

3. In a dust collector, the combination of a casing having a perforated top, and adapted to contain a water bath; a tube adapted to receive the dust laden air; a mushroom projecting into the discharge end of the tube; a perforated deflector of conical form mounted above the mushroom with its apex downward; and a perforated deflector of

conical form mounted thereabove with its apex upward.

4. In a dust collector, the combination of a casing having a perforated top, and adapted to contain a water bath; a tube adapted to receive the dust laden air; a mushroom projecting into the tube; and one or more

deflectors mounted above the mushroom, the top, and deflectors being mounted upon the tube and removable from the casing.

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Witnesses:

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