

J. THEISEN.
VACUUM CLEANER.

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1,042,055.

Patented Oct. 22, 1912.

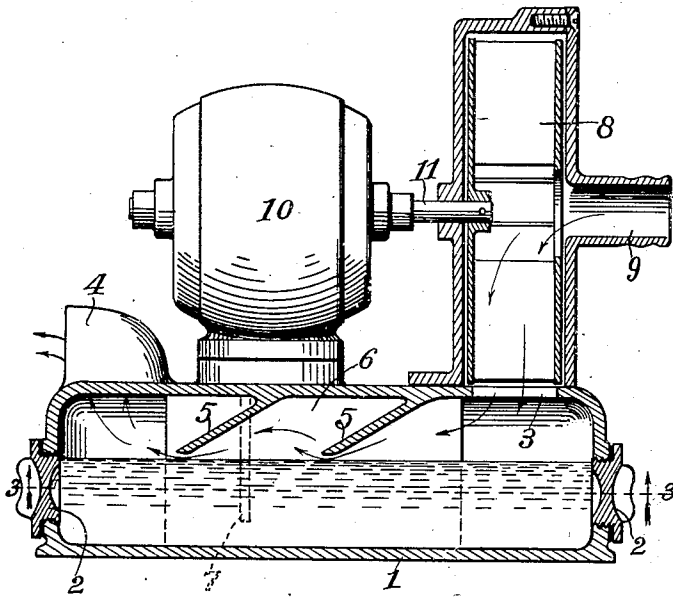


Fig. 1.

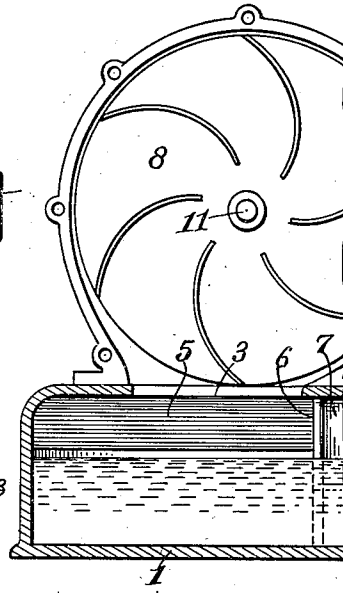


Fig. 2.

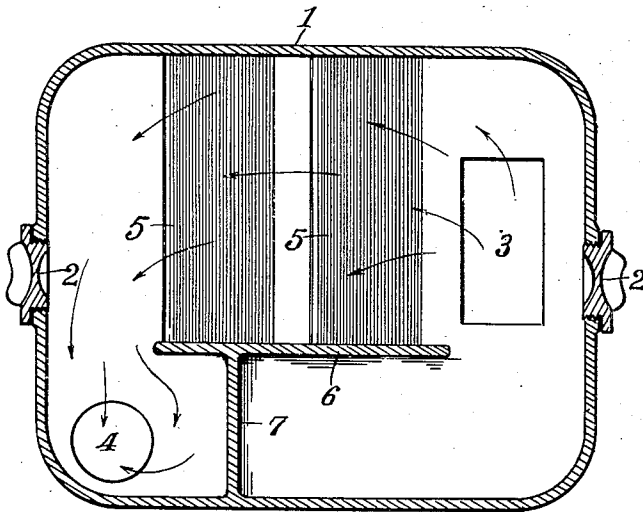


Fig. 3.

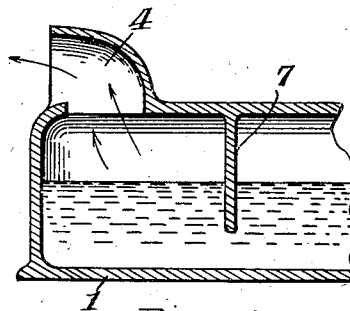


Fig. 4.

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VACUUM-CLEANER.

1,042,055.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOSEPH THEISEN, a citizen of the United States of America, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Vacuum-Cleaners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in vacuum cleaners and its object is to provide a portable device of this class which will effectively remove the dust and other impurities from carpets, articles of furniture and various other objects and deposit the same within a receptacle provided therefor so that the exhaust air from said receptacle will be entirely free from the same and to provide the device with various other new and useful features of construction and arrangement as hereinafter more fully described and particularly pointed out in the claims.

This device consists essentially of a rotary blower which produces a current of air driven by any convenient motor located adjacent thereto, both blower and motor being mounted upon the cover of a receptacle partially filled with water. The current of air carrying dust and other impurities is deflected against the surface of the water by inclined plates within the receptacle and as this current of air strikes the water it will deposit the dust and other impurities in the water which will settle to the bottom of the receptacle and the purified air will be exhausted through an opening provided for that purpose in the cover of the receptacle. Removable plugs are provided for removing the contents and refilling the receptacle and various other details of construction are embodied in this invention as will more fully appear by reference to the accompanying drawings, in which:

Figure 1 is a sectional elevation through the axis of the blower; Fig. 2 is a detail in transverse sectional elevation with the cover of the blower removed; Fig. 3 is an inverted view showing a section on the line 3—3 of Fig. 1; and Fig. 4 is a detail in sectional elevation of one corner of the machine showing the exhaust outlet.

Like numbers refer to like parts in all of the figures.

1 represents the base of the machine which

is hollow and forms a receptacle which when in use is partially filled with water, removable plugs 2 being provided at opposite ends of the case for the purpose of filling or emptying the same.

A rotary blower 8 preferably of the centrifugal type is mounted on the case and driven through a shaft 11 by any convenient form of motor 10 preferably mounted on the case adjacent to the blower. The blower has an inlet opening provided with a nipple 9 which is adapted to receive one end of a flexible tube, the other end of the tube being provided with the ordinary suction dust collector (not shown).

The rotation of the blower will draw in a current of air carrying therewith dust and other impurities, and force the same into the casing 1 through the inlet passage 3. As this mixture enters the case it circulates through the passage at one side of a partition 6 extending from top to bottom of the case. The mixture is deflected downward against the surface of the water contained within the case by inclined plates 5 which extend from across the passage the lower edges of said plates being slightly spaced away from the surface of the water and the upper edges attached to the cover. As the air engages the surface of the water the dust and other impurities carried thereby will be deposited in the water and settle to the bottom thereof and the purified air will pass out of the casing through the exhaust passage 4 located near one corner of the cover of the same.

A complete circulation of air in the case is prevented by a partition 7 which extends from one side of the case to the partition 6 at the side opposite the deflecting plates 5. This partition 7 projects downward beneath the surface of the water but does not extend to the bottom of the case leaving a passage below the partition to permit the water to circulate therethrough. This arrangement will effectively stop the circulation of air but will allow a slow circulation of the water due to the impulse of the air against its surface. This circulation of the water is advantageous in that it insures an equal deposit of sediment over the entire bottom of the receptacle.

This device is portable and the receptacle may be cleaned and refilled by removing both caps 2 and allowing the stream of water to enter one opening and flow through

the receptacle passing out of the opposite opening and thus removing the deposit therein.

What I claim is:—

5 1. A vacuum cleaner, comprising a receptacle adapted to be partially filled with water, inlet and exhaust openings in said receptacle located at approximately opposite
10 ends of the same, means for forcing a current of air into the inlet opening, a longitudinal partition in the receptacle to guide the current of air, a transverse partition to prevent a circuitous circulation of the same,
15 and deflector plates in the path of the air current to direct the air against the surface of the water.

2. A vacuum cleaner, comprising a receptacle adapted to be partially filled with water, inlet and exhaust openings located approximately at opposite ends of said receptacle, means for forcing air into the inlet
20 opening, partitions in the receptacle adapted to guide the current of air and prevent a circuitous circulation of the same, said partitions being arranged to allow the water
25 within the receptacle to circulate, deflector plates in the path of the air current to deflect the air against the surface of the water.

3. A vacuum cleaner, comprising a receptacle adapted to be partially filled with water, inlet and exhaust openings at approximately opposite ends of said receptacle, means for forcing air into the inlet opening,
30 a longitudinal partition engaging both top and bottom of the receptacle and being spaced apart from its ends, a transverse partition extending between the longitudinal partition and one side of the receptacle engaging the top of the receptacle and projecting
35 beneath the surface of the water, and inclined deflector plates in the path of the air current to direct the air against the surface of the water.

4. A vacuum cleaner, comprising a receptacle adapted to be partially filled with water, inlet and exhaust openings in said receptacle, means for forcing a current of air into the inlet opening mounted on the top of said receptacle, a longitudinal partition in the receptacle engaging both the top and bottom of the same and spaced apart from its ends, a transverse partition extending between the longitudinal partition and one side of the receptacle engaging the top of the receptacle and spaced apart from the bottom of the receptacle, and inclined deflector plates on the opposite side of the longitudinal partition and in the path of the air current to direct the air against the surface of the water.

5. A vacuum cleaner, comprising a receptacle adapted to be partially filled with water, inlet and exhaust openings at approximately opposite ends of the receptacle, means for forcing a current of air into the inlet opening mounted on the top of the receptacle, a longitudinal partition in the receptacle engaging both the top and bottom of the same and spaced apart from its ends, a transverse partition extending between the longitudinal partition and one side of the case engaging the top of the case and projecting beneath the surface of the water, being spaced apart from the bottom of the case, and inclined deflector plates on the opposite side of the longitudinal partition and in the path of the air current to direct the air against the surface of the water and removable caps at opposite ends of the receptacle.

In testimony whereof I affix my signature in presence of two witnesses.

JOSEPH THEISEN.

Witnesses:

W. H. BENSEN,
J. M. SMITH.