O. H. MOHR.

SUCTION CLEANER.

APPLICATION FILED MAY 9, 1908.

913,966. Patented Mar. 2, 1909.

Fig. 1.

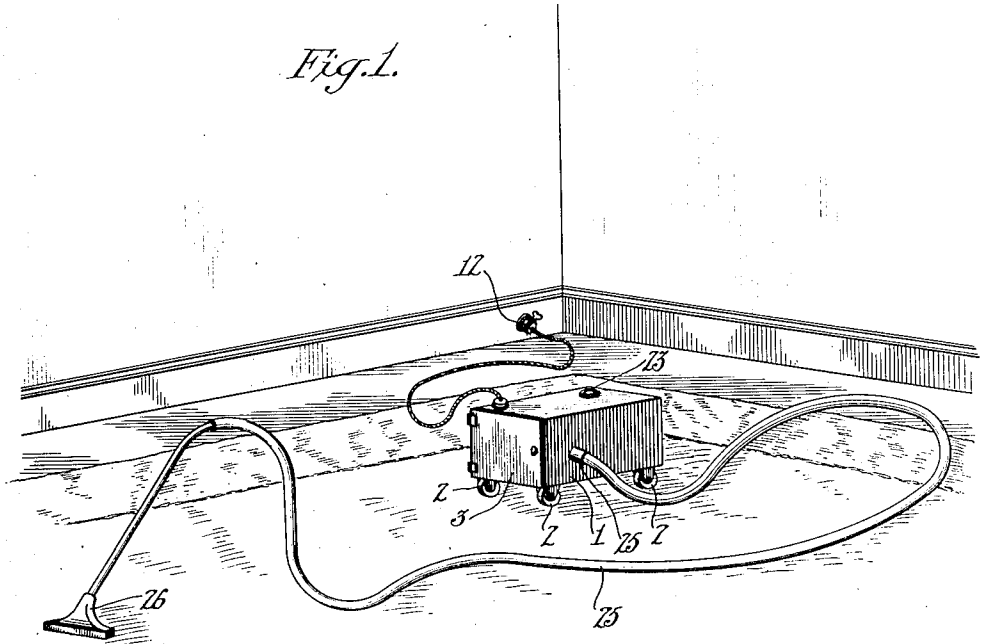


Fig. 2.

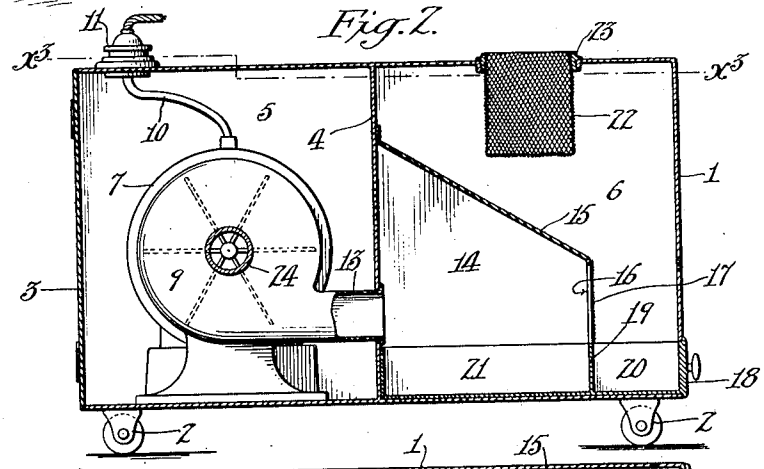
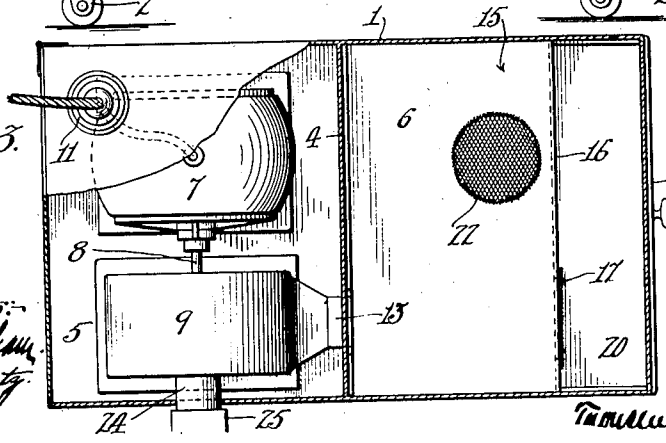


Fig. 3.



Witnesses:-
Frank L. Graham.
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Inventor;
Otto H. Mohr:
by
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atty.

UNITED STATES PATENT OFFICE.

OTTO H. MOHR, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO FIEGE-MOHR ELECTRIC APPLIANCE COMPANY, OF SAN FRANCISCO, CALIFORNIA, A CORPORATION OF CALIFORNIA.

SUCTION-CLEANER.

No. 913,966. Specification of Letters Patent. Patented March 2, 1909.

Application filed May 9, 1908. Serial No. 431,984.

To all whom it may concern:

Be it known that I, OTTO H. MOHR, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented a new and useful Suction-Cleaner, of which the following is a specification.

This invention relates to a device especially adapted for individual use for cleaning floors or floor coverings, tapestries, curtains, or the like, the device being operated by electricity and adapted to be connected to an electric light socket or fixture.

The main object of the invention is to provide a device of this character which may be very cheaply manufactured and sold at a low cost, which is very simple in construction, and of small and compact size, so that it may readily be used in the room.

The device is adapted particularly for theaters, rooming and lodging houses, lodge rooms, hotels, dry goods stores, private houses, etc., and is compact and portable. All the machinery is self-contained therein and the device is easily moved about and primarily intended for individual use.

The accompanying drawings illustrate the invention and referring thereto.

Figure 1 is a perspective view of a portion of a room showing the device connected to an electric fixture in the base-board of the room and ready for use. Fig. 2 is a vertical longitudinal section through the device on a larger scale. Fig. 3 is a horizontal sectional view on a line x^3—x^3 of Fig. 2.

The device comprises a box 1 mounted upon casters 2, so that it may be readily wheeled about and placed in the position desired. One end of the box 1 is provided with a hinged door 3 by means of which access may be had to the interior of the box. A partition 4 divides the box into two chambers 5 and 6, and arranged in the chamber 5 is an electric motor 7 having a shaft 8 which is directly connected to a centrifugal pump 9. As the specific construction of motor 7 and pump 9 is not essential the motor and pump are not shown or described in detail. Power for the motor 7 is supplied by cables 10, which pass through a thimble 11 and are provided with a switch plug 12 adapted to be inserted in an electric light fixture, as for example, in the base-board of the room as shown in Fig. 1.

The discharge pipe of the centrifugal pump 9 extends into a primary separating chamber 14, which is partitioned off from the chamber 6 by an inclined top wall 15 and by a vertical wall 16. Part of the wall 16 consists of wire netting 17. A drawer 18 is slidable in the lower part of chamber 6 and is provided with a partition 19, which, when the drawer is in place, registers with, and forms a continuation of, the wall 16, so that the drawer 18 has a compartment 20 which communicates with chamber 6 which may be designated a settling chamber, and has another compartment 21 which communicates with the primary separating chamber 14. A cylindrical strainer 22 constructed of wire netting is arranged in the upper part of the chamber 6, being carried by a ring 23 which is screwed or otherwise detachably fastened in the top wall of the chamber 6. The suction pipe 24 of the pump 9 extends through the adjacent side wall of chamber 5 and a hose 25 is attached to the pipe 24. A suction nozzle 26 is connected to the pipe 25. The suction nozzle 26 may be of any desired construction adapted for working upon the article which is to be cleaned.

As the motor 7 revolves and operates the pump 9, the dust is sucked up through the nozzle 26, through the pipe 25, passes through the pump 9 and is forced through the pipe 13 thereof into the primary separating chamber 14. This blast of air with its contained dust and other dirt blows against the wall 16 and perforated screen 17 and the heavier particles of dirt together with pins, tacks, or other small things, which have been sucked up drop into the compartment 21 while the finer dust passes with the air blast through the screen 17 into the chamber 6, wherein the remaining fine dust settles into the compartment 20 of the drawer and the air passes out through the screen 22. The area of screen 22 is considerably greater than the area of the discharge mouth 13 of the pump, so that the air passes with a gentle current through screen 22, and the latter prevents the outward passage of dust, which otherwise might be carried up to the upper part of chamber 6. The upward passage of air in chamber 6 is quite gradual and the dust in chamber 6 is thus permitted to float downward into floor 20, as the upward current of air in the chamber is not great enough to carry the dust upward and out thereof.

What I claim is:

1. A suction cleaner comprising a box, a partition in the box, an electric motor and suction pump operated thereby on one side of said partition, a primary separating chamber on the other side of said partition, a settling chamber adjacent the primary separating chamber, a screen between the primary separating chamber and the settling chamber, and a drawer in the box divided into two compartments one of which communicates with the primary separating chamber and the other of which communicates with the settling chamber.

2. A suction cleaner comprising a box, a partition in the box, an electric motor and suction pump operated thereby on one side of said partition, a primary separating chamber on the other side of said partition, a settling chamber adjacent the primary separating chamber, a screen between the primary separating chamber and the settling chamber, a drawer in the box divided into two compartments one of which communicates with the primary separating chamber and the other of which communicates with the settling chamber, and a cylindrical screen in the upper part of the settling chamber.

3. A suction cleaner comprising a box, a partition in the box, an electric motor and suction pump operated thereby on one side of said partition, a primary separating chamber on the other side of said partition, a settling chamber adjacent the primary separating chamber, a screen between the primary separating chamber and the settling chamber, a drawer in the box divided into two compartments one of which communicates with the primary separating chamber and the other of which communicates with the settling chamber, and a cylindrical screen in the upper part of the settling chamber, the area of said screen being considerably greater than the area of the discharge mouth of the pump whereby a gentle air current is produced outwardly through the cylindrical screen.

4. A suction cleaner comprising a box, a partition dividing the box into two chambers, an electric motor in one chamber, a centrifugal suction pump in said chamber connected with said motor, a partition dividing the other chamber into a primary separating chamber and a settling chamber, and a screen in the wall of the latter partition, a door hinged to the chamber containing the motor, a thimble in the wall of the latter chamber and a cable from the motor passing through the thimble and adapted to be connected with an electric fixture.

5. A suction cleaner comprising a box, a partition in the box, an electric motor and suction pump operated thereby on one side of said partition, a primary separating chamber on the other side of said partition, a settling chamber adjacent the primary separating chamber, a screen between the primary separating chamber and the settling chamber, a drawer in the box divided into two compartments one of which communicates with the primary separating chamber and the other of which communicates with the settling chamber, and a cylindrical screer in the upper part of the settling chamber, the area of said screen being considerably greater than the area of the discharge mouth of the pump whereby a gentle air current is produced through the cylindrical screen, a ring supporting said cylindrical screen said ring being detachable from the wall of the settling chamber.

6. A suction cleaner comprising a box, a partition dividing the box into two chambers, an electric motor in one chamber, a centrifugal suction pump in said chamber connected with said motor, a partition dividing the other chamber into a primary separating chamber and a settling chamber, and a screen in the wall of the latter partition, the upper part of said latter partition including a sloping wall upon which dust from the settling chamber is adapted to fall and slide therefrom.

7. A suction cleaner comprising a box, a partition in the box, an electric motor and suction pump operated thereby on one side of said partition, a primary separating chamber on the other side of said partition, a settling chamber adjacent the primary separating chamber, a screen between the primary separating chamber and the settling chamber, a drawer in the box divided into two compartments one of which communicates with the primary separating chamber and the other of which communicates with the settling chamber, and a cylindrical screen in the upper part of the settling chamber, the upper wall of the primary separating chamber being arranged at an angle below the cylindrical screen so that dust falling therefrom on to the sloping wall will slide into the lower part of the settling chamber.

In testimony whereof, I have hereunto set my hand at San Francisco, California, this first day of May, 1908.

OTTO H. MOHR.

In presence of—
J. P. McQUAIDE,
JOSEPH HAMLET.