Sept. 21, 1937. D. HAYS 2,093,913

VACUUM CLEANER

Filed Oct. 23, 1934

Fig. 1.

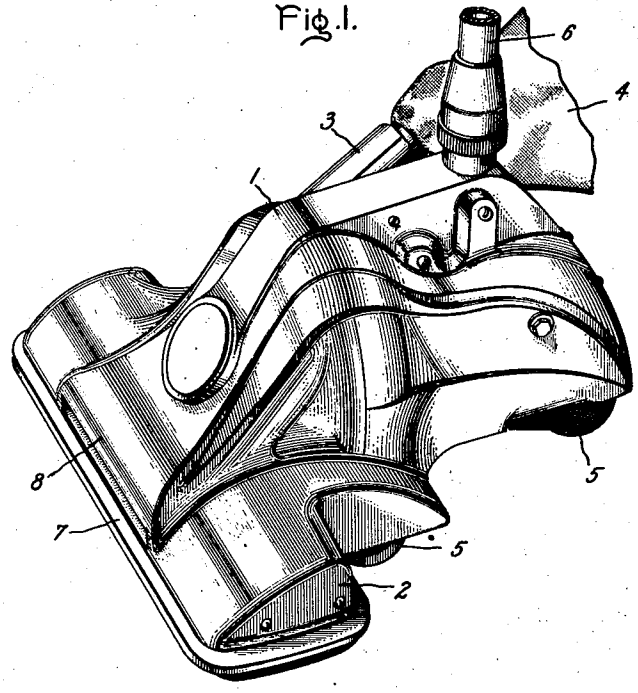


Fig. 2.

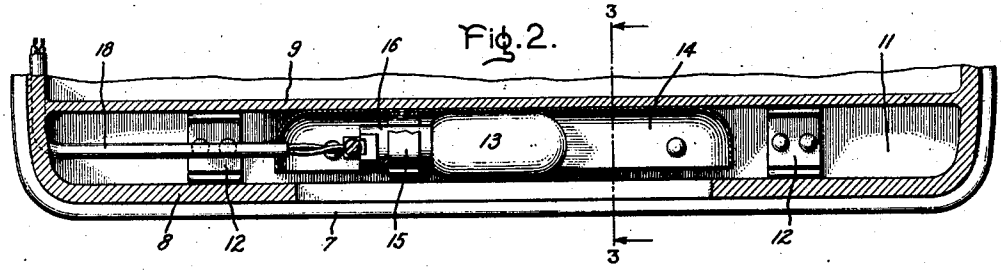
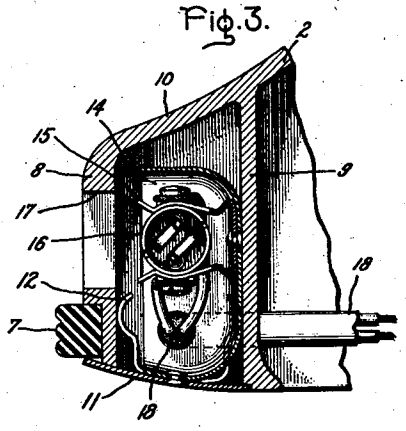


Fig. 3.



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VACUUM CLEANER

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Application October 23, 1934, Serial No. 749,547

4 Claims. (Cl. 240—2)

My invention relates to vacuum cleaners of the type suitable for cleaning floors and the like.

The object of my invention is to provide a vacuum cleaner having an improved construction and arrangement for illuminating the surface being cleaned in front of the suction nozzle.

For a consideration of what I believe to be novel and my invention, attention is directed to the accompanying description and the claims appended thereto.

In the accompanying drawing, Fig. 1 is a perspective view of a vacuum cleaner embodying my invention, Fig. 2 is a sectional plan view of the front of the suction nozzle, and Fig. 3 is a sectional view taken on line 3—3 of Fig. 2.

Referring to the drawing, I have shown my invention in connection with a vacuum cleaner having a casing 1 provided with a suction nozzle 2 and a discharge conduit 3. An electric motor-driven fan contained within the casing produces a suction at the suction nozzle which draws the dirt from the surface being cleaned through the suction nozzle and discharges it through the discharge conduit into a bag 4. The vacuum cleaner is carried on front and rear supporting wheels 5, and a handle 6 is provided for moving the cleaner. A rubber guard 7 is provided around the front and sides of the suction nozzle. The construction described above is to be taken as typical of a vacuum cleaner to which my invention may be applied.

The arrangement for illuminating the surface being cleaned in front of the suction nozzle is contained within a chamber formed between a wall 8 at the front of the suction nozzle and a wall 9 to the rear of the wall 8. The wall 9 defines the inlet opening of the suction nozzle so that no suction is produced in the chamber. The upper wall 10 of the chamber extends between the walls 8 and 9 and is formed integral therewith. The lower wall of the chamber is formed by a closure plate 11 which is removably held against the lower ends of walls 8 and 9 by spring clips 12. The closure plate 11 is inclined upward from the lower edge of wall 9 toward wall 8. The lower edge of wall 9 forms the front edge of the inlet opening of suction nozzle 2. The inclined surface of the closure plate 11 permits the cleaner to be easily moved over rugs without disturbing the rugs.

During the operation of the cleaner, there is a considerable flow of air across the lower surface of the closure plate 11 toward the inlet opening of suction nozzle so that the surface beneath the front edge of the closure plate is subjected to suction cleaning. Because of this, the chamber at the front of the suction nozzle does not prevent cleaning surfaces adjacent walls or obstructions on the surface being cleaned.

The electric lamp 13 for illuminating the surface in front of the suction nozzle is carried directly above closure plate 11 on a reflector 14 which is riveted to the closure plate. A spring clip 15, riveted to the front side of the reflector, supports the lamp socket 16 in a position opposite the center of an opening 17 in the front wall 8. The opening 17 is relatively long and narrow and extends longitudinally across the front of the suction nozzle. Since the lamp 13 is opposite the center of opening 17, the light from the lamp shines through the opening 17 at a relatively wide angle and illuminates a wide band of the surface in front of the suction nozzle. The reflector 14 assists in directing the light from the lamp. Due to the fact that the lamp is close to the surface being cleaned, the illumination on the surface directly in front of the vacuum cleaner is of relatively high intensity. At the same time the lamp is protected by the walls 8, 10, and 11. Current is fed to the lamp through conductors 18.

The lamp may be replaced by moving the closure plate 11 downward away from walls 8 and 9. This moves the lamp 13 and the reflector 14 clear of the vacuum cleaner casing and while in this position, the lamp may be readily removed from or inserted into the socket 16. With this arrangement, the opening 17 need be only of sufficient size to permit proper illumination of the surface in front of the cleaner and need not be large enough to allow replacement of the electric lamp. Also, since the opening 17 may be small, the lamp 13 is well protected from injury.

What I claim as new and desire to secure by Letters Patent of the United States, is:

1. In a vacuum cleaner, a suction nozzle having a surface contacting mouth including a front wall with an opening therein, a wall to the rear of said front wall, a removable closure plate at the lower end of said walls for forming a chamber within the mouth of said nozzle, and means including a lamp carried by said closure plate and shining through said opening for illuminating the surface being cleaned.

2. In a vacuum cleaner, a suction nozzle having a surface contacting mouth including a front wall, a wall to the rear of said front wall, a removable closure plate at the lower end of said walls and inclined upward toward the front wall for forming a chamber within the mouth of said nozzle, and means including a lamp carried by

said closure plate and shining through said front wall for illuminating the surface being cleaned.

3. In a vacuum cleaner, a suction nozzle having a surface contacting mouth including a front wall with an opening therein, a wall to the rear of said front wall, a removable closure plate at the lower end of said walls for forming a chamber within the mouth of said nozzle, a reflector fixed to said closure plate, and means including a lamp carried by said reflector and shining through said opening for illuminating the surface being cleaned.

4. In a vacuum cleaner, a suction nozzle having a surface contacting mouth and a wall in front of said mouth, a wall to the rear of said front wall, a lamp carried between said walls and shining through the front wall, and a removable closure plate at the lower end of said walls forming a chamber for said lamp between said walls.

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