Feb. 7, 1939. D. C. SPOONER, JR 2,146,602

VACUUM CLEANER

Filed April 19, 1935

Fig. 1.

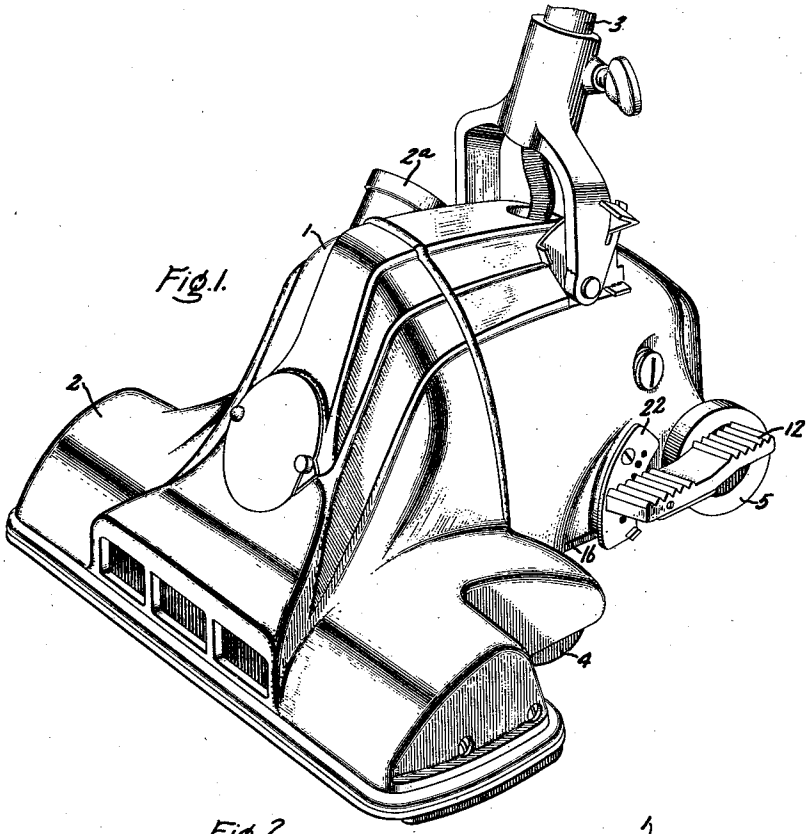


Fig. 2.

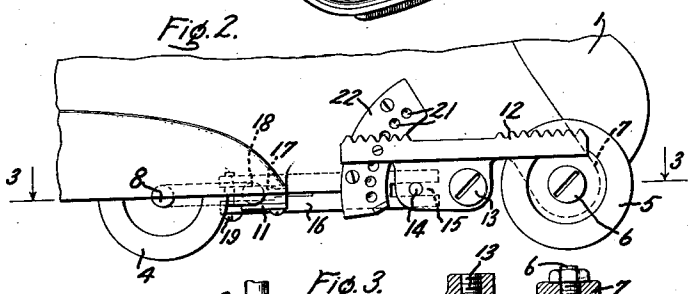
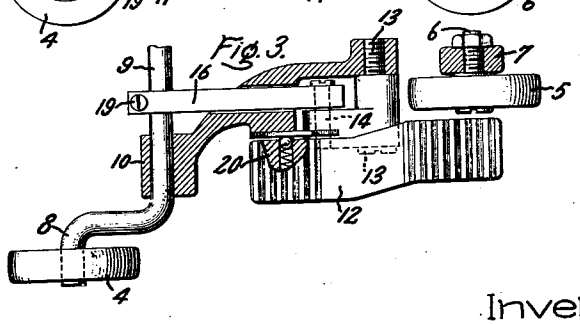


Fig. 3.



Inventor:
David C. Spooner Jr.,
by Harry E. Dunham
His Attorney.

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UNITED STATES PATENT OFFICE

2,146,602

VACUUM CLEANER

David C. Spooner, Jr., Stratford, Conn., assignor to General Electric Company, a corporation of New York

Application April 19, 1935, Serial No. 17,219

1 Claim. (Cl. 15—16)

My invention relates to vacuum cleaners of the domestic type suitable for cleaning floor coverings and the like. In vacuum cleaners of this type, the height of the suction nozzle above the surface being cleaned should be adjusted in accordance with the nature of the surface in order to obtain the most effective cleaning. For instance, when cleaning rugs having a heavy pile, the nozzle should have a more elevated position relative to the rug than when cleaning rugs having a low pile.

The object of my invention is to provide an improved construction and arrangement in a vacuum cleaner for adjusting the position of the suction nozzle relative to the surface being cleaned. For a consideration of what I believe to be novel and my invention, attention is directed to the accompanying description and the claim appended thereto.

In the accompanying drawing, Fig. 1 is a perspective view of a vacuum cleaner embodying my invention; Fig. 2 is a fragmentary side elevation of the vacuum cleaner shown in Fig. 1; and Fig. 3 is a fragmentary sectional view taken on line 3—3 of Fig. 2.

Referring to the drawing, 1 indicates a vacuum cleaner casing having a suction nozzle 2, a discharge conduit 2a, a handle 3, front supporting wheels 4, and rear supporting wheels 5. The rear supporting wheels are rotatably carried on stub shafts 6 which are bolted to ears 7 formed at the rear of the casing. The front supporting wheels 4 are rotatably carried on the offset ends 8 of a shaft 9. This shaft fits in open-ended grooves formed in the under side of bosses 10 on the casing and is held in place in these grooves by plates 11 which are secured to the under side of the bosses. In this construction, it is evident that by rotating the shaft 9, the vertical position of the wheels 4 will be adjusted and the vertical position of the nozzle with reference to the surface being cleaned will thereby be adjusted.

The position of the suction nozzle relative to the surface being cleaned is adjusted by a pedal 12 which is pivotally supported intermediate its ends on a stub shaft 13 which is threaded into the side wall of the casing 1. By this arrangement, the pedal is supported for rocking movement relative to the casing. Secured to the forward part of the pedal is a crank pin 14 which fits within a slot 15 in the end of a lever 16. The other end of lever 16 is provided with a slot 17 which fits over a flattened portion 18 on the shaft 9 and is clamped thereto by a screw 19. A spring pressed ball 20 carried by the pedal 12 co-operates with holes 21 formed in a plate 22 carried by the cleaner casing to provide detents for holding the pedal in position.

In Fig. 2, the pedal is shown in a horizontal position which corresponds to a medium height of the nozzle above the surface being cleaned. When the pedal is inclined downwardly by pressure on the front end of the pedal, the crank pin 14, which is attached to the pedal, causes the lever 16 and the shaft 9, which is connected thereto, to be rotated in a clockwise direction, as viewed in Fig. 2. This causes the nozzle to be lowered closer to the surface being cleaned. The nozzle is raised by pressure on the rear end of the pedal which causes the shaft 9 to be rotated in the opposite direction, thereby elevating the nozzle. The inclination of the pedal therefore provides an indication of the position of the nozzle. This arrangement has the additional advantage that the rocking movement of the pedal necessary to raise and lower the suction nozzle is effected by downward pressure on the pedal.

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

In a surface tool having a surface cooperating part, a shaft journaled in said tool and having offset ends, supporting wheels carried by said offset ends, the shaft being located so that upon turning of the shaft the wheels are moved relative to the tool to adjust the position of the surface cooperating part to positions between an upper and a lower position, a pedal supported intermediate its ends on the tool for rocking movement whereby downward pressure on either end of the pedal will cause tilting of the pedal, a lever fixed to said shaft, a crank rotated by said pedal, a pin and slot connection between said crank and said lever for turning said shaft, and means for holding said shaft in the position to which it is moved by said pedal.

DAVID C. SPOONER, JR.