UNITED STATES PATENT OFFICE.

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VACUUM CLEANING DEVICE.

1,189,648.


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To all whom it may concern:

Be it known that I, WALTER ANDERSON, a citizen of the United States, residing at Fairmont, in the county of Garfield, State of Oklahoma, have invented certain new and useful Improvements in Vacuum Cleaning Devices; 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.

This invention relates to improvements in vacuum cleaning devices.

One object of the invention is to provide a simple and compact device which can be easily manipulated for carrying horses or for cleaning carpets, upholstery or the like.

Another object is to provide a simple device of this character which will effectively suck up dust and dirt and which carries means for collecting the dust and dirt taken up whereby the said dust and dirt can settle in a portion of the device out of line of the blast of the suction.

Other objects and advantages will be apparent from the following description when taken in connection with the accompanying drawing.

In the drawing: Figure 1 is an elevation of my improved vacuum cleaning device.

Fig. 2 is a vertical central sectional view therethrough, Fig. 3 is a bottom plan view, and Fig. 4 is a horizontal section on the line 4–4 of Fig. 2.

Referring particularly to the accompanying drawing, 10 represents a casing having its lower end opened and the upper end arched in the form of a dome, as shown at 11. In the lower portion of the casing is an outwardly flared curved surrounding wall 12 to the upper end of which is connected a plurality of spokes 13 extending radially toward the center and secured to a hub 14. Journaled in this hub is the lower end of a vertical shaft 15, the upper end of which extends upwardly through the top of the casing and carries on its upper end a pinion 16. On the top of the casing is formed a small compartment 17 into which projects the upper end of the shaft 15. In the compartment is mounted a shaft 18, which carries a pinion 19 meshing with the pinion 16. On the shaft 18 is a second pinion 20 meshing with a pinion 21 keyed to the shaft 22 and disposed within the compartment. Below the pinion 21 is loosely mounted a pinion 23, which carries thereon a casing 24, within which is disposed the motor spring 25. One end of the spring is connected to the shaft 22 and the other end to the casing 24. Also mounted within the compartment 17, is a shaft 26 carrying on its upper end a ratchet wheel 27, and on its lower end a combined plain and bevel pinion 28.

The pinion 23 meshes with the plain portion of the pinion 28, as shown. Pivoted on the upper wall of the compartment 17 is a spring-pressed pawl 29, which engages with the ratchet wheel 27. Extending outwardly through the adjacent portion of the wall of the compartment is a horizontal shaft 30. On the inner end of this shaft is mounted a bevel pinion 31 which meshes with the bevel portion of the pinion 28. The outer end of this shaft loosely carries a pinion 32 meshing with a segmental pinion 33 carried in a bracket 34, mounted on the casing 10. A small ratchet wheel 35 is rigidly mounted on the outer end of the shaft 30 and is engaged by a spring-pressed pawl 36 pivotedally carried by the pinion 32. A depending lever 37 is secured to the segmental pinion which is adapted to be grasped to rock said pinion and impart movement to the shaft 30. Within the casing and at a point intermediate the dome portion and the lower portion is a second upwardly and inwardly inclined wall 38, this wall forming a surrounding pocket between it and the surrounding wall of the dome.

Mounted on the lower end of the shaft 15 are the radially extending arms 39 to the outer ends of which are secured the fan blades 40 which travel in the peripheral pocket formed between the wall 12 and the side wall of the casing. The curved wall of the upper end of the casing is formed with a plurality of air outlet openings 41 and disposed inwardly of this wall and properly secured at the lower end of the wall 38 and at the top of the dome is a fabric 42 through which air will pass to the openings 41 which will obstruct the passage of dirt and dust. On the lower end of the casing is secured a spiral strip of metal 43 the lower edge of which is serrated after the manner of the toothed plates of a curry comb.

Assuming the spring motor to be wound up, the toothed strip is passed over the horse's body to loosen the dandruff and dirt.
The rotating fan, driven by the spring motor will direct an upward blast of air inwardly of the wall 38, the air passing through the fabric and opening 41 while the dust and dirt settles back into the pocket between the wall 38 and the casing. There will be a comparative calm in this pocket so that the dust will not be kept in an agitated whirl by the upward blast of air from the fan.

By removing the strip 43 other devices, such as scraping strips, brushes or the like can be substituted so as to adapt the devices for use on carpets, the upholstery of furniture, curtains or the like.

Mounted on the shaft 15, in the upper portion of the casing 10 is a centrifugal governor 44.

When the lever 37 is moved toward the right in Fig. 1, the pinion 32 will be turned so that its pawl 36 moves idly over the ratchet wheel 35, no movement being communicated to the shaft 30 by reason of the fact that the pinion 32 is loosely mounted on the said shaft. When the lever is moved toward the outwardly extending member 43, carried by the casing 10, the pinion 32 will be turned in the opposite direction so that its pawl 36 engages with the ratchet wheel 35 and turns the shaft 30. Movement will be communicated to the shaft 36 through the medium of the pinion 28. The pinion 28 and causes the winding of the motor spring 29. The pawl 29 prevents backward movement of the shaft 26 so that the spring will not unwind when the lever is moved to the right in Fig. 1. The unwinding of the spring will take place from the center, so that the shaft 22 will be rotated carrying with it the pinion 21 and driving the shaft 18. This shaft, through the medium of the pinion 19 and the pinion 18 on the shaft 15 rotates the last-named shaft with its fan. By reciprocating the lever 37 every once in a while during the moving of the device over the horse's body, the spring can be kept wound to such a tension that the maximum speed can be imparted to the fan.

One side of the dome is provided with a cleanout opening closed by a sliding door 45.

What is claimed is:

A vacuum cleaning device comprising an outer shell having its upper portion closed and perforated, an upwardly and inwardly extending wall in the lower portion of the shell provided with an inlet opening and forming a circular pocket between the wall and the shell, air current producing means movable in said pocket, a fabric lining disposed inwardly of the perforated portion of the shell, and an upwardly and inwardly extending wall forming a circular pocket between it and said shell for the reception of the dust drawn up by the air current producing means.

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

WALTER ANDERSON.

Witnesses:

JAMES W. BUTTS,

BenJ. Koos.