May 14, 1940. D. M. DOW 2,200,738

VACUUM CLEANER

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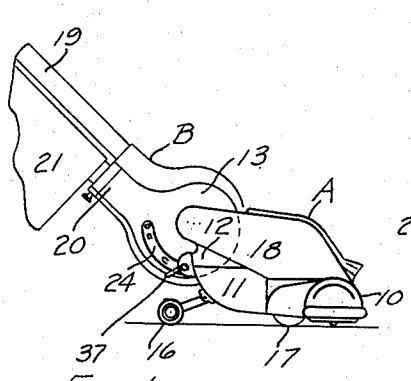


FIG. 1

FIG. 2

FIG. 3

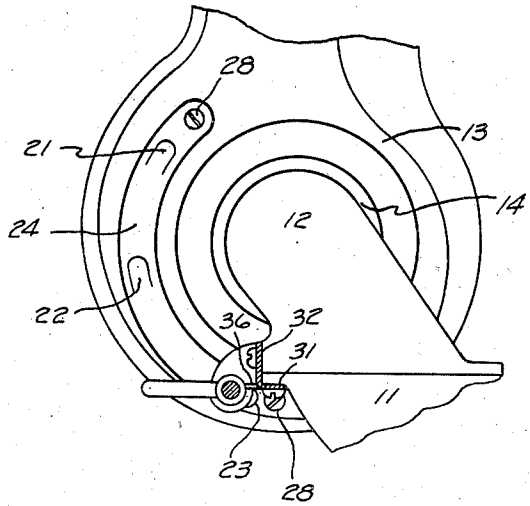


FIG. 4

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VACUUM CLEANER

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1 Claim. (Cl. 15—16)

This invention relates to vacuum cleaners of the type shown in my pending application, Serial Number 66,882, and in my copending Patents 2,114,630 and 2,149,588. The present application constitutes a continuation in part of those applications and the disclosures thereof are incorporated in and made a part hereof by reference.

The general purpose of the present invention is to provide a vacuum cleaner having a vertically swingable handle with novel and inexpensive means for delimiting a series of handle positions, or for restraining the handle from movement in one direction in a given position.

The invention utilizes one side wall of the fan casing to form a series of detents into which a retractible bolt or similar device, carried by the arm of the suction chamber to which the fan casing is pivoted, is movable in a direction parallel to the axis of pivotal movement. The handle is rigidly secured to the fan casing, and thus the fan casing and associated retractible element serve as the handle positioning mechanism, obviating the necessity for more expensive handle positioning mechanism.

Further objects will appear in the perusal of the following detailed description of the invention in connection with the accompanying drawing in which:

Fig. 1 is a side elevation of a suction cleaner embodying the invention,

Fig. 2 is a rear elevation of the same,

Fig. 3 is a detail sectional view of the retractible element, and

Fig. 4 is a detail side elevation of the fan casing and associated parts.

A suction cleaner constructed in accordance with the invention comprises generally two parts, a roller supported body unit A, and a handle, fan casing and bag assembly B, pivotally attached to the body unit A.

The body unit A comprises a suction chamber beginning with an agitator chamber 10 having a suction inlet mouth, and terminating in rearwardly and upwardly extending arms 11, 12, between which is pivoted the fan casing B, its inlets 14 in swivelling communication with the elbow portions 12 of the aforesaid arms.

The body unit is supported upon floor rollers 16, 17 and a cover 18 partially covers the arms 11, 12.

The unit B includes the fan casing 13, the handle 19, secured rigidly to the outlet 20 of the fan casing, and a bag 20a suspended below the handle and having an inlet neck communicating with the outlet 20.

The positioning mechanism includes a series of detents 21, 22, 23 formed in a side wall of the fan casing, either integrally, or by means of an arcuate keeper 24, secured to said side wall. Detent 23 is a round hole.

The detents 21 and 22 are adapted to restrain movement only in one direction, one end of each detent being deep and the other end being inclined into mergence with the outer face of the keeper. This construction is formed by striking tongues 27 out of the keeper and bending them so that their tips lie just out of the plane of the keeper. To accommodate these tip regions, I provide an under plate 25 of arcuate form, corresponding in shape to the keeper, and having openings 26 receiving the tongues 27. Both keeper and underplate are secured by common securing elements 28.

A bolt 29 is longitudinally slidably and rotatably mounted in the spaced ears 30 of a bracket which is L-shaped in cross-section, including vertical and horizontal legs 31 and 32 respectively, secured to under and rear faces, respectively, of the arms 11, 12.

A coil spring 33 urges the bolt into engagement with the keeper 24. A helical cam 34 is formed on or secured to the bolt 29, and engages the inclined edge 35 of a flat cam 36 formed by bending a flap of the material of the bracket 32, toward the axis of the bolt 29. A pedal 37 is secured to the cam 34 and thus to the bolt 29, and is adapted to be engaged by the operator's foot. Depression of the lever causes the cam 34 to rotate against the cam 36 thus forcing the bolt to recede axially. When the foot pedal is released the pressure of the spring 33 will cause the cam 34 to ride against the cam 36 back to a neutral position, bringing the pedal with it.

I claim as my invention:

In a vacuum cleaner having a suction chamber with a pair of rearwardly extending suction outlets, and having a fan casing arranged between said suction inlets and communicating with said fan casing, said fan casing being pivotally connected to said suction inlets, a handle secured in said fan casing and adapted to pivot said fan casing, means for maintaining said fan casing in any one of a series of selected adjusted positions comprising a plate in the form of a segment of a circle and having series of detent openings in the plate, said plate being exteriorly affixed to one side wall of said fan casing, a bracket attached to one of said suction outlets, a retractible means mounted in said bracket, said retractible means being capable of engagement with any one of said detent openings for holding said fan casing in a selected position relative to the suction chamber, and foot pedal operated means to actuate said retractible means.

DEWEY M. DOW.