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[54] **DAMPENING UNIT FOR AN ELECTRIC VACUUM SWEEPER BAG**

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[52] **U.S. Cl.** **55/233,** 55/374, 55/378

[51] **Int. Cl.** **B01d 47/00**

[58] **Field of Search** 55/220, 233, 242, 302, 55/361, 369, 370, 371, 374, 375, 376, 378

[56] **References Cited**

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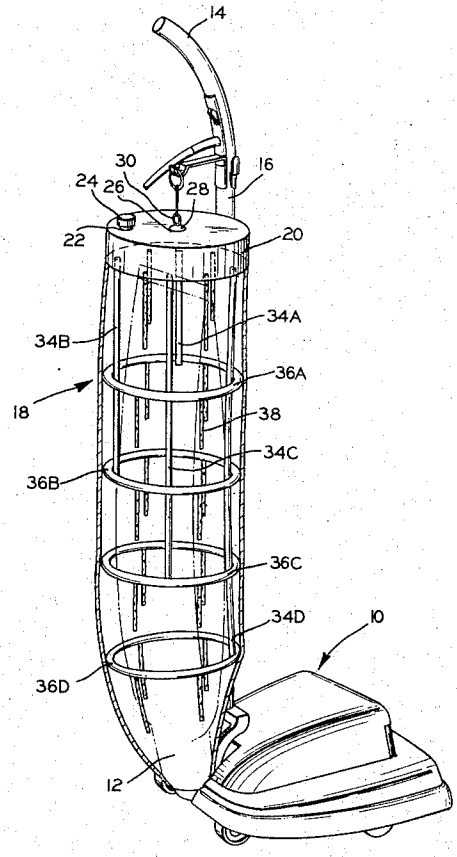
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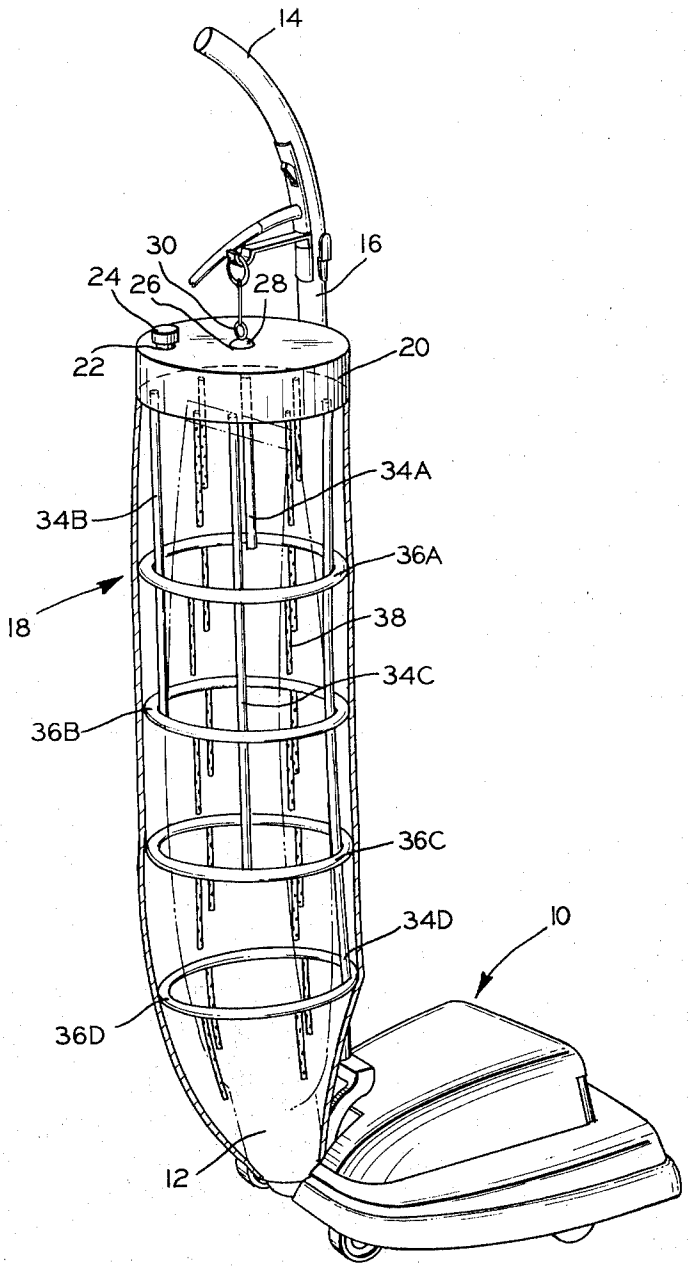
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[57] **ABSTRACT**

A dampening unit to reduce dust emission from the sweeper bag for an electrically operated vacuum sweeper, said unit adapted for disposition around the sweeper bag, and comprising an external skeletal network of tubular members depending and connected to a water container located at the top of the sweeper bag, the first of such tubular members being a series of horizontally disposed tubular rings aligned parallel to one another in a succession of imaginary planes intersecting at spaced intervals the central longitudinal and vertical axis of the sweeper bag; the second set of such tubular members being vertically depending tubular connections each of which connect the water container with a respective horizontal tubular member; a third set of finely perforated members which depend vertically downwardly from the horizontal tubular members to carry and disperse water on the sweeper bag; through which tubular connections water placed in the water container can seep downwardly in a controlled manner into the horizontal tubular members and thence into the vertically disposed perforated tubular members to reach the fabric material of the sweeper bag in order to dampen it.

1 Claim, 1 Drawing Figure




14
30
16
24
26
28
22
20
34A
34B
36A
18
38
34C
36B
36C
34D
10
36D
12

DAMPENING UNIT FOR AN ELECTRIC VACUUM SWEEPER BAG

BACKGROUND OF THE INVENTION

Electrically operated vacuum sweepers are a common appliance in most households. Their usage and ability to pick up dirt has been an immense help to housewives. However, the efficiency of such vacuum sweepers is hampered by the fact that the sweeper bag is not capable of holding all air that enters the bag because of the very fabric material of which it is constructed. Of course, in the operation of electric vacuum sweepers it is imperative that some air pass through the fiber of the bag in order to obviate the bag bursting from a continuous input of air. As a consequence, of this material feature and resultant leakage, some dust laden air will escape from the sweeper bag during sweeping operations and contaminate the air in the room surrounding the sweeper. In many cases, this is not only detracts from the efficiency of the sweeper, and in addition, causes more dust to fall back onto the carpet or other area being swept. Under such latter described conditions, a problem of cleanliness as well as a health problem can result with inefficient sweeper usage. The exact amount of dust which infiltrates back into the air depends on the nature of the sweeper. Certain sweepers have been conceived which do not use a bag, using instead a water filter system. Such sweepers have proven to be efficient but cumbersome in operation. This invention is thusly conceived to be used around those machines which utilize the bag type structure. More particularly, this invention is conceived to provide a mechanical arrangement whereby dust is inhibited and blocked as the expelled air passes from the sweeper bag into the room while the electric vacuum sweeper is being operated.

In view of the foregoing, it is an object of this invention to provide an improved system for vacuum sweepers by which air is filtered more efficiently;

Still another object of this invention is to provide a humidifying system for cleaning the air emitted through the sweeper bag of an electric vacuum sweeper;

It is yet another object of this invention to provide an improved electric vacuum sweeper;

Other and further objects will become apparent from the description taken in conjunction with the following drawing:

DESCRIPTION OF THE DRAWING

The sole FIGURE is a perspective view of the skeletal apparatus in the preferred embodiment as it is shown fitted over a vacuum sweeper bag.

GENERAL DESCRIPTION OF THE INVENTION

The invention is a skeletal member adapted to be covered around a sweeper bag for an upright, electrically operated vacuum sweeper, being comprised basically of a network of hollow tubular members capable of carrying water from a cylindrically shaped water container located at the top of the sweeper bag. The first series of the tubular network members are vertically depending tubular members, the internal cavities of which communicate directly to the interior of the water container in a series of cinnections around the entire outer circumference of the lower surface of the water container, forming thereby a cylindrical birdcage effect. Each of these vertically depending tubular

members in turn connects with one of a series of horizontally disposed tubular members, each of which lies parallel to another in a series of planes intersecting the central longitudinal and vertical axis of the sweeper bag. Depending downwardly and vertically from each horizontal tubular member are a plurality of tubular members which are perforated communicating with the internal passage of each horizontal tubular ring. These vertically depending tubular members are perforated with finely drawn holes so that water may seep in minutely measured quantities from the horizontal tubular members onto the sweeper bag itself thereby dampening the bag.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the drawing in which a preferred embodiment is shown, an upright electrically operated vacuum sweeper **10** is shown. Sweeper **10** has a vertically extending dust collection bag **12** of cloth or fiberglass material which is attached to a vertically upright handle **14.** Sweeper bag **12** is aligned in a substantially parallel manner to the central and vertically extending axis of the handle shaft **16,** as shown in FIG. **1.** Inserted over sweeper bag **12** is a tubular skeletal member **18** comprised of a network of water-carrying tubular members and which skeletal member extends longitudinally over the entire length of the bag **12.**

Skeletal member **18** is comprised of an enclosed water container **20** of the shape of a cylindrical spool. Container **20** has an opening **22** adapted for a screw cap **24** in its upper surface for pouring water into the inside of container **20.** A centrally located hole **26** communicates from the upper to the lower surface of water container **20** and is of sufficient size to allow for the insertion therethrough of the upper neck portion **28** of sweeper bag **12** so that a hook **30** can be snapped to the top of the neck **28** as shown. By this arrangement the upper part of the sweeper bag **12** will rest against the lower surface of water container **20.**

Container **22** has a series of vertically depending tubular members **34** which communicate with the interior of the water container and release and carry water down wardly from container **20.** These tubular members are arranged in a circumferential manner around the periphery of the lower surface of the container **20.** The first such tubular member **34A** leads to a horizontally disposed ring **36A,** while the second such tubular member **34A** leads to a second horizontally disposed tubular member **36B,** which latter horizontally disposed ring **36B** which is next and lower in height succession from horizontal ring **36A.** Each such horizontally tubular ring is thusly connected to a vertically disposed tubular member **34** communicating by its respective internal passages with the horizontal tubes. The respective horizontally disposed tubular members **36** are thusly arranged in a series of imaginary planes which intersect at spaced intervals relative to the vertically extending longitudinal axis of the sweeper bag **12.**

From each horizontal ring **36** there are depending perforated tubes **38** which serve to spread water by fine perforations therein onto the sweeper bag dampening it to help collect dust. Water container **20** is released by an appropriate trigger valve operated by the person operating the sweeper and water will pass from this container into the respective tubes passing water to the bag and dampening the sweeper bag.

The foregoing description is not intended to limit the scope of the following claims.

What is claimed is:

1. A dampening unit for a sweeper for fitting over a vertically extending sweeper bag for an electrical vacuum sweeper bag comprising a:

1. a water container affixed to the top of the sweeper bag;
2. vertically depending tubes extending from the water container and surrounding the outer periphery of the sweeper bag;
3. a series of horizontal circular tubular members connected to the vertically extending tubular members by internal chambers which horizontal tubular members extend around the outer periphery of the sweeper bag;
4. vertically depending perforated tubes extending from the horizontal tubular members and venting into the outer periphery of the sweeper bag.

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