

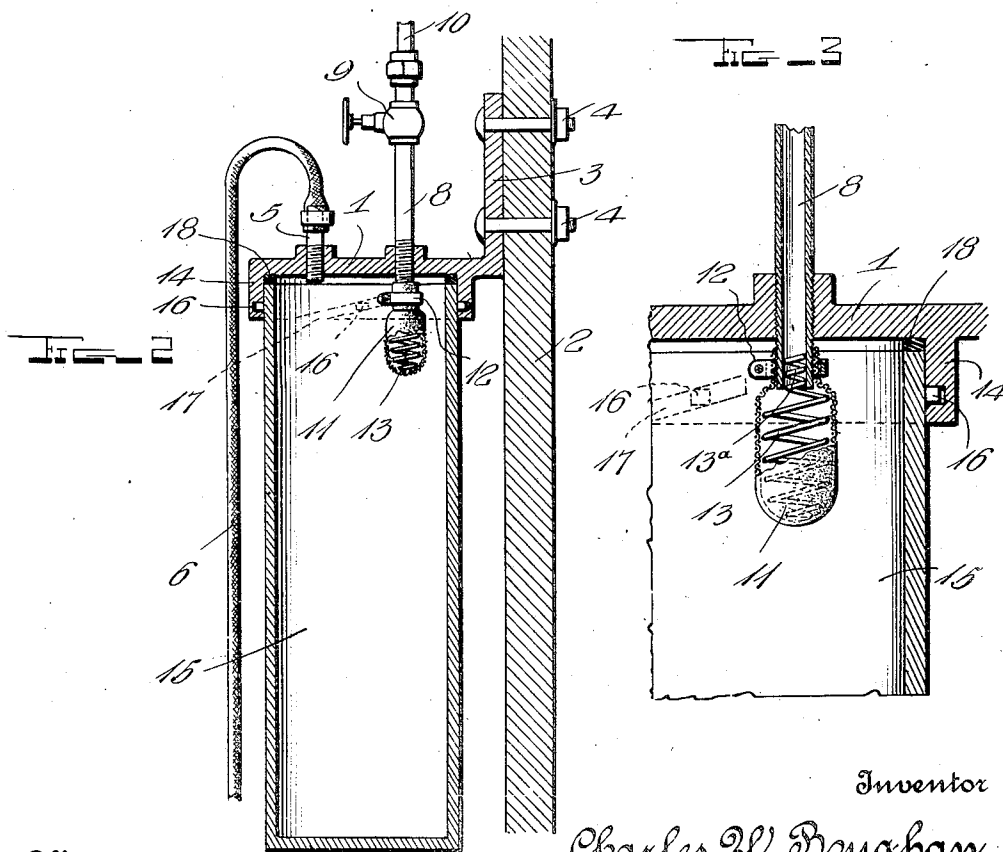
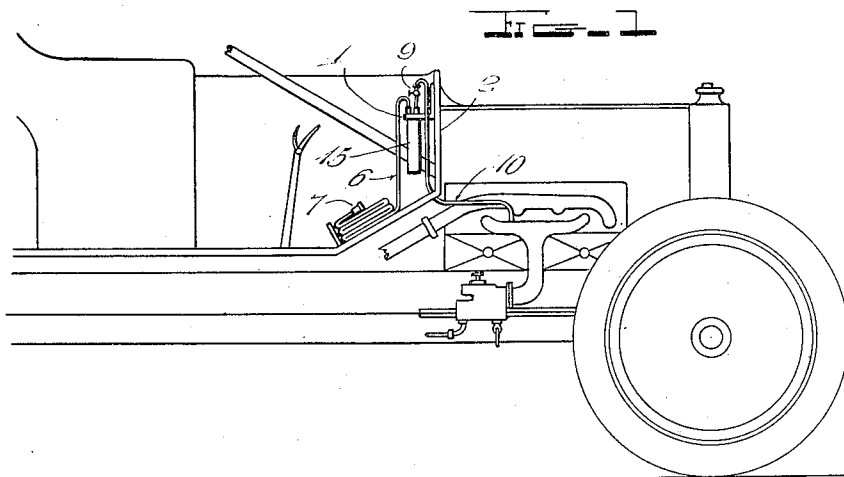
Dec. 16, 1924.

1,519,950

C. W. BOUGHAN

VACUUM CLEANER

Filed March 3, 1924



Witness

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UNITED STATES PATENT OFFICE.

CHARLES W. BOUGHAN, OF HEDRICK, IOWA.

VACUUM CLEANER.

Application filed March 3, 1924. Serial No. 696,647.

To all whom it may concern:

Be it known that I, CHARLES W. BOUGHAN, a citizen of the United States, residing at Hedrick, in the county of Keokuk and State of Iowa, have invented certain new and useful Improvements in Vacuum Cleaners; and I do 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.

My invention relates to improvements in vacuum cleaners and has reference more particularly to a device of this character which is primarily designed for use upon an automobile, for the purpose of keeping the upholstery and other parts, free of dust.

It is the principal object of the invention to provide a device of the class set forth, which constitutes a distinct advance over the subject matter shown by U. S. Patent No. 1,220,297, issued March 27, 1917, to Harold Vanderhoof.

With the foregoing in view, the invention resides in the novel subject matter herein-after described and claimed, the description being supplemented by the accompanying drawing.

Figure 1 is a diagrammatic elevation showing one application of the invention to an automobile.

Figure 2 is an enlarged vertical sectional view partly in elevation.

Figure 3 is a detail sectional view, partly in elevation, showing one manner in which the air exhausting passage from the dust collecting chamber, may be screened.

In the drawing above briefly described, the numeral 1 designates a horizontal cap which is adapted to be mounted upon a suitable support 2, such as the dash or other desired part of an automobile. In the construction shown, an integral upstanding bracket arm 3 has been shown on the cap 1, which arm is secured by bolts or the like 4 to the support.

Extending through the cap 1, I have shown a short, dust and air inlet pipe 5 which connects with a suitable hose 6 having an appropriate suction nozzle 7. Also, passing through the cap 1, is a short air exhaust pipe 8 having a valved connection 9 with a tube 10 which may lead to any desired means for producing suction, but preferably extends to any adequate part of the intake manifold of an automobile engine.

The pipe 8, below the cap 1, is provided with a suitable screen which preferably consists of a chamois bag 11 clamped at 12 around the end of the pipe and held in expanded position by a coiled spring 13 which may well be provided with a reduced coiled neck 13^a fitting over the pipe, this construction being shown most clearly in Fig. 3.

The cap 1 is by preference provided with a depending annular flange 14, and a dust receptacle 15, whose upper end is closed by said cap, may well engage the inner side of this flange as shown. For connecting the flange and receptacle, I prefer to provide the latter with outstanding lugs 16 receivable in inclined grooves 17, in the flange, so that by simply turning the receptacle 15, it may be attached or detached as required. I have shown a gasket 18 between the upper edge of the receptacle 15 and the cap 1, to produce an air-tight connection, but other suitable provision could of course be made for this purpose.

When the invention is used on an automobile, in the manner herein disclosed or an equivalent manner, operation of the motor will create a partial vacuum in the receptacle 15, when the valve 9 is opened. Thus, when the nozzle 7 is engaged with the upholstery or the like, all dust and the like therein will be sucked through the hose 6 and discharged into the receptacle 15, and the air passing through the hose 6 with the dust, will be strained by the chamois bag 11 and will pass out through the tube 10 and into the engine. This auxiliary supply of filtered air to the engine, assists materially in proper operation thereof, under certain conditions, but when the valve 9 is closed, such auxiliary air will be cut off.

From time to time, the receptacle 15 may be quickly and easily detached to dump the accumulated dust therefrom and it will be seen that this can be done, without molesting any other parts of the apparatus, it being unnecessary to first remove a cap and then withdraw a dust bag, as in the patented device above referred to.

As excellent results may be obtained from the details disclosed, they may well be followed, but within the scope of the invention as claimed, numerous minor changes may be made.

I claim:

1. A vacuum cleaner comprising a cap having a supporting bracket, an air outlet

through said cap adapted to be connected with suction creating means, an air and dust inlet through said cap, and a dust receptacle removably engaged with and supported by
5 said cap.

2. A vacuum cleaner comprising a cap, a supporting bracket formed integral therewith, a dust receptacle removably engaged with and supported by said cap, an air out-
10 let pipe projecting through said cap and adapted to be connected with suction creating means and an air and dust inlet pipe engaged with said cap and opening into said
15 receptacle.

3. A vacuum cleaner comprising a cap, means for attaching said cap to a support,

a dust receptacle having a detachable connection with and supported by said cap, an air and dust inlet pipe arranged in said cap and opening in said receptacle, an air outlet
20 pipe arranged in said cap and having its inner end projecting a slight distance into said receptacle, a dust screening bag clamped to the inner end of said outlet pipe, a coiled expanding spring in said bag, said
25 spring having a reduced upper end fitting into the end of said outlet pipe whereby the spring is held in position, and a valve in the outer portion of said pipe.

In testimony whereof I have hereunto af-
30 fixed my signature.

CHARLES W. BOUGHAN.