W. V. ORR.

SUCTION CLEANING DEVICE.

APPLICATION FILED DEC. 1, 1916.

1,314,693. Patented Sept. 2, 1919.

Fig. 1.

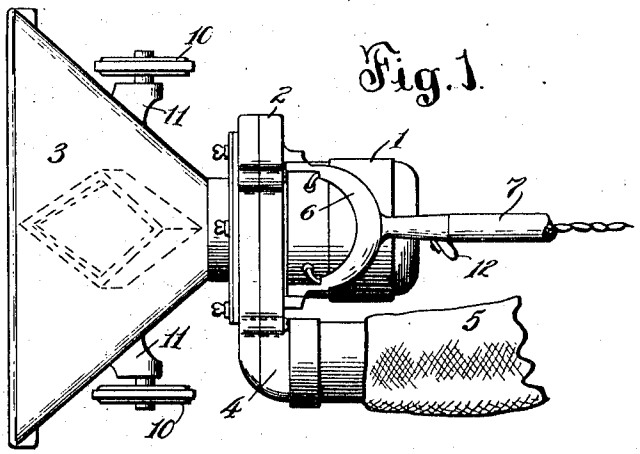


Fig. 3.

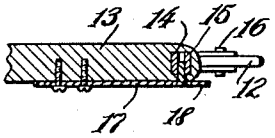


Fig. 2.

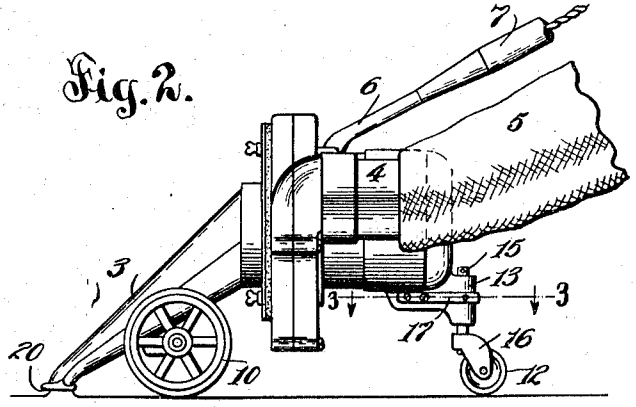
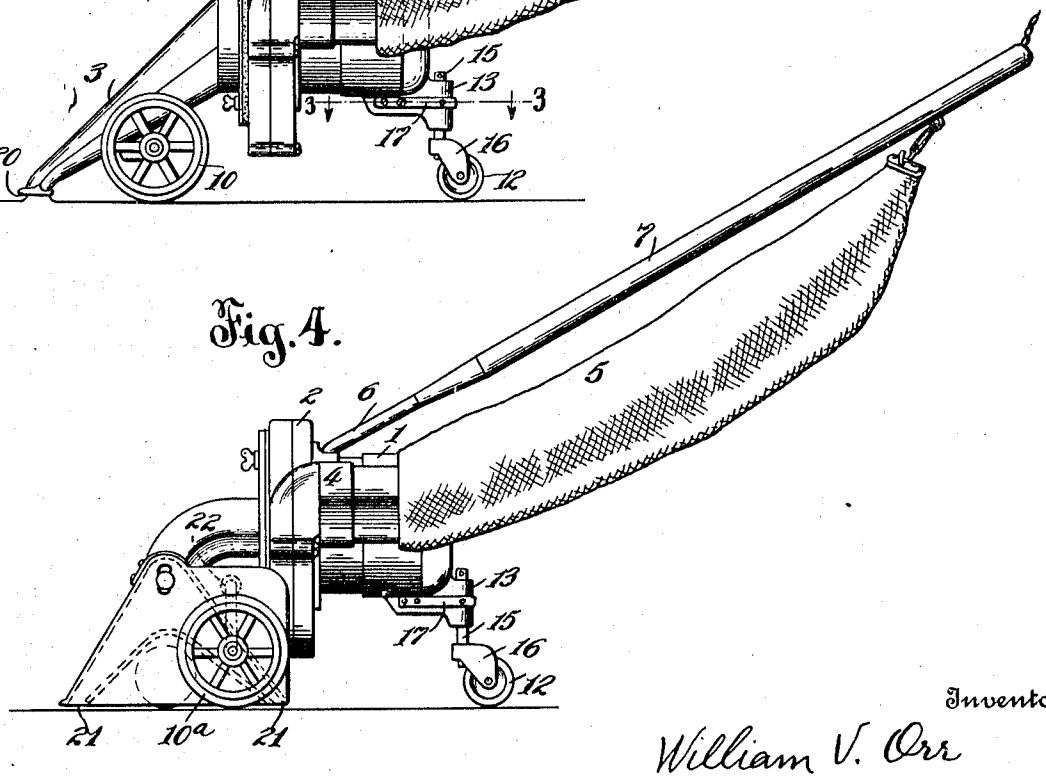


Fig. 4.



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SUCTION CLEANING DEVICE.

1,314,693. Specification of Letters Patent. Patented Sept. 2, 1919.

Original application filed April 19, 1912, Serial No. 691,966. Divided and this application filed December 1, 1916. Serial No. 134,279.

To all whom it may concern:

Be it known that I, WILLIAM V. ORR, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Suction Cleaning Devices, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

This invention relates to vacuum cleaning devices and has for its object the provision of an apparatus of this nature of simple and compact form; the provision of means for adjusting the operating parts with reference to the surface on which they are used; while further objects and advantages will become apparent as the description proceeds.

The present application is a division of the former application filed April 19, 1912, Serial No. 691,966.

Generally speaking my invention may be defined as consisting of the combinations of elements recited in the claims hereto annexed and illustrated in the drawings accompanying and forming part of this application, wherein: Figure 1 is a plan view of a preferred type of cleaner embodying my improvements; Fig. 2 is a side elevational view of the device shown in Fig. 1; Fig. 3 is a detail sectional view taken on the line 3—3 of Fig. 2 looking in the direction of the arrows; and Fig. 4 is a side elevational view of a modified form of the device.

Describing the parts by reference characters, 1 represents the motor, 2 the fan casing and 3 the collecting nozzle of my improved vacuum cleaner, said motor being preferably supported with its shaft substantially horizontal, and said fan casing being attached directly to the forward end of the motor so that a direct connected fan may be employed. The peripnery of this casing is formed with a substantially horizontal discharge pipe 4 to the end of which is attached the porous dust bag 5. Pivoted to some part of the cleaner, upon a horizontal axis perpendicular to the motor axis, is a handle fork 6 to which is attached the rigid handle 7 by means of which the device is guided and to which is attached the upper end of the dust bag 5. The device is supported by means of three wheels or rollers, two of which, 10, 10 are pivoted at some point between the inlet mouth of the nozzle 3 and the center of gravity of the device, in the present case by being journaled to brackets 11, 11 carried by the nozzle; the third, 12, is mounted upon the center line of the cleaner at the rear of the center of gravity, and is arranged for vertical adjustment. In the construction here shown the motor shell is illustrated as formed with a rearwardly extending bracket 13 formed with a vertical aperture 14 in which is slidably mounted the bar 15 to the lower end of which are attached the cheeks 16 between which is journaled the wheel 12. The bar 15 is formed with a plurality of transverse apertures therein adapted to register with a suitable aperture formed in the side of the bracket 13, and to this bracket is secured a resilient member 17 having a finger 18 adapted to coöperate with said apertures to hold said bar in adjusted position.

In the embodiment illustrated in Figs. 1 and 2, the nozzle 3 has a single inlet mouth 20 at a point forward of the wheels 10 so that a vertical adjustment of the wheel 12 rocks the casing, bringing this mouth nearer to or farther from the floor as the case may be. Thus for a naked floor the wheels should be adjusted so as to bring the inlet mouth closely adjacent thereto, while for a floor covering which can be sucked up against the inlet mouth, the adjustment must be changed depending upon the thickness and weight of the fabric and the amount that the wheels 10 sink therein. These wheels 10 are preferably located inside of the lateral limits of the mouth piece so as not to impede close cleaning about walls and furniture. In this construction the wheels 10, 10 require no vertical adjustment.

In the embodiment shown in Fig. 4, two inlet mouths are shown at 21, 21' the carrying wheels 10^a being located between the same. Suitable arrangements are provided as indicated generally at 22 for adjusting vertically the wheels 10^a as well as the wheel 12, by suitable manipulation of which the cleaner can be adjusted vertically while retaining its inlet mouths at equal distances from the floor, as will be obvious.

Having thus described my invention, what I claim is:—

1. In a suction cleaner, the combination with an electric motor and a fan casing secured to one end of said motor, said fan casing having an aperture in the side op-

posite said motor, of a bracket carried by said motor, said bracket having a vertical aperture therein, a bar secured in said aperture in a vertically adjustable manner, a supporting wheel mounted on the lower end of the bar, and a wheeled head having an outlet conduit communicating with the aperture in said fan casing, said head having a downwardly opening inlet mouth upon the opposite side of its wheels from said fan casing.

2. In a suction cleaner, the combination, with an electric motor, and a fan casing secured to one end of said motor, of a supporting wheel secured to said motor in a vertically adjustable manner, a suction head communicating with said fan casing and having a pair of downwardly opening elongated inlet mouths at different distances from said supporting wheel, and vertically adjustable floor wheels carried by said head.

3. In a suction cleaner, a casing having a pair of inlet mouths, a pair of carrying wheels journaled upon axes lying between said inlet mouths, a third carrying wheel located outside of both inlet mouths, and means for vertically adjusting all of said wheels relatively to said cleaner, the center of gravity of said device lying between said first wheels and said third wheel.

4. In a suction cleaner the combination of a casing having a pair of downwardly extending nozzles, said nozzlzes terminating in transverse elongated narrow inlet mouths, said mouths being spaced from each other, a pair of carrying wheels journaled upon axes lying between said inlet mouths, means for vertically adjusting said pair of wheels, a third carrying wheel located outside of both inlet mouths, the center of gravity of said cleaner lying between said first wheels and said third wheel, and means for vertically adjusting said third wheel.

In testimony whereof, I hereunto affix my signature.

WILLIAM V. ORR.