

J. R. VAN DER PUTTEN.
VALVE FOR SUCTION SWEEPERS.
APPLICATION FILED SEPT. 22, 1915.

1,163,716.

Patented Dec. 14, 1915.

Fig. 1.

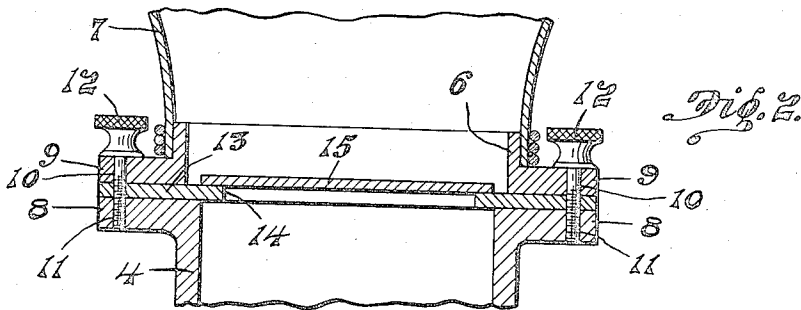
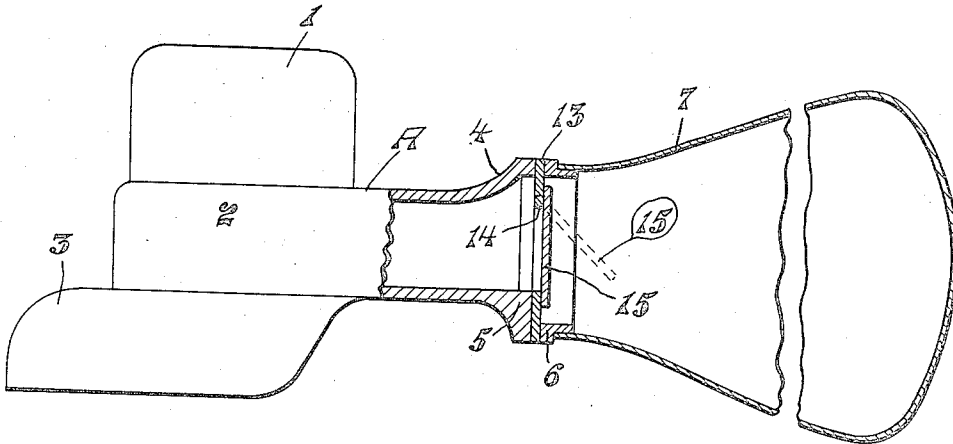


Fig. 3.

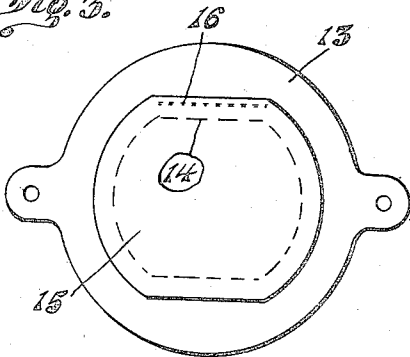
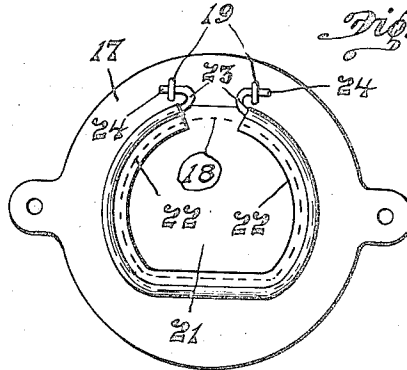


Fig. 4.



Witness

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VALVE FOR SUCTION-SWEEPERS.

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To all whom it may concern:

Be it known that I, JOHN R. VAN DER PUTTEN, a citizen of the United States, residing at New Philadelphia, in the county of Tuscarawas and State of Ohio, have invented a new and useful Valve for Suction-Sweepers, of which the following is a specification.

My invention relates to improvements in suction sweepers and more especially to a valve adapted to be arranged between the fan and the dust receiving bag of the sweeper.

In the ordinary portable suction sweepers such as are provided with a bag adapted to be emptied from the end attached to the casing of the sweeper there has been a great deal of difficulty experienced by dust dropping through the sweeper from the bag and passing through the nozzle upon the floor in case the sweeper is picked up suddenly or moved about without a great deal of care allowing the sweeper to tilt forward.

It is the object of my invention to provide means for preventing any dust from passing back from the bag through the machine and out of the nozzle, making it unnecessary to always use a great amount of care in handling the sweeper and in moving it from place to place.

Another object of my invention is to provide a valve-located between the dust receiving bag and the fan of the sweeper.

A further object is to provide a gasket between the casing of the machine and the ring to which the bag is attached, thus making an air tight joint between said parts, said gasket carrying thereon a valve adapted to remain normally closed, but adapted to be opened when the machine is in use.

Another object of my invention is to provide a valve of the character mentioned, which will be simple, inexpensive, durable and effective.

With these objects in view the invention consists in the novel construction and arrangement of parts, hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportions, size and minor details of construction may be made within the scope of the appended claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawing: Figure 1 represents a side elevation of a suction sweeper of ordinary construction, parts being broken away to show my improved valve attached thereto. Fig. 2 is a horizontal transverse section through a portion of the casing and the dust receiving bag showing my valve located between said parts. Fig. 3 is a front elevation of the gasket and valve attached thereto. Fig. 4 is a similar view showing a modified form of valve. Fig. 5 is a detail perspective view of one of the eyes which is placed in the gasket in the modified form of the invention.

Similar numerals of reference indicate corresponding parts throughout the several figures of the drawing.

Referring more especially to the construction illustrated in the accompanying drawings, the letter A indicates the housing of a suction sweeper, comprising the motor 1, fan casing 2, nozzle and brush casing 3 and the rearwardly extended neck portion 4. In the ordinary sweeper it has been the practice to grind or plane the outer edge of the flange 5 upon the neck portion and the inner edge of the ring 6, which carries the dust receiving bag 7. The neck portion 4 of the casing is provided with ears 8, and the ring 6 is provided with ears 9, each of the ears 9 having a suitable aperture 10 therein and each of the ears 8 having a screw threaded aperture 11 adapted to register with the apertures 10. Thumb screws such as those shown at 12 are passed through said ears and tightened forming an air tight joint, between the neck 4 of the casing and the ring 6 of the bag.

With the use of my improved device it is not necessary to grind or plane the parts above referred to, but a gasket 13 having substantially the outline of the ring 6 is placed between said ring and the flange 5 of the neck of the casing. This gasket is formed of rubber reinforced with fabric, or other suitable material. The thumb screws 12 are then tightened, drawing the ring 6 snugly against the gasket 13, which in turn is held tightly upon the rear face of the flange 5, thus forming an air tight joint. The gasket 13 is provided with an aperture 14, the outline of which is shown in dotted lines in Fig. 3.

The valve consists of a sheet 15 of leather or other suitable material which is hingedly connected along its upper edge to the gasket

13 in any suitable manner as by the stitches 16. The valve will normally remain closed as best shown in Fig. 1 of the drawings, thus making it impossible for any dust or dirt to drop back from the bag 7 into the casing of the sweeper so that it may be accidentally dropped upon the floor in moving the sweeper. The valve 15 being very light, the suction created by the fan when the sweeper is put into operation will cause the valve to open as shown in dotted lines in Fig. 1, thus allowing the dust being removed from the carpet which is being cleaned to be directed through the aperture 14 in the gasket and into the bag 7. Immediately upon stopping the fan the air within the bag will, naturally pass out through the neck of the bag and in so doing will force the valve 15 into the closed position, preventing any dust or dirt from within the bag passing back into the fan casing of the sweeper.

In Fig. 4 is illustrated a modified form of valve in which a reinforcing frame is provided upon the valve. The gasket 17 in this form of valve is provided with an aperture 18, outline of which is shown in dotted lines in Fig. 4. A pair of eyes 19 are placed through suitable apertures in the upper portion of the gasket 17 above the aperture 19, each of these eyes is provided with a bifurcated extension 20, the arms of said bifurcated portion being inserted through the apertures and bent back upon the face of the gasket. The valve consists of a sheet 21 of leather or other suitable material, the outer edges 22 of which are folded over upon a suitable reinforcing wire frame 23, said edges being cemented or otherwise secured to the body portion of the valve. The upper free ends of the wire frame are bent outwardly forming hooks 24. After the eyes 19 have been placed in the gasket the hoops 24

are inserted through said eyes as shown in Fig. 4 of the drawings, thus forming hinges for the valve 21.

Although the drawings and above specification disclose the best mode in which I have contemplated embodying my invention I desire to be not limited to the details of such disclosure, for, in the further practical application of my invention, many changes in form and construction may be made, as circumstances require or experience suggests, without departing from the spirit of the invention, within the scope of the appended claims.

I claim:

1. In a device of the character described, a gasket provided with a central aperture and a flexible valve hingedly connected to said gasket and arranged to normally cover the aperture in said gasket.

2. In a device of the character described, the combination of a gasket provided with a central aperture, eyes formed upon said gasket above said aperture and a flexible valve adapted to normally cover said aperture, said valve comprising a wire frame, the ends of said wire frame being out-turned and passed through said eyes and a sheet of flexible material carried by said wire frame.

3. In a device of the character described, a gasket provided with a central aperture and a flexible sheet valve hingedly connected at one edge to said gasket and arranged to normally cover the aperture in said gasket.

4. In a device of the character described, a gasket provided with a central aperture and a flexible sheet valve stitched at one edge to said gasket and arranged to normally cover the aperture in said gasket.

In testimony that I claim the above, I have hereunto subscribed my name.

JOHN R. VAN DER PUTTEN.