

J. B. KIRBY.
PNEUMATIC CLEANER.
APPLICATION FILED JAN. 22, 1916.

1,206,117.

Patented Nov. 28, 1916.

2 SHEETS—SHEET 1.

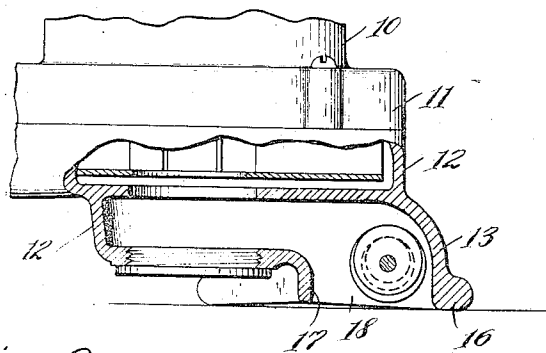
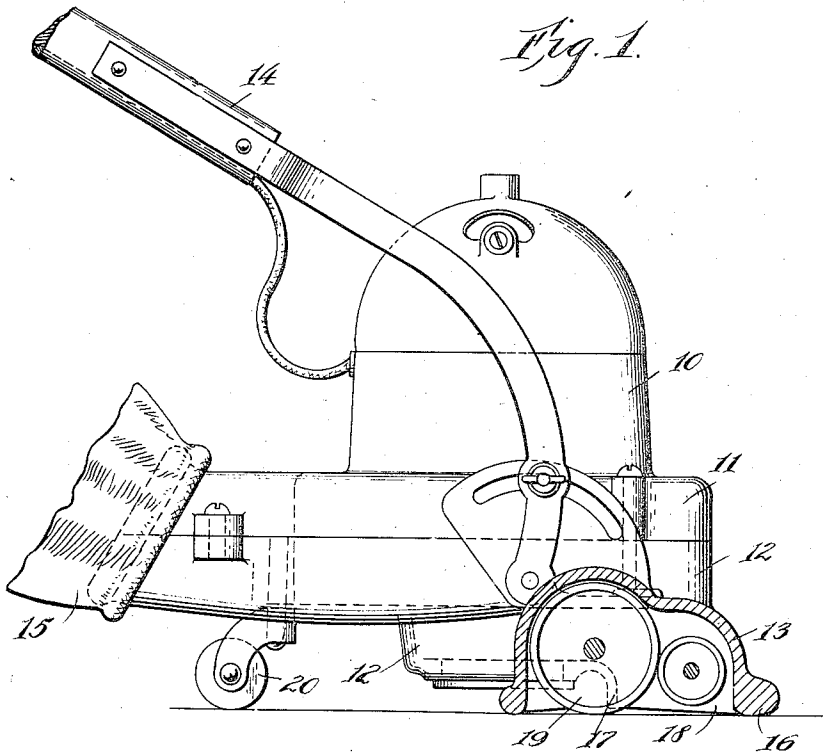


Fig. 2.

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James B. Kirby
By Hall, Smith, Brock & West,
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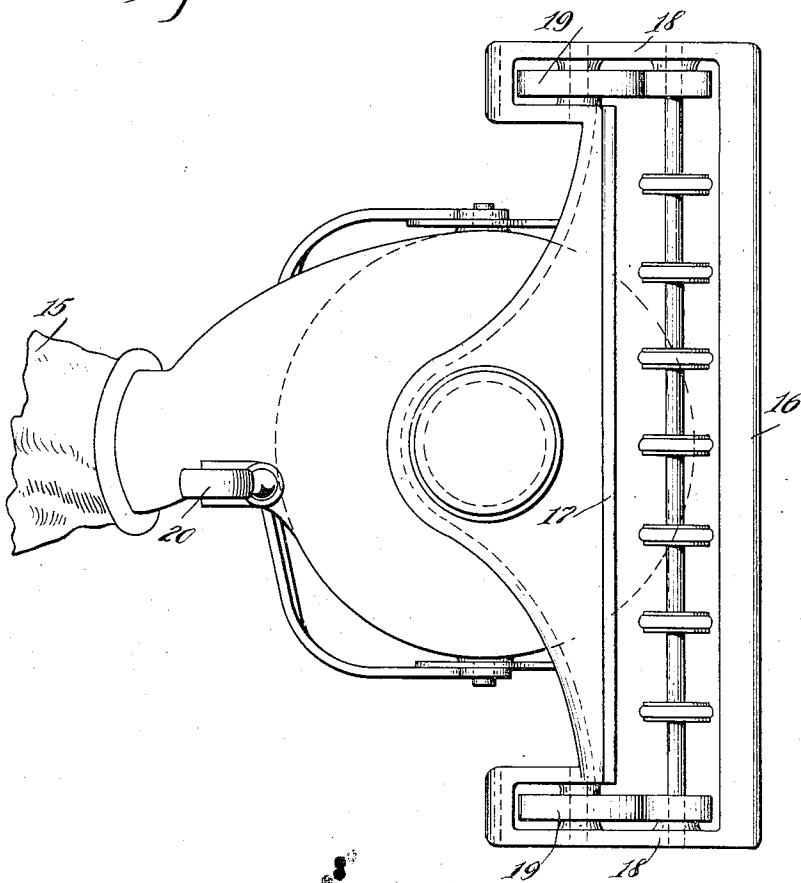
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Fig. 3.



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UNITED STATES PATENT OFFICE.

JAMES B. KIRBY, OF CLEVELAND, OHIO.

PNEUMATIC CLEANER.

1,206,117.

Specification of Letters Patent.

Patented Nov. 28, 1916.

Original application filed August 19, 1911, Serial No. 644,956. Divided and this application filed January 22, 1916. Serial No. 73,582.

To all whom it may concern:

Be it known that I, JAMES B. KIRBY, 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 Pneumatic Cleaners, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

This invention relates to suction cleaners and has for its object the provision of a device of this character which when used upon carpets or like floor coverings will maintain a short distance between the top of the same and one of the lips of the cleaner mouth so as to afford a narrow slot for the inrush of air across the top of the carpet which may pick up and remove threads, lint, scraps and like debris therefrom. This together with other objects and advantages which will be disclosed hereafter is attained by and in the device illustrated in the drawings accompanying and forming a part of this application wherein—

Figure 1 represents a side elevation of my improved suction cleaner, a part of the nozzle being shown in section; Fig. 2 is a central vertical sectional view taken through the nozzle and fan chamber therein; and Fig. 3 is a bottom plan view of the device shown in Fig. 1.

The said cleaner comprises generally a motor chamber 10, fan chamber 11, suction chamber 12, and collecting nozzle 13, the whole being comprised in a single rigid casing manipulated by a handle 14 and delivering its dust and air into a bag 15. Said nozzle extends forwardly and laterally from the suction chamber and is formed with a downwardly-facing, elongated inlet mouth defined between lips 16 and 17 connected at their end by a wall 18 of any suitable arrangement. Suitable means are provided for supporting the weight of the cleaner, preferably comprising carrying wheels 19—19 disposed one on each side of the center of the machine forward of its center of gravity, and a single roller or caster 20 carried substantially upon the center line of the machine rearward of its center of gravity. In the present embodiment the rollers 19—19 are shown as located inside a housing carried by the nozzle and opening

into said inlet mouth, but such detailed construction is not essential to the purposes of the present invention.

The lip of the nozzle adjacent to the carrying rollers is disposed upon a slightly higher plane than the opposite lip of the nozzle as shown in Figs. 1 and 2. As is well known in this type of machine the effect of the suction is to tend to elevate the carpet or other floor covering and bring it into sealing contact with the lips of the cleaner mouth after which all the air entering the nozzle passes through the fabric. This is very efficacious in dislodging dust and small particles, but frequently fails to remove larger and heavier refuse such as threads, lint and cuttings. With the present arrangement the carrying wheels 19—19 contact with the floor covering at each side of the machine and at the rear of the inlet mouth, thus keeping the carpet or other floor covering down against the floor and preventing its rising so as to make sealing contact with the rearward lip which is the one elevated in this embodiment; this permits a free inlet of air which picks up the particles of refuse and sweeps them upward.

This application is a division of my prior application filed August 19, 1911, Serial No. 644,956.

While I have described only one embodiment of my invention it will be apparent that many modifications may be made without departing from the inventive idea here contained or exceeding the scope of the claims hereto annexed.

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

1. In a suction cleaner, a casing having a suction chamber, the wall of said suction chamber flaring outwardly and forwardly and terminating in a nozzle, the mouth of which is adapted to pass over the surface which is to be cleaned, the rear lip of said nozzle being arranged in a horizontal plane above the front lip of said nozzle, floor engaging wheels carried one at each side of said casing rearwardly of said nozzle, in position to prevent sealing contact of the surfaces being treated with said rear lip, and a suction device communicating with said suction chamber.

2. In a suction cleaner, a casing having

a suction chamber whose wall flares outwardly and forwardly and terminates in a nozzle, the mouth of which is adapted to pass over the surface which is to be cleaned, one lip of said nozzle being arranged above the horizontal plane of the other lip thereof, carrying wheels carried by said casing one on each side thereof and located upon that side of said mouth having the elevated lip, in position to prevent sealing contact of the surfaces being treated with said elevated lip, and a suction device communicating with said suction chamber.

3. In a suction cleaner, a nozzle having a downwardly facing, elongated inlet mouth, one of whose lips is located in a horizontal plane above the other lip, and floor engaging supporting devices carried by said casing and located upon that side having the higher lip, in position to prevent lift of the

surface being treated to sealing contact with said higher lip.

4. In a suction cleaner, a casing having a collecting nozzle transversely arranged across its forward part, said nozzle having a downwardly-facing, elongated inlet mouth, whose rearward lip is arranged slightly higher than its forward lip, a pair of supporting rollers arranged rearwardly of and adjacent to said nozzle, one at each side of said casing, in position to prevent contact of the rearward lip with the surface being treated, and a third roller at the rear of said casing, all of said rollers being substantially tangent to the plane which includes the forward plane of said mouth.

In testimony whereof, I hereunto affix my signature.

JAMES B. KIRBY.