G. CLEMENTS.

VACUUM CLEANER.

APPLICATION FILED MAR. 17, 1913.

1,129,274.

Patented Feb. 23, 1915.

Fig. 4.

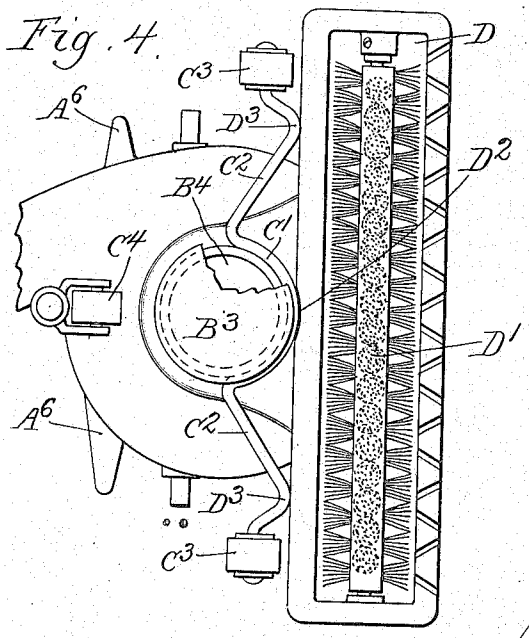


Fig. 3.

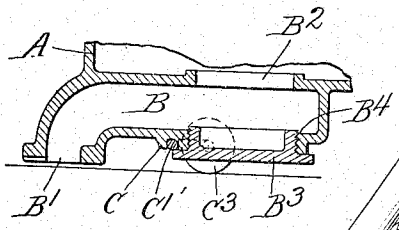
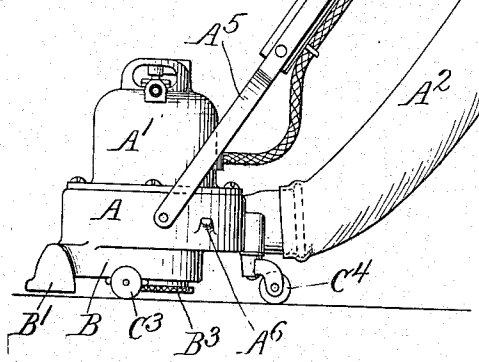


Fig. 1.



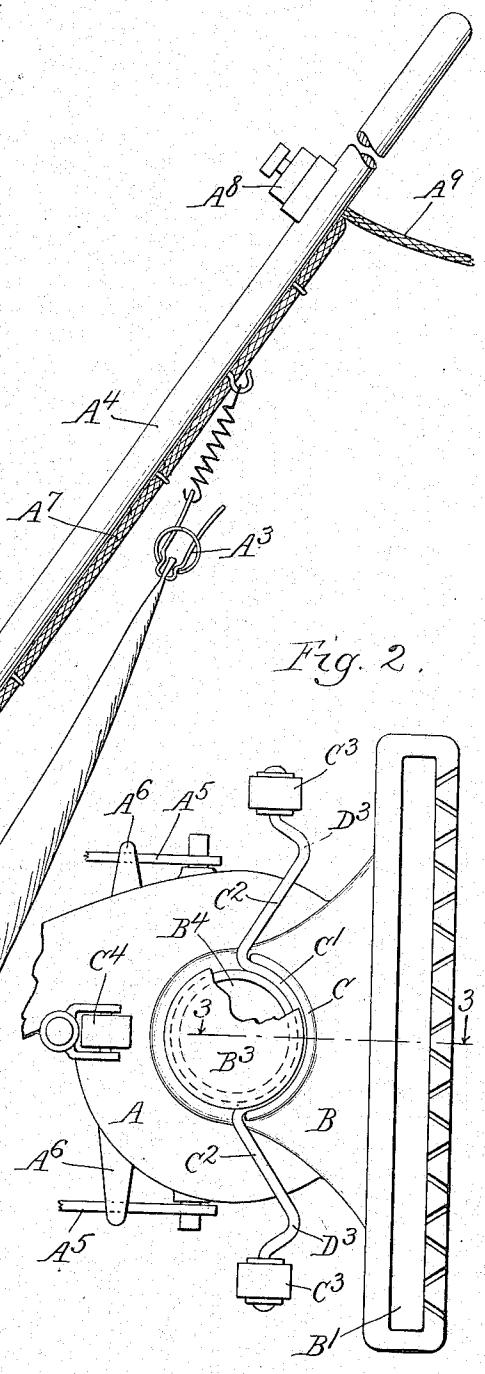


Fig. 2.

Witnesses.

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GEORGE CLEMENTS, OF CHICAGO, ILLINOIS.

VACUUM-CLEANER.

1,129,274. Specification of Letters Patent. Patented Feb. 23, 1915.

Application filed March 17, 1913. Serial No. 754,707.

To all whom it may concern:

Be it known that I, GEORGE CLEMENTS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Vacuum-Cleaners, of which the following is a specification.

My invention relates to improvements in carpet sweepers or vacuum cleaners and has for one object to provide removable means for holding the vacuum cleaner nozzle slightly above the floor level, in order that it may not bury itself in long napped rugs and thereby both impede the progress of the air and the progress of the machine.

It is illustrated in one form in the accompanying drawings, wherein—

Figure 1 shows a side elevation of the machine; Fig. 2, a bottom plan view; Fig. 3, a section along line 3—3 of Fig. 2; and Fig. 4, a bottom plan view of a modified form.

Like parts are indicated by the same letters throughout the several figures.

The pump chamber A carries at its top the motor housing A^1 in which is contained a motor not shown driving a pump or fan in the chamber A also not shown. The pump or fan discharges into a bag or dust receptacle A^2 which is removably supported in a clip A^3 on the handle A^4. The handle A^4 is provided at its lower end with a fork A^5 pivoted at either side to the housing or chamber A. The lugs A^6 limit the rotation of the housing with respect to the handle. Electricity to drive the motor is carried through the cable A^7 from the switch A^8 to the motor. The cable A^9 leads to any suitable source of power.

The housing A has located at its bottom the suction or vacuum or nozzle chamber B which communicates with the suction nozzle B^1 and also communicates through the ports B^2 with the interior of the fan chamber. The cap B^3 closes the opening B^4 in the bottom of the suction chamber.

Arranged about the opening B^4 and concentric with it but slightly removed therefrom is a curved ridge C which ridge is of slightly greater radius of curvature than the largest radius of the cap B^3. The curved, substantially semicircular wire member C^1 is adapted to rest against the ridge C and be clamped between it and the bottom of the part B by the edge of the cap B^3. This comprising a cap screw-threaded in the ing arms C^2 carrying rollers C^3 which rollers when in the position indicated in Figs. 1, 2 and 3 project slightly below the nozzle B^1 and together with the caster C^4 support the device, and allow it to roll along the ground. It will be noted that owing to the curved cross section of the arms and semicircular portion a maximum degree of strength is had. The pressure of the cap effectually clamps the semicircular member against the curved ridge and bottom of the housing so as to hold it rigidly in position.

In the modified form shown in Fig. 4, a broader nozzle D is used. This nozzle contains the usual type of brush D^1 and owing to the breadth of the nozzle the ridge C is dispensed with. The rear edge of the nozzle is recessed at D^2. A semicircular portion of the roller supporting frame is placed in position surrounding the aperture B^4. The cap is screwed in position and the roller supporting frame is then clamped between the cap and the nozzle at D^2, the elbows D^3 being also pressed against the edge of the nozzle to hold the frame rigidly in position. It will be noted that the frames used in Figs. 1, 2, 3 and 4 are identical, but where the nozzle is removed from the opening it is necessary to use the curved ridge. Where the nozzle is adjacent the opening the curved ridge may be dispensed with, and the nozzle itself serves as a back for the frame to which the nozzle may be clamped by the cap, and when the operator wishes to use his vacuum cleaner under such circumstances as above suggested where the nap of the rug is long and especially where the nozzle ought not to come into contact with the surface, he merely removes the cap, places the frame in position and tightening the cap clamps the frame in fixed relation to the housing, thus providing a light, conveniently removable, fixed and sufficiently rigid, auxiliary roller or wheel support for the cleaner housing.

It will be evident that while I have shown in my drawing an operative device, still many changes might be made in size, shape and arrangement of parts without departing materially from the spirit of my invention, and I wish, therefore, that my drawing be regarded as in a sense diagrammatic.

The subject matter contained in this application is illustrated in its entirety or in part in each of my co-pending applications,

Nos. 705,398, filed June 24, 1912, "vacuum cleaner", and 728,566, filed October 30, 1912, "vacuum cleaner".

The roller support or axle which is made up of the curved wire member C^1 and forwardly extending arms D^2 bent to form the elbows D^3 is in effect the wheel supporting frame or axle.

I claim:—

1. In a vacuum cleaner the combination with a suction nozzle, of an auxiliary supporting frame removably mounted adjacent the nozzle, ground contacting rollers carried thereby, and means for holding said frame in a position of substantial parallelism with the axis of the nozzle, said means comprising a cap screw-threaded in the vacuum cleaner casing and engaging a portion of said frame.

2. In a vacuum cleaner the combination with a suction nozzle of an auxiliary supporting frame removably mounted adjacent the nozzle, ground contacting rollers carried thereby and means for holding said frame in a position of substantial parallelism with the axis of the nozzle, said means comprising a cap screw-threaded in the vacuum cleaner casing and engaging a portion of said frame, the frame being provided with a curved portion adapted to surround said cap, a ridge mounted on the vacuum cleaner and concentric with said cap and in engagement with said curved portion.

3. In a vacuum cleaner the combination with a suction nozzle of an auxiliary supporting frame removably mounted adjacent the nozzle, ground contacting rollers carried thereby and means for holding said frame in a position of substantial parallelism with the axis of the nozzle, said means comprising a cap screw-threaded in the vacuum cleaner casing, a recess in opposition to said cap, said recess and said cap engaging said frame to hold it in position.

In testimony whereof, I affix my signature in the presence of two witnesses this 14th day of March, 1913.

GEORGE CLEMENTS.

Witnesses:
BESSIE S. RICE,
LAUREL M. DOREMUS.