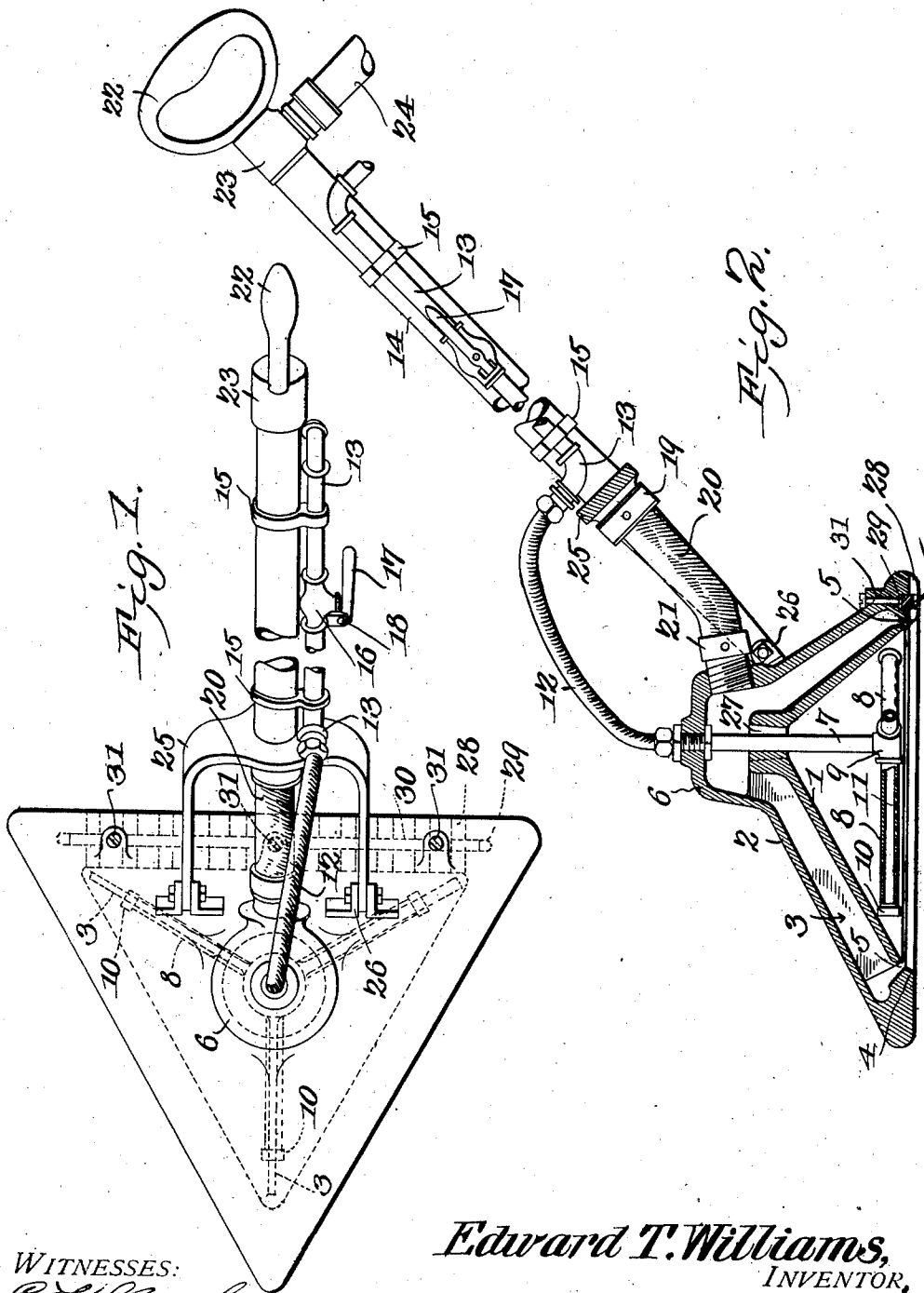


No. 868,901.

PATENTED OCT. 22, 1907.

E. T. WILLIAMS.
CARPET CLEANER.
APPLICATION FILED DEC. 28, 1905.



WITNESSES:

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UNITED STATES PATENT OFFICE.

EDWARD THOMPSON WILLIAMS, OF NEW YORK, N. Y.

CARPET-CLEANER.

No. 868,901.

Specification of Letters Patent.

Patented Oct. 22, 1907.

Application filed December 28, 1905. Serial No. 293,643.

To all whom it may concern:

Be it known that I, EDWARD THOMPSON WILLIAMS, a citizen of the United States, residing at New York, in the county of New York and State of New York, have
5 invented a new and useful Carpet-Cleaner, of which the following is a specification.

This invention relates to carpet cleaners.

The object of the invention is to provide a simple and novel apparatus adapted for cleaning carpets upon a
10 floor, in which dust and debris shall in a feasible manner be loosened and carried off without permitting any escape beyond the implement and thus into the room.

A further object is to adapt the apparatus to operate as a combined pressure and suction cleaner, or as a suction cleaner alone.

A further object is to provide a novel means to control the suction within the suction chamber, whereby to prevent undue friction between the carpet or floor and the cleaner.

With the above and other objects in view, as will appear as the nature of the invention is better understood, the same consists in the novel construction and combination of parts of a carpet cleaner, as will be hereinafter fully described and claimed.

In the accompanying drawings forming a part of this specification, and in which like characters of reference indicate corresponding parts: Figure 1 is a view in plan of the apparatus. Fig. 2 is a view in side elevation, partly in section, thereof.

30 The suction chamber is triangular in form, and consists of two nested pyramidal members, an inner member 1 and an outer member 2, the two members being suitably connected together and held properly spaced apart by webs 3, of which there are shown in this instance three, although this number may be increased
35 if found necessary or desirable and still be within the scope of the invention, the object for making the chamber triangular as shown, being to facilitate getting into and cleaning corners of a room. The outer member is
40 provided with an inward extending marginal flange 4, which is spaced a sufficient distance from the margin, of the inner member to form a suction slot 5, through which the debris passes to the suction outtake pipe presently to be described. The outer member is provided with a boss 6 through the top of which projects
45 and is rigidly secured the pipe 7 of the air blast system, the lower end of which carries a plurality of branches 8, in this instance three, which are secured to a coupling 9 carried by the pipe 7, and the outer ends of which are
50 closed by caps 10, the under faces of the pipes being provided with orifices 11 to permit escape of air. The upper end of the pipe 7 projects beyond the boss and has connected with it one end of a flexible pipe 12, the other end of which is suitably connected with a pipe
55 13 that is combined with the handle 14 of the implement, which constitutes a suction pipe, by clamps or

bands 15. The pipe 13 connects with a suitable source of air under pressure, or with blast mechanism so that the air that escapes through the orifices in the branch pipes 8 will operate to stir up the debris or dust in the
60 carpet, thus facilitating its removal. The pipe 13 carries a valve casing 16 in which is mounted a valve of any preferred construction, the stem of which is connected with a handle 17 fulcrumed at 18 on the casing. This valve is so constructed that it will automatically
65 close when the hand of the operator is removed, the construction being the same as a self closing water faucet valve in common use, if desired.

The pipe or handle has connected with its lower end, as by a coupling 19, a section of hose pipe 20, which
70 carries a threaded coupling 21 that engages a threaded orifice in the side of the boss 6, the object of this arrangement being to permit the handle freely to move through the arc of a circle in manipulating the apparatus.

The free end of the handle carries a hand hold 22 adjacent to which is a coupling 23 that is engaged by a flexible pipe 24 leading to a place of discharge. The handle carries at its lower end a yoke 25 the arms of which are pivoted between ears 26 carried by the outer
80 member 2, and this arrangement will permit of the apparatus being pushed or pulled over a floor in the usual manner.

The inner member 1 is provided at its upper portion with a boss through which the pipe 7 projects, the
85 orifice 27 provided for this purpose being of greater diameter than the pipe in order that a large part of the dirt raised by the air blast will pass off through it. The underside of the rear flange is provided with a series of transverse slots 28 and with a longitudinal slot
90 29, and in the latter slot is arranged a shutter 30 which is engaged by three screws 31 and by which the shutter may be raised or lowered thus to maintain the partial vacuum in the chamber sufficiently low to prevent
95 undue friction between the floor and the cleaner, it being seen that by depressing the shutter that the supply of air will be diminished, and by raising it will be increased. This is a feature of importance, as it materially facilitates the operation of the apparatus.

As stated, the apparatus may be used either as a
100 simple suction system, by cutting off the supply of air from the blast pipe, or as a double system of air blast and suction as shown.

In use of the apparatus, where both systems are employed, the handle 17 will be manipulated to open
105 the valve, to permit air to be forced through the pipes 8 and on to the floor, thus loosening and stirring up the dust and debris. At the same time the suction mechanism connecting the pipe 24 is operated, and the dust and dirt loosened are drawn out in part through
110 the suction slot 5 and in part through the orifice 27, and pass to the pipe 20, handle 14 and pipe 24 to the

place of deposit. Of course, as will be obvious steam may be supplied through the jet pipes 8 in lieu of air.

The apparatus herein described while simple in character will be found thoroughly efficient for the purposes designed and will in a ready, rapid and thorough manner clean carpets of dust and other debris.

I claim:—

1. A carpet cleaner comprising a pair of hollow members placed one within the other and spaced apart to provide a suction chamber but with their lower edges in close proximity to form an inlet slit, a suction conduit communicating with said suction chamber, and an adjustable shutter on the outer member to regulate the partial vacuum within the chamber.
2. A carpet cleaner comprising a pair of hollow nested pyramidal members connected together but separated by spacing webs to produce a suction chamber, the peripheral edges of said members being in close proximity and forming a continuous inlet slot, and a suction conduit communicating with said suction chamber.
3. A carpet cleaner comprising a pair of hollow members having open bases and arranged one over the other with a chamber between them which communicates with the hollow of the inner member, a suction conduit communicating with the upper end of the said chamber to produce a suction therethrough, a conduit extending through the members and terminating adjacent the base of the inner member, a plurality of tubular arms communicating with the said tube and having downwardly discharging perforations, and an air supply pipe connected with the said second conduit.
4. A carpet cleaner comprising a pair of nested members spaced apart, a suction conduit communicating with the space between the members, and a controllable means for admitting atmospheric air to the said space, the same comprising a plurality of inwardly extending conduits ar-

ranged on the bottom surface of one of the members along one side thereof, an adjustable shutter for the said conduits for controlling the supply of air thereto, and devices at the ends of the shutter for raising and lowering the same.

5. A carpet cleaner comprising a suction chamber consisting of a pair of nested triangular members spaced apart, one face of the outer member being provided with slots, having open sides presented to the surface to be cleaned, an adjustable shutter intersecting the slots, and suction mechanism communicating with the space between the members.

6. A carpet cleaner comprising a pair of hollow pyramidal triangular members arranged to form a space between them, a suction conduit connected with the said space, a blast mechanism housed within the hollow of the inner member, and means for controlling the blast, there being communication at the apex of the inner member between the hollow of the inner member and the space between the members.

7. In a carpet cleaner, a structure comprising two hollow pyramidal members connected together and nested with a space between them to provide a suction chamber and slightly separated at their lower edges to form a suction inlet, the edge of the outer member extending below the edge of the inner member, a suction pipe connected to said outer member and communicating with the suction chamber, and an adjustable gate applied to the bottom of said outer member to regulate the inflow of air into said chamber.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

EDWARD THOMPSON WILLIAMS.

Witnesses:

CHAS. WESTERLONG,
CHAS. WESTERBERG,