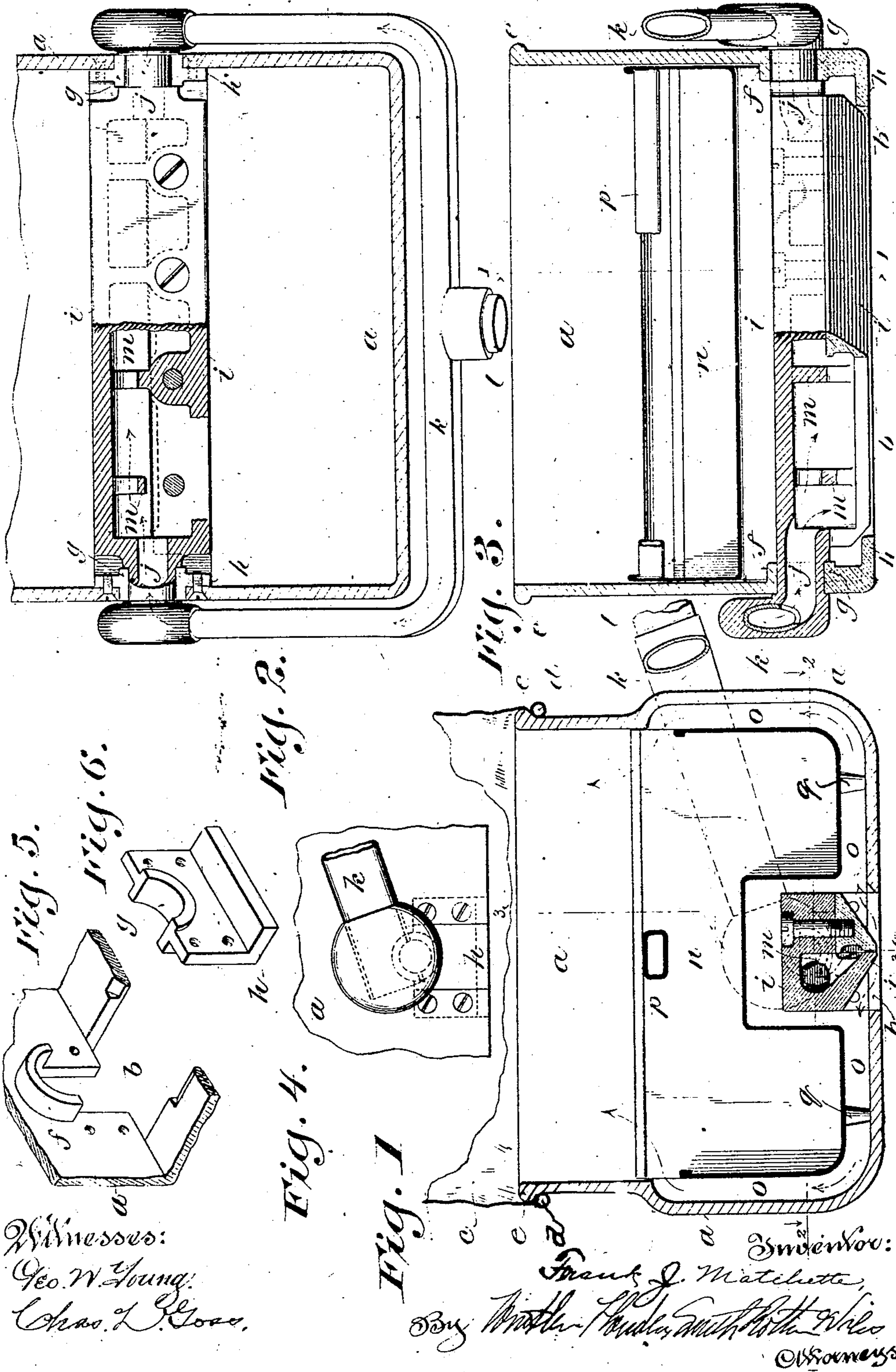


No. 867,067.

PATENTED SEPT. 24, 1907.

F. J. MATCHETTE.
CARPET CLEANER.

APPLICATION FILED NOV. 19, 1903.



Witnesses:
Geo. W. Young,
Chas. L. Goss.

Fig. 1

Fig. 4.

Fig. 2.

Fig. 5.

Fig. 6.

Fig. 3.

Inventor:
Frank J. Matchette,
By *Walter H. Smith* Attorney

UNITED STATES PATENT OFFICE.

FRANK J. MATCHETTE, OF MILWAUKEE, WISCONSIN, ASSIGNOR TO AMERICAN AIR CLEANING COMPANY, OF MILWAUKEE, WISCONSIN, A CORPORATION OF WISCONSIN.

CARPET-CLEANER.

No. 867,067.

Specification of Letters Patent.

Patented Sept. 24, 1907.

Application filed November 19, 1903. Serial No. 181,800.

To all whom it may concern:

Be it known that I, FRANK J. MATCHETTE, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Carpet-Cleaners, of which the following is a specification, reference being had to the accompanying drawing, forming a part thereof.

This invention relates to portable devices for removing dirt and dust from laid carpets, rugs etc., by means of compressed air.

The main objects of the invention are to simplify and improve the construction and operation of devices of this class. It consists in certain novel features of construction and in the peculiar arrangement and combinations of parts substantially as hereinafter particularly described and pointed out in the claims.

In the accompanying drawing like letters designate the same parts in the several figures.

Figure 1 is a vertical section from front to rear on the line 1 1, Fig. 3, of a carpet cleaner embodying my invention; Fig. 2 is a horizontal section of the same on the line 2 2, Fig. 1; Fig. 3 is a vertical longitudinal section on the line 3 3, Fig. 1; Fig. 4 is a detail external view showing the nozzle bearing and connection at one end of the cleaner; and Figs. 5 and 6 are perspective views showing the construction of one of the nozzle bearings.

a is a casing which may be conveniently cast in the form shown with an open top and a transverse opening *b* in the bottom. The open top is provided with a cloth bag or strainer *c*, secured thereto by any suitable means, such as a rubber cord *d*, inserted in a hem in the bag and stretched over a marginal rib or bead *e* on the casing. The opening *b* in the bottom of the casing extends to and into the ends of the casing and terminates in half bearings or boxes *f*, as most clearly shown in Fig. 5. Into each end of this opening is fitted and secured a half box *g*, shown in Fig. 6. The half box *g* is formed with a depending and inwardly turned angular flange *h*, which closes the opening in the end of the casing below said half box.

i is a nozzle formed at the ends with hollow trunnions *j*, which are fitted to turn in the boxes *f g*. To the protruding ends of these trunnions are secured the ends of a tubular bail or forked arm *k*, to which a supply pipe and handle *l* is centrally attached. The nozzle *i* is constructed of two sections, one of which is accurately fitted and secured by screws in an angular longitudinal recess in the other, the two opposing vertical faces of these sections forming a downwardly directed blast slit or orifice which extends lengthwise through or along the opening *b* from end to end and about the center thereof. The main or body section of the nozzle on which the trunnions are formed is recessed or chambered and provided at intervals with

transverse strengthening ribs *m*, by which any spreading of the blast orifice is prevented when the nozzle is subjected to internal pressure. The sections of the nozzle are chamfered or beveled off on the under side and on opposite sides of the blast orifice, to afford a free passage for the dust laden air between the nozzle and the opposing edges of the opening *b*, which are also beveled or chamfered, as shown in Figs. 1 and 5.

n is a dust pan which may be conveniently made of sheet metal fitted within the casing *a* over the nozzle *i* and forming with the bottom and sides of the casing, passages *o*, from the opening *b* into the upper part of the pan. This pan is made readily removable from the casing for the purpose of emptying the dust and dirt therefrom and affording easy access to the nozzle and underlying parts of the cleaner. The dust pan is formed with a cross brace and handle, as shown in Figs. 1 and 3, to brace and strengthen it and to afford means for removing it from and replacing it in the casing *a*. The bottom of the pan is provided with lugs or legs *q*, to support it above the bottom of the casing *a*, and said casing is enlarged as shown in Fig. 1, adjacent to the front and rear sides of the pan, to provide for the passages *o*.

In the operation of the cleaner, the tubular handle *l* is connected by a hose with a reservoir containing compressed air, the handle or some convenient part of the air supply connection being provided with a regulating valve, as usual in this class of apparatus. The cleaner is moved like a sweeper, back and forth over the carpet to be cleaned and renovated, and the downwardly directed blast of air issuing from the nozzle *i*, passes through the carpet, and striking against the floor beneath, is deflected in both directions upwardly into and through the passages *o*, thence into the upper part of the casing. The dust and dirt are removed by this divided and deflected air blast both from the carpet and the floor underneath it, and are carried upwardly through the passages *o* into the upper part of the casing *a*, where they are caught and separated from the air by the cloth bag or strainer *c* and deposited in the pan *n*, the air freed from dust and dirt, escaping through the bag or strainer into the room.

Any particles of dust or dirt which can pass through the carpet, as well as litter too coarse to pass through it, will be taken up and removed therefrom and from the floor underneath, by the air blast, thus not only removing dirt from the surface of the carpet, but also from the floor underneath it, and effecting a thorough renovation of the carpet besides.

By the construction and arrangement of parts herein shown and described, flexible or movable joints in the air passages within the machine itself between its air supply connection and the blast orifice, are avoided,

and the liability to leaks incident to such joints are also avoided, besides the machine is simplified and improved in construction and operation.

Various changes in the minor details of construction of the device may be made within the spirit and intended scope of the invention.

I claim:

1. In a carpet cleaner the combination of a casing having a transverse opening in the bottom and bearings in the ends adjacent to said opening, a nozzle journaled at the ends in said bearings and having a downwardly directed slit parallel with and adjacent to said opening, and a tubular handle attached to and communicating with said nozzle through one of its journals, which forms an air passage leading from a supply connection with the handle outside of the casing to the interior of the nozzle within the casing substantially as described.
2. In a carpet cleaner the combination of a casing having a transverse opening in the bottom and bearings in the ends adjacent to said opening, a nozzle journaled at the ends in said bearings and having a downwardly presented slit parallel with and adjacent to said opening, and a handle having a tubular bail secured to the nozzle, journals which are hollow and form air passages leading from a compressed air supply connection with the handle outside of the casing, to the interior of the nozzle within the casing substantially as described.
3. In a carpet cleaner the combination of a casing having a transverse opening in the bottom and bearings in the ends adjacent to said opening, a nozzle formed at the ends with hollow trunnions which are revolubly fitted in said bearings and having a downwardly presented slit arranged lengthwise of and adjacent to said opening, and a tubular handle having a compressed air supply connection and a tubular bail attached to said trunnions which form pivot connections between said casing and handle and air passages leading into the casing, substantially as described.
4. In a carpet cleaner the combination of a casing having a transverse opening extending across the bottom into the ends and terminating in half boxes, half boxes remov-

ably fitted into and adapted to close said openings in the ends of the casing below said boxes, a nozzle formed with hollow trunnions which are revolubly fitted in said boxes and having a downwardly presented blast orifice arranged lengthwise and adjacent to said opening, and a tubular handle attached to said trunnions substantially as described.

5. In a carpet cleaner the combination of a casing having a transverse opening in the bottom, a nozzle arranged within said casing and having a downwardly directed orifice parallel with and adjacent to said opening, and a dust pan removably fitted in said casing and forming with the bottom and sides thereof passages leading from said opening into the upper part of the pan, substantially as described.

6. In a carpet cleaner the combination of a casing having a transverse opening in the bottom and journal bearings adjacent to the ends of said opening, a nozzle composed of two sections, one of which is fitted and secured in a longitudinal recess of the other and forms therewith a downwardly directed blast orifice or slit, one nozzle section being provided at the ends with hollow trunnions which are revolubly fitted in said bearings, and a tubular handle attached to said trunnions and having a compressed air supply connection outside of the casing, substantially as described.

7. In a carpet cleaner, the combination of a portable casing having a transverse opening in the bottom and a transverse trunnion bearing adjacent to one end of said opening, a tubular operating arm having an air supply connection outside of the casing, and a hollow trunnion to which said arm is fixed mounted revolubly in said bearing, and forming an unbroken hollow pivotal connection between the casing and arm in communication with the transverse opening in said casing substantially as described.

In witness whereof, I hereto affix my signature in presence of two witnesses.

FRANK J. MATCHETTE

Witnesses:

CHAS. L. GOSS.

MAUDE L. EMERY.