

E. A. MARTIN.
PNEUMATIC SUCTION CLEANER.
APPLICATION FILED NOV. 12, 1913.

1,140,992.

Patented May 25, 1915.

2 SHEETS—SHEET 1.

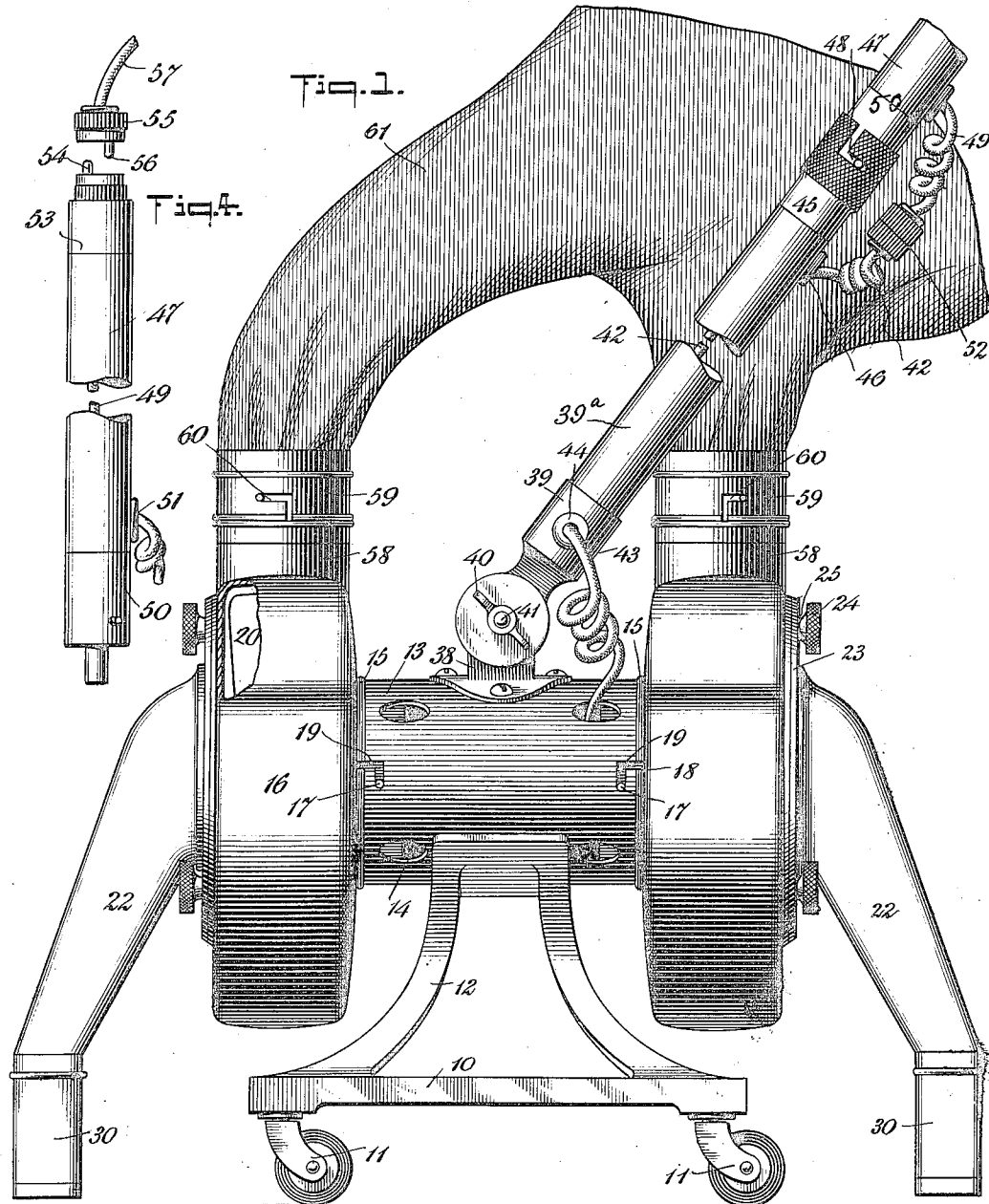
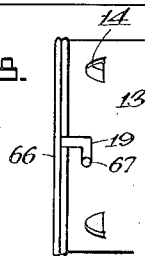


Fig. 2.



WITNESSES

E. B. Marshall
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INVENTOR

Emmanuel A. Martin

BY

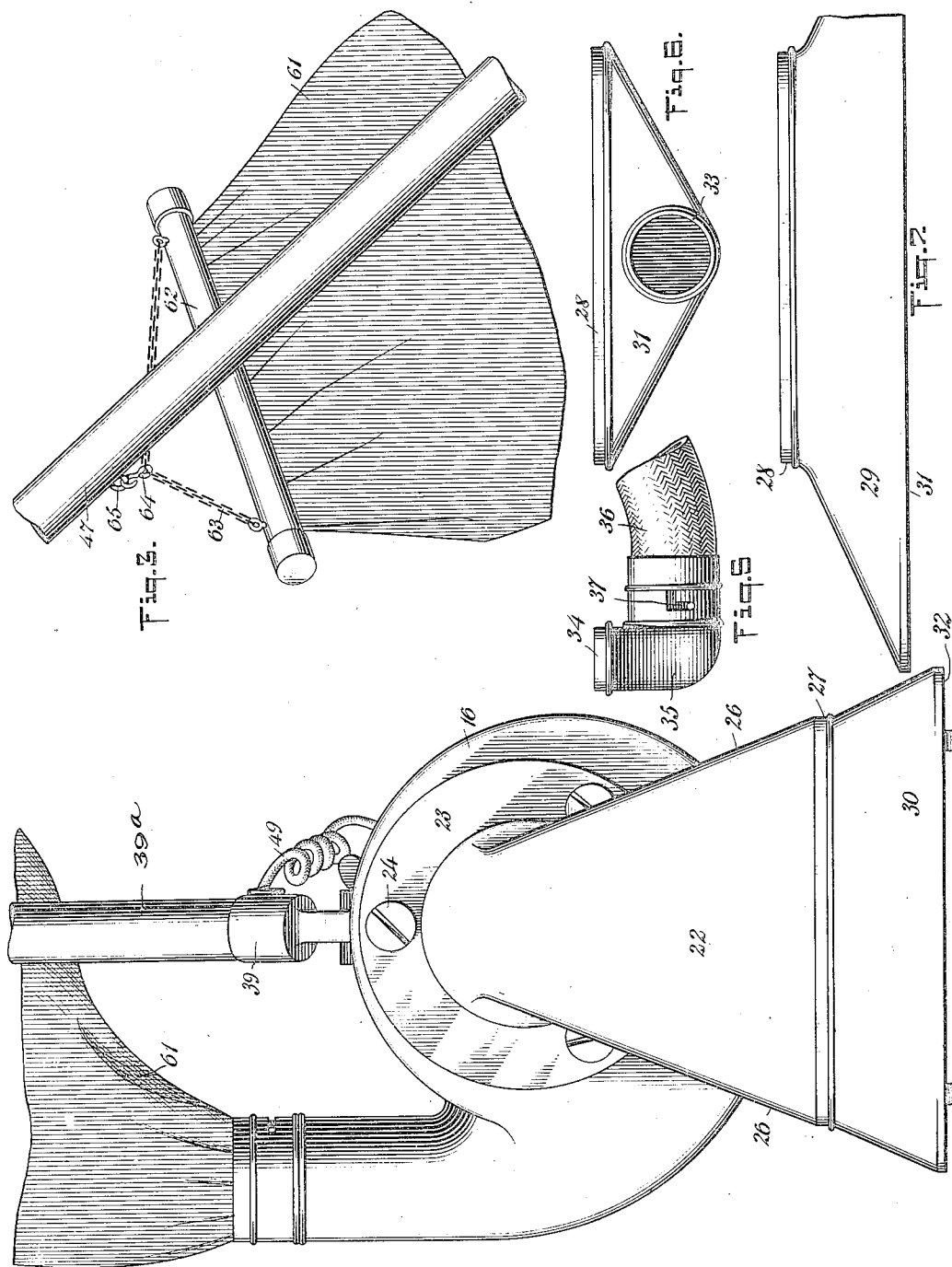
Mumford

ATTORNEYS

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UNITED STATES PATENT OFFICE.

EMANUEL A. MARTIN, OF NEW YORK, N. Y.

PNEUMATIC SUCTION-CLEANER.

1,140,992.

Specification of Letters Patent.

Patented May 25, 1915.

Application filed November 12, 1913. Serial No. 800,501.

To all whom it may concern:

Be it known that I, EMANUEL A. MARTIN, a citizen of the United States, and a resident of New York city, in the county of New York, borough of Manhattan, and State of New York, have invented a new and Improved Pneumatic Suction-Cleaner, of which the following is a full, clear, and exact description.

My invention has for its object to provide a double acting suction cleaner which may be propelled over a surface to be cleaned in a manner which will accomplish the desired result with the least possible expenditure of energy.

Another object of the invention is to construct the cleaner so that parts thereof may be readily removed to transform the double acting cleaner into one with a single action.

Still other objects of the invention are to provide detachable suction mouth pieces having mouths of various lengths so that one having the best length for the work to be done may be conveniently adjusted to the cleaner and to provide the cleaner with a detachable handle through which is conducted the current for operating the motor connected with the fans.

Additional objects of the invention will appear in the following complete specification, in which the preferred form of the invention is disclosed.

In the drawings similar characters of reference indicate corresponding parts in all the views in which—

Figure 1 is a side elevation of the invention; Fig. 2 is an end view; Fig. 3 is a fragmentary view showing, in perspective, the means for supporting the dust bag; Fig. 4 is a fragmentary view showing the electrical connections in the main handle section; Fig. 5 is a fragmentary view showing the pipe connection; Figs. 6 and 7 are end views of suction cleaner members, and Fig. 8 is a fragmentary view showing how the end of the casing is closed when the cleaner is converted into one of a single acting type.

By referring to the drawings it will be seen that a car 10 is provided, the car 10 being mounted on casters 11 and having standards 12 for supporting the horizontally disposed motor casing 13 which incloses the motor 14. Disposed at the ends of the motor casing 13 there are fan chamber casings 16 being secured to the ends 15 of the motor casing 13

by means of bayonet joints, the pins 17 of which are mounted on the annular flanges 18 of the fan chamber casings 16 and being disposed in the angular slots 19 in the motor casing 13. Within the fan chamber casings 16 there are fans 20, these fans 20 being mounted on the shaft 21 of the motor 14 for creating a suction in the suction tubes 22. These suction tubes 22 are secured to the heads 23 of the fan chamber casings 16, these heads 23 being held in position by the screws 24 which are disposed through openings 25 in the heads 23 and which mesh in threaded openings in the fan chamber casings 16. The side walls 26 of the suction tubes 22 diverge downwardly as shown in Fig. 2 of the drawings, the suction tubes 22 being provided with collars 27 at their lower ends in which may be disposed the flanges 28 on the suction mouth pieces 29 and 30 and the coupling 31, these suction mouth pieces 29 and 30 and the coupling 31 may be manufactured of any length and in any manner to obtain the results desired. As will be seen by referring to Fig. 7 of the drawings, the suction mouth piece 29 has a much longer mouth 31^a than the mouth 32 of the suction mouth piece 30, and when this suction mouth piece 29 is used, a much greater area is cleaned with the movement of the cleaner a pre-determined distance. The coupling 31 is not provided with a mouth at its bottom but it is provided with a circular rim 33 at its end in which may be disposed the rim 34 of the coupling 35, it being possible to connect a hose 36 with this coupling 35 by means of a bayonet joint 37. This hose 36 may be connected with any suitable suction mouth piece for cleaning walls, ceilings, draperies, etc.

Secured to the body of the motor casing 13 there is a bracket 38 to which is pivoted a socket 39 in which is inserted a section 39^a of a handle, a winged nut 40 being mounted on the pivot screw 41 for locking the socket 39 relatively to the motor casing 13 in any desired position. This handle section 39^a has a cable 42 with wires, this cable 42 passing out of the inner end 43 of the handle section 39^a through an opening 44, the cable 42 passing out of the outer end 45 of the handle section 39 through an opening 46. A second handle section 47 is provided, this second handle section being normally secured to the handle section 39 by means of a bayonet joint 48. In this handle section 47 there is

a cable 49 with wires, this cable 49 passing out of the inner end 50 of the handle section 47 through an opening 51, the wires of the cables 42 and 49 being connected by contact locking members 52. At the outer end 53 of the handle section 47 there is a projecting contact pin 54 which is adapted to fit into a contact opening in the contact plug 55, the contact plug 55 having a contact pin 56 for engaging the sides of a contact opening in the end 53 of the handle section 47 and connected with one of the wires of the cable 49, the pin 54 being connected with another wire of this cable, the contact opening in the contact plug 55 as well as the pin 56 are connected with wires in the cable 57 in a manner readily understood. Connected with outlet pipes 58 of the fan chamber casings 16 there are collars 59, these collars 59 being held in place by bayonet joints 60, the collars 59 being connected with a dust bag 61, this dust bag 61 being secured to a rod 62 which is disposed horizontally and which is supported by means of a chain 63 which is provided with a hook 64 normally engaging a ring 65 on the handle section 47.

When the cleaner is used as one of a single acting type, a fan chamber casing is removed at one end of the motor casing and the end is closed by a head 66 having pins 67 for moving in the angular slots 19.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. In a suction cleaner, a car having supporting wheels, a horizontally disposed motor casing mounted on the car and longitudinally thereof, two fan chamber casings, means for detachably securing the fan chamber casings to the ends of the motor

casing, one at the front and the other at the rear thereof, a motor in the motor casing having a shaft extending longitudinally thereof and provided with terminals projecting into the fan chamber casings, fans mounted on the shaft terminals and disposed in the fan chamber casings, detachable heads for closing the outer ends of the fan chamber casings, means for holding the heads in position relatively to the fan chamber casings and suction tubes connected with and extending downwardly from the heads.

2. In a suction cleaner, a car having supporting wheels, a horizontally disposed motor casing mounted on the car longitudinally thereof, two fan chamber casings, means for detachably securing the fan chamber casings to the ends of the motor casing, one at the front and the other at the rear thereof, a motor in the motor casing having a shaft extending longitudinally thereof and provided with terminals projecting into the fan chamber casings, detachable heads for closing the outer ends of the fan chamber casings, means for holding the heads in position relatively to the fan chamber casings, suction tubes connected with and extending downwardly from the heads, a handle secured to the motor casings, and a dust collecting means connected with the fan chamber casings.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EMANUEL A. MARTIN.

Witnesses:

EVERARD B. MARSHALL,
PHILIP D. ROLLHAUS.