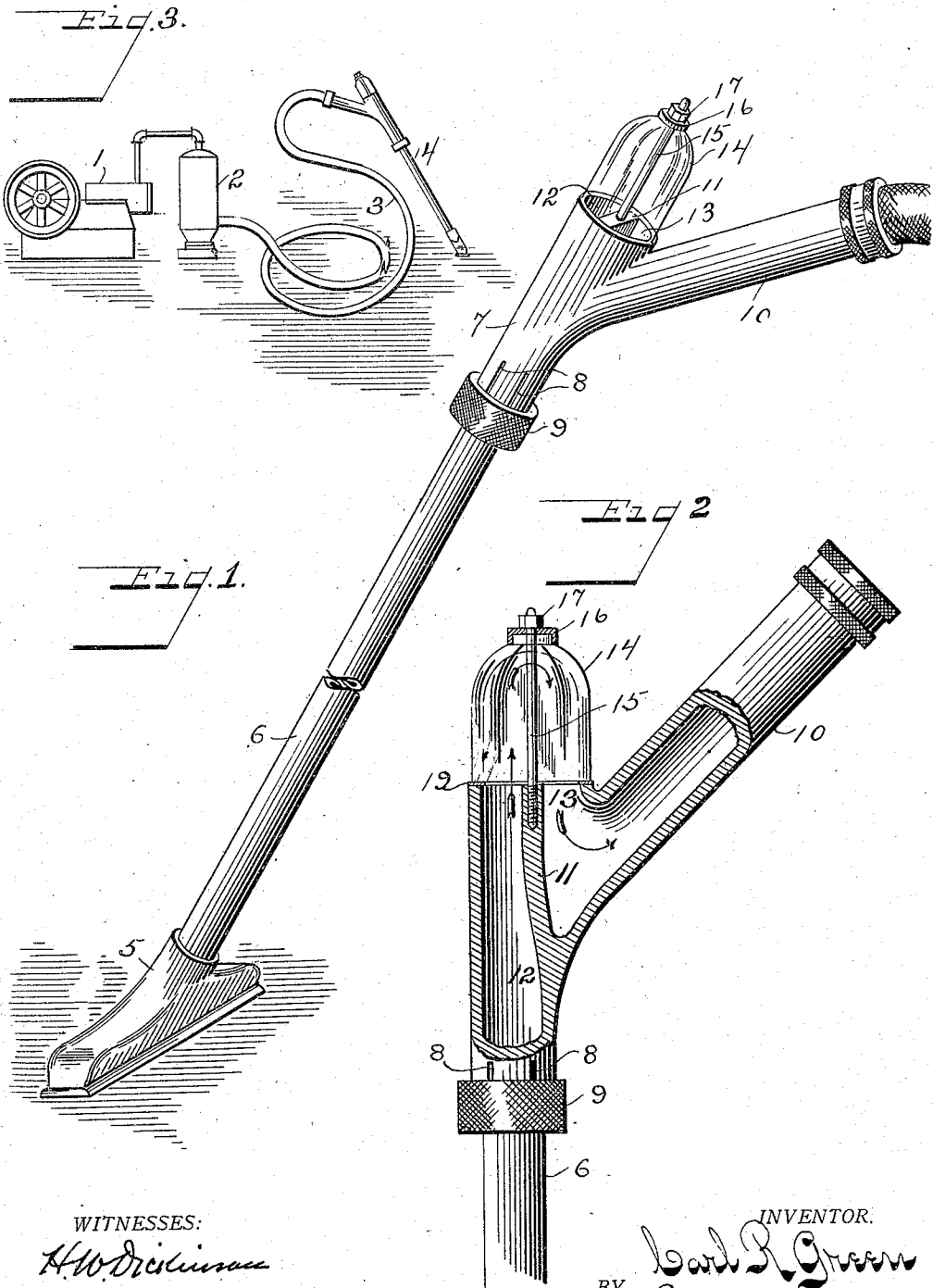


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HANDPIECE FOR VACUUM CLEANING SYSTEMS.
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942,139.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CARL R. GREEN, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Handpieces for Vacuum Cleaning Systems, of which the following is a specification.

My invention relates to improvements in vacuum cleaning apparatus, and particularly to the hand piece for such apparatus.

One of the primary objects of the invention is to provide means whereby the progress of the cleaning may be observed, and such indicator be located at all times in full view of the operator; and further to provide such an indicator of a construction that will offer little resistance to the operation of the system.

With the above primary and other incidental objects in view, as will appear from the specification, the invention consists of the means, the parts, and construction, or their equivalents, hereinafter described and set forth in the claims.

In the drawings Figure 1 is a perspective view of the assembled hand piece. Fig. 2 is a side elevation, partly in section, of the head portion of the hand piece. Fig. 3 is a view showing the relation of the hand piece to the other parts constituting the vacuum cleaning system.

Like parts are indicated by similar characters of reference throughout the several views.

In the drawings 1 is the pump connected to and exhausting the air from the receiver 2 which receiver is connected by the conduit 3 with the hand piece 4. In operation the hand piece 4 is passed over the carpet, walls, furniture, or other articles to be cleaned from which the dust and dirt are extracted by suction; the dirt so extracted being deposited in the receiver 2.

The present invention relates to the hand piece 4 which comprises a nozzle member 5 of ordinary form, an intake pipe 6 inclined upwardly from said nozzle member, to the upper end of which is removably secured a head portion 7. The lower end of the head 7 is slotted as at 8 and provided with a compression collar 9 by which the slotted end of the head is caused to impinge upon the in-

take pipe 6. By this construction various intake pipes of different lengths, and provided with different forms of nozzles may be used interchangeably with the head 7.

Extending angularly from the head 7 is an off-take pipe 10 so located as to form a hand hold for the device. A wall or septum 11 separates the head 7 into two parallel passages, the passage 12 on one side of the septum being continuous with the intake pipe 6 while the passage 13 on the opposite side of the septum communicates with the off-take pipe 10 which in turn is connected with the conduit 3.

Attached to the upper extremity of the head 7 is a dome or cap 14 of glass or other transparent material, which registers with the respective passages 12 and 13 and forms a means of communication between said passages. In combination with the respective passages the dome or cap 14 forms an inverted U shaped conduit, the bend of which is uppermost and transparent, being formed by the dome or cap 14 of glass or other transparent material. The dome or cap 14 being located adjacent and just above the hand when the device is in use, is always in full view of the operator, and by the greater or less quantity of dust and dirt to be seen passing through the dome or cap 14, the progress of the work and the degree of cleanliness attained can readily be determined.

One arm of the inverted U shaped conduit, the passage 12, is in line with the intake pipe 6, thus the direction of the current of dust laden air is in a straight line from the nozzle 5 to the cap or dome 14, thus reducing the resistance to the movement of the air current to minimum.

The glass dome or cap 14 may be secured in position on the head 7 by various methods, but the preferable one consists of a stud 15 in the septum 11 which projects through an opening in the apex of the dome or cap and is provided with a washer 16 and retaining nut 17. A gasket 19 is interposed between the cap 14 and the head 7.

From the above description it will be apparent that there is thus produced a device for the purpose mentioned, possessing the particular features of advantage before enumerated as desirable, but which obviously

is susceptible of modification in its form proportion, detail construction and arrangement of parts without departing from the principle involved or sacrificing any of its advantages.

Having thus described my invention I claim:

1. A hand piece for vacuum cleaning apparatus, comprising a member having an inverted U shaped passage therein for the current of dust laden air, the bend of said U shaped passage being uppermost, and in view of the operator, said bend being of transparent material whereby the movement of the dust particles through the same may be observed, the line of the walls of said U shaped passage being substantially continuous throughout, substantially as specified.

2. In a hand piece for vacuum cleaning apparatus, an upward extending intake pipe, said pipe terminating at its upper extremity in a chamber, a septum dividing said chamber into two semi-circular compartments with one of which compartments said intake pipe communicates, a pipe leading from the other compartment, a cap of transparent material on the upper extremity of said chamber and communicating with each of said semi-circular compartments, the combined transverse area of said compartments being substantially equal to the transverse area of the cap, substantially as specified.

3. In a device as described, a hand piece comprising an intake pipe, an offtake pipe arranged angularly with relation to said intake pipe and adapted to form a hand hold for the device and a transparent cap located above the offtake pipe and connecting the intake, and offtake passages, the walls thereof registering with the external walls of said passages, substantially as specified.

4. In a hand piece for vacuum cleaning apparatus, an intake pipe, a removable head on said intake pipe having therein two parallel passages, a transparent cap on said head with which each of said passages communicates, the walls of said cap registering with the walls of said passages and forming therewith a continuous U shaped conduit, said intake pipe communicating with one of said passages and a pump communicating with the other passage, substantially as specified.

5. In a hand piece for a vacuum cleaning system, an intake pipe, a head removably connected thereto, a septum dividing said head into two passages, the intake pipe communicating with one of said passages, an offtake pipe integral with said head and arranged angularly therewith, said offtake being adapted to form a hand hold and communicating with the other of said passages, and a transparent cap on said head forming a means of communication between the re-

spective passages of said head, substantially as specified.

6. In a hand piece for a vacuum cleaning system, an intake pipe, a head connected therewith, a septum dividing said head into two parallel passages, an offtake pipe angularly carried on said head, a transparent cap on said head registering with the respective passages whereby said passages and cap will form a continuous inverted U shaped conduit, one branch of which communicates with said intake pipe, the other branch communicating with said offtake pipe, substantially as specified.

7. In a hand piece for a vacuum cleaning system, a head, an intake pipe leading to said head, an offtake pipe leading from said head in such position as to form a hand hold for the device, the intake and offtake passages being separated within the head by a flat septum, a transparent cup located on said head above the hand hold when the device is in normal position and in a position for easy observation, and forming a means of communication between the respective passages, with the walls of which the said cup registers, thus forming an uninterrupted reverse conduit, substantially as specified.

8. In a hand piece for vacuum cleaning systems, an intake pipe, a head, a septum dividing said head into two passages, said intake pipe communicating with one of said passages, an offtake conduit communicating with the other of said passages, a glass dome having an opening in the apex thereof located on said head and covering the orifices of both of said passages, a stud in said septum projecting through the opening in said dome, and a retaining nut on said stud, substantially as specified.

9. In a hand piece for vacuum cleaning apparatus, an intake tube terminating in a semi-circular passage within a head carried on said tube, a second tube projecting angularly from said head, and forming a hand hold for the device, said second tube communicating with a second semi-circular passage within the head, a glass cap forming the upper termination of said head and registering with the two semi-circular passages, said cap being located, when the device is in use, immediately above the hand of the operator and in position for easy observation, said cap being transparent throughout, thus enabling the operator to look through the device and better observe the particles of dirt as they cross the line of vision, substantially as specified.

In testimony whereof I have hereunto set my hand this 23rd day of January 1908.

CARL R. GREEN.

Witnesses:

ALFRED McCRAY,
F. L. WALKER.