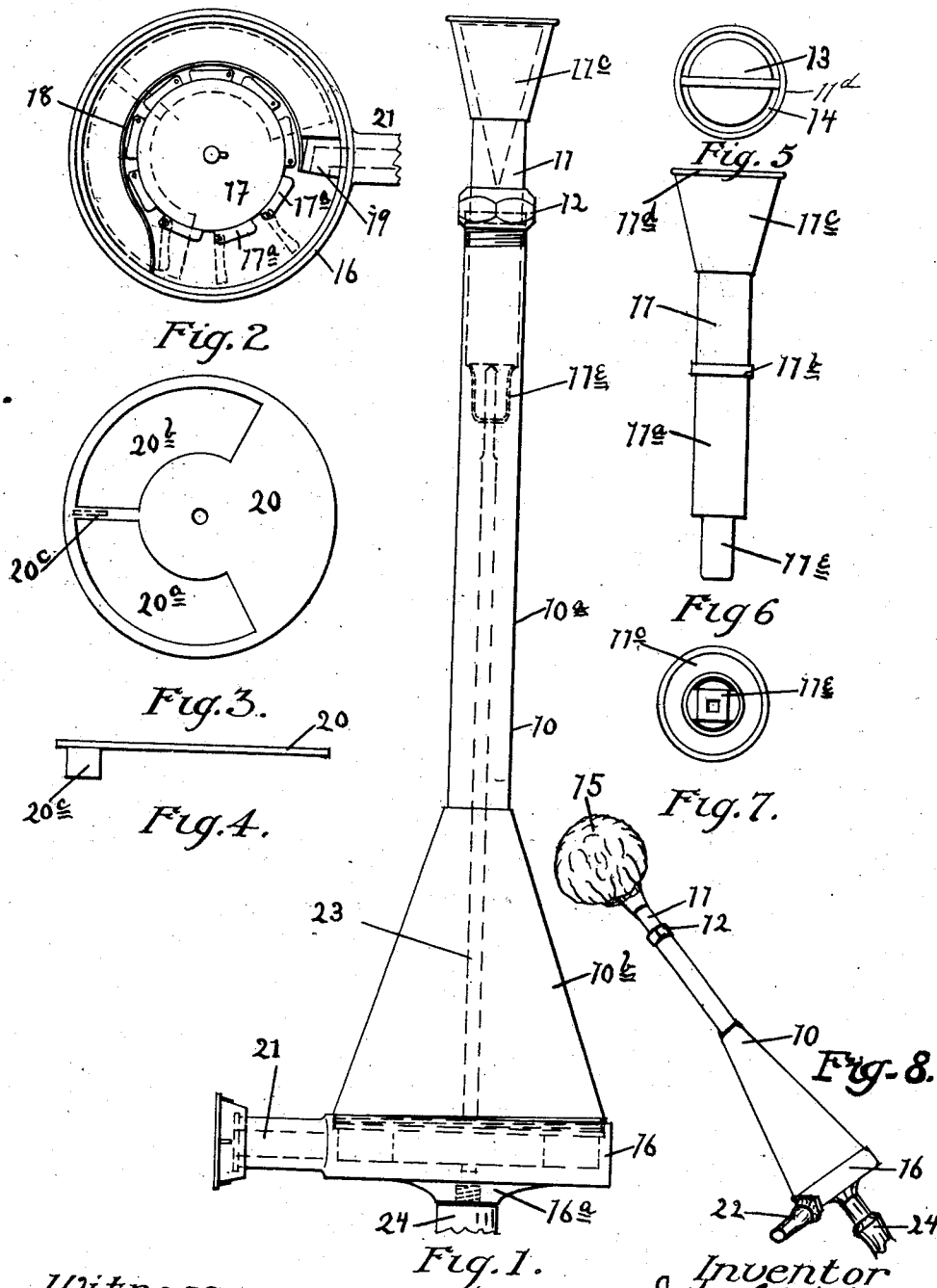


901,272.

Patented Oct. 13, 1908.



Witnesses:
1. Henry J. Munglin
2. Harriet E. Moran

Inventor
John C. Willis
per A. Leslie Wilbur,
Attorney

UNITED STATES PATENT OFFICE.

JOHN C. WILLIS, OF HERKIMER, NEW YORK.

CLEANING DEVICE.

No. 901,272.

Specification of Letters Patent.

Patented Oct. 13, 1908.

Application filed January 10, 1908. Serial No. 410,253.

To all whom it may concern:

Be it known that I, JOHN C. WILLIS, of the village of Herkimer, in the county of Herkimer and State of New York, have invented certain new and useful Improvements in Cleaning Devices; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

The object of my present invention is to provide an improved cleaning device which is simple in construction and efficient in operation, and consists in the main of a rotatory nozzle and a porous distensible cleaning bulb or head on the nozzle.

Figure 1 shows a side elevation of the device with the porous bulb or head, however, omitted. Fig. 2 shows a motor case with the motor in position separated from the other parts and shown in plan view. Fig. 3 shows a cover or plate for partially closing one side of the motor case. Fig. 4 is an edge view of the plate shown in Fig. 3. Fig. 5 is an end view, Fig. 6 is a side elevation and Fig. 7 a bottom end view of the rotatory nozzle portion of the device. Fig. 8 is a perspective view on a much reduced scale, of the device in its entirety.

Referring to the references and figures in a more particular description, 10 indicates what may be termed the body of the device consisting of the tubular portion 10^a and the conical portion 10^b. The upper end of the part 10^a receives the bearing portion 11^a of the rotatory nozzle 11, the same being held against longitudinal movement by the collar enlargement 11^b resting on the end of the part 10^a and held by a ring nut 12 screw-threaded on to the end of the part 10^a. The delivery end of the nozzle will preferably be of a truncated conical form shown at 11^c, having a conical core 13 supported therein by a cross bar as shown in Fig. 5 whereby the outlet at the delivery end is formed to a narrow circular opening as shown at 14. There will also be preferably provided at the delivery end of the nozzle 11 an outwardly standing flange as indicated at 11^d. A porous distensible bag or bulb 15 is secured on the end of the nozzle. This bag, bulb or head 15 may be formed from a piece of cloth

or other suitable material of sufficient size and securely tied on to the nozzle behind the flange 11^d. The base end of the body 10, which is hollow, is secured to the motor case 16.

The motor consists of a rotatable core 17 mounted on a pivot centrally in the motor case, which is circular, and provided with a number of hinged blades. 17^a. During a certain portion of the revolution the blades 17^a are folded in against the core by coming in contact with the guide rib 18 provided on one wall of the case. The blades are opened and the core 17 rotated by a jet of water issuing from the nozzle 19.

The side of the case adjacent to the body 10 is partially closed by a cap or plate 20, which plate has openings 20^a and 20^b, which allow the water to escape from the motor case into the body of the device. The plate 20 is provided with a thin projection 20^c, which is supported between the adjacent ends of the openings 20^a and 20^b and projects downwardly into the motor case.

Externally the motor case is provided with a nipple and coupling 21 connecting with the nozzle 19 on the interior, and affording connections for a rubber hose 22 as to the exterior by means of which hose water for operating the motor as well as inflating the porous head 15 is supplied.

The motor is connected with the rotatable nozzle 11 by a shaft 23. The motor end of the shaft 23 is secured to the core 17 so as to rotate therewith, and the end adjacent to the nozzle 11 is made square to engage in a square hole in the yoke 11^e provided on the inner end of the nozzle 11. The arrangement at the yoke 11^e is such as to allow the water to flow freely through the tubular portion 10^a and into and through the nozzle 11. For handling the device the motor case will preferably be provided with a boss 16^a to which a handle 24 may be readily attached.

When the inflatable porous bulb head is provided on the nozzle, as shown in Fig. 8, it is evident that when water is supplied under pressure through the hose 22 it will first operate upon the motor and through the medium of the motor serve to rotate the nozzle 11 with its bulb head or bag. After passing the motor the water will fill the body 10, passing through the openings 20^a and 20^b and issue from the delivery end of the nozzle into the bulb or bag, distending the same fully and finding its way out through the

porous material thereof. The bulb or bag will thus be distended, rotated and kept wet. The operator, by means of the handle or otherwise, may use the bulb for cleaning surfaces or any desired object, and it is obvious that it is a most efficient device for the purpose.

It is evident that if a current of air under pressure be supplied by the hose 22 the device will operate the same as when water is supplied as above described and the device is then a most efficient means for dusting and for drying any surface or other object.

It is evident that modifications and changes in and from the construction herein described may be made without departing from the spirit of my invention or subject matter intended to be covered by the following claim.

What I claim as new and desire to secure by Letters Patent is:

The combination in a device of the character described of a hollow body, a rotatable nozzle, a motor connected with and serving to rotate the nozzle, a porous bulb provided on the discharge end of the nozzle and means for supplying air or fluid through the motor and the body to the nozzle, substantially as set forth.

In witness whereof, I have affixed my signature hereto in the presence of two witnesses, this 7th day of January, 1908.

JOHN C. WILLIS.

Witnesses:

HENRY J. MUNGER,
HARRIET V. MORAN.