J. P. JOHNSON.

AUTOMOBILE WASHER.

APPLICATION FILED JAN. 31, 1916.

1,230,072. Patented June 12, 1917.

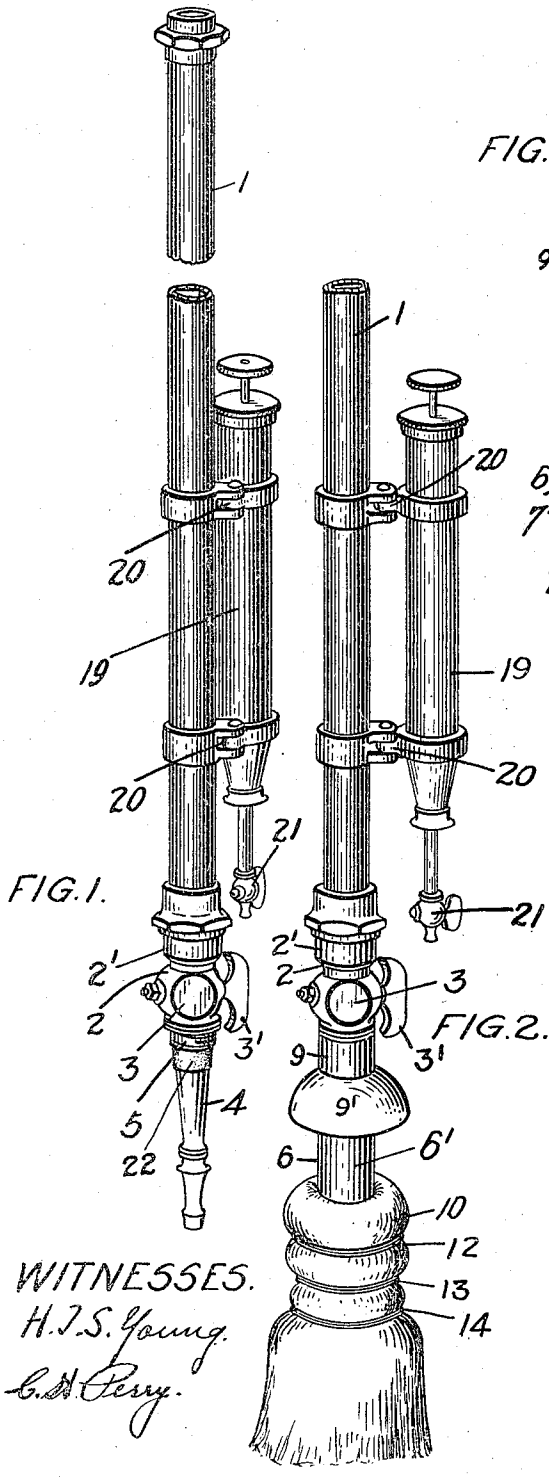


FIG. 1.

FIG. 2.

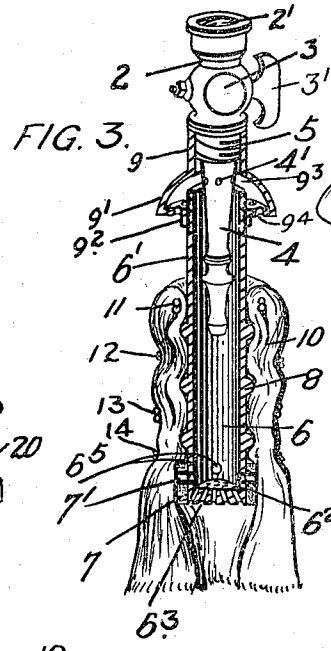


FIG. 3.

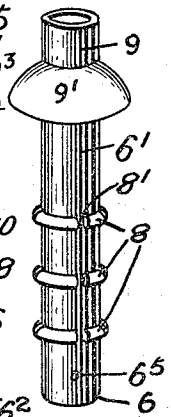


FIG. 4.

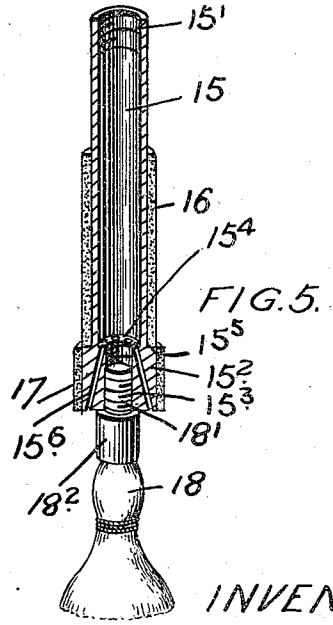


FIG. 5.

WITNESSES.

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AUTOMOBILE-WASHER.

1,230,072. Specification of Letters Patent. Patented June 12, 1917.

Application filed January 31, 1916. Serial No. 75,410.

To all whom it may concern:

Be it known that I, JAMES PIERSON JOHNSON, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Automobile-Washers, of which the following is the specification.

My invention relates to improvements in automobile washers and the object of the invention is to devise an apparatus adapted to allow the operator to easily and quickly clean all parts of an automobile without danger of scratching or otherwise marring the vehicle and by which soap can be supplied in liquid form to the cleaning head of the apparatus and it consists essentially of the following arrangement and construction of parts as hereinafter more particularly explained by the following specification.

Figure 1, is a general perspective view of my device showing the nozzle in position and the cleaning head removed.

Fig. 2, is a perspective view of the major portion of my apparatus showing the mop forming the cleaning head in position.

Fig. 3, is a sectional perspective view through the cleaning head shown in Fig. 2 with the nozzle in position and shown in full.

Fig. 4, is a perspective detail of the tubular center of the cleaning head.

Fig. 5, is a perspective view of the cleaning head with a brush attachment.

In the drawings like letters of reference indicate corresponding parts in each figure.

1 indicates a tubular member forming the handle of the apparatus and to the upper end of which a suitable hose is connected for supplying water to the interior. 2 indicates a nozzle provided with an internally threaded upper portion 2′ which is screwed on to the correspondingly threaded lower end of the tubular member 1. 3 indicates a controlling valve for the nozzle operated by a suitable handle 3′. 4 indicates the nozzle proper which is provided at its lower end with the usual nozzle outlet and supplemental radial outlets 4′ located in proximity to the upper end of the nozzle proper 4. Between the valve portion 3 and the nozzle portion 4 is located an exteriorly threaded portion 5. 6 indicates a cleaning head comprising a tubular member 6′ having a closed lower end 6^2 through which extend outwardly flaring perforations 6^3. 6^5 indicate perforations formed in the periphery of the tubular member 6′ in proximity to the lower end thereof.

7 indicates a collar of resilient rubber or other suitable material which is cemented on to the lower end of the tubular member 6′ and provided with perforations 7′ registering with the perforations 6^5 above described. 8 indicates a series of annular ribs extending around the tubular member 6′ and provided with cross notches 8′ suitably spaced apart. 9 indicates a tubular member provided with an internal thread designed to be screwed on to the exteriorly threaded portion 5 as hereinbefore described. 9′ indicates a semi-spherical hollow member formed integral with the tubular member 9 and provided with a tubular lower portion 9^2 which is threaded on to the upper end of the tubular member 6′ so as to leave an annular space 9^3 between the upper end of the member 6′ and the tubular portion 9. The bottom of the semi-spherical member 9′ is provided with a series of perforations 9^4 for a purpose which will hereinafter appear.

10 indicates the mop body. Such body is formed by cords arranged longitudinally of the tubular portion 6′ and around the periphery thereof, the free ends of the cords extending beyond the lower end of such member. The cords forming the body 10 lie against the annular ribs 8, some of the cords extending into the notches 8′. At a point above the annular ribs 8 the cords are secured around the tubular member 6′ by a binding cord 11. The upper portions of the cords are then bent back upon themselves outwardly above the binding cord 11 and downwardly substantially parallel with the lower portion of the cords. The binding cords 12, 13 and 14 are then fastened around the mop body between the annular ribs 8 so as to permanently secure the mop body to the tubular member 6′. The ribs 8 prevent longitudinal movement of the mop body 10 upon the tubular member 6′ and the notches 8′ serve to prevent any turning movement. It will, therefore, be seen that the mop body is held securely in a stationary position as indicated in the drawing.

In order that the operator may get at small places which would be awkward to get at with the mop I have provided the brush head shown in Fig. 5. This brush head comprises the tubular member 15 provided with an internally threaded upper end 15′. The lower end of the tubular mem-

ber 15 is provided with a head 15^2 having an orifice 15^3 extending therethrough concentric with the center of the tubular member 15 but of small diameter thereby forming an interior ledge 15^4 and an exterior ledge 15^5. 16 indicates a sleeve of rubber or other suitable material which is cemented or otherwise suitably secured to the tubular member 15 above the ledge 15^5. 17 indicates a sleeve of similar material to the sleeve 15 which is cemented or otherwise suitably secured around the outer periphery of the head 15^2. 15^6 indicate small ducts which extend in a downwardly and outwardly inclined direction from the upper face of the ledge 15^4 to the lower face of the head 15^2 in proximity to its outer periphery. 18 indicates a brush provided with a threaded stem 18′ and ferrule 18^2. The stem 18′ is threaded into the orifice 15^3 so that the upper end of the ferrule 18^2 bears against the lower face of the head 15^2, the exterior diameter of such ferrule being less than the distance between the lower ends of the ducts 15^6. 19 indicates a pump which is secured by a suitable hinge connection 20, 20 to the tubular handle 1, the lower end or nozzle end of the pump being directed downwardly toward the cleaning head formed by the mop body 10 and is provided with a suitable closing cock 21.

It will be understood that when the mop body 10 is in use that the lower end thereof spreads outwardly and when the liquid soap, which is contained in the pump cylinder 19, is ejected from the nozzle thereof it is carried on to the out-spread mop, which being supplied with water, readily converts the liquid soap into lather.

22 is a cover sleeve of thin resilient rubber designed to be slipped over the nozzle 4 to cover the perforation 4′ when the nozzle is being used alone as in Fig. 1.

Having described the principal parts involved in my invention I will briefly describe the operation of the same.

In order to take the rough dirt off the vehicle my apparatus is used as shown in Fig. 1, the hose being connected to the upper end of the member 1. The water passes in through the tubular member 1 and when the valve 3 is turned on passes through the nozzle 4 and is ejected therefrom against the body of the vehicle. When it is desired to clean the body of the vehicle the cleaning head 6′ provided with the mop body 10 is connected to the nozzle 4 as shown in Figs. 2 and 3 by threading the tubular portion 9 into the exteriorly threaded portion 5.

When the valve 3 is opened the water passes through the lower end of the nozzle 4 into the tubular member 6′ and through the end orifices 6^4 and peripheral orifices 7′ into the interior of the mop. The water also passes through the orifices 4′ and is ejected through the annular space formed between the upper end of the tubular member 6′ and the lower end of the tubular member 9 into the semi-spherical hooded portion 9′ and then passes through the perforations 9^4 directing the water downwardly on to the exterior of the mop. By this means it will be seen that a copious supply of water is thrown on to the body of the vehicle both on the inside and outside of the mop, the water on the outside of the mop serving to partly loosen the dirt as the fibers of the mop body come into contact therewith.

In order to clean the small places such as under the mud guards and between the spokes of the wheels I remove the head 6′ and similarly attach the head 15. The water passes down through the tubular member 15 and through the ducts 15^6 on to the vehicle around the exterior of the brush 18.

It will also be seen that by providing the sleeves 16 and 17 in the form of head shown in Fig. 5 and the sleeve 7 in the form of head shown in Fig. 3 I have provided a simple means whereby any danger of the apparatus scratching or otherwise marring the body of the vehicle when in use is obviated.

From this description it will be seen that I have devised a very simple device whereby all the parts of an automobile may be easily and readily cleaned, by which a suitable supply of soap is provided which can be readily and quickly turned into lather and in which means are provided for preventing any danger of scratching or otherwise marring the varnished surface of the vehicle body.

Although I have described my device as applied to cleaning automobiles it will, of course, be understood that there are many other uses to which it may be equally well applied such as cleaning railway car windows and the like.

What I claim as my invention is—

1. In a device of the class described, a mop head comprising a tubular member having a series of annular ribs having cross notches formed on the exterior periphery thereof, a mop body extending around the tubular member, and binding means securing the mop body to the tubular member intermediate of the annular ribs to prevent either sliding or rotation of the mop body.

2. In a device of the class described, a mop head comprising a lower tubular member and an upper tubular member spaced apart to form an annular intermediate opening and a hooded member carried by the upper tubular member, a bottom wall for the hooded member having a central opening into which the lower tubular member extends and is secured and having perforations formed around such central opening adapted to direct water from the interior of the hood on to the exterior of the mop body.

3. In a washer of the class described, a

nozzle member having a peripheral discharge and a water outlet below the discharge, a tubular member surrounding the nozzle and outlet but below the discharge, a mop encircling said member and depending therefrom, and means for deflecting the water passing from the nozzle through the discharge in a direction parallel to the axis of the tubular member but outside thereof.

JAMES PIERSON JOHNSON.

Witnesses:
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V. LONG.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."