A. C. JOHNSON.

DEVICE FOR WASHING AIR.

APPLICATION FILED FEB. 5, 1914.

1,120,818. Patented Dec. 15, 1914.

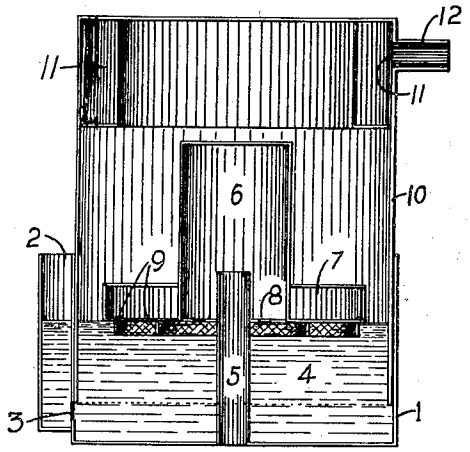


FIGURE 2

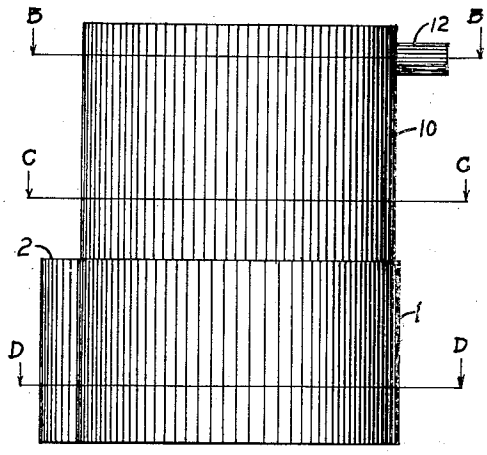


FIGURE 1

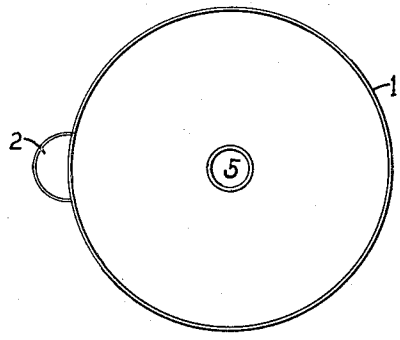


FIGURE 5

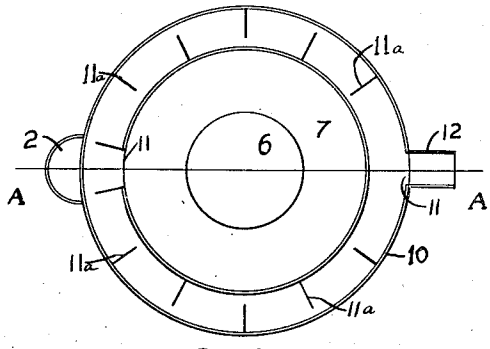


FIGURE 3

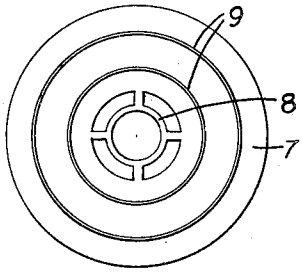


FIGURE 6

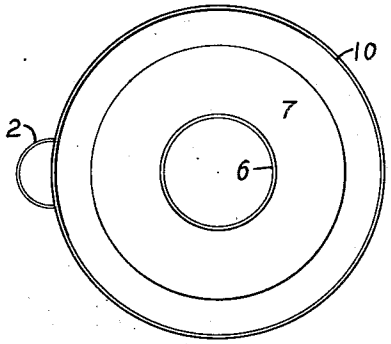


FIGURE 4

WITNESSES:

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HIS ATTORNEY

UNITED STATES PATENT OFFICE.

ALFRED C. JOHNSON, OF WINTERS, CALIFORNIA, ASSIGNOR OF ONE-HALF TO WILLIAM J. BENSON, OF SAN JOSE, CALIFORNIA.

DEVICE FOR WASHING AIR.

1,120,818. Specification of Letters Patent. Patented Dec. 15, 1914.

Application filed February 5, 1914. Serial No. 816,767.

To all whom it may concern:

Be it known that I, ALFRED C. JOHNSON, of Winters, in the county of Yolo and State of California, have invented a new and useful Device for Washing Air; and I do hereby declare that the same is described and represented in the following specification and drawing.

My invention relates to a device for washing air and refers more specifically to the construction and arrangement of the parts of said device which is designed to wash the air to prevent undue wear of the piston head in an internal combustion engine due to the presence of gritty substances in the air drawn in through a carbureter.

The device herein shown has been designed more especially with a view to keep the interior cylindric surface of an internal combustion engine free from sand or other gritty substances which may be in the air used, and thereby minimize the wear upon the piston and other internal parts such as the piston rings, valves and valve stems.

A further object of my invention is to provide a device that may be used where the air is required to be free from dust or other impurities that water will wash out, and one in which the amount of washed air required may be furnished.

A further object of my invention is to provide a device so constructed that the same may be taken apart and easily cleaned and one in which a fresh supply of water may be taken in and discharged as required, and one that will occupy the least possible amount of space and give thoroughly reliable service under all conditions.

For a full understanding of the invention and the merits thereof, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a side elevation of my device for washing air. Fig. 2 is a cross section on line A—A of Fig. 3. Fig. 3 is a cross section on line B—B of Fig. 1. Fig. 4 is a cross section on line C—C of Fig. 1. Fig. 5 is a cross section on line D—D of Fig. 1. Fig. 6 is a bottom plan view of wire strainer.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The device for washing air forming the subject matter of the present invention, comprises a cylindrical body portion 1, made of sheet metal having a water inlet tube 2 attached to the outside thereof, said tube having an opening 3 near the bottom thereof for the purpose of admitting water to said body portion 1 through said tube 2, said tube also serves to designate the height of water in said body portion 1. In the bottom of said body portion 1 and in the center thereof and extending up the required distance through the water shown at 4 in said body portion 1, is air tube 5 which admits air to air chamber 6 attached to float 7. Said float 7 is made of sheet metal having an air chamber 6 attached thereto. Attached to the under side of said float 7 is guide 8 which fits over the outside of air tube 5 and is for the purpose of keeping float 7 in place in body portion 1, said float 7 being adapted to work up and down through said guide 8 on air tube 5. Fastened to the under side of float 7 are wire screens 9 through which the air and water rush at every pulsation of an air pump or carbureter, causing the air to be thoroughly washed at this point. A cylindrical telescoping top is shown at 10 fitting into body portion 1 and extending down a distance into said body portion, having at the top thereof a plurality of baffle plates 11^a. Air ports are shown at 11. These ports are for the purpose of admitting the washed air drawn therethrough by an internal combustion engine or any other means attached to connection 12, and at the same time excluding the water therefrom.

The operation of my device for washing air is as follows: The body portion 1 is partially filled with water as 4, and attached to a carbureter or pump at 12. When the pump or carbureter is in action the air is partially exhausted from chamber 10 thus sucking in air through tube 5 and chamber 6 and through screens 9 to chamber 10. The passage of the air through screens 9 serves to bring the air in closer contact with the water, the relation of the float and the water being always constant regardless of the height of the water or the angle which the surface of said water takes in said chamber. Baffle plates 11^a serve to prevent water from being drawn along with the air to outlet 12 where the air is delivered to said carbureter or pump entirely free of all dust

and undesirable matter. It will of course be understood that the air washer may be formed with any desired number of air ports, and baffle plates. The same may be operated from any source of power required without departing from the spirit of the invention.

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

1. In a device for washing air the combination of a cylindrical body portion having a water inlet tube attached to the outside thereof, an opening near the bottom of said tube leading to said body portion, said tube being adapted to designate the height of water in said body portion, an air tube in said body portion admitting air, a float having an air chamber attached thereto, a guide fitting over said air tube to guide said float in place, wire screens fastened to the underside of said float, a cylindrical telescoping top fitting into said body portion as and for the purpose described.

2. In a device for washing air, the combination of a cylindrical body portion having a water inlet tube attached to the outside of said body portion, means for admitting water from said tube to said body portion, means for designating the height of water in said body portion from the outside thereof, means for admitting air to said body portion, a float having an air chamber attached thereto, means for holding said float and said air chamber in place in said body portion, wire screens fastened to the under side of said float, a cylindrical telescoping top fitting into said body portion, a plurality of baffle plates and air ports in the upper end of said telescoping top, means for connecting an air pump or carbureter to said telescoping top, as and for the purpose described.

In testimony that I claim the foregoing as my invention I affix my signature in the presence of two witnesses, this 30th day of January, A. D. 1914.

ALFRED C. JOHNSON.

Witnesses:
JOHN A. NOISMITH,
L. I. JONES.