April 14, 1925. 1,533,719

M. O. WOOLF

INTAKE ATTACHMENT FOR AIR WASHERS

Filed Nov. 26, 1921

Fig. 1.

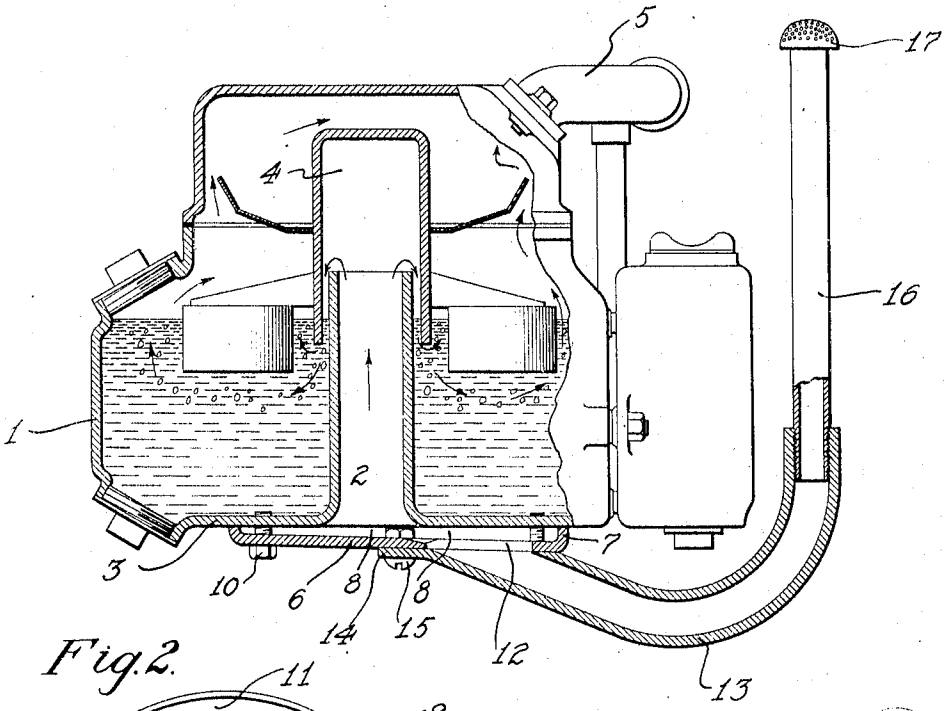
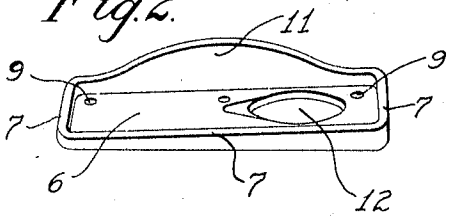


Fig. 2.



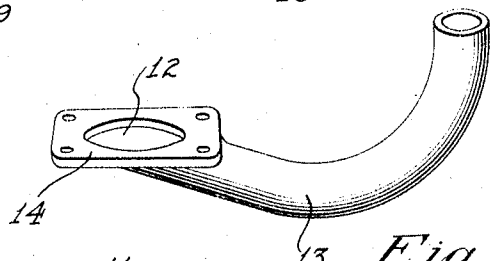


Fig. 3.

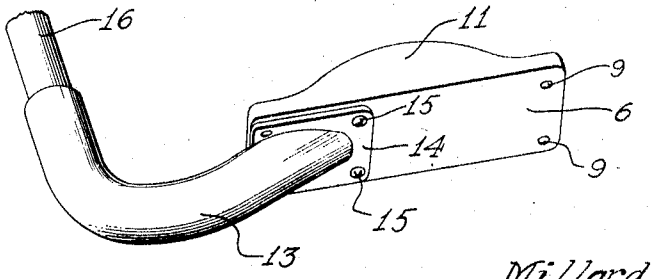


Fig. 4.

Inventor:-
Millard O. Woolf,

By
Langdon Moore, his Attorney.

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UNITED STATES PATENT OFFICE.

MILLARD O. WOOLF, OF OATVILLE, KANSAS.

INTAKE ATTACHMENT FOR AIR WASHERS.

Application filed November 26, 1921. Serial No. 517,381.

To all whom it may concern:

Be it known that I, MILLARD O. WOOLF, a citizen of the United States, residing at Oatville, Kansas, have invented certain new and useful Improvements in an Intake Attachment for Air Washers, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention comprises an intake attachment for air washers, the utility of which is unrestricted, but which is especially useful in connection with devices wherein air for carbureting purposes is first washed before being mixed with fuel to form a mixture for an internal combustion engine.

In devices of this character with which I am familiar, the air is generally taken into a portion of the washing device usually at the bottom thereof and as the washing device itself is usually placed near the ground, a considerable quantity of dust and dirt is taken into the interior of the liquid containing chamber. In tractors used to work soil and in connection with agricultural implements the liquid must be changed as frequently as six times daily in devices holding what would amount to about twenty-five gallons of liquid during that time. Even with washing a large amount of sediment and grit is carried through to the piston rings and interior of the cylinders, scoring them and causing considerable deterioration to the engine.

It is contemplated among the objects of the present invention to provide an intake attachment for air washers which can be readily attached to and detached from the opening where the air is admitted to the interior of the washing chamber; the nature of the attachment itself being simple and arranged for ready adaption to a variety of locations; the arrangement being such that a conduit is provided which will take the air from a point above the level of the place where the air washing device is usually placed and where experience has shown there is little or no dust or grit in it.

Still a further object is to provide a device which will be cheap, strong, light, and will not add materially to the number of parts on the washer.

A drawing illustrating an embodiment of the invention is hereto annexed, the following views being shown:

Fig. 1, is a view in vertical section of one form of structure embodying my invention a portion of the washer being broken away to show interior arrangement;

Fig. 2, and Fig. 3, are views in perspective of cooperating parts of the apparatus in unassembled position;

Fig. 4, is a view in perspective of these parts assembled and looking at them from the bottom.

In these views, 1 designates an air washer, having a central air channel 2, extending upwardly from a bottom 3. A floating hood 4, deflects the air into a liquid contained in the washer, from which it rises and passes out through a conduit 5 to a portion of an internal combustion engine such as a carbureter.

The present invention is adapted to be used in connection with devices of this character and includes an air inlet encircling and enclosing member having a base 6, upwardly extended or turned edges 7 constituting sides and end portions on the base, and forming, with the air washer to which it is adapted to be attached a closure or chamber 8 around the air inlet channel 2.

Means are provided for securing this plate to the air washer, and as here shown comprise openings 9 for the reception of securing means such as bolts 10 threaded into openings in the air washer casing.

Means are provided for preventing lateral displacement of plate 6, and as here shown comprise an extended or upwardly flaring portion 11 on one of the sides. This is adapted to bear against a side or end portion of the washer and add materially to the stability of the device.

Plate or base 6 is provided with an air inlet opening 12, and associated therewith there is a conduit in the form of a goose-neck, 13, having at one end a flange 14, adapted to be secured to base 6 suitably, as by bolts or the like 15. An air conduit 16 is connected to goose-neck 13, and extends upwardly above the level of the machine to a point where there is little or no grit in the air. It may also be provided at its outer end with any suitable air screening device such as is diagrammatically indicated at 17 in Fig. 1.

In operation base plate 6 is attached to the washer so as to cover the air inlet channel thereof and goose-neck 13 arranged to extend to some suitable portion of the machine in a manner which will properly locate the outer end of conduit 16 carrying strainer

17. The joints are made air-tight either by grinding or gaskets, and it has been found that with the attachment an air washer in which the liquid had to be renewed or changed six times daily, can go indefinitely without changing. Also the interior of the piston of the combustion engine and the piston rings are maintained in perfect condition with the attachment whereas without it they have been scored due to grit passing through the washer and into the cylinders.

From the foregoing it will be apparent that the invention accomplishes the objects enumerated and while it has been disclosed in the present embodiment, it will be understood that I do not wish to confine myself to the precise form of this disclosure, as many changes in the structure and arrangement of the parts are contemplated as within the spirit of the invention as set forth in the claim.

What I claim is:

In an air-washer provided with a liquid-containing casing having an air-inlet, an intake-attachment comprising a plate having extending flanges and secured to the liquid-containing casing adjacent the air-intake so as to form a chamber between itself and the said casing and communicating with the air-intake, and a conduit associated with the plate so as to communicate with said chamber and extending to a point remote from the air-intake.

In testimony whereof I affix my signature.

MILLARD O. WOOLF.