May 22, 1951 G. O. ANDERSON 2,554,167

EXHAUST PIPE WATER PROTECTOR

Filed March 21, 1946

Fig. 1.

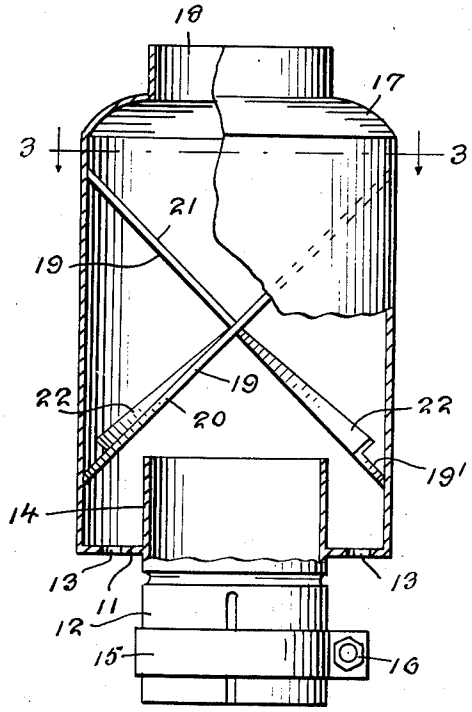


Fig. 2.

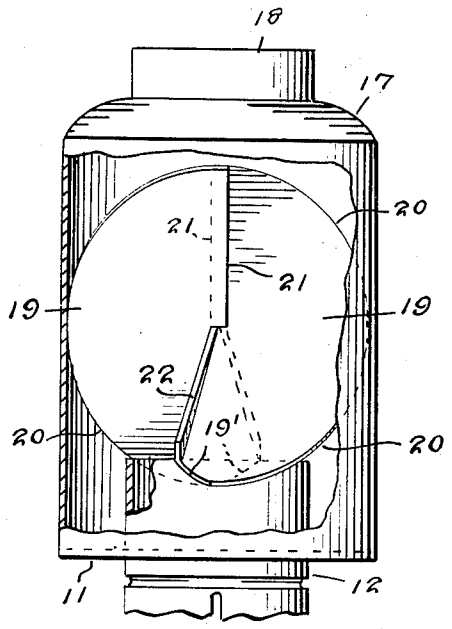


Fig. 5.

Fig. 3

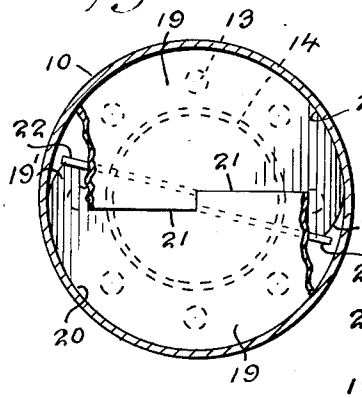


Fig. 4.

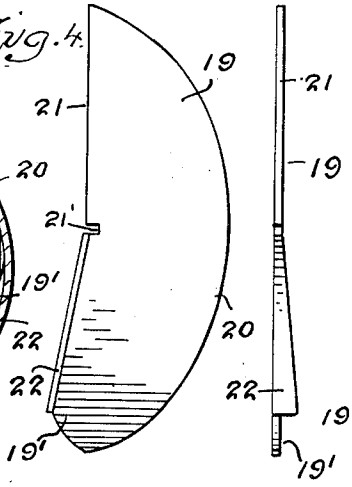
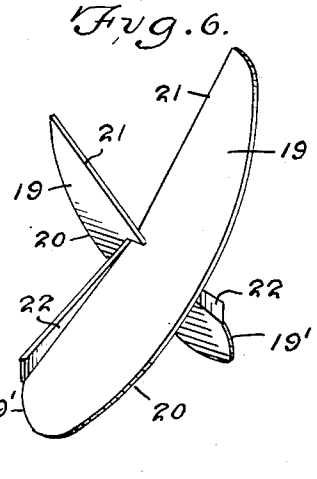


Fig. 6.



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EXHAUST PIPE WATER PROTECTOR

George O. Anderson, Grand Island, Nebr.

Application March 21, 1946, Serial No. 656,060

1 Claim. (Cl. 98—60)

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The invention relates to a protecting device for an exhaust pipe of an internal combustion engine, and more especially to an exhaust pipe water protector.

The primary object of the invention is the provision of a device of this character, wherein it when applied to an exhaust pipe of an engine when vertically disposed or inclined to the vertical, will prevent water from seeping into the exhaust pipe, the device being of novel construction and is unique in the assembly thereof, to serve as a weather guard for the exhaust pipe.

Another object of the invention is the provision of a device of this character, wherein it is of cylinder form and has within deflectors or baffle wings, vanes or the like, so that water admitted to the cylinder will be diverted from a course leading into an exhaust pipe of an internal combustion engine, with resultant increase in the wearing qualities of such pipe while in service.

A further object of the invention is the provision of a device of this character, which is simple in construction, thoroughly reliable and efficient in operation and purposes, strong, durable, readily and easily mounted and demounted, compact, possessed of few parts, thus economical in repairs and replacements, and inexpensive to manufacture and install.

With these and other objects in view the invention consists in the features of construction, combination and arrangement of parts as will be hereinafter more fully described, illustrated in the accompanying drawing, which discloses the preferred embodiment of the invention, and pointed out in the claim hereunto appended.

In the accompanying drawing:

Figure 1 is an elevation of the device constructed in accordance with the invention and partly broken away;

Figure 2 is a view similar to Figure 1 showing the device rotating 45° from the position from that shown in Fig. 1, it also being partly broken away;

Figure 3 is a sectional view on the line 3—3 of Fig. 1;

Figure 4 is an elevation of one deflector section removed from the device;

Figure 5 is an edge view thereof;

Figure 6 is a perspective view of the deflector sections in interfitted relation to each other.

Similar reference characters indicate corresponding parts throughout the several views in the drawing.

Referring to the drawing in detail, the device constituting the present invention, comprises a

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cylindrical body or cylinder 10, it being shown in Figures 1 and 2 partly broken away, and the encircling flat bottom portion 11, with respect to a central coupling sleeve 12 of this body or cylinder 10, is provided with spaced discharge or drain holes 13, the sleeve 12, which is of tube form, being projected a distance into the interior of the body or cylinder 10 to effect an upstanding neck 14 therein, while the remote lowermost end of this sleeve affords an attaching nipple for telescopic engagement over the upper free end of an exhaust pipe, not shown, of an internal combustion engine, which is also not shown.

The nipple of the sleeve 12 is embraced by a clamping collar or band 15, provided with an adjusting bolt 16, and in this manner the said collar or band 15 will securely fasten the device on the exhaust pipe.

The contracted upper hood 17 of the body or cylinder 10 has a central exhaust opening 18 for emitting the gases from the engine into the atmosphere, which opening is of an approximate diameter as the exhaust pipe, while the diameter of the body or cylinder is considerably greater.

Within the body or cylinder 10 and overcast to the neck 14 are crossed interfitted deflector or baffle wings, vanes or the like 19. Each deflector is a flat plate provided with a notch 21' as its center to permit the plates to interfit and each plate has an outer rounded edge 20 making contact with the inner face of the body or cylinder 10 due to the angular disposition thereof within the same, while the upper approximate half has an inner straight edge 21 and the lower approximate half has a segmental portion 19' provided with an inwardly tapered upturned flange 22, for the troughing of rain or water entering the said body or cylinder 10 through the opening 18 and spouting it away from the neck 14. Each flange 22 of a wing, as can be seen from either Fig. 1 or 2, is located beneath the other wing and therefore the rain or water is prevented from entering the exhaust pipe and is directed toward the bottom of the body or cylinder from where it drains out through holes 13.

In the above specified manner the rain or water cannot seep into the exhaust pipe and thus the latter is kept free therefrom during inclement weather, and avoiding moisture admission to the cylinder or cylinders of the engine at all times.

What is claimed is:

A protector device for attachment to the end of an upright exhaust pipe for allowing the exit of exhaust gases while preventing the entrance of water into the exhaust pipe comprising in

combination, a coupling device adapted to be attached to the end of the exhaust pipe, a housing body having the bottom portion thereof telescoping the coupling device for a predetermined axial length of the same, an annular flange at the bottom end of said housing body securing the same symmetrically to said coupling device and provided with drain openings, a pair of deflector wings positioned in said housing body and overlying said coupling device, said wings being offset from each other and on opposite sides of a plane extending longitudinally and medially through said housing body and coupling device, said wings lying in respective planes and having a centrally located notch in each wing for the intersecting of each other and perpendicular to said medially extending plane, each said baffle wing having a projected area substantially greater than one half the cross sectional area of said coupling device, a segmental portion extending from each baffle wing in the plane thereof and underlying the other baffle wing, and an upturned flange terminating each segmental portion, whereby liquids and the like strike said

baffle wings and are gravitated away from the exhaust pipe to the bottom of said housing body for drainage through said drain openings while exhaust gases from said exhaust pipe pass to the atmosphere.

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