Aug. 3, 1926. 1,595,020

O. H. NADLER

AIR CIRCULATOR FOR INTERNAL COMBUSTION ENGINES

Filed April 20, 1926.

Fig. 1,

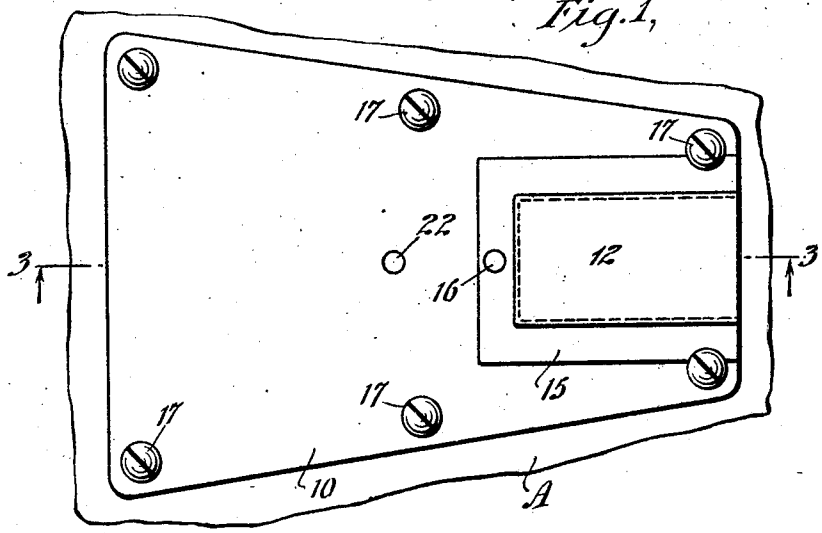


Fig. 2,

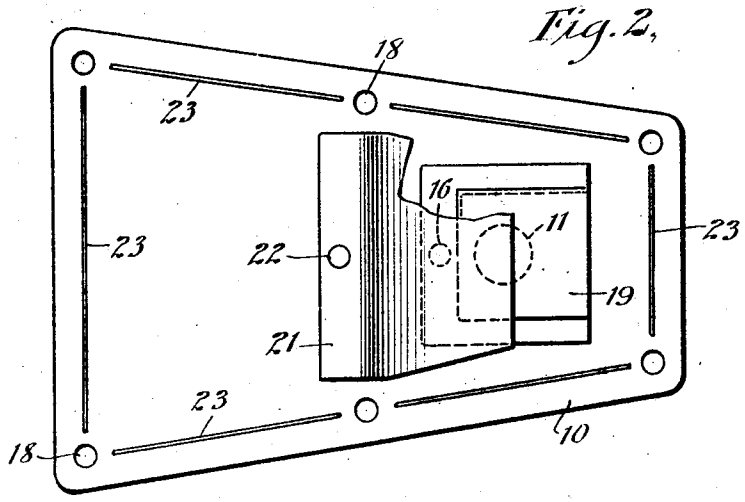
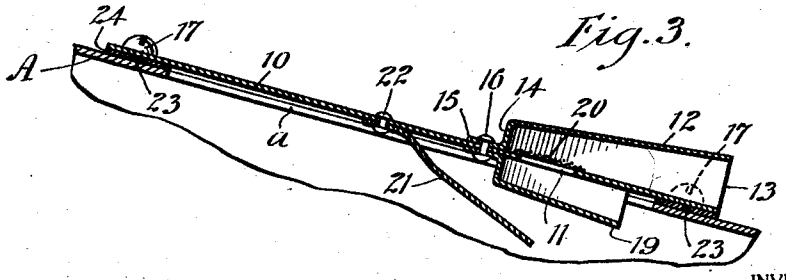


Fig. 3.



WITNESSES

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Patented Aug. 3, 1926. 1,595,020

UNITED STATES PATENT OFFICE.

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AIR CIRCULATOR FOR INTERNAL-COMBUSTION ENGINES.

Application filed April 20, 1926. Serial No. 103,399.

My invention relates to an air circulator for internal combustion engines and particularly to a device for venting and circulating the air in a transmission case.

An object of the invention is to provide an efficient attachment of simple form to be applied to the transmission case in a manner to permit the escape of hot air and the entrance of cool air.

The nature of the invention and its distinguishing features and advantages will clearly appear as the description proceeds.

Reference is to be had to the accompanying drawings forming a part of this specification, it being understood that the drawings are merely illustrative of one example of the invention.

Figure 1 is a plan view of an air circulating means embodying my invention showing the same applied to a transmission case illustrated in part;

Figure 2 is an inverted view of the device removed from the transmission case;

Figure 3 is a longitudinal vertical section on the line 3—3, Figure 1.

In carrying out my invention in practice, in accordance with the illustrated example, a cover plate 10 is provided adapted to be secured to the transmission case A over an opening *a* therein. The plate 10 is formed with an air opening 11 through which air may find ingress and egress to and from the transmission case A, whereby to maintain the same in a cooling condition. On the plate 10 above the opening 11 is a hood 12 which extends materially beyond said opening *a* and has an open end 13 for affording a free passage for air, the other end 14 of the hood being closed. The closed end 14 is formed with a flange 15 which is riveted or otherwise suitably fastened to plate 10 as at 16. The plate 10 may be secured to the transmission case by screws 17 passing through properly located holes 18 in said plate. In order to prevent the splashing of oil through the air opening 11, I provide a shield 19 beneath said hole and secured to the plate 10 by any suitable means such as rivet 16 and certain of the screws 17 that secure the plate to the transmission case.

By the use of the shield 19 the oil obviously will be prevented from splashing directly into the opening 11. Over the hole 11 is a screen 20 in practice, to prevent the entrance of foreign matter to the transmission case.

To further guard against the splashing of oil in the region of the opening 11 and to prevent the collection of oil at the interior of shield 19, I provide a baffle plate 21 secured at one end as at 22 to the plate 10 and extending beyond the rear end of shield 19. Said baffle plate 21 is in an inclined plane to deflect the oil splashing against the same toward the bottom of the transmission case.

To prevent leakage of oil at the joint at the edge of the plate 10, I provide said plate with beads 23 which may be of wires soldered to said plate.

The numeral 24 indicates packing strips between the cover plate 10 and the top surface of the transmission case A.

I would state furthermore that while the illustrated example constitutes a practical embodiment of my invention, I do not limit myself strictly to the exact details herein illustrated, since, manifestly, the same can be considerably varied without departure from the spirit of the invention as defined in the appended claims.

Having thus described my invention, I claim:

1. An air circulating attachment for an internal combustion engine including a cover plate adapted to be disposed over an opening in the transmission case, said plate having an opening for the ingress and egress of air, a hood disposed on said plate over said air opening and having an open end forming an air inlet and outlet in a position remote from said air opening, a shield on said plate disposed beneath said air opening, said shield affording a passage for air, and an oblique baffle secured also to said cover plate and extending beneath said shield.

2. An air circulating attachment for an internal combustion engine including a cover plate adapted to be disposed over an opening in the transmission case, said plate hav-

ing an opening for the ingress and egress of air, a hood disposed on said plate over said air opening and having an open end forming an air inlet and outlet in a position remote from said air opening, a shield on said plate disposed beneath said air opening, said shield affording a passage for air, and an oblique baffle secured also to said cover plate and extending beneath said shield; together with ribs extending along the said cover plate at the several sides thereof near the edges.

OSCAR HENRY NADLER.