Oct. 3, 1939. T. H. BURNS 2,175,106

SUPERCHARGER

Filed May 5, 1938

Fig. 1.

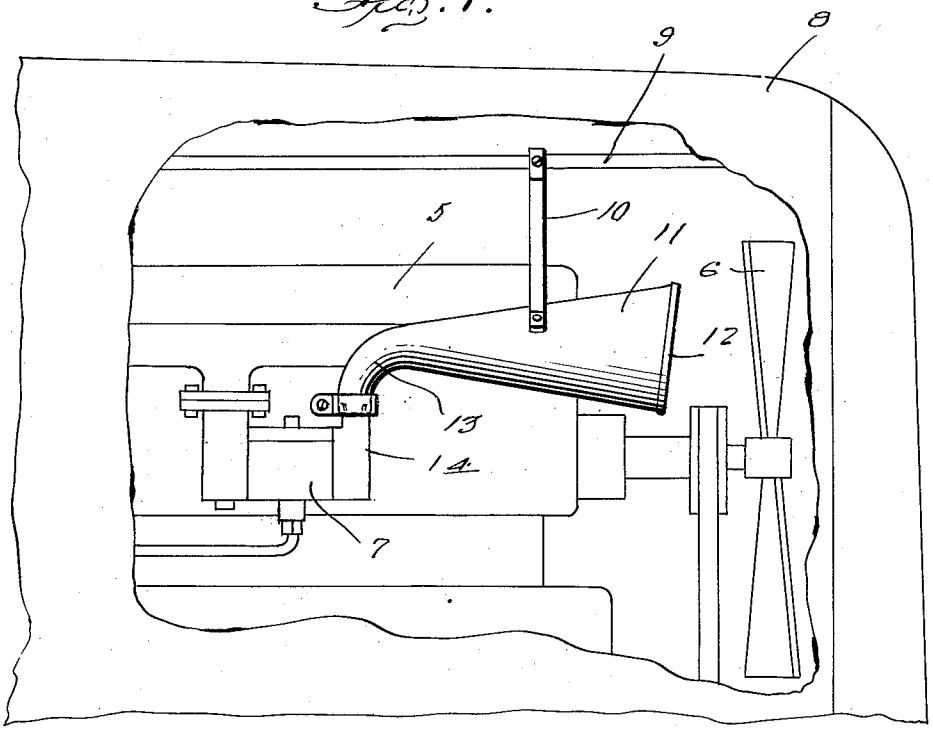
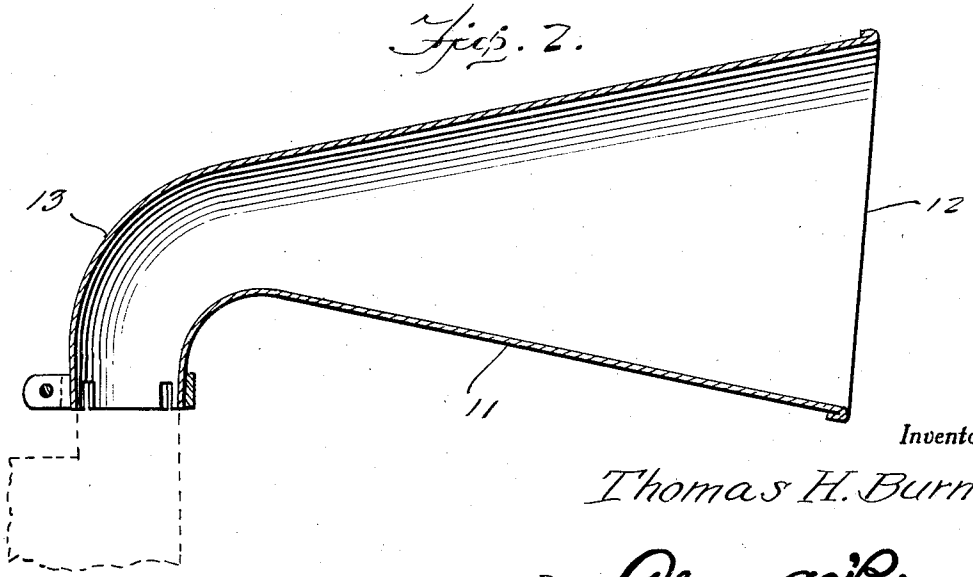


Fig. 2.



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SUPERCHARGER

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3 Claims. (Cl. 123—119)

The present invention relates to internal combustion engines, having in view greater power, pep and speed, together with smoother engine performance and economy in fuel; and the invention together with its object and advantages will be best understood from a study of the following description taken in connection with the accompanying drawing, wherein like numerals refer to like parts throughout, and in which

Figure 1 is a side elevational view illustrating the application of the invention to an internal combustion engine, and

Figure 2 is a longitudinal sectional view through the supercharger attachment.

Referring now to the drawing in detail, the numeral 5 indicates generally an internal combustion engine having associated therewith the usual fan 6 and carburator 7. The engine hood is indicated by the reference numeral 8 and one of the internal hood rods is illustrated and indicated by the numeral 9. From the rod 9 is suspended an attaching bracket 10 forming a support for the supercharger attachment indicated by the reference numeral 11.

The supercharger attachment 11 is of elongated, tapered funnel-like construction having its mouth portion 12 positioned in proximity to and slightly rearwardly of the fan 6 and its opposite end provided with an elbow 13, the extremity of which extends downwardly to fit over the air intake 14 of the carburator. The attached end is split as shown at 15 to provide a tight fit with the air intake by the application of a clamping ring 16.

The funnel 11 and elbow 13 are of gradual and uniform tapering formation throughout from end to end of the device whereby air forced into the mouth end 12 of the funnel will provide a uniformly increased pressure as the same travels toward the reduced end of the funnel where it connects over the air intake 14. The mouth end of the funnel is preferably undercut as shown at 17.

From the above it will be apparent that in actual practice atmospheric air is driven into the funnel by the fan and passes into the carburator so that the combustible mixture is supplied from the carburator to the internal combustion engine under pressure to obtain increased power therefrom and to insure smoother engine performance. By reason of the gradual reduction in the diameter of the funnel and elbow, the air pressure passing through the funnel will be increased as it reaches the reduced end thereof and the gradual curvature of the elbow prevents any interruption to this increase in air pressure and thus provides a uniform force of air which is fed into the air intake of the carburator.

It is believed the details of construction and manner of use of the device will be readily understood from the foregoing without further detailed explanation.

Having thus described the invention, what I claim is—

1. An engine attachment for supplying air to the carburator of the engine under pressure for increasing the charge supply to the engine, said attachment comprising a funnel having the upper edge of its larger end projecting forwardly of its lower edge and supported in a horizontal position in close proximity and rearwardly of the fan of the engine, an elbow at the opposite end of the funnel and attached over the air intake of the carburator, said funnel and elbow being of gradually reduced diameter throughout the entire length of the attachment to gradually and uniformly increase the velocity of air passing through the funnel into said intake.

2. An engine attachment for supplying air to the carburator of the engine under pressure for increasing the charge supply to the engine, said attachment comprising a funnel having the upper edge of its larger end projecting forwardly of its lower edge and suported in a horizontal position in close proximity and rearwardly of the fan of the engine, an elbow at the opposite end of the funnel and attached over the air intake of the carburator, said funnel and elbow being of gradually reduced diameter throughout the entire length of the attachment to gradually and uniformly increase the velocity of air passing through the funnel into said intake, the attached end of the funnel being split and a clamping ring surrounding the same in an air-tight engagement to the air intake of the carburator.

3. An engine attachment for supplying air to the carburator of the engine under pressure for increasing the charge supply to the engine, said attachment comprising a funnel supported in a horizontal position with its larger end in close proximity to and rearwardly of the fan of the engine, said larger end being undercut, an elbow at the opposite end of the funnel, said funnel and elbow being of gradually reduced diameter throughout the entire length of the attachment to gradually provide an increase in the velocity of air passing through the funnel and means for attaching the reduced end of the funnel to the air intake of the carburator.

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