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GASEOUS FUEL AND AIR MIXING DEVICE IN THE FORM OF GASKETS

Filed Feb. 28, 1927

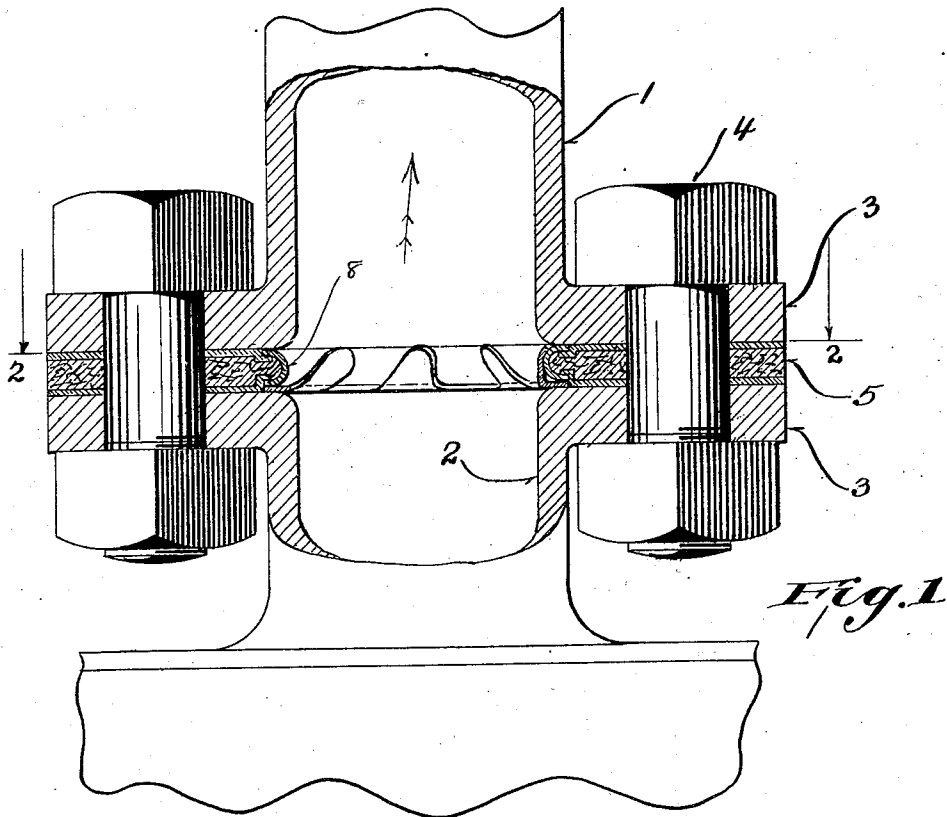


Fig. 1

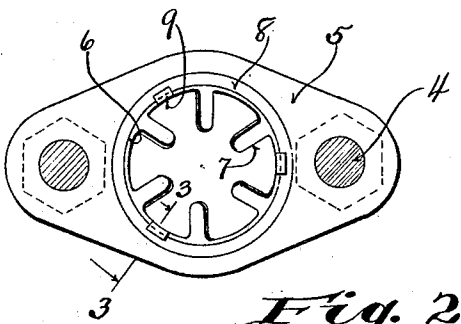


Fig. 2

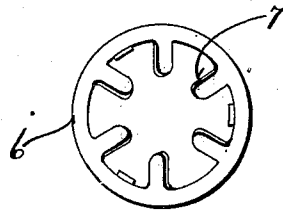


Fig. 4

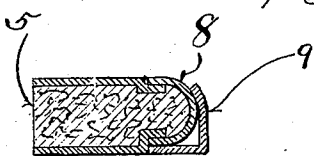


Fig. 3.

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UNITED STATES PATENT OFFICE.

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GASEOUS FUEL AND AIR MIXING DEVICE IN THE FORM OF GASKETS.

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This invention relates to a manifold gasket.

Manifold gaskets for the intake of an internal combustion engine have been made heretofore and have been provided with inwardly projecting prongs adapted to break up the fuel flow or the stream of the passing mixture. However, it has been found that these gaskets and fingers are made as a unitary member so that for each different make of car, a separate and distinct gasket is required, both as to its size and as to its contour.

This invention is designed to provide a gasket which may cooperate with any standard type of gasket for any make of car, and which is so constructed that an individual and separate gasket for each car is not required.

More specifically, objects of this invention are to provide a ring-like auxiliary gasket adapted to be clamped between a standard gasket and the adjacent portion of the intake manifold so that projecting fingers carried by the ring-like auxiliary gasket will cause a whirling motion of the flowing stream and also will insure a thorough breaking up of any solid particles of fuel that may be carried by such stream.

An embodiment of the invention is shown in the accompanying drawings in which:

Figure 1 is a fragmentary sectional view through an intake manifold showing the gasket in place;

Figure 2 is a sectional view on the line 2—2 of Figure 1;

Figure 3 is a sectional view on the line 3—3 of Figure 2;

Figure 4 is a view of the auxiliary gasket removed from the remaining portions of the apparatus.

Referring to the drawings, it will be seen that two parts 1 and 2 of an intake manifold have been shown, as provided with apertured flanges 3 for the reception of the clamping bolts 4. A standard gasket 5 is interposed between these parts of the manifold and clamped in place, thus securing a gas-tight seal.

The auxiliary gasket comprises a ring-like body portion 6 which has a central opening into which a plurality of tongues or fingers 7 project, such fingers and the body portion

of the gasket being stamped from a single sheet of metal. The fingers 7 project radially, as stated, and are slightly twisted or angularly set to cause a whirling of the mixture stream and insure the complete breaking up of all fuel particles, and a thorough sweeping or wiping of the sides of the intake manifold by the gas stream.

This auxiliary gasket is adapted to be positioned between the standard gasket 5 and one portion of the intake manifold, for example, the portion 2. As a matter of fact, the standard gasket is usually provided with a channel-shaped central portion 8 which engages the edges of the upper and lower plates of such gasket, a filler being interposed between the plates. The ring-like auxiliary gasket extends approximately over the central piece 8 of the standard gasket, as shown in Figure 1.

It is to be noted further that the auxiliary gasket is provided with a plurality of tongues or fingers 9 integral therewith which extend upwardly and are bent over the edge of the standard gasket 5, as shown most clearly in Figures 1 and 3, to thereby retain the auxiliary gasket in place or attached to the standard gasket even when the standard gasket is removed from its clamped position.

In using the device, all that is necessary is to position the auxiliary gasket with reference to the standard gasket. No fitting is required, and no substitution of a special gasket for the standard gasket is required.

It will be seen, therefore, that this device fulfills a long felt want in that it supplies an auxiliary gasket for causing a whirling and breaking up of the gas stream, thus securing an intimate mixture of the fuel air, and which also does not require a specially formed gasket, but cooperates with the standard gasket universally employed in the intake manifold.

Although the invention has been described in considerable detail, such description is intended as illustrative rather than limiting as the invention may be variously embodied and as the scope of such invention is to be determined as claimed.

I claim:

In a fuel mixing device, the combination of a standard gasket and an auxiliary gasket adapted to be clamped between the flanges

of an intake manifold and a carburetor of an internal combustion engine, said auxiliary gasket having a ring-like body portion with radially inwardly projecting fingers
5 extending therefrom, said auxiliary gasket having projecting ears adapted to be bent about said standard gasket, said standard gasket having a recessed annular shoulder adapted to receive the body portion of the auxiliary gasket.¹⁰

In testimony that I claim the foregoing I have hereunto set my hand at Milwaukee, in the county of Milwaukee and State of Wisconsin.

EDWARD C. KAHN.