

J. W. NANCE.
GASKET SCREEN.
APPLICATION FILED MAR. 21, 1917.

1,236,100.

Patented Aug. 7, 1917.

Fig. 1.

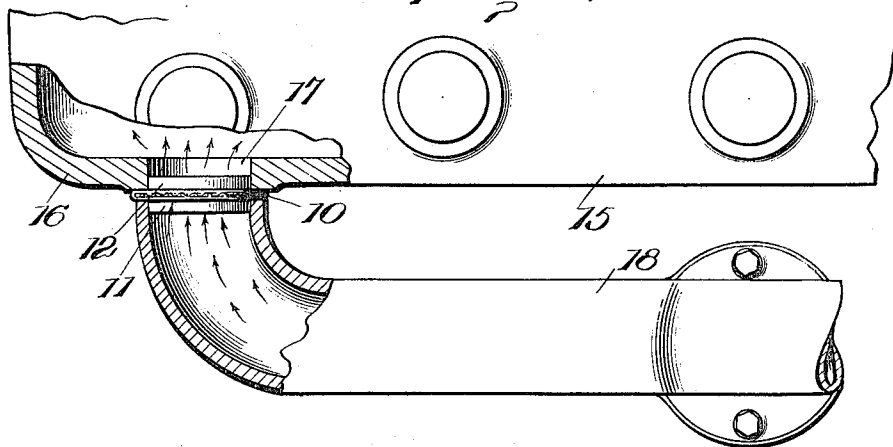


Fig. 2.

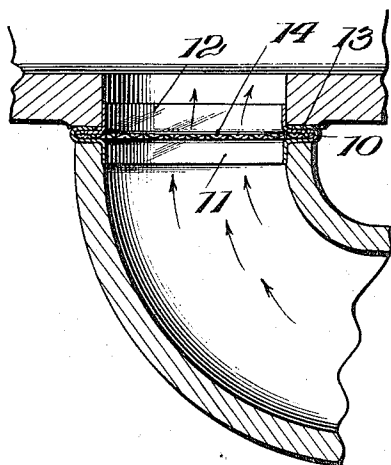


Fig. 4.

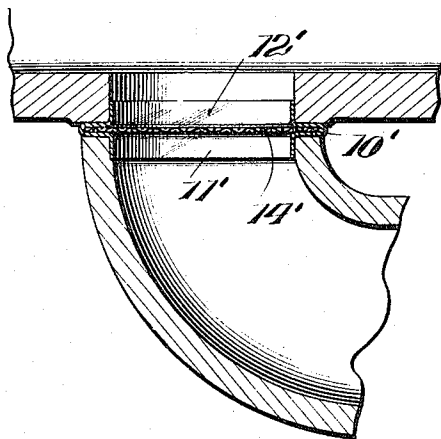
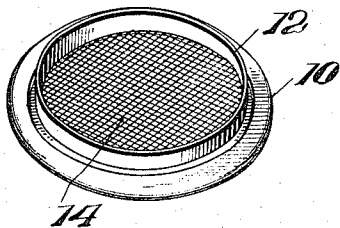


Fig. 3.



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UNITED STATES PATENT OFFICE.

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GASKET-SCREEN.

1,236,100.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JAMES W. NANCE, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Gasket-Screens, of which the following is a specification.

This invention relates to an improved screen gasket especially designed for use in connection with internal combustion engines and has as its primary object to provide a device of this character adapted to be interposed between the intake manifold and one of the engine cylinders at the intake port therein for heating and breaking up the fuel mixture prior to its delivery to the engine with the device acting to form a gasket between the intake manifold and the cylinder of the engine.

The invention has as a further object to provide a device of the above described character having oppositely projecting centering flanges one adapted to fit within the intake manifold of the engine and the other adapted to fit within the intake port of the engine cylinder for supporting the device in position.

And the invention has as a still further object to provide a device which will be simple in construction and which may be employed in connection with substantially any conventional type of internal combustion engine.

Other and incidental objects will appear as the description proceeds and in the drawings wherein I have illustrated the preferred embodiment of the invention and wherein similar reference characters designate corresponding parts throughout the several views:

Figure 1 is a perspective view partly broken away and showing a conventional type of internal combustion engine equipped with my improved device, which is shown in elevation,

Fig. 2 is a sectional view more particularly illustrating the construction of the device and showing the mounting of the disintegrating screen employed.

Fig. 3 is a perspective view showing the device detached, and

Fig. 4 is a sectional view showing a slight modification of the invention.

In carrying out the invention, my im-

proved device is formed with an annular channel-shaped body 10 extended to provide an axially arranged laterally directed centering flange 11. Connected to the body 10 is an annular flange 12 arranged axially of the body to project therefrom in a direction opposite to the flange 11. The flange 12 is of a diameter substantially equal to that of the flange 11 and is provided at its inner extremity with a laterally directed annular lip 13 engaging within the annular body 10 for connecting the flange 12 thereto. Seated within the body 10 beneath the lip 13 of the flange 12 is a circular screen or wire gauze 14 closing the opening through the body. It will thus be observed that in constructing the device, the screen 14 may first be arranged within the body 10 when the lip 13 of the flange 12 may then be seated against the screen and the channel of the body bent down to tightly clamp the screen in position as well as to connect the flange 12 with the body. Preferably, the body 10 and flange 11 are formed of a single piece of suitable resilient sheet metal so that the sides of the channel body 10 will have a corresponding spring action. Also, the flange 12 and lip 13 are preferably formed of a single piece of suitable resilient sheet metal.

In order that the construction, operation and mounting of my improved device may be accurately understood I have, in the drawings, illustrated the invention in connection with a conventional type of internal combustion engine 15 having a cylinder 16 provided with an intake port 17. Associated with the engine is the intake manifold 18. The flanges 11 and 12 are each of a diameter to snugly fit within the port 17 of the cylinder 16 or to snugly fit within the intake manifold 18 so that, in use, either one or the other of said flanges may be engaged within the intake port 17 in the manner shown in Figs. 1 and 2 with the other flange engaged within the adjacent end of the intake manifold. When thus arranged, the body 10 of the device will be disposed to come between the cylinder 16 and the terminal edge of the intake manifold and, owing to the resiliency of the body, will provide a spring gasket therebetween with the flanges 11 and 12 acting to center the device with respect to the intake manifold as

well as with respect to the intake port 17. The device will thus serve to form a tight joint between the intake manifold and the engine and attention is now directed to the fact that the screen 14 will be supported to break up the fuel mixture prior to its delivery to the cylinder. The mesh of the screen 14 is such that the said screen will retain a certain amount of heat and owing to the close proximity of the screen to the engine cylinder, the screen will be always maintained heated to thus tend to heat the fuel mixture upon its passage through the screen.

15 In Fig. 4 of the drawings, I have illustrated a slight modification of the invention wherein the body 10' of the device and flanges 11' and 12' are formed as an integral structure with the screen 14' seated in the channel of the body. In some instances, it may be found desirable to construct the device in this manner and it will be seen that the modified structure is adapted to be mounted and used in a manner similar to the preferred form of the invention.

25 It will therefore be seen that I provide a particularly simple and efficient construction for the purpose set forth and a device adapted for use in connection with substantially any conventional type of internal combustion engine.

Having thus described the invention, what is claimed as new is:

35 1. A device of the character described including a body, centering flanges projecting in opposite directions from the body, and

a screen carried by the body with the body adapted to provide a gasket.

2. A device of the character described including an annular body, centering flanges arranged axially of the body and extending in opposite directions therefrom, and a screen carried by the body with the body adapted to provide a gasket.

3. A device of the character described including a body having spaced yieldable sides, centering flanges extending in opposite directions from the body, and a screen carried by the body with the body adapted to provide a spring gasket.

4. A device of the character described including a channel shaped body having a centering flange extending therefrom, a centering flange connected to the body to extend therefrom in a direction opposite to said first mentioned flange, and a screen seated in the channel of the body with the body adapted to provide a gasket.

5. The combination with an internal combustion engine having an intake port and an intake manifold, of a gasket screen including a body having oppositely directed centering flanges extending therefrom with one of said flanges fitting in the manifold and the other of said flanges fitting in the said port, and a screen carried by the body with the body projecting between the intake manifold and the engine to provide a gasket at the joint between the manifold and the engine.

In testimony whereof I affix my signature.
JAMES W. NANCE. [L. s.]