

June 29, 1937.

M. E. CHANDLER
JOINT FOR CARBURETORS
Filed Feb. 28, 1935

2,085,574

Fig. 1.

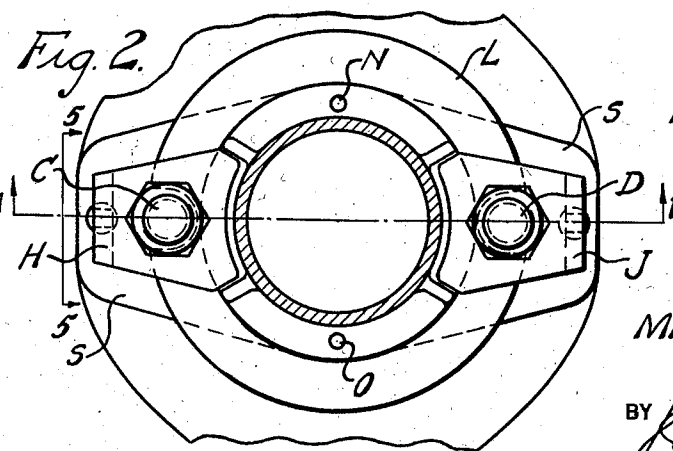
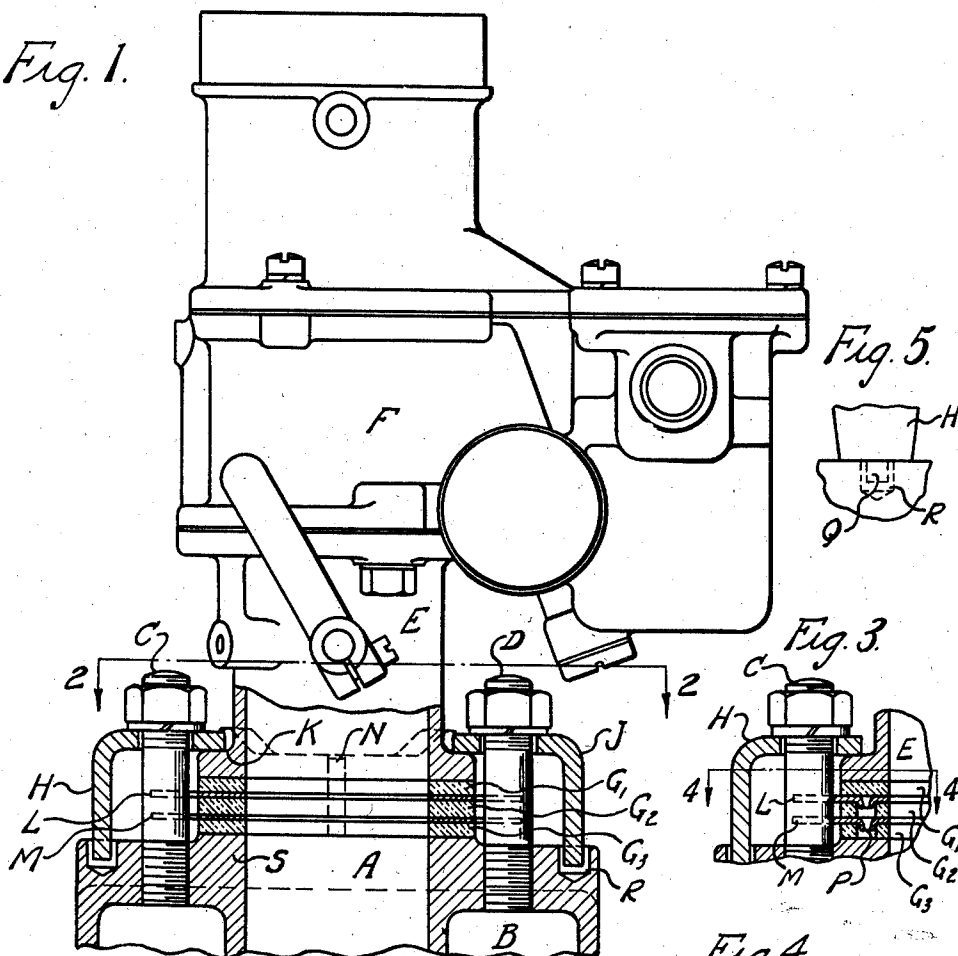


Fig. 3.

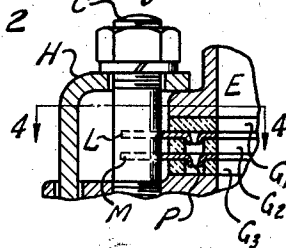
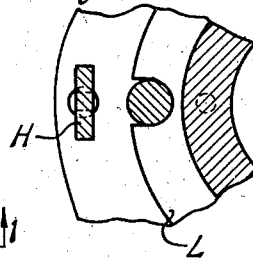


Fig. 4.



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2,085,574

JOINT FOR CARBURETORS

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Application February 28, 1935, Serial No. 8,642

4 Claims. (Cl. 285-140)

The object of this invention is to reduce the amount of heat flowing back into a carburetor through the flange.

The second object is to enable the lower half of a die cast carburetor to be made of a die casting instead of being made of gray iron as it is now constructed.

The third object is to eliminate the heat conducted through the bolts which connect the carburetor to the inlet manifold flange.

The fourth object is to provide heat radiating means closely associated with the heat insulating gaskets. The problem is made more difficult for the reason that heat is brought up as close to the inlet manifold flange to which the carburetor is bolted as it is customary to direct the mixture directly into the hot spot at the point where the carburetor is bolted to the inlet.

I propose to use a novel means of holding the carburetor to the intake manifold. At the present time the flanges are of large area and mass and a great deal of heat is transmitted from the intake manifold into the barrel of the carburetor and thence into the float bowl causing the gasoline to boil. With the present flanges it is not possible to make them of die cast material because they tend to warp owing to strain being placed a long way in from the center. I propose to eliminate the conventional flange and to cast a barrel of the carburetor with a flange of relatively small area extending around the carburetor. I then propose to bolt this narrow flange to the manifold. By the use of conventional studs this flange can be drawn up tight and thus the main carburetor will be clamped into place. By virtue of the fact that the carburetor flange will have small area in contact with the manifold and the studs themselves will not be in contact with the carburetor flange, very little heat will be transmitted from manifold to carburetor barrel. In extreme cases it will be desirable to use and hold in place by the narrow flange, a gasket that resists the conduction of heat between the manifold and the barrel of the carburetor. It might also be desirable to either mould in this gasket or clamp in place heat radiating fins. In other words, I propose in this design to have a means of attaching a carburetor to the manifold so that the flange itself, together with the gaskets, adds very materially in radiating heat between the manifold and the carburetor, rather than conducting heat from the manifold to the carburetor. This will very materially reduce the difficulties had with

gasoline boiling and percolating into the intake manifold.

The preferred form of stamping to clamp the carburetor to the manifold will be two simple L shaped stampings. The horizontal leg perforated for the stud and extending over to rest on the lug of the carburetor. The vertical leg will extend down and have a projection that will extend into a hole bored in the intake manifold which will serve as sort of a dowel hole to locate the position of the L shaped stamping. The part of the stamping projecting into the dowel hole will be smaller than the remainder of the leg so that the leg will rest on the face of the manifold flange. The lug on the carburetor will have locating points in contact with the L shaped stamping to prevent the carburetor from turning. Likewise with these L shaped clamps there can be used the thick gaskets and radiating fins between the intake manifold and the carburetor flange if desired.

Figure 1 shows a carburetor bolted to an inlet manifold having an exhaust jacket around the inlet manifold.

Figure 2 shows a cross-sectional plan view looking down on plane 2-2 of Figure 1.

Figure 3 shows an alternative form of gasket.

Figure 4 shows a plan view taken on plane 4-4 of Figure 3.

Figure 5 shows in elevation a view taken on plane 5-5 of Figure 2.

In the figures A is the mixture entrance to the inlet manifold, B is the exhaust jacket surrounding it, S is the flange of the inlet manifold, C and D are the two studs (mounted in the flange S) which bolt the lower half E of a carburetor F to the flange S of the mixture entrance A of the inlet manifold. G1, G2 and G3 are three gaskets interposed between the lower half E and the air entrance A of the carburetor. Two L shaped stampings H and J engage with a shoulder K on the end of the lower half E of the carburetor F. Radiating discs L and M are used as spacers between the gaskets G1 and G2 and between the gaskets G2 and G3.

In order to keep the radiating discs L and M in place dowel pins N and O are provided. It will be noticed that the stampings H and J will transmit the minimum possible amount of heat and that the studs C and D are exposed as are the radiating discs L and M to the air which is blown over top of manifold from air cooling fan in the car.

In Figure 3 ears P are shown punched out of

the spacers L and M and engage with openings in the gaskets G1, G2 and G3.

In Figures 4 and 5 the L shaped clamp H is shown with a projection Q which engages with a hole R drilled into the flange S of the exhaust heated inlet manifold entrance A—B.

What I claim is:

1. Means for clamping a carburetor to the exhaust heated inlet manifold of an internal combustion engine comprising a plurality of studs projecting from said manifold, a flange on the end of the carburetor, L shaped clamps engaging with the flange, with said manifold and with said studs, a plurality of heat insulating gaskets between said flange and said manifold, heat radiating means interposed between said gaskets for the purpose described.

2. Means for clamping a carburetor to the exhaust heated inlet manifold of an internal combustion engine comprising a plurality of studs projecting from said manifold, a flange on the end of the carburetor, L shaped clamps engaging with the flange, with said manifold and with said studs, a heat insulating gasket between said

flange and said manifold, heat radiating means associated with said gasket for the purpose described.

3. Clamping means for connecting a carburetor to a heated inlet manifold of an internal combustion engine comprising a relatively narrow flange on the end of the carburetor, a plurality of L shaped clamps engaging with said flange and with said inlet manifold, studs projecting from said inlet manifold, said studs being adapted to lock said clamps to said flange and to said inlet manifold.

4. Clamping means for connecting a carburetor to a heated inlet manifold of an internal combustion engine comprising a relatively narrow flange on the end of the carburetor, a flange on the entrance to the inlet manifold, studs projecting therefrom, a plurality of L shaped clamps, means for locating the clamps on said flange, means associated with the studs for locking the clamps to the carburetor and to the flange of the inlet manifold.

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