April 1, 1958 A. H. WINKLER 2,828,952

CARBURETOR

Filed April 11, 1952 2 Sheets-Sheet 1

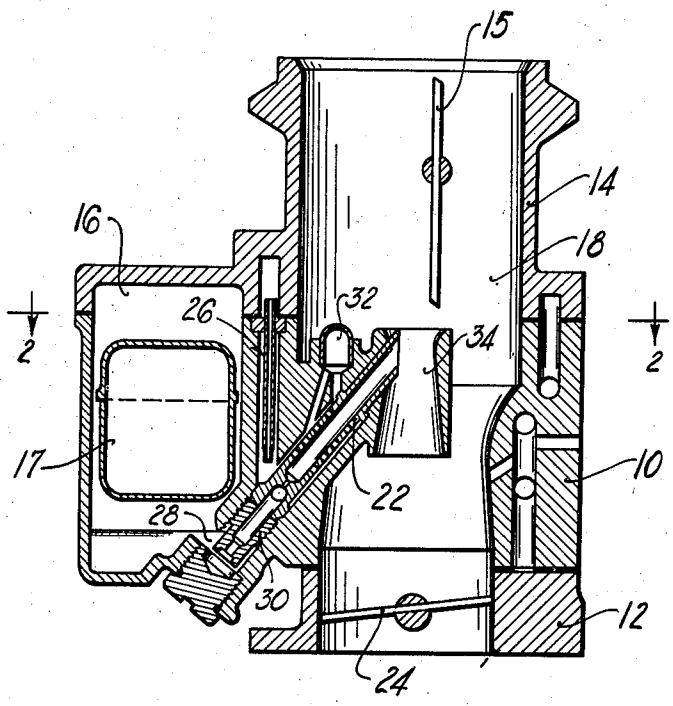


Fig. 1

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Filed April 11, 1952 2 Sheets-Sheet 2

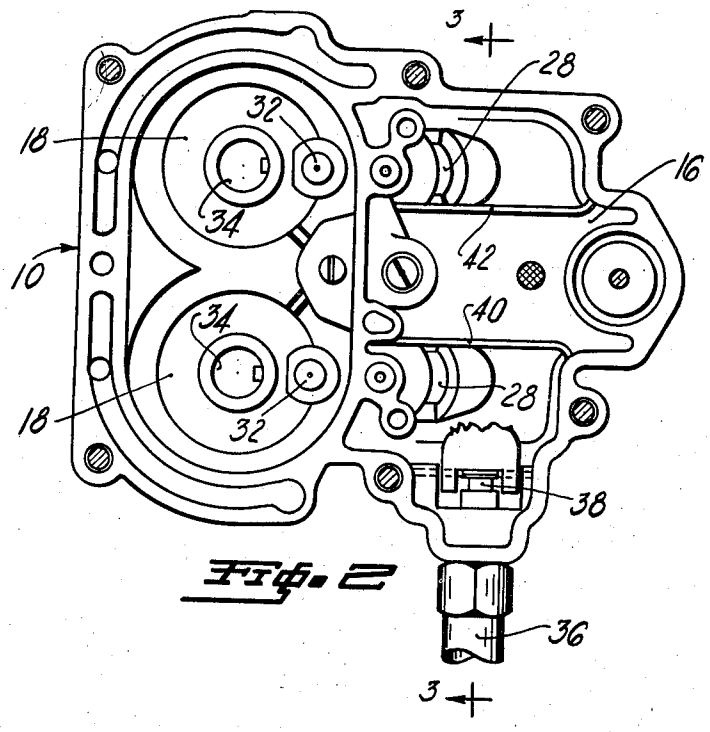


Fig. 2

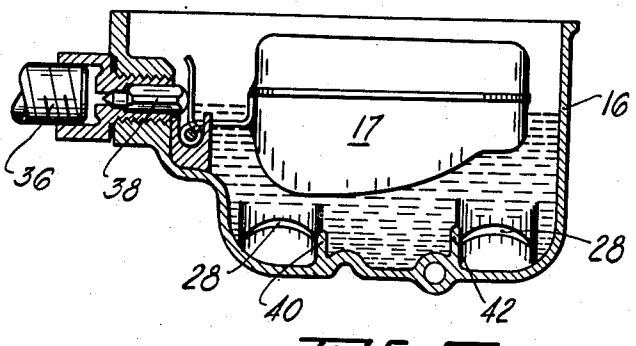


Fig. 3

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CARBURETOR

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Application April 11, 1952, Serial No. 281,700

2 Claims. (Cl. 261—23)

The present invention relates to carburetors and more particularly to float type carburetors for use on automotive engines.

One of the principal objects of the present invention is to provide a special fuel bowl construction for a float type carburetor, which will provide the main metering and idle systems with the required amount of fuel under all operating conditions.

Another object of the invention is to provide in the aforesaid type of automotive carburetors a means which will supply adequate fuel for the main and idling system while the vehicle is turning curves rapidly or making rapid starts or stops.

Further objects and advantages of the invention will become apparent from the following description and accompanying drawings wherein:

Figure 1 is a vertical cross-section of a carburetor embodying my invention.

Figure 2 is a top-plan view of the main body of a float type carburetor, corresponding to a section taken on line 2—2 of Figure 1.

Figure 3 is a section of the float chamber of the carburetor shown in Figure 2 taken on line 3—3.

Referring more specifically to the drawings wherein a double barrel carburetor is shown, numeral **10** designates a main body, **12** a throttle body, **14** an air horn, **15** a choke valve, **16** a fuel bowl having a float **17** mounted therein, and **18** a pair of induction passages in which are disposed main discharge jets **22**, and throttle valves **24**. Idle systems, a part of one being shown at numeral **26**, an accelerating pump and a power enrichment jet will normally be included in the present carburetor which, except for my novel improvement, may be considered as a conventional automotive carburetor. The carburetor is mounted on the engine so that the side of the carburetor on which the fuel bowl is mounted faces the front of the vehicle.

The main discharge jets are inclined upwardly from a point adjacent the bottom of the fuel bowl and are connected with the bowl by crescent-shaped slots **28** at the bottom of each jet. Fuel passes through slots **28** upwardly through the main metering orifices **30** and, after mixing with air from a bleed **32**, is discharged into the throat of venturi **34**. The fuel is supplied to the fuel bowl through a conduit **36** and a valve **38** which is controlled in accordance with the fuel level in the bowl by float **17**.

It is well known that when an automobile is turning a curve the fuel in the fuel bowl of the carburetor is thrown to the side corresponding to the outside of the curve. If the turn is made at high speeds, the fuel in the bowl on the inside of the curve may be seriously diminished or even completely removed so that the inlet to the main fuel discharge jet will become partially or totally uncovered and prevented from delivering the fuel required for normal engine operation. This condition is more pronounced in a double barrel carburetor, such as that shown in the drawing, in that the inlets to the main discharge jets are located in each end of the fuel bowl. In the present carburetor this condition is avoided by placing dams **40** and **42** across the bottom of the fuel bowl adjacent the inside edge of the crescent-shaped fuel inlet slots **28**. These dams extend across the bowl in the direction substantially parallel with the forward movement of the vehicle and upwardly from the bottom of the bowl to a point above the lower edge of slots **28**. As the automobile is making the turn the fuel in the bottom of the bowl on the inside of the curve is thrown against the corresponding dam and is retained along the side thereof, forming a pocket of fuel available for the full operation of the inside jet while the turn is being completed. In the present construction the crescent-shaped slots extend downwardly along the side of the jets adjacent the dams so that as the fuel is thrown against the dams it will flow upwardly along the side thereof and readily flow into the slots. This arrangement of the dams **40** and **42** in relation to slots **28** provides sufficient fuel for both main discharge jets under all normal operating conditions.

The dams must be high enough to cause the fuel to flow into the slots, though they may extend considerably higher, their height being limited only by the space required for the operation of the float. Various changes may be made in the design of the dams and slots and in their relationship to one another without departing from the scope of the invention.

I claim:

1. In a float type carburetor for a vehicle, a fuel bowl, a plurality of discharge jets, crescent-shaped ports connecting said jets with the lower portion of said bowl, and a dam across the bottom of said bowl adjacent the inside edge of each of said ports and extending in substantially the direction of the forward movement of the vehicle, said dams extending substantially above the bottom of said ports.

2. In a float type carburetor for a vehicle, a fuel bowl, a plurality of discharge jets, ports connecting said jets with the lower portion of said bowl, and a dam across the bottom of said bowl adjacent the inside edge of each of said ports and extending in substantially the direction of the forward movement of the vehicle, said dams extending substantially above the bottom of said ports.

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