

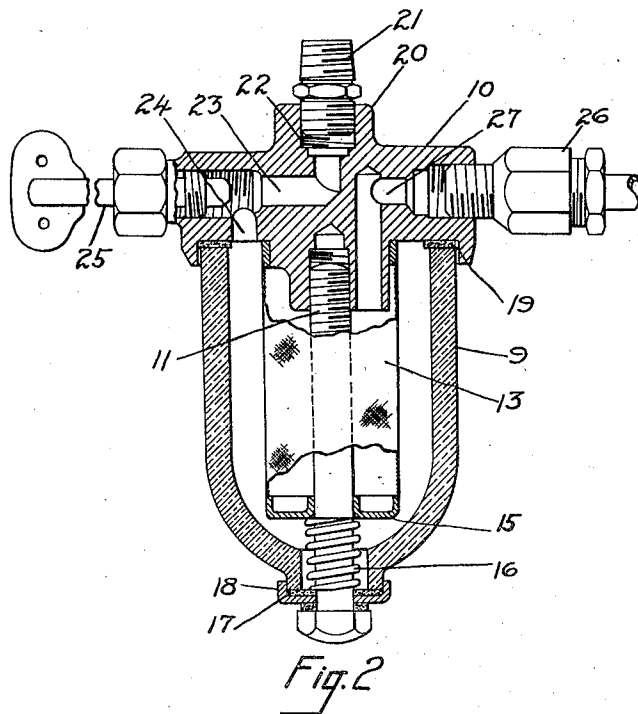
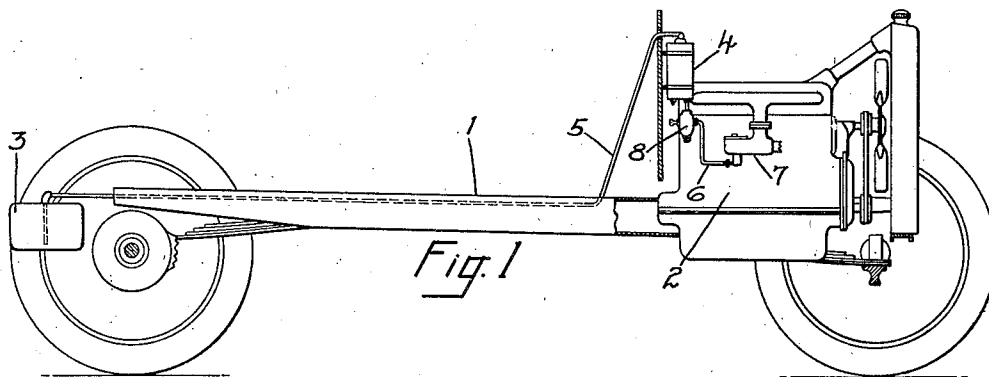
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J. W. JONES

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GASOLINE FILTER

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UNITED STATES PATENT OFFICE.

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GASOLINE FILTER.

Application filed October 7, 1925. Serial No. 60,992.

This invention relates to a gasoline filter. It is intended more particularly for use on motor vehicles, although its utility in other relations to filter impurities from liquids is altogether possible.

It is well known that fuel as supplied to gas engine tanks is to some extent associated with impurities. There is usually present some water and some solid matter. These impurities are carried along through the fuel conduit and to the carburetor. In the carburetor the solid particles are likely to interfere with the proper action of the needle valve and the water dilution prevents the proper mixture being delivered to the engine cylinder. Any of the solid particles which pass through the carburetor and enter the cylinder are, of course, likely to damage the cylinder walls.

The object of this invention is to provide a filter to separate out these impurities and to so locate the filter that it may best perform its function.

The invention will be understood by reading of this specification associated with the accompanying drawings.

In the drawings Figure 1 is a fragmentary side elevation of a motor vehicle chassis, showing particularly the gasoline line and the filter in its position relative to the other parts.

Figure 2 is a vertical sectional view of the filter.

Referring to the drawings, numeral 1 represents the side frame bar of the vehicle and 2 is the motor. The fuel line includes the tank 3, and supplemental or vacuum tank 4, tanks 3 and 4 being connected by pipe 5, and a conduit 6, connecting the vacuum tank and the carburetor 7.

At the bottom of the vacuum tank between that tank and the conduit 6, is located a filter 8, which is the subject of this application. This filter comprises a body of cup shape 9, and a cap 10. The cup 9 is preferably of glass to afford visible indication of the condition of the fuel. The cap 10, is a generally circular disc having an upward screw threaded boss 20, and a similar downwardly directed projection having a threaded opening to receive the bolt 11, which passes up through an opening in the lower end of the cup 9, and holds the parts 9 and 10 in assembled relation. A retainer 18 and packing 17, are located above the head of the bolt and around

the opening at the bottom of the cup, and a packing 19 is placed between the upper edge of the cup and the cap. These parts secure liquid tight joints. Within the cup is a fine mesh tubular screen, held against the cap by a spring 16 in abutment with an imperforate disc 15, at the bottom of the screen and with the bottom closure of the cup.

Within the boss 20 is screwed a nipple 21, which serves to connect the filter with the bottom of the vacuum tank and passage 22 extends downwardly from between the nipple, thence laterally as at 23, and again downwardly at 24 to an opening in the cap to that part of the cup between its wall 9 and the screen 13. This inlet passage is controlled by a valve 25, which threads into the passage and serves at times to stop the flow of fuel from the vacuum tank to the cup. A pipe connection 26, for attachment to pipe 6 is screw threaded into the side of the cap opposite the valve. This opening communicates by means of a passage 27 with a part of the cup within the screen.

The operation will be readily understood. The fuel flows from the tank 4 through passageways 22, 23 and 24 into the annular space within the cup 9. It is there freed from solid matter by the screen 13 and passes up through passage 27 to pipe 6 and to the carburetor. Water, oil or other liquids heavier than the fuel settle to the bottom of the cup. At frequent intervals the valve 25 may be closed, bolt 11 removed and parts disassembled for cleaning.

The location of the filter between the vacuum tank and the carburetor is considered important for the reason that it serves to filter out any sediment that may have collected at the bottom of the vacuum tank. This location is therefore deemed better than a known arrangement, whereby a filter is placed between the main tank and the vacuum tank.

What I claim and desire to protect by Letters Patent is:

1. In a liquid strainer, a cup-shaped body open at its upper end, a cap closing said upper end, said cap having a substantially concentric axial extension with a threaded opening, a tubular strainer having an open end engaging the lower side of said cap and extending within said body, a bolt passing through the base of the body through the strainer and threaded into said stem to hold

the body and cap in assembled relation, a spring surrounding said bolt and engaging the other end of said strainer to hold it against said cap and fluid passages within
5 said cap.

2. In a liquid strainer, an open cup-shaped body, a closure cap therefor, inlet and outlet passages in said cap, a tubular strainer within the body and having an open end engaging
10 the lower side of the cap, a solid bolt passing through the base of the body through an end of the strainer and threaded into the cap

to secure the body and cap in assembled relation, said cap having axial passages eccentric thereto and affording communication to
15 the body, one within and the other without the strainer, said passages also communicating one with the cap inlet and the other with the cap outlet, and resilient means seated
20 against the other end of the strainer to hold it in engaged relation with the said cap.

In testimony whereof I affix my signature.

JOSEPH W. JONES.