M. S. ROBY.

VALVE.

APPLICATION FILED FEB. 21, 1920.

1,345,248.

Patented June 29, 1920.

2 SHEETS—SHEET 1.

Fig. 1.

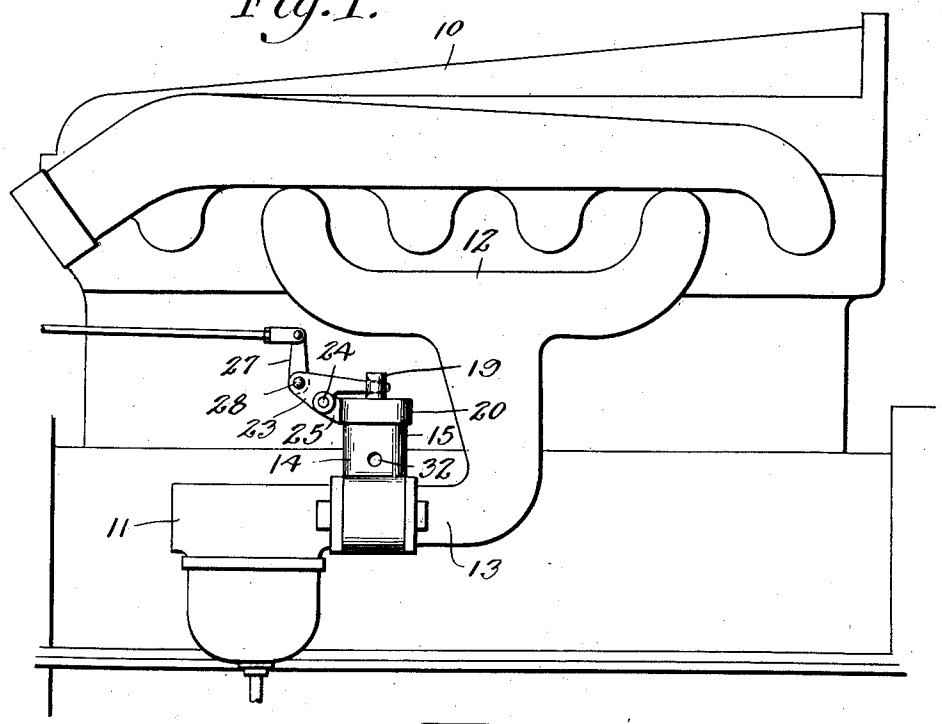
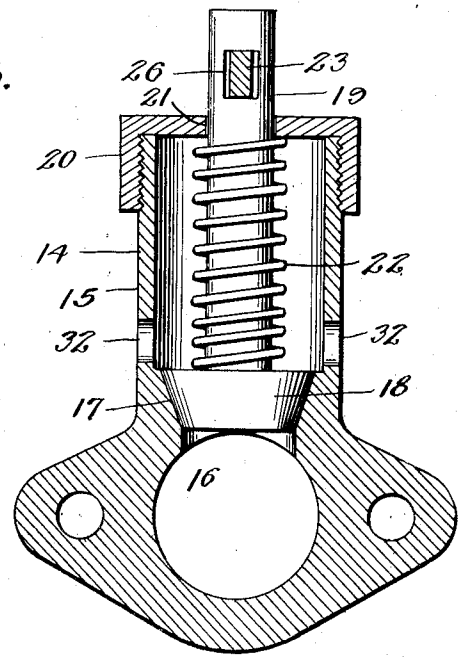


Fig. 3.



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WITNESS:

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2 SHEETS—SHEET 2.

Fig. 2.

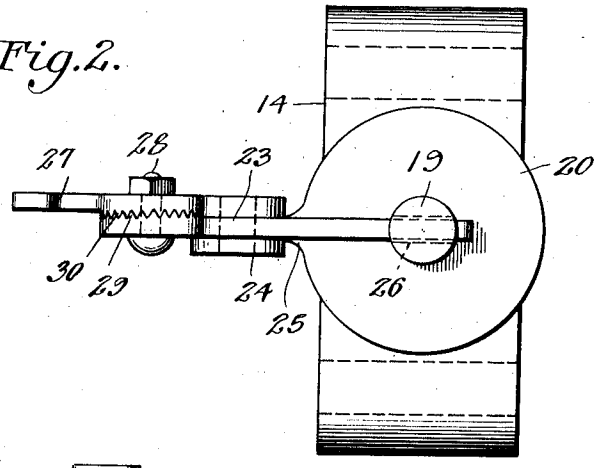


Fig. 4.

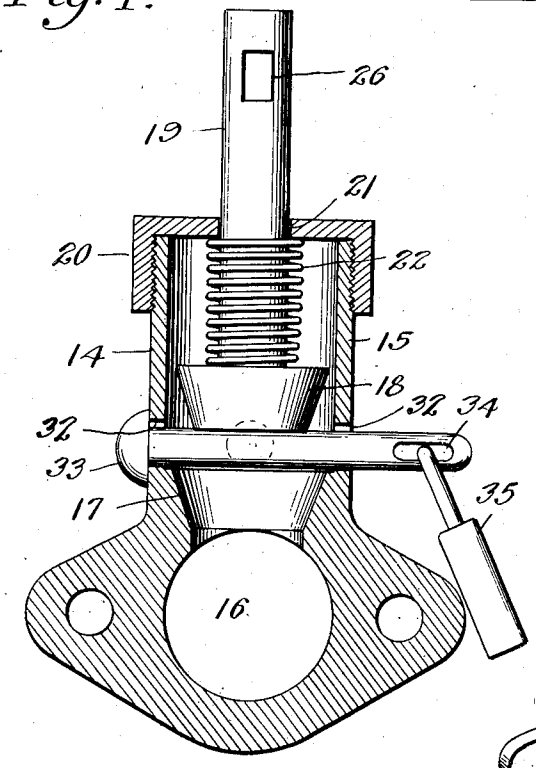
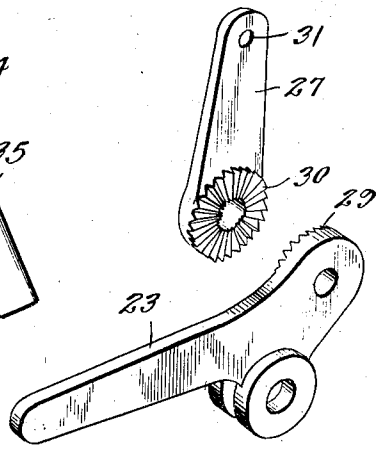


Fig. 5.



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WITNESS:

UNITED STATES PATENT OFFICE.

MARION S. ROBY, OF KENTON, OHIO.

VALVE.

1,345,248. Specification of Letters Patent. Patented June 29, 1920.

Application filed February 21, 1920. Serial No. 360,453.

To all whom it may concern:

Be it known that I, MARION S. ROBY, a citizen of the United States, residing at Kenton, in the county of Hardin and State of Ohio, have invented new and useful Improvements in Valves, of which the following is a specification.

This invention relates broadly to improvements in hydrocarbon engines and specifically to a valve for increasing the supply of air to the intake manifold and is designed for use in connection with motor vehicles.

An object of the invention is the provision of a valve, which is located in the fuel supply pipe between the carbureter and the intake manifold and which may be manually opened to prevent the engine from sucking in fuel through the carbureter when the vehicle is descending a grade, resulting in saving fuel and cooling the engine through the air drawn into the cylinders. It may be also partly opened in ascending a grade to increase the quantity of air as the amount of gasolene is increased.

Another object is the provision of a valve of this character, which may be locked in open position to cut off the fuel supply and prevent the unauthorized operation of the vehicle.

With the above and other objects in view, the invention includes the following novel features and details of construction to be hereinafter more fully described, illustrated in the accompanying drawings, and pointed out in the clams hereunto appended.

In the drawings.

Figure 1 is a fragmentary view showing a sufficient portion of an automobile to illustrate the application of the valve.

Fig. 2 is an enlarged plan view of the valve.

Fig. 3 is an enlarged sectional view through the valve showing the latter in closed position.

Fig. 4 is a view similar to Fig. 3 but showing the valve open and the manner of use as a lock.

Fig. 5 is a detail perspective view of the sectional operating arm, the parts being shown in separated relation.

Referring more specifically to the drawings, wherein like characters of reference denote corresponding parts, the reference character 10 indicates a portion of an engine, 11 the carbureter, 12 the intake manifold of the engine and 13 the fuel supply pipe leading from the carbureter to the intake manifold.

The invention which is designated in its entirety at 14 comprises a valve casing 15, which is preferably cylindrical in shape and is provided at its bottom with a passage 16 which is in communication with the supply pipe 13 and through which the fuel passes from the carbureter to the intake manifold 12. Located above the passage 16 within the casing is a seat 17 for the reception of a preferably circular valve 18, which is provided with a valve stem 19, which extends through the top 20 of the casing 15. This top is threadedly secured to the casing 15 and is provided with an opening 21 for the passage of the valve stem. Located upon the stem 19 between the top 20 of the casing and the valve 18 is a coil spring 22, which acts to normally seat the valve.

For the purpose of operating the valve 18, there is provided a lever arm 23, which is pivotally mounted as shown at 24 upon an ear 25 carried by the top 20. One end of this arm extends within a slot 26 formed in the stem 19 and the opposite end has removably and adjustably secured thereto an extension 27, a bolt 28 being provided for this purpose. To hold the extension 27 in proper adjusted position, the end of the lever arm 23 is toothed or serrated as shown at 29, while the adjacent end of the extension 27 is likewise toothed or serrated as shown at 30 and when these teeth are engaged, accidental relative movement of the arm and extension will be prevented.

The outer end of the extension 27 is provided with an opening 31, to which may be connected one end of an operating rod which extends to within convenient reach of the driver of the vehicle. Any suitable means may be employed for holding the valve in open position. Located within the casing 15 and positioned above the valve seat 17 are oppositely arranged openings 32, for the admission of air.

It will be seen from the foregoing description and accompanying drawings, that when the valve is opened the operation of the engine will cause air to be drawn in through the openings 32 and relieve the suction on the carbureter. It will prevent the passage of fuel to the engine cylinders and the air drawn in through these openings will result

in quickly cooling the cylinders when they are overheated. By adjusting the valve only a portion of the openings 32 may be uncovered so that the quantity of air passing therethrough will be reduced, permitting fuel to be drawn from the carbureter and mixed with the air passing through the opening 32. This is useful in ascending grades where a greater quantity of gasolene is fed to the engine and in order to insure a proper mixture and increase in the amount of air as desired.

For the purpose of providing a lock, there is provided a headed pin 33, which is designed to pass through the openings 32 after the valve has raised from its seat and to prevent the withdrawal of this pin, the latter is slotted as shown at 34 for the reception of the shackle of a lock 35. This will prevent seating of the valve and the passage of fuel to the engine.

The invention is susceptible of various changes in its form, proportions and minor details of construction, and the right is herein reserved to make such changes as properly fall within the scope of the appended claims.

Having described the invention what is claimed is:—

1. The combination with a hydrocarbon engine having a carbureter, of a valve located in communication with the fuel supply between the engine and the carbureter, said valve including a casing having oppositely located air inlets and a locking bolt adapted to be secured transversely of the casing in said inlets and between the valve and valve seat to hold the valve in open position and prevent suction of fuel into the engine cylinders.

2. The combination with a hydrocarbon engine having a carbureter of a valve casing in communication with the fuel supply between the engine and carbureter, a valve plug within said casing and means including a locking bolt adapted to be positioned in the path of movement of the valve plug and removable from the valve casing on unlocking the valve, whereby said valve may be locked in open position to prevent suction of fuel into the engine cylinders.

In testimony whereof I affix my signature.

MARION S. ROBY.