Sept. 18, 1923. 1,468,524

L. G. STRANSKY

VAPORIZING ATTACHMENT

Filed March 10, 1923 2 Sheets-Sheet 1

Fig. 1.

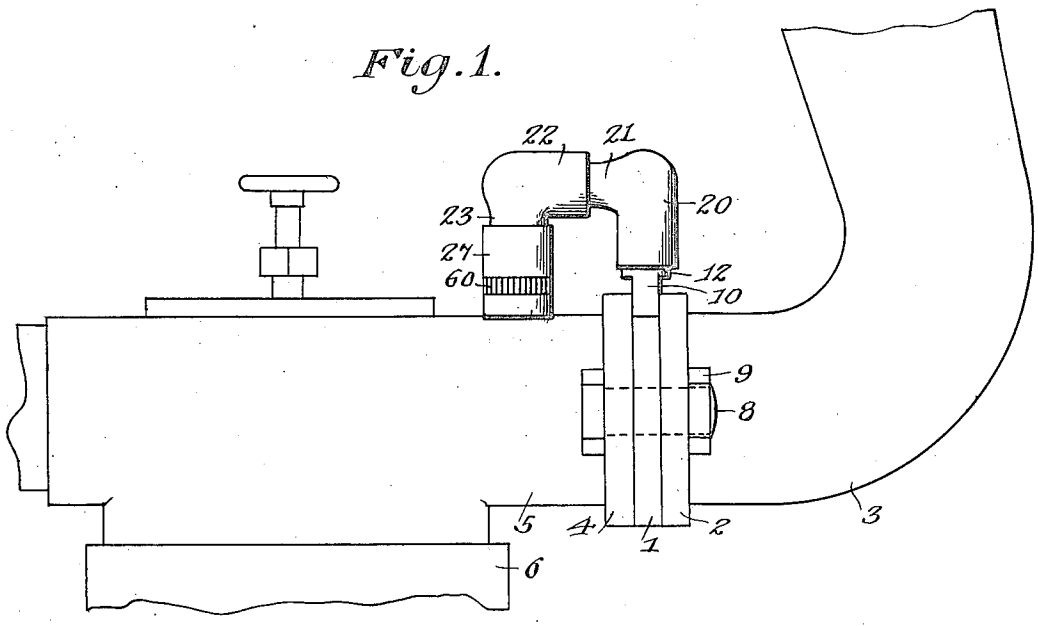


Fig. 2.

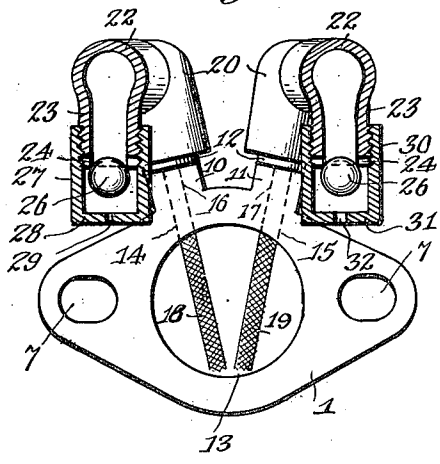
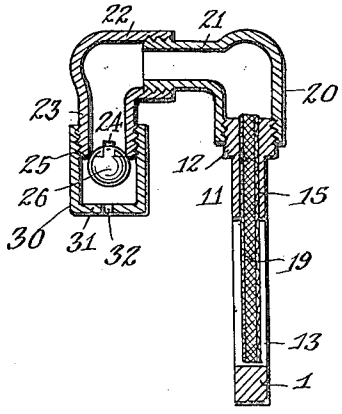


Fig. 3.



INVENTOR.

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BY

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Fig. 4.

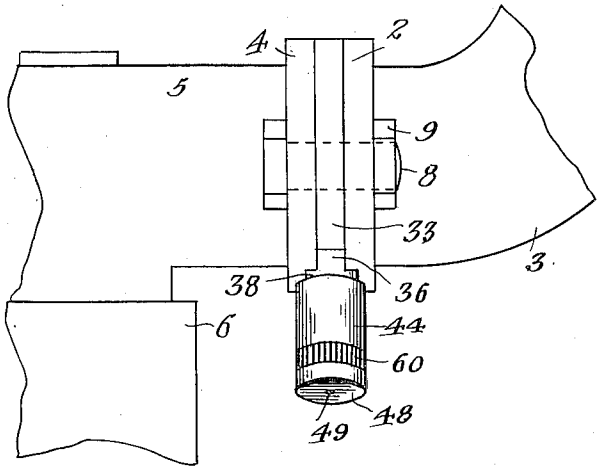


Fig. 5.

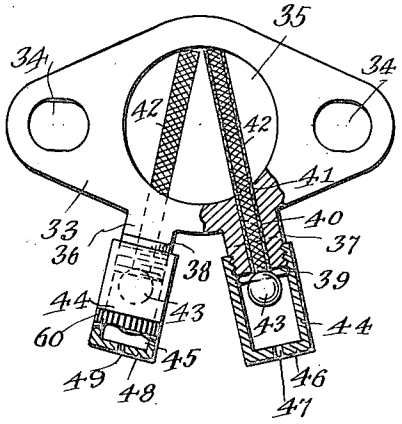


Fig. 6.

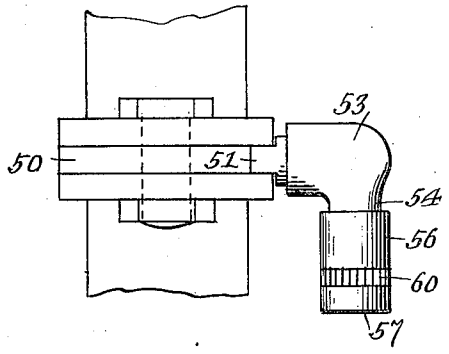


Fig. 7.

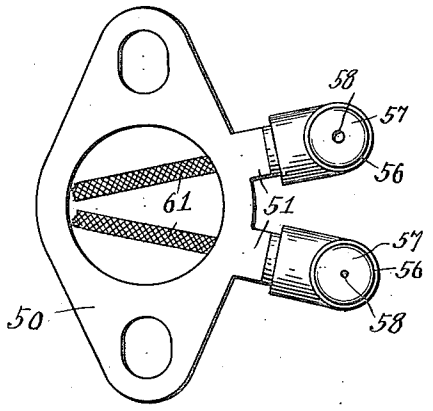
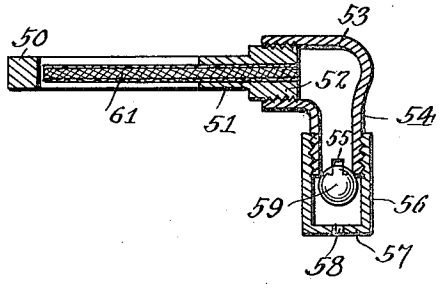


Fig. 8.



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Patented Sept. 18, 1923. 1,468,524

UNITED STATES PATENT OFFICE.

LEO G. STRANSKY, OF PUKWANA, SOUTH DAKOTA.

VAPORIZING ATTACHMENT.

Application filed March 10, 1923. Serial No. 624,303.

To all whom it may concern:

Be it known that I, LEO G. STRANSKY, a citizen of the United States, residing at Pukwana, in the county of Brule and State of South Dakota, have invented certain new and useful Improvements in Vaporizing Attachments, of which the following is a specification.

This invention relates to a vaporizing attachment for use in connection with motor vehicles, and the invention has for its object to provide, in a manner as hereinafter set forth, a vaporizing attachment opening into the intake manifold of the engine to provide for an additional supply of atmospheric air for the purpose of thoroughly vaporizing the gasoline supplied from the carbureter into the intake manifold of the engine to produce an unusually rich and powerful charge, whereby the efficiency of the engine will be increased without increasing the cost of operation.

Further objects of the invention are to provide a vaporizing attachment which is simple in its construction and arrangement, strong, durable, compact, thoroughly efficient in its use, readily installed and comparatively inexpensive.

With the foregoing and other objects in view, the invention consists of the novel construction, combination and arrangement of parts, as hereinafter more specifically described and illustrated in the accompanying drawings wherein is shown an embodiment of the invention, but it is to be understood that changes, variations and modifications can be resorted to which come within the scope of the claims hereunto appended.

In the drawings wherein like reference characters denote corresponding parts throughout the several views:—

Figure 1 is a side elevation of an intake manifold, showing the adaptation therewith of a vaporizing attachment in accordance with this invention.

Figure 2 is a sectional elevation of the attachment.

Figure 3 is a vertical sectional view thereof.

Figure 4 is a side elevation of an intake manifold, showing the adaptation therewith of a modified form of vaporizing attachment in accordance with this invention.

Figure 5 is a sectional elevation of the modified form shown in Figure 4.

Figure 6 is a top plan view of an intake manifold, showing the adaptation therewith of another modified form of vaporizing attachment in accordance with this invention.

Figure 7 is an elevation of the modified form shown in Figure 6.

Figure 8 is a cross sectional view of the form shown in Figure 7.

Referring to Figures 1, 2 and 3 of the drawings, the attachment consists of a body portion in the form of a plate 1, of the desired thickness, and which conforms in contour to the flanged end 2 of an intake manifold 3, and also to the flanged end 4 of a pipe 5 or outlet leading from a carbureter 6. The body portion or plate 1, is formed with a plurality of openings 7, for the passage of bolts 8, which carry nuts 9, whereby the body portion 1 is fixedly secured between the flanged ends 2 and 4 of the intake manifold 3 and pipe 5, respectively.

The body portion 1, has projecting upwardly therefrom, a pair of inclined extensions 10 and 11, and which are disposed in opposite directions with respect to each other, and the upper end of each of said extensions terminates in an enlarged cylindrical peripherally threaded terminal 12. With the exception of the cylindrical terminal 12, the remaining portion of each extension is flat and is flush with the body portion or plate 1.

The body portion or plate 1 is formed with a centrally disposed opening 13, which registers with the openings formed by the intake manifold 3 and that formed by the pipe 5, and preferably the wall of the opening 13 is a continuation of the inner face of the pipe 5 and the inner face of the intake manifold 3.

The body portion or plate 1, is formed with a pair of oppositely extending passages 14, 15, and the former registers with a passage 16 formed in the extension 10, and the latter registers with a passage 17, formed in the extension 11.

Mounted in the registering passages 14 and 16 and extending into the opening 13, is a foraminous pipe 18, and mounted in the registering passages 15 and 17 and extending into the opening 13, is a foraminous pipe 19. The pipes 18 and 19 are disposed at an inclination and extend in opposite directions with respect to each other and have

their inner ends positioned away from the wall of the opening 13.

Threadingly engaging with each of the cylindrical enlargements 12, is a hollow elbow shaped coupling comprising a vertical leg 20, and a horizontal leg 21. The leg 20 is of greater diameter than the leg 21, and the leg 21, at its free end, is provided with peripheral threads with which engage the horizontal leg 22, of a hollow angle shaped hanger. The vertical leg of the hanger is indicated at 23, and is of less diameter than the leg 22. The free end of the leg 23 is provided with oppositely disposed notches 24, and the edge 25 of the leg 23 of the hanger constitutes a seat for a globular valve 26, which when seated, partially closes the leg 23, or in other words, restricts the passage of air through the hanger when the valve 26 is seated against the leg, on the suction stroke of the engine.

The leg 23, of each of the hangers, is provided with peripheral threads, and detachably engaging with the peripheral threads of one of the hangers is a cylindrical casing 27, closed at its bottom as at 28, and having its bottom formed centrally with an orifice 29, which constitutes an inlet. Detachably engaging with the peripheral threads of the other hanger is a cylindrical casing 30, having its bottom closed, as at 31, and further provided centrally of its bottom with an orifice 32, which constitutes an inlet and which is of greater diameter than the orifice 29.

Referring to Figures 4 and 5 of the drawings, the vaporizing attachment includes a body portion 33, formed of a plate conforming in contour to the flanges 2 and 4, and provided with openings 34 for the passage of the bolts 8, and furthermore provided with a centrally disposed opening 35 which registers with the openings formed by the intake 3 and pipe 5. The body portion 33 is formed with a pair of inclined extensions 36, 37, which are disposed in opposite directions with respect to each other, and depending from the bottom edge of the body portion 33, and each of the extensions 31 terminates in an enlarged cylindrical outer end 38, which is peripherally threaded and formed with a transversely extending groove 39 which intersects a passage 40, communicating with a passage 41, formed in the body portion 33, and which communicates with the opening 35. Foraminous pipes 42 are provided, and each is arranged in the registering passages 40 and 41. Associated with the outer end of the cylindircal portion of each extension is a globular valve 43, which during the suction stroke of the engine, seats against the cylindrical portion 38 and restricts the supply of air through the registering passages 40, 41.

Detachably engaging with each cylindrical portion 38, is a cylindrical casing. One of the casings is indicated at 44, and the other at 45. The casing 44 has its bottom closed, as at 46, and said bottom 46 has a central orifice 47, which constitutes an inlet. The casing 45 has its bottom closed, as at 48, and with said bottom 48 formed with a central orifice 49 constituting an inlet and of less diameter than the orifice 47.

Referring to Figures 6, 7 and 8 of the drawings, the body portion of the vaporizing attachment is indicated at 50, and said body portion is constructed similar to the body portions 33 and 1. In the manner of using the device shown in Figure 6, the extensions 51, which are constructed similar to the extensions 36, are disposed to extend laterally with respect to the body portion 50. The enlarged cylindrical portion of each extension 51 is indicated at 52, and detachably engaging therewith is an angle shaped hanger consisting of a horizontally disposed leg 53 and a vertically extending leg 54. The leg 53 is of greater diameter than the leg 54. The free end of the leg 54 is provided with oppositely disposed notches 55, and detachably engaging with the leg 54 is a cylindrical casing 56 having its bottom closed, as at 57, and with said bottom 57 provided with an orifice 58. The orifice 58 in the bottom of each casing constitutes an inlet, and the orifice 58 in one casing is of greater diameter than the orifice 58 in the other casing. Arranged within the casing 56 and associating with the leg 54, is a globular valve 59, which during the suction stroke of the engine seats against the leg 54, and restricts the supply of air through said hanger.

The valves 26, 43 and 59, are gravity movable, and act to close the inlets in the casings, during the power stroke of the engine.

Each of the casings is knurled, as at 60, to facilitate the handling thereof.

Mounted in the extension 51, are foraminous pipes 61, which extend into the body portion 50, and the said foraminous pipes 18, 19, 42 and 61, are employed for breaking up the air as it is discharged into the intake manifold to assist in the vaporizing of the gasoline supplied from the carbureter.

The device is not only used for supplying atmospheric air to the intake of the manifold for the purpose of vaporizing the gasoline to produce an unusually rich and powerful charge, but also is adapted for the removal of the carbon from within the engine, and in this connection a cup is positioned under the cylindrical casing, and after the engine has warmed up, open the throttle about half way and then pour water into the cup. The water will be sucked into the engine, form steam in the cylinder and which loosens and removes the carbon, if this operation is repeated once a day for three days while the engine is warm.

From the foregoing description taken in connection with the accompanying drawings, a vaporizing attachment is set up, whereby atmospheric air is supplied to the intake manifold of the engine for the purpose set forth, during the suction stroke of the engine, and although the preferred embodiment of the invention is as referred to, yet it is to be understood that changes in the details of construction can be had without departing from the scope of the invention as claimed.

What I claim is:—

1. A vaporizing attachment comprising a body portion having an opening adapted to communicate with the intake manifold of an engine, said body portion further provided with air conducting passages leading to said opening, extensions on said body portion provided with passages registering with the passages in the body portion, means supported from said extension for restricting the supply of air through said passages on the suction stroke of the engine, the passages in said body portion disposed at an inclination and extending in opposite directions with respect to each other, the passages in said extensions extending in the direction of the passages in said body portion, and foraminous pipes mounted in said registering passages and extending into the opening of said body portion.

2. A vaporizing attachment comprising a body portion provided with an opening adapted to communicate with the intake manifold of an engine and further provided with air conducting passages communicating with said opening, extensions projecting from said body portion and provided with passages registering with the passages in the body portion, a hollow angle shaped element connected with each of said extensions and having one end constituting a valve seat, that end constituting a valve seat being provided with oppositely disposed notches, a cylindrical casing connected with the notched end of said element and formed with an orifice constituting an inlet, and gravity movable globular valves mounted in each of said casings and cooperating with the notched end of said elements for restricting the supply of air therethrough on the suction stroke of an engine.

3. A vaporizing attachment comprising a body portion provided with an opening adapted to communicate with the intake manifold of an engine and further provided with air conducting passages communicating with said opening, extensions projecting from said body portion and provided with passages registering with the passages in the body portion, a hollow angle shaped element connected with each of said extensions and having one end constituting a valve seat, that end constituting a valve seat being provided with oppositely disposed notches, a cylindrical casing connected with the notched end of said element and formed with an orifice constituting an inlet, and gravity movable globular valves mounted in each of said casings and cooperating with the notched end of said elements for restricting the supply of air therethrough on the suction stroke of an engine, the inlet in one of said casings being of greater diameter than the inlet in the other of said casings.

4. A vaporizing attachment comprising a body portion provided with an opening adapted to communicate with the intake manifold of an engine and further provided with air conducting passages communicating with said opening, extensions projecting from said body portion and provided with passages registering with the passages in the body portion, a hollow angle shaped element connected with each of said extensions and having one end constituting a valve seat, that end constituting a valve seat being provided with oppositely disposed notches, a cylindrical casing connected with the notched end of said element and formed with an orifice constituting an inlet, and gravity movable globular valves mounted in each of said casings and cooperating with the notched end of said elements for restricting the supply of air therethrough on the suction stroke of an engine, the inlet in one of said casings being of greater diameter than the inlet in the other of said casings, said passages disposed at opposite inclinations with respect to each other, and foraminous pipes mounted in said passages and extending into the opening of said body portion.

5. A vaporizing attachment comprising a body portion adapted to be secured to the intake manifold of an engine and provided with an opening registering with the manifold, said body portion further provided with air conducting passages communicating with said opening, a pair of extensions projecting from the body portion and provided with passages registering with the passages in the body portion, an angle shaped coupling detachably connected with each extension, an angle shaped hanger detachably connected with each coupling, said hanger having one of its legs provided with diametrically opposed notches, a cylindrical casing detachably connected with each hanger and provided with an inlet, and a globular value arranged within said casing and cooperating with said hanger for restricting the supply of air through the hanger on the suction stroke of an engine.

6. A vaporizing attachment comprising a body portion adapted to be secured to the intake manifold of an engine and provided with an opening registering with the manifold, said body portion further provided

with air conducting passages communicating with said opening, a pair of extensions projecting from the body portion and provided with passages registering with the passages in the body portion, an angle shaped coupling detachably connected with each extension, an angle shaped hanger detachably connected with each coupling, said hanger having one of its legs provided with diametrically opposed notches, a cylindrical casing detachably connected with each hanger and provided with an inlet, and a globular valve arranged within said casing and cooperating with said hanger for restricting the supply of air through the hanger on the suction stroke of an engine, the inlet of one of said casings being of greater diameter than the inlet of the other of said casings.

7. A vaporizing attachment comprising a body portion adapted to be secured to the intake manifold of an engine and provided with an opening registering with the manifold, said body portion further provided with air conducting passages communicating with said opening, a pair of extensions projecting from the body portion and provided with passages registering with the passages in the body portion, an angle shaped coupling detachably connected with each extension, an angle shaped hanger detachably connected with each coupling, said hanger having one of its legs provided with diametrically opposed notches, a cylindrical casing detachably connected with each hanger and provided with an inlet, and a globular valve arranged within said casing and cooperating with said hanger for restricting the supply of air through the hanger on the suction stroke of an engine, the inner diameter of one of the legs of said coupling being of greater diameter than the other leg thereof, and the inner diameter of one of the legs of each hanger being greater than the inner diameter of the other of said hangers.

8. A vaporizing attachment comprising a body portion adapted to be connected to the intake manifold of an engine and provided with an opening registering with the manifold, said body portion further having a pair of passages communicating with said opening, extensions projecting from said body portion and provided with passages registering with the passages in the body portion, the passages in the extensions adapted to communicate with the atmosphere for supplying air to the intake manifold, a pair of casings each provided with an inlet, a globular valve mounted in each of said casings, an angle shaped means for connecting the casings with the extensions, and provided with a restricted portion, said valves cooperating with said means for partially closing the same on the suction stroke of the engine.

9. A vaporizing attachment comprising a body portion adapted to be connected to the intake manifold of an engine and provided with an opening registering with the manifold, said body portion further having a pair of passages communicating with said opening, extensions projecting from said body portion and provided with passages registering with the passages in the body portion, the passages in the extensions adapted to communicate with the atmosphere for supplying air to the intake manifold, a pair of casings each provided with an inlet, a globular valve mounted in each of said casings, and angle shaped means for connecting the casings with the extensions, and provided with a restricted portion, said valves cooperating with said means for partially closing the same on the suction stroke of the engine, and the inlet of one of said chambers being of greater diameter than the other.

In testimony whereof, I affix my signature hereto.

LEO G. STRANSKY.