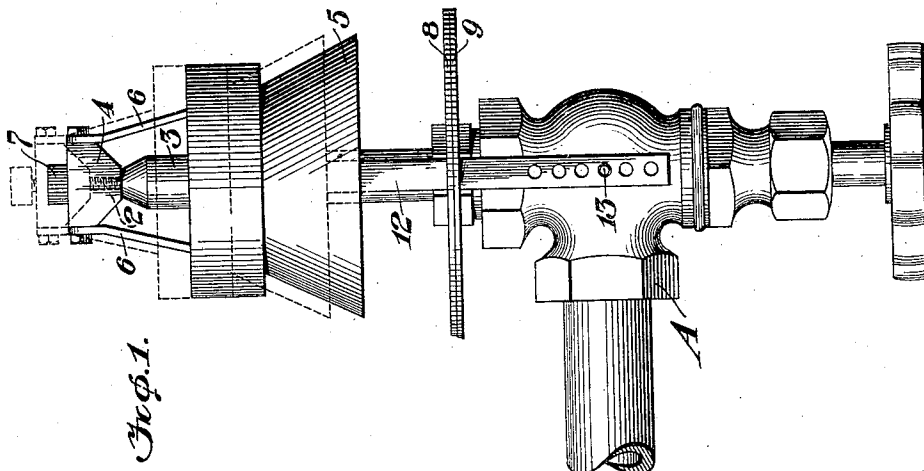
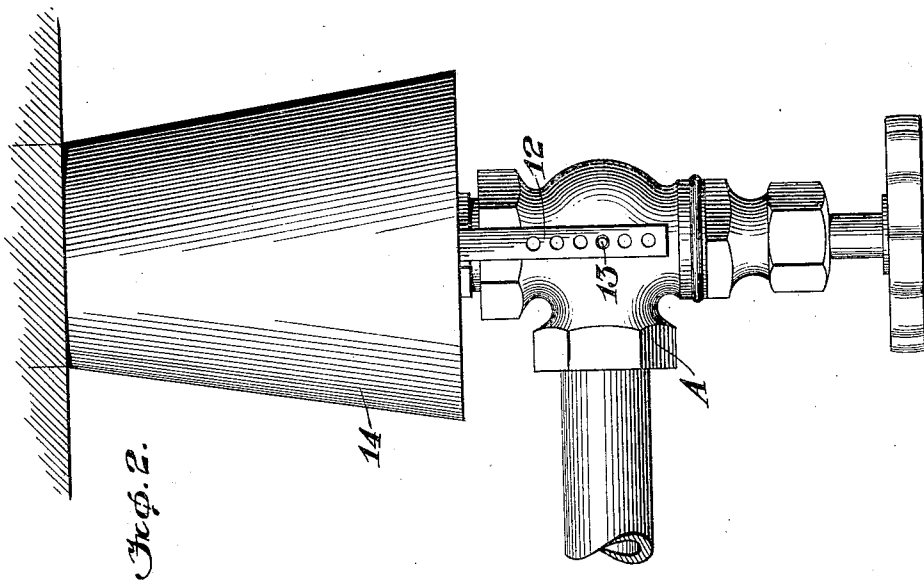


A. J. STICKLER.
VAPORIZER OR CARBURETER.
APPLICATION FILED MAY 6, 1909.

Patented Nov. 22, 1910.

2 SHEETS-SHEET 1.

976,409.



Witnesses
Lloyd W. Patch
A. A. Hammond

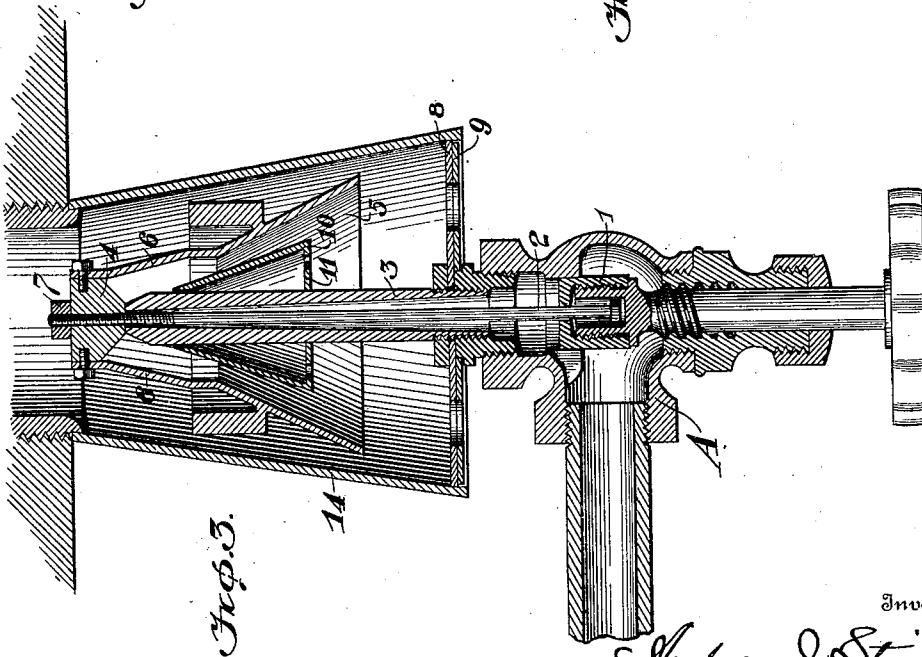
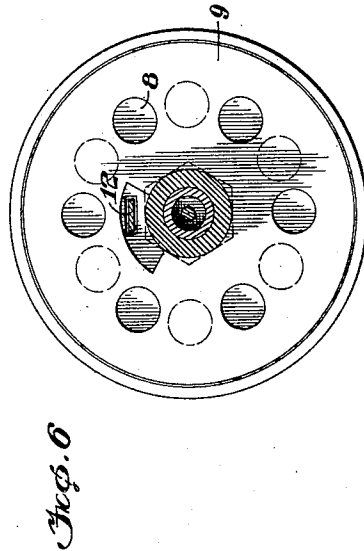
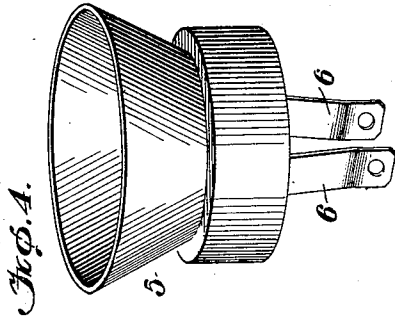
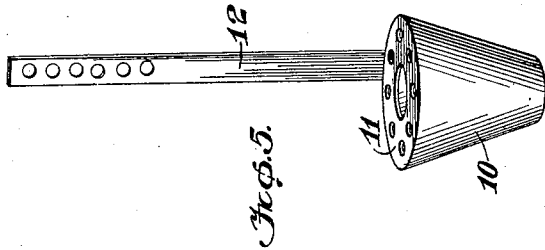
Inventor
Andrew J. Stickler
By Vernon E. Dodge &
his attorney

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By Vernon E. Rogers
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UNITED STATES PATENT OFFICE.

ANDREW J. STICKLER, OF WINFIELD, IOWA.

VAPORIZER OR CARBURETER.

976,409.

Specification of Letters Patent.

Patented Nov. 22, 1910.

Application filed May 6, 1909. Serial No. 494,324.

To all whom it may concern:

Be it known that I, ANDREW J. STICKLER, a citizen of the United States, residing at Winfield, in the county of Henry and State of Iowa, have invented certain new and useful Improvements in Vaporizers or Carbureters, of which the following is a specification.

My invention relates to an improvement in carbureters or vaporizers for gasoline engines, and the object is to provide a valve which would automatically open and close the supply of gasoline to the engine.

A further object is in the provision of means for admitting air to the gasoline outlet for forming a spray and causing the gasoline to be forced into the engine.

The invention consists of certain novel features of construction and combinations of parts which will be hereinafter fully described and pointed out in the claims.

In the accompanying drawings—Figure 1 is a view in side elevation of the invention; Fig. 2 is a side elevation with the hood removed; Fig. 3 is a longitudinal sectional view; Fig. 4 is a view of the cone connected to the valve; Fig. 5 is a perspective view of the inner cone which slides upon the tubular member, and Fig. 6 is a detail.

A represents the valve casing which is connected to any suitable source of supply, not shown, whereby gasoline will be admitted to the valve casing by gravity, and 1 is the turning plug. The head of the turning plug is preferably made hollow, and mounted therein is a stem 2 which has a loose sliding connection with the hollow head. A tube 3 is connected to the valve casing, and received within the tube is the stem 2. The tube is preferably constricted at its upper end, the bore of the tube tapering from the bottom toward the top, forming a constricted opening at the top of the tube. It is through this tube that the gasoline is discharged from the valve casing to the engine, and the supply of gasoline admitted to the stem is controlled by the turning plug. The valve casing is opened by the turning plug when it is desired to start the engine, and remains open until after the engine is stopped. The outer end of the stem 2 is screw-threaded, and mounted on the stem is a valve 4, which has screw-threaded engagement therewith. The valve 4 is intended to close the opening at the up-

per end of the tube 3, and by the movement of the valve upon the stem for lengthening or shortening the vertical movement of the stem 2, the size of the discharge opening is governed. A cone 5 is connected to the valve 4 by straps 6, which straps are removably connected to the valve. The cone is preferably weighted or made of such material or thickness to make the cone considerably heavier than the valve, so that the valve can be automatically seated on the end of the tube 3 to prevent the discharge of gasoline. The valve is held against movement on the stem by a nut 7, and by loosening the nut, the valve can be adjusted on the stem for admitting any quantity of gasoline to the engine. As the valve is screwed downwardly upon the stem, the flow of gasoline will be restricted, as the vertical movement of the stem will be shortened; and upon the suction stroke of the engine, when the valve 4 is raised, only a small outlet will be formed between the valve 4 and the top of the tube 3, but when the valve is screwed upwardly upon the stem, a greater flow of gasoline is admitted to the engine, due to the fact that a larger opening is formed between the valve and the top of the tube when the valve is raised by the suction of the engine.

A stationary disk 8 is connected at the lower end of the tube, which is provided with perforations for admitting the air, and a movable disk 9 is mounted below the stationary disk and upon the valve casing, which disk is also provided with perforations for regulating the amount of air passing through the stationary disk and to the cone 5.

A slidable cone 10 is mounted upon the tube 3 and the lower end of the cone is provided with a bottom 11, in which are openings or perforations through which the air passing through the disks is admitted to be discharged at the top of the cone toward the end of the tube for forming the spray. A bar 12 is connected to the cone, and is provided with perforations in which is adapted to be received a pin 13 on the valve casing for regulating the adjustment of the cone upon the stem for the desired form of spray. When the cone is at the top of the tube a more condensed or constricted spray is formed, but by drawing the cone downwardly upon the tube a greater or wider

spray is produced as the air is discharged from the cone below the end of the tube or below the discharge of the gasolene.

The lower end of the valve 4 is rounded and beveled for spreading the flow of gasolene to permit of the flow of air to come into contact with the gasolene to form the spray. A hood 14 is adapted to be connected to the engine (not shown) and received within the hood are all of the parts with the exception of the valve casing A.

The air which passes through the slidable cone 10 produces a spray at the end of the tube 3, and the air coming through the cone 5 will tend to force the gasolene spray on into the engine, as well as the air which passes through the hood 14. The valve 4 is operated by the suction of the engine for admitting the gasolene to be discharged from the tube 3 into the engine. Upon the suction of the engine the valve is raised and the gasolene discharged from the tube and the adjustment of the slidable cone 10 will produce a spray according to the manner of adjustment of the cone, it depending upon the location of the cone upon the tube, as to the quantity of air directed toward the outcoming gasolene, and whether the air is discharged upwardly along the tube to be met by the outcoming fuel, or to be discharged directly into the outcoming fuel at the top of the tube. Of course, a different spray will be produced from air which is discharged at the top of the tube than will be obtained when the air is discharged along the tube and below the upper end thereof. Upon the completion of the suction stroke of the engine the valve 4 will be again seated upon the tube 3 due to the weighted cone 5. Upon starting the engine the valve is first opened by sliding the cone 10 upwardly against the valve 4 and raising it whereby the gasolene is discharged from the tube and into the engine, but after the engine has once started the supply will be admitted to the engine upon the suction strokes of the engine which will cause the valve to be raised and to draw the gasolene into the engine. The stem 2, of course, is raised upon the movement of the valve 4 and this is permitted by the loose connection between the stem and the turning plug of the valve casing and the adjustment of the valve upon the stem lengthens or shortens the movements of the stem, and accordingly regulates the supply of gasolene to be discharged from the tube.

It is evident that more or less slight changes might be made in the form and arrangement of the several parts described without departing from the spirit and scope of my invention, and hence I do not wish to be limited to the exact construction herein set forth, but:

Having fully described my invention, what

I claim as new and desire to secure by Letters Patent is:

1. In a vaporizer or carbureter, the combination with a valve casing, of a tube connected thereto for supplying fuel, a stem movably mounted in the tube, a valve mounted upon the stem for closing the tube, means for supplying air to the vaporizer, a sliding cone mounted on the tube for directing the air to the fuel as it is discharged from the tube for forming a spray, a bar connected to the cone, and means engaged by the bar for holding the cone at different positions on the tube.

2. In a vaporizer or carbureter, the combination with a hood, a perforated disk connected to the hood, a movable disk in engagement with the stationary disk for regulating the discharge of air into the hood, of a tube connected to the stationary disk, a stem movably mounted in the tube, a valve connected to the stem, a weighted cone connected to the valve for seating the valve upon the end of the tube, and a sliding cone mounted upon the tube, said cones adapted to direct the air to the fuel as it is discharged from the tube, for forming a spray.

3. In a vaporizer or carbureter, the combination with a valve casing, of a tube for supplying fuel connected thereto, a valve for closing the end of the tube, a cone connected to the valve, and a cone slidably mounted on the tube, said cones adapted for directing the supply of air to the fuel as it is discharged from the tube upon the operation of the valve.

4. In a vaporizer or carbureter, the combination with a valve casing, of a tube connected thereto for supplying fuel, a stem slidably mounted in the tube, a valve mounted on the stem for closing the tube, means for supplying air to the vaporizer a weighted cone connected to the valve for directing air to the fuel as it is discharged from the tube, and a sliding cone mounted on the tube for directing air to the fuel as it is discharged from the tube for forming a spray.

5. In a vaporizer or carbureter, the combination with a valve casing, of a tube connected thereto for supplying fuel, a stem mounted in the tube, a valve mounted upon the stem for regulating the discharge of fuel from the tube, means for supplying air to the vaporizer a slidable cone mounted on the tube for directing the air to the fuel as it is discharged from the tube, and a weighted cone connected to the valve for directing air to the fuel as it is discharged from the tube, said cone adapted to seat the valve after the suction stroke of the engine which opens the valve.

6. In a vaporizer or carbureter, the combination with a hood, of a tube for supplying fuel, supported within the hood, a stem slidably mounted in the tube, a valve ad-

justably mounted upon the stem for regulating the size of the discharge opening for the discharge of fuel from the tube, means for delivering air to the hood a slidable cone
3 mounted on the tube for directing the air to the fuel as it is discharged from the tube, and a weighted cone connected to the valve for directing air to the fuel as it is discharged from the tube, said cone adapted to

seat the valve after the suction stroke of the 10 engine which opens the valve.

In testimony whereof I affix my signature, in the presence of two witnesses.

ANDREW J. STICKLER.

Witnesses:

J. W. ANDERSON,

C. A. PAISLEY.