W. KUTSCHE.
ELECTRIC VAPORIZING GASKET.
APPLICATION FILED APR. 7, 1921.

1,387,276. Patented Aug. 9, 1921.

FIG. 1.

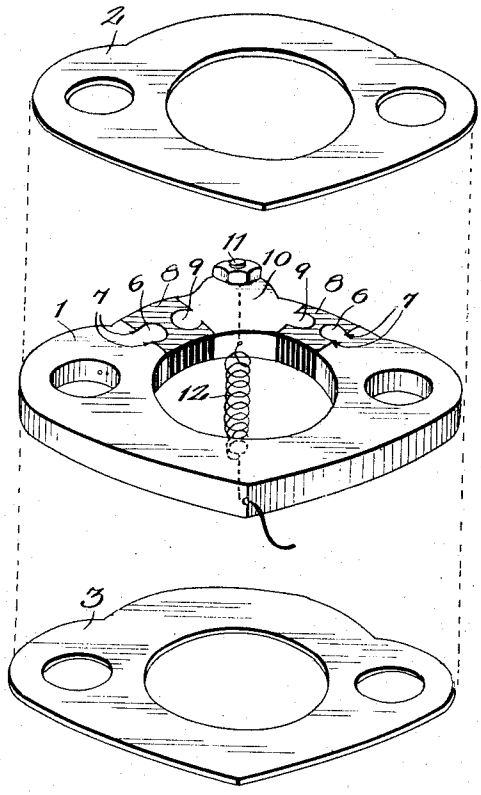


FIG. 2.

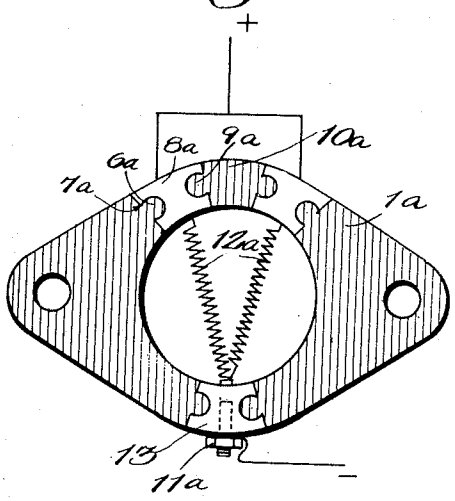
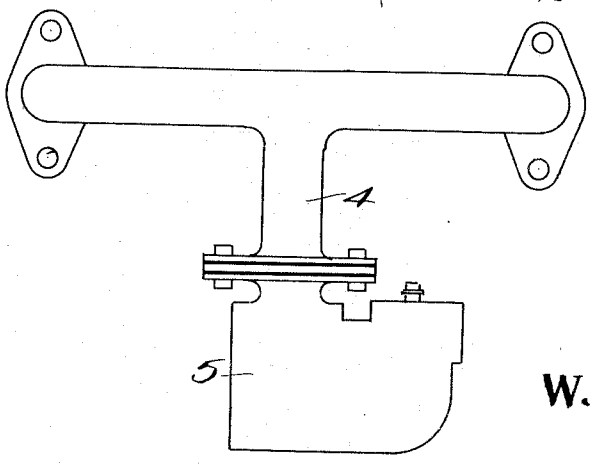


FIG. 3.



W. Kutsche.
INVENTOR

BY Munn & Co.
ATTORNEYS

UNITED STATES PATENT OFFICE.

WILBER KUTSCHE, OF WESTERN, NEBRASKA.

ELECTRIC VAPORIZING-GASKET.

1,387,276. Specification of Letters Patent. Patented Aug. 9, 1921.

Application filed April 7, 1921. Serial No. 459,278.

To all whom it may concern:

Be it known that I, WILBER KUTSCHE, a citizen of the United States, and a resident of Western, in the county of Saline and State of Nebraska, have invented certain new and useful Improvements in Electric Vaporizing-Gaskets, of which the following is a specification.

My invention relates to improvements in fuel vaporizers and it consists in the construction, combination and mode of application substantially as herein described and claimed.

One of the foremost objects of the invention is to provide a gasket to be clamped between the intake manifold and outlet of the carbureter, embodying an electric resistance disposed across the path of the fuel, to heat and vaporize the latter as it passes through.

Another object of the invention resides in the various ways by means of which the resistance is supported in place.

Other objects and advantages will appear in the following specification, reference being had to the accompanying drawing, in which:—

Figure 1 is a composite perspective view showing the various parts of the lead type of gasket for supporting the resistance element,

Fig. 2 is a plan view showing the insulation type of the gasket, and

Fig. 3 is a detail elevation illustrating the place occupied by the gasket between the manifold and carbureter.

Attention is first directed to that form of the gasket, or vaporizer, shown in Fig. 1. The three parts 1, 2, 3, go together, that is to say, 2 and 3 are superposed on 1 when the gasket as a whole is clamped in position between the flange of the intake manifold 4 and the similar flange of the carbureter 5.

The part 1 in this instance is made of lead. At one side there is a space at each side of which the lead gasket is formed with vertical keys 6, these almost appearing as complete circles when viewed from above. The purpose of this formation is to provide recesses at the points 7, so that the insulating locks 8 may be firmly held in place when fitted over the keys.

Similar keys 9 are cast or otherwise provided on the lead insert 10, it being obvious when these various parts are firmly pressed together, a homogeneous gasket is the result. A binding post 11 is fitted on the insert 10. A resistance wire 12 spans the central opening. The ends of this wire are fastened in any convenient manner between the gasket 1 and its insert 10.

Current is let in at one side and conducted away at the other, the insulating locks 8 preventing short circuiting. The wire 12 may conceivably be made in shapes other than that shown, so that the fuel passage is more thoroughly covered and the fuel is more evenly vaporized.

The pieces 2 and 3 are of thin insulating material. They are necessary to in turn prevent current escaping to the adjacent metallic flanges of the manifold and carbureter. These pieces are used both in connection with the lead type vaporizer gasket, and also the insulating type to which attention is now directed.

In Fig. 2 the gasket 1^a is made of insulation. Like the gasket in Fig. 1, it has keys 6^a, recesses 7^a, locks 8^a, and keys 9^a on an insert 10^a. In each case, the substance of the material is reversed, that is to say, 8^a is now lead and 10^a in now insulation.

A binding post 11^a is now fitted on a third insert 13 which is likewise held in place by keys the same as in respect to the locks 8^a above. The resistance 12^a is stretched between the insert and the locks and again may assume any shape desired.

The purpose of the invention will be easily understood. A gasket of some kind is usually employed where there is a likelihood of either a gas or liquid leaking. This likelihood is present at the joint where the manifold and carbureter are fastened together. It is also desirable to heat the incoming fuel, and the present invention therefore serves two important purposes, *i. e.* to seal the joint and heat the fuel.

Since heating the fuel produces better vaporization, the name "vaporizing gasket" appears most appropriate. It remains only to be said that considerable novelty lies in the mode of making the gasket either in one form or another. It is intended that it shall be sectional, and this being the case a reliable device must be employed for holding the sections together. This device appears in the shape of the keys and locks, and it is to this feature that the claims are largely directed.

While the construction and arrangement of the improved vaporizing gasket as herein described and claimed, is that of a generally

preferred form, obviously modifications and changes may be made without departing from the spirit of the invention or the scope of the claims.

I claim:—

1. A vaporizing gasket, composed of a body of insulating and conducting parts, and insulating pieces laid above and below when the gasket is clamped between a manifold and carbureter and a resistance element contained within the gasket.

2. A vaporizing gasket, composed of a body comprising insulating and conducting parts, means keying them together, a resistance element connected between certain conducting parts, and insulating pieces laid above and below the body.

3. A vaporizing gasket, comprising a body cut out at one side to leave a space, keys formed on the ends, approximating a circle to produce recesses; an insert with similar keys, and locks fitted between the insert and body, having openings to receive the keys and produce a homogeneous structure when all parts are fitted together.

4. A vaporizing gasket comprising a body having a central opening therein and including conducting and insulating sections having interfitting connections to permit of the disassembling of the body, and a resistance wire carried by those conducting sections separated by the insulating sections.

5. A vaporizing gasket comprising a body including a plurality of conducting and insulating sections having connections to secure the members against displacement in the plane of the gasket but to permit of their displacement laterally with respect to the gasket, and a resistance wire carried by those conducting sections separated by the insulating sections.

6. In combination, an intake manifold, a carbureter, and a vaporizing gasket interposed between the two and composed of insulating and conducting sections which are free to be disconnected from each other when removed from between the manifold and carbureter, but locked in gasket formation when in applied position, and a resistance element carried by those conducting sections of the gasket which are separated by insulating sections.

7. In combination, an intake manifold, a carbureter, and a vaporizing gasket interposed between the two and including insulating and conducting sections arranged to define an opening in the gasket to effect communication between the carbureter and manifold, said sections being so connected to each other as to permit disassembling thereof when removed from between the manifold and carbureter, but locked in gasket formation when in applied position, a resistance wire carried by those conducting sections separated by the insulating sections, and insulating pieces at the opposite sides of the gaskets having openings therein to register with the gasket opening.

8. A vaporizing gasket comprising a body formed of conducting sections and insulating sections between the conducting sections, and a resistance wire carried by the conducting sections, all of said sections being detachably connected to each other to facilitate the application and removal of the resistance wire to and from the gasket.

9. A vaporizing gasket comprising a body formed of insulating and conducting sections, and head and socket connections between the sections to permit detachment thereof for the purpose described.

10. A vaporizing gasket comprising a body formed of insulating and conducting sections, a resistance wire carried by conducting sections separated by the insulating sections, and head and socket connections between the sections arranged to secure said sections against displacement in the plane of the gasket for the purpose described.

WILBER KUTSCHE.