

E. KEIL.
SPARK PLUG CLEANER.
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1,438,834.

Patented Dec. 12, 1922.

Fig. 1,

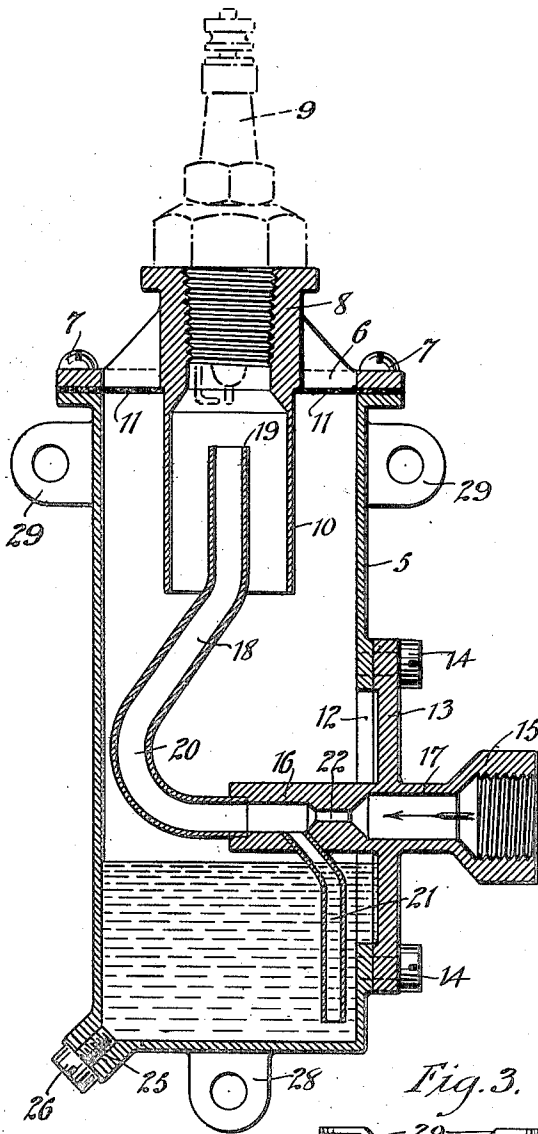


Fig. 2,

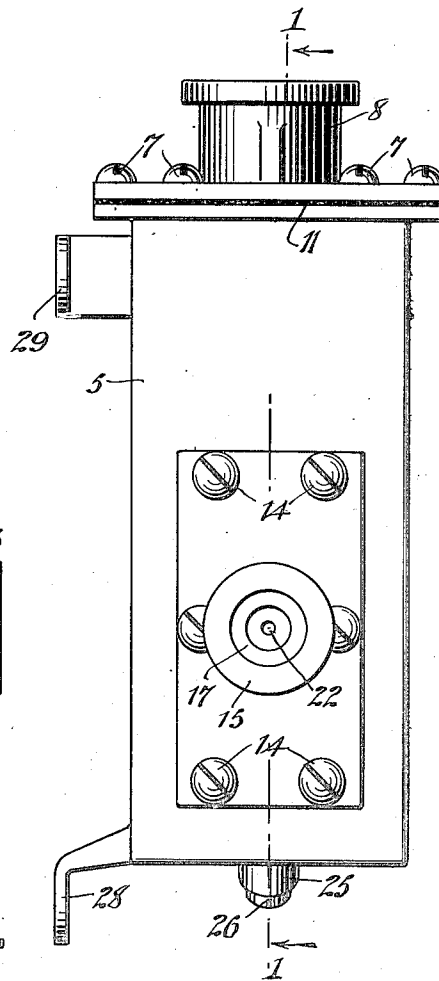
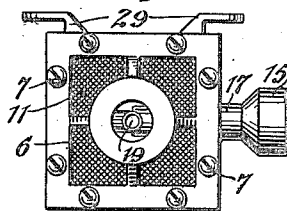


Fig. 3.



WITNESSES

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SPARK-PLUG CLEANER.

Application filed April 19, 1921. Serial No. 462,502.

To all whom it may concern:

Be it known that I, ERNST KEIL, a citizen of the United States, and a resident of Dayton, Moraine City, in the county of Montgomery and State of Ohio, have invented a new and Improved Spark-Plug Cleaner, of which the following is a full, clear, and exact description.

The present invention relates to new and useful improvements in devices for cleaning spark plugs.

It is one of the objects of the invention to provide means by which a cleaning medium such as kerosene or the like may be precipitated into contact with the electrodes of a spark plug to remove carbon or other deposits therefrom.

It is a further object of the invention to provide such a device in which the cleaning medium is projected into contact with the electrodes of a spark plug by air pressure.

It is a further object of the invention to provide means for controlling the air pressure and thereby regulate the force at which the cleaning medium is projected.

It is a still further object of the invention to provide a device of this character which is readily portable and capable of use wherever a source of compressed air is available.

It is a still further object of the invention to provide a device of this character which is capable of use with an ordinary hand pump of the type employed for inflating tires.

With the above and other objects in view, reference is had to the accompanying drawings, in which—

Figure 1 is a longitudinal sectional view of a device constructed in accordance with the present invention, said section being taken on the line 1—1 of Fig. 2;

Fig. 2 is a front elevation of a device constructed in accordance with the present invention;

Fig. 3 is a top plan view thereof.

Referring more particularly to the drawings, the reference character 5 designates a receptacle substantially of rectangular form, and said receptacle is formed of cast iron or other suitable material. The receptacle 5 has a removable cover 6, and said cover 6 is in the form of a grating or the like secured to the receptacle by suitable fastening means such as bolts 7. Carried by the cover 6 and projecting outwardly therefrom, is an in-

ternally threaded member 8, said internally threaded member being adapted to receive a spark plug 9.

Projecting inwardly of the cover 6 is a tubular member 10, said tubular member 10 being so constructed as to depend from the cover 6 and occupy a position within the receptacle 5. Interposed between the top 6 of the receptacle and the open end thereof, is a wire screen or mesh 11, to permit the escape of air for a purpose to be hereinafter described.

The receptacle 5 is provided with a cut-out portion 12 in one of its side walls, and secured to said side wall in such a manner as to close said cut-out portion, is a plate 13. This plate is secured in position by means of screws or the like 14. This plate is so formed as to provide an inwardly-projecting tubular member 16, and an outwardly-projecting tubular member 17, said outwardly-disposed tubular member 17 being provided with an internally threaded socket 15 to provide suitable attaching means for a compressed air supply.

Projecting from the inner member 16 is a tubular extension 18, which is curved upwardly as at 20, and has its upper end 19 lying in the tubular member 10 of the cover 6. Extending downwardly from the tubular member 16 is a tubular member 21, the lower end of which is adjacent the bottom of the receptacle 5. The inner tubular member 16 is provided with a constricted or reduced portion 22, and the tubular member 21 is connected in such a manner to the tubular member 16 that the compressed air passing through said tubular member 16 passes through the constricted portion 22, and is projected therefrom at a point directly over the upper end of the tubular member 21. The reference character 25 designates a drain opening adapted to be closed by means of a plug 26.

The receptacle is provided on its lower end with a perforated ear or lug 28, and at its upper end with a pair of perforated ears or lugs 29. These perforated ears or lugs 28 and 29 form the means by which the device may be permanently secured to a suitable support if desired.

The device operates in the following manner:

A spark plug (shown in dotted lines in Fig. 1) is positioned in the internally threaded extension 18. The receptacle 5 is filled

with kerosene to a level approximately to the tubular extension 16 as shown in Fig. 1. Compressed air is now admitted to the tubular member 17 and in passing through the constricted portion 22 thereof gains sufficient velocity to pick up the kerosene in the receptacle 5 through the medium of the tubular member 21, and forcibly project said kerosene against the electrodes of the spark plug 9. The kerosene tends to dissolve and remove foreign deposits from the spark plug electrodes which settle to the bottom of the receptacle 5 together with the kerosene, the foreign deposits being directed downwardly by the depending tubular member 10. During this operation, the air under pressure in the receptacle 5 escapes by way of the screen 11 secured to the receptacle by means of its top 6.

From the foregoing it is apparent that the present invention provides a new and improved device for cleaning spark plugs which is capable of attachment to any suitable source of air supply and which through its special construction will precipitate a cleaning fluid together with the air into contact with the electrodes of a spark plug in such a manner as to remove foreign deposits therefrom.

What is claimed is—

1. In a device for cleaning spark plugs, a receptacle having an open end, a foraminous member closing said open end, a plate for securing said foraminous member in place,

spark plug supporting means carried by said plate, said spark plug supporting means comprising a tubular member formed integral with said plate and projecting inwardly of the receptacle, and means projecting inwardly of said receptacle for supplying a cleaning medium to the spark plug carried by said tubular member.

2. In a device for cleaning spark plugs, a receptacle having an open end, a foraminous member closing said open end, a plate for securing said foraminous member in place, spark plug supporting means carried by said plate, said spark plug supporting means comprising a tubular member having a depending portion adapted to enclose the lower end of a spark plug when positioned therein, and means projecting into said depending portion for supplying a cleaning medium to the spark plug carried in said supporting means.

3. In a device for cleaning spark plugs, a receptacle having an open end, a foraminous member closing said open end, means for securing said foraminous member in position upon the open end of the receptacle, spark plug supporting means carried by said foraminous member securing means and having a depending tubular extension, and means projecting into the tubular extension for supplying a cleaning medium to the spark plug carried by said spark plug supporting means.

ERNST KEIL.