

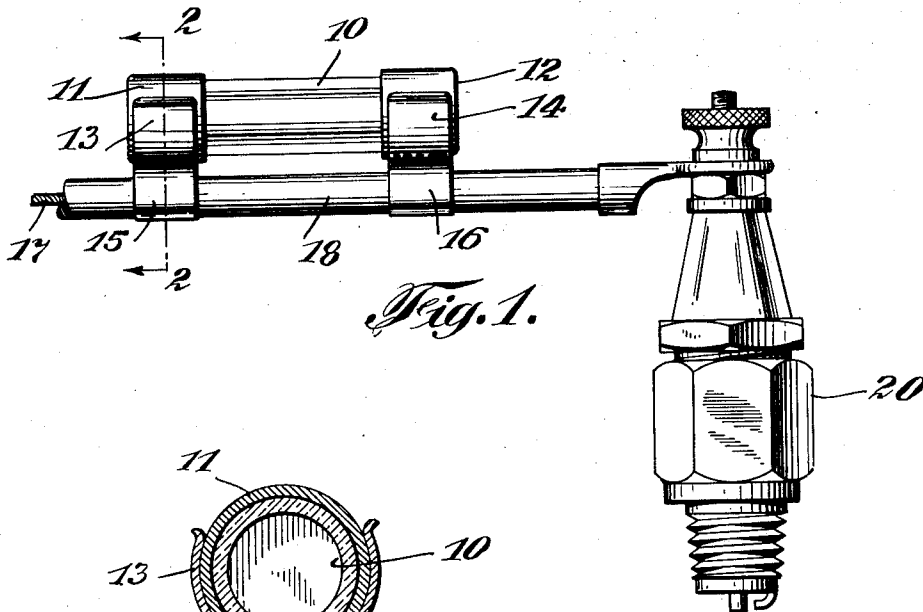
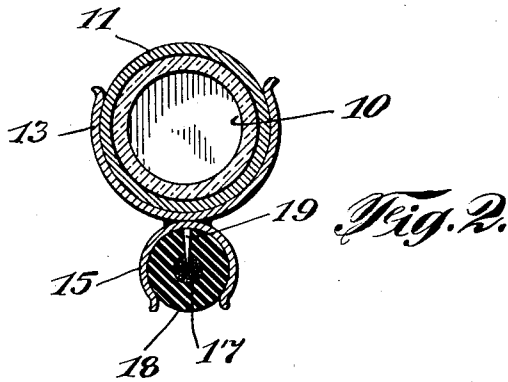
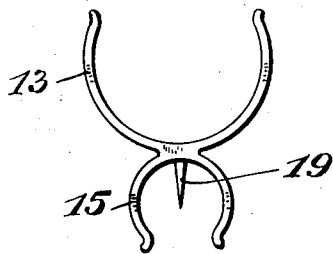
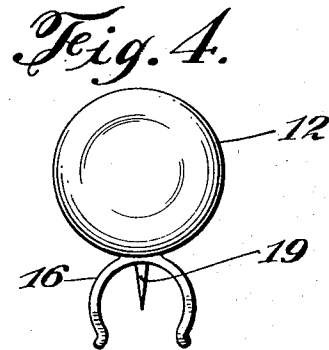
May 5, 1925.

1,536,808

M. NORDEN

SPARK PLUG TESTER

Filed Feb. 14, 1924



INVENTOR
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UNITED STATES PATENT OFFICE.

MORTIMER NORDEN, OF NEW YORK, N. Y.

SPARK-PLUG TESTER.

Application filed February 14, 1924. Serial No. 692,679.

To all whom it may concern:

Be it known that I, MORTIMER NORDEN, a citizen of the United States, residing at the borough of Manhattan, in the city, county, and State of New York, have invented an Improvement in Spark-Plug Testers, of which the following is a specification.

My invention relates to devices for testing the spark plugs of internal combustion engines, and its object is to provide an inexpensive article which may be quickly and conveniently applied directly to the conductor wires leading to the spark plugs at any desired point whereby the condition of the plug will be visibly disclosed, and which may be applied in turn to the wires of each spark plug, or by using a separate indicator for each plug they may be left in position so that the condition of the entire series of spark plugs may be indicated and compared at a glance.

The details of the invention are herein-after particularly set forth and described.

In the accompanying drawing:

Figure 1 is an elevation of the indicator applied to the conductor wires of a spark plug.

Fig. 2 is a rear end view partly in section, the spark plug being removed.

Fig. 3 is an end view of one of the double clips, and

Fig. 4 is a similar view showing a modification.

Similar reference characters indicate like parts throughout the several views.

Referring to the drawing, 10 indicates a tubular casing of transparent non-conducting material, preferably glass, and of a diameter and length that will readily permit the same to be carried in the pocket. The casing 10 is filled with Neon or other gas, or rarefied air, and on the ends of the casing are fitted metallic caps 11 and 12, which are cemented or otherwise sealed in place.

13 and 14 are two semicircular sockets which receive the end caps 11 and 12, such sockets being formed of sheet metal such as copper or brass, and having sufficient resiliency to allow said caps to be easily sprung into them, but which grip the caps

sufficiently to prevent their accidental separation from the sockets.

Secured to the bottom of the sockets at their center by solder or any suitable means, and depending therefrom are spring clips 15 and 16, also formed of sheet metal such as copper or brass, which are adapted to be sprung over the insulated conductor wires 17 leading to the spark plug 20, and which grip the covering 18 of the wires with sufficient firmness to hold the device thereto without liability of accidental displacement, but which possess sufficient resiliency to permit the device to be removed readily when desired.

Within the center of either or both of these clips 15 and 16, there is a pointed metallic pin 19 secured to the clip or clips by solder or other suitable means.

When the clips are forced over the conductor wires these pointed pins penetrate the insulating material 18 covering the wires and make electrical contact with such wires conveying the current through the sockets 13 and 14 and end caps 11 and 12, to the gas filling the tubular casing 10, which becomes illuminated by the passing current of electricity and so indicates to the eye the condition of the spark plug.

It will be readily understood that the casing 10 may be withdrawn from the sockets 13 and 14 when desired, leaving the sockets in position upon the conductors, they being so held by the clips 15 and 16, whereby they are ready to receive a casing at any time, but these sockets 13 and 14 may be dispensed with entirely, in which case the clips 15 and 16, are secured directly to the end caps 11 and 12, as illustrated in Fig. 4.

My invention provides an inexpensive, convenient and portable device for detecting quickly and with certainty the faults of spark plugs of internal combustion engines; it is quickly applied to the electrical conductors leading to the spark plugs whereby the passing current of electricity visibly discloses the condition of the plugs.

I claim as my invention:

1. A device of the character described, comprising a transparent casing, metallic caps closing the ends thereof, clips connected

with said caps, and means secured to said clips for penetrating the insulation of electric conductors.

2. A device of the character described, comprising a transparent casing, metallic caps closing the ends thereof, metallic sockets into which said caps are inserted, resilient

clips secured to said sockets, and pointed pins secured to said clips for making contact with electric conductors.

Signed by me this 7th day of February, 1924.

MORTIMER NORDEN.