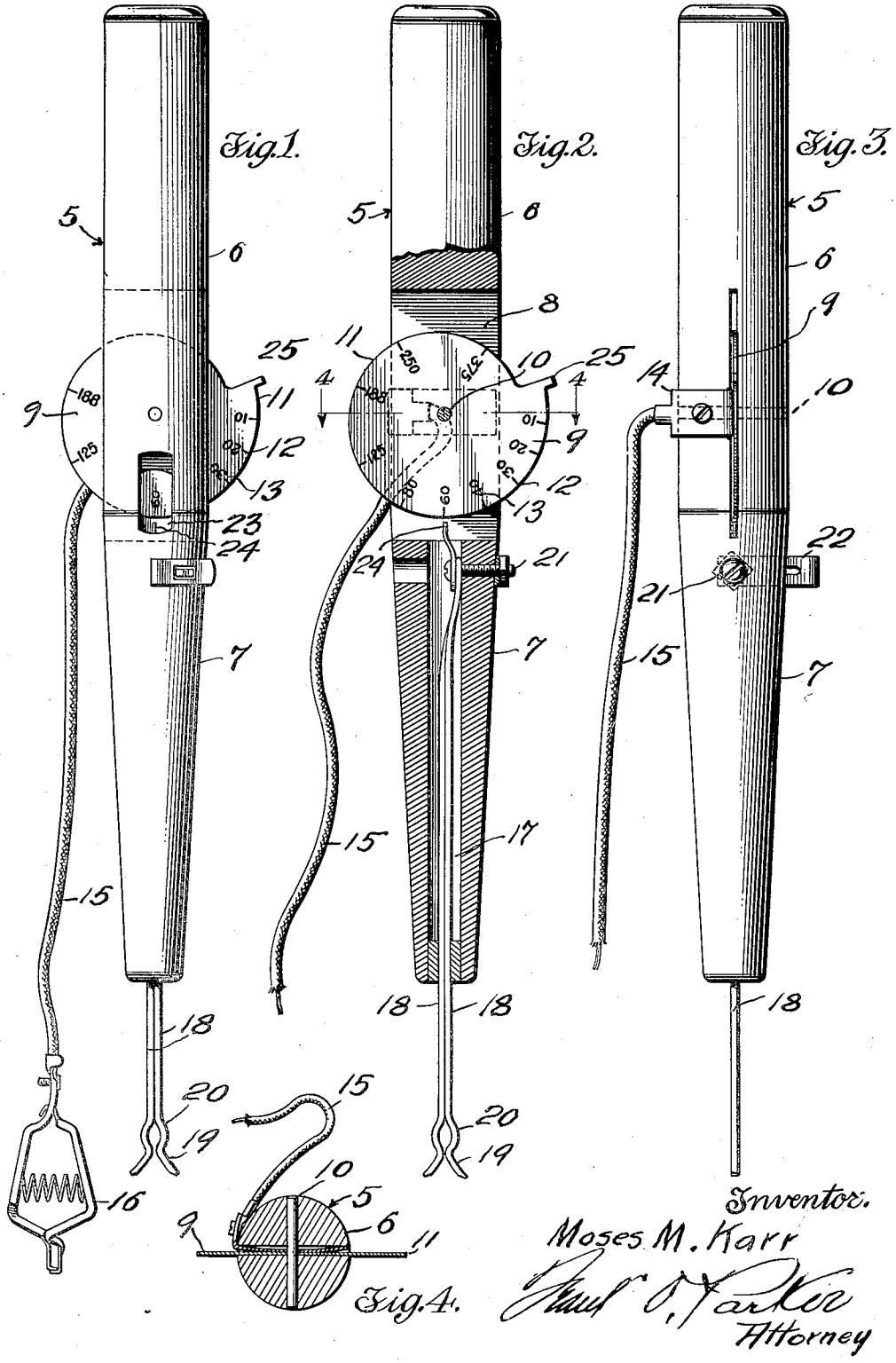
March 27, 1934. M. M. KARR 1,952,259

ELECTRIC IGNITION FEELER

Filed May 24, 1933



Patented Mar. 27, 1934 1,952,259

UNITED STATES PATENT OFFICE

1,952,259

ELECTRIC IGNITION FEELER

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Application May 24, 1933, Serial No. 672,681

2 Claims. (Cl. 175—183)

The invention relates to an electric current and ignition tester, and more especially to an ignition feeler or the like instrument.

The primary object of the invention is the provision of a device of this character, wherein any spark plug or electric current disorder in the ignition or current system in a motor vehicle may be conveniently and readily ascertained so that correction thereof may be made without undue labor on the part of a service man or other operator of the device.

Another object of the invention is the provision of a device of this character, wherein its construction is novel so that prompt detection may be had of spark plug and electric current disorders as well as locating flickering shorts in the electric system installed in a motor vehicle or the like and additionally the testing of all insulation of conducting parts of such system.

A further object of the invention is the provision of a device of this character, which is extremely simple in construction, thoroughly reliable and efficient in its purposes, strong, durable, readily and easily adjusted, convenient for its uses, possessing but few parts and inexpensive to manufacture.

With these and other objects in view the invention consists in the features of construction, combination and arrangements of parts as will be hereinafter more fully described, illustrated in the accompanying drawing which discloses the preferred embodiment of the invention, and pointed out in the claims hereunto appended.

In the accompanying drawing:

Figure 1 is a side elevation of the instrument constructed in accordance with the invention.

Figure 2 is a fragmentary longitudinal section view of the same.

Figure 3 is an elevation taken at substantially right angles to Figure 1.

Figure 4 is a sectional view on the line 4—4 of Figure 2 looking in the direction of the arrows.

Similar reference characters indicate corresponding parts throughout the several views in the drawing.

Referring to the drawing in detail the instrument comprises a body 5, preferably made from wood, although it may be made from any other suitable material, for example hard rubber or composition of material functioning as insulation. This body 5 at one end portion provides a handle 6 and at the other end portion an outwardly tapered shank 7, respectively.

Formed transversely intermediate of the body 5 is a slit 8 for accommodation of a turning dial 9 rotatable upon a pivot or axle 10, the latter being suitably mounted in the body 5. This dial 9 has a peripheral cam edge 11 to provide an eccentric margin, while on one face of the dial are graduation markings 12 and associated digits 13, respectively, these being indicative of sparking gaps.

Secured to the body 5 is a wiper connection 14, the wiping extension or portion thereof being disposed in the slit 8 for constant contact with the dial 9, and with this connection 14 is joined an insulated lead 15 having a terminal clip 16 at its outer free end.

Passed through a central bore 17 in the shank 7 and projected exteriorly of the latter beyond its outer end is a pair of prongs 18, these being formed with outwardly flared tips 19 and outwardly bowed bights 20, respectively, which latter are inwardly of the tips as will be apparent. These prongs 18 are side-by-side with respect to each other and there inner ends are joined with a terminal post or fastener 21 mounted in the body, while this post or fastener carries at the outside of the body a wire connection or terminal clip 22.

Provided in the body 5 is a window 23 for visibility of a spark jumping point 24 on the post or fastener 21 and the graduation marks 12 and digits 13, respectively, for the testing purposes of sparking gaps of spark plugs employed in internal combustion engine of the ignition system for the same.

In the use of the instrument for spark plug disorders it is necessary to ground said instrument by attaching the terminal clip 16 to the engine block (not shown), then adjust the dial 9 so that the point 24 will tally with the graduation mark 12 at the scale digits 20, and with the engine idling slowly, contact the prongs 18 with the spark plug electrode (not shown). If no spark appears at the window 23 turn the dial 9 to zero stop 25 of the said dial. If there is no effect on the firing of the engine with the dial at zero stop 25 that plug is shorted out or other defects are causing the firing to fail. When the dial is set at 60 mark 12 and should the spark appear at the window 23 regularly then that particular plug has the spark gap too wide for the average motor compression. To remove the wire from a plug while the motor is running it is necessary to set the dial at the zero stop 25 and attach the prongs 18 to the wire terminal nearest that plug. Thus the wire to that plug can be removed therefrom without danger of shock.

For current disorders and to determine

whether the spark is constant and strong enough to effect perfect ignition, detach the wire from the missing plug in the ignition system and hold it in the prongs 18. Then set the dial 9 at the 250 mark. If a good spark appears at the window 23 regularly at all speeds of the motor then the current is good. When the current is good and missing occurs only while motor is laboring, the missing plug must be removed for a test in a compression tester or exchanged for a new plug as a comparison test.

To determine whether the ignition or sparking coil produces a good spark which is not being delivered to the plug, it is necessary to remove the high tension lead from the coil or distributor and make contact with the device by the prongs 18 engaging the high terminal of the coil, then crank the engine and see if the spark jumps farther than it did at the plug terminal and such jump should occur at the 250 marking on the dial 9.

It is to be understood that the prongs 18 serve as an attachment clip with recoil, spring or rebound action, this being important when locating flickering shorts, as it is often desirable at times to suspend the instrument through the medium of the prongs.

What is claimed is:

1. A device of the kind described, comprising a body member, a rotatable dial forming a spark testing gap gauge carried in the body, an electric connector leading to said gauge, testing prongs mounted with the body, an electric connector leading to the prongs, and a sparking tip extended from said prongs to coact with the gauge.

2. A device of the kind described, comprising a body member forming a handle and shank, testing prongs in the shank and extended outwardly of the same, a sparking tip connected with the prongs, a dial movably mounted in the handle and cooperating with the tip to provide a spark gap testing gauge, and electric connectors for the dial and prongs, respectively.

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