

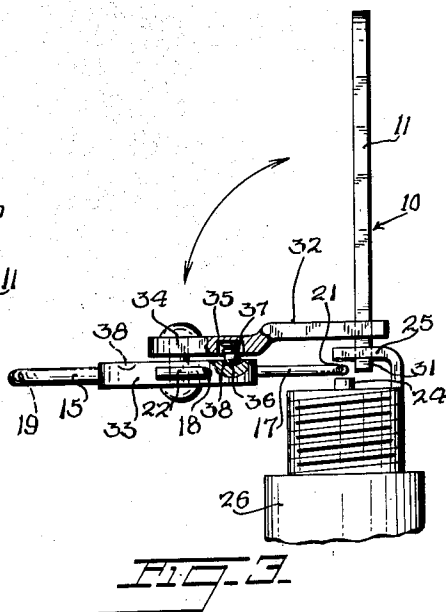
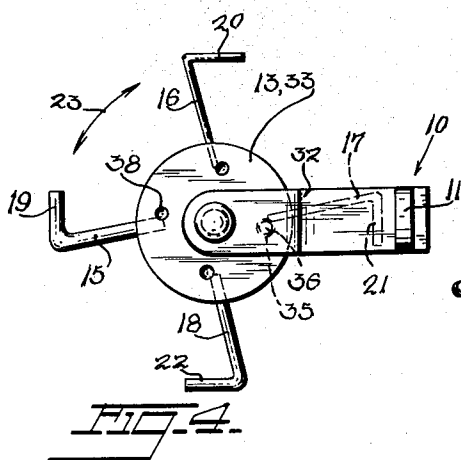
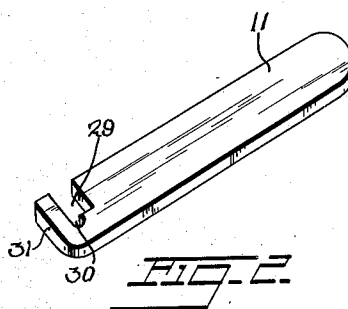
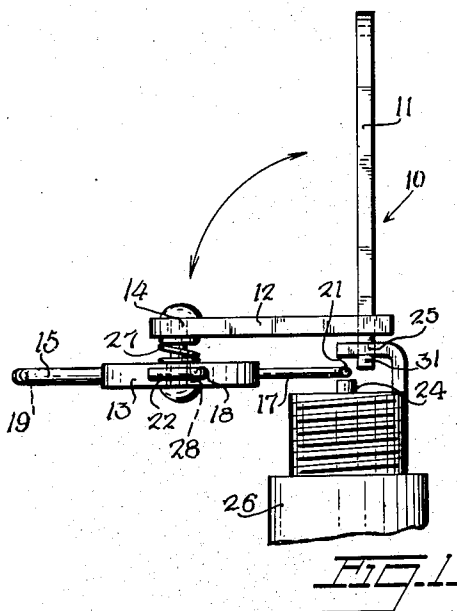
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SPARK PLUG ADJUSTMENT TOOL

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SPARK PLUG ADJUSTMENT TOOL

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2 Claims. (Cl. 7—1)

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The present invention concerns a spark plug tool and refers more particularly to a combination tool for more conveniently setting the spark plug gap and gauging the same.

An object of the present invention is to provide a combination tool comprising a multiplicity of gap gauges and convenient associated means for setting the gap of a spark plug.

A further object is to provide a tool of the character described in which the gap setting operation is rendered simple and easy and the magnitude of gap change is readily estimated and controlled.

Another object is that the described tool shall be simple in design and construction, cheap to fabricate and durable in use.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawing forming a material part of this disclosure:

Fig. 1 is a side elevation of the preferred embodiment of the invention in operative position on a spark plug.

Fig. 2 is a perspective view of the handle component of the same.

Fig. 3 is a side elevation of a modified form of the invention, also in operative position on a spark plug.

Fig. 4 is a top elevation of the same.

Referring now in detail to the drawings, the invention is shown in its preferred form in Figs. 1 and 2, the tool 10 comprising a handle portion 11, bracket 12 extending substantially perpendicularly thereto, a gauge disc 13 rotatably mounted on bracket 12 by means of shaft 14, and a plurality of wire gauges 15, 16, 17 and 18 extending radially therefrom comprising operative gauging portions 19, 20, 21 and 22 extending in the plane of rotation and tangentially to their path of rotation 23.

The portions 19, 20, 21 and 22 are thus adapted to be brought selectively into operative gauging position between the central electrode 24 and the radial electrode 25 of a spark plug 26 by rotation of disc 13. Disc 13 is laterally spaced a substantial distance from bracket 12 and a light coil spring 27 is compressed between the two and surrounding shaft 14. Friction between spring 27 and disc 13 tends to keep the latter in any position to which it is set. The central bore 28 of disc 13 is larger than shaft 14 so that disc 13

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fits loosely thereon for reasons hereafter to appear.

Handle 11 has a recess 29 formed therein and a further recess 30 openly communicating therewith. Bracket 12 is set in recess 29 and firmly joined to handle 11 by cementing, soldering, welding or in any convenient manner. In the assembled tool, recess 30 is therefore defined by bracket 12 and finger 31, and the tool 10 is capacitated to engage electrode 25 between the two last mentioned portions, and by bending electrode 25, to set the gap between electrode 25 and electrode 24. Such bending is accomplished by movement of handle 11 in the direction of either of the arrows in Fig. 1.

It may be desired to carry out the gap setting operation with an operative gauging portion 19, 20, 21 or 22 in the gap, and in such case handle 11 and bracket 12 may be moved as indicated in Fig. 1 while disc 13 and the gauges may be maintained in position between the electrodes, the loose fit of disc 13 on shaft 14 permitting this. Disc 13 may be also moved axially of shaft 14 against spring 27 in order to accommodate for variations in the exact position and size of gap from one spark plug to another.

In a modified form of the invention shown in Figs. 3 and 4, bracket 32 has a gentle S curve between its two parallel end portions, and the clearance between the bracket and disc 33 is small. Disc 33 is similar in general to disc 13 and the gauges mounted thereon are or may be identical, the differences from disc 13 being that disc 33 fits the shaft 34 on which it is mounted more snugly, so as to maintain a parallel relation between it and bracket 32. Bracket 32 has a socket 35 in which a ball 36 is positioned and actuated outwardly by a spring 37. Disc 33 is formed with a plurality of partispherical recesses 38 into which ball 36 is urged as each of the gauges comes into gauging position, thus a click mechanism is constituted which tends to lock any one of the gauges in gauging position.

While I have illustrated and described the preferred embodiments of my invention, it is to be understood that I do not limit myself to the precise constructions herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims.

Having thus described my invention, what I claim as new, and desire to secure by United States Letters Patent is:

1. In a spark plug tool for setting and gauging the gap between the central and the radially ex-

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tending electrodes of a spark plug, a vertically extending lever means which is slotted on one side to engage the radial electrode for bending said electrode in either direction relative to the central electrode, a horizontally extending bracket mounted on said lever means, at least one wire gauge movably supported by said bracket for movement into and out of gauging position between the two electrodes, whereby the gap between said electrodes may be gauged at the same time that the radial electrode is bent by the lever means to adjust the gap between said radial electrode and the central electrode.

2. In a spark plug tool for setting and gauging the gap between the central and radially extending electrodes of a spark plug, a handle formed with a slot in one end for engaging the radial electrode and bending the same toward and away from the central electrode, a bracket extended radially from one side of said handle, a gauge disc rotatively supported on said bracket to turn in a plane extended at right angles to the length of said handle, wire gauges extended radially from the periphery of said gauge disc to be moved

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into and out of gauging position between the two electrodes as said disc is rotated, whereby the radial electrode may be bent to space it from the central electrode in accordance with the thickness of the wire gauge held between the electrodes, and spring means for holding said gauge disc in a rotative position in which one of said wire gauges will be engaged between the electrodes.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,384,209	O'Toole	July 12, 1921
1,431,708	Tisdale et al.	Oct. 10, 1922
1,990,430	Fitzgerald	May 17, 1927
1,985,410	Isaacs	Dec. 25, 1934
2,237,378	Thienemann	Apr. 8, 1941
2,313,174	Shock	Mar. 9, 1943