

S. H. MURPHY, JR. & J. W. McCUEN.
SPARKING DEVICE.

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1,058,456.

Patented Apr. 8, 1913.

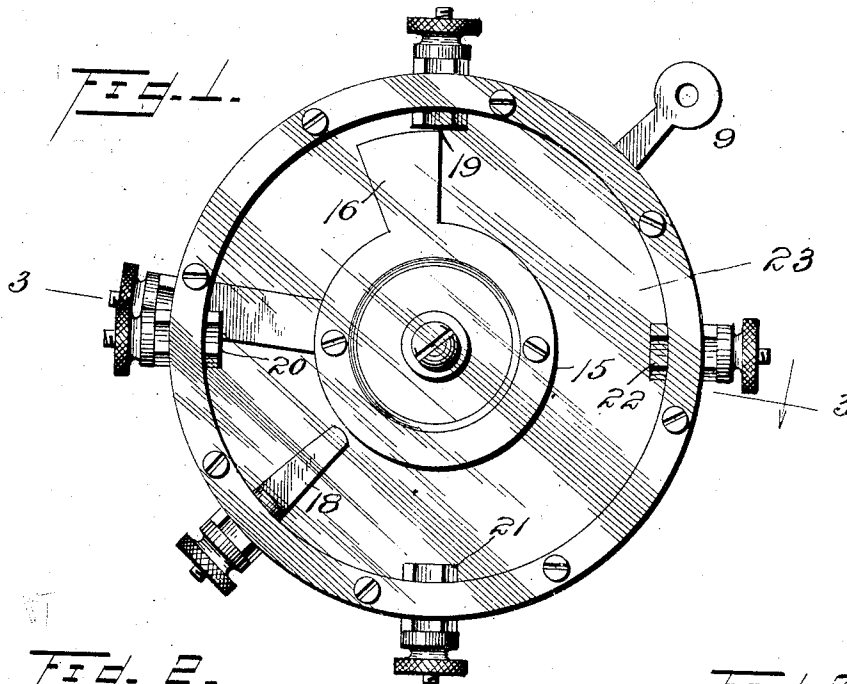


FIG. 1.

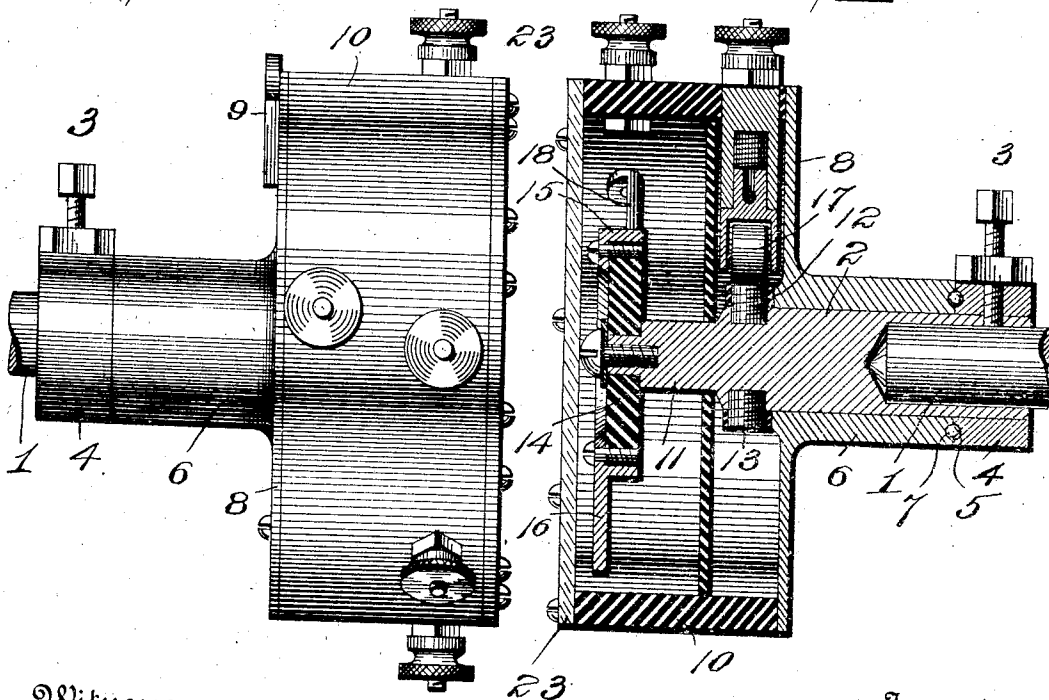


FIG. 3.

Witnesses

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SPARKING DEVICE.

1,058,456.

Specification of Letters Patent.

Patented Apr. 8, 1913.

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To all whom it may concern:

Be it known that we, SAMUEL H. MURPHY, Jr., and JAMES W. McCUEN, citizens of the United States, residing in the city of Baltimore, State of Maryland, have invented certain new and useful Improvements in Sparking Devices, of which the following is a specification.

This invention relates to sparking devices, and more particularly to that class adapted for making and breaking the circuit of electric currents for automobiles, boats, stationary and all other styles of internal combustion engines.

The object of our invention is to eliminate all defects so common in the sparking devices now in general use, said result being obtained by constructing the device with but few parts, arranged in a unique and compact manner, and so constructed that they will require no adjustment whatever.

A further object of our invention is to provide a sparking device of the character above described, which can be easily and quickly applied to any style of engine now in use, and to construct the same in a simple, compact and durable manner, one which will efficiently perform all of its intended functions.

With these objects in view, and such others as may hereinafter appear, our invention consists in the particular construction of the various parts, and in the novel manner of combination and arrangement of said parts, all of which will be more fully described and specifically pointed out in the appended claim.

In the drawings forming a part of this specification:—Figure 1 is a top plan view, Fig. 2 is a side elevation, Fig. 3 is a sectional view.

Referring by numerals to the drawings, 1 represents the end of a cam shaft upon which is mounted our improved sparking device by means of a sleeve 2, which fits snugly over the end of the shaft and is secured thereto by a set screw 3, which passes through a collar 4, having a ball race 5, in one face thereof as clearly shown in Fig. 3.

Mounted upon the sleeve 2, is an outer sleeve 6, having a ball race 7, in one face thereof which corresponds to the ball race 5. This sleeve 6, supports a circular head 8,

having an arm 9, formed integral therewith, and supporting a cylindrical rim portion 10 of a casing.

The sleeve 2 projects through the sleeve 6, into the rim 10 of the casing, and terminates in a shaft 11, said shaft having mounted thereupon a fiber band 12, in which is set a series of contact points 13. The free end of the shaft supports a disk 14 of fiber or the like, surrounded by a band 15, which carries a contact blade 16. The contacts 13 are adapted to engage a roller contact 17, mounted in the wall of the casing, the contact 17 being pressed inwardly by a spring 17^a and being adapted for connection to a vibrator coil not shown. The band 15, is so arranged that it is constantly in close position to a contact 18, which is connected to the feed wire of a coil not shown, and the contact blade 16 carried by the band is brought as the band revolves in close position to the contacts 19, 20, 21 and 22, which are adapted for connection to sparking coil not shown. It is to be noted that the contact points 19, 20, 21 and 22 do not touch the contact blade 16 carried by the band, but are brought in close proximity thereto as the band revolves, sufficiently close for the current to jump and thereby exhilarate the spark. It will be seen that the contact point 18, is also in close proximity to the band, but not in direct contact therewith, the object being to cause the current to jump and thereby exhilarate the spark. The contact point 18 is connected to the secondary circuit coil as is manifest.

In Fig. 3 we have shown a thin disk of non-conducting material interposed between the contact points 13, and the band 15, which carries the contact blade 16. With this disk, we have found it possible to construct the device in a more compact manner without any danger of the current jumping from the contacts 13, to the contact blade 16 or band supporting the same.

The casing 10, is provided with a glass cover 23, which affords means for inspecting the device at any and all times.

We deem the foregoing explanation sufficiently plain that the invention will be readily understood by all conversant in such matters.

Having thus described the various fea-

tures of our invention, what we claim as new and desire to secure by Letters Patent, is:—

A sparking device of the character described including a casing embodying a rim, 5 a head secured thereto and formed with a central sleeve, a sleeve mounted in the first-named sleeve and extended into the casing to form a shaft, a disk of insulating substance secured to said shaft, a band secured 10 to the rim of said disk and provided with an outwardly projecting contact blade, contact secured to the rim of the casing close to the path of movement of said blade, an

inwardly spring-pressed contact carried by the casing, and contacts carried by said 15 shaft, and engaging said spring contact, and a disk of insulating substance mounted in the casing and separating said last-named shaft contacts and spring contact from other contacts.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."