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PATENTED MAY 26, 1908.

J. O. HEINZE, JR.

SPARK COIL.

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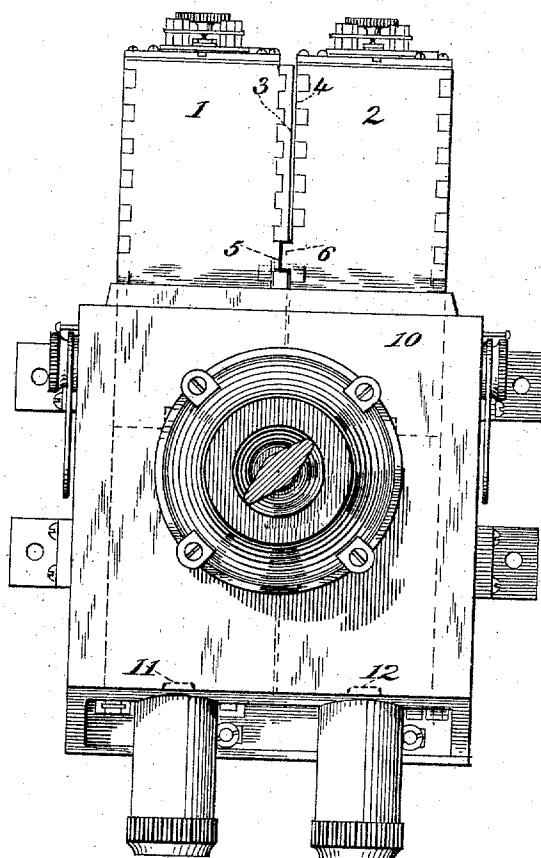


Fig. 1.

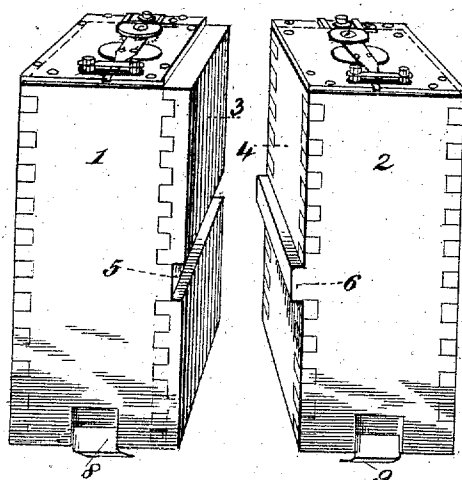


Fig. 2.

Witnesses:
W. E. Remick
H. P. Gile

Inventor:
John Otto Heinze, Jr.
by his attorney
Charles F. Richardson

UNITED STATES PATENT OFFICE.

JOHN OTTO HEINZE, JR., OF LOWELL, MASSACHUSETTS.

SPARK-COIL.

No. 888,611.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN OTTO HEINZE, Jr., a citizen of the United States, residing at Lowell, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Spark-Coils, of which the following is a specification, reference being had therein to the accompanying drawing.

10 My invention relates to spark-coils.

It has been found that where two or more spark-coil units, mounted in a box, and independently removable therefrom, are used in association with, say, a gasoline engine in an automobile, faulty electrical connections are likely to result, because of possible jolts of the automobile.

Now, it is the object of my invention to reduce the chances of these faulty connections, and I attain it by so designing and combining said spark-coil units, that while they are mounted in their box, they are not independent, but are bound together into a solid and rigid group, and can not be independently removed therefrom, or replaced therein; that is to say, to withdraw one unit from the box, all the units must be withdrawn; and to assemble all the units in the box, all must be assembled simultaneously.

30 Figure 1 shows my invention in front elevation; two spark-coil units being partially within their box; while Fig. 2 is a perspective view of two disconnected spark-coil units, and shows means employed for removably connecting them.

In the drawings illustrating the principle of my invention and the best mode now known to me of embodying that principle, a group of two spark-coil units 1, 2, is shown. 40 The sides 3, 4, of the coil units 1, 2, which are to be adjacent, are made of such thickness that a horizontal slot 5, may be formed in one, as 3, and a corresponding rib 6, on the other, as 4; this rib and slot being so arranged in relation to each other that when they are in engagement, the terminals, as 8, 9 of the coils, will, when the units are moved down to the bottom of the box 10, simultaneously engage corresponding contacts 11, 12.

50 To assemble the spark-coil units 1, 2, Fig. 2, the slot 5 and rib 6 are brought into engagement, and then the units are inserted into

the box 10, Fig. 1, the inside surfaces of which serve as guides for the group; the units becoming and remaining inseparably bound together while they remain in the box. 55 To remove these coils, the operator grasps one or both of the coils, and lifts them out of the box. While it is true that the spark-coil units can not be withdrawn without destroying all of their electrical connections, the removal is hardly ever necessary, because spark-coil construction has now reached such a state of perfection, that defects in individual units hardly ever arise.

It is evident that the moment the group is 65 inserted in the box, the units become rigidly bound together into what is substantially one solid body, which, consequently, is heavier than each of the component units, and when seated in the box, is less likely to be 70 sufficiently jolted out of normal position, to cause faulty electrical connections between the terminals 8, 9, and 11, 12, than would be the case were the units independently removable. 75

At present, the unit construction is retained, because it is convenient commercially; hence to retain that convenience, yet to have the advantage of a heavy group of coils, I provide the means disclosed, to render what, while in the box, would otherwise be a group of independent units, a group of dependent units.

It will be plain to all of those skilled in the art to which my invention appertains, that 85 it may be employed in many different forms without departing from the spirit of my invention, and I desire to protect the same in the broadest manner legally possible.

What I claim is:— 90

1. In combination, a box; a plurality of spark coil units removably mounted therein; and means connecting said units, whereby the removal of one of said units from the box necessitates the removal of its adjacent unit. 95

2. A box; a plurality of spark-coil units removably mounted therein; and interlocking means to connect said units; all being so designed as to reduce the tendency to sever any electrical connections between the 100 box and the units.

3. A box having electrical connections therein; a plurality of spark coil units re-

movably mounted therein, and having electrical connections; and means connecting said units, and so designed that the combined weight of the said units tends to hold
5 the electrical connections of each unit, in engagement with its respective electrical connections in the box.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN OTTO HEINZE, Jr.

Witnesses:

F. J. V. DAKIN,
E. F. UNIAC.