S. F. BRIGGS.

TRANSFORMER ATTACHMENT FOR SPARK PLUGS.

APPLICATION FILED MAY 31, 1910. RENEWED NOV. 17, 1911.

1,038,277. Patented Sept. 10, 1912.

FIG. 1.

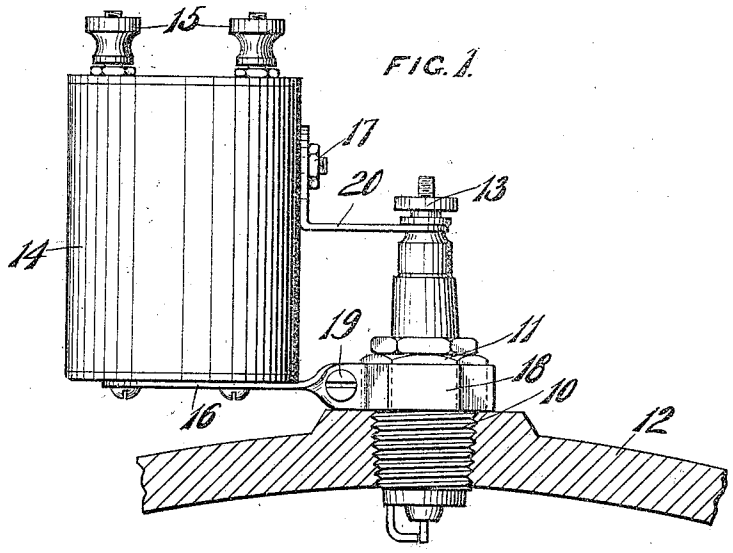


FIG. 2.

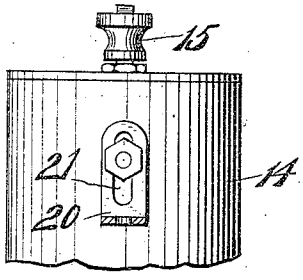
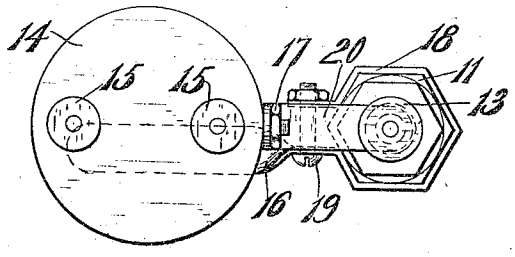


FIG. 3.



WITNESSES.

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TRANSFORMER ATTACHMENT FOR SPARK-PLUGS.

1,038,277. Specification of Letters Patent. Patented Sept. 10, 1912.

Application filed May 31, 1910, Serial No. 564,052. Renewed November 17, 1911. Serial No. 660,967.

To all whom it may concern.

Be it known that I, STEPHEN F. BRIGGS, residing in Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented new and useful Improvements in Transformer Attachments for Spark-Plugs, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

This invention has for its object to provide a transformer adapted to be attached to an ordinary spark plug to be supported thereby without other mechanical connection and having its electrical connection made therewith by its attaching means, thus dispensing with secondary cables.

Another object of the invention is to provide such an attachment for spark plugs with adjustable connecting means adapted to permit of its connection with spark plugs of various sizes and constructions.

With the above and other objects in view the invention consists in the transformer attachment for spark plugs herein claimed and all equivalents.

Referring to the accompanying drawings in which like characters of reference indicate the same parts in the different views: Figure 1 is a front elevation of a transformer attachment for spark plugs shown as applied to the spark plug of an engine; Fig. 2 is a detail view of a portion thereof, showing the sliding adjustment for its connection with the binding post of the spark plug; and, Fig. 3 is a plan view thereof.

In these drawings 10 indicates an ordinary spark plug with the usual hexagonal or other wrench engaging head 11 for turning it into the cylinder head 12 and the binding post 13 on the central insulated pin or stem. An induction coil or transformer 14 in an insulating casing has a pair of binding posts 15 for the terminals of its primary winding and has a metal strap 16 on its bottom and a clamping bolt 17 on its side forming the terminals of its secondary winding. The strap 16 is twisted and bent to form a clip 18 of hexagonal or other desired shape to fit upon the head 11 of the spark plug and a bolt 19 passing through its end and its neck portion serves to rigidly clamp it on the head of the spark plug, such strap thus becoming the support for the induction coil 14. An angular bracket arm 20 is clamped to the side of the induction coil 14 by means of the clamping bolt 17, said bolt passing through an elongated slot 21 in the vertical arm of the bracket to permit the bracket to slide thereon when the nut is loose to bring the opening of the horizontal arm of the bracket over the end of the binding post 13 of the central insulated pin of the spark plug in order that it may be clamped thereto by means of the nut of the binding post. The bracket 20 thus becomes a brace to assist in the support of the induction coil, and constitutes the secondary connection from the terminal of the secondary winding of the induction coil at binding post 17 to the insulated central pin of the spark plug.

With this invention there is no necessity for secondary cables for connecting the induction coil with the spark plug, the mechanical connections for supporting the induction coil constituting the conductors directly connected with the spark plug to establish electrical connection therewith. The construction of the parts is such that the induction coil may be connected with spark plug which may be quickly and easily at- and this without the necessity for cutting or otherwise working upon the engine or the spark plug, the induction coil being simply a removable attachment for the spark plug which may be quickly and easily attached or detached at will and simplifying the electrical connections by making it necessary to wire to the primary terminals only.

Besides connecting the coil as above described, it is possible to dispense with one of the binding posts 15 and utilize the clip 18 as a terminal common to the primary and secondary windings, or the clip may not form the terminal of either winding, one of the binding posts 15 serving as a common terminal for both windings.

What I claim as new and desire to secure by Letters Patent is—

1. An induction coil, a clip carried thereby for clamping the body of a spark plug to support the coil, and an adjustable bracket on the induction coil adapted for engagement with the insulated central pin of the spark plug, said clip and bracket constituting the secondary terminals of the induction coil.

2. An induction coil, a metal strap secured to the bottom thereof and constituting one terminal of the secondary winding of

the induction coil, said metal strap being twisted and bent to form a clip for engaging the body of a spark plug, a bolt passing through the end and neck portion of the strap for clamping it to the body of a spark plug for supporting the induction coil, a clamping bolt on the side of the induction coil, an angular bracket having an elongated slot passing over the clamping bolt, said bracket being adjustably clamped to the induction coil by means of the clamping bolt and provided with an opening in its extending portion to engage with the central pin of the spark plug, said clamping bolt constituting the other secondary terminal of the induction coil and the bracket and the clip forming the secondary connections between the induction coil and the spark plug.

3. An induction coil, a metal strap secured to the bottom thereof and twisted and bent to form a hexagonal clip with its end standing approximately parallel with the neck portion between the twisted portion and the hexagonal clip, a bolt passing through the neck portion and the end of the strap, a spark plug having a hexagonal body engaged by the clip, and an insulated central pin with a binding post on its end, said bolt serving to clamp the clip to the body of the spark plug for supporting the induction coil, a clamping bolt projecting from the side of the induction coil with a nut threaded thereon, and an angular bracket provided with a slot in its vertical arm fitting on the clamping bolt and held in an adjustable position by means of the nut, the horizontal arm of the bracket being provided with an opening fitting upon the binding post of the central pin member of the spark plug.

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

STEPHEN F. BRIGGS.

Witnesses:
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