

V. BARDIN.
ELECTRICAL CONNECTOR FOR ENGINE SPARK PLUGS AND OTHER PURPOSES.
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1,390,481.

Patented Sept. 13, 1921.

Fig. 1

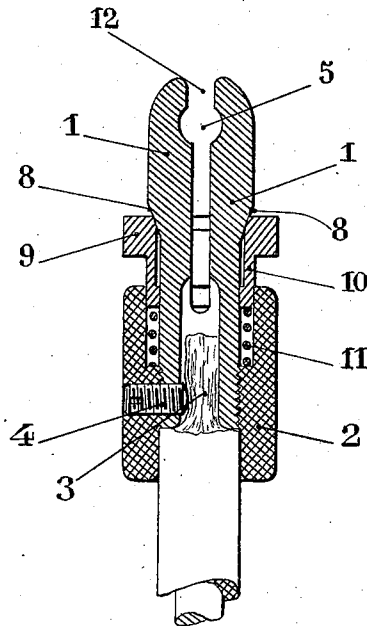
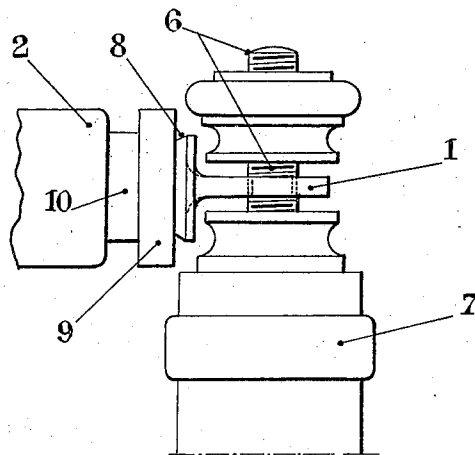


Fig. 2



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ELECTRICAL CONNECTOR FOR ENGINE SPARK-PLUGS AND OTHER PURPOSES.

1,390,481.

Specification of Letters Patent. Patented Sept. 13, 1921.

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To all whom it may concern:

Be it known that I, VICTOR BARDIN, a citizen of the French Republic, residing at No. 30 Rue de la Briche, St.-Denis, Seine, France, have invented certain new and useful Improvements in Electrical Connectors for Engine Spark-Plugs and other Purposes, of which the following is a specification.

This invention has for its object to provide an improved connector for connecting rapidly an electric conductor with an electric terminal of any kind, for instance the spark plug of an internal combustion engine.

The accompanying drawings illustrate by way of example a constructional form of this invention employed as a wire connector for connecting a spark plug of an internal combustion engine to its supply wire.

Figure 1 is an axial section of the improved connector, and

Fig. 2 is an elevation of the improved connector mounted on a spark plug.

In these figures the improved connector is drawn double its natural size.

In the constructional form illustrated, the improved connector comprises essentially an extensible member constituting a kind of flat tongs comprising two parts or limbs 1, 1.

This member is provided with a screw threaded inner shank adapted to be screwed into a cylindrical sleeve 2 of insulating material. 3 is the supply lead, the uncovered end of which is inserted in a recess in the end of the screw threaded shank of the extensible member. 4 is a screw adapted to be screwed through the side of the sleeve 2 and also through the side of the screw threaded shank of the extensible member. It serves to clamp the uncovered portion of the wire 3 against the said member in such a manner as to fix the said portion in place therein.

The forward ends of the limbs of the tongs are enlarged so as to form an approximately cylindrical recess 5 which has, when the tongs is closed, approximately the diameter of the metal stem 6 of the spark plug 7. This enlarged end is connected to the cylindrical body by a conical bearing surface resting against the conical internal surface of a ring 9 which is continued in the form of a cylindrical extension 10. This extension is adapted to slide inside the insulating sleeve 2. A spring 11 confined between

the extension 10 and a circular shoulder of the sleeve 2, has a constant tendency to push the ring 9 against the bevel surfaces 8, and consequently to cause the limbs of the tongs to close upon the stem of the spark plug.

The manner of operation of the improved connector will be readily understood from the preceding description.

When it is desired to apply the connector for the purpose of effecting a connection between the secondary wire and the spark plug, the flaring mouth 12 of the tongs is pushed against the metal stem of the spark plug. By reason of this pushing, the limbs of the tongs move apart and cause the ring 9 to descend in opposition to the action of the spring 11. The said limbs are caused to close again by the reaction of the said spring when the stem 6 has entered the cylindrical recess 5. From this moment onward the connection is established and no vibration and even no pull is capable of opening the improved connector, the tongs of which is firmly kept closed by the ring 9. To remove the improved connector it is merely necessary to push the said ring against the opposition of the spring in such a manner as to free the tongs and allow its jaws to open and thus disengage the connector from the spark plug.

It is to be understood that the double-limbed tongs hereinbefore described may be replaced by any other similar device composed of extensible parts.

What I claim is:—

1. A device for connecting electrically an electric conductor to a contact terminal, comprising in combination a sleeve of insulating material having an internal shoulder in the bore thereof, said bore having a smooth portion and a screw threaded portion, a bifurcated metal member the limbs of which are provided with an exterior bevel surface, said device having a screw threaded shank cooperating with the screw threaded portion of said bore, a ring encircling said limbs and formed with an interior bevel surface co-acting with said exterior bevel surface, said ring having an extension thereon fitting slidably in the smooth portion of said bore, and a spring located in said bore between the inner end of said ring extension and said shoulder.

2. A device for connecting electrically an electric conductor to the stem of a contact

terminal, comprising in combination a sleeve of insulating material having an internal shoulder in the bore thereof, said bore having a smooth portion and a screw threaded portion, a laterally extensible bifurcated member the limbs of which are flat at the free ends thereof, each of the inner surfaces of said free ends being formed with recessed portions adapted to receive and grip the stem of the contact terminal, said limbs having an exterior bevel surface formed thereon and being united at their inner ends

by a screw threaded shank engaging the screw threaded portion of said bore, a ring encircling said limbs and formed with an interior bevel surface co-acting with said exterior bevel surface, said ring having an extension thereon fitting slidably in the smooth portion of said bore and a spring located in said bore between said shoulder and the inner end of said ring extension.

In testimony whereof I have signed my name to this specification.

VICTOR BARDIN.