W. J. LITTLEHALES.

ELECTRIC CABLE CONNECTION.

APPLICATION FILED JAN. 28, 1909.

948,563. Patented Feb. 8, 1910.

Fig. 1.

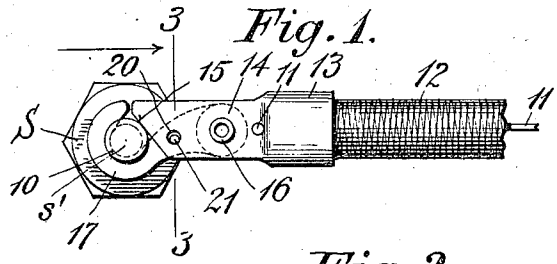


Fig. 2.

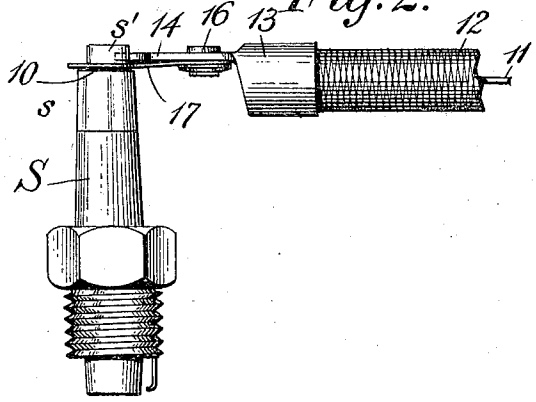


Fig. 3.

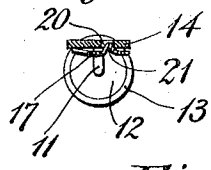
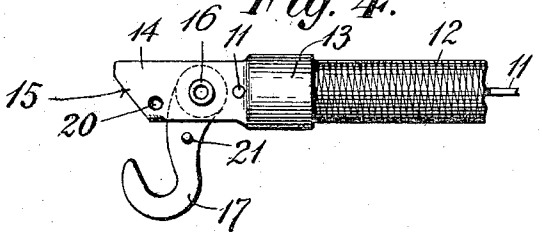


Fig. 4.



WITNESSES:

P. M. Hewson

M. E. O'Neill.

INVENTOR.

W. J. Littlehales,

BY Charles Francis Schmeltz

ATTORNEY.

UNITED STATES PATENT OFFICE.

WILLIAM J. LITTLEHALES, OF NEW BRITAIN, CONNECTICUT.

ELECTRIC-CABLE CONNECTION.

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Application filed January 28, 1909. Serial No. 474,776.

To all whom it may concern:

Be it known that I, WILLIAM J. LITTLEHALES, a citizen of the United States, and resident of New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Electric-Cable Connections, of which the following is a full, clear, and exact specification.

This invention relates to electric-cable connections and more particularly to that class thereof which are utilized for the purpose of connecting a high tension electric conductor with the end of a spark plug such as is common in the ordinary gas or explosive engine, and it has for its object the provision of such a device which can readily be clasped or secured to the end of a spark plug without the necessity of employing a screw driver or other tool, which, furthermore, is held in close electrical contact with the member to which it is secured, and which also cannot shake loose from the plug, thus obviating the annoyance frequently resulting from imperfect connections and also from loosening of the parts.

My invention has been clearly illustrated in the accompanying drawings in which similar characters denote similar parts, and in which—

Figure 1 is a top plan view of a spark plug and an electric-cable connected therewith in conformity with my invention. Fig. 2 is a side view thereof. Fig. 3 is a section on line 3, 3 of Fig. 1, and Fig. 4 shows a top view of my improved device opened and released from the spark plug.

Briefly stated, my improved connection comprises a pair of jaws one of which is movable relatively to the other and is hook-shaped so as to clasp the stem of a spark plug, the two jaws being held in closed condition by a pin-and-socket connection which is rendered effective to close the jaws by virtue of the resiliency of one of the jaws, as will hereinafter be fully set forth.

Referring to the drawings, S represents a spark plug of ordinary construction, the upper part of the stem *s* of which is provided with an annular groove 10 adapted to receive one jaw of my improved connection device. This device is secured at the end of an electric conductor 11 which is heavily insulated by suitable insulating material 12, the conductor 11 is electrically connected with a thimble 13 of my improved connector, or as it may properly be called "clip," and has a stationary jaw 14 which is beveled at 15 so as to present a surface against which the reduced portion of the spark plug *s*, more particularly in the groove 10 thereof, can rest.

Pivoted to the stationary jaw 14, as at 16, is the movable jaw 17 of the device which is preferably resilient vertically as seen in Fig. 2, and the free end of which is of such thickness as to readily enter the groove 10 above referred to. By referring to Figs. 1 and 4 it will be seen that the movable jaw is hook-shaped so that when the two jaws are closed as shown in Fig. 1, the spark plug will be firmly grasped thereby, inasmuch as the stationary jaw 14 engages one side of the head *s'* of the spark plug end while the hook portion of the movable jaw 17 will engage the diametrically opposite side thereof in the groove 10 thereof.

The means for holding the two jaws in closed position consist preferably of a pin-and-socket connection which comprises in the present instance an aperture or recess 20 in the stationary jaw 14 into which a projection 21 provided on the movable jaw 17 can enter, the organization being such that when the spark plug is in place between the two jaws, the projection 21 will by virtue of its cone shape, not have completely entered into the recess, so that a certain cam action results and tends to bring both of the jaws toward each other and in close contact with the spark plug.

By referring to Fig. 4, it will be seen that the jaw 17 is swung open far enough to permit the ready insertion or removal of the spark plug so that the device is admirably adapted for use on gas engines as generally employed in automobiles.

It will also be understood that by virtue of the construction above described, the cable can be removed from the spark plug by swinging the same at a right angle to its longitudinal axis, instead of pulling the end of the cable backward upon itself as has to be done in the connections now in general use.

Many changes may be made in the device

especially in the method of locking the jaws together, without in any way changing or departing from the gist of the invention.

I claim:

In a cable clip the combination with a stationary jaw having a recess, a resilient movable jaw pivoted to the stationary jaw and having a cam-shaped projection adapted to enter said recess for closing said jaws.

WILLIAM J. LITTLEHALES.

Witnesses:
CHAS. F. SCHMELZ,
ALFRED C. COOKE.