

R. M. G. PHILLIPS.
 TERMINAL FOR IGNITERS.
 APPLICATION FILED FEB. 21, 1911.

Patented Aug. 20, 1912.

1,036,143.

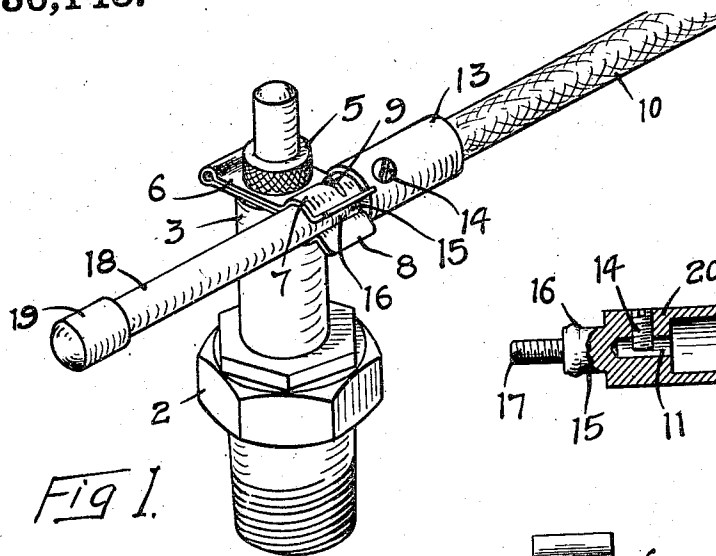


Fig. 1.

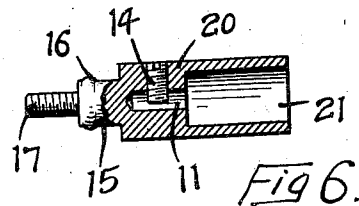


Fig. 6.

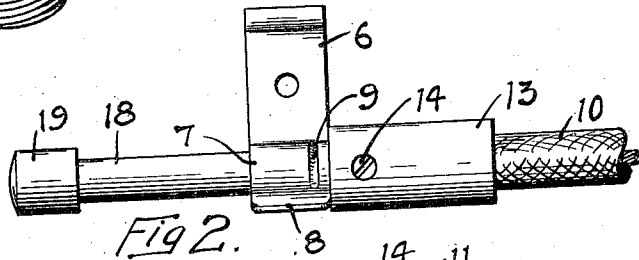


Fig. 2.

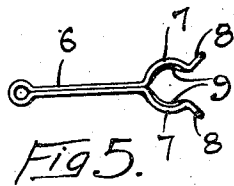


Fig. 5.

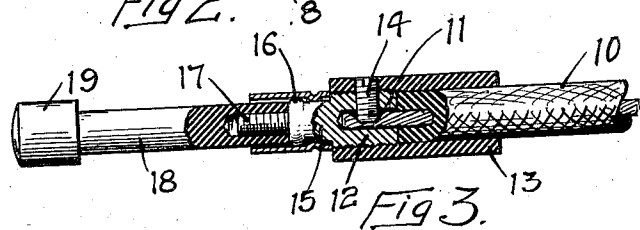


Fig. 3.

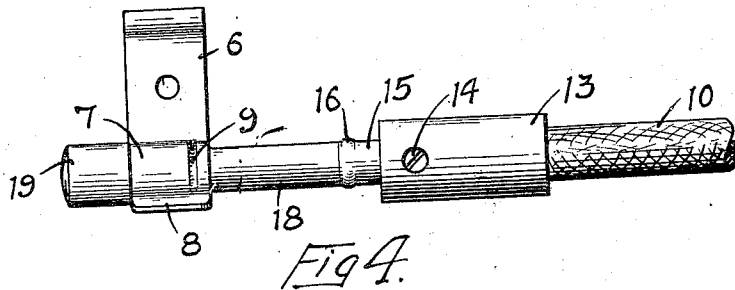


Fig. 4.

WITNESSES
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TERMINAL FOR IGNITERS.

1,036,143.

Specification of Letters Patent.

Patented Aug. 20, 1912.

Application filed February 21, 1911. Serial No. 610,042.

To all whom it may concern:

Be it known that I, ROSS M. G. PHILLIPS, of Minneapolis, Hennepin county, Minnesota, have invented certain new and useful Improvements in Terminals for Igniters, of which the following is a specification.

The object of my present invention is to provide means whereby the electric current through a spark plug or igniter may be turned on or off for the purpose of testing the plug and locating the trouble without the use of tools and without the necessity of loosening the terminal binding nuts or posts.

My invention consists generally in interposing a slip joint between the electric conductor and the binding post, whereby any cylinder may be easily and quickly cut out without the use of tools and without disturbing the other connections.

In the accompanying drawings forming part of this specification, Figure 1 is a perspective view of a spark plug with my improved terminal applied thereto, Fig. 2 is a detail view of the same, Fig. 3 is a sectional view illustrating the construction of the terminal, Fig. 4 is a view similar to Fig. 2, showing the circuit broken through the terminal, Fig. 5 is a detail view of the spring clamp mounted on the binding post of the igniter, Fig. 6 is a sectional view illustrating a modified construction of the terminal.

In the drawing, 2 represents the spark plug, which may be of any ordinary or preferred construction.

3 is an insulator inclosing a terminal, 5 is a binding nut between which and the insulator 3 I arrange a spring clamp 6 of suitable material. This clamp has jaws 7 with diverging ends 8, ribs 9 being formed in the jaws by slightly creasing the metal composing them.

10 is an electric conductor, the insulation being stripped from the wire, as indicated in Fig. 3, the end of the wire being inserted into a socket 11 provided in an interiorly threaded plug 12.

13 is a sleeve of insulating material inclosing the plug and the end of the conductor and provided with a screw 14 which passes through the sleeve and the plug and engages the end of the conductor wire. The plug has a neck 15 formed thereon provided with an annular shoulder 16 and a threaded extension 17 which fits into a socket in an insu-

lating pin 18 that is provided with a head 19. The insulating pin 18 is preferably of substantially the diameter of the neck 15 and slightly smaller than the shoulder 16, so that when the neck is thrust in between the spring jaws the shoulder will engage the ribs 9 and prevent accidental breaking of the circuit by the sliding of the neck lengthwise between the jaws. Whenever desired, however, the conductor or the pin 18 may be grasped and pushed or pulled lengthwise, thereby pulling the neck out from between the spring jaws 7 and breaking the circuit. The conductor may also be entirely separated from the jaws by pulling laterally thereon and springing the jaws apart sufficiently to allow the neck to slip out from between them. When the conductor and neck are moved lengthwise, the insulating pin 18 will slide between the jaws until the head 19 contacts with the jaws, whereupon the circuit will be broken without detaching the conductor from the jaws. The operator of an engine will thus be able, by a process of elimination, to easily and quickly determine whether the igniters are sparking properly and if one of them is not working he can easily and quickly locate it without the use of tools and without the necessity of separating the conductor from the binding post or terminal.

In Fig. 6 I have shown a modification, which consists in providing a plug 20, made entirely of metal instead of having an insulating sleeve, as shown in Fig. 3. The conductor is thrust into the socket 21 in this plug and the end of the stripped wire is engaged and held by the binding screw in the same manner as shown in Fig. 3.

I claim as my invention:—

1. A terminal connection comprising an electric conductor having conducting and non-conducting surfaces, said conductor being capable of lengthwise movement, a clamp adapted to be attached to a terminal and gripping said surfaces, the lengthwise movement of said conductor making or breaking the circuit through said clamp, the lateral movement of said conductor spreading said clamp and separating said conductor therefrom.

2. A terminal comprising an electric conductor, a plug in circuit therewith and having a neck forming a conducting surface, an insulating pin forming a continuation of

said neck, said neck having a shoulder formed thereon and said pin having a stop, and spring jaws adapted to be attached to a terminal and between which jaws said neck
5 and pin are slidable to make or break the circuit.

3. A terminal connection comprising an electric conductor having conducting and non-conducting surfaces, spring jaws be-
10 tween which said conductor is slidable, the lengthwise movement of said conductor making or breaking the circuit through said spring jaws, the lateral movement of said
15 conductor spreading said jaws and allowing the separation of said conductor therefrom.

4. A terminal connection comprising an electric conductor having conducting and non-conducting surfaces, means adapted to be attached to a terminal and having a slid-
ing bearing on said conductor, the length- 20 wise movement of said conductor making or breaking the circuit through said means, the lateral movement of said conductor disengaging it from said means.

In witness whereof, I have hereunto set
my hand this 17th day of February 1911. 25

ROSS M. G. PHILLIPS.

Witnesses:

GENEVIEVE E. SORENSEN,
CATHERINE H. REHFUSS.

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