

Aug. 21, 1934.

H. RABEZZANA

1,970,767

CABLE TERMINAL

Original Filed March 22, 1928

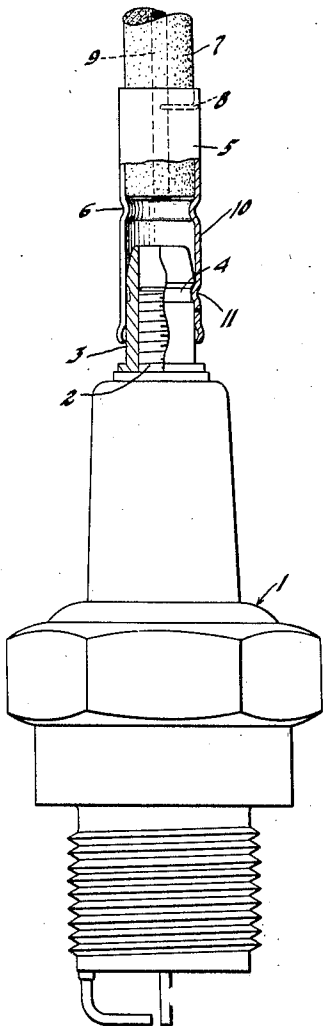


Fig. 1

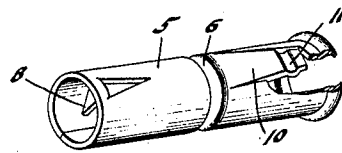


Fig. 2

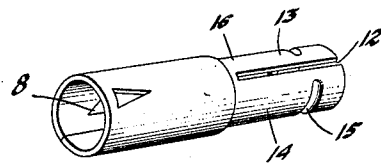


Fig. 3

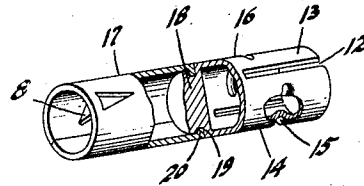


Fig. 4

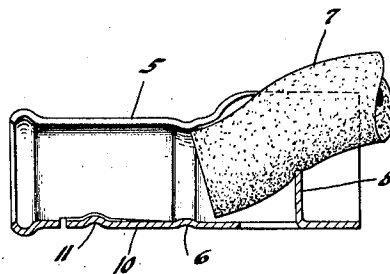


Fig. 5

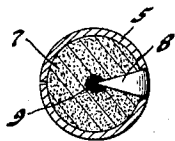


Fig. 6

Inventor

Hector Rabazzana

By Blackmore, Spencer & Finch
Attorneys

UNITED STATES PATENT OFFICE

1,970,767

CABLE TERMINAL

Hector Rabezana, Flint, Mich., assignor, by
mesne assignments, to General Motors Cor-
poration, Detroit, Mich., a corporation of Del-
aware

Original application March 22, 1928, Serial No.
263,903. Divided and this application October
31, 1929, Serial No. 403,792

1 Claim. (Cl. 173-269)

This invention relates to cable terminal con-
nectors, such as are employed for connecting
ignition cables to the terminals of spark plugs,
and is a division of my application, S. N. 263,903,
filed March 22, 1928, which has become Patent
No. 1,792,866 dated February 17, 1931.

My invention consists essentially of a cylinder
within one end of which the cable is secured
and the other end of which is adapted for grip-
ping engagement with the spark plug terminal.
The connection with the cable is preferably made
by means of a tongue bent inwardly from the
cylinder and forced through the cable covering
into electrical contact with the conductor. In
the forms disclosed herein, the gripping engage-
ment with the spark plug terminal is obtained
by providing the cylinder with an integral in-
wardly pressed portion for engaging the terminal.

Various modifications of my invention will be
described herein, as shown in the accompanying
drawing.

Fig. 1 is a partial section through the preferred
form of my connector showing it applied to a
conventional type of spark plug.

Fig. 2 is a perspective view of such preferred
form.

Figs. 3 and 4 are perspective views of modified
forms of the connector.

Fig. 5 is a view showing the method of con-
necting the cable end to the connector.

Fig. 6 is a cross-sectional view showing the
electrical contact of the cable connection.

In Fig. 1 the numeral 1 indicates a conventional
spark plug provided with a terminal 2 shown
as screw-threaded and equipped with a sleeve
3 provided with an annular groove 4 for cooper-
ation with my improved connector, the part of
this construction essential to the present inven-
tion being the provision of such annular groove
or equivalent engaging means. My preferred
form of connector consists of a cylinder 5 formed
of sheet metal and provided intermediate its
ends with an annular constriction or abutment
6 serving to limit the extent of insertion of the
ignition cable 7.

The numeral 8 designates a pointed tongue
pressed inwardly from the metal of the cylinder
5 and adapted to pierce the cable insulation and
make electrical contact with the cable conductor
9, as shown in Fig. 6. To assemble the cable
with the connector, the cable receiving end of
the cylinder 5 is left open at the seam, as shown
in Fig. 5, so as to permit the introduction of the
cable, it being understood that during or after

insertion of the cable, this open end of the cyl-
inder will be closed.

In my preferred embodiment, the other end
of the cylinder 5 is provided with a bendable
tongue 10 having an inwardly pressed portion
11, which as shown in Fig. 1, is adapted to engage
in the groove 4 of the spark plug terminal. The
bendable tongue 10 is preferably formed by cut-
ting or punching out a portion of the cylinder
wall between the abutment 6 and the terminal
receiving end, which in the final product is po-
sitioned diametrically opposite the split in the
cylinder and in longitudinal alignment with the
pointed tongue pressed therefrom as may be
seen from Fig. 2. As shown in Fig. 2, tongue 10
may be formed to extend toward the open end
of the connector adapted axially to receive the
grooved terminal of a spark plug by cuts con-
verging toward said end and joined together
near said end. It will be seen from Fig. 1 that
the cylinder 5 is of such size and form as to
maintain itself securely on the spark plug and
substantially in axial alignment with the grooved
terminal member 3 when the resilient tongue 10
engages the groove 4.

In the form shown in Fig. 3, the connector is
slotted diametrically as at 12 at the terminal-
receiving end to form opposed spring fingers or
bendable tongues 13 and 14. The fingers or
tongues are provided with inwardly pressed ribs
15 adapted to seat in the groove 4 of the spark
plug terminal in the same manner as the in-
wardly pressed portion 11 in the form shown in
Figs. 1 and 2. The end of the cylinder which
engages the terminal is reduced as at 16 to limit
the inward insertion of the ignition cable which
is connected thereto as previously described.

The construction in Fig. 4 illustrates a con-
nector formed in two parts 16 and 17. The ter-
minal-receiving part 16 is slotted and the spring
fingers or bendable tongues provided with in-
wardly pressed ribs similarly to the form shown in
Fig. 3. This part 16 is provided with a closed
end 18 having an annular groove 19 receiving
an inturned flange 20 on the cable-receiving
part 17, which latter part is split and provided
with the inwardly bent cable piercing tongue as
in prior forms. The closed end 18 serves to limit
insertion of the ignition cable.

My improved connector in its various forms
is characterized by the ease with which it may
be applied to the ignition cable and to the spark
plug terminal, and by the cheapness and sim-
plicity of its construction.

I claim:

110

A cable connector for spark plug terminals including a longitudinally split, tubular, cylindrical sleeve with an open end to axially receive and fit closely around a cylindrically grooved terminal, longitudinally extending cuts in said sleeve which converge towards said open end and are joined together at a point between the ends of said sleeve to provide an integral, resilient tongue, said tongue being formed with an inwardly extending portion for frictional engagement in the groove of the terminal.

HECTOR RABEZZANA.

10	85
15	90
20	95
25	100
30	105
35	110
40	115
45	120
50	125
55	130
60	135
65	140
70	145
75	150