Aug. 15, 1933. E. NOLAN 1,922,601

SPARK PLUG TERMINAL

Filed June 18, 1928

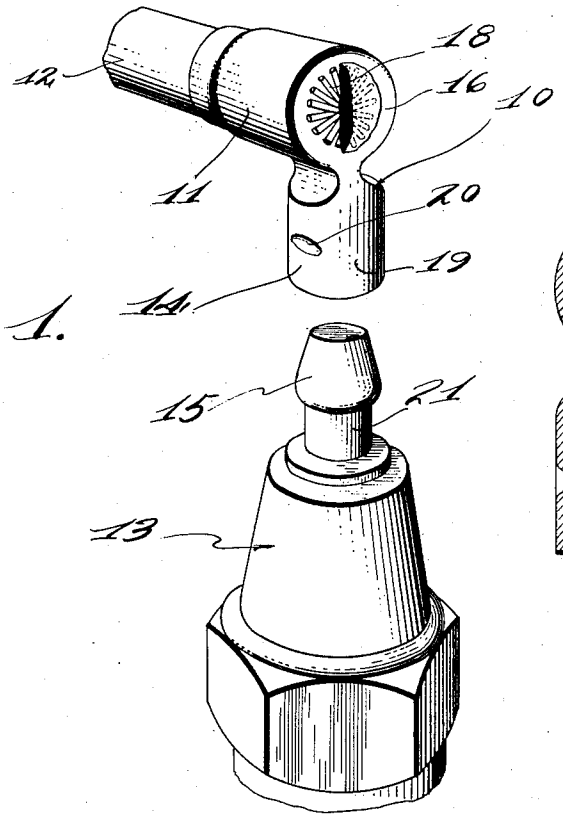


Fig. 1.

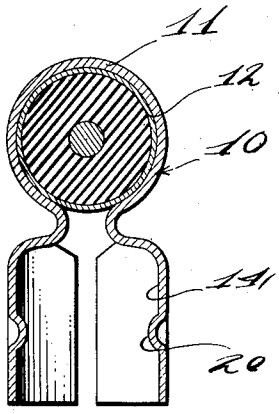


Fig. 4.

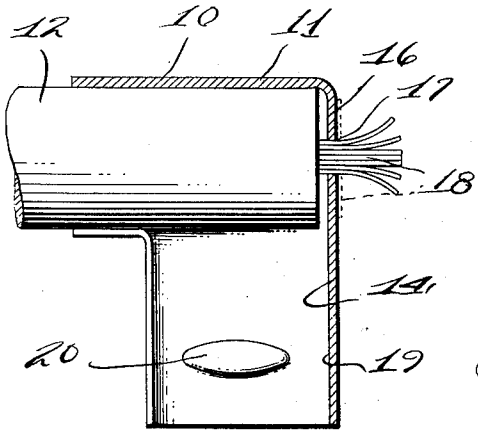


Fig. 2.

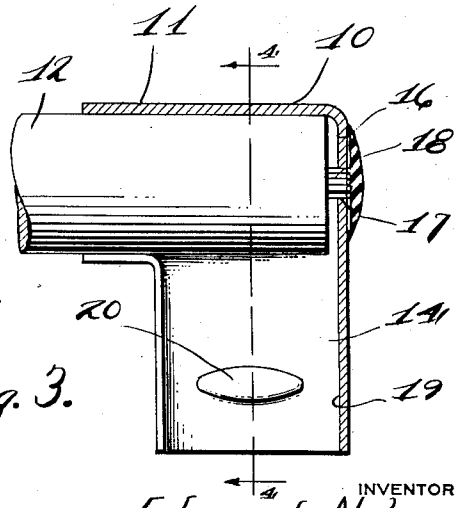


Fig. 3.

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SPARK PLUG TERMINAL

Edmund Nolan, Detroit, Mich.

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3 Claims. (Cl. 173—269)

This invention relates generally to terminal connectors designed for use with electric supply conductors for connecting the conductor or cable to a device to which an electric current is to be supplied and refers particularly to terminals adapted for use in connection with the ignition systems of internal combustion engines for detachably connecting the conductors to the spark plugs of said ignition systems.

An object of the invention is to provide a terminal connector so designed as to permit the end of the supply conduit to be easily and quickly secured thereto.

Another object is to provide a connector formed from a sheet metal stamping which can be economically manufactured in quantity production.

With the above and other objects in view the invention consists in certain novel features of construction, combinations and arrangements of parts as will be more fully described and particularly pointed out in the appended claims.

In the drawing:

Figure 1 is a perspective view of a terminal connector and a spark plug to which it is adapted to be detachably secured;

Figure 2 is a sectional view of the connector and supply cable before the conductor wire is secured to the end wall of the connector;

Figure 3 is a view somewhat similar to that shown in Figure 2 with the conductor wire soldered to the end wall of the connector.

Figure 4 is a section taken on line 4—4 of Figure 3.

Referring now to the drawing wherein like characters of reference indicate like parts, the numeral 10 designates a terminal connector formed from a single sheet metal blank and comprising a cup portion 11 adapted to fit about the insulating covering 12 of a supply cable through which an electric current is supplied to a spark plug 13, the connector also being provided with a socket portion 14 projecting laterally from the cup portion 11 and adapted to be detachably secured to the central terminal 15 of the plug 13.

Preferably the cup portion 11 is provided with a flattened end wall 16 having a centrally disposed aperture 17 therethrough. The end of the insulation 12 of the supply cable is cut so as to terminate short of the end of the conductor wire 18, the arrangement being such that the end of the insulation will abut against the inner face of the end wall, while the end of the conductor wire will project through the opening as shown in Figure 2. This wire is preferably made of a plurality of separate strands which are flattened out against the outer face of the end wall 16 and then secured thereby by means of solder so as to provide a good electrical connection.

The socket portion 14 extends substantially at right angles to the body portion 11 and is also substantially tubular in form, having its outer longitudinal wall 19 lying in the plane of the end wall 16. As will be noted the socket portion is longitudinally split and is provided with opposed indentations 20 which are adapted to ride over the outer end of the terminal 15 and to snap into the circumferential groove 21 for detachably securing the cable to the plug.

With the terminal formed in the manner above described, it will be apparent that there are no parts in direct line of the wall 16 which will interfere with the soldering of the conductor wire of the supply cable to the terminal and that by having the socket portion spaced laterally from the body portion, the former will be out of the way so that a soldering tool may be easily and quickly applied to the end wall in securing the wire thereto. This arrangement also permits the dipping of the end wall in solder, thus insuring a quick assembly of the parts.

It will therefore be evident that I have provided a terminal connector which eliminates some of the objectionable features present in connectors now in use and which can be cheaply manufactured in quantity production.

While it is believed that from the foregoing description, the nature and advantages of the invention will be readily apparent, I desire to have it understood that I do not limit myself to what is herein shown and described and that such changes may be resorted to when desired as fall within the scope of what is claimed.

What I claim as my invention is:

1. A terminal connector formed from an integral sheet metal blank fashioned to form two cylindrical portions having perpendicular axes and with the edges of the blank adjacent along the inner angle of said cylinders, one of said cylinders being adapted to receive an insulated conductor and having an end wall centrally apertured for the passage of the metallic conductor and permitting of securing the same from the outside, and the other of said cylinders being adapted for a snap engagement with the terminal contact there being also deep indentations in opposite sides of said cylinder between the same and the first mentioned cylinder to mutually reinforce said cylinders.

2. A terminal connector formed from an integral sheet metal blank fashioned to form two

cylindrical portions having perpendicular axes and with the edges of the blank adjacent on the inner angle of said cylinders, one of said cylinders being adapted to receive an insulated cable and having an end wall with a central aperture for the passage of the metallic conductor therethrough permitting of securing from the outside, said blank being deeply indented on opposite sides between said cylindrical portions to mutually reinforce the same, and the second of said cylindrical portions having indentations in the opposite sides thereof for forming a snap engagement with a terminal contact loosely fitting said cylindrical portion.

3. A terminal connector formed from an integral sheet metal blank comprising cylindrical portions having perpendicular axes, one of said cylinders being adapted to receive an insulated supply cable and being provided with an end wall with an aperture therethrough in alignment with the axis of said cylinder for receiving the wire of the conductor permitting the securing of the same to the outside of said end wall, and the other of said cylinders being adapted for a snap engagement with the terminal contact and having deep indentations in opposite sides of said cylinder between the same and the first mentioned cylinder to form a stop for the terminal contact and to mutually reinforce said cylinders.

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