R. H. FRANK.

TERMINAL CONNECTION.

APPLICATION FILED MAY 24, 1917.

1,266,575. Patented May 21, 1918.

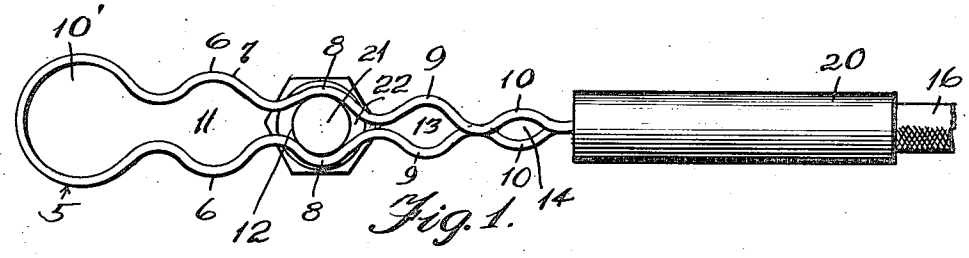


Fig. 1.

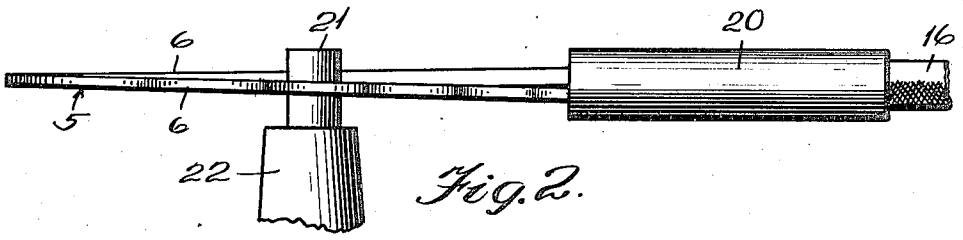


Fig. 2.

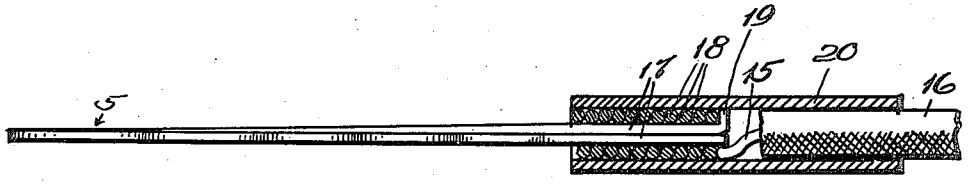


Fig. 3.

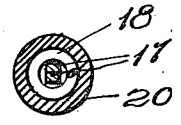


Fig. 4.

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TERMINAL CONNECTION.

1,266,575. Specification of Letters Patent. Patented May 21, 1918.

Application filed May 24, 1917. Serial No. 170,734.

To all whom it may concern:

Be it known that I, RICHARD H. FRANK, a citizen of the United States, residing at Malta, in the county of Phillips and State of Montana, have invented certain new and useful Improvements in Terminal Connections, of which the following is a specification.

My invention relates to improvements in terminal-connections, adapted for use with high tension cable wires, such as the wires which are secured to the spark plugs of an internal combustion engine, while not necessarily restricted to such use.

An important object of the invention is to provide a device of the above mentioned character, which is adapted to fit upon different size posts of spark plugs or the like, and to form a proper contact therewith, without the use of binding nuts, while the nuts may be used if desired.

A further object of the invention is to provide a device of the above mentioned character, which is adapted to quickly and conveniently connect the wire with the post of the spark plug, without liability of the operator receiving an electric shock or shocks.

Other objects and advantages of the invention will be apparent during the course of the following description.

In the accompanying drawings forming a part of this specification and in which like numerals are employed to designate like parts throughout the same,

Figure 1 is a plan view upon an enlarged scale, of a device embodying the invention,

Fig. 2 is a side elevation of the same,

Fig. 3 is a central longitudinal section through the same, and,

Fig. 4 is a transverse section taken on line 4—4 of Fig. 3.

In the drawings, wherein for the purpose of illustration is shown a preferred embodiment of my invention, the numeral 5 designates a terminal-connection, which is formed of a section of resilient wire, bent upon itself between its ends, providing spaced sides 6. The wire is preferably formed of brass, while any other suitable material may be employed. The terminal-connection 5 tapers rearwardly, and the sides 6 thereof converge rearwardly, as shown. As more clearly shown in Fig. 1, the sides 6 are provided with outwardly bulging oppositely arranged waves or turns 7, 8, 9, and 10, providing recesses 11, 12, 13, and 14, respectively, which decrease in diameter rearwardly.

The numeral 15 designates a preferably copper wire, covered with insulating material 16. The forward end of the wire 15 is coiled about the inner ends or shanks 17 of the sides 6, providing turns 18. These shanks 17 are preferably arranged in superposed relation. One shank 17 is bent outwardly, forming an extension 19, disposed rearwardly of the turns 18, as shown. The turns 18 are preferably soldered to the shanks 17, while they may be secured thereto by any other suitable means.

The numeral 20 designates a preferably stiff or rigid insulating sleeve, receiving and covering the turns 18 and the end of the insulating covering 16. This sleeve 20 is preferably formed of gutta-percha, while other material may be employed.

In use, the operator holds the insulating sleeve 20 in his hand and moves the terminal-connection in proximity to the post 21 of the spark plug 22, so that such post enters the recess 11. The device is then moved forwardly until the post fits snugly in a succeeding recess, depending upon the diameter of the post. In the present instance, the post is shown as held in the recess 12, but if of a smaller diameter it would be held in a selected succeeding recess. The sides 6 being resilient, yield laterally to permit of the post entering the proper recess, and these sides will have a proper binding contact with the post, for affording proper electrical connection.

It is to be understood that the form of my invention herewith shown and described is to be taken as a preferred example of the same, and that various changes may be resorted to in the size, shape, and arrangement of parts, without departing from the spirit of my invention or the scope of the subjoined claim.

Having thus described my invention, what I claim is:

A device for connection with terminals of different diameters, comprising a section of resilient wire bent upon itself for providing a curved end portion adapted for the reception of the largest terminal with which the device is adapted to coact, and sides which converge away from the curved

end portion, said sides being provided with a plurality of transverse pairs of turns which provide recesses of different diameters; a main wire; and means for connecting the free ends of the resilient wire with the main wire.

In testimony whereof I affix my signature in the presence of two witnesses.

RICHARD H. FRANK.

Witnesses:
WM. B. GORDON,
WM. BALLARD.