F. A. TEFFT.

ELECTRIC CONNECTOR.

APPLICATION FILED MAY 21, 1917.

1,254,172. Patented Jan. 22, 1918.

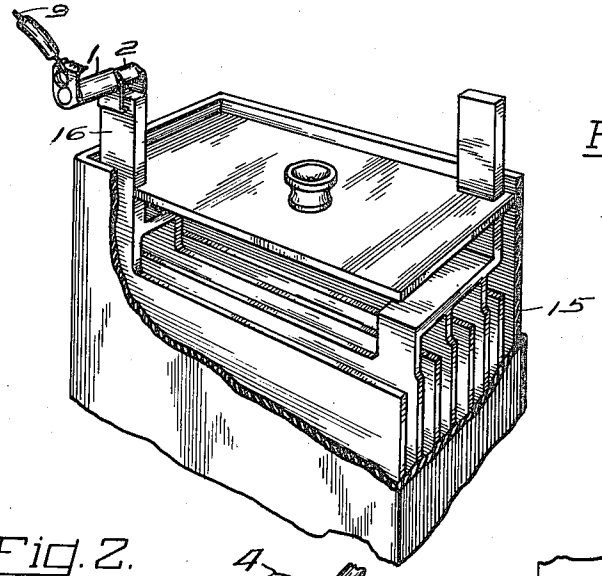


Fig. 1.

Fig. 3.

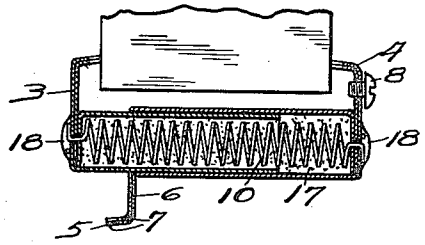


Fig. 2.

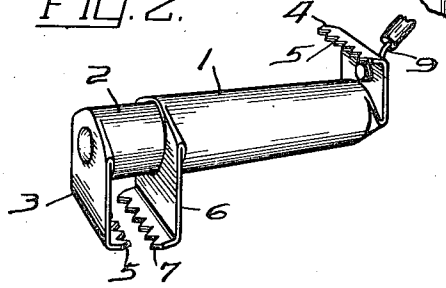
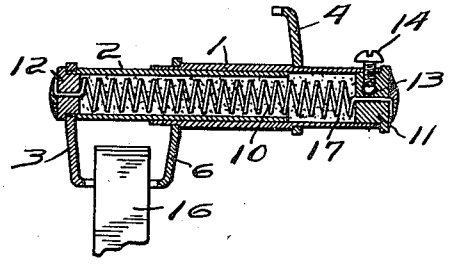


Fig. 4.



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ELECTRIC CONNECTOR.

1,254,172. Specification of Letters Patent. Patented Jan. 22, 1918.

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To all whom it may concern:

Be it known that I, FREDRICK A. TEFFT, a citizen of the United States, and a resident of Toledo, in the county of Lucas and State of Ohio, have invented a certain new and useful Electric Connector; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this specification.

My invention relates to electric connectors and it has for its object to provide a connector which may be readily used to connect a line such as a lead line to a battery terminal, or for making temporary connections between electrical devices of any character and yet one which is of long life and exceedingly efficient. It particularly has for its object to provide a spring clamping article connector wherein the spring is so protected that deterioration thereof will be prevented. In electrical devices acids and alkalis are commonly used, according to the character of the electrical devices, which causes the deterioration or disintegration of the metal parts. The activity of the acids or the alkalis quickly causes springs to lose their elasticity and consequently causing connectors having such springs to become useless for readily connecting with electrical devices.

Constructions containing the invention may partake of different forms. I have selected one form of construction as an example of such constructions for purposes of illustration. The form selected is illustrated in the accompanying drawings and is described hereinafter.

Figure 1 of the drawings illustrates the construction selected and a battery to which it is connected. Fig. 2 illustrates a perspective view of one form of the connector. Fig. 3 illustrates a sectional view of the connector illustrated in Fig. 2. Fig. 4 illustrates a sectional view of a modified form of construction.

The connector is provided with two telescoping tubes 1 and 2, and two jaws 3 and 4 preferably having serrated teeth 5. The jaws may be located at or near the ends of the telescoping tubes 1 and 2. In the form of the invention illustrated in Figs. 1 and 2, the telescoping parts of the jaws may be formed of tubes, the tubes being compressed and turned down to form the jaws 3 and 4. The outer telescoping member 1 may be provided with jaws located at each end but turned toward opposite sides of the telescoping member 1, that is, it may be formed with the jaw 6 which is also provided with a serrated edge 7. This provides a means for clamping parts of electrical devices of different sizes, that is, the parts may be clamped between jaws 3 and 6 or by turning the telescoping member 1 to bring the jaw 4 in alinement with the jaw 3, the parts may be clamped between the jaws 3 and 4.

The connector may be secured or connected to a lead line by any suitable means such as by the screw 8 about which the end of the lead line 9 may be turned and then the end of the lead line 9 may be clamped by threading the screw 8 into the connector such as into the jaw 4 in which the screw 8 is located.

The invention has many features of value but the main object of the invention is to protect the means whereby the jaws are yieldingly drawn together. This is done by inclosing the yielding means within the telescoping tubes. A spring 10 is located within the tubular telescoping parts 1 and 2 and its ends are connected to the outer ends of the tubular members which are closed by bending the outer jaws 3 and 4 over the ends. The ends of the spring 10 may be secured by a suitable non-corrosive acid and alkali resisting material such as turning the ends of the spring and covering them with lead which will give exceedingly long life and greatly extend the utility of the connector.

To further protect the springs 10 from the fumes and vapors of the acids and the alkalis, the tubular members may be filled with grease or other acids and alkali resisting material so as to completely cover these springs. On account of cheapness, convenience and efficiency, I find it best to fill the tubular members 1 and 2 with grease.

In the form of construction illustrated, Fig. 4, the tubular telescoping members 1 and 2 are formed of machined parts, that is, they are tubular members which are cut and turned to provide shoulders against which the jaws 3, 4 and 6 may be forced to secure them in position. Moreover, the jaw 4 may be located at a midpoint along the telescoping member 1 to leave sufficient room for the operator to manipulate the con-

nector when making a connection with an electrical device. The ends of the springs 10 are located in heads 11 and 12, a transverse hole 13 is bored through one of the heads and the tubular member 1 and a screw 14 is threaded into the head 11. The lead wire 9 may be inserted into the hole 13 and clamped in position by means of the screw 14 thus connecting the lead wire 9 to the connector. The head 12 may be placed somewhat loose in the tubular member 2 so that when the tubular member 1 is turned so as to bring one or the other of the clamping jaws 4 or 6 into alinement with the clamping jaw 3, the spring 10 will cause the head 12 to rotate and will thus prevent the spring 10 from causing the tubular body 2 to re-rotate when the connector is released from the electrical device to which it may be connected. In the form of the invention illustrated in Fig. 4 the tubular bodies 1 and 2 may also be filled with grease such as a heavy oil or greases used in machinery and automobiles.

The constructions containing the invention illustrated in the accompanying drawings may be modified by those skilled in the art without departing from the spirit of the invention which may be contained in many forms of construction and used for many purposes.

I claim:

1. In a connector the combination of a tubular member having a jaw, a second tubular member telescoping the first tubular member and having a jaw at each end located on opposite sides of the second tubular member, a spring located within the tubular members and connecting the ends thereof to yieldingly draw the jaws together.

2. In a connector, a pair of telescoping tubular members having clamping jaws, a spring located within the tubular members for telescoping the tubular members drawing the jaws together, grease contained in the telescoping members and surrounding the spring.

3. In a connector, a pair of tubular telescoping members having closed outer ends and clamping jaws, a tension spring located within the tubular members and secured in the outer ends.

4. In a connector, a pair of tubular telescoping members having closed outer ends and clamping jaws, a tension spring located within the tubular members and secured in the outer ends, grease contained in the tubular members and surrounding the spring.

In testimony whereof, I have hereunto signed my name to this specification.

FREDRICK A. TEFFT.