

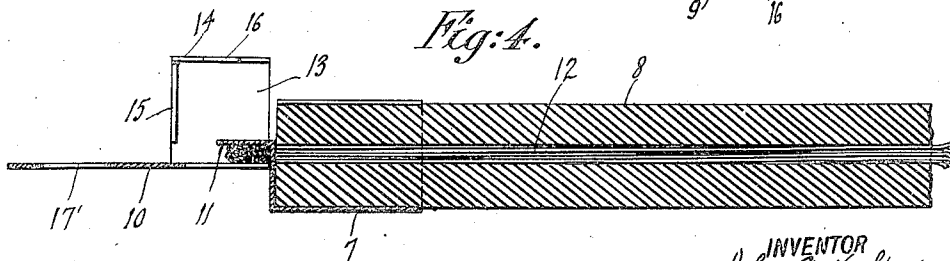
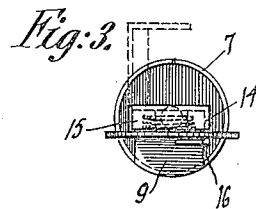
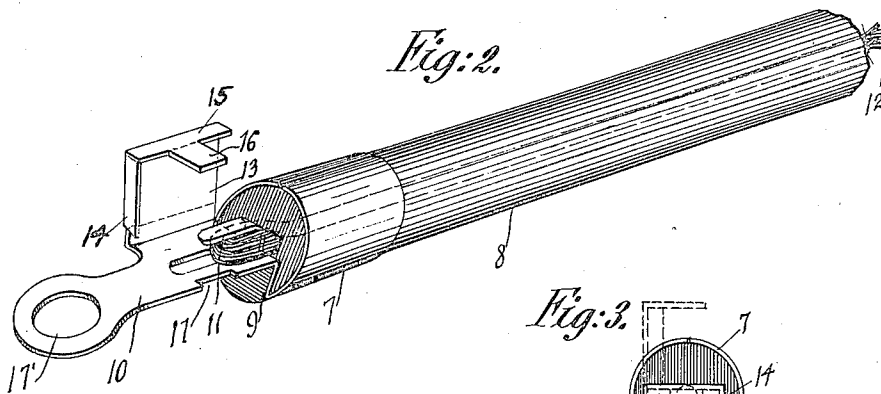
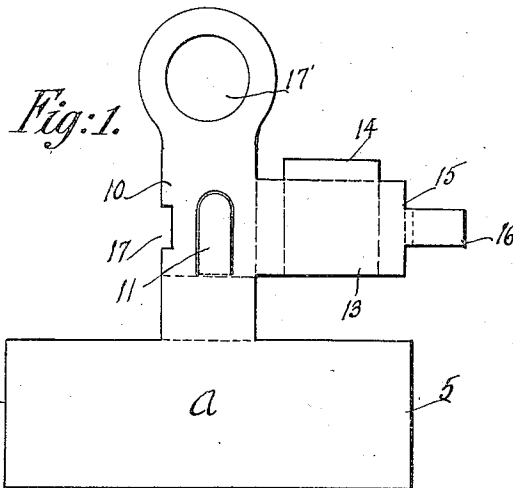
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TERMINAL FOR ELECTRIC CONDUCTORS

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UNITED STATES PATENT OFFICE.

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TERMINAL FOR ELECTRIC CONDUCTORS.

Application filed November 17, 1920. Serial No. 424,602.

To all whom it may concern:

Be it known that I, JOHN A. KULIER, a citizen of the United States, and resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Terminals for Electric Conductors, of which the following is a specification.

This invention relates to improvements in terminals for electric conductors and has for its general object to facilitate the operation of effecting connection between the conducting wire and the terminal, and to provide a terminal which will effectively hold the wire locked against displacement without the use of solder, and which will not impair the flow of current from the wire to the part with which the wire is connected by the terminal. To this end the invention resides in providing a stop disposed so as to intercept the end of the insulated portion of an electric wire and thereby prevent movement thereof in one direction and in a keeper adapted to engage and interlock with a loop made by bending the end portion of the wire core of an insulated conducting wire and disposed so as to prevent longitudinal movement of the said wire in the opposite direction.

Other objects will appear and be better understood from that embodiment of the invention of which the following is a specification, reference being had to the accompanying drawings forming part thereof, and in which:

Figure 1 is a plan of the blank from which the terminal of this invention is formed;

Figure 2 is a perspective of the terminal connected to a conducting wire showing the parts immediately before locking;

Figure 3 is an end elevation showing the positions of the parts when the terminal is in use;

Figure 4 is a longitudinal section.

The body *a* of the blank is formed throughout of metal such as copper, brass or the like, and cut or stamped from a sheet into approximately the shape shown in Figure 1. The wings 5 and 6 extending laterally from one end portion of body *a* are operated upon so that each curves in a direction opposed to the other and for an extent to enable the wings to cooperate to provide a split sleeve 7 shown in Figure 2, suitable for receiving a section of the insulated wire 8.

In this connection it may be well to state that by preference the diameter of the sleeve 7 will be a trifle less than the diameter of wire 8, so that the sections of the sleeve will undergo a slight distension upon passing the section of wire 8 into the sleeve and will thereby operate to bind upon the engaged portion of the wire. The shoulder 9 at one end of sleeve 7 constitutes a stop which extends inwardly with respect to the sleeve so as to intercept the end surface of the insulated covering of the wire 8, and thereby prevent longitudinal movement of the said wire in one direction. The provision of shoulder 9 results in offsetting the sleeve 7 from the opposite end portion 10 of body *a* which at its inner end and at approximately its point of connection with the shoulder is upstruck to provide the hook or keeper 11 which is disposed so as to align approximately with the wire core 12 of insulated conducting wire 8.

It will of course be understood that the bared portion of the core 12 as shown results from the usual practice of cutting or scraping away the insulation from one end of wire 8. In the present instance this removal of the insulation is carried on for an extent sufficient to permit the bending of the exposed portion of the core around the hook or keeper 11, which then operates by engaging the loop or eye formed by bending the core to prevent movement of wire 8 outwardly from sleeve 7.

The wing 13 extending laterally from the portion 10 is arranged opposite to hook or keeper 11. This wing 13 is bendable transversely with respect to the portion 10 in order that it may encounter the hook or keeper 11 and operate to flatten this hook or keeper to clinch it about the wires 12. A flange 14 on one side of wing 13 and a flange 15 on the end of the said wing operate to prevent spreading or displacement of the strands of core 12 during the bending of hook or keeper 11 and the compressing of the strands thereby, it being obvious that the said flanges bridge or cross the space between the wing and the portion 10 when the wing is bent so as to extend parallel with the said portion 10. The provision of these flanges also increases the conducting properties of the terminal in that whatever strands of the core that become displaced when the core is squeezed by the hook or keeper will make contact

with one or the other of the said flanges. A tongue 16 extending from flange 15 is adapted to enter a recess 17 in the portion 10 and then be bent around one face of the
 5 said portion 10 and thereby operate to lock the wing as shown in Figure 3. The section of the portion 10 extending outwardly from wing 13 is provided with an eye 17 for receiving the binding post of a spark plug
 10 or other device to which wire 8 is to be connected.

From the foregoing the construction and operation of the invention will be readily understood. Although I have shown and described an ideal embodiment of the invention it is to be understood that I am not
 15 to be limited to the use of the parts shown and described, it being obvious that minor mechanical changes may be adopted within the scope of what is claimed without departing from the spirit of the invention.

I claim:

1. A terminal for electric conductors comprising a body adapted to engage about the
 25 insulated end portion of a conductor and having an end portion extending from the body substantially axially of the conductor, said end portion having a keeper to receive the extremity of the wire, means associated with said end portion and extending
 30 entirely across and in direct contact with the top of the keeper and adapted to move in substantial parallelism with the end portion and toward said end portion for compressing the keeper upon the wire extremity,
 35 said means having engagement with said end portion at one side, and means to secure said means to the opposite side of said end portion.

40 2. A terminal for electric conductors comprising a body adapted to be bent about the insulated end portion of a conductor and having an end portion extending outwardly therefrom, said end portion having

a keeper for engagement over the extremity
 45 of the electric wire, and means carried by the end portion for direct engagement with the keeper and adapted to be interlocked with the end portion at opposite sides
 50 of the keeper to hold keeper from bending under tension of the wire.

3. A terminal for electric cables, comprising a sleeve part adapted to embrace the insulated end of a cable, an end portion
 55 extending from the sleeve part, a keeper hook raised from the end portion and adapted to receive the extremity of the electric wire therebeneath, and a locking device carried by the end portion and adapted
 60 to be secured entirely across the top of the keeper hook in contact therewith for holding the later from lifting under tension of the wire.

4. A terminal for electric cables and the like comprising means adapted to have engagement
 65 with a portion of the cable, an end portion for the terminal extending outwardly beyond said means and having a hook for a projecting end of the wire, a wing movably carried by the end portion and
 70 adapted to move into contact with said hook, said wing having flanges arranged at open portions of the hook to confine the wire.

5. A terminal for electric cables and the like comprising means to engage the cable,
 75 an end portion projecting from said means and having a bendable hook engaged by the wire of the cable, a wing foldably associated with said end portion and adapted to compress the bendable hook about the wire, said
 80 wing having flanges lying at initially open portions of the hooks, said wing further having means to clamp about the end portion.

In testimony that I claim the foregoing
 85 as my invention, I have signed my name hereunder.

JOHN A. KULIER.