July 3, 1934. G. WERNER 1,965,270

CABLE FASTENING

Filed March 26, 1930

Fig.1.

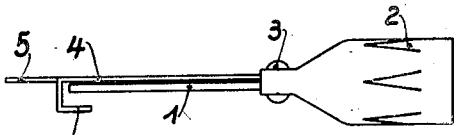


Fig.2.

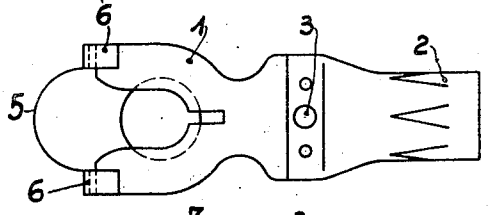


Fig.3.

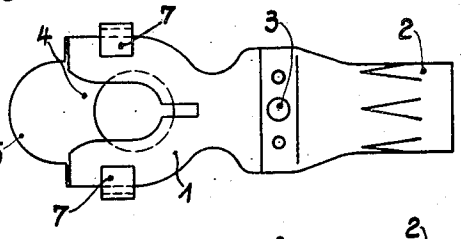


Fig.4.

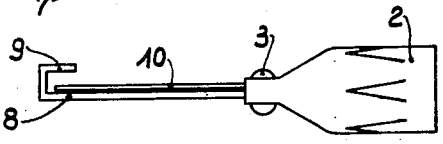


Fig.5.

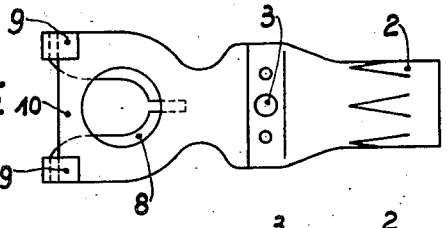


Fig.6.

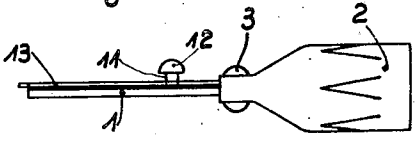
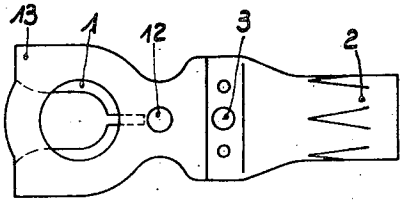


Fig.7.



Inventor
Gustav Werner
by Steward & McKay
his attorneys

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UNITED STATES PATENT OFFICE

1,965,270

CABLE FASTENING

Gustav Werner, Stuttgart, Germany, assignor to Robert Bosch Aktiengesellschaft, Stuttgart, Germany

Application March 26, 1930, Serial No. 439,157
In Germany December 6, 1929

7 Claims. (Cl. 173—269)

The present invention relates to cable fastenings and is particularly applicable to ignition cables of internal combustion engines.

In order to secure ignition cables to the terminals of sparking plugs so that they cannot become loosened through vibration or pulling at the cable, resilient cable terminals of the flat forked type which snap into a small groove of the plug terminal under pressure, are provided in known manner with a leaf spring lying parallel to the cable socket, the spring having formed therein a closed eye, preventing lateral displacement of the cable terminal. When inserting the cable terminal into the groove of the plug terminal the leaf spring is lifted so far that it can slide over the end of the plug terminal and when the opening or eye comes into register with the end of the terminal, the leaf springs down again on to the cable terminal. Without excessive bending the cable terminal cannot then be loosened from the plug terminal. This construction however has the disadvantage that when the cable is taken off the plug terminal, the leaf spring, through carelessness, may be easily bent so far as to exceed the elastic limit of the material of the spring which thereby becomes useless.

According to the present invention this disadvantage is avoided by causing the end of the leaf spring and the cable terminal to engage one another by means of projections or lugs on one of the two parts, so that during the insertion of the cable terminal on the plug terminals the leaf spring can only be displaced by an amount corresponding to the distance from the end of the terminal to the groove. In this way it is impossible to bend the leaf spring so far that it is permanently altered in shape.

The invention is more particularly described with reference to the accompanying drawing in which:—

Figure 1 is a side view of one form of cable terminal.

Figure 2 is a corresponding plan view of the cable terminal from below.

Figure 3 is a plan view from below of a cable terminal with lateral lugs on the leaf spring.

Figure 4 is a side view of a further construction.

Figure 5 is a plan view corresponding to Figure 4.

Figure 6 is a side view of a still further form of construction.

Figure 7 is a plan view corresponding to Figure 6.

A leaf spring 4 is secured by rivets 3 to the fork-ended element 1, which is secured by the same rivets 3 to a cable engaging sleeve 2 having backwardly projecting teeth, the leaf spring projecting with its end 5 over the fork-element 1. Two lugs or flaps 6 on the spring 4 are bent under the edge of the fork-element at the end.

The construction according to Figure 3 only differs from that in Figures 1 and 2 in that the lugs 7 of the leaf spring instead of being bent over the end of the fork-element are bent over its lateral edges.

In the example according to Figures 4 and 5, the fork-element 8, instead of the leaf spring, has two lugs 9 which are bent over the end of the leaf spring 10.

According to Figures 6 and 7 a pin 11 with a head 12 is mounted on the fork-element 1. This pin 11 passes through a hole in the spring 13 with ample clearance. The head 12 serves as a stop for the leaf spring 13.

I declare that what I claim is:—

1. A cable terminal comprising a cable engaging member, a fork-ended element adapted to engage in a groove in a terminal pin, a leaf spring element secured at one end to said fork-ended element to extend therealong to a free terminal opposite the forks in said fork-ended element, said terminal being apertured to fit over said pin, and at least one lug on one of said elements loosely embracing said other element to engage therewith at a point positively limiting displacement of said leaf spring relatively to the fork-ended element.

2. A cable terminal comprising a cable engaging member, a fork-ended element adapted to engage in a groove in a terminal pin, an apertured leaf spring secured at one end to said fork-ended element and having lugs engaging over the free or face end of said fork-ended element for limiting displacement of said spring relatively to said fork-ended element.

3. A cable terminal comprising a cable engaging member, a fork-ended element adapted to engage in a groove in a terminal pin, an apertured leaf spring secured at one end to said fork-ended element and having lugs loosely engaging over the sides of said fork-ended element at points limiting displacement of said spring relative to said fork-ended element.

4. A cable terminal comprising a cable engaging member, a fork-ended element adapted to engage in a groove in a terminal pin and having angled lugs extending therefrom and an apertured leaf spring secured at one end to said fork-

ended element and extending within the lugs thereon whereby relative displacement of the spring and fork-ended element is limited.

5. A cable terminal comprising a cable engaging member, a fork-ended element adapted to engage in a groove in a terminal pin, an apertured leaf spring element secured at one end to said fork-ended element, one of said elements being provided with lug extensions embracing said other element near the free end thereof and permitting limited displacement between said elements.

6. A cable terminal comprising a cable-engaging element, a rigid fork-ended member secured to said cable-engaging element and adapted to engage in a groove in a terminal pin, a leaf-spring member secured at one end to said fork-ended member to extend therealong to a free terminal opposite the forks in said fork-ended member, said terminal being apertured to fit over said pin, and restraining means to positively limit the displacement of said leaf-spring member relative to said fork-ended member, said restraining means comprising a rigid stop element mounted on one of said members and adapted to engage the other of said members only upon a predetermined relative displacement of the free ends of said members.

7. A cable terminal comprising a cable-engaging member, a flat fork-ended element secured to said cable-engaging member and adapted to engage in a groove in a terminal pin, a leaf spring secured at one end to said element to extend when in unflexed condition in parallelism therewith, said spring having an apertured terminal opposite the opening between the forks of said fork-ended element and means for positively limiting the displacement of said leaf spring relative to said fork-ended element.

GUSTAV WERNER.