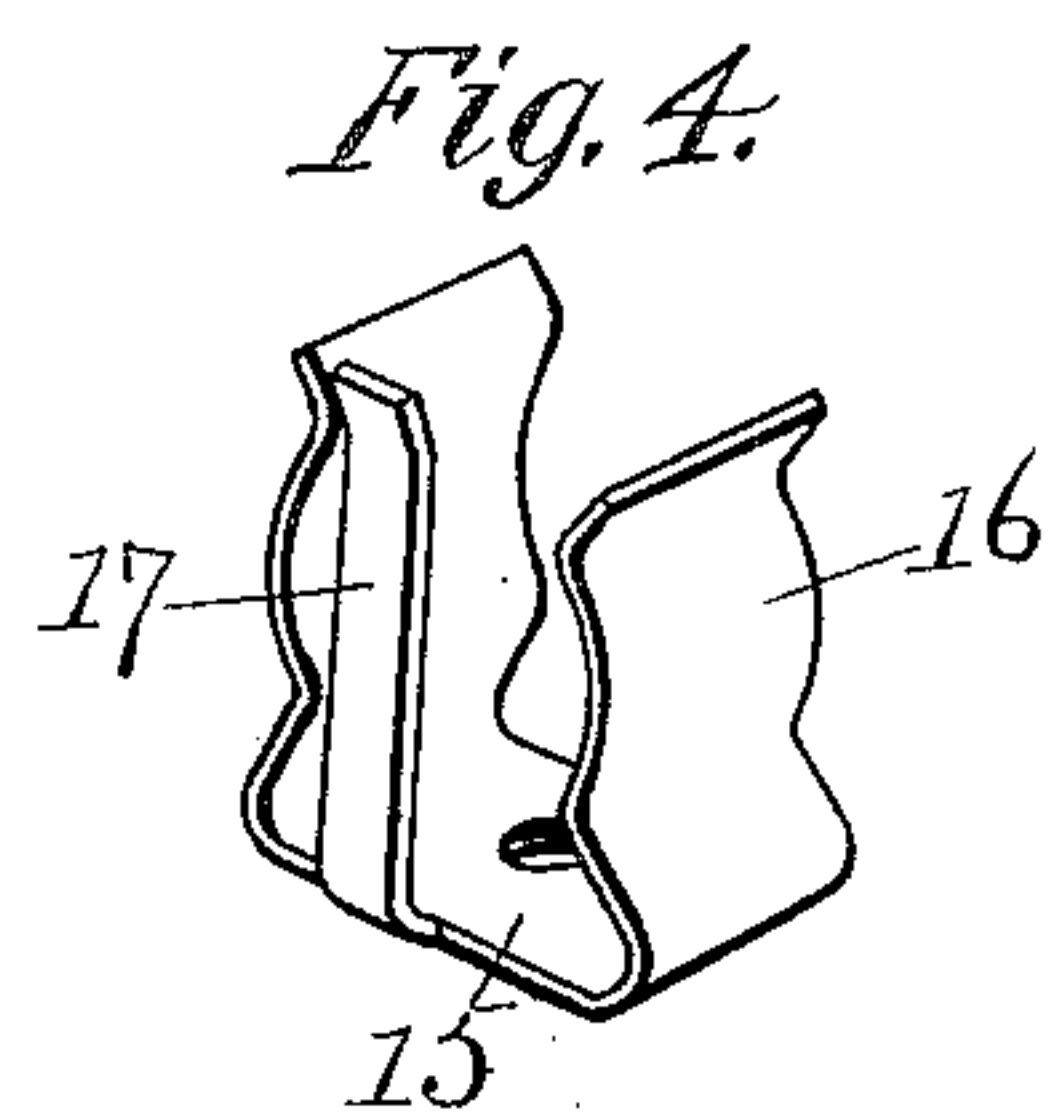
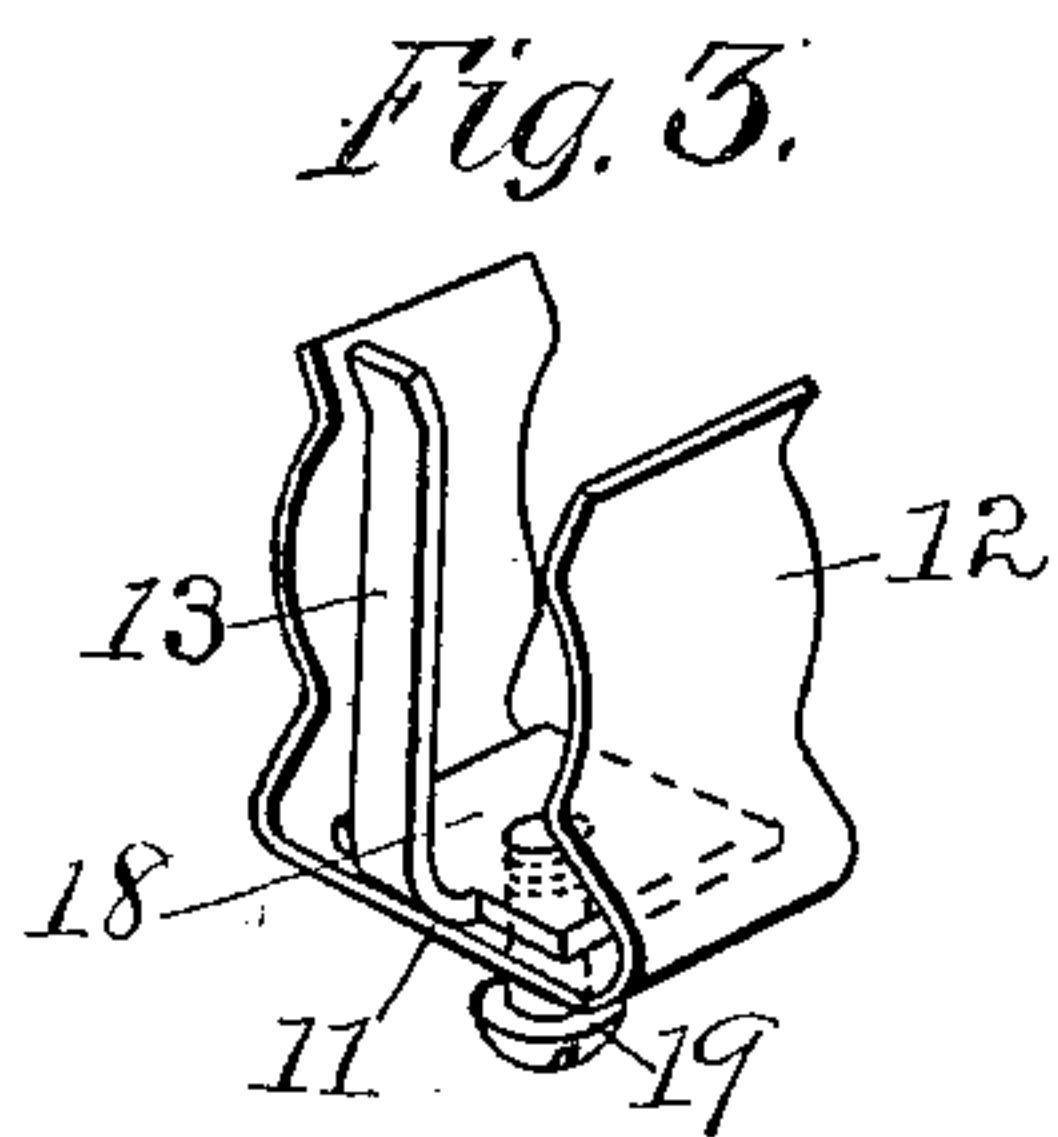
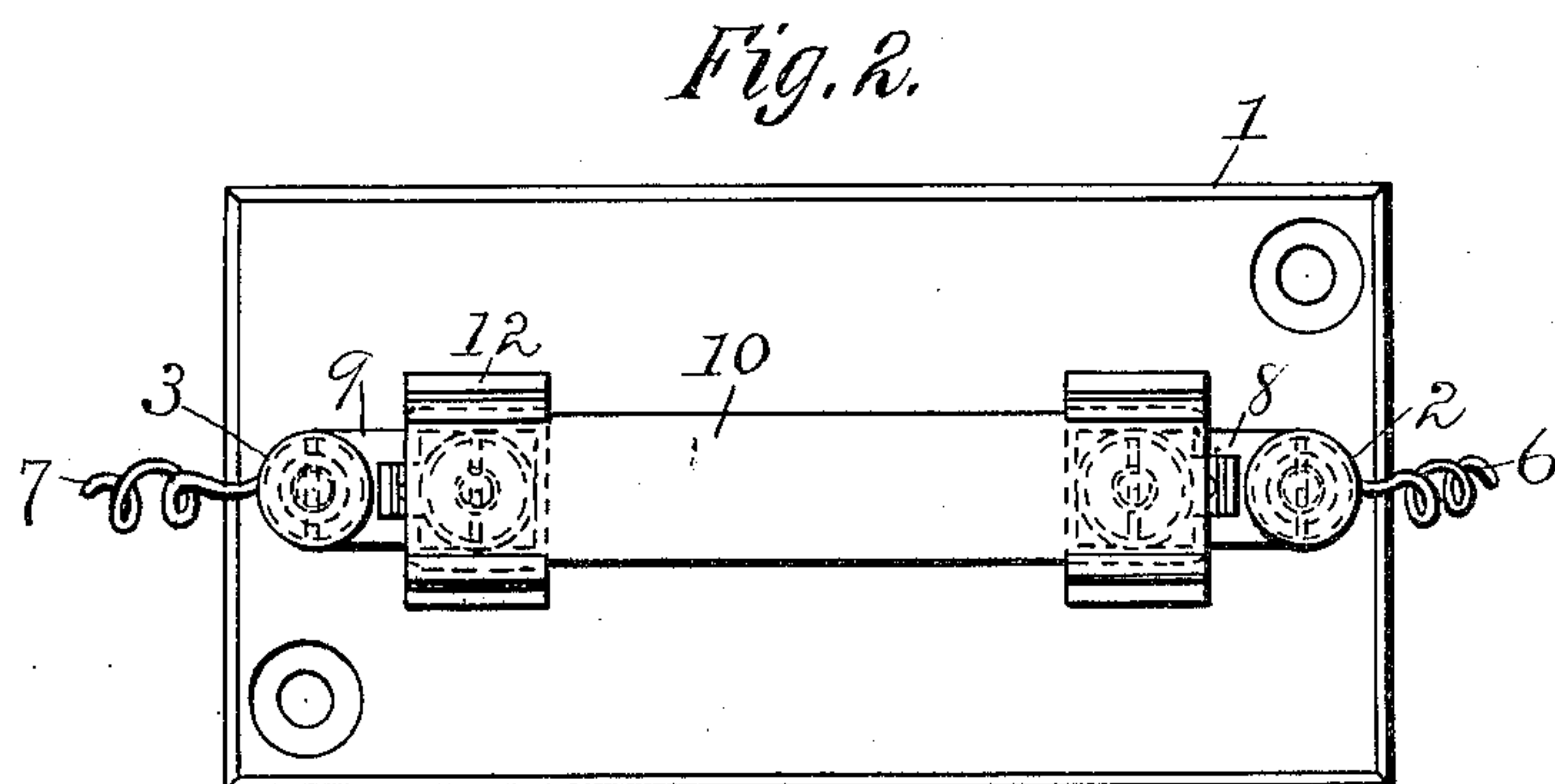
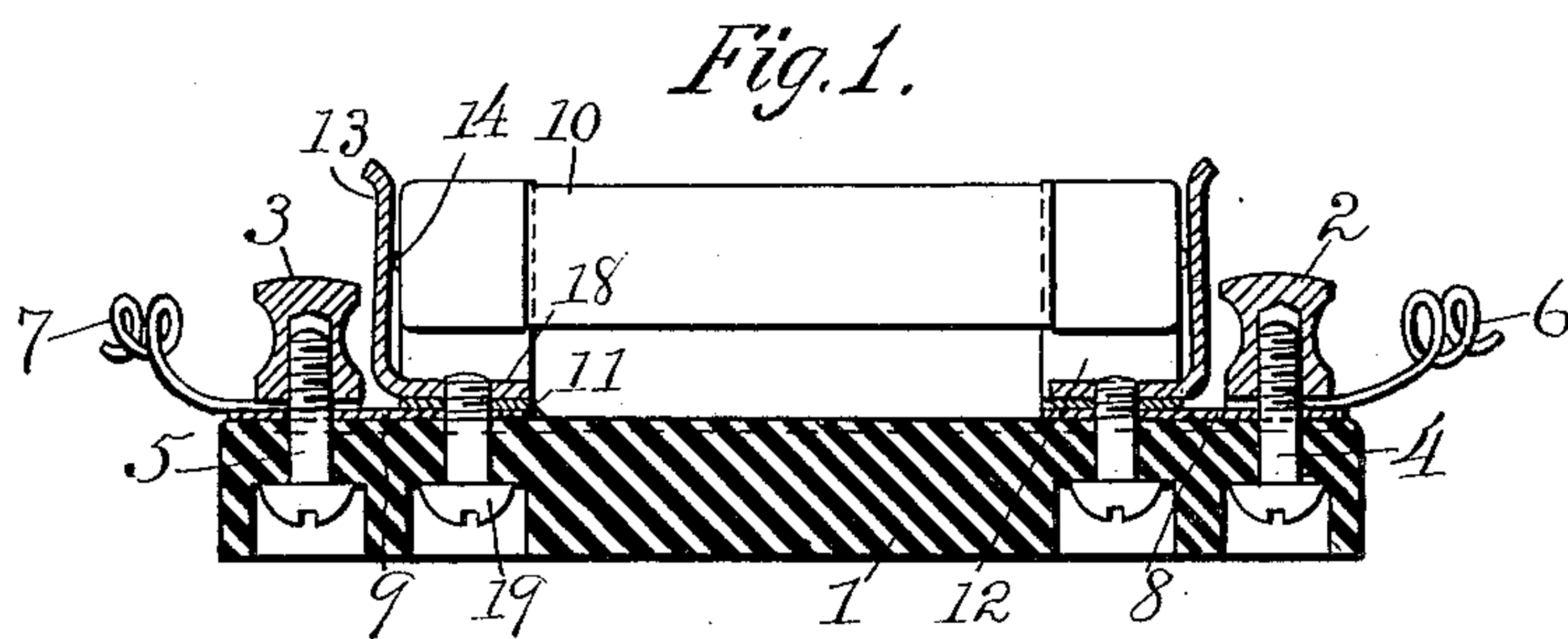


J. H. TRUMBULL.  
ELECTRIC FUSE HOLDER.  
APPLICATION FILED JUNE 6, 1905.

946,741.

Patented Jan. 18, 1910.



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# UNITED STATES PATENT OFFICE.

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## ELECTRIC-FUSE HOLDER.

946,741.

Specification of Letters Patent.

Patented Jan. 18, 1910.

Application filed June 6, 1905. Serial No. 263,923.

*To all whom it may concern:*

Be it known that I, JOHN H. TRUMBULL, a citizen of the United States, and a resident of Plainville, in the county of Hartford and State of Connecticut, have invented a new and Improved Electric-Fuse Holder, of which the following is a specification.

My invention relates to that class of devices used for the purpose of preventing a wire or system from being overcharged with electricity, and the object of my invention is to provide a holder for such devices that shall securely retain the fuse in place in position at all times to perform the function required of it, and also to provide a device of this class in which intimate electrical contact shall at all times be maintained.

A form of device in the use of which these objects may be attained is illustrated in the accompanying drawings, in which—

Figure 1 is a view in lengthwise section through a device embodying my invention. Fig. 2 is a top or plan view of the device. Fig. 3 is a detail perspective view of one of the clips or circuit terminals. Fig. 4 is a detail view of a clip or circuit terminal showing a modified form of the invention.

In devices employed for holding a fuse prior to my invention the metal tips forming the contact for the fuse have been grasped and the fuse then held in place by the spring action of clips upon these metal tips or contacts. A danger is present, however, in devices of this class for the reason that jars or vibrations tend to gradually move the fuse in the clip so that the metal surface forming the contact between the clip and the fuse is greatly reduced, or entirely removed. When this surface is reduced to a sufficient degree the operation of the device is, of course, imperfect.

By the use of my improved holder I have provided means whereby the fuse is positively held in position and in a manner to provide an improved and extremely efficient contact.

In the accompanying drawings the numeral 1 denotes a base, made of any suitable insulating material and on which the holder and connections are mounted. Wire clamping devices consisting of clamp screws 2—3 secured to threaded studs 4—5, passing through the base to the upper side thereof,

are provided at each end of the base for the reception of the wires 6—7. Conductors 8—9 extend from said clamps to a point to engage the clips or holders for the fuse 10. These holders are made in the form of a clip consisting of a base 11 and spring arms 12 extending upward from the base and adapted to grasp a fuse on opposite sides and frictionally hold it in the grasp of the clip. A bar 13 extends upward from the base to a position opposite the end of a fuse 10 with which it makes intimate contact. Each of the clips is provided with such a bar, and these bars are spring bars adapted to move apart sufficient to admit the fuse 10, but to closely grasp the fuse and exert a pressure endwise thereon and to closely engage with the fusible contact or connection 14 on each end of the fuse. The fusible connection 14 extends through the fuse tube as indicated and is in close contact with the spring arms 13. The metallic ends of the tube which are also connected with the fusible contact 14 are gripped by the spring clips, thus additional contact is provided for the fusible member and the end springs bearing firmly on the fusible contact insure perfect and bright contacts owing to the comparatively soft nature of the fusible contact which, when forced between the end springs will make the firmest and most perfect contact possible. The advantages of this arrangement are apparent inasmuch as a direct and firm electrical connection is established between the opposite ends of the fusible member, insuring additional conductivity to that provided by the holding members or clamps 12. By giving a firm end support to the fusible member and a substantially firm side support through the clamps 12, with the metallic end pieces of the fuse tube, it is practically impossible for the parts to wear sufficiently to cause improper contact. It is also advantageous to have these end bars 13 firmly secured through the base part 18 which serves as a nut for the screw 19 and locks the various parts in positive position. By this construction it will be seen that the fuse is firmly held in position against endwise and against lateral movement, and the contact between the base and the fusible point or contact 14 is direct, thus providing a most efficient form of device for conducting the electric current.



In the form of device shown in Fig. 4 the clip consists of a base 15 and upwardly extending side parts 16 formed as in the device shown in Fig. 3. The bar 17, however, is  
5 formed integral with the base. In the form shown in Fig. 3 the bar 13 has a base 18 that is secured in position as by means of the screw 19 passing upward through the base 1 to secure the clip in position.

10 What I claim as my invention and desire to secure by Letters Patent is:—

In combination with a base of insulating material, clips secured to said base, each having a base with spring-arms projecting up-

ward at each side thereof to engage and 15 hold the ends of a fuse against lateral movement and a spring-bar having a base located between said arms and with its spring-arm extending upwardly to engage the end of the fuse, said base forming a nut for a 20 screw, and a screw coöperating with the base of insulating material and the base of the spring bar to clamp the clip and appurtenant parts in position.

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