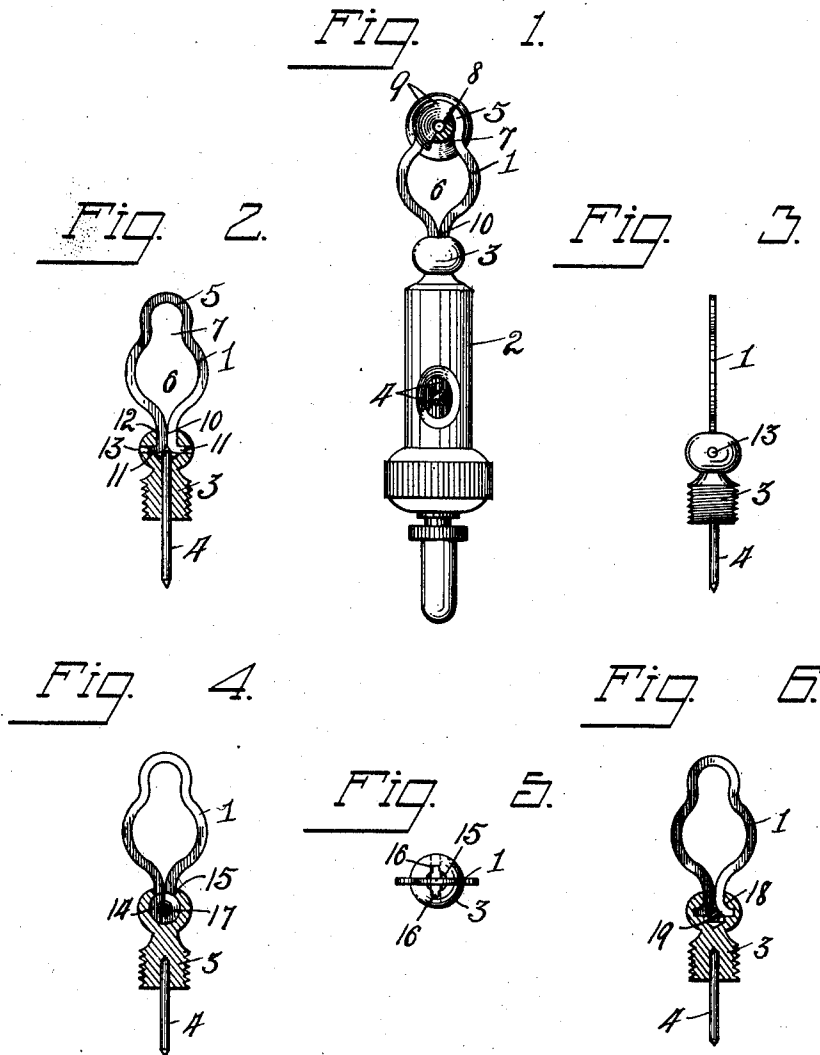


J. D. ROBERTSON.
 TERMINAL CLAMP.
 APPLICATION FILED AUG. 5, 1910.

998,304.

Patented July 18, 1911.



WITNESSES:
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TERMINAL CLAMP.

998,304.

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To all whom it may concern:

Be it known that I, JAMES D. ROBERTSON, 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 Terminal Clamp; 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 figures of reference marked thereon, which form a part of this specification.

My invention relates to terminal clamps, and has for its object the provision of a spring clamp of this class which is simple, strong and durable in its construction, inexpensive of manufacture, and capable of being easily and quickly applied to or removed from a terminal part, but prevented from accidental removal therefrom, and adapted when in engagement with a terminal part, to have a perfect electrical contact therewith.

The invention is fully described in the following specification, and a few of the preferred embodiments thereof are illustrated in the accompanying drawings, in which,—

Figure 1 is a side view of a clamp embodying my invention in association with a spark-gap. Fig. 2 is a similar view of the clamp part with its carrying plug in section. Fig. 3 is an edge view of the clamp with plug attached. Fig. 4 is a side view of the clamp with its means of attachment to the plug slightly modified and with the plug in section. Fig. 5 is an outer end view thereof, and Fig. 6 is a side view of the clamp with another form of plug attaching means and with the plug in section.

The clamp 1 comprising my invention is shown in the present instance as used in connection with a spark-gap of which 2 is a barrel and as being attached to the plug 3 of such gap, but is not restricted to such use as it may be used in any connection for which it may be adapted or appropriate. The plug 3 carries one of the points 4, 4 forming the spark gap, the other being carried by the gap barrel 2 in the usual or any suitable manner.

The clamp 1 is formed from a piece of resilient wire, which is centrally bent upon

itself to form the loop 5 at its outer end and the larger eye or opening 6 toward its inner end, with the mouth of the loop 5 or the communicating passage between it and the opening 6 slightly restricted, as at 7. The loop 5 is of suitable size to snugly fit the shank 8 of a terminal button or nut with which it is to be engaged while the opening 6 is of suitable size to permit the passage of one of the flanges 9 of the terminal button therethrough, as is apparent. The restriction of the mouth of the loop 5 requires force to be applied to the terminal 1 in engaging such loop with or disengaging it from the shank 8 of the terminal button, thus preventing an accidental disengagement of such parts. The legs of the clamp 1 are drawn together adjacent their free ends, as at 10, and have their terminals bent outwardly in opposite directions to provide retaining spurs 11 at the inner end of the clamp.

The plug 3 or other member to which the clamp is to be attached has its outer end axially drilled or socketed, as at 12, to permit an insertion of the inner end of the clamp therein upon a compression of the legs in lapping relation. When the leg ends have been inserted in such socket they are permitted to spring outwardly with the spurs 11 projecting into registering transverse openings 13 in the plug, which openings may be provided by transversely drilling the head, as shown. The socket 12 is of suitable width to receive the combined widths of the two legs, as shown in Fig. 2, and to permit a leg and its spur to be inserted therein. When the spurs 11 of the two legs of a clamp have sprung outwardly within the openings 13, the portions 10 of the legs laterally abut against each other to prevent a relative compression of the legs to withdraw the spurs 11 from their openings thus securely locking the clamp within the plug or carrying part 3.

In order to positively lock the clamp legs against removal from the part 3, the point 4 carried by such part is fitted securely into the inner end thereof and has its inner end tapered and seating between the clamp legs at the inner ends of the spurs 11 thereof, thus preventing a relative compression of the legs to permit their withdrawal from the socket of the part 3.

A slightly modified form of securing the

clamp to the plug 3 is shown in Figs. 4 and 5. In these figures the legs of the clamp terminate in laterally registering circular loops 14, which are fitted into a reamed-out socket 15 in the plug or carrying part 3. The contracted mouth of the socket 15 is notched, as at 16, on opposite sides thereof, to permit the insertion of the loops 14 therein. Upon an insertion of the clamp loops 14 into the socket 15 through the notches 16 the clamp and its loops 14 are given a quarter turn within the socket to place the eyes of such loops into register with a transverse aperture through the plug to permit the insertion of a locking pin 17 therethrough.

The form shown in Fig. 6 is similar to that of Figs. 1, 2 and 3 except that the spurred leg terminals of the clamp are locked in expanded position within the socket 18 of the plug or holding member 3 by a pin 19 inserted through the plug transversely of such spurs and fitting between their inner ends, as shown.

I wish it understood that my invention is not limited to any specific construction or arrangement of the parts except in so far as such limitations are specified in the claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is,

1. A terminal clamp comprising a wire like member which is bent upon itself to provide a clamp portion, said member having the terminal portions of its legs laterally abutting and then projecting outwardly in opposite directions and a socketed holder part receiving said legs and interlocking therewith, and means carried by the holder

and coacting with said legs to prevent a disengagement thereof from said holder. 40

2. A terminal clamp comprising a socketed holder, the socket of which has lateral recesses, a wire like member bent upon itself to form a terminal receiving loop and having the free end portions of its legs adapted to fit into the socket of said holder with their ends fitting into said recesses and a pin carried by the holder and coacting with the legs of said member to prevent a removal thereof from the holder socket. 45 50

3. A terminal clamp, comprising a socketed holder, a wire-like member bent upon itself to form a terminal receiving loop and having the free end portions of its legs adapted to fit into and interlock with the holder socket, and means coöperating with the holder and legs of such member to prevent a separation thereof. 55

4. A terminal clamp comprising a socketed holder, a wire like member bent upon itself to form a terminal receiving loop and having its leg terminals fashioned to fit within the holder socket and to interlock therewith to prevent a withdrawal of such legs from the holder socket, and an electrode projecting from said holder and having its inner end coacting with the legs of said member to prevent a removal of the legs from the holder. 60 65

In testimony whereof, I have hereunto signed my name to this specification in the presence of two subscribing witnesses. 70

JAMES D. ROBERTSON.

Witnesses:

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C. W. OWEN.