To all whom it may concern:

Be it known that I, Tomlinson F. Johnson, Jr., a citizen of the United States, residing at Atlanta, in the county of Fulton and State of Georgia, have invented a new and useful Improvement in Sticks for Handling High-Voltage Line Conductors, of which the following is a specification.

This invention relates to sticks for handling high voltage line conductors, and is designed as an improvement on the structure of the stick shown and described in Patent No. 1,370,651 issued to me on March 8, 1921.

The object is to provide a stick of this class having an improved head, whereby the application of the device to high voltage line conductors to enable the workmen to handle the same with safety is greatly facilitated, whether said conductors are horizontally or vertically disposed or arranged at an inclination, thus overcoming a disadvantage found in the use of the device of the aforesaid patent, said device being more or less difficult to properly attach to the conductor when the latter is in a vertical or nearly vertical position.

In carrying out the invention I provide an improved head attached at one end of the wooden stick or pole having the necessary insulating qualities, said head being provided with a multiple clamping member having a plurality of hooks equidistant from each other whereby they are balanced so that there is always one hook to engage the conductor, said member being screwed or drawn toward the end of the head by a simple turning action of the pole to bind the conductor thereto, so that the workman may replace faulty insulators, or make any other repairs that may be necessary, without cutting off the current or without interruption to the service.

A full and complete understanding of the invention may be obtained from a consideration of the following detailed description, taken in connection with the accompanying drawing forming a part of this specification; it being understood that while the drawing shows a practical form of the invention, the latter is not to be confined to strict conformity with the showing thereof, but may be changed and modified, so long as such changes or modifications mark no material departure from the salient features of the invention, as specifically pointed out in the appended claims.

In the drawing, in which similar reference characters designate corresponding parts throughout the several figures,—

Figure 1 is a perspective view of a stick or pole constructed in accordance with the present invention;

Figure 2 is a vertical, longitudinal section through the head of the stick, parts being in elevation; and showing the manner of engaging the same with a line wire;

Figure 3 is a similar view showing the wire in clamped position;

Figure 4 is a top plan view of the head and clamping member in engagement with a wire;

Figure 5 is an inverted sectional view of the clamping member in engagement with a wire, taken on the line 5—5 of Fig. 3.

The device of the present invention is intended to be used by linemen in the maintenance of high voltage electric conductors to enable him to test out insulators without the necessity for cutting off the current, and to perform other operations without danger to himself, it being necessary in many cases to grapple the said line wire and to lift or force the same from engagement with the insulators, and to support the same while new insulators are installed in position. Inclined wires or vertically disposed wires are difficult to engage, and the present form of clamping head has been devised to overcome such difficulties.

To this end the invention comprises a pole 1 formed of wood to supply the necessary insulating qualities and of a kind to give sufficient strength for the purposes to which the device is put, and of a diameter to be easily handled, the length of the pole varying to suit the conditions encountered.

The lower end of the pole is equipped with the usual swivelled shackle 2, pivotally connected to a socket member 3 suitably connected to the end of the pole, as by rivets, and adapted to be engaged by a cable, when it is necessary to exert more than ordinary lifting power to elevate the line wire and to hold the same elevated. At the opposite end the pole is equipped with a metallic head 4, formed preferably of brass to resist corrosion, and provided
with an integrally formed socket member 5 having a bore to snugly fit the end of the pole, and rigidly held thereto by oppositely disposed screws 6, or other suitable fasteners, which prevent the accidental removal of the head from the pole. The head is also provided with a centrally-disposed passageway 7, provided with suitable internal threads for the reception of the centrally arranged threaded shank 8 of a clamping member 9, the inner free end of said shank entering the upper tapering end 10 of the socket, the end of the pole being further provided with a shallow socket or bore 11, into which the end of the threaded shank may enter when fully screwed into the end of the head.

The upper part of the threaded shank is screwed through a central threaded bore 12 provided in the clamping member 9, and is provided with a polygonal enlargement 13 which bears upon the upper face of said member, such connection securely holding the member to the shank and preventing independent movement.

This clamping member has a circular hub provided with a plurality of outstanding, integrally formed arms or hooks 14, preferably three in number, and strengthened by reinforcing beads 15 along their upper faces, the outer ends of the arms being turned downwardly, as at 16, to provide lugs or stops for engaging the wire, as illustrated at 17 in Figures 2 and 3, 4 and 5. When the shank is screwed into clamping relation to bind the member against the wire between said member and the upper plane face of the head 4, the lug 16 in engagement therewith will prevent the wire from moving or slipping, and by turning the pole with head 4 thereon, the two members may be caused to tightly clamp the wire, the head 4 acting as an anvil.

In the use of the device for catching and holding a wire in any position, the operator turns the shank and the member from the head 4 and by reaching outwardly with the pole, one of the arms or hooks 14 will always be in position for engagement with the wire 17, when the lug 16 may be hooked over said wire, and the pole rotated to draw the shank into the head and the member against the wire, and the wire against the head 4 when the necessary operations may be performed without danger to the lineman.

As shown in Figures 4 and 5, the hooks or arms are equidistant from each other and are in triangular relation, so that they are always balanced, this being one of the characteristic features of the invention.

From the foregoing it will be seen that a simple and easily operated device for the purpose has been provided which may be readily applied in position to a line wire no matter in what direction the wire may extend.

What is claimed is:

1. A means for handling line conductors, comprising an insulating stick having at one end a threaded anvil rigidly mounted thereon, a clamping member having a plurality of depending hooks which are arranged equidistantly whereby they are always balanced, and a centrally arranged threaded shank connecting the member centrally to the anvil, whereby the rotation of the stick causes the shank to move the clamping member toward and from the anvil and to grip a conductor between one of the hooks of said member to the anvil.

2. A device of the class described, comprising a pole, a metallic head secured to one end of the pole, a movable clamping member having a plurality of arms or hooks equidistantly arranged so that the movable member is always balanced, and a centrally arranged shank connecting the member and head, said member engaging a conductor and binding the same on the head when the pole and head are turned in the proper direction.

3. A device of the class described, comprising a pole, a metallic head secured to one end of the pole, a movable clamping member having a plurality of arms or hooks equidistantly arranged so that the movable member is always balanced, and a shank connecting the member and head, said member engaging a conductor and binding the same on the head when the pole and head are turned in the proper direction, said outstanding arms terminating in downwardly turned lugs beyond the periphery of the head to prevent the said conductor from slipping between the head and one of the arms when the pole is turned onto the shank.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature.

TOMLINSON F. JOHNSON, Jr.