

No. 685,606.

Patented Oct. 29, 1901.

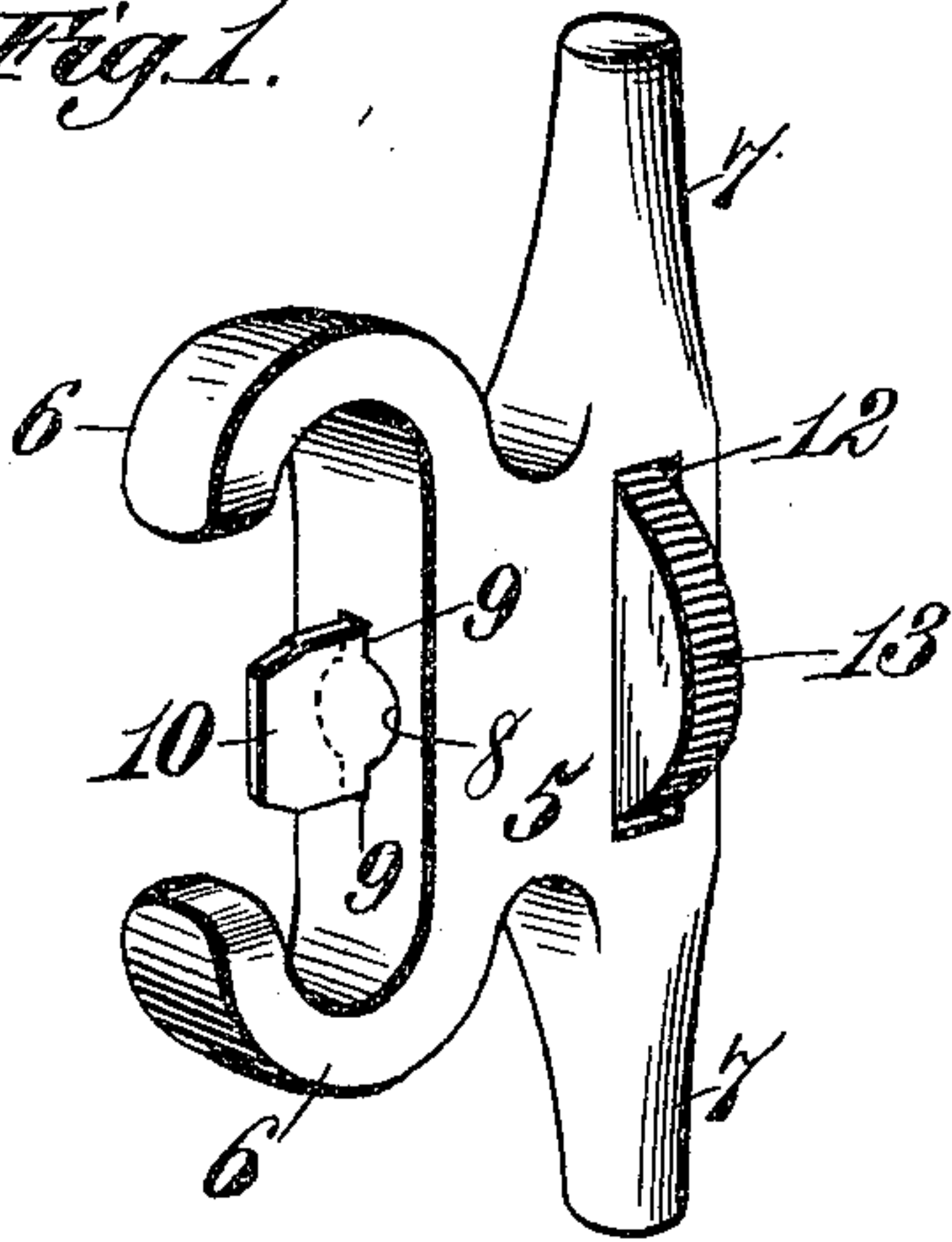
A. HENRY.

SCREW DRIVER FOR SECURING INSULATORS IN PLACE.

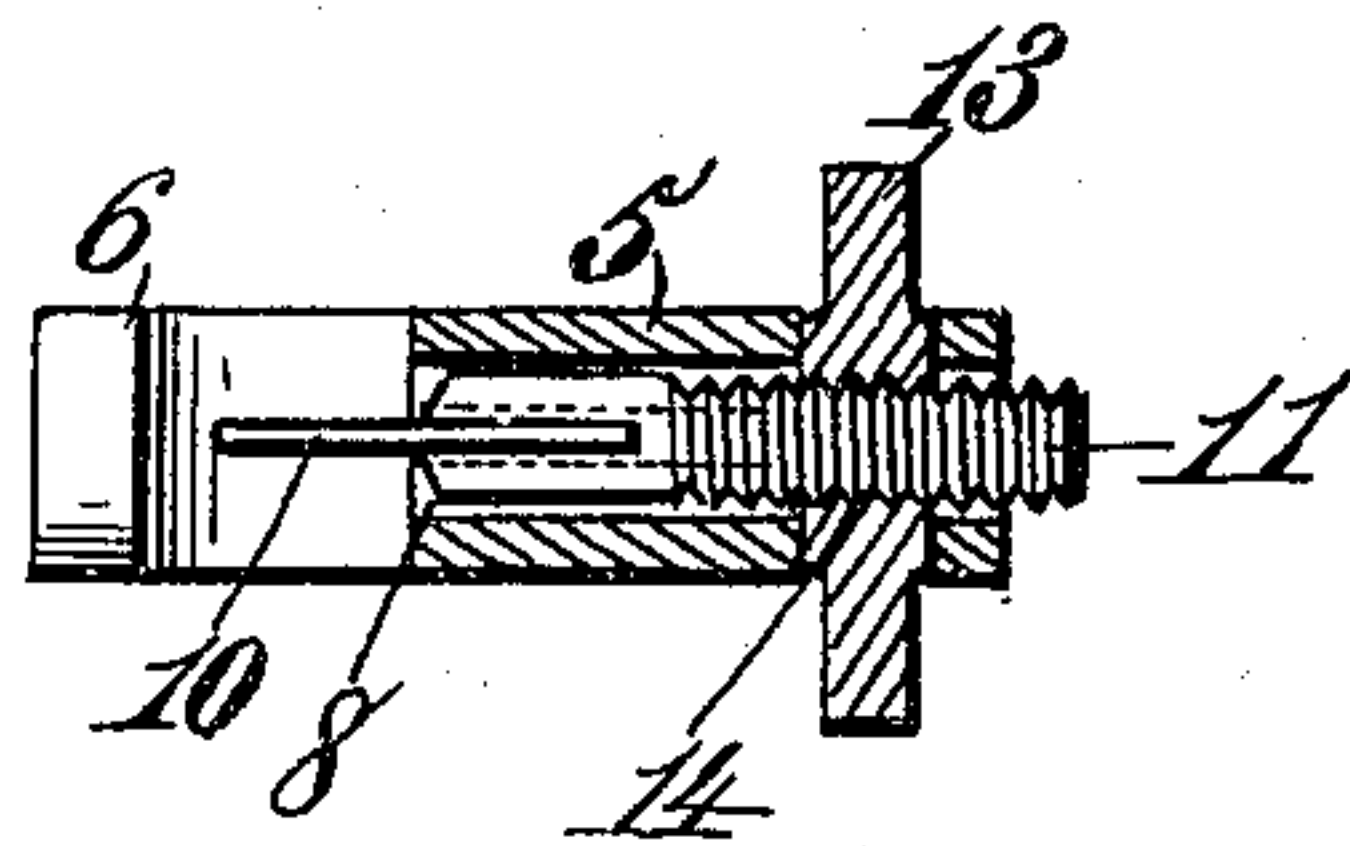
(Application filed May 23, 1901.)

(No Model.)

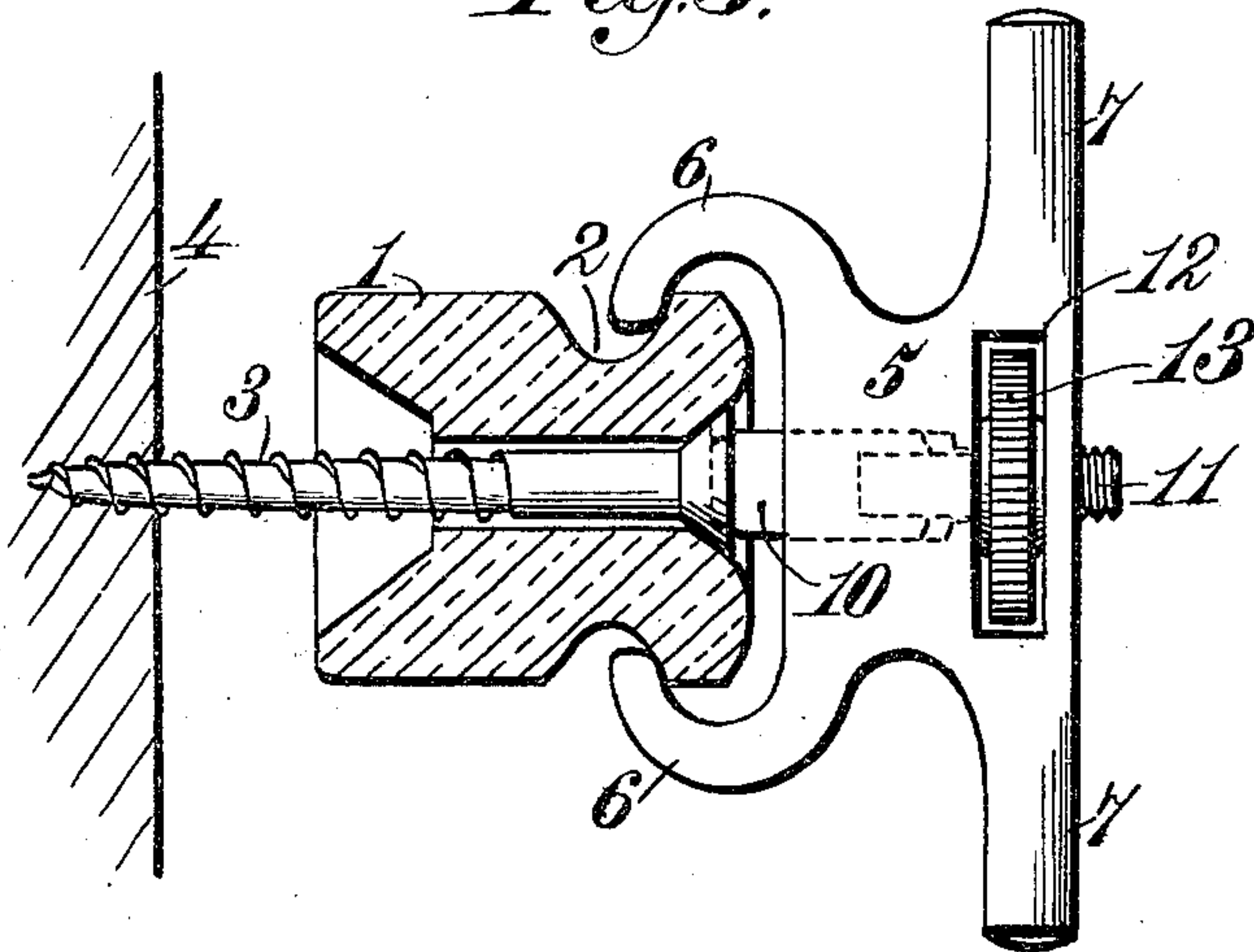
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses.  
*Robert G. Smith.*  
*J. B. Kessler.*

Inventor.  
*Archie Henry.*  
By *James L. Norris.*  
*Atty.*



# UNITED STATES PATENT OFFICE.

ARCHIE HENRY, OF MEADVILLE, PENNSYLVANIA.

## SCREW-DRIVER FOR SECURING INSULATORS IN PLACE.

SPECIFICATION forming part of Letters Patent No. 685,606, dated October 29, 1901.

Application filed May 23, 1901. Serial No. 61,659. (No model.)

*To all whom it may concern:*

Be it known that I, ARCHIE HENRY, a citizen of the United States, residing at Meadville, in the county of Crawford and State of Pennsylvania, have invented new and useful Improvements in Screw-Drivers for Securing Insulators in Place, of which the following is a specification.

This invention relates to an improved screw-driver for securing insulators in place, and has for its object to provide in a single, simple, and inexpensive implement a screw-driver and means for holding the insulator in position while the screw is being driven in the support to which the insulator is to be attached.

To this end my invention consists in the features and in the construction, combination, and arrangement of parts hereinafter described, and particularly pointed out in the claims following the description, reference being had to the accompanying drawings, forming a part of this specification, wherein—

Figure 1 is a perspective view of my improved implement. Fig. 2 is a vertical sectional view of the same, and Fig. 3 is a view showing the implement in position for securing the insulator in place.

My improved implement is primarily intended for the use of those employed in wiring electric telephones and other electric instruments and is especially designed for securing in place the porcelain insulator-knobs employed for supporting the wires, the purpose being to provide a simple, inexpensive, and efficient implement by means of which the insulator may be conveniently held in place while being fastened to its support and the screw employed for fastening it in place may be driven with ease.

Referring to the drawings, the numeral 1 indicates an insulator of ordinary construction and consisting of a porcelain knob provided with a circumferential groove 2 for the reception of the wire conductor, as usual, and 3 the screw employed for fastening the insulator to its support 4, which may be a wall, ceiling, the woodwork of a building, or the like.

The implement designed for holding the insulator 1 in position while the screw 3 is being driven into the support 4 and for driving the screw into the support comprises a shank

or body 5, provided at one end with two fixed rigid jaws 6, that curve outward from the shank in opposite directions to straddle the head of the insulator and then curve inward toward each other to engage the circumferential groove in the insulator. The opposite end of the shank or body 5 is provided with two arms 7, that project at right angles to the shank in opposite directions to form a handle that may be readily grasped in one hand by the operator. Formed longitudinally in and passing centrally through the shank or body of the implement is a perforation or round passage 8, and extending from opposite sides of said perforation or passage are longitudinal grooves 9, that extend from the lower end of the shank to a point intermediate the lower and upper ends thereof. The numeral 10 indicates the screw-driver, which consists of a flat blade sharpened at one end, as usual, but is relatively short, being approximately the length of the grooves 9 or but slightly longer. The screw-driver is loosely fitted in the grooves 9 and is freely movable lengthwise therein, but manifestly cannot turn independently of the shank or body and its handle. The screw-driver at its upper end terminates in a threaded tang 11, that loosely passes through the perforation or passage 8 in the body of the implement. The tang 11 may be formed integrally with the blade of the screw-driver, or it may be fastened thereto in any suitable manner. In the present instance the lower end of the tang is forked or slotted, and the upper end of the screw-driver blade is fitted in said slotted or forked end and is riveted rigidly in place therein. A transverse slot or recess 12 is formed in the upper portion of the body or shank of the implement, and rotatably arranged therein is a milled nut 13. The threaded tang 11 passes through a threaded aperture 14, formed centrally in the nut, and the periphery of the nut projects beyond the opposite sides of the body or shank of the implement in position to be conveniently grasped by the fingers.

By turning the nut 13 in one direction the screw-driver is retracted within the body or shank of the implement, for, as before described, the screw-driver is incapable of turning in the implement and as the threaded tang is fixed on the blade when the nut is



turned in the proper direction it operates to move the tang lengthwise in its passage and retract the screw-driver. After the screw-driver has been retracted in the manner described the jaws 6 may be slipped laterally over the head of the insulator, the screw 3 having first been slipped in place therein, after which the nut is turned in the proper direction to force the end of the screw-driver down into engagement with the nick in the head of the screw. When the parts are in this position, the implement and insulator are loosely clamped together, the jaws preventing the insulator from being removed or dropping endwise from the implement and the engagement of the screw-driver with the head of the screw preventing the insulator from moving laterally from between the jaws. In other words, when the parts are in the position referred to the implement and insulator are inseparable. To secure the insulator in place, the operator grasps the handle 7 in one hand and places the point of the screw on the spot on the support where the screw is to be driven. Then by pressing upon the implement and at the same time turning it by its handle the screw is driven or screwed into the support. Usually the insulator will turn with the screw until the latter has been almost completely driven to its seat, when the frictional contact between the insulator and its support will prevent the latter from turning, and then the jaws will freely revolve about the head of the insulator, but will continue to hold the screw-driver in engagement with the head of the screw. Should, however, the screw-driver have been forced so tightly against the head of the screw by the nut that the jaws will not revolve freely about the head of the insulator, just before giving the final turns to the screw the nut may be partially turned to slightly loosen the engagement between the jaws and the insulator-head, when the screw may be freely driven entirely to its seat. After the insulator has been screwed into place in the manner described the nut is loosened to retract the screw-driver, when the implement can be readily removed.

In manipulating the improved implement the operator need use only one hand, leaving the other hand free for supporting himself or for performing other duties, and this is especially desirable in affixing the insulators to the under sides of cross-arms on poles and on other elevated structures and in securing the insulators to ceilings and the like. As shown, the body or shank of the implement, the handle, and the jaws are made in one integral piece and are preferably of malleable iron, while the screw-driver in practice is made of tempered steel.

Having described my invention, what I claim is—

1. In an implement of the character described, the combination with the body of the implement provided with two jaws adapted

to grasp the head of an insulator, of a screw-driver carried by said body centrally between the jaws, means for adjusting the screw-driver toward and from the ends of the jaws, means for preventing the screw-driver from turning independently of the body of the implement and jaws, and a fixed handle on the body of the implement for turning the latter and the screw-driver, substantially as described.

2. In an implement of the character described, the combination with the body or shank of the implement provided at one end with two integral rigid jaws curved to grasp the head of an insulator and provided at its opposite end with an integral handle, of a screw-driver movably fitted in the body or shank centrally between the jaws, and means for adjusting the screw-driver toward and from the ends of the jaws, substantially as described.

3. In an implement of the character described, the combination with the body or shank of the implement provided at one end with two rigid jaws curved to grasp the head of an insulator, said body or shank having a longitudinal passage formed centrally therein and having two oppositely-disposed slots formed in the sides of the passage, a screw-driver movably fitted in said slots and passage and provided with a threaded tang movable in the passage, and a nut carried by said body or shank and engaging said tang to adjust the screw-driver toward and from the ends of the jaws, substantially as described.

4. In an implement of the character described, the combination with the body or shank of the implement provided at one end with two rigid jaws curved to grasp the head of an insulator, said body or shank having a longitudinal passage formed centrally therein and having two slots formed in the sides of the passage, a screw-driver movably fitted in said slots and passage and provided with a threaded tang movable in the passage, and a nut loosely fitted in a transverse slot in the body or shank and engaging said tang to adjust the screw-driver toward and from the ends of the jaws, substantially as described.

5. In an implement of the class described, the combination with the body or shank of the implement provided at one end with two integral rigid jaws curved to grasp the head of an insulator and provided at its opposite end with two rigid arms that project at right angles to the shank in opposite directions to form a handle, of a screw-driver movably fitted in the body or shank centrally between the jaws, and means for adjusting the screw-driver toward and from the ends of the jaws, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ARCHIE HENRY.

Witnesses:

S. J. MACKAY,

GEO. KILPATRICK.