

No. 689,218.

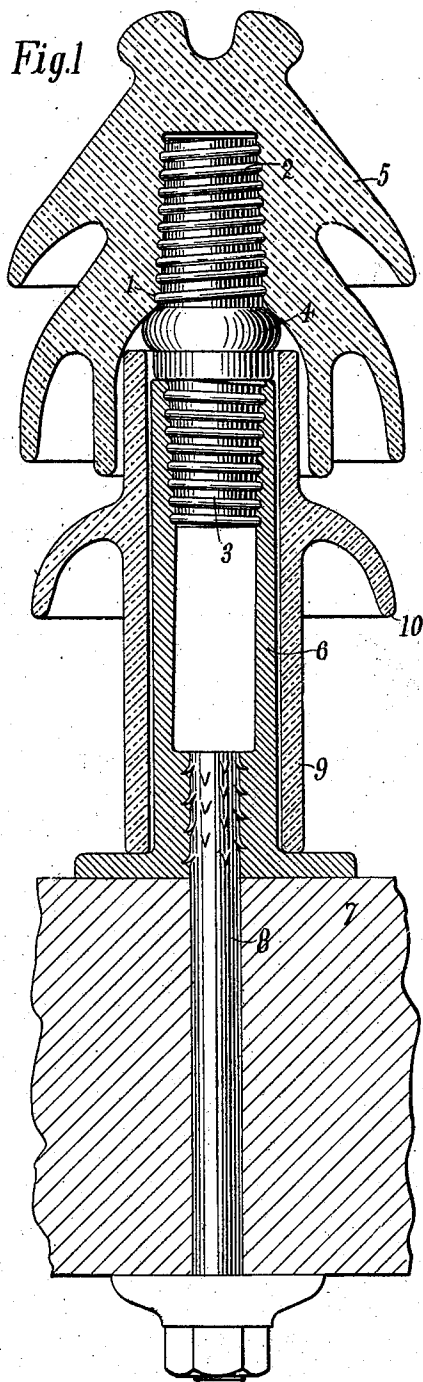
Patented Dec. 17, 1901.

A. F. PARKS.
ELECTRICAL INSULATOR.

(Application filed Apr. 8, 1901.)

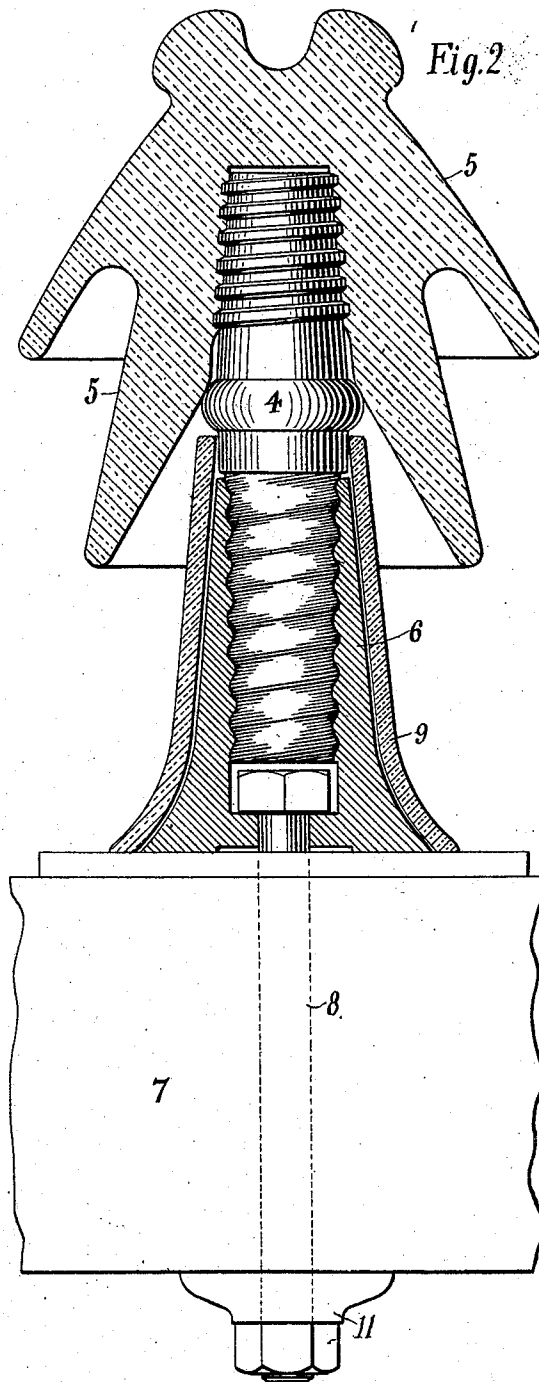
(No Model.)

Fig.1



Witnesses:
Raphael Petter
Wm. H. Capel.

Fig.2



Albert F. Parks, Inventor

by Charles A. Smy. Atty

UNITED STATES PATENT OFFICE.

ALBERT F. PARKS, OF BROOKLYN, NEW YORK, ASSIGNOR TO LEWIS B. STILLWELL, OF NEW YORK, N. Y.

ELECTRICAL INSULATOR.

SPECIFICATION forming part of Letters Patent No. 689,218, dated December 17, 1901.

Application filed April 8, 1901. Serial No. 54,812. (No model.)

To all whom it may concern:

Be it known that I, ALBERT F. PARKS, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Electrical Insulators, of which the following is a specification.

My invention relates to the class of devices employed for supporting and insulating electric conductors, particularly those carried in the air and employed for the transmission of electric energy in large quantities.

In electric transmission systems where it is desired to transmit large amounts of power over long distances the conductors are called upon to convey currents of relatively high voltages and are often necessarily large and heavy. For the purpose of meeting the electrical strains due to the high potential it is customary to increase the size, quality, and effective surface of the insulators; but often the supports upon which the insulators have been carried have been of relatively small size and therefore of insufficient mechanical strength to support the weight of the conductors and resist the various mechanical strains to which they are subjected by reason of weight and wind-pressure. In some instances the pins have been made of metal; but this is objectionable on account of the difficulty of securing a sufficiently accurate fit between the threads of the pin and those of the insulator, both being of rigid and unyielding material and having different coefficients of expansion. Usually also the metal pins have been of inadequate mechanical strength to resist wind-pressure and the repeated strains due to swinging weight of the conductors. In some instances metal pins surrounded by a threaded wooden sleeve have been used; but these are generally of insufficient mechanical strength and are objectionable for the reason that the threads of the wood sleeve are easily stripped by the mechanical strains transmitted from insulator to pin. Another serious difficulty in the case of these pins and also in the case of pins consisting entirely of wood arises from the liability of the wood to be burned by excessive leakage of current.

The general plan of the invention is to construct an insulator of sufficient size and

strength and to support this upon a threaded pin, usually of wood and therefore capable of adapting itself to any irregularities of the threads of the insulator, this pin being in turn supported in a metallic socket adapted to be secured to the cross-arm or other support. Suitable means are provided for preventing the insulator from being screwed too far onto the pin and for distributing the local strains.

In the accompanying drawings, Figure 1 illustrates one form of the insulator, and Fig. 2 a modification.

Referring to the figures, 1 represents a pin, which may be of wood or other suitable material. This is shown in Fig. 1 as being provided with reversed screw ends 2 3, between which is a spherical enlargement 4. The feature of the reversed thread possesses value from the fact that by its use it becomes possible to remove the pin from the insulator and containing-socket at one operation, a feature of importance when the insulator may be placed, for instance, in a position difficult of access. The insulator, which may be of porcelain or glass or any other suitable material, is represented at 5 and may be of any suitable shape or configuration. It is screwed onto the threaded end 2 of the pin until it strikes against the spherical seat 4. It will be seen that any lateral strains upon the insulator will be distributed in a measure through this seat. A socket 6 receives the threaded end 3 of the pin 1. This socket may be of iron or other suitable material provided with suitable means for fastening it to a cross-arm or other support 7.

In Fig. 1 I have shown the socket as being constructed with a bolt 8, which may be cast into the socket, as shown. A sleeve 9, of insulating material, may surround the socket, as shown in Fig. 1, and this may be constructed with a petticoat 10, similar to the insulator itself. It is here shown as extending upward into the hollow portion of the insulator 5.

In Fig. 2 a modification is shown, in which the metal socket 6 is somewhat enlarged at the base to afford a wider bearing-surface. The insulating-sleeve 9 is here shown as covering the socket and extending into the hol-

low portion of the insulator 5, the latter being of slightly-different configuration than that shown in Fig. 1. The bolt 8 for securing the insulating device to the insulator-arm may be made removable, as shown in this figure, and it may extend through the insulator-arm and be fastened by a nut and washer 11 in any well-known manner. An insulator-support constructed in the manner above described possesses great mechanical strength. It allows of a more economical size of cross-arm, no large hole being required through it to receive a large wooden pin. Moreover, the insulator may be placed high above the cross-arm by giving any required length to the socket-pin, thus lessening the liability of contact with snow which may accumulate. Moreover, it provides an incombustible support and a pin which may be quickly and easily removed.

I claim as my invention—

1. The combination with a cross-arm or support, of a metallic socket rigidly secured thereto, a pin of softer material secured within said metallic socket, a seat for the insulator upon said pin and means for securing the insulator to said pin and against said seat.

2. The combination with an insulator of the character described, of a support therefor consisting of a threaded pin of wood or other soft material receiving the insulator upon one end, an enlargement upon the pin against which a portion of the insulator abuts, and a metallic socket receiving the other end of the pin, substantially as described.

3. The combination of a metallic socket, a

threaded wooden pin screwed therein having a reverse thread upon the remaining end, and an insulator screwed to the latter end.

4. A support for receiving a line-wire insulator, consisting of a wooden pin having reversed screw-threads upon its respective ends, and an intermediate enlargement.

5. The combination with an insulator for line-wires, of a metallic socket, a wooden pin having reversed screw-threads upon its respective ends, one end being screwed into the socket and the remaining end into the insulator, thereby rigidly securing the pin to the insulator and the socket, and means for rigidly securing the socket to a cross-arm substantially as described.

6. The combination of an insulator, a pin of yielding material carrying the same, a metallic socket receiving the pin, means for rigidly securing the same to a support, and a sleeve of insulating material surrounding the socket.

7. The combination of an insulator having a downwardly-extending flange, a metallic socket and an extension of said socket of softer material receiving the insulator, and a sleeve of insulating material surrounding the metallic socket and extending within the flange of the insulator.

Signed at New York, in the county of New York and State of New York, this 6th day of April, A. D. 1901.

ALBERT F. PARKS.

Witnesses:

WM. H. CAPEL,

GEORGE H. STOCKBRIDGE.