

C. G. ET AL.
INSULATOR PIN.
APPLICATION FILED MAR. 30, 1912.

1,045,536.

Patented Nov. 26, 1912.

Fig. 1.

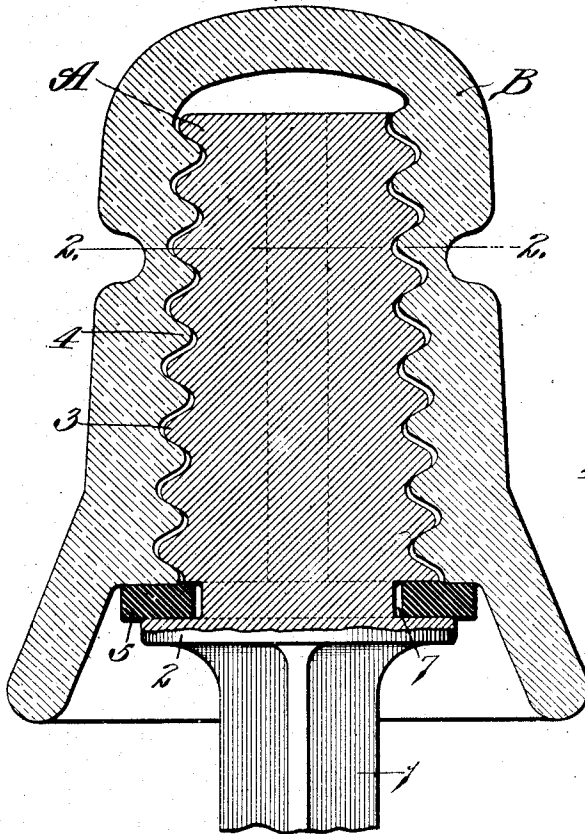


Fig. 2.

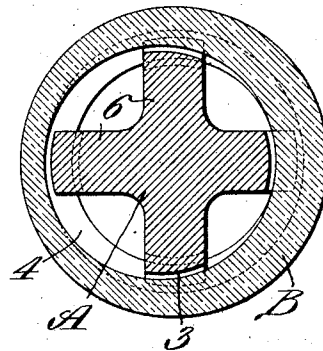
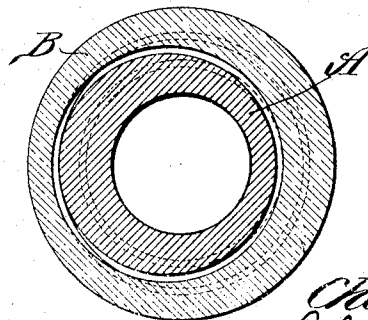


Fig. 3.



Witnesses:
Geo. R. Redson
C. M. Badger.

Inventor:
Charles G. Little.
By C. E. Russell & Co., Attys.

UNITED STATES PATENT OFFICE.

CHARLES G. ETTE, OF ST. LOUIS, MISSOURI, ASSIGNOR TO ETTE INVESTMENT COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF MISSOURI.

INSULATOR-PIN.

1,045,536.

Specification of Letters Patent.

Patented Nov. 26, 1912.

Application filed March 30, 1912. Serial No. 687,442.

To all whom it may concern:

Be it known that I, CHARLES G. ETTE, a citizen of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in Insulator-Pins, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to insulator-pins, and particularly to the heads or screw-threaded portions of insulator-pins onto which the insulators are screwed.

The main object of my invention is to provide a metal insulator-pin that has a head or screw-threaded portion of novel design which is so constructed that the expansion of the metal in the head will not crack or break the insulator which is usually made of glass or porcelain.

Another object is to provide a metal head for insulator-pins that comprises threads which are so proportioned that they fit loosely the internal threads of the insulator that is mounted on the head, and means for causing the threads on the insulator to engage the threads on the head in such a manner that the metal in the head can expand longitudinally and laterally without cracking the insulator. And still another object is to provide a cast metal insulator-pin that comprises means for securely holding the insulator but which is so designed that it is not necessary to bore holes or slots in the head of the pin during the process of casting the pin.

Other objects and desirable features of my invention will be hereinafter pointed out.

Figure 1 is a vertical sectional view of the head of an insulator-pin constructed in accordance with my invention, showing an insulator arranged in operative position on the pin; Fig. 2 is a cross-sectional view taken on approximately the line 2—2 of Fig. 1; and Fig. 3 is a cross-sectional view similar to Fig. 2, illustrating a slight modification of my invention.

Referring to the drawings which illustrate the preferred form of my invention, A designates the head of an insulator-pin which may either be formed integral with or detachably connected to the shank 1 of the pin. The head A is formed of metal, and in the embodiment of my invention

herein shown is cast integral with the shank 1 of the pin. Said head is tapered, as shown in Fig. 1, and at the base or lower end of same is a flange 2 whose function will be hereinafter described. The screw-threads 3 on the head A are so proportioned and designed that they will fit loosely with the internal screw-threads 4 of the insulator B that is mounted on the head so as to permit the metal in the head to expand without exerting sufficient pressure on the insulator to crack same. In practice, the head of the pin is so proportioned that there will be about 1/16" play between the head and the insulator.

In order to hold the insulator securely on the head and thus prevent it from working off the head I have provided means for causing the threads or horizontally disposed ribs on the insulator to bear snugly against the threads or cooperating ribs on the head A at one point when the insulator is screwed down onto the head. The means herein shown for accomplishing this consists of a yielding member such, for example, as a rubber washer 5 that is mounted on the flange 2 at the base of the head A of the pin. Said washer is of sufficient dimensions to cause the insulator B to bear upon same when the insulator is screwed down onto the head and consequently said yielding member 5 exerts sufficient upward pressure on the insulator to hold the upper sides of the threads 4 thereon pressed tightly against the under sides of the threads 3 on the head A, thus securely holding the insulator on the pin. The play between the head A and the insulator permits the metal in the head to expand laterally without exerting pressure on the insulator, and as the threads on the insulator do not bear upon the upper side of the threads on the head A the metal in said head can expand longitudinally without causing the insulator to crack.

The head A may be of any desired cross-sectional shape, either cruciform as shown in Fig. 2, or round, as shown in Fig. 3. I prefer to make the head cruciform-shape so as to reduce to a minimum the cooperating or contacting surfaces of the insulator and the head. The four spaced ribs 6 which constitute the head A of the pin are provided with notches or grooves 7 adjacent the horizontally disposed flange 2 so as to receive the yielding member 5 and

thus prevent said member from becoming displaced when the insulator is removed.

An insulator-pin of the construction above-described is inexpensive to manufacture because it is not necessary to core holes or slots in the head of the pin; there is no possibility of the insulator becoming cracked or broken when the metal in the head expands owing to the fact that the cooperating threads, ribs or projections on the insulator and on the head contact at only one point, which point is so disposed that the head can expand laterally and longitudinally without exerting pressure on the insulator; and still another desirable feature of such a pin is that the insulator is held so securely that it cannot work off the head of the pin.

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

1. An insulator-pin having a metal head provided with screw-threads that cooperate with screw-threads on the insulator, and means for causing the threads on the insulator to bear against only the under side of the threads on the head, thus permitting the head to expand longitudinally without exerting sufficient pressure on the insulator to crack same.

2. An insulator-pin having a head provided with threads that cooperate with threads on the insulator, said threads being so proportioned that they will fit loosely, and means on said pin that cooperates with the insulator to hold the insulator in such a position that the threads thereon bear against only one side of the threads on the head, thus permitting the head to expand without cracking the insulator.

3. An insulator-pin having a head provided with screw-threads that cooperate with screw-threads on the insulator, said cooperating threads being so proportioned that they will fit loosely, and a yielding member carried by said pin and arranged in such a manner that it will hold the insulator in such a position that the threads thereon engage the threads on the head at one point but are held out of engagement from the major part of the surfaces of said threads.

4. An insulator-pin having a metal head

provided with ribs that are adapted to lap over cooperating ribs on the insulator, and means for holding the insulator in such a position that the ribs thereon bear against only one side of the ribs on the head, thereby permitting the head to expand longitudinally.

5. An insulator-pin having a metal head provided with substantially transversely disposed projections that cooperate with similarly disposed projections on the insulator, and a yielding member carried by the pin and arranged in such a manner that it will hold the projections on the insulator in engagement with the projections on the head at one point, thus permitting the head to expand longitudinally.

6. An insulator-pin having a metal head provided with screw-threads, and a yielding member on said pin arranged adjacent the lower end of said head and adapted to be engaged by the insulator when it is screwed down upon the head, thereby causing the insulator to be held in such a position that the metal in the head can expand without causing the head to exert sufficient pressure on the insulator to crack same.

7. An insulator-pin having a metal head provided with screw-threads, and a yielding member on said pin arranged adjacent the base or lower end of the head substantially as and for the purpose described.

8. The combination of an insulator-pin having a metal head provided with screw-threads, an insulator mounted on said head and provided with internal screw-threads that loosely fit the threads on the head, and a yielding member arranged between the lower end of the insulator and a shoulder on said pin so as to exert upward pressure on the insulator when it is screwed down into position.

In testimony whereof I hereunto affix my signature in the presence of two witnesses, this twenty-fifth day of March 1912.

CHARLES G. ETTE,

Witnesses:

WALTER C. RAITHEL,
EDWARD SCHWIDDE.

Correction in Letters Patent No. 1,045,536.

It is hereby certified that in Letters Patent No. 1,045,536, granted November 26, 1912, upon the application of Charles G. Ette, of St. Louis, Missouri, for an improvement in "Insulator-Pins," an error appears in the printed specification requiring correction as follows: Page 2, line 71, strike out the comma and the words "and a yielding" and insert the words and syllable *that are adapt-*; and that the said Letters Patent should be read with this correction that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 24th day of December, A. D., 1912.

[SEAL.]

C. C. BILLINGS,

Acting Commissioner of Patents.