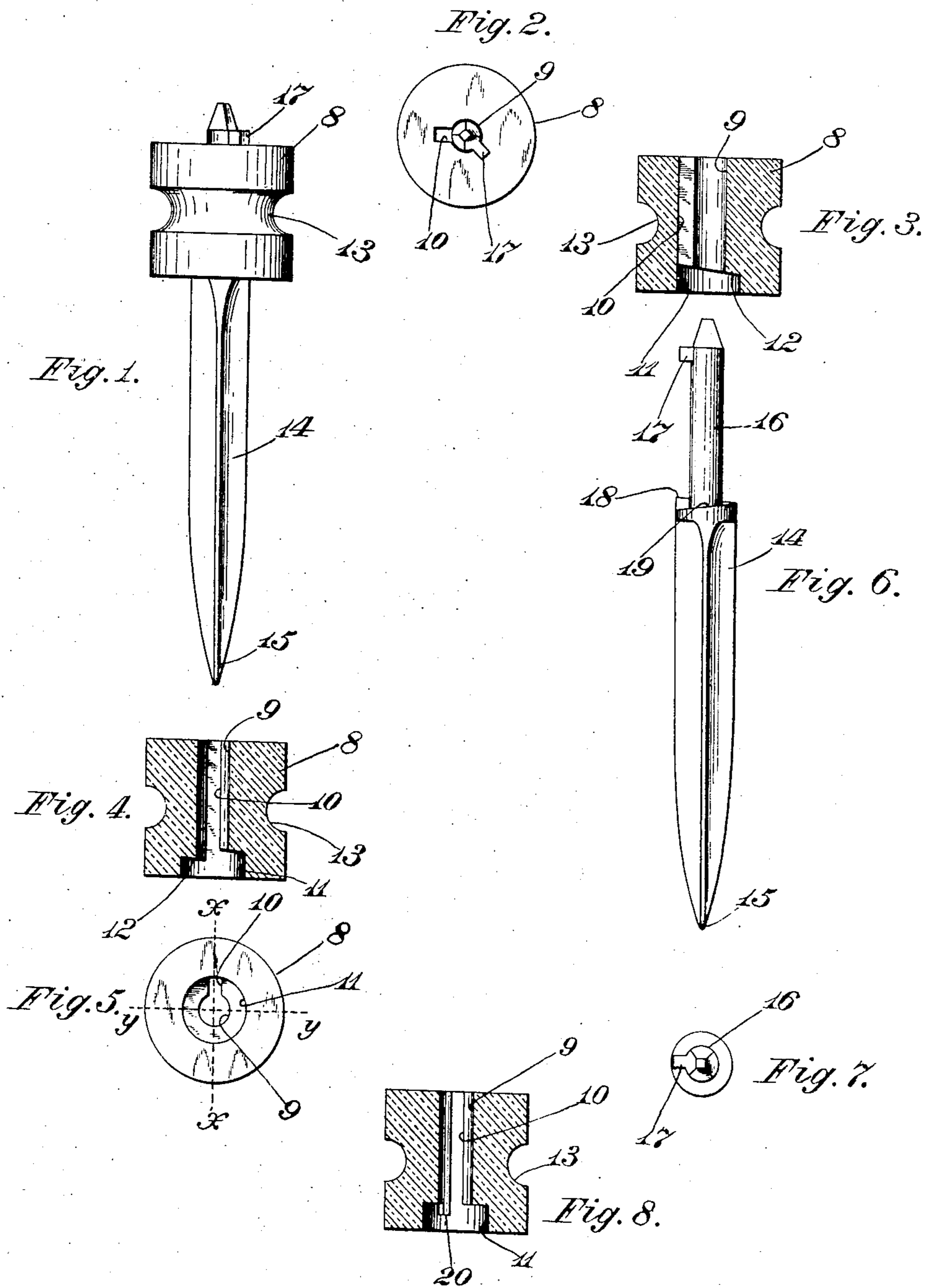


G. M. FINCKEL.  
FEEDER WIRE INSULATOR.  
APPLICATION FILED MAY 20, 1908.

903,692.

Patented Nov. 10, 1908.



Witnesses

Benj. Finckel  
Frank Minter

Inventor

George M. Finckel

# UNITED STATES PATENT OFFICE.

GEORGE M. FINCKEL, OF COLUMBUS, OHIO, ASSIGNOR TO THE SACKETT MINE SUPPLY COMPANY, OF COLUMBUS, OHIO, A CORPORATION OF OHIO.

## FEEDER-WIRE INSULATOR.

No. 903,692.

Specification of Letters Patent.

Patented Nov. 10, 1908.

Application filed May 20, 1908. Serial No. 432,830.

*To all whom it may concern:*

Be it known that I, GEORGE M. FINCKEL, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Feeder-Wire Insulators, of which the following is a specification.

The object of this invention is to provide an improved insulator especially adapted for feeder or other electric wires.

The invention consists in the construction hereinafter described and then particularly pointed out in the claims.

In the accompanying drawings illustrating forms of the invention, but to which forms the invention is not limited—Figure 1 shows in elevation the device with the parts assembled; Fig. 2 is a plan view looking at the upper end of Fig. 1; Fig. 3 is a central section on the line  $x-x$  Fig. 5; Fig. 4 is a similar section on the line  $y-y$  Fig. 5; Fig. 5 is a plan view looking at the inner end of the insulator body or the under side of the device as viewed in Fig. 4; Fig. 6 is an elevation of the pin; Fig. 7 is a view looking at the upper end of the pin, and Fig. 8 is a sectional view like Fig. 4 of another form of insulator body.

The insulator body 8 is formed of the usual material, as porcelain, glass or other vitreous material. The insulator body has a central circular opening 9 with a key way or groove 10. The inner end of the central opening is shown to be enlarged to form a socket 11, the shoulder 12 between the socket 11 and opening 9 being of spiral form. The exterior of the insulator body is formed with the usual annular groove 13 to receive the electric conductor or devices for attaching the conductor thereto.

14 designates the metallic pin, preferably fluted and barbed at one end to form a spur as seen at 15 and provided with a small cylindrical portion 16 at the other to fit in the opening 9 of the insulator body. The spur is to be driven into the coal or other wall as usual. The portion 16 is provided at its end with a laterally projecting lug 17. At the base of the portion 16 is a shoulder 18 of a diameter to fit in the socket 11, said shoulder having its outer side of spiral form as seen at 19 corresponding substantially in pitch to the pitch of the shoulder 12 in the insulator body.

The insulator body is placed on the small or reduced end 16 of the pin by sliding it thereon with the lug 17 in line with the key way or groove 13 until the lug lies beyond the outer end of the insulator body and then giving it a turn to tightly pinch the body between the spiral surface and lug of the pin. It is understood, of course, that the lug should be located at such a distance from the spiral shoulder 19 as to require the lug 17 to be turned out of line with the groove 13 to obtain the pinching effect. One of the important advantages of this construction is that the spiral shoulders of the insulator body and pin afford large contacting surfaces thereby giving a firmer binding effect between the insulator body and the pin. By diminishing the pitch of the spiral contacting surfaces and placing the pin a trifle nearer the spiral surface of the pin the binding effect might be increased. Another important advantage of this construction in this variety of insulator is that the spiral surface of the insulator body is within the body and is therefore protected from injury.

It is not necessary that the insulator body be provided with a spiral surface to cooperate with the spiral shoulder of the pin. The shoulder between the large and small openings of the body can be provided at the proper point with a small non-spiral portion, as seen at 20, Fig. 8, to cooperate with the spiral shoulder of the pin. But I, at present, prefer the two spiral surfaces, one on the pin and one on the block as first set forth, because of the more extended contact between the parts.

What I claim and desire to secure by Letters Patent is:

1. The combination with an insulator body having a through opening provided with a key way and a shoulder at the inner end of said opening, of a supporting pin having a body engaging portion provided with a lug to pass through said opening and key way, said lug to engage when turned the outer end of the insulator body, said pin also provided with a spiral shoulder against which the shoulder at the inner end of the insulator body is turned, substantially as described.

2. The combination with an insulator body having a through opening provided with a key way and a spiral surface around the inner end of said opening, of a supporting pin having a body-engaging portion provided

with a lug to pass through said opening and key way, said lug to engage, when turned, the outer end of the insulator body, said pin also provided with a spiral shoulder against  
5 which the spiral shoulder of the insulator body is turned, substantially as described.

3. The combination with an insulator body having a through opening provided with a key way, and a spiral surface around the in-  
10 ner end of said opening, of a supporting pin having a body engaging portion provided

with a lug to pass through said opening and key way, said lug to engage, when turned, the outer end of the insulator body, said pin also provided with a shoulder at the base of  
15 the body engaging portion against which said spiral surface in the insulator body is turned, substantially as described.

GEORGE M. FINCKEL.

Witnesses:

BENJAMIN FINCKEL,  
FRANK MINTER.