

P. S. DUMBOLTON & F. FRANZ.
INSULATOR.
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937,736.

Patented Oct. 19, 1909.

Fig. 1.

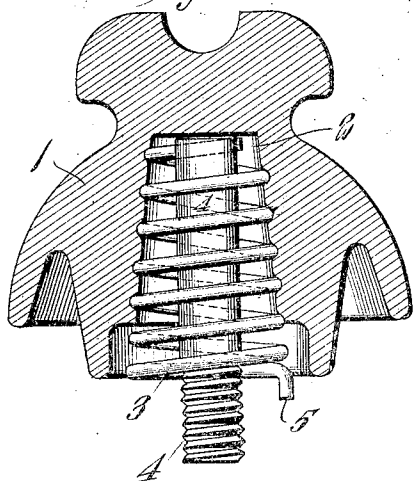


Fig. 2.

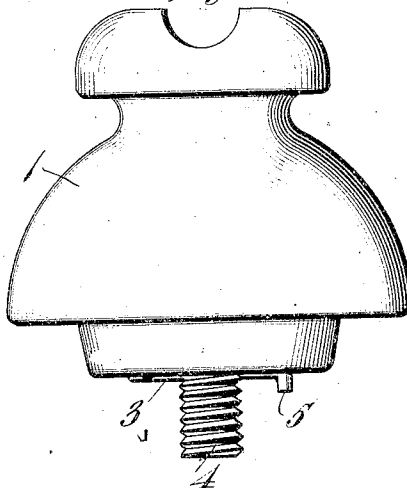


Fig. 3.

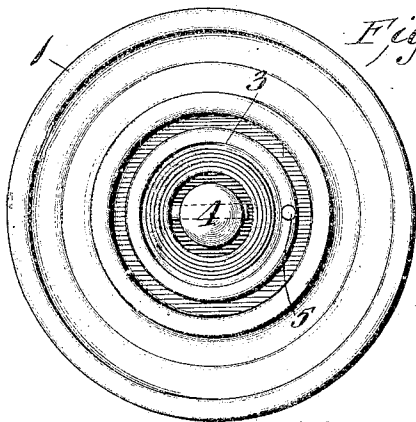
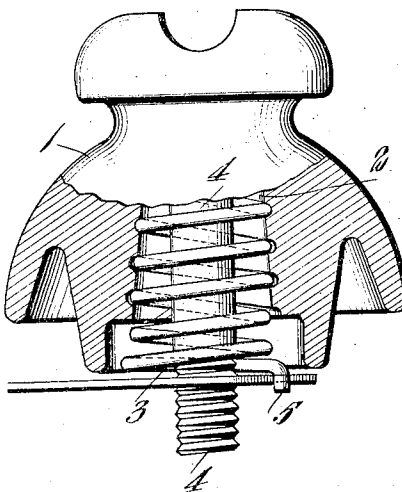


Fig. 4.



WITNESSES
E. M. Carlaghan
Amos H. Stark

INVENTORS
PERRY S. DUMBOLTON
FRANK FRANZ
BY *Munn & Co.*

ATTORNEYS

UNITED STATES PATENT OFFICE.

PERRY S. DUMBOLTON AND FRANK FRANZ, OF BURKE, IDAHO.

INSULATOR.

937,736.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, PERRY S. DUMBOLTON and FRANK FRANZ, citizens of the United States, residing at Burke, in the county of Shoshone, State of Idaho, have invented an Improvement in Insulators, of which the following is a specification.

Our invention is an improvement in insulators for telegraph and telephone wires and other similar conductors of electricity.

It is more particularly an improvement in that class of insulators which are mounted on spiral wire coils which are suitably attached to a supporting screw pin.

Our insulator is adapted for lateral oscillation so that it may be used without danger of breaking, as is often the case with insulators so fixed on their supports as to be incapable of yielding to jar or vibration. This is particularly the case with insulators made of glass or porcelain.

In the accompanying drawing, Figure 1 is a vertical section of our improved insulator and its support. Fig. 2 is an exterior view of the same. Fig. 3 is a bottom plan view. Fig. 4 is a view illustrating the method of detaching the insulator proper from its support.

The insulator proper 1 has a common and well-known form and is provided centrally with a socket 2 which is conical in form instead of being cylindrical as is usual in this class of insulators. That is to say, the socket 2, has the form of a truncated cone, the smaller end being uppermost, and it is formed with a cross screw-thread which receives a screw in the form of a wire spring 3, the same being connected with the head of a screw pin 4, and the lower end 5 of the spring being formed with a downward projection which extends normally slightly below the lowest portion of the insulator proper. It is apparent that when the insulator proper is attached to the support, as shown in Fig. 1, it is free to oscillate or move laterally in any direction so far as permitted by the elasticity of the spring 3, and the diameter of the socket 2. By this means, the insulator proper is relieved of jar, vibration, and strain, which otherwise might break it.

It will be understood that in general our invention is applied more particularly to insulators whose body is made of porcelain.

A special feature of our invention is the relation of the conical spiral spring 3 to the conical socket, whereby, when the pin 4 of the insulator is screwed into a bar or other support, the spring is compressed to a certain degree so as to fit more tightly in the socket, and, notwithstanding this, the elasticity of the spring is such that there is no liability of the insulator proper being broken by the expansion of the spring when the insulator is in normal position or when deflected laterally with reference to the pin support 4. Thus a porcelain insulator proper is adapted to be used for mine trolleys and any other places where jar, expansion, or vibration have heretofore rendered it inexpedient. Should, however, the body 1 be broken from any cause, another may be quickly and easily screwed on the spring.

In screwing the pin 4 into a bar or other support, the tip 5 of the spring comes in contact with the bar or with an interposed washer which may be applied to the pin and the friction between the spring and body of the insulator is such that the insulator is held securely. When thus tightly screwed on the spring the insulator cannot be unscrewed without first compressing the lower coils of the spring, which may be effected by forcing the free end 5 of the spring back by means of a tool inserted between the same and the body of the pin as shown in Fig. 4, and applying pressure to the longer arm of such lever whereby the lower coils of the spring are wound slightly closer to the pin.

What we claim is:

The combination of a non-conducting insulator proper having a central conical socket provided with a spiral groove and a support for said insulator comprising a screw threaded pin and a spiral spring secured thereto at the top and encircling the body of the pin but spaced therefrom below said top, the spring corresponding in size and form to the socket and its lower portion having a downward projection or tip 5, as and for the purpose shown and described.

PERRY S. DUMBOLTON.
FRANK FRANZ.

Witnesses:

V. O. BROWNIGG,
S. P. TOBIN.