No. 888,616. PATENTED MAY 26, 1908.

C. C. JOHNSON.

INSULATOR.

APPLICATION FILED OCT. 26, 1907.

Fig. 2.

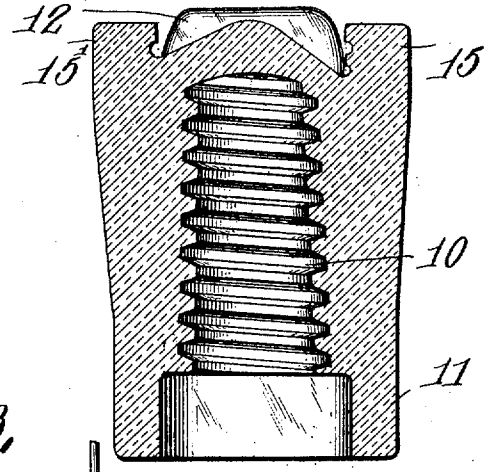


Fig. 3.

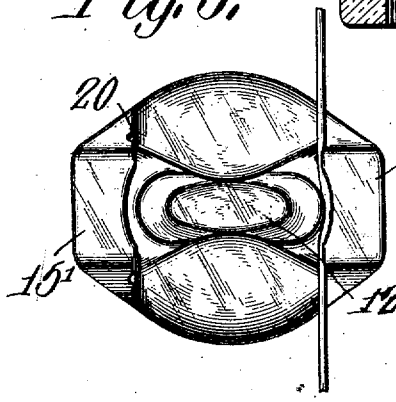
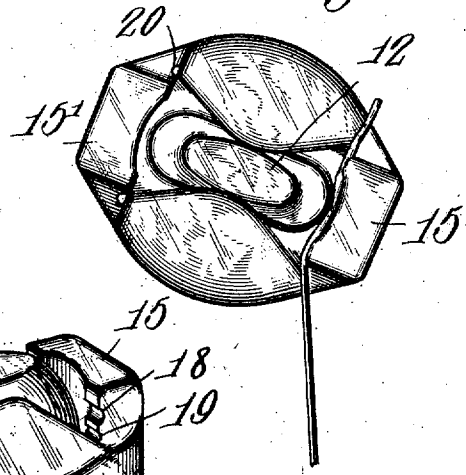


Fig. 4.



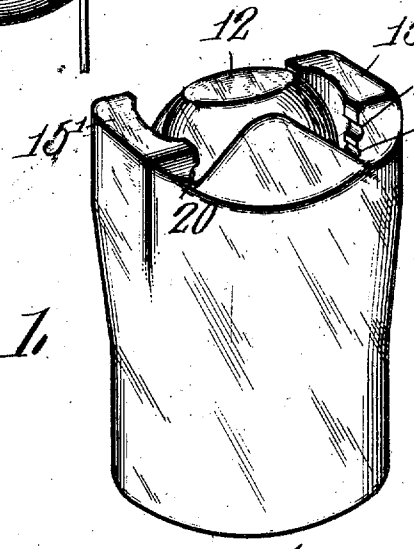


Fig. 1.

Witnesses

E. F. Holcomb

Jno. C. Porter

Inventor

Chauncey C. Johnson

By C. A. Snow & Co

Attorneys

UNITED STATES PATENT OFFICE.

CHAUNCEY C. JOHNSON, OF SCRANTON, PENNSYLVANIA, ASSIGNOR OF FORTY-FIVE ONE-HUNDREDTHS TO JOHN A. WATSON, OF PITTSTON, PENNSYLVANIA.

INSULATOR.

No. 888,616. Specification of Letters Patent. Patented May 26, 1908.

Application filed October 26, 1907. Serial No. 399,377.

To all whom it may concern:

Be it known that I, CHAUNCEY C. JOHNSON, a citizen of the United States, residing at Scranton, in the county of Lackawanna and State of Pennsylvania, have invented a new and useful Insulator, of which the following is a specification.

This invention relates to insulators for the support of telegraph, telephone, and other wires, and has for its principal object to provide a novel form of insulator that is so mounted and arranged as to firmly grip and hold the wire in case the latter becomes broken between any two insulators, so that the wire will not pull loose and sag, so as to bring it into contact with lower wires, and render restretching and repairs difficult.

A further object of the invention is to provide a pivotally mounted insulator that is arranged to be turned on its pivot under stress of the wire when the latter is broken beyond the insulator.

A still further object of the invention is to provide a pivotally mounted insulator that will firmly hold a line-wire and into which the wire may be introduced without the necessity of employing tying links or other auxiliary fastenings.

A still further object of the invention is to provide a single piece insulator of such construction as to permit the ready attaching of wires of different gage.

With these and other objects in view, as will more fully hereinafter appear, the invention consists in certain novel features of construction and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportions, size and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings:—Figure 1 is a perspective view of an insulator constructed in accordance with the invention. Fig. 2 is a vertical section of the same. Fig. 3 is a plan view of the insulator in normal position. Fig. 4 is a similar view, showing the insulator pulled partly around under the strain of a broken wire.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

The insulator is formed of glass or other suitable material, and is provided with the usual threaded opening 10 and petticoat 11, although in some cases the pin may be smooth and the opening unthreaded, the insulator being so mounted on the pin that it is free to turn in either direction under stress of the wire when the latter is broken. The central portion of the top of the insulator is slightly convexed, and is provided with a diametrically disposed rib 12, the opposite ends of which are arranged on slightly curved lines, and the rib is convex in cross section so as to form a rounded jaw for engagement with one side of the wire, and this rounded jaw coacts with a concaved jaw 15 that is formed integral with the body of the insulator and extends upward at a point slightly beyond the end of the rib. The width of the jaw 15 is much greater than that of the rib 12, and the inner face of the end portions of said jaw 15 are provided with notches 18 and 19, which are arranged to receive the wire, these notches being of different depth and the uppermost notch 18 being largest, so that it may receive a wire of heavy gage, while the lowermost notch or notches at the base of the jaws may receive a wire of lighter gage. At the opposite side is a similar jaw 15′ having a notch 20 that preferably is of greater depth than the notch 18 for the purpose of receiving a large wire. The top of the rib 12 projects slightly above the upper faces of the jaws 15, 15′, and when a wire is to be introduced into the tapering spaces between said jaws, it is slightly bent to correspond to the arcuate faces of the jaws, and then is forced downward until it springs into one or other set of notches. In every case the depth of the notches is such that the wire will be slightly bent around the end of the rib and in this manner will be clamped and held against longitudinal as well as upward displacement.

The insulator forming the subject of the present invention is designed for use in connection with a single wire only, the wire being placed at one or other side of the insulator in accordance with its gage and so long as the wire remains unbroken and is subjected to practically the same tensional strain on opposite sides of the insulator, the length of the rib 12 will be approximately at a right angle to the length of the wire, but if the wire should become broken between two in-

sulators, or between the insulator and another attaching point, the wire at the opposite side will act to turn the insulator on its supporting pin, and in so doing the wire will be bent at that point where it passes beyond the edge of the jaw 15, and the double bend thus formed inside and outside the jaw 15 will serve to firmly clamp the wire in place and prevent its falling into contact with subjacent wires. The extent to which the insulator is turned will depend on the stress of the wire, and the greater the stress and extent of turning, the greater the binding effect of the insulator on the wire.

I claim:—

A pivotally mounted insulator having at the top a transversely extending rib convex in cross section and curved outwardly and downwardly, a pair of complementary concaved jaws projecting upward from the body of the insulator at points in alinement with the rib and forming open top wire receiving spaces of gradually increasing width from the bottom upward, the opposite edges of the concaved jaws being provided with wire receiving notches, there being a plurality of such notches to permit the reception of wires of different gage.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

CHAUNCEY C. JOHNSON.

Witnesses:
JAS. M. WALKER,
W. J. DILLON.