

F. M. FARWELL.
INSULATOR.
APPLICATION FILED OCT. 17, 1911.

1,043,916.

Patented Nov. 12, 1912.

Fig. 1.

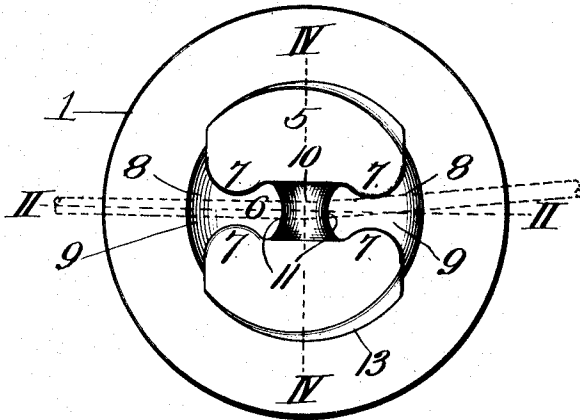


Fig. 4.

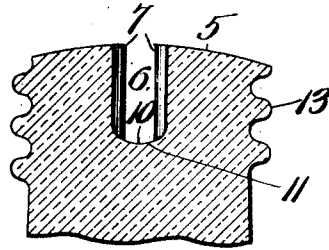


Fig. 2.

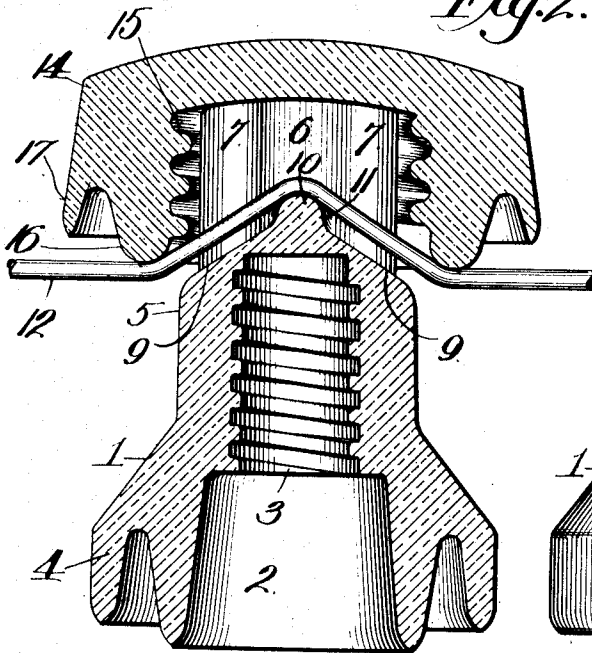
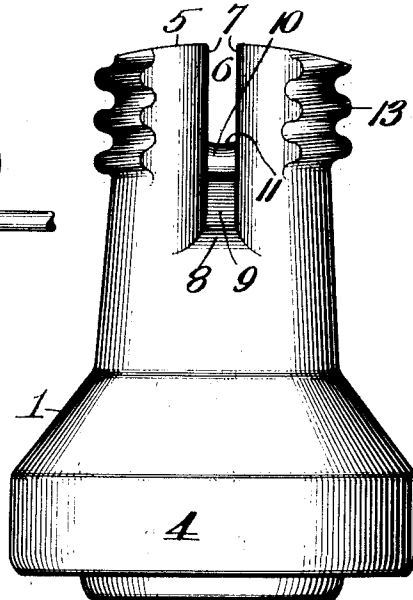


Fig. 3.



Witnesses
Frank R. Glax
A. C. Rodgers

Inventor
F. M. Farwell
By George J. Hoop. Atty.

UNITED STATES PATENT OFFICE.

FRANK M. FARWELL, OF KANSAS CITY, MISSOURI.

INSULATOR.

1,043,916.

Specification of Letters Patent.

Patented Nov. 12, 1912.

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To all whom it may concern:

Be it known that I, FRANK M. FARWELL, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Insulators, of which the following is a specification.

This invention relates to insulators of that class for use with outside telegraph and telephone lines, and my object is to produce an insulator consisting of two parts adapted for a three-point engagement with the wire to be supported and to protect the wire at the points of contact therewith, from rain and snow.

With this general object in view, the invention consists in certain novel and peculiar features of construction and organization as hereinafter described and claimed; and in order that it may be fully understood reference is to be had to the accompanying drawing, in which—

Figure 1, is a top plan view of the lower portion or base of an insulator embodying my invention. Fig. 2, is a central vertical section of the complete insulator taken on the line II—II of Fig. 1, with a wire clamped in operative position. Fig. 3, is a side view of the lower portion or base of the insulator. Fig. 4, is a vertical section on the line IV—IV of Fig. 1.

In the said drawing, 1 is a porcelain or analogous base provided with an opening 2, and a communicating threaded bore 3, to respectively receive and engage the lower and upper or threaded portions of the customary pin, not shown, of the cross arm of a telegraph or telephone pole. The lower part 4 of the base is of substantially conical form and the upper part 5 also tapers upward slightly, and at the upper end is provided with a diametric slot or bifurcation 6, which is contracted in width at opposite sides of its center, as shown clearly in Fig. 1, the parts 7 of the upper portion 5 which form the sides of the contracted portions of the slot or bifurcation, being rounded in cross section so as to produce flaring mouths 8 at the sides of the slot or bifurcation, for a purpose which hereinafter appears.

The top of the lower portion or base at the bottom of the slot or bifurcation, tapers upwardly at 9, and terminates at the apex of such upwardly projecting portions in a rounded boss 10 which is concaved as at 11,

for the purpose of tending to centralize a telegraph or telephone wire, 12 in the slot or bifurcation 6, and the slotted or bifurcated portion of the base is externally screw threaded as at 13.

14 is a cap of porcelain or analogous material which is internally threaded at 15 to engage the threads 13 of the base, and said cap is provided between its outer margins and said threads and at the lower end of the latter, with a flange 16, which depends below the outer margin of the cap and is of rounded form in cross section as shown in Fig. 2, the said flange when the cap is screwed its full distance on the base, lying in a plane above that of the lower ends of the tapered surfaces 9 and said flange is of substantially greater diameter than the upper portion of the base so as to occupy a plane outward of said portion of the base.

To secure a wire reliably in position by means of this insulator, the former is first slipped down into the slot or bifurcation 6 until it rests upon the boss 10. The cap is then screwed upon the upper end of the base until the flange 16 engages the wire. The latter is then preferably bent downwardly upon the boss by any suitable means to substantially the position shown in Fig. 2, and then the cap is screwed downward until such movement is arrested by engagement with the upper extremity of the base, as by bending the wire in the manner explained and then screwing the cap down the former is not subjected to a grinding or cutting action incident to the cap being pressed upon it and turned at the same time, though of course the bending of the wire as explained may be accomplished by simply screwing the cap down and causing it to bend the wire as explained.

When the wire and cap occupy the position shown in Fig. 2, the former, it will be observed, is in contact with the insulator at three points only, namely, with the boss and with the annular depending flange 16 at diametrically opposite sides of the boss.

With the parts thus arranged it will be apparent that swaying movement of the wire between two insulators may be sufficient at times to cause the wire to contact with the opposite sides of the narrow or contracted portions of the slot or bifurcation and to accommodate this swaying movement and eliminate any chance of the cutting or abrading of the wire the slot or bifurcation

is provided with the flaring mouths herein-
before referred to, as without such flaring
mouths the wire in such swaying movements
would be subject to abrasion by contact with
5 comparatively sharp portions of the base.

In Fig. 1 the wire is shown in dotted lines
in a position to which it may sway in gusty
weather. It will be observed by reference
to Fig. 2, particularly, that the portion of
10 the cap outward of the depending flange 16,
constitutes in effect a skirt 17 which shields
the depending flange 16 and the wire at the
points of contact with said flange from the
rain, snow and hail.

15 From the above description it will be ap-
parent that I have produced an insulator
embodying the features of advantage enu-
merated as desirable and I wish it to be
understood that while I have illustrated and
20 described the preferred embodiment of the
invention I do not desire to be restricted to
the exact details of construction shown and
described as obvious modifications will sug-
gest themselves to one skilled in the art.

25 I claim:—

1. An insulator comprising a base pro-
vided with a diametric bifurcation in its up-
per end and tapering upward from opposite
sides at the bottom of said bifurcation and
30 provided at the apex of said tapering sur-
faces with an upstanding rounded boss; the
slotted or bifurcated portion of the base be-
ing externally threaded, in combination with
an internally threaded cap to receive the

threaded slotted or bifurcated portion, and 35
provided in a vertical plane between the
threads and outer margins of the cap with
a depending rounded flange of greater diam-
eter than the base at the bottom of said slot
or bifurcation; the parts being so propor- 40
tioned that the said flange shall occupy a
horizontal plane above the lower ends of
said tapered surfaces of the base.

2. In an insulator, a base provided with a
diametric slot or bifurcation in its upper 45
end and tapered upwardly from opposite
sides at the bottom of said bifurcation and
provided at the apex of said tapered sur-
faces with an upstanding rounded boss; the
slotted or bifurcated portion being exter- 50
nally threaded.

3. In an insulator, a base having, in its
upper end a diametric slot or bifurcation
of greatest width at its center, the base at
the bottom of the slot or bifurcation extend- 55
ing upward from opposite ends of the latter
and formed at the apex of said surface and
at the widest point of the slot or bifurca-
tion with an upstanding rounded boss; the
slotted or bifurcated portion of the boss be- 60
ing externally screw-threaded.

In testimony whereof I affix my signature
in the presence of two witnesses.

FRANK M. FARWELL.

Witnesses:

HELEN C. RODGERS,
G. Y. THORPE.