No. 876,939. PATENTED JAN. 21, 1908.

H. W. BUCK.

INSULATOR.

APPLICATION FILED JULY 29, 1902.

Fig. 1.

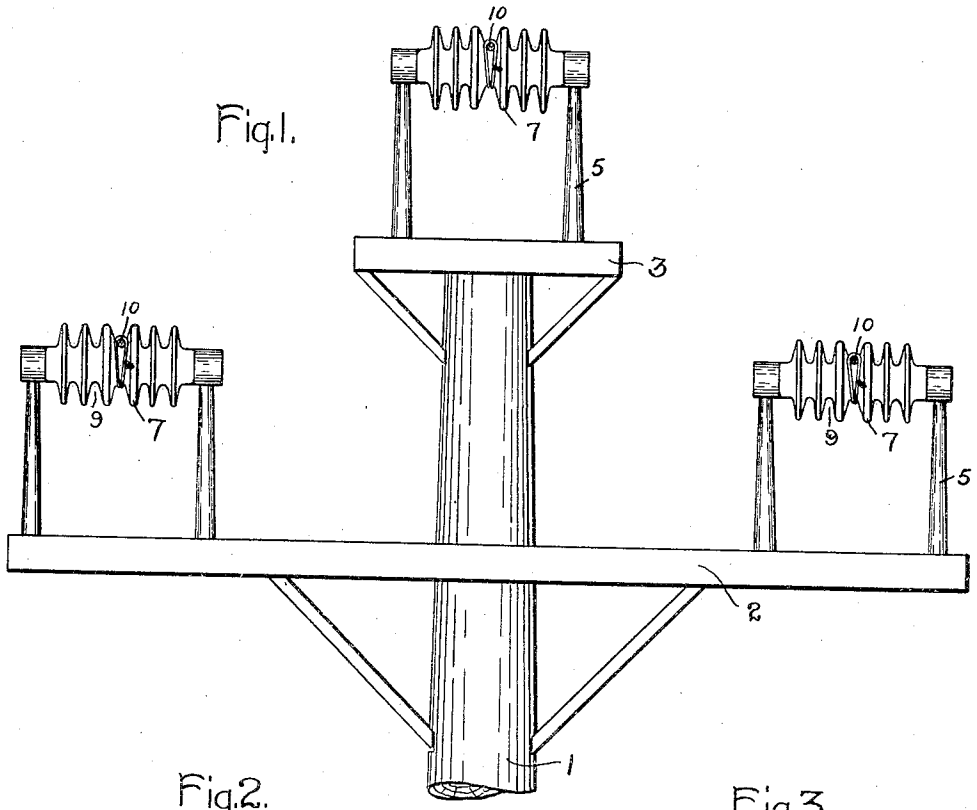


Fig. 2.

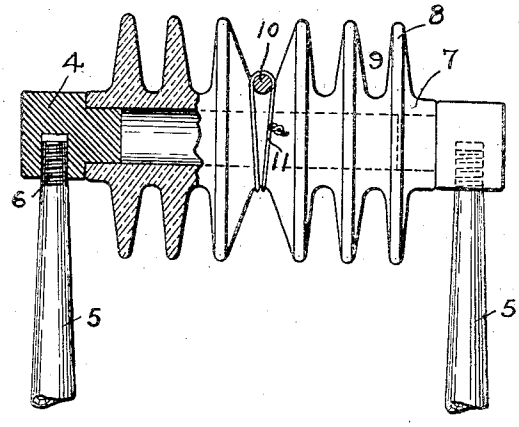
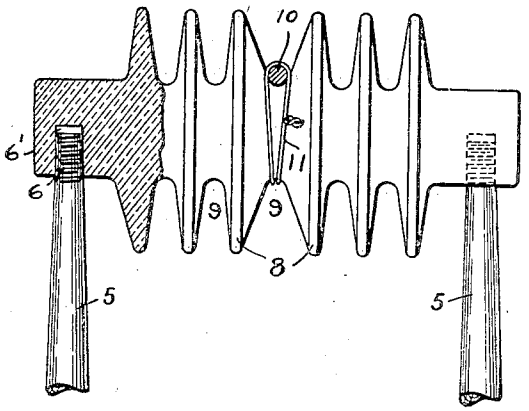


Fig. 3.



WITNESSES:

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HAROLD W. BUCK, OF NIAGARA FALLS, NEW YORK.

INSULATOR.

No. 878,939. Specification of Letters Patent. Patented Jan. 21, 1908.

Application filed July 29, 1902. Serial No. 117,562.

To all whom it may concern:

Be it known that I, HAROLD W. BUCK, a citizen of the United States, residing at Niagara Falls, in the county of Niagara, State of New York, have invented certain new and useful Improvements in Insulators, of which the following is a specification.

My invention relates to improvements in insulators for high potential lines.

The object of my invention is the production of an insulator for supporting high potential lines in which there is no tendency to puncture and in which the resistance to creepage can be made very large.

A further object of my invention is the production of an insulator which is comparatively inexpensive and but little affected by rain.

In the drawing, Figure 1 shows a front elevation of a support with three of my insulators mounted thereon; Fig. 2 is an enlarged detail view partly in section showing one form of my insulator; while Fig. 3 is a similar view showing a modification thereof.

I have shown in the drawing a pole or support 1 carrying a long cross arm 2 bearing two of my insulators, and a short cross arm bearing one of my insulators. The particular arrangement shown is designed to carry high potential three phase transmission lines. The three insulators 7 shown are identical in construction. They are made of glass or porcelain, are tubular in form, and are encircled by a series of ridges or corrugations 8, and corresponding depressions 9 to increase the distance over which the creepage current must travel.

The axis of the insulator is horizontal so that the planes of the corrugations are vertical. Wooden blocks 4 are inserted in the ends of the tubular insulators and in these wooden blocks are screwed vertical uprights or supports 5 having threaded ends 6. The supports 5 are secured in turn in any suitable manner to the horizontal cross pieces 2 and 3.

In Fig. 3 I have shown another embodiment of my invention in which the insulator is made solid and radial recesses 6′ are formed near each end in which the supports 5 are screwed in the same manner as they are screwed in the wooden blocks 4 in the other form. In each case the conductor 10 which it is desired to support by the insulator lies in the depression 9 located between the middle pair of corrugations or ribs 8 and is secured by the wire 11 in the ordinary manner. The middle pair of ridges may be separated to a greater distance than the others if necessary, to receive the wire.

Among the advantages obtained by my construction are the following: The insulator is a perfectly symmetrical solid of revolution, and is therefore easy to mold in porcelain or glass; secondly, the ridges or ribs are disposed in vertical planes so that there is no tendency for water to drip from one to the other as in the ordinary construction and thus electrically connect the petticoats; thirdly, as there is no iron or other conductor in the interior of the insulator there will be no tendency to puncture and the insulator will have to be designed for surface leakage only so that a high grade porcelain or glass is not necessary.

What I claim as new and desire to secure by Letters Patent of the United States, is—

1. In combination, an insulator comprising a solid cylindrical substantially horizontally disposed body formed out of insulating material and encircled by a series of corrugations, means for supporting said body engaging the body only at its ends, and a conductor extending transversely to said body and supported thereby between a pair of adjacent corrugations.

2. An insulator for electric conductors, comprising a cylindrical body encircled by a series of corrugations and having a socket or recess formed in each end, and supports for said body entering said sockets or recesses and extending radially from said body.

3. An insulator for electrical conductors, comprising a solid cylindrical body made entirely out of insulating material, the said body being horizontally disposed, encircled by a series of corrugations and supported at its ends only.

4. An insulator for electrical conductors, comprising a long cylindrical body made entirely out of insulating material, the said body being horizontally disposed and encircled by a series of corrugations, recesses being formed in the ends of said body extending inward from the cylindrical surface of said body, and supports for entering said recesses and sustaining said body.

5. An insulator for electric conductors comprising a cylindrical body of insulating material encircled by a series of corrugations and provided at each end with a support receiving opening or recess, and a pair of supports for the body, one entering the recess or

opening at one end of the body and the other entering the opening or recess at the opposite end of the body.

6. An insulator for electric conductors comprising a horizontally disposed one piece cylindrical body of insulating material encircled by a series of corrugations and having a support receiving socket or recess formed in each end, and supports for said body entering said sockets or recesses.

In witness whereof, I have hereunto set my hand this twenty-sixth day of July, 1902.

HAROLD W. BUCK.

Witnesses:

WM. M. BLAIR,

C. W. OLMSTED.