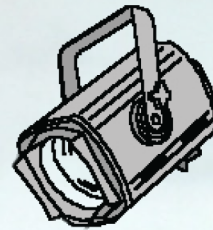


INSULATOR SPOTLIGHT

CD 317.8 / CD 313 / CD 313 / CD 313.1



INSULATOR SPOTLIGHT



CD 317.8-CD313-CD313-313.1

V.G. CONVERSE

INSULATOR BY

CHRIS HEDGES

INSULATOR SPOTLIGHT

CD 317.8 / CD 313 / CD 313 / CD 313.1 (CONTINUED)

No. 701,847.

V. G. CONVERSE.
INSULATOR.

(Application filed Aug. 2, 1901.)

Patented June 10, 1902.

(No Model.)

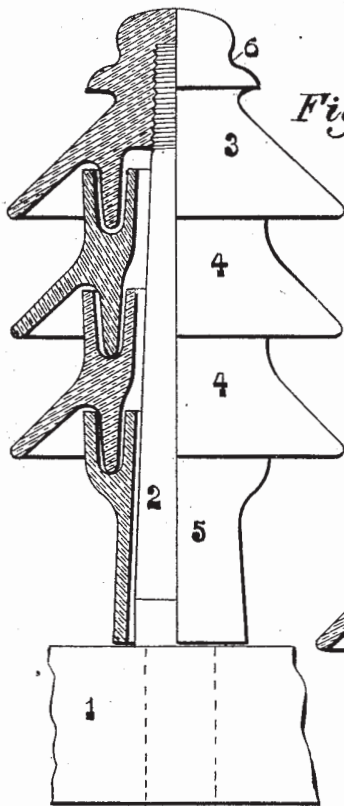


Fig. 1.

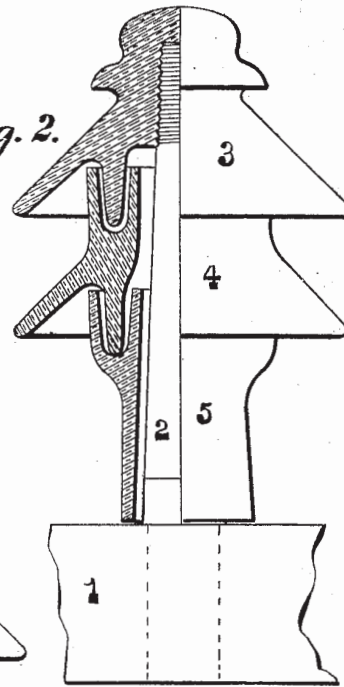


Fig. 2.

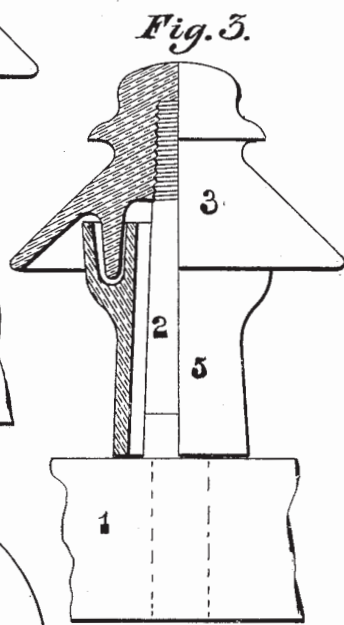


Fig. 3.

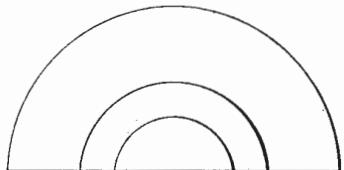


Fig. 4.

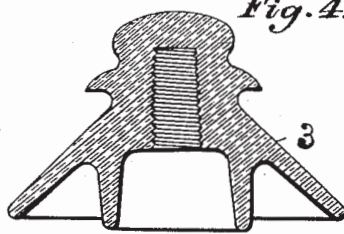


Fig. 5.

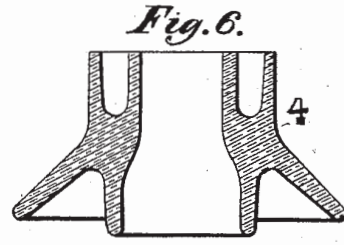
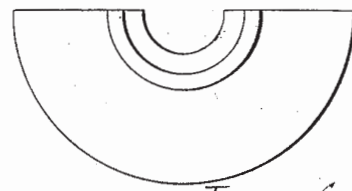


Fig. 6.



Witnesses:
J. M. Fowler
Geo. H. Harvey

Inventor:
Vernon G. Converse,
by Wm. L. Pierce
his Atty.

To all whom it may concern:

Be it known that I, VERNON G. CONVERSE, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented or discovered new and useful Improvements in Insulators, of which the following is a specification.

In the accompanying drawings, which make part of this specification, Figure I represents one form of my invention, half in elevation and half in vertical section. Fig. II is a view similar to Fig. I, except that two sections 4 are shown. Fig. III is a view similar to Fig. I, except that the tubular section 5 is omitted. Fig. IV is a view similar to Fig. III, except that two sections 4 are shown. Fig. V is a top plan of one of the sections marked 4.

My invention relates to devices for the support and insulation of electrical conductors, particularly conductors used for transmitting currents of high voltage.

It is with reference to the tendency under wet-weather conditions of a high-voltage current to arc over the surface of an insulator or partly over the surface of an insulator and partly through the air, from the conductor to the ground or the support for the insulator which may be grounded, that I make my insulator of the form and in the manner hereinafter described.

In the various figures, 1 is shown as a cross-arm or support for

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the pin 2, having a threaded end, on which the insulator is screwed. These elements, by which the insulator is supported, are not essential, as the insulator may be supported in any desired manner.

The insulator proper is shown in Figs. III and IV as made up of a cap section 3 and one or more sections 4, each section having an outwardly-extending and exposed flange 7 and a downwardly-extending flange 8. The flanges 8 project into the annular groove X of the sections 4. The lowest flange 8 may be seated in the groove of the tubular section 5, as shown in Figs. I and II, or said section 5 may be omitted, as shown in Figs. III and IV.

6 represents a conductor of electricity, and 9 represents the cement or glazing hereinafter referred to.

The essential features of my insulator are a plurality of sections having outwardly-extending and exposed flanges, the sections being first made separately and then joined together into one inseparable piece for use. The purpose of the outwardly-extending and exposed flange is to present a succession of unexposed surfaces beneath the flanges and also gaps in the path of the current to impede arcing of the current over the surface of the flanges and through the air from the conductor to the ground. The tubular section 5, which is shown in Figs. I and II, may serve to prevent the arcing or jumping of the current to the pin, if a pin be used, onto support the rest of the insulator.

As it is an extremely difficult and apparently impracticable thing at the present time to make an insulator possessing the features described in one piece or of a homogeneous mixture, I make my insulator in sections or pieces in either of the following ways:

The first way is to make the insulator in sections, as shown in the several figures, and then cement them inseparably together with a mixture of sulfur and feldspar, which is poured into the grooves X. This method is applicable to insulators whose sections are made of glass, porcelain, or any other suitable insulating material. While I have used sulfur and feldspar as a cement for the purpose described, it is not an essential cement for this form of insulator, as there are other cements known to the arts for the union of materials, such as glass or porcelain, which would also make the sections of the insulator absolutely inseparable even by the use of heat or acid or other reagent.

The second method is for the use of materials in making the sections of the insulator which are fusible or may be fused together, and has particular reference to the use of porcelain. While I do not limit myself to the method of securing the sections together, I have found that flux or glaze may be poured into the grooves X when the insulator is in sections and that by baking or reheating the sections may be fused together into one apparently homogenous piece and one that is inseparable.

In neither of the methods described is it necessary to the manufacture of my insulator that the sections be united either in the manner or at the points shown. It is possible that the insulator may be made so as to be joined at any point or points between its extremities and also so that more than one flange may be included in a single section or that some of the sections may be without flanges.

The principles of my insulator and the method of manufacturing it apply as well to an insulator which depends from the cross arm or support as to one which is mounted above the cross arm or support.

The drawings show my preferred forms; but the construction as shown does not necessarily cover the many changeable details which might effect the same result as obtained by me.

Having described my invention, what I claim is—

1. An insulator for currents of high voltage, consisting of sections separate in manufacture, the number employed dependent upon the amount of insulation required, and means for holding the sections permanently assembled against any force applied.
2. An insulator for currents of high voltage, having extreme sections and one or more mean sections separate in manufacture, the number of the latter employed dependent upon the amount of insulation required and means for holding the sections permanently assembled against any force applied.
3. An insulator for currents of high voltage including in its organization insulating sections separate in manufacture and with outwardly-extending flanges, a gap being between the flanges of adjacent sections and beyond the flange of an extreme one of said sections, and means for holding the sections permanently assembled against any force applied.
4. A high-voltage insulator made up of three or more parts

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which are separate articles of manufacture, one of which acts as a cap to cover or protect the pin or support from the elements, the second a tube or cylinder of a smaller diameter than the first part which surrounds or incloses the pin and electrically protects it, and the third one or more parts with outwardly-extending flanges or petticoats which intervene between the first and second parts, the said parts being permanently united for use.

5. A high-voltage insulator made up of three or more parts which are separate articles of manufacture, one of which acts as a cap to cover or protect the pin or support from the elements and has a downwardly-extending flange or petticoat, the second a tube or cylinder of a smaller diameter than the first part which surrounds or incloses the pin and has an upwardly extending groove, the third one or more parts with outwardly-extending flanges or petticoats which intervene between the first and second parts and have downwardly-extending flanges or petticoats, and upwardly-extending grooves, the said parts being permanently united for use.

Signed at Pittsburg this 8th day of March, 1902.

Vernon G. Converse

Witnesses:

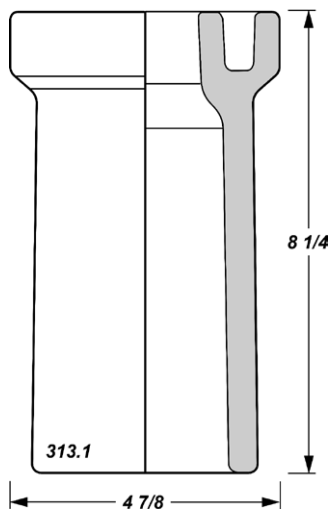
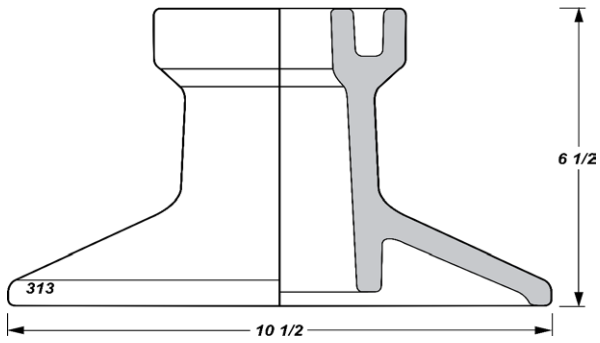
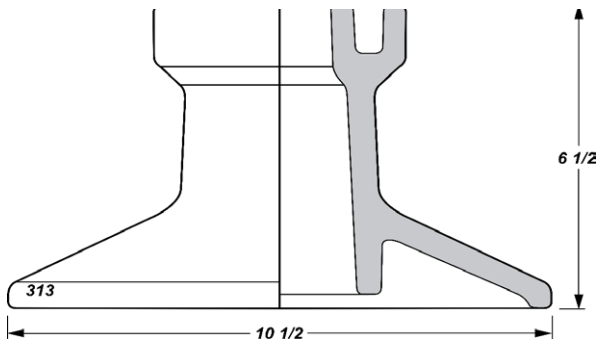
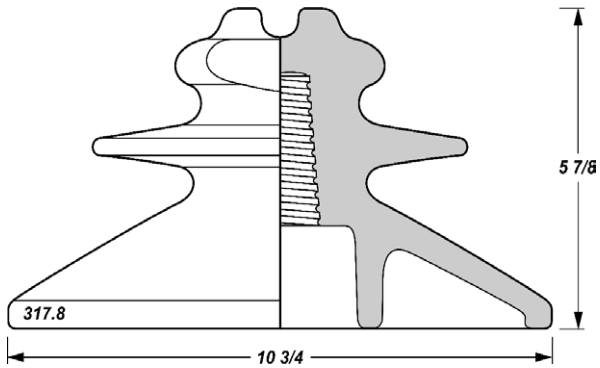
F. N. Barber,

F. E. Muckle.



INSULATOR SPOTLIGHT

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INSULATOR SPOTLIGHT

CD 317.8 / CD 313 / CD 313 / CD 313.1 (CONTINUED)



The embossing on this rare beauty is really unusual, as the top is embossed with PATENTED JUNE 10 1902 on one side of the skirt and SECTION 1 on the other side.

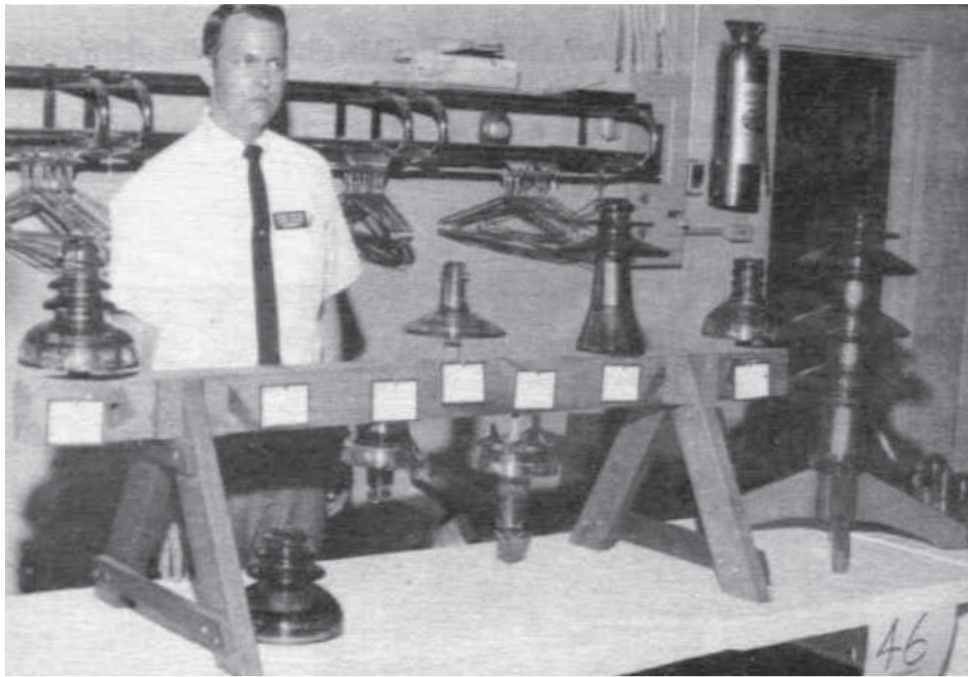
The 2 mid skirts are marked PATENT MAY 2 1893 on the inside of the collar, HEMINGRAY on the other side, and SECTION 2 on the skirt.

The base piece has no markings at all.



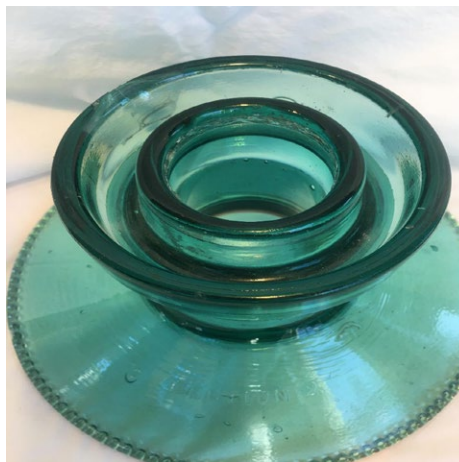
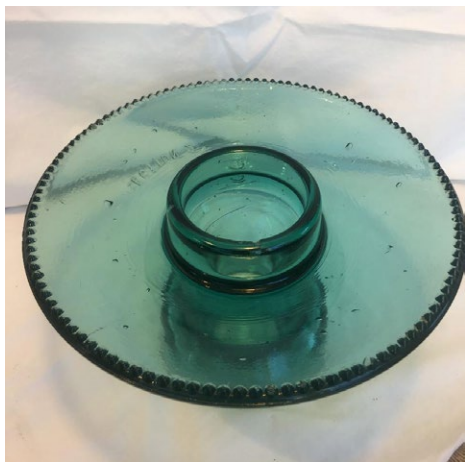
INSULATOR SPOTLIGHT

CD 317.8 / CD 313 / CD 313 / CD 313.1 (CONTINUED)



I want to thank Chris Hedges for sharing this ultra rare insulator for us all to see. Above is a picture of Dennis Donovan who worked for Hemingray and, in his spare time, dug the dump at the plant and discovered many of the one of a kind Hemingray insulators. As far as the CD 317.8,313,313,313.1 it's the only one known. There is a CD 317.7 which is very similar, except the embossing is different—it's marked H.G.CO / PATENT MAY 2 1893. There is also one other CD 313 in the hobby. I have often wondered if this design was changed and the CD 248/311/311 was a replacement for it. The time period is about correct as many of the lines built in Montana that used the Hemingray "Stacker" were built in the early 1900's, and there are just too many similarities between the two, but those are just my thoughts. I hope everyone enjoys this new feature we will be doing in each issue of Drip Points; I will be spotlighting not only glass insulators, but porcelain as well! ▲

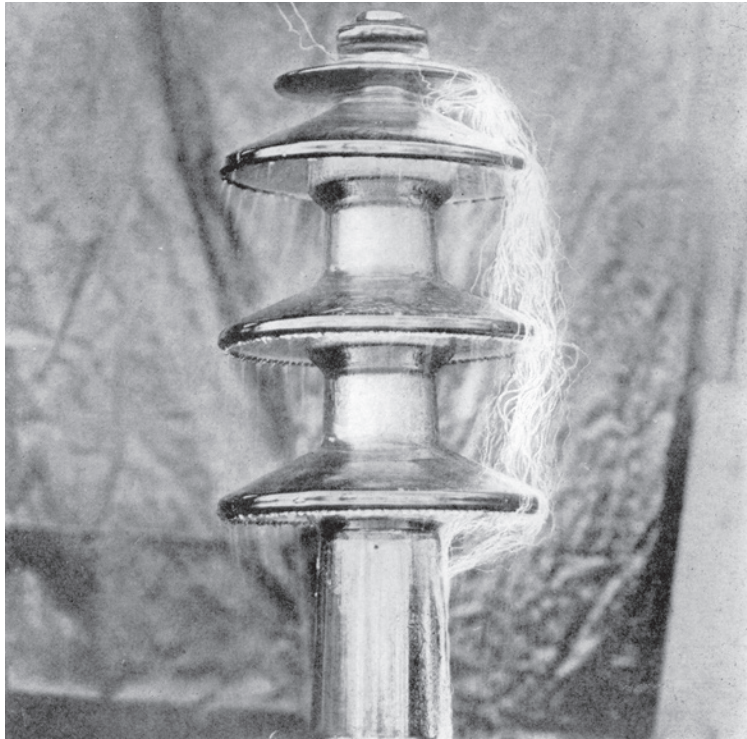
Thanks Again, *Doug Rusher*



INSULATOR SPOTLIGHT FOLLOW-UP

BY CHRISTIAN WILLIS * NIA #5185

We got some great feedback from the April 2020 issue of Drip Points Magazine, in which our brand new Insulator Spotlight featured the ultra-rare CD 317.8/313/313/313.1 manufactured by Hemingray for V. G. Converse. Fellow Hemingray collectors Bill Meier and Bob Stahr submitted some additional historical photos and information that I wanted to be sure to share with everyone.



THIS 1906 PHOTO SHOWS THE INSULATOR UNDER TEST AT 198 KV

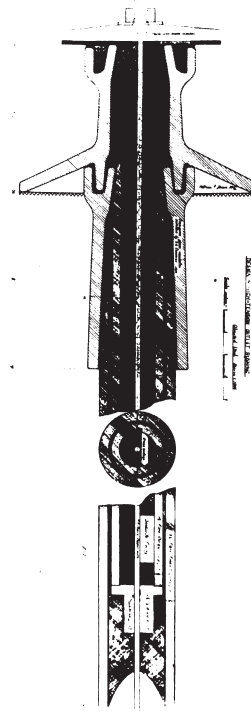


Fig. 18.

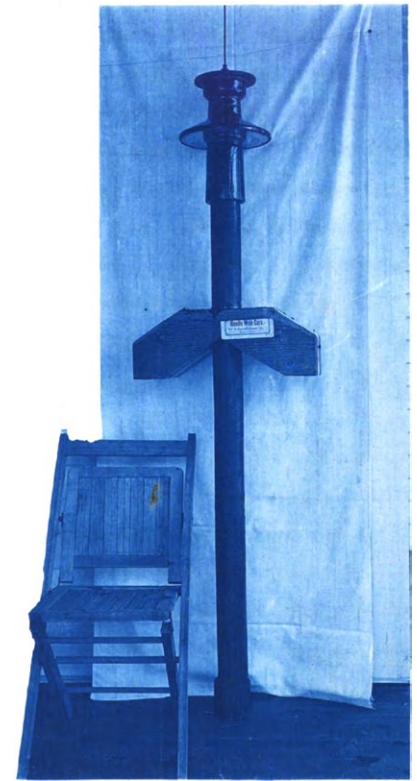


Fig. 19.

The above figures appeared in a 1906 University of Wisconsin Master's Thesis by Alvin Meyers entitled "A Ten Thousand Horse-Power Hydro-Electric Installation at Olmsted, Utah, with Special Reference to High-Tension Wiring and High-Tension Outlets." This photo and illustration show the V.G. Converse "middle piece" (CD 313) and "base" (CD 313.1) used as bushings. The estimated cost of each piece was 27¢!

Bill Meier reminded us of the absolute wealth of information available over at reference.insulators.info. For more information on this particular insulator, be sure to visit the following articles:

- <https://reference.insulators.info/publications/view/?id=7339>
- <https://reference.insulators.info/publications/view/?id=3384>
- <https://reference.insulators.info/publications/view/?id=12495>

Special thanks to Bill Meier, Bob Stahr, and Elton Gish for all their hard work making invaluable insulator history like this available to the hobby! ▲



THE MEETING OF THE BUCKEYE CLUB AT THE HEMINGRAY GLASS COMPANY IN MUNCIE, INDIANA.

The Buckeye Club consisted of jobbers in electrical supplies from the states of Pennsylvania, Ohio, Michigan, Indiana and Kentucky.

From Hemingray historian Bob Stahr: "Ralph Hemingray is 4th from left. I believe the person holding the insulator is likely VG Converse. The person to the left of VG Converse is Daniel Hemingray."