

HEMINGRAY MINE INSULATORS

BY CHRISTIAN WILLIS * NIA #5185

As an insulator collector, chances are at some point in your collecting you've found one particular style that you really like and want to specialize in. For me, one of those styles was the CD 185 Jeffrey Mine Insulator. There was just something about the sharp, cylindrical profile, the hole through the top, the wall-to-wall embossing, and the scarcity of them that really drew me in. I wanted one! And as we all know, "one" turns into "more than one" rather quickly...

In this article we'll explore the history of the CD 185, and examine the various mine insulators manufactured by Hemingray.



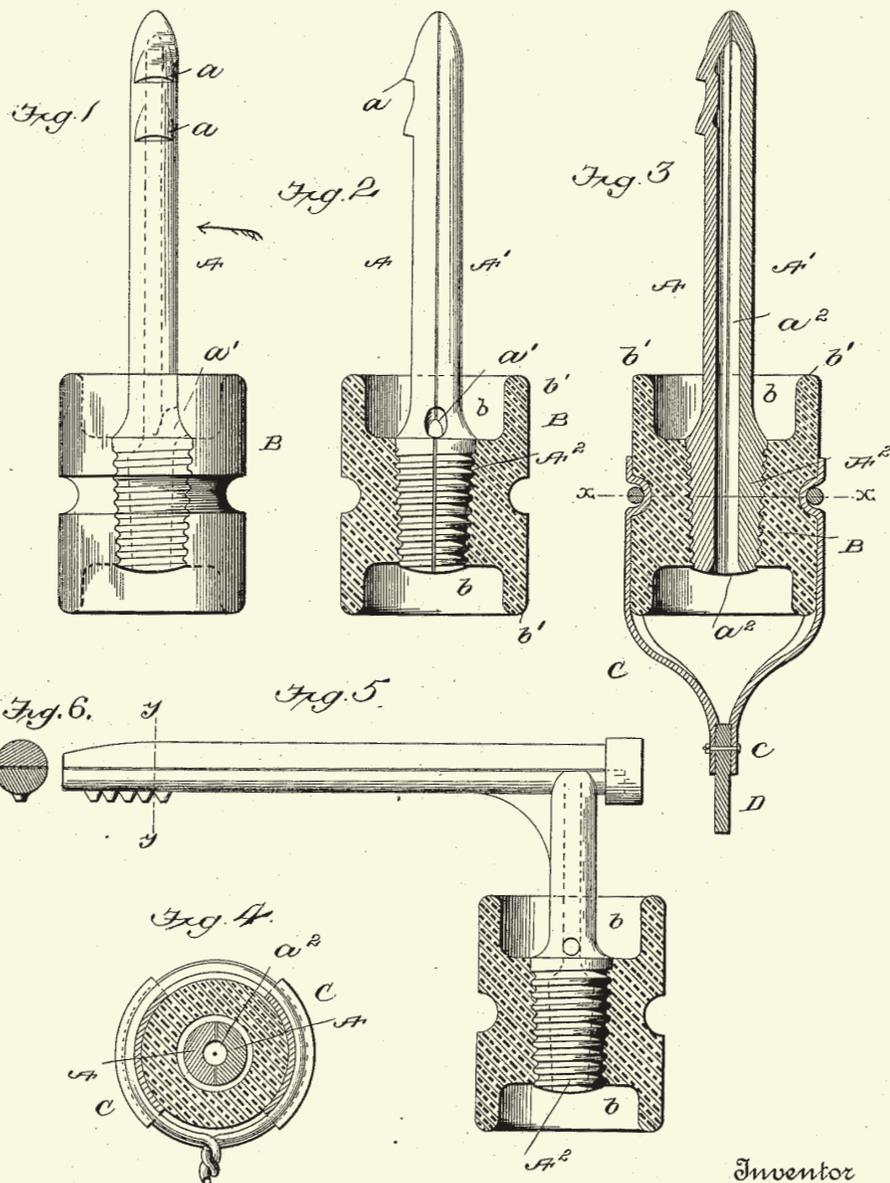
The story begins on November 29, 1893, when David N. Osyor of Columbus, Ohio, and assignor to Joseph A. Jeffrey, filed a patent for a "Conductor-Support and Insulator." This insulator, and its supporting pin, was specially designed for wet and freezing environments (such as inside a mine). The insulator itself has a threaded hole completely through the middle. It screwed onto a hollow, malleable iron pin with a channel for draining water. This would prevent the water from pooling, freezing and short circuiting the attached electrical line.

(No Model.)

D. N. OSYOR.
CONDUCTOR SUPPORT AND INSULATOR.

No. 526,498.

Patented Sept. 25, 1894.



Witnesses
John Danville
Chas. H. Porter

Inventor
David N. Osyor
By
Doubleday & Bliss Attorneys

THE MORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(CONTINUED)

UNITED STATES PATENT OFFICE.

DAVID N. OSYOR, OF COLUMBUS, OHIO, ASSIGNOR TO JOSEPH A. JEFFREY,
OF SAME PLACE.

CONDUCTOR-SUPPORT AND INSULATOR.

SPECIFICATION forming part of Letters Patent No. 526,498, dated September 25, 1894.

Application filed November 29, 1893. Serial No. 492,350. (No model.)

To all whom it may concern:

Be it known that I, DAVID N. OSYOR, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Conductor-Supports and Insulators, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to improvements in conductor supports and insulators for electric light wires, trolley lines, &c., and consists in the novel arrangement and combination of parts to be hereinafter described and pointed out in the claims.

It is well known that there are serious difficulties to be met with in using the ordinary insulators, especially in wet, or freezing weather, as the water freezes about the wires and short circuits the current, rendering the wire useless and making work over the wires an impossibility. Especially is this true in mines when electrical work is going on.

My invention is designed to overcome these difficulties.

Figure 1 is a side view of my device. Fig. 2 is a side view looking in the direction of the arrow in Fig. 1. Fig. 3 is a longitudinal section with the trolley line hanger attached. Fig. 4 is a section on line $x-x$ Fig. 3. Fig. 5 shows a modified hanger. Fig. 6 is a section on line $y-y$ Fig. 5.

The support is formed with two parts A, A', being divided longitudinally for a purpose to be hereinafter set forth. Each part A, A', is cast with a longitudinal groove a^2 and a lateral groove or duct a' , so that when the two parts A, A', are put together there is an aperture in the support extending into and connecting with a central duct. On one of the parts A are projections a adapted to engage with the material into which the support is driven and prevent its withdrawal. The part A' is more or less wedge-shaped, for a purpose to be described.

The end A^2 of the support is a little enlarged and has a tapering screw thread, on which is screwed a glass insulating spool B having flanges b' on both ends, and having a groove b^2 extending around its periphery at a central point.

It will be seen that the top of the flange b' extends some ways beyond the aperture a' , the latter being a little above the end face of the spool B.

The conductor hangers C which I use for electrical haulage, conform to the configuration of the spool B and extend downward below it, and are bolted or otherwise secured at c to the conductor or trolley line D. The hangers are wired or secured in any suitable way to the spool B. It will be understood that I do not limit myself to the use of these hangers, for I dispense with them when using my device with telegraph or telephone wires.

As my device is specially adapted for use in coal mines, I will describe the method of putting up the lines there.

A hole is drilled in the roof, and the part A, is driven therein as far as may be desired. Then the part A' is driven in beside it, (it acting as a wedge and driving the projections a , a , into the coal) until the screw threads correspond. Then the spool B is screwed on, and the hangers with the conductors or the wires themselves are attached thereto.

It is well known that there is a constant dripping of water down on the supports, which acts to make short circuits; but in my device the water runs down into the cup formed by the flanges b', b' , and runs through the ducts a', a^2 , to the floor beneath without overflowing and running down on the wires.

When the support is driven downward so that the part A^2 is uppermost it will be seen that the water will run through the apertures in the same way.

In freezing and thawing weather, I find by actual experience that the ice melts around the iron quicker than around the glass, so that a way is made for the water to run through the ducts.

In Fig. 5 a hanger is shown having the same essential features but being also adapted for use in places where those of the other style cannot be so well employed. Here the perforated part which directly supports the insulator B extends at right angles from the part which is driven into the wall or support. One of this kind can be used advantageously in many of the numerous angles or restricted spaces found in coal mines and similar places.



ABOVE: This illustration appeared in the Electrical Review Trade Journal (New York, NY, Saturday, August 6, 1904, Vol. 45, No. 6) and described "Malleable Iron Pins for Mine Feeder System." Note the embossing on the insulator shows an incorrect patent date year of "1898".

<https://reference.insulators.info/publications/view/?id=5292>

LEFT: Patent drawings and paperwork, courtesy of Bill Meier: <http://reference.insulators.info/patents>

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HEMINGRAY MINE INSULATORS

(CONTINUED)

On September 25, 1894, Patent 526,498 was granted. The earliest CD 185s were manufactured by Hemingray for the Jeffrey Mfg. Co. circa 1893. They are crudely molded, hand-embossed and bear “Patent Applied For” as seen on the [007] embossing below.

Once the patent was granted in 1894, the “Patent Applied For” embossing was blotted out on the molds and replaced with “Patent Sept 25, 1894.” This can be seen in the [030] embossing (below, right). Note the “Loop 2” embossing style, which was common for Hemingrays embossed around this time period.

In the current price guide, there is also a [010] embossing without the indication of a blot out:

(F-Above wire groove) SPECIAL MINE INSULATOR/JEFFREY MFG.CO. (F-Skirt) COLUMBUS OHIO/PATENT SEPT 25 1894 SB

I am skeptical that this embossing actually exists in the smooth base variety; it is more likely that the blot out was just missed by collectors, as the earlier [007] “Patent Applied For” embossing wasn’t discovered until later, so they wouldn’t have been aware of a blot-out underneath at the time.

It should also be noted that all of the earliest CD 185 Jeffreys are smooth base and lack any drip points. Indeed, drip points themselves had just been patented by Hemingray on May 2, 1893.

(Patent text continued from previous page)

While I have described my device as adapted for mine work, yet it will be seen that it can be very well used with telephone and telegraph wires, as well as electric light wires.

What I claim is—

1. A conductor support having two parts separable on longitudinal lines, in combination with an insulating spool, secured around outside of said support, and means for fastening said spool on said support, substantially as set forth.

2. A conductor support having two longitudinally separable parts, screw threaded on one end, and an insulating spool adapted to be screwed thereon substantially as set forth.

3. A two part conductor support, one part A of which is provided with spurs or serrations *a, a*, and the other part A' being wedge shaped, and adapted to slide on the said part A, in combination with an insulating spool secured to said support substantially as set forth.

4. The combination with the support, of the insulating spool having a recessed top, said support having a duct leading there-through and communicating with the recess whereby

water which collects in said recessed top may pass through said duct, substantially as set forth.

5. The combination with the support, of the insulating spool having a recessed top, there being an aperture or duct leading from said recess through the spool, whereby water which collects in the recess may be discharged, substantially as set forth.

6. The combination with the insulating spool, of a support therefor having a duct extending from a point near the upper end of the spool to a point near the lower end of the spool, substantially as set forth.

7. The combination with an insulating spool having flanges *b', b'*, of a support having a duct extending from a point lower than the top of the upper flange, to a point above the lower edge of the lower flange, substantially as set forth.

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

DAVID N. OSYOR.

Witnesses:

H. H. BLISS,
MARCUS B. MAY.



CD 185 JEFFREY MFG. CO. [007]
(F-Above wire groove) SPECIAL MINE INSULATOR/JEFFREY MFG.CO. (F-Skirt) COLUMBUS OHIO/PATENT APPLIED FOR SB — Photo courtesy of Bill Meier.



CD 185 JEFFREY MFG. CO. [030]
(F-Above wire groove) SPECIAL MINE INSULATOR/JEFFREY MFG.CO. (F-Skirt) COLUMBUS OHIO/PATENT SEPT 25 1894/[‘APPLIED FOR’ blotted out] SB

HEMINGRAY MINE INSULATORS

(CONTINUED)

As you can see on the following pages, later embossings are stamped, and bear Hemingray's well-known drip points on either the top or bottom of the insulator.

CD 185 Jeffreys are fairly unusual in that they have a large amount of embossing crammed into a relatively small space on one side of the insulator only. This evidently proved challenging for engravers.

As we can see on some molds, such as the one on the right, they actually ran out of room trying to emboss "Insulator"! This accounts for the [040] embossing, which denotes "{Many varieties of blot outs and spelling errors at the end of 'INSULATOR'}". In this case, they blotted out the last few letters and abbreviated it to say "INSULR" to get around the space limitation.

The [001] embossing is also "SPECIAL" in that they started to stamp the "S" a bit too high on the mold, corrected themselves, and started over. This left a lone, lightly-struck "S" hanging out above the embossing (see photo on right).

Because of the harsh environments where these insulators were typically used, such as mines, these are frequently found with at least a chip or two, and often more. It is very uncommon to find a specimen in mint condition.

On the next page, we'll explore the different color variations of the Jeffreys, as well as the later production Hemingray embossings.



CD 185 JEFFREY MFG. CO. [040]
(F-Above wire groove) SPECIAL
MINE INSULATOR/JEFFREY
MFG.CO. {Many varieties of blot
outs and spelling errors at the
end of 'INSULATOR'} (F-Skirt)
COLUMBUS OHIO/PATENT
SEPT 25 1894 {Drip points may be
on the top or on the bottom of the
insulator} SDP



CD 185 JEFFREY MFG. CO. [001]
(F-Above wire groove) S/SPECIAL
MINE INSULATOR/JEFFREY
MFG.CO. (F-Skirt) COLUMBUS
OHIO/PATENT SEPT. 25 1894.
{Drip points may be on the top
or on the bottom of the insulator}
SDP

HEMINGRAY MINE INSULATORS

(CONTINUED)



CD 185 JEFFREY MFG. CO. [020]
Aqua



CD 185 JEFFREY MFG. CO. [020]
Ice Aqua – Photo courtesy of Bill Meier



CD 185 JEFFREY MFG. CO. [020]
Hemingray Blue

Pictured above are all three color varieties of the most prolific of the Jeffrey Mine Insulators, the [020] embossing. From left to right: Aqua, Ice Aqua, and Hemingray Blue. Aqua is the most prevalent color across all of the Jeffrey Mine Insulators. Ice Aqua and Hemingray Blue are seldom seen, and the price guide reflects this appropriately.

Also, note the varying height. The molds in which these were made had a sliding cylinder, and depending on how much glass was poured into the mold, it would cause the resulting insulator to be taller or shorter. This resulted in interesting height variations, generally a difference of $\pm 1/2$ ", but occasionally more.

Note that the Mine Insulator (next page, top left) is embossed simply "Mine Insulator", though it is unquestionably a Hemingray product. Why they chose to generically emboss some molds is unknown. There is also a No Embossing CD 185 listed in the price guide, but to date I have not seen one, so I cannot evaluate if it is a Hemingray product or not. CD 185s were also manufactured by other glass companies including Brookfield (typically embossed "B" or "B-1") but those are beyond the scope of this article.



HEMINGRAY MINE INSULATORS

(CONTINUED)



CD 185 MINE INSULATOR [010]
(F-Skirt) MINE/INSULATOR SB

In addition to manufacturing mine insulators for Jeffrey Mfg. Co., Hemingray also manufactured and sold the CD185 under their own name as the No.95 style. They originally appeared in catalogs as the “No. 1 Mine”, but no specimens exist with this style number. Based on when these appeared in catalogs, these were likely offered from the early 1900’s through the early 1920’s, and discontinued soon after. Note the rounded tops on the Hemingrays below, which sets them apart from the Jeffrey Mine Insulator molds on the previous page.

The smooth base [010] (below, left) is the rarest of the Hemingray-embossed insulators, followed by [020] (below, center), and finally the [030]/[040] embossing (below, right). Personally, I question if [030] and [040] exist, and I’ll explain why:

- [030] – All of the specimens I’ve handled over the years have a blotted out “N°95” on the R-Skirt, indicating they were all modified from the same [010/020] molds.
- [040] – The embossing states “(R-Skirt) MADE IN U.S.A./[‘HEMINGRAY-95’ blotted out]” but all of the ones I’ve seen have “N°95” blotted out. I have yet to see ‘HEMINGRAY-95’ blotted out. Let me know if you’ve seen otherwise!

I hope this article gives other Hemingray and mine insulator collectors a good idea of the wide variety that Hemingray produced over the years! 🐻



CD 185 HEMINGRAY [010]
(F-Skirt) HEMINGRAY
(R-Skirt) N° 95 SB



CD 185 HEMINGRAY [020]
(F-Skirt) HEMINGRAY
(R-Skirt) N° 95 SDP



CD 185 HEMINGRAY [030/040] (SIMILAR)
(F-Skirt) HEMINGRAY-95
(R-Skirt) MADE IN U.S.A. /
[‘N°95’ blotted out] SDP