

“Doppelgangers”

By Cole King

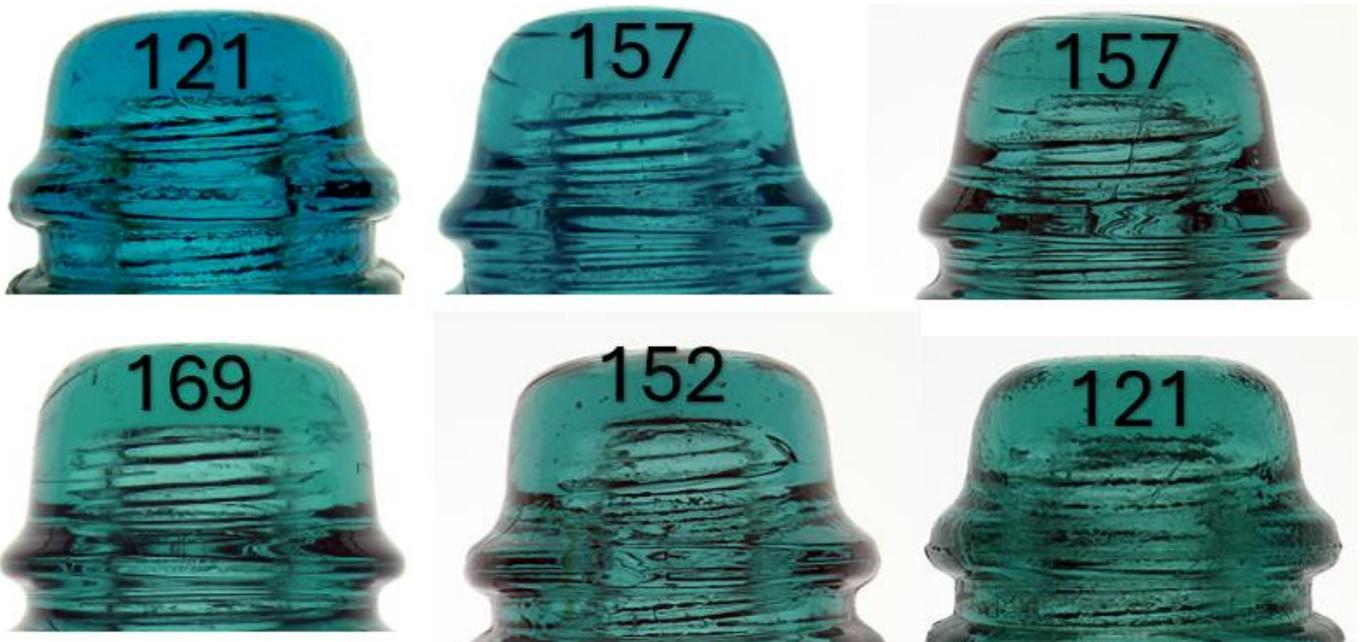
Some of you may have noticed that in the last year or so, I haven't been as active in the hobby as I usually am. Life sometimes gets in the way of our hobbies, as I'm sure we have all experienced a time or two. I've been wanting to sit down and write an article for quite a while; but many of the topics I have on my “to-do” list are very detailed ideas, and would require more time than I have available to research and build a complex article.

Last fall, I wanted to sit down and research a theory that I had... That the 152 “Hoopskirt” design was accomplished by adding an outer skirt to the existing CD 121.

Why would I form such an outlandish hypothesis? The crown shape.

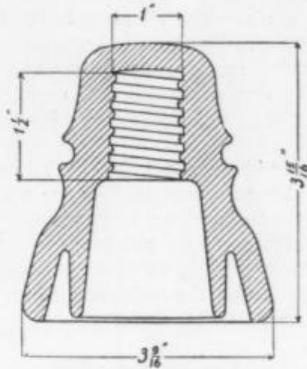
On November 10th, I sent the following message to ICON.

“I know that c.1910, a “competition” of sorts was held to design a new standard double petticoat insulator. David Wieck's 1995 article “A Visit to the AT&T Archives” says that Hemingray submitted the CD155.6, CD157, and CD169. Brookfield submitted the CD153, 169.5*, and CD157. Unfortunately, the way in which the 152 was selected is not mentioned. It is a sort of foot-note factoid. Does anyone have any further information on how AT&T, as well as Hemingray and Brookfield, settled on this new design? *Article was written prior to the elimination of CD169.5; this insulator is now listed as CD153.”



LOW-VOLTAGE GLASS INSULATOR.

In the accompanying illustration are shown the cross-sectional dimensions of the glass insulator that has been developed as a result of many years of experience by both the American Telephone & Telegraph Company and the Western Union Telegraph Company. It provides the required surface to minimize leakage and the required



strength to withstand mechanical strains. It has been developed by the Brookfield Glass Company, New York, which is said to have sold the first screw-thread glass insulator to the Western Union Telegraph Company in 1865.

I received quite a few responses; the most detailed of which was unsurprisingly from my friend Lee Brewer. His information focused mostly on what glass company could rightfully claim the honor of being the ones to have invented the 152 that we all know and love. He graciously included a link to a listing in the August 3rd, 1912 copy of "Electrical World" (at left) claiming that Brookfield had developed this new insulator.

Here was my (partial) response.

"Hemingray's submissions of the 169 and 157 resemble the final product (the 152) much more than [Brookfield's] 153

does/did. The 121 was already a "fan favorite." To me, it looks like Hemingray just took a 121, and added an outer skirt. Resulting in the 157 & 169. And that style dome, wire ridge and groove carried over to the 152 because ATT was already accustomed to it. But my theory is, the 152 (through the testing of the 157 and 169) is essentially just a 121 with a second petticoat. I think this theory at least carries some weight, because otherwise, how can you justify that the 152 looks shockingly similar to the wire groove on Hemingray's prototypes, yet nothing like Brookfield's prototype. Hemingray's submissions must have influenced the 152 significantly, even if they didn't invent it completely.

To me, they took the top half of Hemi's prototype(s), and the bottom half of B's 153. Put the two together and you get a 152.



I received yet another lengthy email from Lee, and in that email, he said,

“I have always thought the similarities in the domes as you are pointing out [was] simply one of a proven design being used over and over. They knew the dome, from experience was doing its job of shedding the water. It was only the skirts that needed a revision. The smaller tolls could not be used on higher voltage lines because there was not enough glass to stop the leakage. So the the only real thing that had to be revised would be the area below the wire groove.”

Lee also mentioned that the topic of the 152's development was to be included in his upcoming book.

Dwayne Anthony chimed in to comment that the 152 was also first sold by California in 1912. Interestingly enough, they did not introduce the 121 until 1913 or 1914.

Other collectors reached out (via my ICON post) to tell me that Glenn Drummond had completed extensive research on the development of the 152, and that he had shared this information with several other collectors. Unfortunately, the research seemed to have been “analog only,” and not archived anywhere digitally. The papers were now buried in the hoards of our fellow collectors, and I was not able to put my eyes on them.

After hearing that Glenn had already done this extensive research, my interest in the topic waned. Without reading the AT&T archive papers myself, and not having access to Glenn's research, my ambition dimmed and my article idea was shelved. That was, until today.



It is easy to see that the 116 was developed by modifying existing 121.4 molds.

I wrapped up a pesky online work meeting, and looked away from my computer to the light box sitting to the right of my desk. My eye happened to land on a 121.4 and the 116 sitting next to it. The idea popped into my head that, while I may not be able to prove a concrete relationship between the 121 and the 152, what if I just wrote an article calling attention to some CD's that look similar, be it by coincidence or not? Perhaps I may not have time to research the development of this many specific insulator designs; But why not write a fun, light hearted article, that simply brings attention to the matter?



L: CD280.1 R: CD280

So, the idea of “Insulator Doppelgangers” was born. Many come to mind almost immediately. Several, several insulators are unmistakably based on or similar to another style, without question. The CD113 is a CD106 with a second wire groove. The 280.1 is a 280 with a pointed dome. The 295 is a 237, just with a third petticoat. The same can be said of the 183 and the 281.

The realization came to me quickly however, that this article may have the potential to spiral out of control. I feared that some may falsely interpret the intention of my article to be a commentary on how the CD numbering system is implemented. I want to preface by saying that, this article is in no way a “statement” piece. I am simply a collector, who is sharing the abstract similarities I noticed when looking at my collection. To assure the legitimacy of this, I decided to only comment on CD’s that I own and can photograph. For example, the 132.4 is undeniably a 132 with some added “features” to make it compatible with the Chambers’ Lightning Rod system. However, as I do not own a 132.4 (yet), so that connection will not be mentioned. I also decided to filter the article down to include only my Hemingray collection. Many of you know I collect KCGW pieces, for example. It is my personal belief that the 102.3 was just KCGW’s attempt to make a 102, and the mold came out a little funky looking. But comparing one company’s insulators to another company’s insulators becomes a very long discussion, which also gives way to the conversation of mold variations. I have had many personal conversations about how, to my eye, certain 164 molds look like 166’s. Again, that could be an entire article by itself. So, I urge you to not read too much into this, and please take it at face value. The only point I have to make is, “You ever notice how ‘XYZ’ insulator kinda looks like ‘ABC’ insulator?” I digress.



Left to Right: 183, 281, 237, 295.

Circling back to the topic of the 152, I have always been fascinated by the adapted uses that Hemingray found for the 152 style. “So the ‘No. 38’ didn’t work out, eh? Well, let’s make the skirt more bell-shaped and call it a ‘No. 40.’ Need one with a saddle groove? No problem! Slap some ears on top and we’ll call it a ‘No. 43.’ Think a cross-top world work best? Sure, we can do that. How does ‘No. 44’ sound?”



Left to Right: CD 157 “No.38”, CD152 “No.40”, CD213 “No.43”, CD208 “No.44”

As years passed, many, many styles were improved upon and replaced. An article on updated insulator designs would be quite lengthy. So yes, the 213 resembles the CD214, because the 214 replaced the 213 in the 1920’s. They each bare the number “43.” Ergo, the topic of “Insulator Evolution” will not be explained in detail here. At the risk of sounding like a broken record, I repeat in saying this article is merely light-hearted observations.



The CD214 (shown at center) is the updated version of the CD213. It is based on the CD154, which itself replaced the 152 around the same timeframe. What I find most interesting, however, is that the 214 does not share a square wire groove as seen on its brother, the Hemingray-42. This “curved at the top, flat on the bottom” style wire groove is reminiscent of the CD142, seen at right.

One theme I see consistently is the carry-over of one crown/dome style from one insulator to the next. There is famously a 134 Hemingray, for example, that proudly wears the unmistakable “top” off of a 162. Don Briel’s Price Guide lists this as Embossing Index Number [070] and reads:

[070] (F-Skirt) HEMINGRAY/MADE IN U.S.A. (R-Skirt) No.18 {Crown looks like a CD 162} SDP

We know for a fact that some insulators do, in fact, only differentiate from each other based on the number of petticoats. (See the example of the CD183 vs. CD281 shown earlier.) But how many more insulators may have been modeled after other insulators with less or more petticoats, and we just haven’t noticed?

Christian Willis notes on his website, www.hemingray.info, “[The CD 307] is essentially a triple petticoat version of the CD 257 intended for high voltage applications.”



When the resemblance is on two unique looking insulators such as these, it is natural to conclude that these two styles may somehow be related. That is, after all, why we have the decimal system in place for our Consolidated Design system. The 230.1 is just a 230 with an inner skirt. The 122.4 is a 122 with threading inside the skirt. The list goes on and on. I think if more people took the time to really study the similarities in their insulators, no matter how much they may seem to be different, we would be very surprised to find how many insulators share characteristics.



This is a Locke embossed CD287.1, manufactured by Hemingray. Never in my wildest dreams would I have thought to connect this insulator to a signal type, but when taking photos for this article, I was surprised to see a striking resemblance between its crown and that of a common CD164. I do not

think it would be unreasonable to speculate that when Fred Locke ordered up a triple petticoat piece, the Hemingray design team had a look around, and decided to just add another skirt to the common Hemingray No. 20.

This sort of speculation is part of the reason I find insulator collecting to be so fun. Did Hemingray really base the 287.1 off of the 164? Probably not. But, we will likely never be able to say so with 100% certainty. For insulator nerds like us, (and if you've made it this far in this article, I know you are one too,) there is always something new to fascinate us, even if we are looking at the same collection we've had for decades.



Sometimes I wonder: why did they even bother designing a new style at all? This CD168 "D-510" is pictured here next to a CD165 Hemingray-20. The CD165 was unveiled in 1941, as a replacement to the beloved CD164. My question is, however, was the CD165 ever really necessary? The CD164 had a voltage rating of 5,000 volts. The CD168 could handle 6,600 volts. As you can see, the two

insulators are almost identical from the wire groove up. When Hemingray decided to do away with the CD164, why didn't they just direct their customers to the D-510 they already had in production? Yes, the CD165 used less glass, but if the 168 not only met, but exceeded the voltage requirements, why not use your energy marketing that, instead of going through all of the trouble to engineer, make molds, and Q.C. a whole new design? I guess this kind of thinking is why I have yet to run a successful glass business.



I find that some of the most amusing “doppelgangers” in the insulator hobby are the ones that look almost like an adult and child. At left, you see a Hemingray No.9 and a Hemingray Western Union #5.

Perhaps if this 106 eats all of his vegetables, he can grow up to be big and strong like the CD125.

The other “sibling” of the 106 is of course the Hemingray No.12 CD113. I wonder why they never made the 113 a big brother, too?

Another familiar looking pair which you may not have expected to see is the CD114 and the CD196.

While I’m sure any resemblance is surely coincidental, I can’t help thinking that the 114 looks like an adolescent 196.

One day, he will grow out his umbrella and transition into a strong, tall, transposition.

See what I did there?

