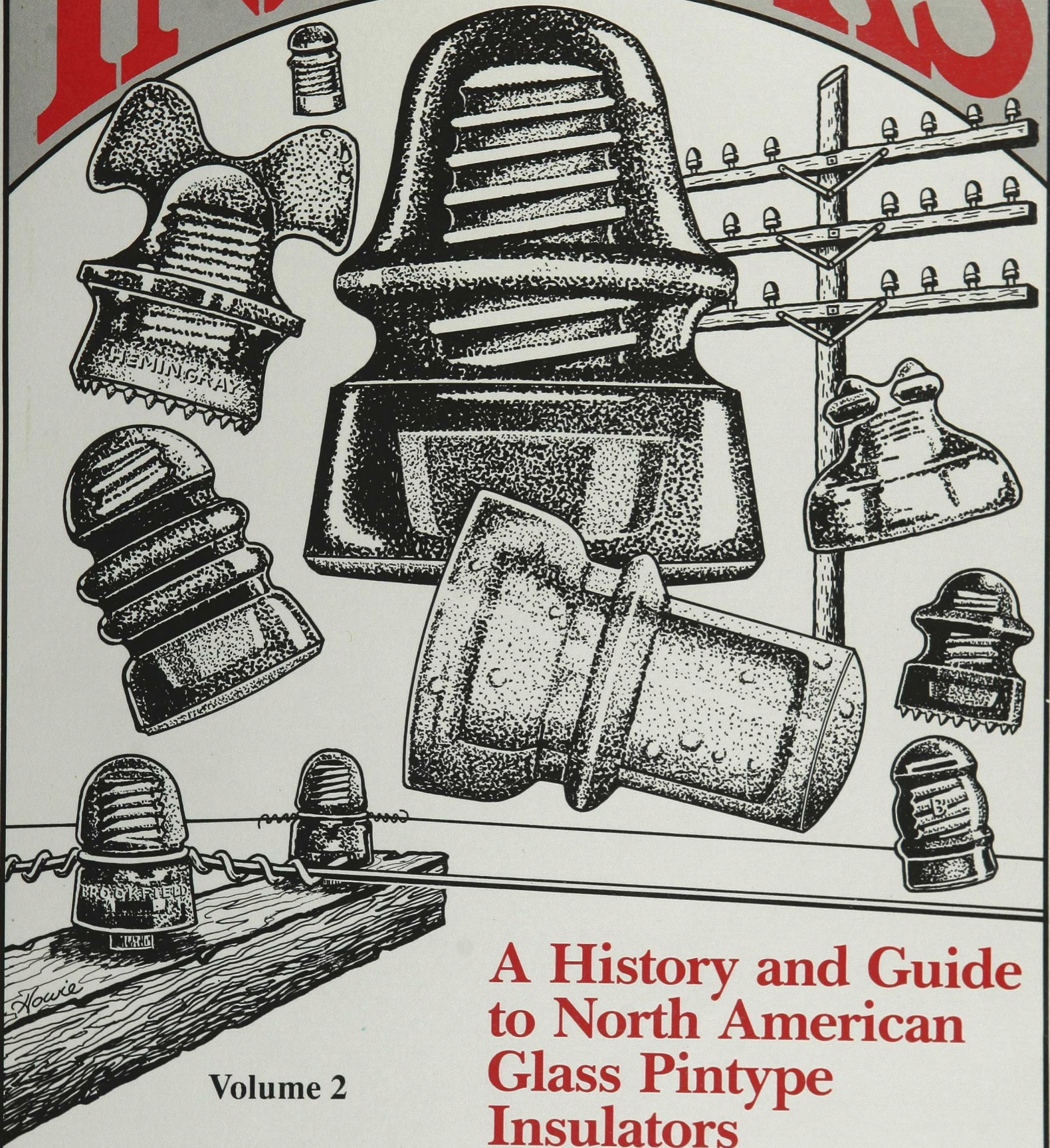


INSULATORS

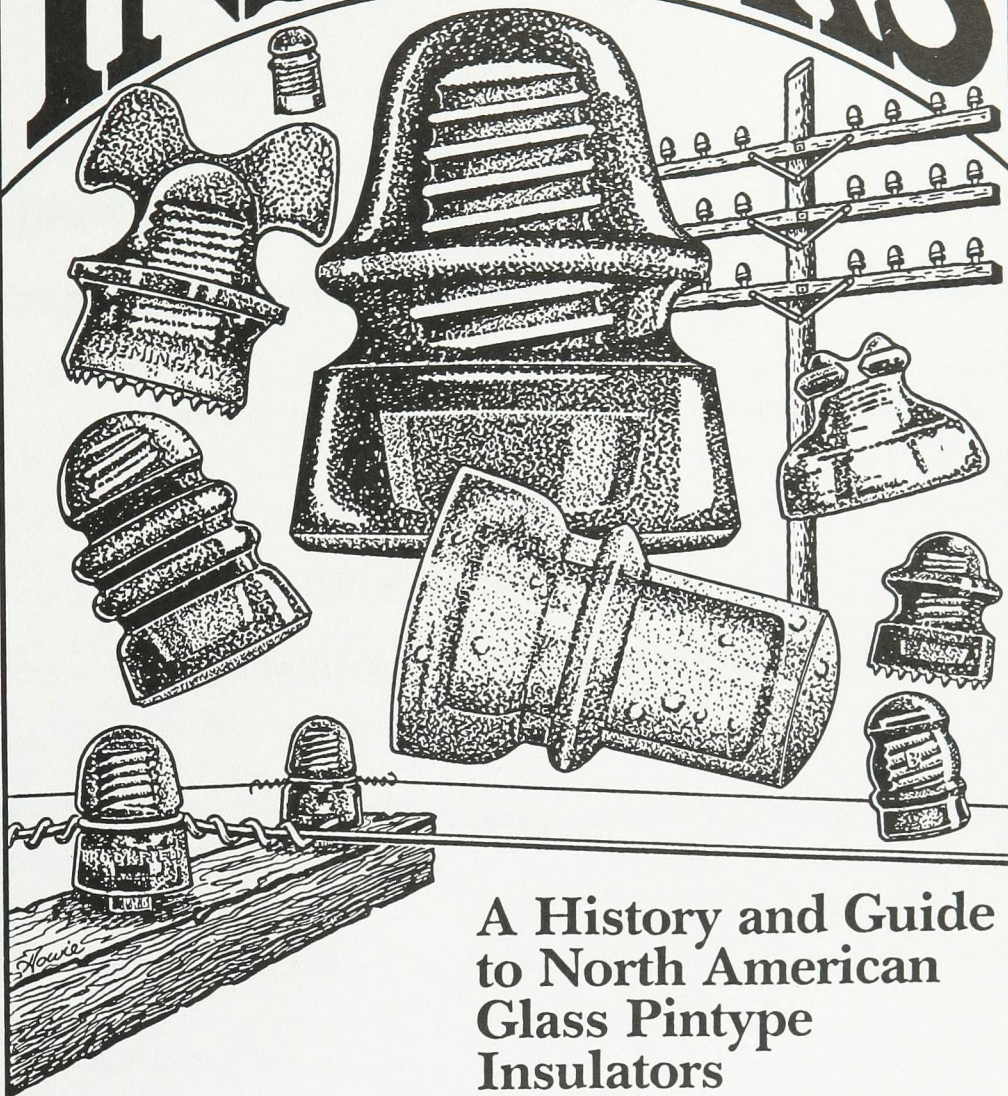


Volume 2

A History and Guide
to North American
Glass Pintype
Insulators

— John and Carol McDougald —

INSULATORS



A History and Guide
to North American
Glass Pintype
Insulators

John and Carol McDougald

VOLUME 2

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HOW TO USE THIS REFERENCE

One of the primary objectives of this reference book is to provide readers with a logical listing of all of the confirmed styles and embossings of North American glass pintype insulators. In order for you to use this reference most effectively, you need to understand the conventions (rules) that were used to develop the listing. These few pages will take a while to digest, but hopefully they will assist you when it is time for you to look up a specific listing.

General Rules of Order

Listings are sequenced by CD Number (the Consolidated Design numbering system developed by Mr. N. R. Woodward to designate style and general use of the insulator), General Embossing Category (Brookfield, Hemingray, Whitall Tatum, etc.), Specific Embossing (detailed below) and finally Drip Points.

Within the "Specific Embossing" category, listings are sequenced based on the location of the embossing. The following priority for embossing location was used in determining the listing sequence: Dome, Front Crown (F-Crown), Front Skirt (F-Skirt), Rear Crown (R-Crown), Rear Skirt (R-Skirt), Base, Other (specified). That means that all listings within a given CD number and general embossing category that have dome embossing will appear before any listing without dome embossing. The same logic applies throughout the listing sequence. If you are hopelessly confused at this point, don't give up. The next section should help you understand the process a little better.

How Do I Find My Insulator?

CD Number

If you know the CD number of your insulator, skip to the paragraph on "General Embossing Category". CD numbers are sequenced based on usage and generally go from small to large, although there are many notable exceptions to the latter rule. In describing uses, a few terms may need clarification. "Wire grooves" are the indentations that normally go all the way around the insulator that permitted the conducting wire to be fastened securely to the insulator. There are both "side" wire grooves and "top" (or saddle) wire grooves. "Petticoat" is a term used to describe the number of skirts an insulator has, including the outside surface of the insulator. This can be determined by looking up through the pinhole of the insulator from the bottom. The

number of "rings" formed by the glass will be the number of petticoats. Don't forget to count the outside skirt. Using these rules, the following chart describes the groupings for the CD numbering chart:

The first grouping of CD's (CD 100 - CD 375) is for insulators with a threaded pinhole which allows the insulator to be secured in place by screwing it on to a similarly-threaded pin. These are referred to as "threaded insulators".

- CD 100 - CD 144:** Side wire groove, single petticoat. (Some of these will have two side wire grooves.)
- CD 145 - CD 184:** Side wire groove, double petticoat
- CD 185 - CD 189:** Pinhole goes all the way through the insulator. (Many of these are referred to as "mine insulators").
- CD 190 - CD 205:** Transposition. (These will all have multiple side wire grooves, may have multiple petticoats, and may consist of two insulators mounted on a single pin.)
- CD 206 - CD 249:** Saddle wire groove, double petticoat.
- CD 250 - CD 279:** Cable, single or double petticoat. (These all have saddle wire grooves and are formed so that the wire appears to sit between two "ears".)
- CD 280 - CD 289:** Side wire groove, triple petticoat.
- CD 290 - CD 309:** Saddle wire groove, triple petticoat.
- CD 310 - CD 314:** Sleeves. (These covered the pins and provided additional electrical resistance for the insulator. They are not "stand alone" insulators.)
- CD 315 - CD 334:** One-piece, large power styles.
- CD 335 - CD 375:** Cemented multipiece, large power styles.

The following CD number series (CD 700 - CD 799) are referred to as "threadless insulators" because they had no internal threading in the pinhole. Various means were used to attach these insulators to the pins.

- CD 700 - CD 700.1:** "Egg", Pin hole goes all the way through the insulator
- CD 701 - CD 718:** "Egg", Pin types
- CD 721 - CD 725:** Pin type, designed to be used with a wood cover {These insulators do not have wire grooves}
- CD 726 - CD 728.8:** Side wire groove signal, Straight skirt

- CD 729 - CD 732.2: Side wire groove signal, Concave skirt
- CD 734 - CD 735.5: Side wire groove "Pilgrim Hat", one wire ridge
- CD 735.6 - CD 739.5: Side wire groove "Pilgrim Hat", two wire ridges
- CD 740 - CD 742.3: Side wire groove "Pilgrim Hat", rounded dome
- CD 743.1 - CD 743.3: Side wire groove "Beehive"
- CD 780 - CD 782: "Bureau Knobs"
- CD 785 - CD 796: Cross top; Slash top; Teapot; Miscellaneous styles

The following CD number series includes non-pintype insulators which are really outside the scope of this book. However, there are a number of insulators that have become inseparable from this aspect of the hobby and are, therefore, included here for completeness.

CD 1000 - CD 1040: Glass block and miscellaneous styles.

If you are unable to find your insulator using these general categories and then reviewing the pictures in the specific CD number series, you may have an insulator that is outside the scope of this book (foreign, lightning rod, nonglass, nonpintype, etc.). At this point, you will probably want to look at some of the other reference books listed in the bibliography at the end of Volume I of this reference to further research your insulator.

General Embossing Category

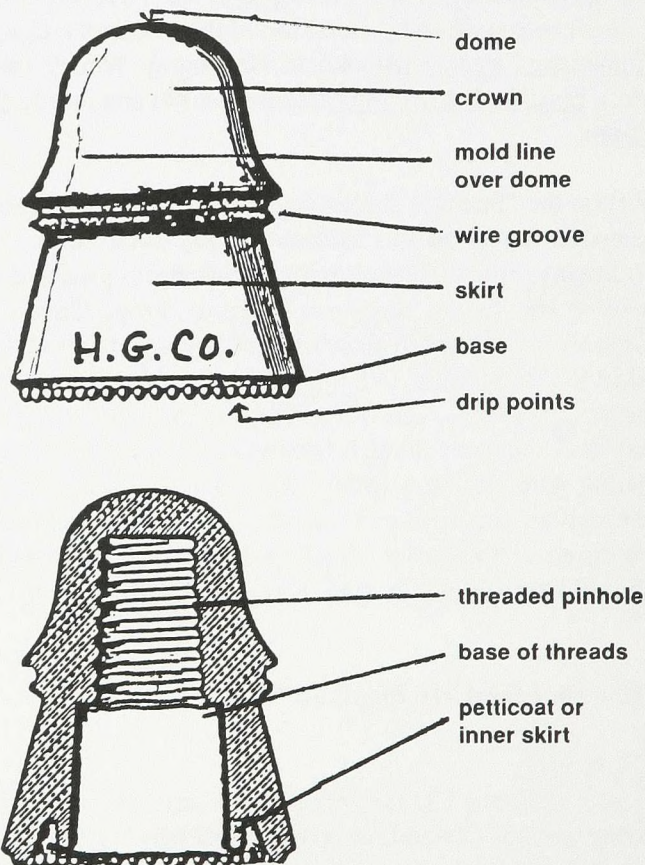
Once you have identified the CD number of your insulator, you want to identify the general embossing category. This generally refers to a name that is embossed on the insulator. It is usually either the company that manufactured the insulator or the company for whom it was made. Look the insulator over and pick out a name. See if you can find it in the bold listings on the page(s) that contains information on your CD. If no names or letter abbreviations appear on the insulator, look through the NO-NAME categories. If you are unable to find a general embossing category that works, you may have either selected the wrong CD number, or you may have an insulator that hasn't been catalogued yet. The latter condition would be very unusual, but not impossible.

Specific Embossing

Once you have identified the CD number and the general embossing category, your problems are almost over, unless you happen to have an insulator with a lot of embossing variations. (CD 126 Brookfield's are my personal favorite when it comes to tough embossings.) Use the accompanying drawing and look at specific locations on the insulator for embossing. Start with the dome. Insulators formed with two-piece molds (referred to as MLOD or "Mold Line Over Dome") cannot be dome-embossed. Therefore, if there is a

seam running through the dome, embossing found near the top of the insulator is considered to be either front crown or rear crown, not dome embossing. If there is no MLOD and there is dome embossing, confine your search to the first few listings that start "Dome". They will all be together.

If there is no dome embossing, look on the front crown. If only one side of the crown has embossing, it is considered to be the front. If there is embossing on the front crown, confine your search to listings that begin "F-Crown" and that have the exact embossing on the front crown that your insulator has. By following this procedure and the sequencing of embossing locations discussed earlier, you should be able to limit your search to 8-10 listings, even on the most complex listings. Be careful though, because when you get close to your embossing, there are some very subtle differences in listings that need to be reviewed to ensure you have selected the right one.



Drip Points

Once you have gotten this far, you may find up to three identical listings, differing only in the last entry which describes the base on the insulator, including the presence or absence of drip points. The following abbreviations have been used to describe various bases:

- SB** - Smooth base
- RDP** - Round drip points

SDP - Sharp drip points

FDP - Flat drip points {often found on Maydwell and McLaughlin insulators}

RB - Rounded base {found on some Canadian CD102, CD143, CD162 [Hamilton], and CD162.4 insulators}

CD - Continuous drip {describes a rounded projection that goes all of the way around the base and forms a ledge on the inside and outside of the base; found on some Pennycuick styles and the skirt-embossed CD112 SBT&T}

CB - Corrugated base {found on newer Hemingray and Kimble products}

WDP - Wedge drip points {found on some CD 102 and CD 162.3 Star insulators}

GB - Grooved base {found on some CD 143 Dwight and Great Northwestern insulators}

All listings will contain one of these abbreviations except for base-embossed insulators, which don't require further base description. Hopefully, by this time, you have found your insulator and are in the process of adding a catalog listing to your collection.

No attempt has been made in this reference to identify the number of drip points on an insulator. There is a tremendous variety in the number and size of drip points on any given embossing (CD 160 H.G. CO. is probably the best example). Counting and cataloging drip points has been left to the discretion of the individual collector.

OTHER INFORMATION ABOUT EMOSSINGS

Below is listed some additional information to help you interpret the symbols that are used on the embossing listings and some other data to understand what rules were used to decide whether an embossing should be listed separately or not.

Brackets () [] { }

Three types of brackets have been used to help clarify the listings:

() - These serve two functions: (1) to describe the location of specific embossing - (F-Skirt); (2) to indicate arc embossing - (Arc).

[] - These are used to describe embossing that cannot be reproduced in the book with precision. For example, [L' in an oval] means that there is an L and it appears in an embossed oval. Anything enclosed in single quotation marks (e.g. 'L') means that it appears exactly as shown on the insulator. All of the other information describes other aspects of the embossing. [Star] means that there is an embossed star on the insulator, not a four-letter word 'Star'.

{ } - These are used to describe unusual features of the embossing - {'N' is backwards}, or unusual features of the insulator itself - {Oakman Style}. This bracket is particularly useful in distinguishing between No-Name styles for a specific CD number. In addition, these brackets have been used to distinguish the embossing on the two parts of the two-piece transposition insulators - {191 Top}.

The Slanted Line -- /

The slanted line should be read - "over". However, it has been used in two different ways. When no blotted-out embossing exists, the various lines of embossing appear sequentially down the insulator. If blotted-out embossing appears in the listing, the blotout may appear directly under some other embossing. The important thing to know is that a blotout appears somewhere on that portion of the surface. CD 121's have been found with "HEMINGRAY" appearing above, below, or directly on top of ["AM.TEL.& TEL. Co." blotted out]. All three are included in the listing:

(F-Skirt) HEMINGRAY/["AM.TEL.& TEL.Co." Blotted out]

The slanted line is also used on base embossed insulators. If no slanted line appears, the base embossing can be read continuously in a "clockwise" direction around the base. The slanted line is used to designate a change in direction of the embossing. Typically, this would indicate that the top half of the base embossing would be read in a "clockwise" direction (a slanted line would appear in the listing here), and the bottom half would be read "counter-clockwise".

Punctuation

Punctuation presented the most difficult problem in deciding what to list as a separate embossing. The presence or absence of punctuation, periods versus commas, location of dashes, etc. can all be a function of the engraver, the age of the mold and/or the quality of the glass. To cite one example, there are 16 possible variations on the embossing "(F-Skirt) AM.TEL.& TEL.Co.", depending on which periods are there. All 16 variations exist. To avoid confusion, all of these possible variations have been included under the one listing shown above. In general, minor punctuation differences have not been included as separate listings. A common, or generic, listing has been included to cover all of the possible variations. Further detailing is left to the specialty collector.

NO., No., NO, No, N^o, N^o.,etc.

There are lots of different ways to spell "number", at least as it applies to style numbers on insulators. Some embossings are absolutely consistent. Others have great variety. Seven different ways have been found to say "N^o20" on CD 164 M^cLaughlins. Only two appear in the book, and there would

have only been one, except one particular embossing seemed to always appear with one drip point style so it was included. Again, the most common style was identified, and included to represent all of the possibilities. Once again, the specialty collector has a great opportunity.

[Letter or Number] [Number] [Numbers and Dots]

[Letter or Number] and [Number] generally refer to mold information. The presence or absence of mold information and the exact location of that mold information has been recorded with some care. This information seems to be of interest to collectors and in many cases, separate listings have been included because of differences in mold number locations.

[Numbers and Dots] is almost exclusively a Hemingray and related company marking. It contains mold and date information. Since dots were added to signify additional years of production, [Numbers and Dots] may represent an embossing that, in fact, has no dots because it is the first year of use of the mold. In other words, some liberties may have to be taken in the use of these descriptions.

No Name Categories

No Names have always been a problem because they represent such a large portion of the total insulator population and they have not been grouped in any way to provide easier identification. This reference has used four No Name categories to help assist in identification and to group insulators of interest to specialty collectors. The categories are (1) No Name {U.S. products}, (2) No Name - Dec Pat {Hemingray products with only a date designation}, (3) No Name - Canada, and (4) No Name - Mexico.

In addition, a number of insulators that have blotted out embossing that is legible have been included in the embossing category of the legible embossing. Examples that come to mind are CD 102.3 K.C.G.W. and CD 121 AM.TEL.& TEL.Co. Hopefully, this will not add confusion to the identification process.

Summary

This information has been provided to help you understand the rules that were used to select separate embossing listings for this reference. You may prefer to be either more or less exacting in your own record keeping. At least, you will have a set of rules to follow to help you decide how to do your own cataloging.

COLOR

Color was not an issue (for the most part) when insulators were made, and as a result, we are blessed with a complete spectrum of colors with a seemingly endless variation. The author has tried to reach a compromise solution in describing colors, and the problem has been approached this way. Descriptive adjectives have been used which identify the depth of color going from light to dark as follows: Tint (Blue Tint), Ice (Ice Blue), Light (Light Green), "No Descriptor" (Green), Dark (Dark Green), Royal (Royal Purple), and Blackglass (Olive Blackglass).

Using these descriptors, the color charts in Volume I picture and name 111 colors. This is only about half of the color designations that have been used in the book, but hopefully it will be representative of a large portion of the colors that will be encountered by the collector. Agreement will never be reached on naming colors, but these listings and color photographs will at least provide a point of reference when dealing with fellow collectors and trying to describe colors. If words are spoken like "It looks like the Dark Yellow Green picture in the book only with a little more Amber", the mission will have been accomplished.

**CONSOLIDATED DESIGN
PICTORIAL REFERENCE FOR
THREADED PINTYPE
GLASS INSULATORS**



CD 100

CD 100

SURGE

(F-Skirt) SURGE/REG.U.S.PAT.OFF. (R-Skirt) BABSON BROS.CO./CHICAGO U.S.A. RDP
Clear, Straw

(F-Skirt) SURGE/T.M.REG.PAT.PEND. (R-Skirt) BABSON BROS.CO./CHICAGO U.S.A. RDP
Clear

(F-Skirt) SURGE/T.M.REQ.PAT.PEND {Note Spelling}
(R-Skirt) BABSON BROS.CO./CHICAGO U.S.A. {Note Spelling} RDP
Clear

(F-Skirt) SURGE/T.M.REQ.PAT.PEND. {Note Spelling}
(R-Skirt) BABSON BROS.CO./CHICAGO U.S.A. RDP
Clear



CD 100.2

CD 100.2

SURGE

(F-Skirt) SURGE (R-Skirt) BABSON BROS.CO. RDP
Clear



CD 100.5

CD 100.5

PYREX

(F-Skirt) PYREX/REG.U.S.PAT.OFF. (R-Skirt) [1,2,3 or 4]/MADE IN U.S.A. SB
Clear



CD 100.6

CD 100.6

HEMINGRAY

(F-Skirt) HEMINGRAY E.1 SB
Off Clear



CD 101

CD 101

BROOKFIELD

(Dome) [Number] (F-Skirt) BROOKFIELD SB
Aqua, Dark Aqua, Green Aqua

(Dome) [Number] (F-Skirt) BROOKFIELD SDP
Blue Aqua, Aqua

(F-Skirt) BROOKFIELD SB
Aqua, Light Blue, Light Green, Emerald Green, Yellow
Green, Dark Aqua

(F-Skirt) BROOKFIELD SDP
Aqua, Yellow Green

(F-Skirt) BROOKFIELD (R-Skirt) NO.9 SDP
Aqua

(F-Skirt) BROOKFIELD (R-Skirt) NO.9 {Slug Emboss-
ing} SB
Light Blue

(F-Skirt) BROOKFIELD/[Number] SB
Olive Green, Olive Amber, Yellow Olive

(F-Skirt) BROOKFIELD/[Number] (R-Skirt) NO.9 SB
Green, Aqua, Lime Green, Light Blue, Yellow Green,
Dark Aqua

(F-Skirt) BROOKFIELD/[Number] (R-Skirt) NO.9 SDP
Aqua, Blue Aqua

(F-Skirt) BROOKFIELD/[Number] (R-Skirt) NO.9 {Slug
Embossing} SB
Green



CD 101 Variations

*This comparison picture shows the wide
range of heights available in CD 101.*



CD 102

CD 102

B

(F-Skirt) B SB
Aqua, Light Aqua, Green, Light Green

B.G.M.

(Dome) [Letter] (F-Skirt) B.G.M.CO. SB
Light Purple, Purple, Clear

(F-Skirt) B.G.M.CO. SB
Light Purple, Purple

B.T.C.

(F-Skirt) B.T.C./CANADA SB
Purple

(F-Skirt) B.T.C./CANADA/['MONTREAL' Blotted out] SB
Clear, Smoke, Purple, Lavendar, Purple Tint, Blue Gray, Light Green, Ice Blue

(F-Skirt) B.T.C./MCANADAL SB
Light Aqua, Royal Purple, Light Purple, Steel Blue

(F-Skirt) B.T.C./MONTREAL SB
Royal Purple, Ice Blue, Aqua, Light Blue, Light Green

(F-Skirt) B.T.CO.OF CAN. SB
Light Green, Green Aqua, Blue, Aqua

(F-Skirt) B.T.CO.OF CAN./[Diamond] (R-Skirt) [Diamond] SB
Royal Purple, Teal Blue, Aqua, Ice Blue, Light Green, Purple

(F-Skirt) ['B.T.C.' Blotted out]/MONTREAL SB
Purple, Aqua

(F-Skirt) ['B.T.CO. OF CAN.' Blotted out]/['Diamond' Blotted out] (R-Skirt) ['B.T.CO. OF CAN' Blotted out]/['Diamond' Blotted out] SB
Dark Olive Green

(F-Skirt) ['B.T.CO. OF CAN.' Blotted out]/[Diamond] (R-Skirt) [Diamond] SB
Ice Blue, Aqua, Light Green, Light Blue, Dark Olive Green

(F-Skirt) ['B.T.CO.OF CAN.' Blotted out]/[Diamond] (R-Skirt) ['B.T.CO.OF CAN.' Blotted out]/[Diamond] SB
Light Aqua, Lavendar, Olive Blackglass, Light Blue, Green Blackglass

BROOKFIELD

(Dome) [Letter or Number] (F-Crown) (Arc)W. BROOKFIELD/(Arc)NEW YORK SB
Aqua, Purple, Light Blue, Light Aqua

(Dome) [Letter or Number] (F-Skirt) BROOKFIELD SB
Aqua, Green, Yellow Green, Light Green, Emerald Green, Dark Aqua, Green Aqua, Olive Green

(Dome) [Letter or Number] (F-Skirt) BROOKFIELD SDP
Green, Aqua, Yellow Green, Olive Blackglass, Blue, Dark Amber, Dark Aqua, Dark Green

(Dome) [Letter or Number] (F-Skirt) BROOKFIELD (R-Skirt) BROOKFIELD SB
Aqua, Light Aqua, Green

(Dome) [Letter or Number] (F-Skirt) BROOKFIELD (R-Skirt) NEW YORK SB
Light Aqua, Dark Aqua, Light Purple, Yellow Green, Ice Green, Aqua, Green, Light Blue, Inky Blue

(Dome) [Letter or Number] (F-Skirt) BROOKFIELD (R-Skirt) NEW YORK SDP
Aqua, Yellow Green, Green, Green Aqua

(Dome) [Letter or Number] (F-Skirt) BROOKFIELD (R-Skirt) NEW YORK/['B.G.M.Co.' Blotted out] SB
Aqua, Light Aqua

(Dome) [Letter or Number] (F-Skirt) RROOKFIELD {Note Spelling} (R-Skirt) NEW YORK SDP
Aqua

(Dome) [Letter or Number] (F-Skirt) W. BROOKFIELD (R-Skirt) NEW YORK SB
Aqua, Light Blue, Purple, Ice Aqua, Light Green, Light Aqua, Ice Blue

(F-Crown) (Arc)W. BPOOKFIELD/NEW YOPK {Note Spelling} {MLOD} SB
Aqua

(F-Crown) (Arc)W. BROOFIELD/45 CLIFF ST./N.Y. {Note Spelling} (R-Crown) [Number] {MLOD} SB
Light Aqua

(F-Crown) (Arc)W. BROOFIELD/45 CLIFF ST./N.Y. {Note Spelling} {MLOD} SB
Light Aqua

(F-Crown) (Arc)W. BROOKFIELD/(Arc)45 CLIFF ST. (R-Crown) [Number] {MLOD} SB
Light Blue

(F-Crown) (Arc)W. BROOKFIELD/(Arc)45 CLIFF ST./N.Y. (R-Crown) [Number] {MLOD} SB
Light Aqua, Light Green, Yellow Green

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST./N.Y. (R-Crown) [Letter or Number] {MLOD} SB
Light Blue, Light Aqua, Green Aqua, Snowy Aqua

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST./N.Y. {'N' is backwards} (R-Crown) [Number] {MLOD} SB
Light Aqua

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST./N.Y. {'N' is backwards} {MLOD} SB
Green, Light Aqua

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST./N.Y.
{MLOD} SB
Aqua, Ice Blue

(F-Crown) (Arc)W. BROOKFIELD/NEW YORK (R-
Crown) [Letter or Number] {MLOD} SB
Light Aqua, Green, Light Yellow Green

(F-Crown) (Arc)W. BROOKFIELD/NEW YORK
{MLOD} SB
Aqua, Olive Green, Light Aqua

(F-Crown) (Arc)W^M BROOKFIELD/NEW YORK (R-
Crown) [Letter or Number] {MLOD} SB
Light Aqua

(F-Crown) W. BROOKFIELD/NEW YORK {MLOD}
SB
Light Aqua, Aqua

(F-Skirt) BROOKFIELD {Note spelling} (R-Skirt) NEW
YORK SB
Light Blue

(F-Skirt) BROOKFIELD SB
Aqua, Yellow Green, Emerald Green, Dark Green

(F-Skirt) BROOKFIELD SDP
Aqua, Green, Yellow Green, Olive, Emerald Green,
Amber

(F-Skirt) BROOKFIELD (R-Skirt) NEW YORK
{MLOD} SB
Light Purple, Green, Aqua, Clear

(F-Skirt) W. BROOKFIELD (R-Skirt) NEW YORK SB
Light Blue, Light Aqua, Light Green, Aqua

C.G.I.

(F-Skirt) C.G.I.CO. SB
Smoke, Aqua, Light Purple, Sage Green, Light Green,
Straw, Yellow, Rose, Citron, Light Plum

CALIFORNIA

(F-Skirt) CALIFORNIA SB
Blue, Aqua

DIAMOND

(Dome) [Number] (F-Skirt) [Diamond] SB
Light Purple

(F-Skirt) [1/3 Diamond] SB
Olive Green, Dark Amber, Dark Green

(F-Skirt) [Diamond] SB
Straw, Aqua, Sage Green, Lime Green, Emerald Green,
Brown Amber, Sky Blue, Purple, Teal Blue, Midnight
Blue, Olive Blackglass, Light Green, Yellow Green,
Violet Purple, Yellow Tint, Yellow Honey Amber, Blue
Gray, Olive Green, Root Beer Amber, Mustard Yellow,
Light Purple, 7-up Green, Light Steel Blue, Off Clear,
Turquoise Blue

(F-Skirt) [Diamond] (R-Skirt) ['Diamond' Blotted out]
SB
Root Beer Amber

(F-Skirt) [Diamond] (R-Skirt) [1/3 Diamond] SB
Olive Green, Olive Amber, Cornflower Blue

(F-Skirt) [Diamond] (R-Skirt) [1/3 Diamond]/[Number]
SB
Root Beer Amber

(F-Skirt) [Diamond] (R-Skirt) [1/3 Diamond]/[Number]
{Drip Points are very small} SDP
Olive Blackglass

(F-Skirt) [Diamond] (R-Skirt) [Backwards Number] SB
Light Purple, Purple, Root Beer Amber, Midnight Blue

(F-Skirt) [Diamond] (R-Skirt) [Backwards Number]
{Drip Points are very small} SDP
Olive Blackglass, Root Beer Amber

(F-Skirt) [Diamond] (R-Skirt) [Diamond] SB
Gray Blue, Royal Purple, Light Purple, Milky Gray,
Aqua, Clear, Teal Blue, Amber Blackglass, Ice Blue,
Emerald Green, Light Green, Brown Amber, Light Aqua,
Steel Blue

(F-Skirt) [Diamond] (R-Skirt) [Number] SB
Yellow Green, Amber Blackglass, Gray, Purple, Blue,
Light Purple, Light Green, Teal Green

(F-Skirt) [Diamond] (R-Skirt) [Small number just under
wire groove] SB
Purple, Olive Blackglass

(F-Skirt) [Diamond] {Drip Points are very small} SDP
Brown Amber, Olive Amber

(F-Skirt) [Diamond] {Solid Raised Diamond} SB
Light Aqua, Light Green

(F-Skirt) [Vertical Bar]/[Diamond] (R-Skirt) [Vertical
Bar]/['Diamond' Blotted out] SB
Gray Blue, Blue, Light Aqua, Dark Olive, Dark Purple,
Emerald Green, Ink Blue, Midnight Blue



CD 102 Variations

(Left to right) *S.F.*; *HEMINGRAY/Nº14*; *DIAMOND*; *No Name - large pony, Pennycuick style*

(F-Skirt) [Vertical Bar]/[Diamond] (R-Skirt) [Vertical Bar]/[Diamond] SB
 Light Aqua, Ice Blue, Royal Purple, Milky Ice Blue, Lavendar, Olive Blackglass, Off Clear, Green, Teal Green, Jade Blue Milk, Midnight Blue, Teal Blue, Light Steel Blue

(F-Skirt) [Vertical Bar]/[Diamond] (R-Skirt) [Vertical Bar]/[Diamond] SDP
 Light Aqua

HAWLEY

(F-Skirt) ['HICo' Entwined Initials]/HAWLEY, PA. U.S.A. SB
 Light Blue, Light Aqua, Jade Blue, Ice Green, Jade Green

(F-Skirt) ['HICo' Entwined Initials]/HAWLEY, PA. U.S.A. (R-Skirt) ['STERLING' Blotted out] SB
 Aqua

(F-Skirt) ['HICo' Entwined Initials]/HAWLEY, PA. U.S.A. (R-Skirt) ['STERLING' Blotted out]/['Pound Sign' Blotted out] SB
 Aqua

(F-Skirt) ['HICo' Entwined Initials]/HAWLEY, PA. U.S.A./['Pound Sign' Blotted out] (R-Skirt) ['Pound Sign' Blotted out] SB
 Aqua, Light Aqua, Ice Green, Blue Aqua

(F-Skirt) ['HICo' Entwined Initials]/HAWLEY, PA. U.S.A./['STERLING' Blotted out] SB
 Aqua

(F-Skirt) ['HICo' Entwined Initials]/HAWLEY, PA./ U.S.A. (R-Skirt) [Number] SB
 Aqua

HEMINGRAY

(F-Skirt) HEMINGRAY/Nº 14 SB
 Aqua, Blue Aqua

MONTREAL

(F-Skirt) MONTREAL SB
 Ice Blue, Aqua

(F-Skirt) MONTREAL {Drip Points are tipped in} SDP
 Light Blue

N.E.G.M.

(F-Skirt) N.E.G.M.CO. SB
 Green Aqua, Dark Aqua, Green, Yellow Green, Blue

N.W.&B.I.T

(F-Skirt) N.W.& B.I.T.CO. SB
 Purple, Light Green, Smoke, Clear, Light Aqua

(F-Skirt) N.W.& B.I.T.CO. (R-Skirt) [Comma]/[Blotted out Embossing] SB
 Light Purple, Clear

NO NAME

(F-Crown) PAT.JAN. 14 1879 {MLOD} SB
 Aqua

(F-Crown) PAT/JAN 25TH 1870 (R-Crown) FEB 22ND 1870/MCH 20TH 1877 {MLOD} SB
 Light Aqua, Lime Green, Yellow Green, Green, Purple

(F-Crown) PAT/JAN 25TH 1870 (R-Crown) [Number]/ FEB 22ND 1870/MCH 20TH 1877 {MLOD} SB
 Yellow Green

(F-Crown) PAT/JAN 25TH 1870/JAN 14TH 1879 (R-Crown) [Letter or Number] {MLOD} SB
 Aqua, Light Aqua, Purple

(F-Crown) [Christian Cross] (R-Crown) [Blotted out Embossing] {MLOD} SB
 Aqua

(F-Crown) [Christian Cross]/PAT/JAN 25TH 1870/JAN 14TH 1879 SB
 Light Purple, Aqua

(F-Crown) [Number]/PAT/JAN. 25TH 1870 (R-Crown)
FEB. 22ND 1870/MCH 20TH 1877 {MLOD} SB
Light Aqua

(F-Skirt) [Comma] SB
Aqua, Light Purple

(F-Skirt) [Pound Sign] (R-Skirt) [Pound Sign] SB
Aqua, Light Aqua

(F-Skirt) [Pound Sign]/[Blotted out embossing in a 1/2"
circle] (R-Skirt) [Pound Sign] SB
Blue Aqua

[No Embossing] {Large pony; Pennycuick Style} SB
Aqua, Snowy Aqua, Light Blue Aqua, Green, Light
Green Aqua

NO NAME-CANADA

(Dome) [Backwards Number] SB
Royal Purple, Light Purple

(F-Skirt) [Vertical Bar] SB
Lavendar, Olive Blackglass

(F-Skirt) [Vertical Bar] (R-Skirt) [Vertical Bar] SB
Light Aqua, Teal Blue, Blue, Royal Purple, Smoky Blue,
Sage, Olive Blackglass, Lavendar, Light Purple, Purple

(F-Skirt) [Vertical Bar] (R-Skirt) [Vertical Bar]
{Threaded to Base} SB
Light Green

(F-Skirt) [Vertical Bar] {Bar is short and heavy} SB
Ice Aqua

[No Embossing] SB
Green, Lavendar, Aqua, Blue, Steel Blue, Blue Aqua,
Light Sage, Off Clear, Purple

[No Embossing] SDP
Aqua

[No Embossing] {Drip Points tipped in, threaded to base}
SDP
Light Blue

[No Embossing] RB
Light Blue, Green Aqua

[No Embossing] {MLOD} SB
Clear, Aqua, Light Green, Straw, Light Purple, Gray Blue

[No Embossing] {Threaded to base} {MLOD} SB
Light Aqua, Aqua, Lime Green

PAT'D

(Base) PAT'D {MLOD}
Lime Green

(Dome) [Number in a circle] (Base) PAT'D SB
Aqua, Light Aqua

S.F.

(Dome) [Letter or Number] (F-Skirt) S.F. SB
Aqua, Green, Yellow Green

(F-Skirt) S.F. SB
Aqua, Yellow Green, Blue, Green, Lime Green

SO.MASS

(F-Skirt) SO.MASS TEL.CO. SB
Aqua, Clear

STAR

(Dome) [Number] (F-Skirt) [Star] SB
Aqua, Light Blue, Dark Blue, Light Green, Gray

(Dome) [Number] (F-Skirt) [Star] SDP
Aqua, Dark Blue

(Dome) [Number] (F-Skirt) [Star]/['S.F.' Blotted out]
SB
Green, Light Aqua, Aqua

(Dome) [Number] (F-Skirt) [Star]/['S.F.' Blotted out]
SDP
Aqua, Green

(F-Skirt) [Star] SB
Aqua, Dark Blue, Light Green, Yellow Green, Dark
Green, Light Blue, Green, Light Aqua, Olive Green,
Olive Amber

(F-Skirt) [Star] SDP
Light Green, Aqua, Light Blue

(F-Skirt) [Star] (R-Skirt) [Small Star] SB
Aqua, Light Green, Light Blue, Yellow Green, Blue
Aqua, Lime Green

(F-Skirt) [Star] (R-Skirt) [Star] SB
Aqua, Light Green, Yellow Green, Light Blue, Green,
Lime Green

(F-Skirt) [Star] (R-Skirt) [Star] WDP
Light Aqua

(F-Skirt) [Star] (R-Skirt) [Vertical Bar] SB
Aqua, Blue

(F-Skirt) [Star]/['S.F.' Blotted out] SB
Aqua

(F-Skirt) [Star]/['S.F.' Blotted out] SDP
Green Aqua

STERLING

(F-Skirt) STERLING (R-Skirt) [Pound Sign] SB
Aqua, Blue, Light Aqua

WESTINGHOUSE

(F-Skirt) WESTINGHOUSE/NO.3 SB
Aqua, Electric Blue, Light Green, Off Clear, Peacock
Blue



CD 102.4

NEW ENGLAND TEL
(Base) N.E.TEL.& TEL.Co.
Aqua, Green

CD 102.4



CD 102.3

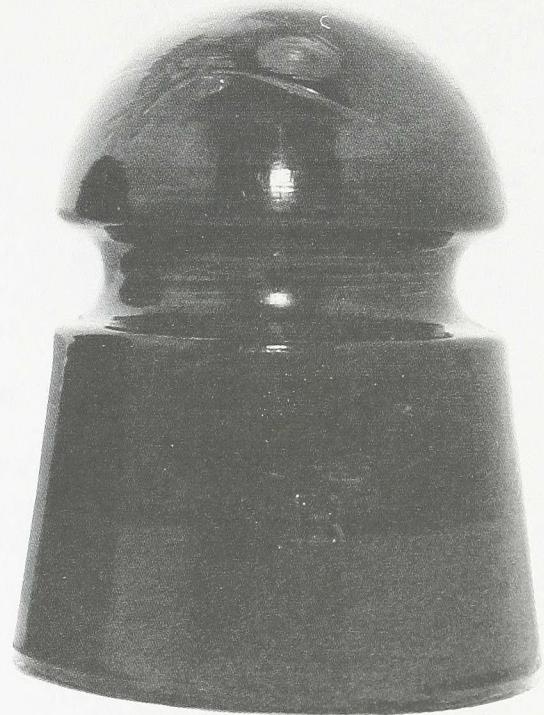
CD 102.3

K.C.G.W.

(F-Skirt) [Glass Dot] ['KCGW' Blotted out] (R-Skirt)
[Glass Dot] SB
Dark Aqua

(F-Skirt) [Glass Dot]/['KCGW' Blotted out] (R-Skirt)
[Glass Dot]/[Number] SB
Light Green, Dark Aqua

(F-Skirt) [Vertical Bar]/['KCGW' Blotted out] (R-Skirt)
[Vertical Bar] SB
Light Green, Aqua, Ice Blue



CD 103

CD 103

B

(F-Skirt) B SB
Aqua, Dark Green, Green, Dark Yellow Green, Dark
Aqua

GAYNER

(F-Skirt) GAYNER (R-Skirt) NO.6/[Number] SB
Aqua



CD 104

BROOKFIELD

(Dome) [Number] (F-Skirt) (Arc)BROOKFIELD/NEW YORK SB

Aqua, Dark Aqua

(F-Skirt) (Arc)W. BROOKFIELD/45 CLIFF ST./N.Y. SB

Aqua

(F-Skirt) (Arc)W. BROOKFIELD/83 FULTON ST./N.Y. SB

Aqua, Light Green, Light Aqua

(F-Skirt) (Arc)W^M BROOKFIELD/NEW YORK {Note Spelling} {MLOD} SB

Lime Green

(F-Skirt) (Arc)W^M BROOKFIELD/NEW YORK SB

Aqua

(F-Skirt) BROOKFIELD (R-Skirt) NEW YORK SB

Aqua

NATIONAL

(Base) NATIONAL INSULATOR CO./PAT.JAN.1. & OCT.7. 1884

Light Aqua, Lime Green, Aqua

NEW ENGLAND TEL

(Dome) [Number] (F-Skirt) (Arc)NEW ENG. TEL & TEL/C.O {Note placement of periods in the center of the embossing} SB

Aqua

(Dome) [Number] (F-Skirt) (Arc)NEW ENG.TEL & TEL./CO. SB

Aqua, Ice Blue, Purple, Green, Olive Green, Lime Green, Yellow Green

(F-Skirt) (Arc)NEW ENG.TEL & TEL./CO. SB

Aqua, Light Green

(F-Skirt) (Arc)NEW ENG.TEL & TEL./CO. (R-Crown) [Number] {MLOD} SB

Aqua

(F-Skirt) (Arc)NEW ENG.TEL & TEL./CO. (R-Skirt) ['(Arc)NEW ENG.TEL & TEL./CO.' Blotted out] SB

Light Aqua

(F-Skirt) (Arc)NEW ENG.TEL & TEL./CO. (R-Skirt) [Blotted out embossing in an oval slug] SB

Blue

CD 103.4

CD 103.4

NO NAME - MEXICO

[No Embossing] SB

Emerald Green, Dark Green



CD 104



CD 104 Variations

*(Left to right) No Name - Pennycuick style;
 No Name - blotted out embossing;
 No Name - PATENT/DEC. 19-1871*

(F-Skirt) (Arc)NEW ENG.TEL & TEL./CO. (R-Skirt)
 [Oval Slug] (Base) NATIONAL INSULATOR CO./
 PAT.JAN 1.& OCT.7.1884
 Light Blue Aqua, Light Green

(F-Skirt) (Arc)NEW ENG.TEL & TEL./CO. {'N's are
 backwards} SB
 Aqua, Ice Blue

NO NAME

(F-Skirt) [Blotted out Embossing - 6 Blots] SB
 Aqua

[No Embossing] SB
 Aqua, Light Milky Aqua, Light Blue, Teal Blue, Dark
 Aqua

[No Embossing] {Pennycuick Style} CD
 Light Aqua, Aqua

[No Embossing] {Pennycuick style} SB
 Light Aqua, Dark Aqua, Dark Yellow Green, Aqua, Blue
 Aqua, Dark Green

NO NAME-DEC PAT

(F-Crown) PATENT/DEC. 19-1871 (R-Crown) 4 SB
 Light Aqua, Off Clear, Aqua, Light Purple, Green Aqua

STANDARD GLASS

(Base) THE STANDARD GLASS INSULATOR CO./
 BOSTON MASS.
 Light Aqua

STAR

(F-Skirt) [Star] SB
 Light Aqua, Blue



CD 105

CD 105

AMERICAN

(Base) AM INS CO./PAT SEP 13 1881
 Light Aqua, Blue Aqua, Aqua, Light Blue Aqua

(Base) AM.INS.CO. PAT.SEPT. 13. 81
 Light Green Aqua, Light Green, Green Aqua

(Base) AM.INS.CO./PAT.SEP.13 1881 {Lines and Dots
 over Dome}
 Aqua, Light Aqua, Green

(Base) AM.INS.CO./PAT.SEP.13 1881 {Lines over
 Dome}
 Aqua, Light Aqua, Blue Aqua

NO NAME

[No Embossing] SB
 Aqua, Ice Blue, Blue Aqua



CD 106

CD 106

AM.TEL.& TEL.

(F-Skirt) AM.TEL.& TEL.CO. SDP
Aqua

AYALA

(F-Skirt) R.AYALA.L {Embossed in a concave rectangle} RDP
Light Green

(F-Skirt) R.AYALA.L {Embossed in a concave rectangle} SDP
Light Green, Dark Honey Amber

BIRMINGHAM

(F-Skirt) BIRMINGHAM (R-Skirt) NO.10 SDP
Straw

(F-Skirt) BIRMINGHAM (R-Skirt) [Number]/NO.10 SDP
Straw

CIA COMERCIAL

(F-Skirt) *Cia Comercial/Ericsson, S.A* RDP
Off Clear, Light Green, Ice Green

(F-Skirt) *Cia Comercial/Ericsson, S.A.* SDP
Aqua, Light Aqua, Light Green, Green, Celery Green,
Dark Cornflower Blue

(F-Skirt) *Cia Comercial/Ericsson, S.A.* (R-Skirt) [Blotted out Embossing] SDP
Light Green, Dark Cornflower Blue

CID COMMERCIAL

(F-Skirt) CID COMMERCIAL GRIPPON S.H. SDP
Aqua, Green, Amber

DIAMOND

(F-Skirt) [Diamond] SDP
Pink, Peach

(F-Skirt) [Diamond] (R-Skirt) [Diamond] RDP
Pink, Straw, Clear

(F-Skirt) [Vertical Diamond] (R-Skirt) [Vertical Diamond] SDP
Straw, Pink

ERICSSON

(F-Skirt) ERICSSON RDP
Clear

(F-Skirt) ERICSSON (R-Skirt) TELEFONOS RDP
Blue, Cornflower Blue

(F-Skirt) ERICSSON (R-Skirt) TELEFONOS SDP
Aqua, Root Beer Amber

(F-Skirt) ERICSSON (R-Skirt) ['M' and 'V' in a circle] RDP
Pink Tint

(F-Skirt) ERICSSON (R-Skirt) ['M' and 'V' in a circle] SDP
Light Pink, Clear

GAYNER

(F-Skirt) GAYNER (R-Skirt) NO.90 SDP
Aqua, Green

(F-Skirt) GAYNER (R-Skirt) NO.90/[Number] SB
Aqua

(F-Skirt) GAYNER (R-Skirt) NO.90/[Number] SDP
Light Aqua

(F-Skirt) GAYNER (R-Skirt) NO.91/[Number] {Note 'NO.91'} SDP
Aqua

GOOD

(F-Skirt) GOOD SB
Aqua, Light Purple

HEMINGRAY

(F-Skirt) HEMINGRAY/MADE IN U.S.A. {Note Spelling}

(R-Skirt) N° 9 SDP

Aqua

(F-Skirt) HEMINGRAY SB

Aqua

(F-Skirt) HEMINGRAY SDP

Aqua, Blue Aqua, Hemingray Blue, Dark Aqua

(F-Skirt) HEMINGRAY (R-Skirt) N° 9 SB

Aqua

(F-Skirt) HEMINGRAY (R-Skirt) N° 9 SDP

Aqua, Green, Yellow Green, Blue

(F-Skirt) HEMINGRAY-9 SDP

Aqua

(F-Skirt) HEMINGRAY-9 (R-Skirt) MADE IN U.S.A.

RDP

Green, 7-up Green, Half Clear/Half Aqua, Clear, Aqua, Light Apple Green, Ice Blue, Blue, Light 7-up Green, Hemingray Blue

(F-Skirt) HEMINGRAY-9 (R-Skirt) MADE IN U.S.A.

SDP

Blue Aqua, Light Hemingray Blue

(F-Skirt) HEMINGRAY-9 (R-Skirt) MADE IN U.S.A./

[Numbers] RDP

Ice Blue, Clear

(F-Skirt) HEMINGRAY-9 (R-Skirt) MADE IN U.S.A./

[Numbers and Dots] {Note Spelling} RDP

Clear

(F-Skirt) HEMINGRAY-9 {'N' is backwards} (R-Skirt)

MADE IN U.S.A. {'N' is backwards} RDP

Aqua, Light Hemingray Blue

(F-Skirt) HEMINGRAY-9 {'N' is backwards} (R-Skirt)

MADE IN U.S.A. {'N' is backwards} SDP

Aqua, Light Hemingray Blue

(F-Skirt) HEMINGRAY-9/[Number] (R-Skirt) MADE IN

U.S.A. RDP

Ice Blue

(F-Skirt) HEMINGRAY/MADE IN U.S.A. (R-Skirt) N° 9

SDP

Aqua, Light Blue

(F-Skirt) HEMINGRAY/N° 9 (R-Skirt) PATENT/MAY 2

1893 SB

Blue, Aqua

(F-Skirt) HEMINGRAY/N° 9 (R-Skirt) PATENT/MAY 2
1893 SDP

Blue Milk, Jade Green Milk, Milky Gray, Jade Blue
Milk, Aqua, Lime Green, Purple, Gray Purple, Hemin-
gray Blue, Light Blue

(F-Skirt) HEMINGRAY/N° 9 (R-Skirt) PATENT/MAY 2
1893/[Blotted out Embossing] SDP

Jade Green Milk

(F-Skirt) HEMINGRAY/N° 9 (R-Skirt) PATENTE/MAY
2 1893 {Note Spelling} SDP

Aqua

(F-Skirt) HEMINGRAY/N° 9 (R-Skirt) PATENTED

SDP

Aqua

(F-Skirt) HEMINGRAY/N° 9 (R-Skirt) PATENTED/

MAY 2 1893 SDP

Aqua

(F-Skirt) HEMINGRAY/N° 9 {'N' in Hemingray is

backwards} (R-Skirt) PATENT/MAY 2 1893 SDP

Aqua

(F-Skirt) HEMINGRAY/N° 9/{Blotted out Embossing}

(R-Skirt) PATENT/MAY 2 1893 SDP

Aqua, Jade Green Milk

(F-Skirt) HEMINGRAY/[Numbers and Dots] (R-Skirt)

MADE IN U.S.A./[Numbers] RDP

Clear

LYNCHBURG

(F-Skirt) LYNCHBURG (R-Skirt) [Number]/NO.10/

MADE IN/U.S.A. SDP

Aqua, Green, Yellow Green

(F-Skirt) LYNCHBURG/['L' in an oval] (R-Skirt)

NO.10/MADE IN [Number]/U.S.A. {Number may appear
in any number of positions to the right of the other
embossing} SDP

Light Aqua, Green, Light Green

(F-Skirt) LYNCHBURG/['L' in an oval] (R-Skirt)

NO.10/MADE IN/U.S.A. SDP

Aqua, Dark Green, Light Green, Light Aqua

(F-Skirt) LYNCHBURG/['L' in an oval] [Number] (R-

Skirt) NO.10/MADE IN/U.S.A. SDP

Light Aqua, Green, Yellow Green

(F-Skirt) LYNCHBURG/['L' in an oval] [Number] (R-

Skirt) NO.10/MADE IN/[Number] U.S.A. SDP

Light Aqua

(F-Skirt) LYNCHBURG/['L' in an oval] {'G' is backwards} (R-Skirt) NO.10/MADE IN/U.S.A. {'S' is backwards} SDP
Aqua, Green

(F-Skirt) LYNCHBURG/[Blotted out Embossing]/['L' in an oval] (R-Skirt) NO.10/[Blotted out Embossing]/MADE IN/U.S.A. SDP
Light Aqua, Light Green

(F-Skirt) ['L' in an oval] (R-Skirt) NO.10/MADE IN/U.S.A. RDP
Aqua

(F-Skirt) ['L' in an oval] (R-Skirt) NO.10/MADE IN/['U.S.A.' Blotted out]/['LYNCHBURG' Blotted out] RDP
Straw

(F-Skirt) ['L' in an oval] (R-Skirt) [Number]/NO.10/MADE IN/ A. {'U.S.' Missing} RDP
Deep Straw

(F-Skirt) ['L' in an oval]/LYNCHBURG (R-Skirt) NO.10/MADE IN/U.S.A. SDP
Light Blue Aqua, Aqua, Light Green

(F-Skirt) ['L' in an oval]/LYNCHBURG (R-Skirt) No.10/[Number]/MADE IN/U.S.A. {'S' is backwards} SDP
Green, Aqua

(F-Skirt) ['L' in an oval]/LYNCHBURG (R-Skirt) [Number]/NO.10/MADE IN {No 'U.S.A.'} RDP
Straw, Clear, Pink Tint

(F-Skirt) ['L' in an oval]/LYNCHBURG (R-Skirt) [Number]/NO.10/MADE IN {No 'U.S.A.'} SDP
Straw

(F-Skirt) ['L' in an oval]/LYNCHBURG (R-Skirt) [Number]/NO.10/MADE IN/U.S.A. SDP
Aqua, Green Aqua, Yellow Green

MAYDWELL

(F-Skirt) MAYDWELL-9 (R-Skirt) U.S.A. SDP
Clear, Straw, Pink, Purple, Light Green, Gray, Light Purple, Steel Green, Gingerale

(F-Skirt) MAYDWELL-9 (R-Skirt) U.S.A./['MCLAUGHLIN' Blotted out] SDP
Light Smoke, Light Green, Ice Green, Light Straw

(F-Skirt) MAYDWELL-9/['U.S.A.' Blotted out] (R-SKIRT) U.S.A./['MCLAUGHLIN-9' Blotted out] SDP
Light Yellow Green, Light Green, Light Straw

MCLAUGHLIN

(F-Skirt) MCLAUGHLIN N° 9 SB
Ice Blue, Steel Blue, Light Gray, Light Green, Light Aqua, Smoke

(F-Skirt) MCLAUGHLIN N° 9 FDP
Light Blue, Light Green, Dark Green, Yellow Green, 7-up Green, Aqua

(F-Skirt) MCLAUGHLIN N° 9 RDP
Gingerale, Light Blue, Light Green, Green, Aqua, Apple Green, Steel Blue

(F-Skirt) MCLAUGHLIN N° 9 SDP
Blue Aqua, Light Green, Light Sage, Light Blue

(F-Skirt) MCLAUGHLIN N° 9 (R-Skirt) U.S.A. FDP
Light Green, Lime Green, Emerald Green, Aqua, Gingerale, Amber Blackglass, Light Blue, Green Blackglass, Dark Green

(F-Skirt) MCLAUGHLIN N° 9 (R-Skirt) U.S.A. RDP
Light Green, Emerald Green, Straw, Aqua, Light Green Aqua, Light Yellow Green, Ice Green, Green, Light Blue, Delft Blue

(F-Skirt) MCLAUGHLIN N° 9 (R-Skirt) U.S.A. SDP
Light Blue, Light Green, Light Straw, Light Apple Green, Light Green Aqua

NO NAME

(F-Skirt) 7 (R-Skirt) 7 SB
Aqua, Green

(F-Skirt) NO.9 SB
Blue, Light Aqua

(F-Skirt) NO.9/[Number] SB
Blue

(F-Skirt) NO.90/[Number] SB
Aqua

(F-Skirt) NO.90/[Number] SDP
Aqua

(F-Skirt) PATENT/MAY 2 1893 SDP
Aqua

(F-Skirt) [Vertical Bar] (R-Skirt) [Vertical Bar] SB
Green, Light Green

NO NAME-MEXICO

(Dome) ['M' and 'V' entwined in a triangle] (F-Skirt) ['M' and 'V' entwined in a triangle] RDP
Light Green

(F-Skirt) ['M' and 'V' entwined in a triangle] RDP
Light Green

[Blotted out Embossing] RDP
Green

[Blotted out Embossing] SDP
Blue, Sage Green, Straw

O.V.G.
(F-Skirt) O.V.G.CO. SB
Light Blue, Light Green, Aqua, Green w/Amber Swirls,
Blue, Light Blue, Light Aqua

P.S.S.A.
(F-Skirt) ['VB' in a chevron]/PSSA #9 SB
Light Blue Gray, Straw

(F-Skirt) ['VB' in a chevron]/PSSA #9 RDP
Yellow Green, Ice Blue, Light Sage Green, Light Green,
Green, Straw

STAR
(F-Skirt) [Star] SB
Aqua, Dark Green, Light Blue, Lime Green, Olive Green,
Dark Aqua, Yellow Green, Green, Light Green, Blue
Aqua, Light Aqua

V.B.
(F-Skirt) V.B. SB
Aqua

W.F.G.
(F-Skirt) W.F.G.CO./DENVER, COLO. SB
Light Aqua, Light Green, Clear, Ice Aqua

W.G.M.
(F-Skirt) W.G.M.Co. SB
Royal Purple, Purple, Light Purple, Straw, Peach,
Burgundy, Light Green



CD 106.1

CD 106.1

DUQUESNE
(Dome) [Number] (F-Skirt) DUQUESNE (R-Skirt)
GLASS CO. SB
Cornflower Blue, Blue Aqua, Light Aqua

(Dome) [Number] (F-Skirt) DUQUESNE/G.CO. (R-
Skirt)DUQUESNE/G.CO. SB
Aqua, Cornflower Blue

(F-Skirt) DUQUESNE./GLASS.CO. (R-Skirt)
DUQUESNE./G.CO. SB
Cornflower Blue

(F-Skirt) DUQUESNE (R-Skirt) GLASS CO. {No ribs
under wire groove} SB
Cornflower Blue



CD 106.2

CD 106.2

P.S.S.A.

(F-Skirt) P S S A #9 SB

Ice Blue, Off Clear, Gray, Yellow Green, Yellow, Light Aqua

(F-Skirt) ['VB' in a chevron]/P S S A #9 SB
Ice Green



CD 106.3

CD 106.3

DUQUESNE

(Dome) [Number] (F-Skirt) DUQUESNE. (R-Skirt) GLASS. CO. SB

Aqua, Dark Aqua, Light Blue, Cornflower Blue

(Dome) [Number] (F-Skirt) DUQUESNE./GLASS CO. (R-Skirt) DUQUESNE./G.CO. SB

Aqua, Light Green

(F-Skirt) DUQUESNE. (R-Skirt) GLASS.CO. SB
Aqua

(F-Skirt) DUQUESNE./G.CO. (R-Skirt) DUQUESNE./G.CO. SB

Aqua, Light Green, Light Blue

(F-Skirt) DUQUESNE./GLASS.CO. (R-Skirt) DUQUESNE./G.CO. SB

Light Green, Sky Blue, Aqua

NO NAME

[No Embossing] SB

Aqua, Light Aqua, Cornflower Blue



CD 106.4

CD 106.4

NO NAME-MEXICO

[No Embossing] SDP

Light Green, Aqua, Straw



CD 106.5

CD 106.5

TEXCOCO

(F-Skirt) CRISOL/[‘TC’ entwined in a triangle]/TEX-COCO (R-Skirt) N^o 9 SDP
Green, Yellow Green, Green Aqua, Dark Green



CD 107

CD 107

ARMSTRONG

(F-Skirt) Ⓐrmstrong No.9 (R-Skirt) MADE IN U.S.A.
[Numbers and Dots] SB
Clear

(F-Skirt) *Armstron' g* No.9 (R-Skirt) MADE IN U.S.A.
[‘A’ in a circle] [Numbers and Dots] {Note location of
apostrophe} SB
Clear

(F-Skirt) *Armstrong' s* No.9 (R-Skirt) MADE IN U.S.A.
[‘A’ in a circle] [Numbers and Dots] SB
Clear

CRISA

(F-Skirt) CRISA (R-Skirt) [Logo] 9 SB
Clear

HEMINGRAY

(F-Skirt) HEMINGRAY-9 (R-Skirt) MADE IN U.S.A./
[Numbers and Dots] CB
Clear

(F-Skirt) HEMINGRAY-9 (R-Skirt) MADE IN U.S.A./
[Numbers and Dots] SB
Clear



CD 106.5 Variations

On the left is the flat dome style which is compared to the tall dome style on the right. Aside from the variation in dome heights, all other dimensions are the same. The tall dome style seems to be more readily available.

P.S.S.A.

(F-Skirt) P S S A N° 9 SB
Aqua, Sage Green, Light Yellow Green, Light Olive
Green, Light Green

WHITALL TATUM

(F-Skirt) (Arc) WHITALL TATUM/No.9 (R-Skirt)
(Arc) MADE IN U.S.A./[Numbers]/['A' in a circle]/
[Number] SB
Clear, Light Olive

(F-Skirt) WHITALL TATUM CO. No.9/[Number] (R-
Skirt) MADE IN U.S.A./['W/T' in a triangle] SB
Ice Aqua, Clear, Straw

(F-Skirt) WHITALL TATUM No.9/[Number] (R-Skirt)
MADE IN U.S.A. ['W/T' in a triangle]/[Number] SB
Clear



CD 107.2

CD 107.2

NO NAME-MEXICO

[No Embossing] SB
Light Straw, Clear



CD 108

CD 108

DIAMOND

(F-Skirt) [Diamond] RDP
Straw

DOMINION

(F-Skirt) DOMINION-9 (R-Skirt) ['D' in a diamond]/
[Number] RDP
Straw

(F-Skirt) DOMINION-9 (R-Skirt) [Diamond] RDP
Straw, Light Green, Clear

(F-Skirt) DOMINION-9 (R-Skirt) [Dots]/[Diamond] SDP
Straw

(F-Skirt) DOMINION-9 (R-Skirt) [Number] ['D' in a
diamond]/[Number] SB
Clear, Straw

(F-Skirt) DOMINION-9 (R-Skirt) [Number] ['D' in a
diamond]/[Number] SDP
Clear, Straw, Peach, Light Green

WHITALL TATUM

(F-Skirt) No.9/WHITALL TATUM CO. (R-Skirt) MADE
IN U.S.A./[Number] SB
Aqua, Light Purple, Light Straw

(R-Skirt) WHITALL TATUM CO. No.9/[Number] (R-
Skirt) MADE IN U.S.A. ['W/T' in a triangle] SB
Light Aqua, Peach, Straw, Pink



CD 109

CD 109

CHICAGO

(Base) CHICAGO INSULATING CO./PAT.OCT.16, 1883.

Aqua, Milky Aqua

The **Fiske and Mott** patent of October 16, 1883 covers the design of **CD 109**. (See Insulators of the Mid-West -- Chicago and Its Insulators chapter)



CD 109.5

CD 109.5

HARLOE

(F-Skirt) HARLOE'S PATENT/MAR 21. '99/MAR 12. '01/DEC 9. '02/P.I. SB

Aqua

(F-Skirt) HARLOE'S PATENT/MAR 21.'99/MAR 12.'01/DEC 9.'02/12PI (R-Skirt) ['HICo' Entwined Initials]/HAWLEY PA./U.S.A. SB

Light Aqua

(See Pennsylvania Manufacturers - Harloe Insulator Company for patent information)



CD 109.7

CD 109.7

JOHNSON & WATSON

(F-Skirt) JOHNSON & WATSON/PAT'D SB

Aqua

On May 26, 1908 **Chauncey C. Johnson** of Scranton, Pennsylvania, assigned forty-five one-hundredths of his patent design to **John A. Watson**, of Pittston, Pennsylvania. Their patent claimed "a novel form of insulator that is so mounted and arranged as to firmly grip and hold the wire in case the latter becomes broken between any two insulators, so that the wire will not pull loose and sag, so as to bring it into contact with the lower wires, and render restretching and repair difficult."

CD 109.7 appears to be similar in design to the Harloe patent insulators. Instead of having the Harloe three "fingers" design with one finger facing in one direction and positioned between two fingers facing in the opposite direction, the Johnson and Watson patent has only two "fingers". Both fingers face in the same direction with one being a little taller and pointed in shape which forces the line wire to wedge between the fingers upon installation. This was designed to keep the line wire from popping out of position. The 1908 patent covered only the exterior design of this insulator.

On September 14, 1908 application was made for Patent No. 913,212. It was granted on February 23, 1909 and provided for a molding plunger which formed longitudinal grooves within the pinhole. The threading resembles the segmented threads of many of the Boston area manufactured styles.

To date, there is only one known specimen of the **Johnson and Watson** patent.

"With the **Barclay** improved insulator the spiral groove on the outer surface is so threaded that when unscrewed from its pin the tie holding the wire is also unscrewed or removed from the insulator. The reverse operation screws the insulator on the pin, and at the same time puts the tie wire back on its original position on the insulator. The object of this insulator is to save labor and expense on renewing glass when broken or otherwise *defective and in the transfer of wire.*" So wrote the *Electrical Review and Western Electrician* on May 29, 1909. Pictured were Fig. 2 (the "Western Union" double-petticoat pattern -- CD 147), Fig. 3 (the pony pattern - CD 110), and Fig. 4 (the deep-groove, double-petticoat pattern -- CD 150)

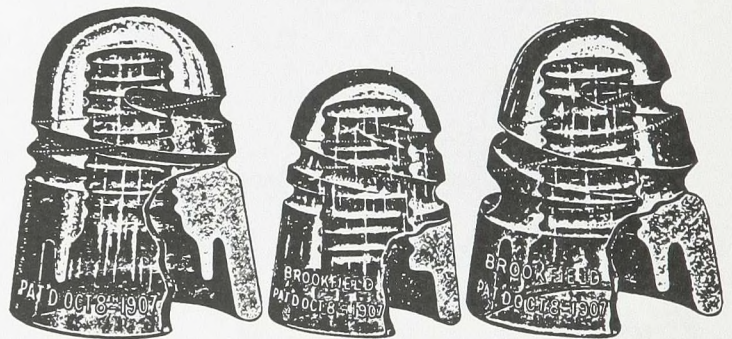


FIG. 2. FIG. 3. FIG. 4.
BROOKFIELD GLASS INSULATORS.



Side view of CD 109.7

The segmented threading of the pinhole is clearly visible.



CD 110

CD 110

BROOKFIELD
(F-Skirt) BROOKFIELD/PAT.OCT. 8- 1907 SB
Aqua, Green, Yellow Green



CD 110.5

CD 110.5

NATIONAL

(Base) + NAT.INSUL.CO.+ /PAT.MAY 1. DEC.25.1883.
 JAN.1. OCT.7.1884 {Segmented threads}
 Light Aqua

(Base) +NAT.INSUL.CO.+ /PAT.MAY.1.DEC.25.1883
 JAN.1 OCT.7.1884
 Aqua, Light Green

(Base) +NAT.INSULATOR CO.+/
 PAT.MAY.1.DEC.25.1883 JAN.1.OCT.7.1884.
 Light Aqua

NEW ENGLAND TEL

(F-Skirt) (Arc)NEW ENG.TEL & TEL/CO (Base)
 +NAT.INSULATOR CO.+ /PAT.MAY.1.DEC.25.1883
 JAN.1.OCT.7.1884.
 Light Aqua

(F-Skirt) NEW ENG TEL./&/TEL.CO. (Base)
 +NAT.INSUALTOR CO.+ /PAT.MAY 1.DEC.25.1883
 JAN.1.OCT.7.1884.
 Light Aqua

(F-Skirt) NEW ENG TEL/&/TEL.CO. (Base)
 +NAT.INSUL.CO.+ /PAT.MAY 1.DEC.25.1883.
 JAN.1.OCT.7.1884 {Segmented threads}
 Light Aqua, Light Green



CD 110.6

CD 110.6

NATIONAL

(Base) NATIONAL INSULATOR CO./PAT.MAY 1.
 DEC.25.1883 JAN.1. OCT.7.1884
 Aqua, Green Aqua, Light Green, Light Aqua

Both the **CD 110.5** and **CD 110.6** are designs based upon a patent issued to **Joseph S. Lewis** on May 1, 1883 and another patent issued to **Frank L. Pope** on December 25, 1883. (See New England Manufacturers -- American Iron Glass Pipe and Plate Company chapter for patent information)

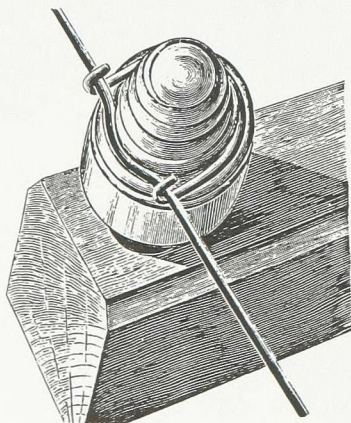
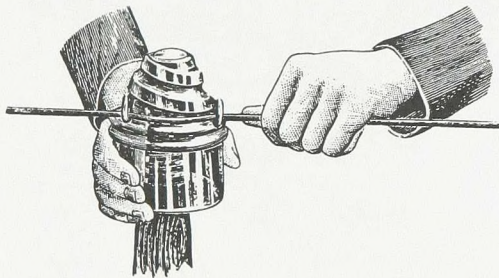
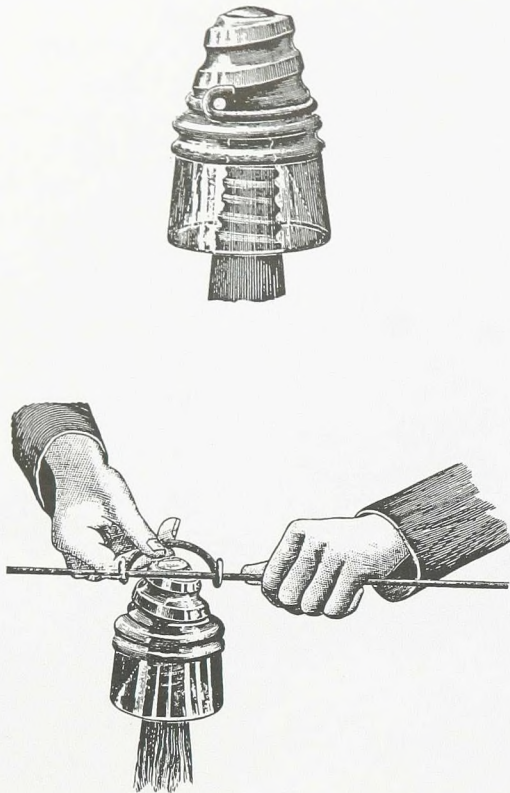


Illustration of the "self-binding" insulators as found in a pamphlet of the Brookfield Glass Company. There was no date on the publication, but the use of "National Insulator Company" dates it no earlier than 1886. (Courtesy of David Dale)



CD 111

CD 111

PYREX
(F-Skirt) PYREX
Clear

The only known specimen of **CD 111** resides in the Lyons Historical Museum in Lyons, Colorado. The insulator was donated to the museum by its owner, Al Campbell, at the time of his death. A group of collectors traveled to the museum to provide us with a photograph.

(Photograph courtesy of Don and Dan Reinke, Mike Miller, Dennis McHenry and Dan Wagner)



CD 112

CD 112

B

(Dome) [Number] (F-Center between wire grooves) B SB
Light Aqua

(Dome) [Number] (F-Skirt) B SB
Aqua

(Dome) [Number] (F-Skirt) B SDP
Aqua, Dark Aqua

(F-Center between wire grooves) B SB
Light Aqua, Light Green

(F-Skirt) B SB
Light Aqua

BROOKFIELD

(Dome) [Letter or Number] (F-Skirt) BROOKFIELD SB
Aqua, Light Aqua, Green, Olive Green

(Dome) [Letter or Number] (F-Skirt) BROOKFIELD
SDP
Aqua, Green, Yellow Green, Green Aqua

(Dome) [Letter or Number] (F-Skirt) BROOKFIELD (R-
Skirt) NEW YORK SB
Light Aqua, Light Blue, Light Green

(Dome) [Letter or Number] (F-Skirt) BROOKFIELD (R-
Skirt) NEW YORK SDP
Olive Amber

(F-Center between wire grooves) B (F-Skirt)
BROOKFIELD (R-Skirt) NEW YORK SB
Aqua, Ice Blue

(F-Skirt) BROOKFIELD (R-Skirt) N° 31 SB
Aqua, Light Aqua

CALIFORNIA

(F-Skirt) CALIFORNIA SB
Smoke, Light Purple, Light Green, Clear, Blue (Style
Variant), Aqua

HAWLEY

(F-Skirt) ['HICo' Entwined Initials] (R-Skirt) HAWLEY.
PA. U.S.A. SB
Aqua

(F-Skirt) ['HICo' Entwined Initials]/['STERLING'
Blotted out] (R-Skirt) HAWLEY, PA. U.S.A. SB
Aqua, Light Green Aqua



CD 112 Variations

(Left to right) BROOKFIELD (Fat style; compare to Brookfield pictured for CD 112);
LYNCHBURG; and two different styles of the CALIFORNIA CD 112)

(F-Skirt) ['HICo' Entwined Initials]/['STERLING'
Blotted out] (R-Skirt) HAWLEY, PA. U.S.A./['Pound
Sign' Blotted out] SB
Light Green

LYNCHBURG

(Dome) [Letter or Number] (F-Skirt) LYNCHBURG
No.31 (R-Skirt) ['L' in an oval] [Number] MADE IN/
U.S.A. RDP
Green, Emerald Green, Straw, Apple Green, Yellow
Green, Clear

(Dome) [Letter or Number] (F-Skirt) LYNCHBURG
No.31 (R-Skirt) ['L' in an oval] [Number] MADE IN/
U.S.A. SDP
Aqua, Green, Light Green Aqua, Sage Green

(F-Skirt) LYNCHBURG No.31 (R-Skirt) ['L' in an oval]
[Number] MADE IN/U.S.A. RDP
Pink

(F-Skirt) LYNCHBURG No.31 (R-Skirt) ['L' in an oval]
[Number] MADE IN/U.S.A. SDP
Aqua, Yellow Green

NEW ENGLAND TEL

(F-Skirt) NEW ENG (R-Skirt) TEL & TEL CO.
{MLOD} SB
Light Aqua

(F-Skirt) NEW ENG (R-Skirt) TEL & TEL.Co. SB
Aqua, Green

NO NAME

[No Embossing] {Unembossed S.B.T.& T.} CD
Aqua, Olive Green, Green

O.V.G.

(F-Skirt) #11 O.V.G.CO. SB
Light Aqua, Green, Light Purple, Green Aqua, Blue

S.B.T.&T.

(F-Center between wire grooves) S.B.T.& T.CO. SB
Ice Blue, Green, Off Clear, Ice Green, Dark Aqua

(F-Skirt) S.B.T.& T.Co. CD
Aqua, Ice Blue, Green, Light Aqua, Off Clear, Light
Green, Forest Green

S.F.

(F-Skirt) S.F. SB
Aqua

STAR

(F-Skirt) [Star] SB
Aqua, Lime Green, Olive Green, Olive Amber, Green,
Yellow Green, Apple Green, Light Blue, Light Aqua,
Yellow Olive, Light Gray Lavendar

(F-Skirt) [Star] (R-Skirt) [Star] SB
Dark Aqua, Lime Green, Olive Green, Light Yellow
Green, Aqua, Light Blue, Green

STERLING

(F-Skirt) STERLING (R-Skirt) [Pound Sign] SB
Light Aqua



CD 112.4

CD 112.4

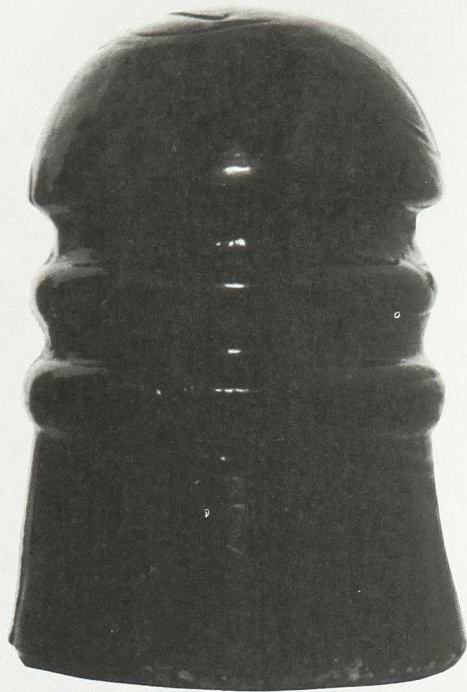
DIAMOND

(F-Skirt) [Vertical Bar]/[Diamond] (R-Skirt) [Vertical
Bar]/[Diamond] SB
Aqua, Light Blue, Olive Blackglass

HEMINGRAY

(F-Skirt) HEMINGRAY/N° 8 SB
Aqua, Light Blue, Light Green, Off Clear, Golden
Amber, Light Purple, Blue

(F-Skirt) HEMINGRAY/N° 8/[Blotted out Embossing]
SB
Aqua



CD 112.5

CD 112.5

NO NAME-CANADA

(F-Skirt) [Vertical Bar] (R-Skirt) [Vertical Bar] SB
Dark Olive Green

[No Embossing] SB
Dark Olive Green



CD 113



CD 113 Variations

*WESTINGHOUSE/NO. 4 (left) and the newer style
HEMINGRAY - 12 mold (right)*

CD 113

ARMSTRONG

(F-Skirt) *Armstrong's* No.13 (R-Skirt) MADE IN U.S.A.
['A' in a circle] [Numbers and dots] SB
Straw, Clear

HEMINGRAY

(F-Skirt) HEMINGRAY (R-Skirt) N° 12 SDP
Aqua, Hemingray Blue, Green, Emerald Green, Dark
Green, Dark Yellow Green

(F-Skirt) HEMINGRAY (R-Skirt) PATENTED SDP
Aqua

(F-Skirt) HEMINGRAY-12 (R-Skirt) MADE IN U.S.A.
RDP
Aqua, Light Hemingray Blue, Clear, Hemingray Blue

(F-Skirt) HEMINGRAY-12 (R-Skirt) MADE IN U.S.A.
SDP
Aqua, Green, Emerald Green, Light Blue, Hemingray
Blue

(F-Skirt) HEMINGRAY-12 (R-Skirt) MADE IN U.S.A./
[Number and Dots] RDP
Clear, Hemingray Blue

(F-Skirt) HEMINGRAY-12 (R-Skirt) MADE IN U.S.A./
[Number] {Mold variation has a larger lower wire ridge
and tapers more from there to the lower wire groove}
RDP
Clear, Light Yellow

(F-Skirt) HEMINGRAY-12/[Number] (R-Skirt) MADE
IN U.S.A./[Number] RDP
Clear, Ice Blue

(F-Skirt) HEMINGRAY/MADE IN U.S.A. (R-Skirt) N° 12 SDP
Aqua, Light Blue, Hemingray Blue

(F-Skirt) HEMINGRAY/N° 12 (R-Skirt) PATENT/MAY 2 1893 {'E' is backwards} SDP
Aqua

(F-Skirt) HEMINGRAY/N° 12 (R-Skirt) PATENT/MAY 2, 1893 SDP
Aqua, Hemingray Blue, Sage Green, Emerald Green, Jade Green Milk, Purple, Light Gray Purple, Light Aqua, Jade Blue Milk, Pink

(F-Skirt) HEMINGRAY/N° 12 (R-Skirt) PATENTED SDP Aqua

(F-Skirt) HEMINGRAY/N° 9 {Note 'N° 9'} (R-Skirt) PATENT/MAY 2 1893 RDP
Aqua

NO NAME-CANADA

(F-Skirt) [Dots] (R-Skirt) [Dots] {Several variations that appear like braille} SDP
Royal Purple, Milky Purple

STAR

(F-Skirt) [Star] SB
Aqua, Lime Green, Yellow Green, Olive Green, Green, Light Blue, Blue Aqua

WESTINGHOUSE

(F-Skirt) WESTINGHOUSE/NO.4 SB
Off Clear, Light Green, Brooke's Blue

WHITALL TATUM

(F-Skirt) WHITALL TATUM CO. No.13/[Number] (R-Skirt) MADE IN U.S.A. ['W/T' in a triangle] SB
Clear, Light Straw

(F-Skirt) WHITALL TATUM No.13/[Number] (R-Skirt) MADE IN U.S.A. ['A' in a circle]/[Numbers and Dots] SB Clear

(F-Skirt) WHITALL TATUM No.13/[Number] (R-Skirt) MADE IN U.S.A. ['W/T' in a triangle] SB
Clear

CD 113.2

DUQUESNE

(F-Skirt) DUQUESNE (R-Skirt) GLASS.CO. SB
Aqua, Blue

(F-Skirt) DUQUSNE {Note Spelling} (R-Skirt) GLASS.CO. SB
Blue Aqua, Cornflower Blue



CD 113.2



CD 114

CD 114

HEMINGRAY

(F-Skirt) HEMINGRAY/N° 11 (R-Skirt) PATENT MAY 2 1893 SDP
Aqua, Off Clear, Ice Blue, Red Amber, Light Aqua, Green Aqua, Bubbly Jade Aqua, Jade Blue Milk



CD 114.2

CD 114.2

STANDARD GLASS

(Base) THE STANDARD GLASS INSULATOR CO./
BOSTON MASS.

Light Aqua, Blue Aqua



CD 115

CD 115

ARMSTRONG

(F-Skirt) (A)rmstrong No.3 ['A' in a circle] (R-Skirt)
MADE IN U.S.A. [Number and Dots] SB
Clear, Off Clear

(F-Skirt) *Armstrong's* No.3 (R-Skirt) MADE IN U.S.A.
['A' in a circle] [Numbers and Dots] SB
Clear

BROOKFIELD

(Dome) [Number] (F-Skirt) BROOKFIELD SB
Aqua, Green

(F-Skirt) BROOKFIELD SB
Olive Green, Aqua, Green, Yellow Green, Green Aqua

(F-Skirt) BROOKFIELD SDP
Aqua, Green

DIAMOND

(F-Skirt) [Diamond] (R-Skirt) [Diamond] SB
Straw, Light Aqua, Aqua, Light Green, Ice Blue, Blue

DOMINION

(F-Skirt) DOMINION-10 (R-Skirt) [Diamond] RDP
Clear, Straw, Light Green

HEMINGRAY

(F-Skirt) HEMINGRAY (R-Skirt) N° 10 SDP
Aqua, Green, Light Aqua, Blue

(F-Skirt) HEMINGRAY (R-Skirt) PATENTED SDP
Hemingray Blue

(F-Skirt) HEMINGRAY (R-Skirt) PATENTED/MAY 2
1893 SDP
Aqua, Green

(F-Skirt) HEMINGRAY-10 (R-Skirt) MADE IN U.S.A.
RDP
Clear, Ice Green, Aqua, Hemingray Blue, Green Aqua

(F-Skirt) HEMINGRAY-10 (R-Skirt) MADE IN U.S.A./
[Number] CB
Clear, Pink Tint

(F-Skirt) HEMINGRAY-10 (R-Skirt) MADE IN U.S.A./
[Number] SB
Clear

(F-Skirt) HEMINGRAY-10 (R-Skirt) [Numbers] SB
Clear

(F-Skirt) HEMINGRAY-10/[Number] (R-Skirt) MADE IN U.S.A. RDP
Ice Blue

(F-Skirt) HEMINGRAY-10/[Number] (R-Skirt) MADE IN U.S.A./[Numbers] RDP
Clear

(F-Skirt) HEMINGRAY-16 {Note '16'} (R-Skirt) MADE IN U.S.A./[Number] SB
Clear

(F-Skirt) HEMINGRAY/MADE IN U.S.A. (R-Skirt) N° 10 SDP
Aqua

MAYDWELL

(F-Skirt) MAYDWELL-10 (R-Skirt) U.S.A. RDP
Clear, Off Clear, Peach, Straw, Light Green, Gingerale

(F-Skirt) MAYDWELL-10 (R-Skirt) U.S.A. SDP
Peach, Straw, Smoke

(F-Skirt) MAYDWELL-10 (R-Skirt) U.S.A./
['M^cLAUGHLIN' Blotted out] RDP
Straw

M^cLAUGHLIN

(F-Skirt) M^cLAUGHLIN (R-Skirt) N° 10 SB
Light Green, Sage Green

(F-Skirt) M^cLAUGHLIN (R-Skirt) N° 10 FDP
Light Green, Ice Blue, Sage Green, Aqua, Gingerale

(F-Skirt) M^cLAUGHLIN (R-Skirt) N° 10 RDP
Light Blue, Light Green, Light Aqua, Green, Bubbly
Clear

(F-Skirt) M^cLAUGHLIN (R-Skirt) N° 10 SDP
Light Green

WHITALL TATUM

(F-Skirt) (Arc)WHITALL TATUM/No.3 (R-Skirt)
(Arc)MADE IN U.S.A./[Numbers and Dots] ['A' in a
circle] SB
Clear, Light Straw

(F-Skirt) WHITALL TATUM CO. No.3 (R-Skirt)
[Number] MADE IN U.S.A. SB
Light Pink

(F-Skirt) WHITALL TATUM CO. No.3/[Number] (R-
Skirt) MADE IN U.S.A. SB
Clear, Peach, Light Aqua

(F-Skirt) WHITALL TATUM CO. No.3/[Number] (R-
Skirt) MADE IN U.S.A. ['W/T' in a triangle] SB
Clear, Off Clear, Light Aqua, Ice Blue, Light Peach,
Amber (Fake), Olive, Straw

(F-Skirt) WHITALL TATUM CO. No.3/[Number] (R-
Skirt) [Number] MADE IN U.S.A. SB
Aqua, Light Blue

(F-Skirt) WHITALL TATUM No.3/[Number] (R-Skirt)
MADE IN U.S.A. ['W/T' in a triangle] SB
Clear, Straw Tint, Pink Tint, Light Aqua



CD 116

CD 116

A.U.

(F-Crown) PATENT/DEC. 19, 1871 (F-Skirt) ['A.U.'
Blotted out] (R-Skirt) JULY 1ST 1882/PAT APPLIED
FOR SB
Aqua

BROOKFIELD

(F-Skirt) W. BROOKFIELD SB
Aqua, Light Blue, Green, Light Aqua, Dark Green



CD 116 Variation

The narrow body style is found on units that are not embossed "BROOKFIELD"

(F-Skirt) W. BROOKFIELD {MLOD} SB
Aqua, Green, Light Blue, Light Aqua, Dark Aqua

NO NAME

(F-Crown) ['PAT JAN ...' Blotted out] SB
Light Aqua

(F-Skirt) JULY 1ST 1882/PAT APPLIED FOR (R-Skirt)
PATENT/MAY 2 1893 SDP
Ice Aqua, Aqua, Light Green

(F-Skirt) JULY 1ST 1882/PAT APPLIED FOR (R-Skirt)
[Letter] SB
Aqua

NO NAME-DEC PAT

(F-Crown) PATENT/DEC. 19, 1871 (F-Skirt) PATENT/
MAY 2 1893 (R-Skirt) JULY 1ST 1882/PAT APPLIED
FOR SDP
Aqua, Light Green, Ice Aqua

(F-Crown) PATENT/DEC.19, 1871 (F-Skirt) PATENT/
MAY 2 1893 (R-Skirt) PATENT APPLIED FOR SB
Aqua

(F-Crown) PATENT/DEC.19, 1871 (F-Skirt) [Letter] (R-
Skirt) JULY 1ST 1882/PAT APPLIED FOR SB
Aqua, Cornflower Blue

CD 116.5

B
(F-Skirt) B (R-Skirt) B SB
Light Aqua, Light Green



CD 116.5



CD 117

NO NAME
(F-Skirt) & {Ampersand} SB
Aqua, Green, Olive Green, Dark Aqua, Snowy Aqua

CD 117



CD 118

CD 118

NO NAME

[No Embossing] SB
Carnival



CD 119

CD 119

BROOKFIELD

(F-Skirt) W. BROOKFIELD. N.Y. (R-Skirt) PAT. APRIL 28 1885 SB

Light Aqua, Aqua



CD 118 with Metal Outer Skirt

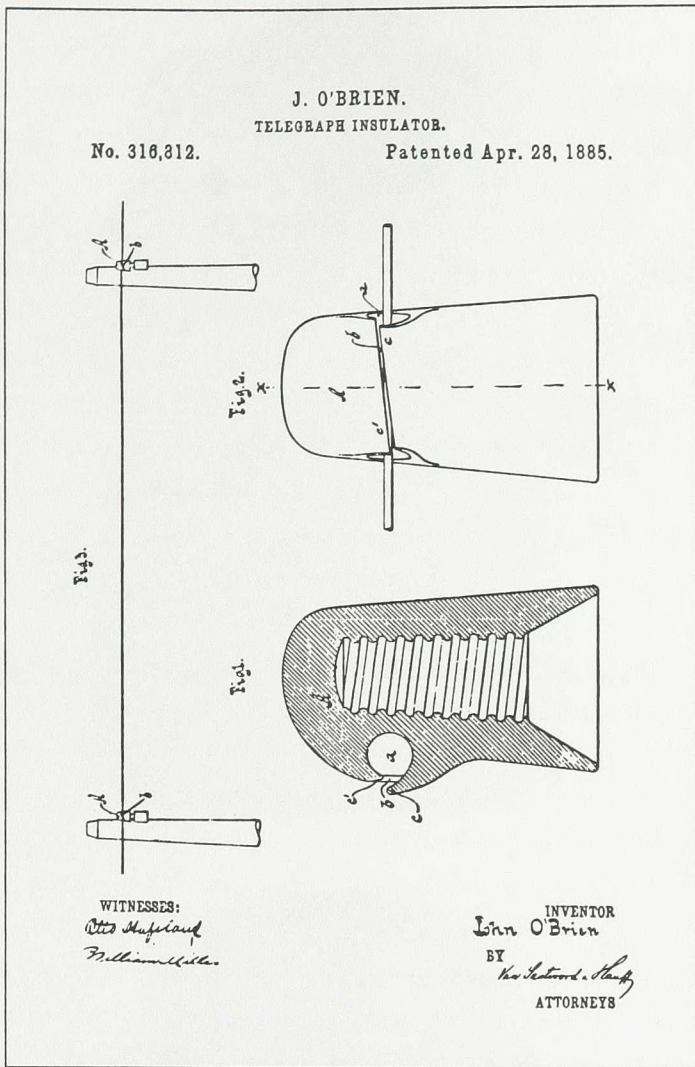
A few CD 118 units have been located with a copper sheath cemented to the glass insulator. The ridges in the skirt of the insulator provided a corrugated surface to assist the attachment of the outer sheath.

(Courtesy of Don Wacker collection;
photograph by John McDougald)

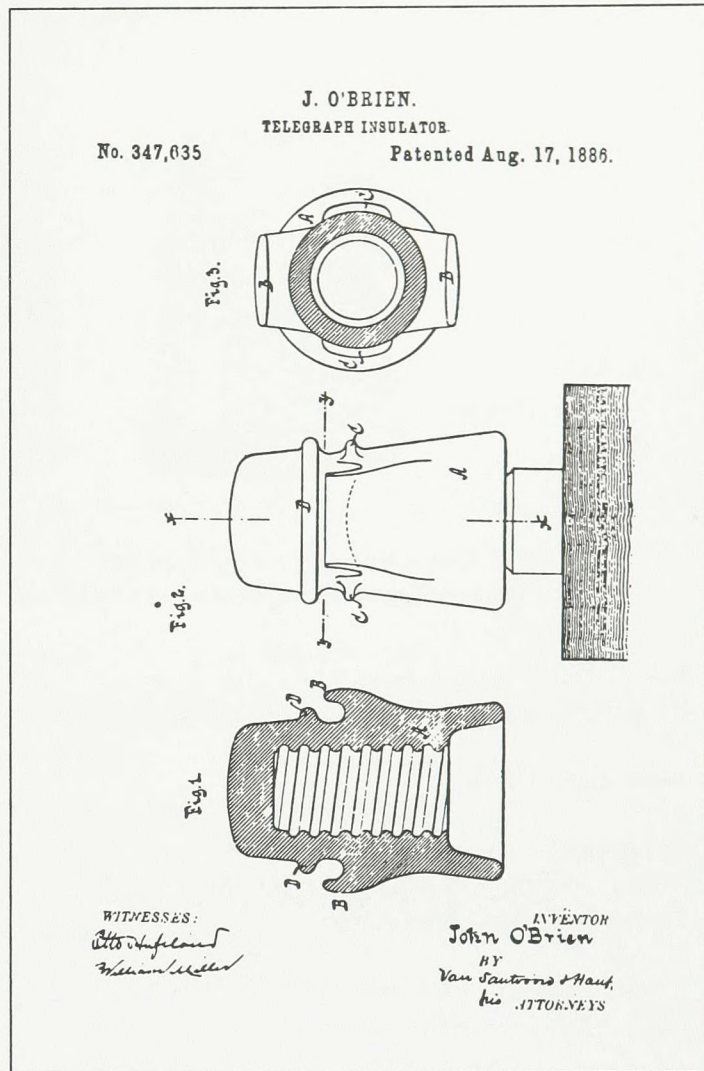
CD 119 is a real curiosity. The patent of **John O'Brien**, which he assigned to William Brookfield, has the date "PAT. APRIL 28 1885" embossed on the skirt and provided for a "no-tie" design. The insulator pictured in the patent drawing shows the body of the insulator with a transverse hole and corresponding slot through which the line wire was placed. The upper and lower walls of the slot supported the line wire and held it in place. The drawing and CD 119 do not resemble each other.

However, a year later on August 17, 1886, John O'Brien was issued another patent which he also assigned to William Brookfield. The patent drawing resembles the CD 119. The design covered "lug" supports under the wire groove to support a tie wire while the installer had the choice of using the "right" or "left" arm to support the line wire. It makes one wonder why the later patent date was not embossed on this CD style.

One of the known installation locations for the O'Brien patents was Paraguay. Most have come from that source. However, several units were recently excavated in Canada.



O'Brien Patent No. 316,812, April 28, 1885



O'Brien Patent No. 347,635, August 17, 1886



CD 120

CD 120

BROOKE'S

(Dome) [Letter] (F-Skirt) H. BROOKE'S PAT. (R-Skirt)
AUG 14 1883. SB

Brookes Blue

(F-Skirt) [Letter]/H. BROOKE'S PAT. (R-Skirt) AUG 14
1883. SB

Light Blue Aqua, Light Blue, Brooke's Blue

C.E.W.

(F-Skirt) C.E.W. SB

Aqua, Blue, Cornflower Blue, Purple, Olive Green,
Cobalt Blue

(F-Skirt) C.E.W. {MLOD} SB

Light Aqua



CD 120 Variations

On the left is Hemingray unit with drip points. The skirt flares and the dome has a different shape. The middle insulator and the one to the right are both embossed "C.E.W." and show the wide variety of heights available.

K.C.G.W.

(F-Skirt) [Glass Dot]/K.C.G.W (R-Skirt) [Glass Dot]/5
SB
Aqua, Light Green

(F-Skirt) PATENT/DEC 19 1871 (R-Skirt) 5/[Letter] SB
Light Green, Aqua, Green Aqua

NO NAME

[No Embossing] {Hemingray Style} SB
Purple, Lavendar, Light Aqua

[No Embossing] {Unembossed C.E.W.} SB
Clear, Straw, Royal Purple, Aqua

NO NAME-DEC PAT

(F-Crown) PAT DEC.19. 1871 (R-Crown) 5 (R-Skirt)
[Letter] SB
Aqua, Light Aqua, Green Aqua, Blue Aqua, Off Clear

(F-Crown) PAT.DEC.19, 1871 (F-Skirt) [Letter or
Number] (R-Crown) 5 SB
Aqua, Light Green, Light Blue, Ice Green, Dark Aqua,
Green Aqua, Blue Aqua, Jade Green, Light Aqua

(F-Crown) PAT.DEC.19. 1871 (R-Crown) 5 SB
Aqua, Green Aqua

(F-Crown) PATENT/DEC 19 1871 (R-Crown) 5 (R-Skirt)
[Letter] SB
Aqua, Green Aqua

(F-Skirt) PATENT/DEC 19 1871 (R-Skirt) 5 SB
Aqua, Ice Blue, Olive Green, Light Green, Milky Clear,
Clear, Light Aqua, Light Blue, Off Clear, Blue Aqua

(F-Skirt) PATENT/DEC 19 1871 (R-Skirt) 5/PATENT
MAY 2 1893 SDP
Aqua, Blue Aqua, Green Aqua, Light Green, Yellow
Green Tint, Off Clear, Light Aqua



CD 120.2

CD 120.2

PAT APP FOR

(F-Skirt) PAT APP FOR (R-Skirt) [Letter] SB
Aqua, Blue, Emerald Green w/Milk

PONY

(F-Skirt) PONY (R-Skirt) PAT APP FOR SB
Blue, Jade Green Milk



CD 121

CD 121

A.T.& T.

(Dome) [Letter or Number] (F-Skirt) A.T.& T.Co. SB
Aqua, Light Blue, Green, Yellow Green, Light Blue
Aqua, Green Aqua, Dark Aqua, Light Green, Olive Green

(F-Skirt) A.T.& T.Co. SB
Light Green Aqua

AM.TEL.& TEL.

(Dome) [Letter or Number] (F-Skirt) AM.TEL.&
TEL.Co. SB
Aqua, Light Green, Light Blue, Hemingray Blue, Ice
Blue, Green, Light Green Aqua, Blue Aqua

(Dome) [Number] (F-Crown) AM.TEL & TEL.Co.
{MLOD} SB
Light Aqua, Green

(Dome) [Number] (F-Crown) [Number] (F-Skirt)
AM.TEL.& TEL.Co. SB
Aqua, Light Yellow Green

(Dome) [Number] (F-Skirt) AM.TEL. TEL.Co. {No
Ampersand} SB
Aqua

(Dome) [Number] (F-Skirt) AM.TEL.& TE. Co. {Note
Spelling} SB
Green

(Dome) [Number] (F-Skirt) ['AM.TEL.& TEL.Co.'
Blotted out] SB
Light Aqua

(F-Crown) AM.TEL & TEL.Co. {MLOD} SB
Aqua, Light Aqua

(F-Skirt) AM TEL TEL Co {No Ampersand} SB
Blue Aqua

(F-Skirt) AM.TEL & TEL.Co. (R-Skirt) [Blotted out
Embossing] SB
Green

(F-Skirt) AM.TEL.& TEL.Co. SB
Aqua, Light Blue, Purple, Jade Green Milk, Hemingray
Blue, Green, Yellow Green, Light Blue Aqua, Light
Green Aqua

(F-Skirt) AM.TEL.& TEL.Co. SDP
Aqua

(F-Skirt) AM.TEL.& TEL.Co. (R-Skirt) ['AM.TEL.&
TEL.Co.' Blotted out] SB
Aqua

(F-Skirt) AM.TEL.& TEL.Co. {MLOD} SB
Light Aqua

(F-Skirt) ['AM.TEL.& TEL.Co.' Blotted out] SB
Light Aqua

B.T.C.

(F-Skirt) B.T.C./CANADA SB
Light Aqua, Clear, Royal Purple, Ice Green, Light Blue,
Ice Aqua, Off Clear

(F-Skirt) B.T.C./MCANADAL SB
Light Aqua, Off Clear, Steel Blue, Aqua

(F-Skirt) B.T.C./MONTREAL SB
Light Aqua, Ice Blue, Dark Blue, Ice Aqua

(F-Skirt) B.T.CO./CANADA SB
Light Aqua, Light Purple, Royal Purple, Blue Aqua,
Green Aqua

(F-Skirt) B.T.Co.OF CAN. SB
Aqua, Blue Aqua, Green, Yellow Green

(F-Skirt) ['B.T.C.' Blotted out]/CANADA SB
Off Clear, Ice Aqua, Light Aqua, Royal Purple



CD 121 Variations

(Left) A product of W.G.M. CO. (See Robert Good, Jr. and the Valverde Glass Works chapter) and the pleated skirt style (right) patented by Withycombe. (See Our Neighbors-North and South of the Border -- Canadian Insulators chapter)

(F-Skirt) ['B.T.C.' Blotted out]/CANADA (R-Skirt) [Diamond] SB
Royal Purple

(F-Skirt) ['B.T.C.' Blotted out]/MCANADAL SB
Light Aqua, Ice Blue, Lavendar, Royal Purple

(F-Skirt) ['B.T.C./CANADA' Blotted out] (R-Skirt) [Diamond] SB
Green Tint

BROOKFIELD

(Dome) [Number] (F-Skirt) BROOKFIELD SB
Aqua, Green Aqua, Green, Yellow Green

(Dome) [Number] (F-Skirt) BROOKFIELD SDP
Dark Aqua, Green, Emerald Green, Yellow Green, Olive Green, Amber

(Dome) [Number] (F-Skirt) BROOKFIELD (R-Skirt) [Five Blots] SB
Aqua, Green, Emerald Green, Light Green, Dark Yellow Green, Light Aqua, Dark Aqua

(Dome) [Number] (F-Skirt) BROOKFIELD (R-Skirt) [Five Blots] SDP
Aqua, Green, Yellow Green, Olive Green, Olive Amber, Amber Blackglass

(Dome) [Number] (F-Skirt) W. BROOKFIELD SB
Light Lime Green, Light Aqua, Light Green, Blue Aqua

(F-Skirt) BROOKFIELD (R-Skirt) [Five Blots] SB
Light Aqua, Blue Aqua,

(F-Skirt) W. BROOKFIELD SB
Aqua, Light Green Aqua

C.& P.

(Dome) [Number] (F-Skirt) C.& P. TEL Co. SB
Aqua, Light Aqua, Green, Light Green, Yellow Green

(F-Skirt) C.& P. TEL Co. SB
Aqua, Green, Blue, Light Aqua

C.D.& P.

(Dome) [Letter or Number] (F-Skirt) C.D.& P. TEL Co SB
Aqua, Yellow Green, Light Green Aqua, Green, Light Aqua

(F-Skirt) C.D.& P.T.Co SB

Aqua, Ice Blue, Light Green, Lime Green, Light Yellow Olive, Blue Aqua, Yellow Green

CALIFORNIA

(F-Skirt) A 007/CALIFORNIA SB
Smoke, Yellow Sage, Sage Green, Steel Blue, Purple, Burgundy, Light Purple, Peach, Sage/Purple Two Tone

CANADA

(F-Skirt) CANADA/['MONTREAL' Blotted out] SB
Light Aqua, Ice Aqua, Off Clear, Clear, Royal Purple, Light Steel

DIAMOND

(F-Skirt) [Diamond] SB
Light Aqua, Straw, Light Green, Light Lavendar, Royal Purple, Green Aqua, Sage Gray, Off Clear, Steel Blue, Yellow Green

(F-Skirt) [Diamond] (R-Skirt) [Blotted out Embossing] SB
Aqua, Royal Purple, Straw

(F-Skirt) [Diamond] (R-Skirt) [Diamond] SB
Aqua, Light Aqua, Lemon, Steel Blue, Royal Purple, Blue Aqua

GAYNER

(F-Skirt) GAYNER (R-Skirt) NO.160/[Number] SDP
Aqua, Ice Blue, Green Aqua, Light Aqua

GOOD

(F-Skirt) R. GOOD JR./DENVER, COLO./[1,2 or 3 Dots]
(R-Skirt) 16 {2 Dot mold has a period between 'DENVER' and 'COLO.'} SB
Light Aqua, Aqua, Blue Aqua, Ice Blue, Steel Blue, Yellow Green, Light Purple, Royal Purple, Light Green, Purple, Steel Gray

HAWLEY

(F-Skirt) ['HICO' Entwined Initials]/HAWLEY, PA./ U.S.A. SB
Aqua, Blue Aqua

HEMINGRAY

(Dome) [Number] (F-Skirt) HEMINGRAY (R-Skirt) N° 16 SDP
Aqua, Light Aqua, Blue, Emerald Green

(Dome) [Number] (F-Skirt) HEMINGRAY/N° 16 (R-Skirt) HEMINGRAY SDP
Aqua, Blue, Yellow Green, Olive Green, Dark Green, Light Blue Aqua

(F-Skirt) HEMINGRAY {Note Spelling} (R-Skirt) PATENT/MAY 2 1893 SDP
Aqua

(F-Skirt) HEMINGRAY {Note Spelling} (R-Skirt) PATENTED/MAY 2 1893 SDP
Aqua

(F-Skirt) HEMINGAY/[Blotted out Embossing] {Note Spelling} (R-Skirt) PATENT/MAY 2 1893/[Blotted out Embossing] SDP
Aqua

(F-Skirt) HEMINGRAY (R-Skirt) N°16 SDP
Aqua, Emerald Green, Blue, Yellow Green, Olive Amber

(F-Skirt) HEMINGRAY (R-Skirt) PATENT/MAY 2 1893 SB
Aqua, Hemingray Blue, Jade Green Milk

(F-Skirt) HEMINGRAY (R-Skirt) PATENT/MAY 2 1893 SDP
Aqua, Blue Aqua, Light Aqua, Aqua Jade Milk, Hemingray Blue

(F-Skirt) HEMINGRAY (R-Skirt) PATENTED SDP
Light Aqua

(F-Skirt) HEMINGRAY (R-Skirt) PATENTED/MAY 2 1893 RDP
Aqua

(F-Skirt) HEMINGRAY (R-Skirt) PATENTED/MAY 2 1893 SDP
Aqua

(F-Skirt) HEMINGRAY (R-Skirt) PATENTED/[‘AM.TEL.& TEL.Co.’ Blotted out] SDP
Aqua, Light Green

(F-Skirt) HEMINGRAY (R-Skirt) PATENTED/MAY 2 1893 {Note Spelling} SDP
Aqua, Blue

(F-Skirt) HEMINGRAY/[‘AM.TEL.& TEL.Co.’ Blotted out] (R-Skirt) PATENTED SDP
Aqua

LYNCHBURG

(Dome) [‘L’ in an oval] (F-Skirt) LYNCHBURG (R-Skirt) No.30/MADE IN U.S.A. SDP
Blue Aqua

(Dome) [‘L’ in an oval] (F-Skirt) LYNCHBURG (R-Skirt) No.30/[Number]/MADE IN U.S.A. SDP
Aqua, Ice Blue, Green, Light Aqua

MAYDWELL

(F-Skirt) MAYDWELL-16W (R-Skirt) U.S.A. SDP
Straw

(F-Skirt) MAYDWELL-16W/[‘M^cLAUGHLIN’ Blotted out] (R-Skirt) U.S.A. RDP
Off Clear

(F-Skirt) MAYDWELL-16W/[‘M^cLAUGHLIN’ Blotted out] (R-Skirt) U.S.A. SDP
Off Clear

M^cLAUGHLIN

(F-Skirt) M^cLAUGHLIN (R-Skirt) N° 16 SB
Gray Blue, Light Steel Blue, Yellow Green, Light Sage Green, Light Blue

(F-Skirt) M^cLAUGHLIN (R-Skirt) N° 16 RDP
Light Aqua, Green, Light Green, Cornflower Blue, Light Blue, 7-up Green, Emerald Blackglass, Olive Blackglass, Amber Blackglass, Lime Green

(F-Skirt) M^cLAUGHLIN (R-Skirt) N° 16 RDP
Olive, Delft Blue, Ice Aqua, Dark Green, Light Straw

(F-Skirt) M^cLAUGHLIN (R-Skirt) N° 16 SDP
Amber Blackglass, Dark Olive Green, Slate Green, Steel Blue, Light Gray Blue, Delft Blue, Emerald Green, Dark Olive Amber, Aqua

NEW ENGLAND TEL

(F-Skirt) (Arc)NEW EEG.TEL.& TEL.CO. {Note Spelling} SB
Aqua, Green Aqua

(F-Skirt) (Arc)NEW ENG.TEL.& TEL.CO. SB
Aqua, Light Green

NO NAME

(F-Skirt) [Glass Dot] (R-Skirt) [Glass Dot] SB
Ice Blue, Light Green, Gray, Light Aqua

[No Embossing] {Four fins under the wire groove - Unembossed Duquesne} SB
Light Aqua, Light Blue

[No Embossing] {Glass dot in dome distinguishes it from the unembossed AM.TEL.& TEL.; possible Pennycuick} SB
Light Aqua

[No Embossing] {Unembossed AM.TEL.& TEL.} SB
Aqua, Purple, Clear

NO NAME-CANADA

(Dome-in a circle) PAT'D SEPT.19TH 1899 {Pleated Skirt} SB
Aqua, Blue, Green, Yellow Green, Olive Green, Light Aqua, Blue Aqua

O.V.G.

(F-Skirt) O.V.G.CO. SB
Aqua, Blue, Green, Light Aqua, Blue Aqua

STANDARD GLASS

(Base) THE STANDARD GLASS INSULATOR CO./ BOSTON MASS.
Light Aqua, Light Blue

U.S.TEL.

(Dome) [Number] (F-Skirt) U.S.TEL.CO. SB
Aqua, Light Green, Yellow Green, Olive Green, Green, Blue Aqua

W.F.G.

(F-Skirt) W.F.G.CO./DENVER, COLO./[1,2 or 3 Dots] (R-Skirt) 16 {2 Dot molds have a period between 'DENVER' and 'COLO.'} SB
Aqua, Off Clear, Ice Blue, Steel Blue, Lavendar, Green, Cornflower Blue, Light Ink Blue, Steel Gray, Light Aqua Clear, Ice Aqua, Milky Aqua, Steel Aqua, Light Lavendar, Emerald Green, Dark Violet

W.G.M.

(F-Skirt) W.G.M.CO. SB
Purple, Royal Purple, Peach, Straw, Off Clear, Burgundy, Milky Purple, Light Purple, Straw/Peach Two Tone, Clear



CD 121.4

CD 121.4

A.U.

(F-Crown) PATENT/DEC. 19, 1871 (F-Skirt) A.U. SB
Light Aqua, Light Green

(F-Crown) PATENT/DEC. 19, 1871 (F-Skirt) A.U. (R-Skirt) [Letter] SB
Green Aqua, Light Aqua, Light Green

(F-Crown) PATENT/DEC. 19, 1871 (F-Skirt) A.U./ [Letter] (R-Skirt) [Letter] SB
Light Green

(F-Crown) PATENT/DEC. 19, 1871 (F-Skirt) ['A.U.' Blotted out] (R-Skirt) [Letter or Number] SB
Aqua, Yellow Green

(F-Crown) PATENT/DEC. 19, 1871 (F-Skirt) ['A.U.' Blotted out]/[Letter] SB
Aqua

(F-Crown) PATENT/DEC. 19, 1871 (F-Skirt) ['A.U.' Blotted out] SB
Aqua



CD 122

CD 122

ARMSTRONG

(F-Skirt) Ⓐrmstrong No.2 (R-Skirt) MADE IN U.S.A.
SB
Clear

(F-Skirt) Ⓐrmstrong No.2 (R-Skirt) MADE IN U.S.A./
[Numbers and Dots] SB
Clear, Smoke

(F-Skirt) *Armstrong's* No.2 (R-Skirt) MADE IN U.S.A.
['A' in a circle] SB
Off Clear, Straw, Pink, Smoke

(F-Skirt) *Armstrong's* No.2 (R-Skirt) MADE IN U.S.A.
['A' in a circle] [Numbers and Dots] CB
Off Clear

DIAMOND

(F-Skirt) [Diamond] SB
Straw, Light Green

DOMINION

(F-Skirt) DOMINIOIN-16 {Note Spelling} (R-Skirt)
[Diamond] RDP
Light Green

(F-Skirt) DOMINION-16 (R-Skirt) ['D' in a diamond]
SDP
Light Green

(F-Skirt) DOMINION-16 (R-Skirt) ['D' in a diamond]
[Number] SB
Clear

(F-Skirt) DOMINION-16 (R-Skirt) [Diamond] SB
Clear, Straw

(F-Skirt) DOMINION-16 (R-Skirt) [Diamond] RDP
Clear, Straw, Light Peach, Light Green

(F-Skirt) DOMINION-16 (R-Skirt) [Diamond] SDP
Light Green

(F-Skirt) DOMINOIN-16 {Note Spelling} (R-Skirt)
[Diamond] RDP
Peach

HEMINGRAY

(F-Skirt) HEMIGRAY-16 {Note Spelling} (R-Skirt)
MADE IN U.S.A. RDP
Aqua, Green

(F-Skirt) HEMINGRAY (R-Skirt) N°16 SB
Hemingray Blue

(F-Skirt) HEMINGRAY (R-Skirt) N°16 SDP
Aqua, Hemingray Blue, Green

(F-Skirt) HEMINGRAY-16 (R-Skirt) MADE IN U.S.A.
RDP
Clear, 7-up Green, Aqua, Hemingray Blue

(F-Skirt) HEMINGRAY-16 (R-Skirt) MADE IN U.S.A.
SDP
Clear, Aqua, Hemingray Blue

(F-Skirt) HEMINGRAY-16 (R-Skirt) MADE IN U.S.A./
[Number] CB
Clear, Straw, Ice Blue

(F-Skirt) HEMINGRAY-16 (R-Skirt) MADE IN U.S.A./
[Number] SB
Clear

(F-Skirt) HEMINGRAY-16 (R-Skirt) [Number] SB
Clear

(F-Skirt) HEMINGRAY-16/[Number and Dots] (R-Skirt)
MADE IN U.S.A. RDP
Ice Blue

(F-Skirt) HEMINGRAY-16/[Number and Dots] (R-Skirt)
MADE IN U.S.A./[Number] SB
Clear, Light Straw, Light Pink

(F-Skirt) HEMINGRAY-16/[Number and Dots] (R-Skirt)
MADE IN U.S.A./[Number] RDP
Clear, Ice Blue, Light Green, White Milk, 7-up Green

(F-Skirt) HEMINGRAY-17 (R-Skirt) MADE IN U.S.A.
[Number] CB
Clear, Green Tint, Light Straw

(F-Skirt) HEMINGRAY-17 (R-Skirt) MADE IN U.S.A.
[Number] SB
Clear

(F-Skirt) HEMINGRAY/N° 16 (R-Skirt) HEMINGRAY
SDP
Aqua

KERR

(F-Skirt) KERR No.2 (R-Skirt) MADE IN U.S.A.
[Number and Dots] SB
Clear

LYNCHBURG

(Dome) ['L' in an oval] (F-Skirt) LYNCHBURG (R-
Skirt) NO.30/[Number]/MADE IN U.S.A. SDP
Apple Green

(F-Skirt) ['L' in an oval]/LYNCHBURG (R-Skirt) NO.30
[Number]/MADE IN U.S.A. RDP
Aqua, Green, Ice Blue

(F-Skirt) ['L' in an oval]/LYNCHBURG (R-Skirt) NO.30
[Number]/MADE IN U.S.A. SDP
Aqua, Light Aqua

(F-Skirt) ['L' in an oval]/LYNCHBURG (R-Skirt)
[Blotted out Embossing]/NO.30 [Number]/MADE IN
U.S.A. SDP
Aqua, Light Green, Ice Blue, Yellow Green, Straw, Blue
Aqua, Green, Off Clear

MAYDWELL

(F-Skirt) MAYDWELL-16 (R-Skirt) U.S.A. SDP
Clear, Straw, Gray, Light Green, Light Yellow Green,
Olive Green, Purple Tint, Yellow Green, Gingerale

(F-Skirt) ['NO.16' Blotted out]/MAYDWELL-16 (R-
Skirt) ['M^cLAUGHLIN' Blotted out]/U.S.A. SDP
Clear, Dark Straw

M^cLAUGHLIN

(F-Skirt) M^cLAUGHLIN (R-In Wire Groove) [Number]
(R-Skirt) NO.16 RDP
Light Apple Green, Citron, Yellow Green

(F-Skirt) M^cLAUGHLIN (R-Skirt) NO.16 RDP
Aqua, Light Green, Blue Tint, Light Yellow Green, Lime
Green, Apple Green, Dark Green, Olive Green

(F-Skirt) M^cLAUGHLIN (R-Skirt) NO.16 SDP
Aqua, Ice Green

V.M.R.NAPOLI

(F-Skirt) V M R /NAPOLI SB
Aqua, Light Green, Sage Green, Light Green Aqua

WHITALL TATUM

(F-Skirt) (Arc)WHITALL TATUM/No.2 (R-Skirt)
(Arc)MADE IN U.S.A./[Numbers and Dots]/['A' in a
circle] SB
Light Pink, Light Olive Green, Clear, Off Clear, Light
Sage, Light Yellow Green, Light Steel Blue

(F-Skirt) (Arc)WHITALL TATUM/No.2 (R-Skirt)
(Arc)MADE IN U.S.A./[Numbers and Dots]/['A' in a
circle] {'N' is backwards} SB
Clear, Light Olive Green, Light Sage Green, Light Blue

(F-Skirt) WHITALL TATUM CO. No.2 (R-Skirt) MADE
IN U.S.A./['W/T' in a triangle] SB
Light Straw

(F-Skirt) WHITALL TATUM CO. No.2 (R-Skirt) ['W/T'
in a triangle]/MADE IN U.S.A./[Number] SB
Smoky Straw

(F-Skirt) WHITALL TATUM CO. No.2 (R-Skirt)
[Number] MADE IN U.S.A. SB
Light Blue Aqua

(F-Skirt) WHITALL TATUM CO. No.2/[Number] (R-
Skirt) MADE IN U.S.A. ['W/T' in a triangle] SB
Off Clear, Straw, Light Green Aqua, Light Aqua, Peach

(F-Skirt) WHITALL TATUM CO. No.2/[Number] (R-
Skirt) MADE IN U.S.A. ['W/T' in a triangle]/[Number]
SB
Light Straw

(F-Skirt) WHITALL TATUM No.2/[Number] (R-Skirt)
MADE IN U.S.A. ['W/T' in a triangle]/[Number] SB
Off Clear, Straw, Pink, Ice Blue, Amber (Fake)



CD 122.4

CD 122.4

HEMINGRAY

(F-Skirt) HEMINGRAY-E 2 (R-Skirt) MADE IN U.S.A.
 {Inside of Skirt is Threaded} SB

Lemon, Off Clear

PYREX

(F-Skirt) PYREX/REG.U.S.A.PAT.OFF.MADE IN
 U.S.A. (R-Skirt) [Number]/PAT.APPD.FOR SB

Light Lemon, Clear

(F-Skirt) PYREX/REG.U.S.PAT.OFF. (R-Skirt) [Letter
 or Number]/MADE IN U.S.A./PAT.APPD.FOR. SB

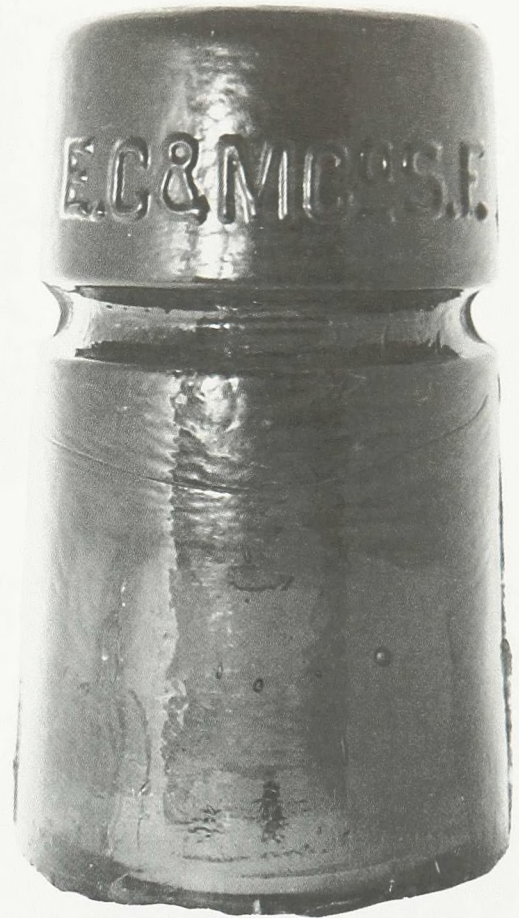
Clear, Light Lemon

(F-Skirt) PYREX/REG.U.S.PAT.OFF. MADE IN U.S.A.
 SB

Light Lemon, Off Clear, Clear

(F-Skirt) PYREX/REG.U.S.PAT.OFF.MADE IN U.S.A.
 (R-Skirt) PAT.APPD.FOR SB

Clear



CD 123

CD 123

E.C. & M.

(F-Crown) E.C & M C^o S.F. {There may be a glass button
 on the front or rear skirt; See Volume I, page 85, for
 detail style and color information} {MLOD} SB

Aqua, Light Green, Cobalt Blue, Blue, Bubbly Green,
 Dark Yellow Green, Olive Green Amber, Olive Amber,
 Purple, Green Aqua, Light Blue, Dark Green, Emerald
 Green, Ink Blue, Lime Green, Sage Green, Dark Yellow
 Amber, Apple Green, Light Cobalt Blue, Olive Amber
 Blackglass

(F-Crown) E.C. & M.C^o S.F. {Embossed upsidedown} (F-
 Skirt) [Glass Dot] {MLOD} SB

Emerald Green, Cobalt Blue, Aqua



CD 123 Variations

The tallest, the shortest and the upsidedown embossing of the "E.C.&M.Co S.F." (See Contributions from California chapter for details on mold types and colors)



CD 123.2

CD 123.2

CHESTER

(F-Skirt) CHESTER/N.Y. (R-Skirt) PAT JAN 25 1870
SB
Aqua



CD 124

CD 124

HEMINGRAY

(Dome) [Number] (F-Skirt) [Vertical Bar]/HEMINGRAY/N° 4 (R-Skirt) PATENT/MAY 2 1893 SDP
Blue Aqua

(F-Crown) 4 (F-Skirt) HEMINGRAY/N° 4 (R-Skirt) PATENT/MAY 2 1893 SDP
Aqua

(F-Skirt) A/HEMINGRAY/N° 4 (R-Crown) PAT.DEC.19. 1871 (R-Skirt) 4/PATENT/MAY 2 1893 SDP
Aqua, Light Aqua

(F-Skirt) HEMINGRAY/4/N° 4 (R-Crown) PAT.DEC.19. 1871 (R-Skirt) PATENT/A/MAY 2 1893 SDP
Aqua

(F-Skirt) HEMINGRAY/N° 13/['4' Blotted out] (R-Skirt)
PATENT/MAY 2 1893 SDP
Aqua, Hemingray Blue, Light Aqua

(F-Skirt) HEMINGRAY/N° 4 (R-Skirt) PATENT/MAY 2
1893 SDP
Light Aqua, Light Blue, Olive Green, Green, Emerald
Green, Aqua w/Amber Swirls

(F-Skirt) HEMINGRAY/N° 4 { '4' is backwards} (R-
Skirt) PATENT/MAY 2 1893 SDP
Aqua, Green, Olive Green

NO NAME

(Dome) 4 (F-Skirt) [Vertical Bar] (R-Skirt) [Crescent]
SB
Aqua, Light Blue

(F-Skirt) [Backwards '7'] (R-Skirt) [Backwards '7'] SB
Aqua

NO NAME-DEC PAT

(F-Crown) PAT.DEC.19. 1871 (F-Skirt) 4 (R-Skirt)
[Letter] SB
Aqua, Light Blue, Light Aqua, Light Green, Clear, Green
Tint



CD 124.2

CD 124.2

NO NAME-DEC PAT

(F-Crown) PATENT/DEC.19, 1871 (R-Crown) 4 SB
Aqua, Off Clear, Light Aqua, Dark Blue Aqua, Dark
Aqua, Teal Blue



CD 124.3

CD 124.3

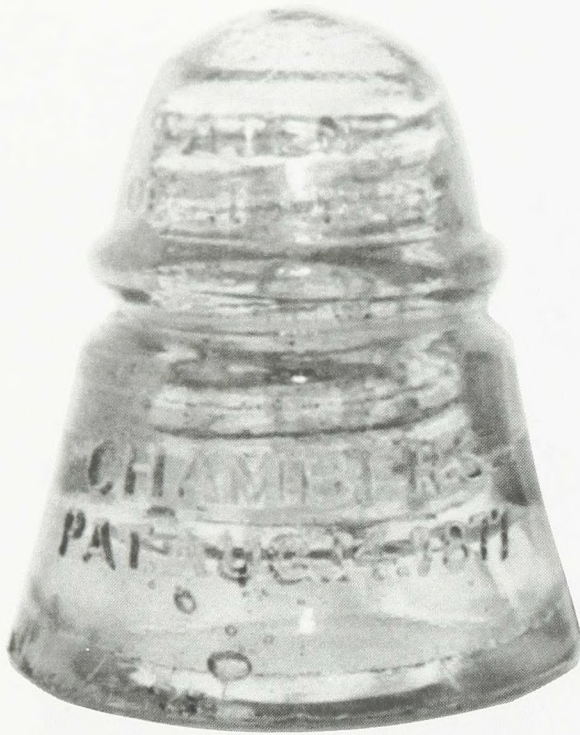
NO NAME-DEC PAT

(F-Crown) PAT.DEC.19. 1871 (F-Skirt) [Letter] (R-Skirt)
4 SB
Green Aqua

(F-Crown) PATENT/DEC.19, 1871 (F-Skirt) [Letter] (R-
Crown) 4 SB
Aqua, Blue, Light Green, Purple, Olive Green, Light
Aqua, Light Green Aqua

(F-Crown) PATENT/DEC.19. 1871 (R-Crown) 4 (R-
Skirt) [Letter] SB
Aqua, Blue, Blue Aqua, Light Aqua, Dark Aqua, Light
Green

CD 104, CD 124.2 and CD 124.3 are all older Hemin-
gray "Number 4" styles. The newer style "Number 4" is
CD 124. You will also note that the mold for the **CD**
124.5, which is part of the Chambers lightning rod
system, appears to be a CD 124.3 mold which has been
modified to provide a flared skirt and the wing projec-
tion.



Front View



Side View

CD 124.5

CD 124.5

CHAMBERS

(F-Crown) PATENT/DEC. 19. 1871 (F-Skirt) CHAMBERS/PAT.AUG. 14. 1877 (R-Crown) 4 SB
Light Aqua

This insulator is part of the **Chambers' Lightning Protection System**. One theory is that the CD 124.5 was the "poor man's" version of CD 132.4, the companion insulator to CD 317. CD 124.5 was used with CD 317.5 which was the "poor man's version of CD 317. (See CD 132.4 and CD 317 for additional information)



CD 125

CD 125

HEMINGRAY

(F-Skirt) HEMINGRAY (R-Skirt) N° 15 SDP
Aqua, Green

(F-Skirt) HEMINGRAY-15 (R-Skirt) MADE IN U.S.A.
RDP
Aqua, Ice Blue, Blue

(F-Skirt) HEMINGRAY-15 (R-Skirt) MADE IN U.S.A.
SDP
Aqua

(F-Skirt) HEMINGRAY/MADE IN U.S.A. (R-Skirt) N°
15 SDP
Light Aqua

(F-Skirt) HEMINGRAY/MADE IN U.S.A. (R-Skirt)
PATENT/DEC. 19. 1871/[Letter] SB
Light Green

(F-Skirt) HEMINGRAY/W.U. N° 5 (R-Skirt) PATENT/
MAY 2 1893 SDP
Dark Aqua, Green, Purple, Hemingray Blue, Aqua, Light
Green



CD 125 Variations

*Differences occur in both the dome size and the
angle of the skirt on these Hemingray styles.*

NO NAME

(F-Skirt) ['PAT DEC 19 1871' Blotted out] {MLOD}
SB
Light Aqua

(F-Skirt) ['PAT JAN 25 1870' Blotted out] SB
Light Aqua

[No Embossing] SB
Aqua

PAT APP FOR

(F-Skirt) PAT.APP.FOR (R-Skirt) 5/[Letter] SB
Aqua, Blue, Milky Green, Dark Sapphire Blue

W.U.

(F-Skirt) W.U./5 (R-Skirt) PAT.APP.FOR SB
Blue

(F-Skirt) W.U./5 (R-Skirt) PATENT/DEC. 19. 1871 SB
Aqua, Light Green, Olive, Ice Blue, Green, Blue Aqua,
Lemon Yellow, Light Aqua, Apple Green, Yellow Green

(F-Skirt) W.U./5 (R-Skirt) PATENT/DEC. 19. 1871/
[Letter] {Comes in two distinct dome sizes} SB
Aqua, Light Aqua, Clear, Off Clear, Blue, Olive Green,
Lime Green

(F-Skirt) W.U./5/PATENT/MAY 2 1893 (R-Skirt)
PATENT/DEC 19 1871/[Letter] SDP
Aqua

(F-Skirt) W.U./5/[Letter] (R-Skirt) PATENT/DEC. 19.
1871 SB
Aqua, Green, Green Aqua, Lemon Yellow

(F-Skirt) W.U./PATENT/MAY 2 1893 (R-Skirt) PAT-
ENT/DEC. 19. 1871/[Letter] SDP
Aqua, Ice Blue, Lime Green, Yellow Green



CD 126

CD 126

BROOKFIELD

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST./N.Y.
 (R-Crown) (Arc)CAUVET/JULY 25, 1865/PAT.JAN. “ ,
 1870/ “ FEB. 22, “ SB
 Light Aqua

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST./N.Y.
 (R-Crown) [Number] SB
 Aqua

(F-Crown) PAT.MARCH 20, 1870/W. BROOKFIELD
 {Note Date} (R-Crown) PAT.JAN. 25, 1870/PAT.FEB.
 20, 1870/55 FULTON ST. N.Y. {Note ‘Feb.20’ Date}
 {MLOD} SB
 Blue Aqua

(F-Crown) PAT.MARCH 20, 1877/W. BROOKFIELD
 (R-Crown) PAT.JAN. 25, 1870/PAT.FEB. 20, 1870/55
 FULTON ST. N.Y. {Note ‘Feb.20’ Date} {MLOD} SB
 Light Aqua

(F-Crown) PAT.MARCH 20, 1877/W. BROOKFIELD
 (R-Crown) PAT.JAN. 25, 1870/PAT.FEB. 20, 1870/
 NO.55 FULTON ST. N.Y. {Note ‘Feb.20’ Date}
 {MLOD} SB
 Green

(F-Crown) PAT.MARCH 20, 1877/W. BROOKFIELD
 (R-Crown) PAT.JAN. 25, 1870/PAT.FEB. 22, 1870/55
 FULTON ST. N.Y. {MLOD} SB
 Light Aqua, Yellow Green

(F-Crown) PAT.MARCH 20, 1877/W. BROOKFIELD
 (R-Crown) [Number]/PAT.JAN 25, 1870/PAT.FEB 22,
 1870/55 FULTON ST. N.Y. {MLOD} SB
 Light Aqua

(F-Crown) PAT.MARCH 20, 1877/W. BROOKFIELD
 (R-Crown) PAT.JAN. 25, 1870/PAT.FEB. 22, 1870/
 NO.55 FULTON ST. N.Y. {MLOD} SB
 Green, Aqua, Blue, Olive Green, Light Green, Dark
 Green

(F-Crown) PAT.MARCH 22, 1877/W. BROOKFIELD
 {Note Date} (R-Crown) PAT.JAN. 25, 1870/PAT.FEB.
 22, 1870/55 FULTON ST. N.Y. {MLOD} SB
 Aqua

(F-Crown) W U T CO./CAUVETS PAT./W.
 BROOKFIELD (F-Just below wire groove)
 PAT.MARCH 20, 1877 (R-Crown) [Number]/FEB. 22,
 70/NO 55 FULTON ST. N.Y. (R-Just below wire groove)
 PAT.JAN. 25, 1870 {MLOD} SB
 Light Aqua, Olive Green, Blue Aqua

(F-Crown) W U T CO./CAUVETS PAT./W.
 BROOKFIELD (R-Crown) [Number]/FEB. 22, 70/NO.55
 FULTON ST. N.Y. {MLOD} SB
 Aqua, Light Aqua, Powder Blue

(F-Crown) W. BROOKFIELD/45 CLIFF ST. N.Y. SB
 Purple

(F-Crown) W. BROOKFIELD/45 CLIFF ST. N.Y. (R-
 Crown) PAT./JAN. 25TH 1870/JAN. 14TH 1879 {MLOD}
 SB
 Blue Aqua

(F-Crown) W. BROOKFIELD/45 CLIFF ST. N.Y. (R-
 Crown) [Number]/PAT./JAN. 25TH 1870/JAN. 14TH 1879
 {MLOD} SB
 Blue Aqua

(F-Crown) W. BROOKFIELD/45 CLIFF ST./N.Y. SB
 Aqua

(F-Crown) W. BROOKFIELD/45 CLIFF ST./N.Y. (R-
 Crown) PAT.JAN. 25, 1870/PAT.JAN. 14, 1879
 {MLOD} SB
 Aqua

(F-Crown) W. BROOKFIELD/55 FULTON ST. N.Y. (R-Crown) PAT.FEB. 22, 1870/ " JAN. 25, 1870/ " JAN. 14, 1879 SB
Aqua

(F-Crown) W. BROOKFIELD/55 FULTON ST. N.Y. (R-Crown) PAT.FEB. 22ND, 1870/ " JAN. 25TH, 1870/ " JAN. 14TH, 1879 {MLOD} SB
Aqua, Light Green, Green, Yellow Green, Blue Aqua, Green Aqua

(F-Crown) W. BROOKFIELD/55 FULTON ST. N.Y. {'S' is backwards} (R-Crown) PAT.FEB. 22ND, 1870/ " JAN. 25TH, 1870/ " JAN. 14TH, 1879 {MLOD} SB
Light Aqua, Snowy Green, Yellow Green, Blue Aqua

(F-Crown) W. BROOKFIELD/55 FULTON ST. N.Y. {'S' is backwards} (R-Crown) PAT.FEB 22 1870/ " JAN 25 " / " " 14 1879 {MLOD} SB
Yellow Green

(F-Crown) W. BROOKFIELD/NEW YORK {MLOD} SB
Aqua, Blue

(F-Crown) W^M BROOKFIELD/55 FULTON ST. N.Y. (R-Crown) PAT. FEB 22ND 1870/JAN 25TH 1870/JAN 14TH 1879 SB
Blue Aqua

(F-Crown) W^M BROOKFIELD/55 FULTON ST. N.Y. (R-Crown) PAT.FEB. 22ND 1879/JAN. 25TH 1879/JAN. 14TH 1879 {Note three 1879 dates} SB
Aqua, Light Aqua

(F-Crown) W^M BROOKFIELD/55 FULTON ST. N.Y. (R-Crown) PAT.FEB. 22ND 1879/JAN. 25TH 1870/JAN. 14TH 1879 {Note Feb.'79 Date} SB
Aqua

(F-Crown) [Number]/(Arc)W. BROOKFIELD/45 CLIFF ST. N.Y. (R-Crown) PAT.JAN.25, 1870/PAT.JAN. 14, 1879 {MLOD} SB
Aqua, Purple

(F-Crown) [Number]/(Arc)W. BROOKFIELD/45 CLIFF ST./N.Y. (R-Crown) (Arc)CAUVET/JULY 25 1865/PAT JAN. " 1870/ " FEB. 22 " {MLOD} SB
Aqua, Yellow Green, Teal Green

(F-Crown) [Number]/(Arc)W. BROOKFIELD/45 CLIFF ST./N.Y. (R-Crown) (Arc)DAUVET/PAT./JULY 25, 1865/JAN. 25, 1870/FEB. 22, 1870 {Note Spelling} {MLOD} SB
Aqua

(F-Crown) [Number]/(Arc)W. BROOKFIELD/45 CLIFF ST./N.Y. {MLOD} SB
Aqua, Blue Aqua, Green, Yellow Green, Teal Green, Mint Green

(F-Crown) [Number]/PAT.MARCH 20, 1877/W. BROOKFIELD (R-Crown) PAT.FEB. 22,1879/JAN. 25, 1870 JAN. 14, 1879 {Note Feb.'79 Date} {MLOD} SB
Aqua, Light Green

(F-Crown) [Number]/PAT.MARCH 20, 1877/W. BROOKFIELD (R-Crown) PAT.JAN. 25,1870/PAT.FEB. 22, 1870/55 FULTON ST. N.Y. {MLOD} SB
Light Aqua, Light Green, Lime Green, Green, Yellow Green, Light Blue

(F-Crown) [Number]/PATT.MARCH 20, 1877/W. BROOKFIELD {Note Spelling} (R-Crown) PAT.JAN. 25, 1870/PAT.FEB. 22, 1870/55 FULTON ST. N.Y. {MLOD} SB
Blue Aqua

(F-Crown) [Number]/W. BROOKFIELD/45 CLIFF ST. (R-Crown) PAT JAN 25. 1870/PAT JAN 14. 1879 {MLOD} SB
Light Blue

(F-Crown) [Number]/W. BROOKFIELD/45 CLIFF ST. (R-Crown) PAT JAN 25. 1870/PAT JAN 14. 1870 {Note second Jan.'70 Date} {MLOD} SB
Blue Aqua

(F-Crown) [Number]/W. BROOKFIELD/45 CLIFF ST. N.Y. (R-Crown) (Arc)CAUVET/JULY 25, 1865/ PAT.JAN. " ,1870/ " FEB. 22, " {MLOD} SB
Aqua, Olive Green

(F-Crown) [Number]/W. BROOKFIELD/45 CLIFF ST. N.Y. (R-Crown) PAT JAN 25. 1870/PAT JAN 14. 1879 {MLOD} SB
Aqua, Light Aqua, Light Green

(F-Crown) [Number]/W. BROOKFIELD/45 CLIFF ST./ N.Y. (R-Crown) PAT JAN 25, 1870/PAT JAN 14, 1879 {MLOD} SB
Blue

(F-Crown) [Number]/W. BROOKFIELD/55 FULTON ST. N.Y. (R-Crown) FEB 22 1870/JAN 25 1870/JAN 14 1879 {MLOD} SB
Light Aqua, Light Green Aqua, Olive Green, Yellow Green, Green, Lime Green, Blue

(F-Crown) [Number]/W. BROOKFIELD/55 FULTON ST. N.Y. (R-Crown) PAT FEB 22 1870/JAN 25 1870/ JAN 14 1879 {MLOD} SB
Aqua

(F-Crown) [Number]/W. BROOKFIELD/55 FULTON
ST. N.Y. (R-Crown) PAT FEB 22ND 1870/JAN 25TH 1870/
JAN 14TH 1879 {MLOD} SB
Aqua, Light Green, Yellow Green, Olive Amber, Dark
Red Amber

(F-Crown) [Number]/W. BROOKFIELD/55 FULTON
ST. N.Y. (R-Crown) PAT.FEB. 22, 1870/JAN. 14, 1879
{MLOD} SB
Aqua, Green, Yellow Green, Olive Green

(F-Crown) [Number]/W. BROOKFIELD/55 FULTON
ST. N.Y. {'S' is backwards} (R-Crown) PAT FEB 22ND
1870/ " " JAN 25TH 1870/ " " JAN 14TH 1879 {MLOD}
SB
Blue Aqua, Light Blue Aqua

(F-Skirt) W. BROOKFIELD (R-Skirt) NEW YORK SB
Aqua, Light Green, Green Aqua, Light Blue, Emerald
Green, Lime Green

NO NAME

(F-Crown) 7 {Large Number} {MLOD} SB
Green

(F-Crown) PATd (R-Crown) [Number] SB
Green

(F-Crown) ['PAT.JAN. 25, 1870' Blotted out] SB
Aqua

(F-Skirt) RD 149959 SB
Green Aqua, Green Jade

[No Embossing] {Large round dome} SB
Aqua, Green, Dark Blue, Dark Aqua

[No Embossing] {MLOD} SB
Mint Green



CD 126.1

CD 126.1

BROOKFIELD

(F-Crown) W U T CO./CAUVETS PAT./W.
BROOKFIELD (R-Crown) [Number]/FEB. 22 70/NO 55
FULTON ST. N.Y. {MLOD} SB
Light Aqua, Powder Blue



CD 126.3

CD 126.3

A.U.

(F-Crown) PATENT/DEC. 19. 1871 (F-Skirt) A.U. SB
Dark Aqua, Blue Aqua, Teal Green

(F-Crown) PATENT/DEC. 19. 1871 (F-Skirt) A.U. (R-Crown) [Number] SB
Aqua

(F-Crown) PATENT/DEC. 19. 1871 (F-Skirt) A.U. (R-Skirt) [Letter] SB
Aqua, Light Green

BROOKFIELD

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST. N.Y. (R-Crown) PAT.JAN. 25, 1870 SB
Aqua

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST./N.Y. (R-Crown) (Arc)CAUVET/PAT./JULY 25, 1865/JAN. 25, 1870/FEB. 22, 1870 SB
Light Aqua, Light Blue

(F-Crown) W. BROOKFIELD/45 CLIFF ST. N.Y. (R-Crown) PAT.JAN. 25, 1870 {MLOD} SB
Light Aqua, Light Green

(F-Crown) W. BROOKFIELD/55 FULTON ST N.Y. (R-Crown) [Number]/PAT FEB. 22ND 1870/JAN. 14TH 1879 {MLOD} SB
Light Blue

(F-Crown) W. BROOKFIELD/55 FULTON ST. N.Y. (R-Crown) PAT FEB 22ND 1870/JAN 25TH 1870/JAN 14TH 1870 { Note second Jan. '70 Date} SB
Aqua, Blue Aqua

(F-Crown) W. BROOKFIELD/55 FULTON ST. N.Y. (R-Crown) [Number]/PAT.FEB 22ND 1870/JAN 25TH 1870/JAN 14TH 1879 {MLOD} SB
Light Aqua

(F-Crown) [Number]/(Arc)W. BROOKFIELD/45 CLIFF ST./N.Y. (R-Crown) (Arc)CUAVET/PAT./JULY 25, 1865/JAN. 25, 1870/FEB. 22, 1870 {Note Spelling} {MLOD} SB
Aqua, Light Aqua, Blue Aqua

(F-Crown) [Number]/(Arc)W. BROOKFIELD/45 CLIFF ST./N.Y. (R-Crown) (Arc)DAUVET/PAT./JULY 25, 1865/JAN. 25, 1870/FEB. 22, 1870 {Note Spelling} {MLOD} SB
Light Aqua, Blue

(F-Crown) [Number]/W. BROOKFIELD/45 CLIFF ST. N.Y. (R-Crown) PAT.JAN 25TH 1870 SB
Light Aqua, Blue Aqua

(F-Crown) [Number]/W. BROOKFIELD/55 FULTON ST. N.Y. (R-Crown) FEB. 22, 1870/JAN. 25, 1870 SB
Aqua



CD 126.3 Variations

(Left) A dome embossed Brookfield; (Right) No Name with "X" or "111" markings on dome which are similar to markings found on American Insulator Company products.

(F-Crown) [Number]/W. BROOKFIELD/55 FULTON ST. N.Y. (R-Crown) PAT.FEB 22TH 1870/JAN 25TH 1870/ JAN 14TH 1879 SB
Yellow Green

(F-Crown) [Number]/W. BROOKFIELD/55 FULTON ST. N.Y. (R-Crown) PAT.FEB. 22,1870/ “ JAN. 25 “ / “ “ 14, 1879 {‘4’ is backwards} {MLOD} SB
Aqua, Light Blue, Light Green, Blue Aqua, Light Aqua

(F-Crown) [Number]/W. BROOKFIELD/55 FULTON ST. N.Y. (R-Crown) PAT.FEB. 22,1870/ “ JAN. 25, “ / “ “ 14, 1879 {MLOD} SB
Aqua, Light Blue Aqua, Light Green, Blue Aqua, Green Aqua

(F-Crown) [Number]/W. BROOKFIELD/55 FULTON ST. N.Y. (R-Crown) PAT.FEB. 22,1870/ “ JAN. 25, “ / “ “ 14, 1870 {Note second Jan.’70 Date} {MLOD} SB
Light Aqua, Blue

(F-Crown) [Number]/W. BROOKFIELD/55 FULTON ST. N.Y. (R-Crown) PAT.FEB. 22ND 1870/JAN 25TH 1870/JAN 14TH 1879 SB
Light Aqua

NO NAME

(Dome) [‘X’ or ‘111’] SB
Aqua, Light Green, Olive Green, Light Yellow Olive, Blue, Green Aqua, Light Yellow Green

CD 126.4

AMERICAN

(Base) AM INS CO PAT SEP 13 1881.
Aqua

(Dome) [Number] (Base) AM INS CO./PAT SEP 13 1881
Light Aqua, Light Blue, Aqua

W.E.MFG.

(F-Crown) W.E.MFG.CO. (F-Skirt) PATENT/APPLIED FOR (R-Crown) W.U. SB
Aqua, Blue, Lime Green, Cornflower Blue

(F-Crown) W.E.MFG.CO. (F-Skirt) PATENT/APPLIED FOR/[‘DEC 19 1871’ Blotted out] (R-Crown) W.U. SB
Light Green, Green Aqua

(F-Crown) W.E.MFG.CO. (F-Skirt) PATENT/DEC. 19. 1871 (R-Crown) W.U. SB
Dark Aqua, Light Green Aqua, Aqua, Light Lime Green, Light Blue, Cornflower Blue

(F-Crown) W.E.MFG.CO. (F-Skirt) PATENT/DEC. 19. 1871 (R-Crown) W.U. (R-Skirt) [Letter] SB
Aqua, Light Aqua, Green Aqua, Blue Aqua

(F-Crown) W.E.MFG.CO. (R-Crown) W.U. SB
Aqua, Lime Green

(F-Crown) W.E.MFG.CO. (R-Crown) W.U. (R-Skirt) [Letter] SB
Lime Green, Blue



CD 126.4



CD 127

CD 127

BROOKE'S

(Base) H. BROOKE'S PAT.JAN. 25TH 1870
Aqua, Ice Blue, Light Aqua

BROOKFIELD

(Dome) [Letter and a Number in a circle] (F-Crown) W.
BROOKFIELD 55 FULTON ST. N.Y./CAUVETS PAT.
FEB. 22 70 PAT.JAN. 25 1870 SB
Light Blue

(F-Crown) W. BROOKFIELD 55 FULTON ST. (R-
Crown) CAUVETS PAT.APL. 4, 1870 {Note Date}
{MLOD} SB
Aqua, Blue

(F-Crown) W. BROOKFIELD 55 FULTON ST. (R-
Crown) PAT.APL. 4, 1871 {MLOD} SB
Blue, Green

(F-Crown) W. BROOKFIELD 55 FULTON ST. (R-
Crown) [Number]/PAT.APR. 4, 1871 {MLOD} SB
Aqua

(F-Crown) W.U.T.Co./CAUVET'S PAT/W.
BROOKFIELD (R-Crown) FEB.22, 1870/NO 55 FUL-
TON ST N.Y. {MLOD} SB
Aqua

(F-Crown) W.U.T.Co./CAUVET'S PAT/W.
BROOKFIELD (R-Crown) [Number]/FEB 22 1870/NO
55 FULTON ST {MLOD} SB
Aqua

(F-Crown) W.U.T.Co./CAUVET'S PAT/W.
BROOKFIELD (R-Crown) [Number]/FEB. 22 1870/55
FULTON ST. {MLOD} SB
Aqua

(F-Crown) W.U.T.Co./CAUVET'S PAT/W.
BROOKFIELD (R-Crown) [Number]/FEB. 22-70/NO 55
FULTON ST. N.Y. {MLOD} SB
Ice Aqua, Light Blue, Aqua, Light Yellow Green

(F-Crown) W.U.T.Co./CAUVETS PAT./W.
BROOKFIELD (R-Crown) [Christian Cross or Letter]/
FEB.22 70/NO 55 FULTON ST. N.Y. {MLOD} SB
Aqua, Light Blue

(F-Crown) W.U.T.Co./CAUVETS PAT./W.
BROOKFIELD (R-Crown) [Number]/FEB. 22 70/NO 55
FULTON ST. {MLOD} SB
Aqua

(F-Crown) [Number]/W. BROOKFIELD 55 FULTON
ST. (R-Crown) PAT.APR. 4, 1871 {MLOD} SB
Aqua, Blue Aqua

(F-Crown) [Number]/W. BROOKFIELD 55 FULTON
ST. (R-Crown) PAT.APRIL 4, 1870 {Note Date}
{MLOD} SB
Blue Aqua

(F-Crown) [Number]/W. BROOKFIELD 55 FULTON
ST. (R-Crown) PAT.APRIL 4, 1871 {MLOD} SB
Lime Green, Mint Green, Blue Aqua, Blue

(F-Crown) [Number]/W. BROOKFIELD 55 FULTON
ST. (R-Crown) PATD APL 4 1871 {MLOD} SB
Blue Aqua



CD 127 Variation

Some of the Brookfield molds used for the CD 127 style had no lip below the wire groove and a straight skirt from the wire groove to the base.

NO NAME

(Dome) ['W/1' in a circle] SB
Aqua, Ice Blue, Emerald Green

[No Embossing] {MLOD} SB
Aqua

[No Embossing] {Unembossed W/1} SB
Light Aqua, Ice Blue, Emerald Green

W.U.

(Dome) [Number] (F-Crown) L.A.C.S PAT.JULY 25TH
1865 (F-Skirt) W.U. PATTERN SB
Aqua, Blue

(Dome) [Number] (F-Skirt) W.U.P. SB
Dark Cobalt Blue, Dark Teal Green, Dark Aqua



CD 128

CD 128

ARMSTRONG

(F-Skirt) (A)rmstrong C.S.C. (R-Skirt) MADE IN U.S.A.
[Numbers and Dots] SB
Clear

(F-Skirt) *Armstrong's* C.S.C. (R-Skirt) Made in U.S.A.
['A' in a circle] [Numbers and Dots] SB
Clear, Smoke, Straw, Purple Tint

HEMINGRAY

(F-Skirt) HEMINGRAY-C S/[Entwined diamond and
oval] (R-Skirt) E_14B SB
Off Clear, White Milk, Opalescent

(F-Skirt) HEMINGRAY-E.1. (R-Skirt) MADE IN U.S.A.
{Inside of skirt is threaded} SB
Off Clear, Light Lemon

(F-Skirt) HEMINGRAY/[Number and Dots] (R-Skirt)
C.S.A. SB
Clear, Light Yellow, Light Green, Dark Yellow

(F-Skirt) HEMINGRAY/[Numbers and Dots] (R-Skirt)
C.S.C. CB
Clear



CD 127.4

CD 127.4

NO NAME

[No Embossing] SB
Dark Aqua, Light Purple, Sage Aqua

NO NAME-DEC PAT

(F-Skirt) PATENT/DEC. 19. 1871 SB
Dark Aqua, Green Aqua, Light Purple

(F-Skirt) HEMINGRAY/[Numbers and Dots] (R-Skirt)
C.S.C. SB
Off Clear

(F-Skirt) [Vertical Bar]/HEMINGRAY/[Number] (R-
Skirt) C.S.C. SB
Light Green

(F-Skirt) [Vertical Bar]/HEMINGRAY/[Number] (R-
Skirt) [Vertical Bar]/C.S.O. SB
Clear

(F-Skirt) [Vertical Bar]/HEMINGRAY/[Number] (R-
skirt) C.S.O. SB
Ice Green

KERR

(F-Skirt) KERR C.S.C. (R-Skirt) MADE IN U.S.A.
[Numbers and Dots] SB
Off Clear

NO NAME

(F-Skirt) C.S./[Entwined diamond and oval] (R-Skirt)
E_14B {Threads inside skirt} SB
Off Clear

PYREX

(F-Skirt) PYREX [Letter]/T.M.REG.U.S.PAT.OFF. (R-
Skirt) C.S.A./MADE IN U.S.A./[Number] {Threads
inside skirt} SB
Clear, Straw

(F-Skirt) PYREX/REG.U.S.PAT.OFF. (R-Skirt) MADE
IN U.S.A. PAT.APPD.FOR {Threads inside skirt} SB
Clear, Straw

(F-Skirt) PYREX/REG.U.S.PAT.OFF./MADE IN U.S.A.
(R-Skirt) PAT.APPD FOR {Threads inside skirt} SB
Clear

(F-Skirt) PYREX/REG.U.S.PAT.OFF./MADE IN U.S.A.
(R-Skirt) [Number]/PAT.APPD.FOR {Threads inside
skirt} SB
Clear

(F-Skirt) PYREX/T.M.REG.U.S.PAT.OFF. (R-Skirt)
MADE IN U.S.A./PAT.APPD FOR[Letter] {Threads
inside skirt} SB
Clear, Straw

WHITALL TATUM

(F-Skirt) (Arc)WHITALL TATUM/C.S.C. (R-Skirt)
(Arc)MADE IN U.S.A./[Numbers and Dots]/['A' in a
circle] SB
Clear

(F-Skirt) (Arc)WHITALL TATUM/[Number]/['A' in a
circle] (R-Skirt) C.S.C./MADE IN U.S.A. SB
Clear, Smoke



CD 128.4

CD 128.4

HEMINGRAY

(F-Skirt) HEMINGRAY/[Number] (R-Skirt) S.B. SB
Clear, Yellow Tint

(F-Skirt) HEMINGRAY/[Number] (R-Skirt) S.B. {1" Pin
hole} SB
Clear, Ice



CD 129

CD 129

ARMSTRONG

(F-Skirt) Ⓐrmstrong T.S. (R-Skirt) MADE IN U.S.A.
[Numbers and Dots] SB
Green Tint, Clear, Off Clear

HEMINGRAY

(F-Skirt) HEMINGRAY/[Numbers and Dots] (R-Skirt)
T.S. CB
Clear, Light Straw, Blue Tint

KERR

(F-Skirt) KERR T.S. (R-Skirt) MADE IN U.S.A. [Num-
bers and Dots] SB
Off Clear



CD 130

CD 130

CALIFORNIA ELECTRIC WORKS

(F-Skirt) CAL.ELEC.WORKS/PATENT SB
Aqua, Light Green, Blue, Ice Blue, Dark Aqua



CD 130.1

CD 130.1

CALIFORNIA ELECTRIC WORKS
(F-Skirt) CAL.ELEC.WORKS/PATENT {MLOD} SB
Cobalt Blue, Aqua



CD 130.2

CD 130.2

SEILERS
(F-Skirt) SEILERS PATENT/FEB. 6-1877 (R-Skirt)
PATENT/DEC. 19-1871 SB
Aqua, Green

Paul Seiler was issued a patent on February 6, 1877 for the design of **CD 130.2**. It should be noted that the insulator also is embossed with Robert Hemingray's December 19, 1871 patent date. Since this patent appears exclusively on Hemingray manufactured products, it is assumed that Seiler had his insulators manufactured by Hemingray. (See Contributions from California chapter for patent information)



CD 131

(F-Crown) [Number]/(Arc)CAUVETS/PAT./JULY 25, 1865 (F-Skirt) W. BROOKFIELD/55 FULTON ST. N.Y. (R-Skirt) [Number] {MLOD} SB
Aqua

(F-Crown) [Number]/(Arc)CAUVETS/PAT./JULY 25, 1865 (F-Skirt) W. BROOKFIELD/55 FULTON ST. N.Y. {MLOD} SB
Aqua, Light Aqua

NO NAME
[No Embossing] {MLOD} SB
Aqua

TILLOTSON
(F-Crown) (Arc)L.G. TILLOTSON/& CO./N.Y. (F-Skirt) BROOKE'S PAT/JAN 25TH 1870 SB
Gingerale, Light Aqua

(F-Crown) (Arc)L.G. TILLOTSON/& CO./N.Y. (F-Skirt) BROOKE'S PAT {Note Spelling} SB
Dark Aqua

(F-Crown) (Arc)L.G.TILLOTSON/& CO./N.Y. (F-Skirt) BROOKE'S PAT/JAN 25TH 1870 (R-Skirt) PAT.JAN 25, 1870/PAT.FEB 22, 1870 {MLOD} SB
Light Aqua, Aqua

CD 131

BROOKFIELD

(F-Crown) (Arc)CAUVETS/PAT./JULY 25, 1865 (F-Skirt) W. BROOKFIELD/55 FULTON ST. N.Y. SB
Aqua

(F-Crown) (Arc)CAUVETS/PAT./JULY 25, 1865 (F-Skirt) W. BROOKFIELD/55 FULTON ST. N.Y. (R-Skirt) [Number]/[Number] SB
Light Aqua

(F-Crown) (Arc)CAUVETS/PAT./JULY 25, 1865 (F-Skirt) W. BROOKFIELD/NO 55 FULTON ST. N.Y. (R-Skirt) [Number] SB
Light Aqua

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST./N.Y. (R-Crown) (Arc)CAUVET/JULY 25, 1865/PAT JAN " 1870/ " FEB. 22, " {MLOD} SB
Light Aqua, Ice Blue

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST/N.Y. (R-Crown) (Arc)CAUVET/PAT JULY 25 1865/" JAN " 1870/" FEB 22 " SB
Light Green, Lime Green



CD 131.4

CD 131.4

NO NAME

[No Embossing] SB

Dark Aqua, Milky Aqua, Blue Aqua, Celery Green, Light Purple, Sage Green, Purple, Dark Yellow Green

NO NAME-DEC PAT

(F-Crown) PATENT/DEC. 19, 1871 (R-Crown) 1 SB

Light Aqua

(F-Crown) PATENT/DEC. 19, 1871 (R-Crown) 1

{MLOD} SB

Aqua, Light Green, Dark Green, Light Aqua

TILLOTSON

(F-Skirt) L.G.T. & CO. (R-Skirt) PAT. JAN. 25, 1870/

PAT. FEB. 22, 1870 {MLOD} SB

Aqua



CD 132

CD 132

NO NAME

[No Embossing] SB

Light Green

NO NAME-DEC PAT

(F-Crown) PAT. DEC. 19, 1871 (R-Crown) 2 (R-Skirt)

[Letter] SB

Aqua, Light Green Aqua, Light Purple, Light Aqua

(F-Crown) PATENT/DEC. 19, 1871 (F-Skirt) [Letter] (R-Crown) 2 SB

Aqua, Green Aqua

(F-Crown) PATENT/DEC. 19, 1871 (R-Crown) 2 SB

Aqua, Green Aqua, Light Purple, Cobalt Blue, Dark Olive Green, Purple, Light Aqua, Dark Aqua

(F-Crown) PATENT/DEC. 19, 1871 (R-Crown) 2 (R-Skirt) [Letter] SB

Aqua, Light Aqua, Green Aqua, Clear, Off Clear, Smoke, Light Purple, Blue Aqua

PAT APP FOR

(F-Skirt) PAT APP FOR (R-Skirt) 2 SB

Dark Aqua, Dark Blue Aqua

PAT'D

(F-Crown) 2 (Base) PAT'D

Green Aqua



CD 131.8

CD 131.8

NO NAME

[No Embossing] SB

Aqua



CD 132.2

NO NAME

(Dome) 2 SB

Aqua, Ice Blue, Teal Blue, Cobalt Blue, Light Green, Green, Yellow Green, Lime Green, Dark Cobalt Blue

PAISLEY

(F-Skirt) S.T.PAISLEY/MAKER/BEAVER FALLS, PA.

(R-Skirt) L.A.CAUVET'S/PAT'D/JULY 25TH 1865 SB

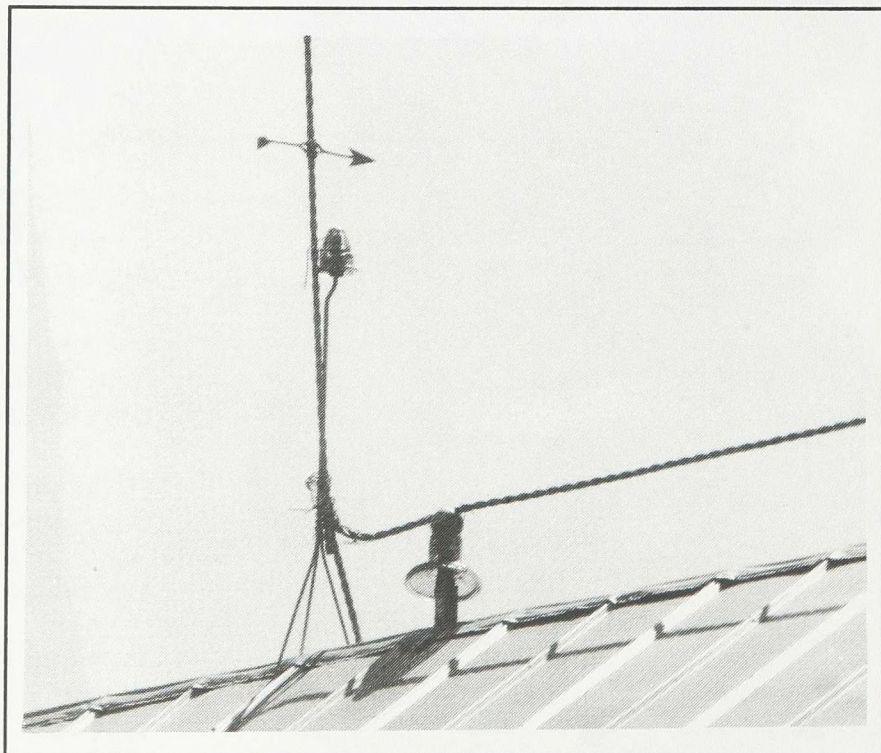
Aqua

CD 132.2

Chambers' Lightning Protection System

Somewhere in the heartland of rural Missouri we find the rooftop of a barn with the Chambers' lightning protection system installed and in operation. You will see the **CD 317** "candlestick" mounted to the apex of the roof and the **CD 132.4** "companion" mounted next to the vertical lightning rod.

The CD 317 is mounted on standard threaded pin and attached to the roof. The CD 132.4 is mounted with a standard threading at the top of the tripod stand. The side view of the CD 132.4 (pictured on following page) shows the specially molded slot in the skirt of the insulator which received the "riser" lightning rod. The horizontal cable of the system is mounted into the saddle groove on the top of the dome of the CD 317.



(Photograph courtesy of Chris Hedges and Charlie Allmon)



Front View

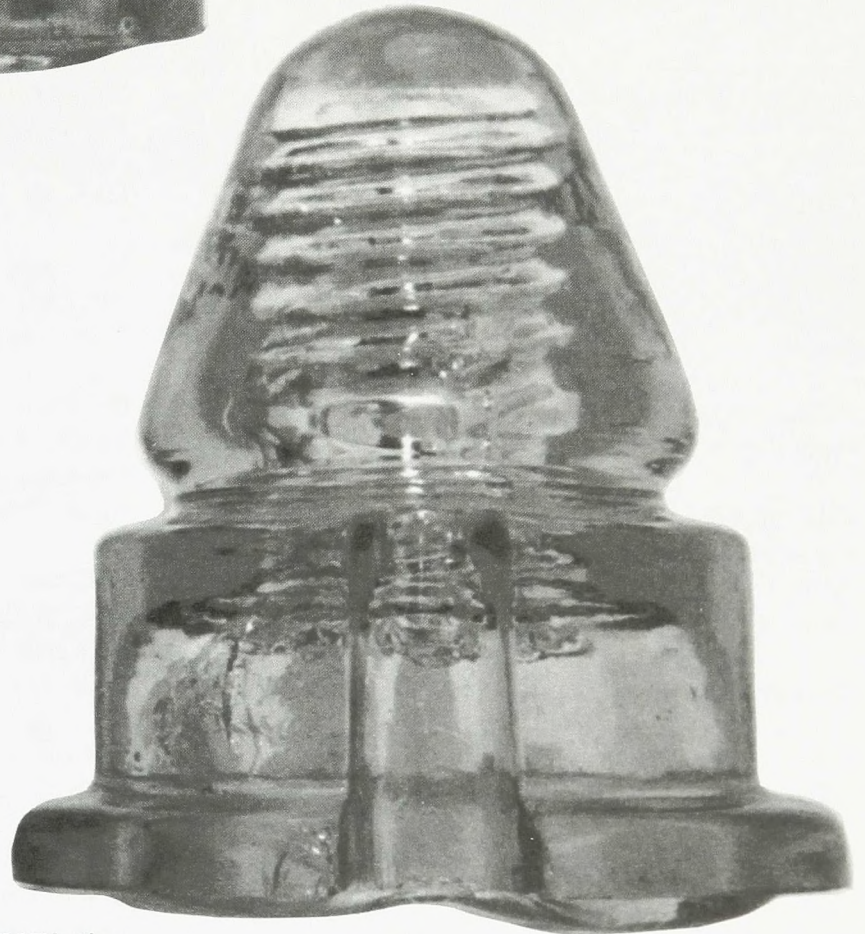
CD 132.4

CD 132.4

NO NAME-DEC PAT

(F-Crown) PATENT/DEC. 19. 1871 SB

Aqua, Dark Aqua, Light Green



Rear View

This is the companion insulator used with CD 317 in the **Chambers' Lightning Protection System**. The vertical slot used during installation for the "riser" lightning rod. (See CD 317 for additional information)



CD 133

CD 133

B.G.M.

(F-Skirt) B.G.M.C. SB
Purple

(F-Skirt) B.G.M.CO. SB
Light Purple

BROOKFIELD

(Dome) [Number] (F-Skirt) BROOKFIELD (R-Skirt)
NEW YORK SB
Aqua, Yellow Green, Light Aqua, Green Aqua

(Dome) [Number] (F-Skirt) BROOKFIELD (R-Skirt) N°
20 SB
Dark Aqua, Yellow Green, Green, Emerald Green, Aqua,
Olive Green, Dark Olive Amber

(Dome) [Number] (F-Skirt) W. BROOKFIELD (R-Skirt)
NEW YORK SB
Light Aqua, Blue Aqua, Green, Yellow Green

(F-Crown) (Arc)BROOKFIELD {'W' Blotted out}/['1'/
'55 FULTON ST.' Blotted out]/N.Y. (F-Skirt) ER (R-
Crown) [Blotted out Embossing] SB
Aqua

(F-Crown) (Arc)CAUVET'S/PAT/JULY 25, 1865 (F-
Skirt) W. BROOKFIELD/N° 55 FULTON ST. (R-Skirt)
[Number] SB
Aqua

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST./N.Y.
{Note Spelling} (R-Crown) PAT/JAN 25 1870 SB
Yellow Green

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST. N.Y.
SB
Aqua

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST. N.Y.
{'N' is backwards} SB
Aqua

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST./N.Y.
(R-Crown) [Number]/PAT/JAN 25 1870 {MLOD} SB
Blue

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST./N.Y.
{'4' is backwards} (R-Crown) (Arc)CAUVET'S/PAT./
JULY 25, 1865/PAT.JAN. 25, 1870/PAT.FEB. 22, 1870
{MLOD} SB
Light Aqua

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST./N.Y.
{'N' is backwards} (R-Crown) PAT./JAN. 25, 1870
{MLOD} SB
Aqua

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST./N.Y.
{MLOD} SB
Light Aqua, Light Blue, Green, Yellow Green

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST./NEW
YORK (R-Crown) [Number]/PAT/JAN 25, 1870
{MLOD} SB
Aqua, Olive Green

(F-Crown) (Arc)W. BROOKFIELD/55 FULTON ST./
N.Y. (R-Crown) (Arc)CAUVET'S/PAT/JULY 25 1865/
PAT JAN 25 1870/PAT FEB 22 1870 {MLOD} SB
Light Aqua

(F-Crown) (Arc)W. BROOKFIELD/NEW YORK (R-
Crown) (Arc)W. BROOKFIELD/NEW YORK SB
Aqua

(F-Crown) (Arc)W. BROOKFIELD/NEW YORK (R-
Crown) [Letter] {MLOD} SB
Light Aqua, Aqua, Apple Green, Ice Blue, Light Blue

(F-Crown) (Arc)W. BROOKFIELD/[Number]/55
FULTON ST. N.Y. (F-Skirt) E.R. (R-Crown)
(Arc)CAUVET'S/PAT./JULY 25, 1865 (R-Skirt)
PAT.JAN. 25, 1870 {MLOD} SB
Aqua

(F-Crown) (Arc)W. BROOKFIELD/[Number]/55
FULTON ST. N.Y. (F-Skirt) E.R. (R-Crown)
(Arc)CAUVET'S/PAT./JULY 25, 1865 {MLOD} SB
Aqua

(F-Crown) (Arc)W. BROOKFIELD/[Number]/55
FULTON ST./N.Y. (F-Skirt) E.R. (R-Crown)
(Arc)CAUVET'S/PAT./JULY 25, 1865 (R-Skirt)
PAT.JAN. 25, 1870/PAT.FEB. 22, 1870 {MLOD} SB
Aqua, Blue, Light Aqua

(F-Crown) (Arc)W. BROOKFIELD/[Number]/55
FULTON ST./N.Y. (R-Crown) CAUVET'S/PAT/JULY
25, 1865 {MLOD} SB
Blue Aqua, Apple Green, Light Aqua, Teal Blue, Dark
Green, Sapphire Blue

(F-Crown) W. BROOKFIELD/NEW YORK (R-Crown)
[Letter] SB
Aqua, Light Blue, Yellow Green

(F-Crown) [Number]/(Arc)CAUVET'S/PAT/JULY 25,
1865 (F-Skirt) W. BROOKFIELD/NO 55 FULTON ST
(R-Skirt) [Large '7'] {MLOD} SB
Aqua

(F-Crown) [Number]/(Arc)W. BOOKFIELD {Note
Spelling}/45 CLIFF ST./N.Y. {'4' is backwards} (R-
Crown) (Arc)CAUVET'S/PAT./JULY 25, 1865/
PAT.JAN. 25, 1870/PAT.FEB. 22, 1870 {MLOD} SB
Aqua

(F-Crown) [Number]/(Arc)W. BOOKFIELD/45 CLIFF
ST/N.Y. {Note Spelling} {MLOD} SB
Green Aqua, Light Aqua

(F-Crown) [Number]/(Arc)W. BROOKFIELD/45 CLIFF
ST {'C' is backwards} (R-Crown) PAT./JAN. 25, 1870
{MLOD} SB
Aqua

(F-Crown) [Number]/(Arc)W. BROOKFIELD/45 CLIFF
ST. N.Y. (R-Crown) (Arc)CAUVET'S/PAT./JULY 25,
1865/JAN. 25, 1870/FEB. 22, 1870 SB
Aqua

(F-Crown) [Number]/(Arc)W. BROOKFIELD/45 CLIFF
ST. N.Y. (R-Crown) PAT/JULY 25, 1865 {MLOD} SB
Aqua

(F-Crown) [Number]/(Arc)W. BROOKFIELD/45 CLIFF
ST./N.Y. (R-Crown) PAT./JAN. 25 1870 {MLOD} SB
Aqua, Green, Yellow Green

(F-Crown) [Number]/(Arc)W. BROOKFIELD/45 CLIFF
ST./N.Y. {'N' is backwards} (R-Crown) PAT./JAN. 25
1870. {MLOD} SB
Light Aqua

(F-Crown) [Number]/(Arc)W. BROOKFIELD/45 CLIFF
ST./N.Y. {MLOD} SB
Light Aqua, Ice Blue, Light Green

(F-Crown) [Number]/(Arc)W. BROOKFIELD/55
FULTON ST./N.Y. (R-Crown) (Arc)CAUVET'S/
PAT.JULY 25, 1865/PAT.JAN. 25, 1870/PAT.FEB. 22,
1870 {MLOD} SB
Aqua

(F-Crown) [Number]/(Arc)W. BROOKFIELD/NEW
YORK SB
Light Blue

(F-Crown) [Number]/(Arc)W. BROOKFIELD/NEW
YORK (R-Crown) [Letter] {MLOD} SB
Aqua, Light Blue, Light Aqua

(F-Crown) [Number]/(Arc)W. BROOKFIELD/NEW
YORK {MLOD} SB
Light Aqua, Aqua, Green

(F-Crown) [Number]/(Arc)W. BROOKFIELD {Note
Spelling}/45 CLIFF ST./N.Y. (R-Crown) PAT.JAN. 25,
1870 {MLOD} SB
Aqua

(F-Skirt) BROOKFIELD (R-Skirt) NEW YORK SB
Aqua, Light Blue, Light Green, Green

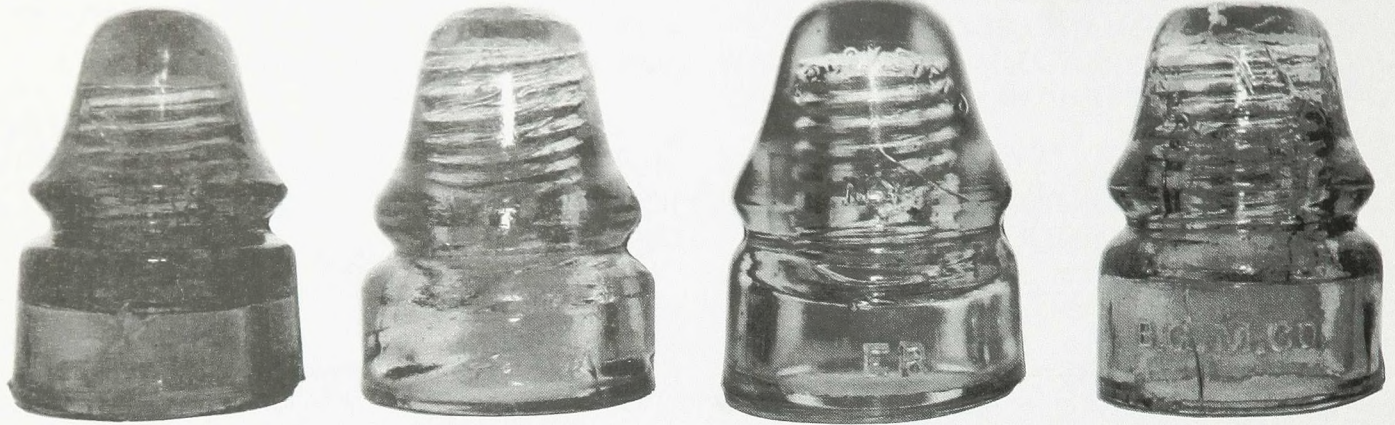
(F-Skirt) BROOKFIELD (R-Skirt) NEW YORK/
['B.G.M.CO.' Blotted Out] SB
Light Aqua, Light Yellow Green

(F-Skirt) BROOKFIELD (R-Skirt) N° 20 SB
Aqua, Yellow Green

(F-Skirt) BROOKFIELD (R-Skirt) N° 20 SDP
Dark Aqua, Yellow Green, Olive Green

(F-Skirt) BROOKFIELD (R-Skirt) [Blotted out Emboss-
ing] SB
Aqua

(F-Skirt) W. BROOKFIELD (R-Skirt) NEW YORK SB
Aqua, Apple Green, Lime Green



CD 133 Variations

(Left to right) Star; No Name - Canada; Dome embossed Brookfield with "ER" embossed on the skirt; B.G.M.CO.

CALIFORNIA

(F-Skirt) CALIFORNIA SB
Aqua, Purple, Peach, Smoke, Yellow, Burgundy, Light Purple, Blue Aqua

CITY FIRE ALARM

(F-Skirt) CITY FIRE ALARM SB
Light Aqua

E.R.

(F-Skirt) E R SB
Aqua, Light Aqua, Light Green

H.G.CO.

(F-Skirt) H.G.CO. (R-Skirt) N° 7/STANDARD SB
Aqua, Clear, Light Green, Light Blue, Orange Amber, Purple Tint

(F-Skirt) H.G.CO. (R-Skirt) N° 7/STANDARD { 'S' is backwards } SB Aqua

(F-Skirt) H.G.CO. (R-Skirt) STANDARD SB
Aqua

(F-Skirt) H.G.CO./PATENT MAY 2 1893 (R-Skirt) N° 20 SDP
Aqua, Lime Green

(F-Skirt) H.G.CO./PATENT MAY 2 1893 (R-Skirt) N° 20/['STANDARD' Blotted out] SDP
Aqua

(F-Skirt) H.G.CO./PATENT MAY 2 1893 (R-Skirt) STANDARD SB
Aqua

(F-Skirt) H.G.CO./PATENT MAY 2 1893 (R-Skirt) STANDARD SDP
Aqua, Light Aqua, Milky Aqua, Jade Green Milk, Light Green, Lemon, Yellow Green, Light Yellow Green, Green, Gray Sage

HEMINGRAY

(F-Skirt) HEMINGRAY (R-Skirt) PATENT/MAY 2 1893 SDP
Dark Aqua

(F-Skirt) HEMINGRAY/N° 20 (R-Skirt) PATENT MAY 2 1893 SDP
Aqua

(F-Skirt) HEMINGRAY/PATENT MAY 2 1893 (R-Skirt) STANDARD SDP
Aqua, Light Green

NO NAME

(Dome) [Number] (F-Skirt) N° 20 SB
Aqua, Yellow Green

(F-Skirt) N° 20 SB
Aqua, Green, Light Green, Emerald Green, Yellow Green, Light Blue, Ice Blue, Olive Green

(F-Skirt) Rd N° 154745 SB
Aqua, Jade Green Milk

[No Embossing] SDP
Aqua

[No Embossing] {MLOD} SB
Light Aqua

NO NAME-CANADA

[No Embossing] RB
Light Aqua

[No Embossing] {High Narrow Dome} SB
Light Aqua, Light Green, Blue, Purple

NO NAME-DEC PAT

(F-Crown) PATENT/DEC. 19, 1871 SB
Ice Aqua, Aqua, Light Green, Purple

O.V.G.

(F-Skirt) O.V.G.CO. SB
Aqua

STAR

(F-Skirt) [Star] SB
Aqua, Blue, Green, Lime Green, Yellow Green, Olive
Green, Aqua/Yellow Green Two Tone, Blue Aqua, Light
Blue, Light Green

TEL.FED.MEX

(F-Skirt) TEL. FED./MEX. (R-Skirt) JM. {MLOD} SB
Dark Green Aqua



CD 133.1

CD 133.1

BROOKE'S

(F-Skirt) HOMER BROOKE'S PAT (R-Skirt) [Letter]/
AUG 14 1883 SB
Aqua, Brooke's Blue, Light Blue

ELECTRICAL SUPPLY CO.

(F-Crown) [Number] (F-Skirt) THE ELECTRICAL
SUPPLY Co./CHICAGO {MLOD} SB
Aqua, Light Green, Light Aqua

(F-Skirt) THE ELECTRICAL SUPPLY Co./CHICAGO
{MLOD} SB
Aqua, Light Green, Green Aqua, Light Blue

NO NAME-DEC PAT

(Dome) [Letter] (F-Skirt) PATENT/DEC. 19, 1871 (R-
Skirt) [Number] SB
Aqua, Light Green, Apple Green, Light Aqua, Off Clear,
Purple Tint

(F-Skirt) PATENT/DEC. 19, 1871 (R-Skirt) [Number]/
[Letter] SB
Clear, Apple Green

PAT APP FOR

(F-Skirt) PAT APP FOR (R-Skirt) 3 SB
Teal Blue, Teal Green, Dark Blue Aqua

(F-Skirt) PAT APP FOR (R-Skirt) 3/[Letter] SB
Aqua, Hemingray Blue

TEL.FED.MEX

(F-Skirt) SAMUEL H^{NOS}/NEW YORK. (R-Skirt)
TEL.FED./MEX. SB
Aqua



CD 133.2

CD 133.2

B.F.G.

(Dome) ['I' and 'C' Entwined Initials] (F-Crown)
(Arc)L.A.C.'S PAT JULY 25TH 1865 (F-Skirt) B.F.G.Co.
SB
Aqua

(Dome) [Number] (F-Crown) (Arc)L.A.C.'S PAT JULY
25TH 1865 (F-Skirt) B.F.G.Co. SB
Aqua, Blue

NO NAME

(Dome) M SB

Aqua, Blue

[No Embossing] SB

Aqua

P&W

(Dome) ['2' in a circle] (F-Crown) (Arc)PATD JULY 25TH 1865/L.A.C. (F-Skirt) P & W SB

Aqua, Blue

(F-Crown) (Arc)PATD JULY 25TH 1865/L.A.C (F-Skirt) P & W SB

Aqua

(F-Skirt) L.A.C./PAT^D JULY 25TH 1865/P & W SB

Aqua



CD 133.4



CD 133.3

CD 133.3

NO NAME

(F-Skirt) [Vertical Bar] (R-Skirt) [Vertical Bar] SB

Aqua, Green

CD 133.4

NO NAME

[No Embossing] SB

Aqua, Light Blue, Light Green, Yellow Green, Light Purple, Purple, Dark Plum, Honey Amber, Purple/Sage Two Tone

NO NAME-DEC PAT

(F-Crown) PATENT/DEC. 19. 1871 (F-Skirt) [Letter] (R-Crown) 3 SB

Aqua, Green, Light Green, Light Aqua, Green Aqua

(F-Crown) PATENT/DEC. 19. 1871 (R-Crown) 3 SB
Light Blue, Light Green, Aqua, Light Aqua, Dark Aqua, Dark Green

(F-Crown) PATENT/DEC. 19. 1871 (R-Crown) 3 (R-Skirt) [Letter] SB

Aqua, Light Aqua, Dark Aqua, Green, Light Green, Blue Aqua, Dark Yellow Green, Blue, Light Purple

PAT'D

(Base) PAT'D

Aqua, Green, Yellow Green, Cobalt Blue, Milky Aqua, Green Aqua, Dark Green



CD 133.5

CD 133.5

TEL.FED.MEX.

(F-Skirt) TEL.FED./MEX (R-Skirt) JM/[Blotted out Embossing] {MLOD} SB
Dark Green Aqua



CD 134

CD 134

AMERICAN

(Base) AM INS CO/PAT.SEP 13 1881
Light Green, Blue Aqua, Aqua, Light Aqua

(Base) AM INSR Co PAT^D SEPT. 13, '81. {'R' is backwards}
Aqua, Light Green, Honey Amber, Light Green Aqua, Olive Amber

(Base) AM INSR Co. PATD SEPT. 13, '81 {'N' is backwards}
Light Aqua, Light Olive Green, Light Green Aqua, Light Blue, Ice Green, Aqua, Light Green, Light Yellow Green, Green, Olive Green

(Base) AM. INS. CO. PAT. SEPT 13. 81.
Light Aqua

(Base) AM. INS. CO. PAT^D SEPT 13.'81. [Glass Dot]
Light Aqua, Light Green, Aqua, Light Green Aqua

B.G.M.

(F-Skirt) B.G.M.CO. SB
Clear, Purple, Light Purple, Light Lemon, Pink

BROOKFIELD

(Dome) [Number] (F-Skirt) BROOKFIELD SB
Dark Green

(Dome) [Number] (F-Skirt) BROOKFIELD SDP
Dark Green, Dark Aqua

(Dome) [Number] (F-Skirt) BROOKFIELD (R-Skirt)
NEW YORK SB
Aqua, Green Aqua, Light Aqua

(Dome) [Number] (F-Skirt) BROOKFIFED {Note Spelling} SB
Aqua, Dark Aqua

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST (R-Crown) [Number] {MLOD} SB
Light Green

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST. N.Y. (R-Crown) [Number]/PAT. JAN 25. 1870 {MLOD} SB
Aqua

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST. N.Y. {MLOD} SB
Aqua, Green, Light Yellow Green

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST./N.Y. (R-Crown) [Number] SB
Ice Blue, Green, Apple Green

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST./N.Y.
{MLOD} SB
Light Aqua, Light Yellow Green, Green, Aqua

(F-Crown) (Arc)W. BROOKFIELD/NEW YORK SB
Aqua

(F-Crown) (Arc)W. BROOKFIELD/NEW YORK (R-
Crown) [Letter] SB
Aqua

(F-Crown) (Arc)W. BROOKFIELD/NEW YORK (R-
Crown) [Number] {MLOD} SB
Light Green, Aqua

(F-Crown) (Arc)W. BROOKFIELD/NEW YORK
{MLOD} SB
Aqua

(F-Crown) (Arc)W^M BROOKFIELD/45 CLIFF ST. N.Y.
(R-Crown) PAT.JAN. 25 1870 {MLOD} SB
Light Green, Light Aqua

(F-Crown) [Number]/(Arc)W. BROOKFIELD/45 CLIFF
ST/N.Y. {MLOD} SB
Aqua, Light Green, Green

(F-Skirt) BROOKFIELD SB
Aqua

(F-Skirt) BROOKFIELD (R-Skirt) NEW YORK SB
Light Green

(F-Skirt) BROOKFIELD (R-Skirt) NEW YORK/
['B.G.M.CO.' Blotted out] SB
Aqua, Green

(F-Skirt) BROOKFIELD (R-Skirt) N° 36/[Number] {This
is a CD162 with no inner skirt} SB
Dark Aqua, Blue

(F-Skirt) BROOKFIELD (R-Skirt) N° 41 SB
Aqua, Green

(F-Skirt) BROOKFIELD/[Number]. (R-Skirt) N° 36 {This
is a CD162 with no inner skirt} SB
Aqua

(F-Skirt) W. BROOKFIELD (R-Skirt) NEW YORK SB
Light Aqua, Yellow Green, Green, Aqua, Light Blue
Aqua

(F-Skirt) W. BROOKFIELD (R-Skirt) NEW YORK/
['B.G.M.CO.' Blotted out] SB
Light Aqua

C.E.L.

(F-Skirt) C. E.L.CO./[Blotted out Embossing] SB
Aqua, Jade Aqua, Green Aqua, Blue Aqua

(F-Skirt) C.E.L.CO. {MLOD} SB
Aqua, Green, Blue Aqua

CALIFORNIA

(Dome) [Letter] (F-Skirt) CALIFORNIA SB
Light Rose

(F-Skirt) CALIFORNIA SB
Aqua

DIAMOND P

(F-Skirt) ['P' in a diamond] (R-Skirt) PAT.AUG 11. 85.
SB
Blue Aqua, Sage Green Vaseline, Light Apple Green,
Lime Green, Sapphire Blue, Jade Green Milk, Apple
Green, Green, Light Green Slag, Teal Aqua, Steel Blue,
Yellow Green Vaseline, Gray Green Vaseline, Light
Yellow Green, Light Aqua, Aqua, Apple Green

ELECTRICAL SUPPLY CO.

(F-Skirt) THE ELECTRICAL SUPPLY CO/CHICAGO
{MLOD} SB
Light Aqua

(F-Skirt) THE ELECTRICAL SUPPLY CO/CHICAGO
(R-Skirt) 905 {MLOD} SB
Light Aqua, Green, Aqua

FALL RIVER

(F-Skirt) FALL RIVER (R-Skirt) POLICE SIGNAL SB
Aqua

G.E.CO.

(Dome) [Letter or Number] (F-Skirt) G.E.CO./['T-H.E.
CO.' Blotted out] {MLOD} SB
Aqua, Light Aqua

(F-Skirt) G.E.CO. SB
Light Aqua, Light Green, Green

(F-Skirt) G.E.CO. {MLOD} SB
Light Aqua, Aqua

GOOD

(F-Skirt) GOOD SB
Light Aqua, Aqua

(F-Skirt) GOOD/[1 or 2 Dots] SB
Light Aqua, Aqua, Light Green

HEMINGRAY

(F-Skirt) HEMINGRAY (R-Skirt) N° 18 SB
Green



CD 134 Variations

*(Left to right) American Insulator Company embossed on the base;
Western Flint Glass Company; a C.E.L.CO. embossing.*

(F-Skirt) HEMINGRAY (R-Skirt) N° 18 SDP
Aqua, Light Aqua, Hemingray Blue

(F-Skirt) HEMINGRAY (R-Skirt) PATENT/MAY 2 1893
SDP
Aqua, Light Aqua, Green Aqua

(F-Skirt) HEMINGRAY-18 (R-Skirt) MADE IN U.S.A.
RDP
Aqua, Hemingray Blue

(F-Skirt) HEMINGRAY-18/[Numbers and Dots] (R-
Skirt) MADE IN U.S.A./[Number] RDP
Clear, Ice Aqua

(F-Skirt) HEMINGRAY/MADE IN U.S.A. (R-Skirt) N°
18 SDP
Aqua, Hemingray Blue

(F-Skirt) HEMINGRAY/PATENT MAY 2 1893 (R-Skirt)
STANDARD SDP
Aqua

(F-Skirt) HEMINGRY {Note Spelling} (R-Skirt) PAT-
ENT/MAY 2 1893 SDP
Aqua

K.C.G.W.

(F-Skirt) ['K.C.G.W.' Blotted out] (R-Skirt) ['FAIR-
MOUNT' Blotted out] SB
Aqua

(F-Skirt) [Glass Dot]/K.C.G.W. (R-Skirt) [Glass Dot]/
FAIRMOUNT SB
Green Aqua, Aqua, Ice Blue

(F-Skirt) [Glass Dot]/['K.C.G.W.' Blotted out] (R-Skirt)
[Glass Dot]/['FAIRMOUNT' Blotted out] SB
Ice Green, Dark Aqua, Aqua

NO NAME

(F-Skirt) [Glass Dot] (R-Skirt) [Glass Dot] SB
Aqua

(F-Skirt) [Vertical Bar] (R-Skirt) [Vertical Bar] SB
Light Green

[No Embossing] {Hemingray style} RDP
Aqua

[No Embossing] {Oakman Style - seen with and without
a small diamond shape on the dome} SB
Aqua, Root Beer Amber, 7-up Green, Apple Green, Light
Green, Light Green Aqua, Light Blue Aqua, Olive
Amber, Emerald Green

[No Embossing] {Oakman mold - Diamond plunger mark
in the pinhole} SB
Aqua, Blue, Light Green

[No Embossing] {Pennycuick style} SB
Aqua, Light Sage Green, Blue

NO NAME-CANADA

[No Embossing] {Slope shoulder} {MLOD} SB
Light Blue, Blue, Blue Aqua, Dark Green, Green Aqua

NO NAME-DEC PAT

(Dome) [Letter] (F-Skirt) PATENT/DEC. 19. 1871 SB
Clear, Ice Blue, Aqua, Green Tint, Light Green Aqua,
Light Purple, Dark Aqua, Light Blue Aqua

(Dome) [Letter] (F-Skirt) PATENT/DEC. 19. 1871 (R-
Skirt) PATENT/MAY 2 1893 SDP
Light Aqua

(F-Skirt) PATENT/DEC. 19. 1871 SB
Blue Aqua, Ice Blue, Light Green, Peacock Blue, Olive
Green, Lemon, Off Clear, Blue

(F-Skirt) PATENT/DEC. 19. 1871 (R-Skirt) PATENT
MAY 2 1893 SDP
Aqua, Clear, Peacock Blue, Green Aqua, Light Blue,
Dark Yellow, Light Green, Off Clear, Lime Green

(F-Skirt) PATENT/DEC. 19. 1871 (R-Skirt) PATENT/
MAY 2 1893 SDP
Aqua, Light Aqua, Light Green, Violet Blue

(F-Skirt) PATENT/DEC. 19. 1871 (R-Skirt) [Letter] SB
Light Purple, Aqua, Clear, Light Yellow Green, Blue,
Light Green, Light Aqua, Sky Blue, Green Aqua

OAKMAN

(Base) OAKMAN PATD SEPT 13. 81.
Aqua, Emerald Green

PETTINGELL ANDREWS

(F-Skirt) PETTINGELL ANDRE (R-Skirt) WS CO.
BOSTON SB
Aqua, Blue Aqua, Light Green Aqua

STAR

(F-Skirt) [Star] SB
Aqua, Green, Light Blue, Lime Green, Dark Green, Dark
Aqua, Blue

T-H.E.

(Dome) T-H.E. CO (F-Skirt) PATENT/DEC. 19. 1871
SB
Light Green, Light Lime Green, Light Aqua, Aqua

(F-Skirt) T-H.E. CO. SB
Light Blue, Aqua

(F-Skirt) T-H.E. CO. (R-Crown) [Number] {MLOD} SB
Yellow Green, Light Green, Blue, Aqua, Root Beer
Amber, Light Blue Aqua

W.F.G.

(F-Skirt) W.F.G.CO./DENVER, COLO. (R-Skirt) [0,1 or
2 Dots] SB
Aqua, Steel Blue, Light Gray, Pink, Purple, Lime Green,
Light Peach, Milky Lavendar, Light Gingerale, Blue
Aqua, Straw

(F-Skirt) W.F.G.CO./DENVER, COLO. (R-Skirt)
[Blotted out Embossing] SB
Light Lavendar, Clear

W.G.M.

(F-Skirt) W.G.M.Co. SB
Purple

WESTINGHOUSE

(F-Skirt) WESTINGHOUSE/NO.6 SB
Light Aqua, Blue Aqua, Peacock Blue, Light Green



CD 134.4

CD 134.4

NO NAME

[No Embossing] {American Threads} SB
Light Green, Aqua, Yellow Green, Golden Amber, Blue
Aqua, Olive Amber, Olive Green

CD 134.6 was given a nickname, "The Mad Hatter", many years ago. The insulator was removed from a line in the Philadelphia Naval Ship Yard. To date, only one example of this CD has been found.

On the following page is an article about this insulator which appeared in the March 24, 1897 *Electrical Review*. You will read that the insulator was "made by the Philadelphia Insulator Company."

Philadelphia city and business directories from 1890 to 1902 show no record of a Philadelphia Insulator Company. However, **Hannibal W. Rappleye** was listed as a resident at 2814 Poplar Street [currently a downtown Philadelphia address] between 1890 and 1902. His professional listings were: Gas Burner Service and Repair (1890-1893); Plumbers Materials and Supply (1894); President (1895); General Agent (1896); Unemployed (1897); Machinist (1898-1901); Refrigerator Sales & Service (1902). The listings in 1895 and 1896 indicated no company name, but the



CD 134.6

CD 134.6

BROOKFIELD

(F-Skirt) BROOKFIELD (R-Skirt) PHILADELPHIA/
PAT'D APRIL 17, 1896 SB

Aqua

address for both listings is 503 Penn Mutual Building, Philadelphia.

It might be assumed that no listing for the Philadelphia Insulator Company suggests that they did not have a manufacturing location in the Philadelphia or Delaware Valley area.

Since the CD 134.6 bears the Brookfield name, it is likely that Rappleye was the General Agent for the Brookfield Glass Company in 1896. It is logical that he sold his patent rights to Brookfield and became their General Sales Agent in the Philadelphia area.

Jack Kesling, in researching "The Mad Hatter", concludes "that the Philadelphia Insulator Company was a flash in the pan. The fact that more insulators have not been found suggests this was an experimental style for Brookfield, but technical performance never met expectations and the insulator was dropped from their product line."

The "Philadelphia" Insulator and Tie.

In the accompanying illustration is shown a novel method of tying line wires, made by the Philadelphia Insulator Company, of Philadelphia, Pa. The tie, in its operation, seems to be similar to the stopper device ordinarily used on beer bottles. The tie is made instantly, by the snap of the lever, or is unmade in the same manner. A number of ties on a line



THE PHILADELPHIA INSULATOR AND TIE.

can be simultaneously made. The tie adapts itself to the position of the line wire by means of the movable band on the insulator being turned to any desired position to conform with the line wire.

In new work it is the practice to have gangs of as many as five men on the poles, and when ready to make their ties, they tie in succession, the second man awaiting word from the

first before he makes his tie, and so to the fifth, or last. It will take an expert lineman two minutes to make a good tie, thus requiring an average of 10 minutes for each tie made. With the "Philadelphia" the tie is made so readily as to admit of the five ties practically being made simultaneously. This means a saving of time of practically 50 minutes for the five ties.

In repair work, where the former tie must be removed, it requires about two minutes to remove the old tie, and at least as much more time to

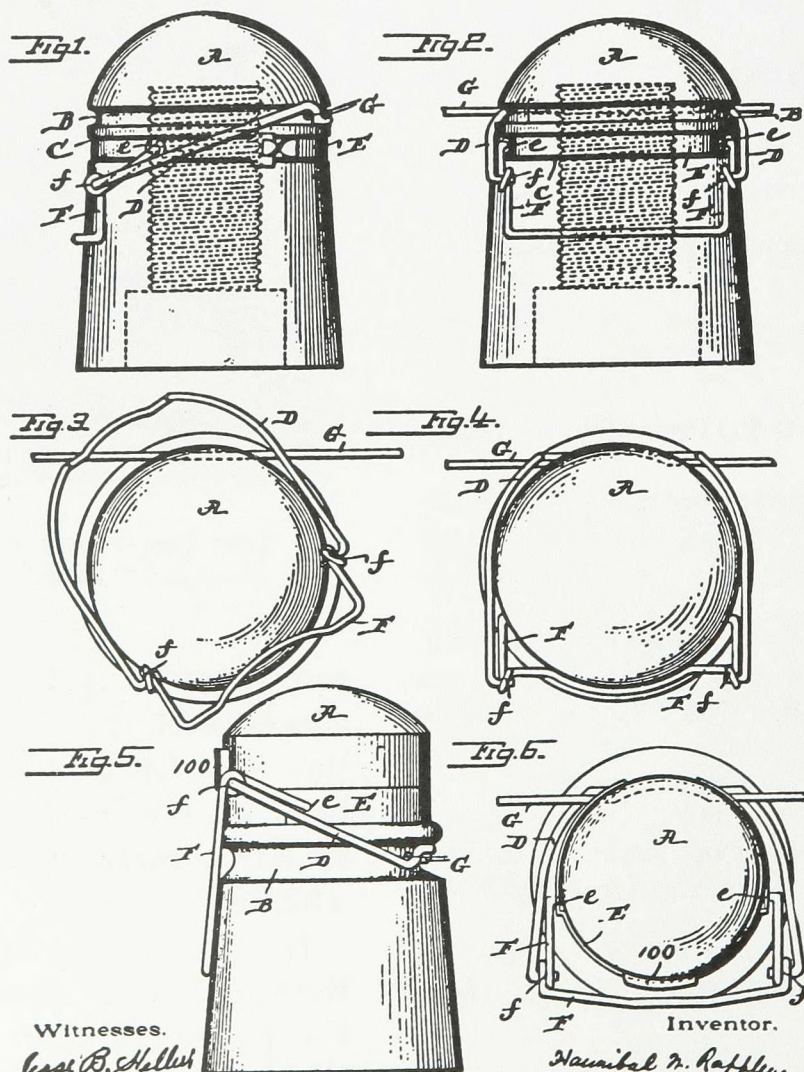
make the new one. The old tie is of no further use, and if of copper, has cost at least one cent. A new copper tie will cost as much more, or, in all, two cents for ties to replace one removed. It is claimed that with the device illustrated the tie can be made or unmade any number of times without impairment. Practically no time is required in making or unmaking them.

The "Philadelphia" Insulator and Tie from *Electrical Review*, March 24, 1897. (Courtesy of Mike Miller)

H. W. RAPPLEYE.
INSULATOR.

No. 557,881.

Patented Apr. 7, 1896.



Witnesses.
Jesse B. Haller
Thomas F. Callis

Inventor.
Harriet W. Rappleye
J. G. Hestling
Attorney.



CD 135



CD 135.5

CD 135

CHICAGO

(Base) CHICAGO INSULATING CO./PAT OCT 16 1883. (F-Skirt) [Glass Dots] SB
Blue Aqua, Blue

(Upper Shoulder) CHI.INS.CO. PAT.OCT. 16. 1883 (F-Skirt) [Glass Dots] SB
Aqua

(Upper Shoulder) CHI.INS.CO. PAT^d OCT. 16. 1883 (F-Skirt) [Glass Dots] SB
Aqua, Blue, Blue Milk

The **Fiske and Mott** patent of October 16, 1883 covers the design of **CD 135**. (See Insulators of the Mid-West -- Chicago and Its Insulators chapter)

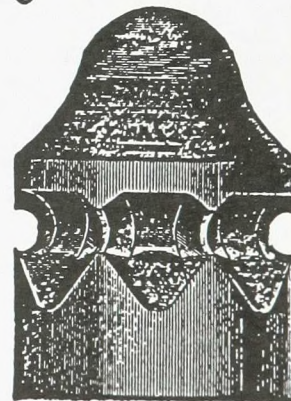
(Right) The "Fiske & Mott High Resistance Insulator" ad appeared in the February 28, 1894 issue of Electrical Review. (Courtesy of Elton Gish)

CD 135.5

E.R.W.

(F-Skirt) E.R.W. SB
Ice Blue, Lime Green, Green Aqua, Blue Aqua, Light Aqua

THE FISKE & MOTT
High Resistance Insulator



We will be ready to fill orders after January 15th in order of receipt—in glass or of our patent composition.
For long lines, or wherever HIGH INSULATION is required, they are unequalled.
For prices, catalogues, etc., address,
THE CHICAGO INSULATING CO.,
122 La Salle St., Chicago, Ill.



CD 136

CD 136

B&O

(F-Crown) B & O (R-Crown) PAT. JAN 25TH 1870 SB
Aqua, Lime Green, Light Aqua

(F-Crown) B & O (R-Crown) [Number] {MLOD} SB
Green

(F-Crown) B & O {MLOD} SB
Green Aqua

(F-Skirt) B & O/[Letter] (R-Skirt) PATENT/DEC. 19.
1871 SB
Aqua, Light Green, Green Aqua, Green

(F-Skirt) B & O/[Letter] (R-Skirt) PATENT/PEC. 19.
1871 {Note Spelling} SB
Light Green, Aqua

BROOKFIELD

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST./N.Y.
(F-Skirt) B & O (R-Crown) PAT/JAN 25TH 1870
{MLOD} SB
Light Blue

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST./N.Y.
(F-Skirt) B & O (R-Crown) [Letter]/PAT/JAN 25TH 1870
{MLOD} SB
Light Aqua

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST./N.Y.
{‘N’ is backwards} (F-Skirt) B & O (R-Crown) PAT/JAN
25TH 1870 {‘N’ is backwards} {MLOD} SB
Aqua, Light Green, Light Blue

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST./N.Y.
{‘N’ is backwards} (F-Skirt) B & O (R-Crown) [Num-
ber]/PAT/JAN 25TH 1870 {‘N’ is backwards} {MLOD}
SB
Aqua

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST./N.Y.
{‘N’ is backwards} (F-skirt) B & O (R-Crown) [Number]/
PAT/JAN 25TH 1870 {MLOD} SB
Aqua, Light Aqua, Light Blue



CD 136 Variation

The older style with "B & O" embossed on the dome.



CD 136.4

CD 136.4

NO NAME

[No Embossing] {Four Segmented Threads} SB
Yellow Olive, Aqua, Light Aqua, Yellow Green, Green,
Emerald Green, Blue Aqua, Dark Green Aqua

[No Embossing] {MLOD} SB
Aqua, Dark Green Aqua, Light Blue, Sapphire Blue, Dark
Yellow Green, Turquoise Blue, Dark Green, Sky Blue

CD 136.5

BOSTON BOTTLE

(Base of Threads) BOSTON BOTTLE WORKS - PAT.
OCT. 15 72 {Three Segmented Threads; This is a
CD158.2 with no inner skirt} SB
Aqua

CD 136.7

NO NAME

(Base of Threads) PAT.OCT. 15, 1872. {Three Seg-
mented Threads} SB
Aqua, Apple Green, Celery, Ice Aqua, Blue Aqua, Off
Clear

[No Embossing] {Three Segmented Threads} SB
Aqua



CD 136.5



CD 136.7



CD 137

CD 137

HEMINGRAY

(F-Skirt) HEMINGRAY (R-Skirt) D-990 SB
Clear, Aqua

(F-Skirt) HEMINGRAY [Number] (R-Skirt) D-990 SB
Ice Blue

(F-Skirt) HEMINGRAY [Numbers and Dots] (R-Skirt) D-990 [Number] CB
Clear



CD 138

CD 138

BROOKFIELD

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST./N.Y.
(F-Skirt) POSTAL TEL. Co. (R-Crown) [Number]/PAT/
JAN 25TH 1870 {MLOD} SB

Light Blue, Light Green, Apple Green, Light Aqua, Off
Clear, Yellow Green



CD 137.5

CD 137.5

NO NAME

[No Embossing] SB
Clear

CD 138.2

LAWRENCE GRAY

(Base) MANUFACTURED BY LAWRENCE B. GRAY'S/PATENT PROCESS SB
Blue Gray

NATIONAL

(Base) NATIONAL INSULATOR CO./PAT.JAN.1 & OCT.7.1884 SB
Aqua, Green, Light Aqua

NO NAME

[No Embossing]
Dark Teal Aqua

STANDARD GLASS

(Base) THE STANDARD GLASS INSULATOR CO./ BOSTON MASS. SB
Aqua, Light Aqua, Light Blue

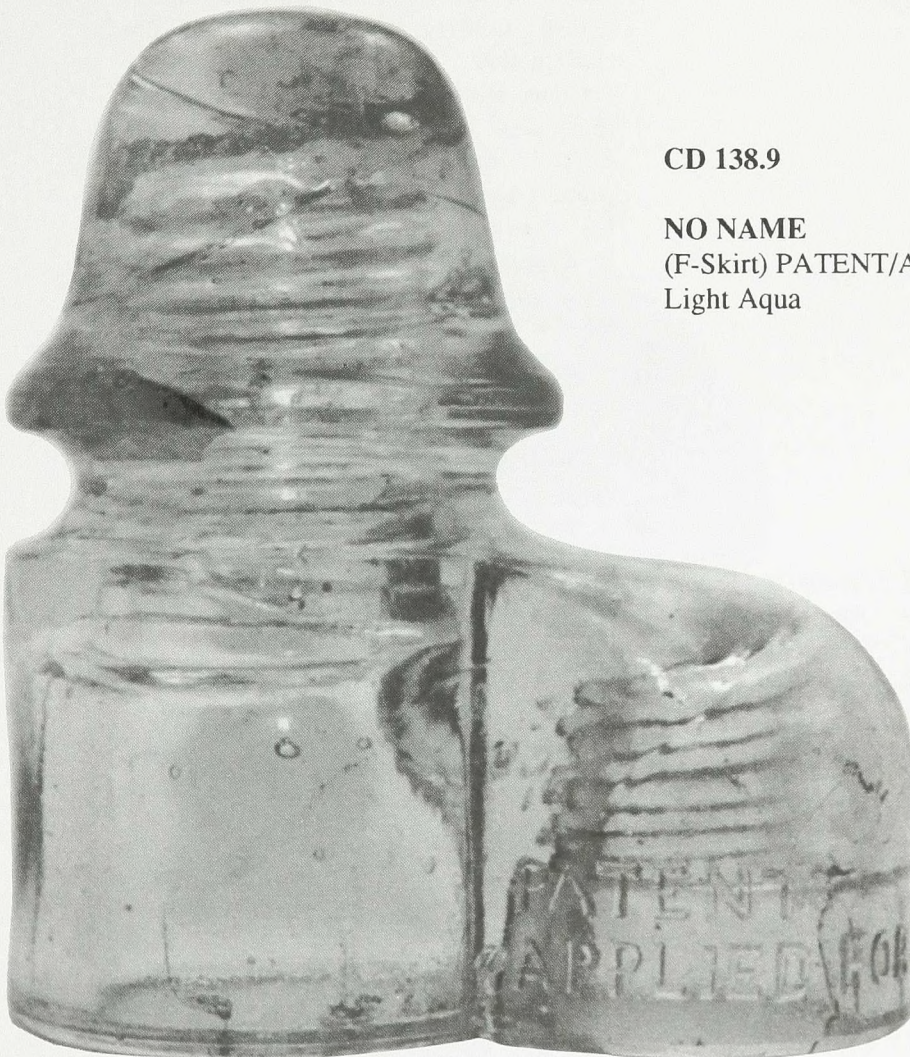


CD 138.2

CD 138.9

NO NAME

(F-Skirt) PATENT/APPLIED FOR SB
Light Aqua



CD 138.9

CD 138.9 is probably one of the most bizarre shapes found in pin-type insulators. The main body has a standard threaded pinhole and a wire groove. But riding along like a "motorcycle's side car" is another section which also has a standard threaded pinhole but no wire groove.

There are six known specimens, but only one is mint. The rest have been reconstructed by gluing broken pieces. The insulator is named "The Miller Twin Pin" for Stewart and Isabelle Miller who were the original owners of the pieces.

The "Twin Pin" insulators were found along a railroad spur in Polks, Michigan, in an old barrel.

The "PATENT APPLIED FOR" embossing indicates that patent application had been made; however, no issued patent data has been found.



CD 139

CD 139

COMBINATION SAFETY

(F-Skirt) COMBINATION/SAFETY (R-Skirt) PAT. APPLIED FOR SB
Aqua

(F-Skirt) COMBINATION/SAFTY {Note Spelling} (R-Skirt) PAT. APPLIED FOR SB
Aqua

CD 139 is one of the more unusual "no-tie" insulators designed during the early 1900's. All of the units are embossed with "PAT. APPLIED FOR" on the rear skirt, however a patent was issued to **E. F. Shoenthaler** of Longbranch, New Jersey, assignor of two-thirds to **William H. Parker** and **Joseph F. Finn**, of Longbranch, New Jersey. The patent date is November 17, 1903.

The Electrical Review and Western Electrician of May 29, 1909 carried an article about four insulators offered by the Brookfield Glass Company. One of the insulators described was the "**Combination Safety**".

To date there is only one known unit with the misspelled "SAFTY" (pictured above) and it is evident on the four other known specimens that the "TY" of "SAFTY" were removed and the mold reengraved with the correct spelling.

Brookfield Glass Insulators.

The Brookfield Glass Company, 2 Rector Street, New York is one of the pioneer and one of the most prominent manufacturers of glass insulators. This company's product has been standard for forty years, and with the Barclay improved in-

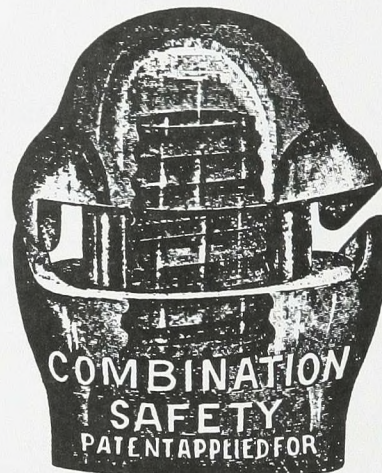
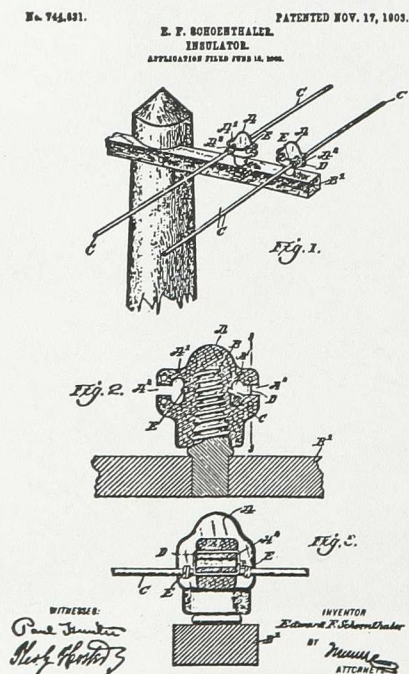


Fig. 1.

ulator a fine range of selection is afforded, meeting every exigency of line construction. The accompanying illustrations show four types of Brookfield insulators. Fig. 1 is a "Combination Safety" insulator, which is designed to prevent the dropping of the line wire to the cross-arm if the tie-wire breaks and to eliminate the necessity of tying to every insulator.

Electrical Review and Western Electrician, May 29, 1909 (Courtesy of Elton Gish)





CD 139.6

PYREX
(F-Skirt) 660-PYREX-
PAT.MAY-27-1919 (R-
Skirt) CORNING MADE
IN U.S.A. SB
Clear

CD 139.6



CD 139.8

NO NAME
[No Embossing] SB
Root Beer Amber

CD 139.8



CD 139.9

CD 139.9

M^cLAUGHLIN

(F-Skirt) M^cLAUGHLIN (R-Skirt) USLD

{Comes with a rounded or a peaked
dome} SB

Aqua



CD 139.9 Variation
Peaked dome



CD 140

CD 140

JUMBO

(F-Skirt) JUMBO SB

Aqua

NO NAME

[No Embossing] SB

Aqua, Blue, Turquoise, Dark Green, Amber, Olive Green,
Jade Milk, Clear, Light Purple, Green, Lime Green,
Yellow Green, 7-up Green, Purple w/Milk Swirl

OAKMAN

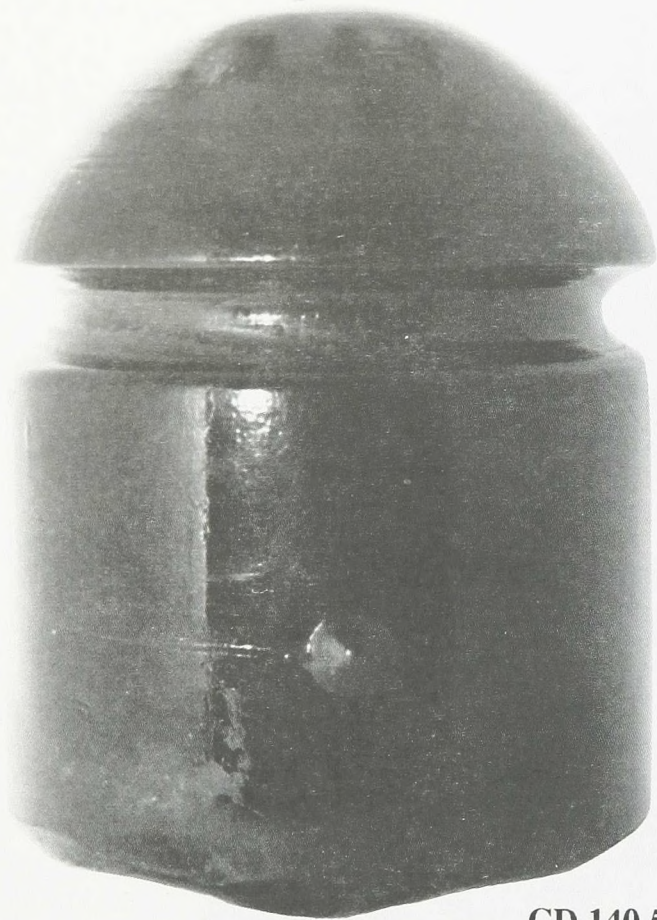
(Base) OAKMAN M'F'G CO. BOSTON SB

Aqua

(F-Skirt) JUMBO (Base) OAKMAN M'F'G' CO.
BOSTON SB

Aqua, Blue

(F-Skirt) JUMBO (R-Skirt) PATD JUNE 17, 1890, AUG
19, 1890 (Base) OAKMAN M'F'G. CO. BOSTON SB
Aqua, Light Green Aqua



CD 140.5

NO NAME
(F-Skirt) [Glass Dot] {MLOD} SB
Cobalt Blue, Cobalt Blackglass

CD 141

NO NAME
[No Embossing] SB
Green, Dark Aqua, Emerald Green, Aqua w/Amber Swirls, Light Aqua

CD 140.5



Front View

CD 141.6

CD 141.6

NO NAME
(F-Skirt) PAT'D AUG 29-93 SB
Light Aqua



CD 141



Side View

G. W. BLACKBURN.
INSULATOR.

No. 504,059.

Patented Aug. 29, 1893.

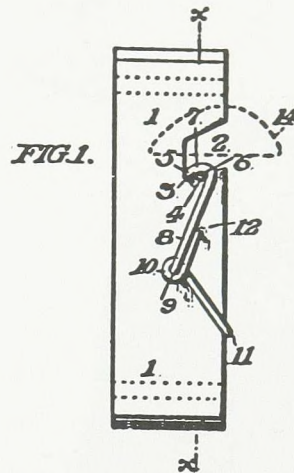


FIG. 1.

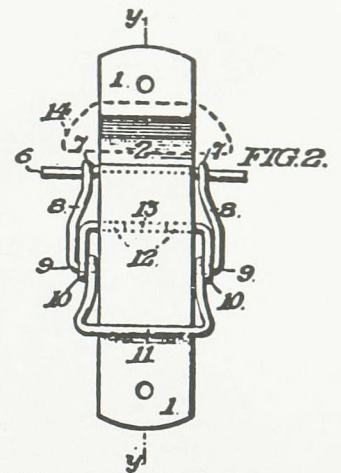
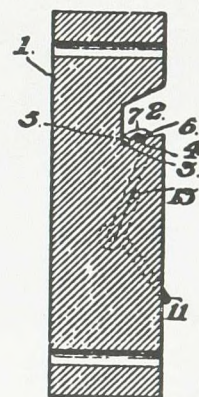
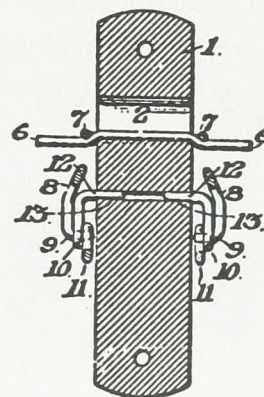


FIG. 2.

FIG. 3.

FIG. 4.



WITNESSES:

N. E. Paige
A. J. Gahn.

INVENTOR:

George W. Blackburn
by [Signature]

The CD 141.6 pictured on the previous page illustrates how the bail wire was attached to the insulator. There are two round indentations just below the wire groove line on both the front and rear skirts into which the bail wire fits. You will see that the wire is using the left indentation and the right indentation which is clearly visible is not in use.

The side view (above) shows the flat sides of the dome and the attachment of the bail wires.

In this insulator's case, the wire groove was not used for the "line wire", but for the "bail wire". The line wire was attached to the bail wire clamp.

George W. Blackburn of Palmyra, New Jersey was granted a patent on August 29, 1893 covering "a block of insulating material with a bail shaped clamping lever adapted to receive a line wire." The patent drawing was a block design, but the molded insulator has a standard threaded pinhole.

To date, both specimens of the CD 141.6 have been found on the East Coast. It is suspected that the insulator may have been a product of one of the New Jersey glasshouses.



No. 798,235.

PATENTED AUG. 29, 1905.

W. R. TWIGGS.
INSULATOR.

APPLICATION FILED MAY 9 1904

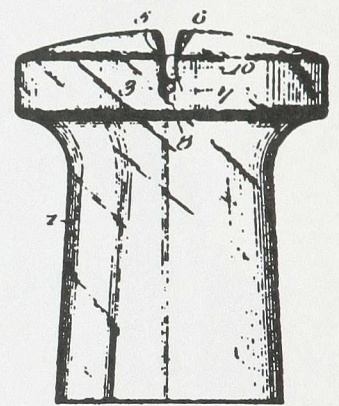
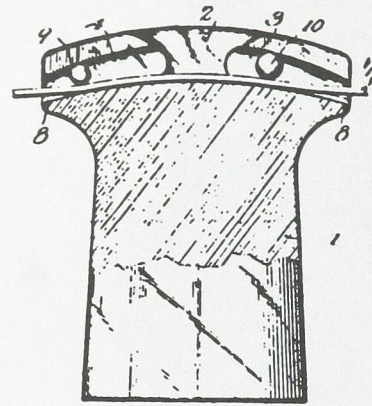


Fig. 1.

Fig. 2.

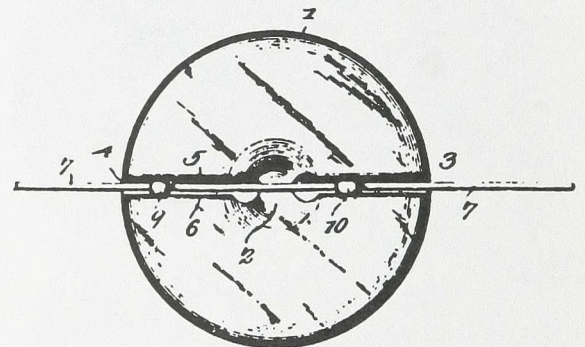


Fig. 5.

CD 141.7

CD 141.7

TWIGGS

(Dome-in a circle) W.R. TWIGGS PAT AUG 29 1905

SB

Crystal Clear

Witnesses
W. H. Larke

William R. Twiggs, Inventor
by *C. A. Snowles* Attorney

Sandusky, Ohio, was the residence of **William R. Twiggs**. The 1905 city directory of that town lists Twiggs as a letter carrier. He died in Cleveland, Ohio, on July 19, 1938 and is buried in Oakland Cemetery in Sandusky.

CD 141.7 is another example of a "no-tie" insulator design. The patent issued on August 29, 1905 covered a standard, threaded pintype with a slot running through a large disk-shaped crown. On the top of the crown there is a rectangular opening which accesses the slot. The channel of the slot narrows as it approaches the outer diameter of the crown. The line wire was placed into the slot and two glass balls (similar to a marble) were dropped into the rectangular opening on top of the line wire. The balls were then slid in opposite directions along the narrowing slot, wedging the line

and securing it in place. The idea eliminated the use of a tie wire and would speed the process of installation.

To date only one unit has been located. It is made of clear glass with almost a crystal-looking quality. It is quite possible that the insulator was manufactured in Toledo, Tiffin or Findlay, all of which are in close proximity to Sandusky, Ohio. These Ohio glasshouses were noted for quality glass products and stemware during the early 1900's.

The design and idea were unique and it is suspected that the one known specimen may have been a test unit that Twiggs planned to use in selling his patent idea.

A five dollar bill bought the insulator at an Ohio flea market in 1981.



CD 141.8

CD 141.8

BUZBY

(Crown behind wire groove) J.F.BUZBY/PAT'D MAY 8/
1890 SB

Ice Aqua, Aqua

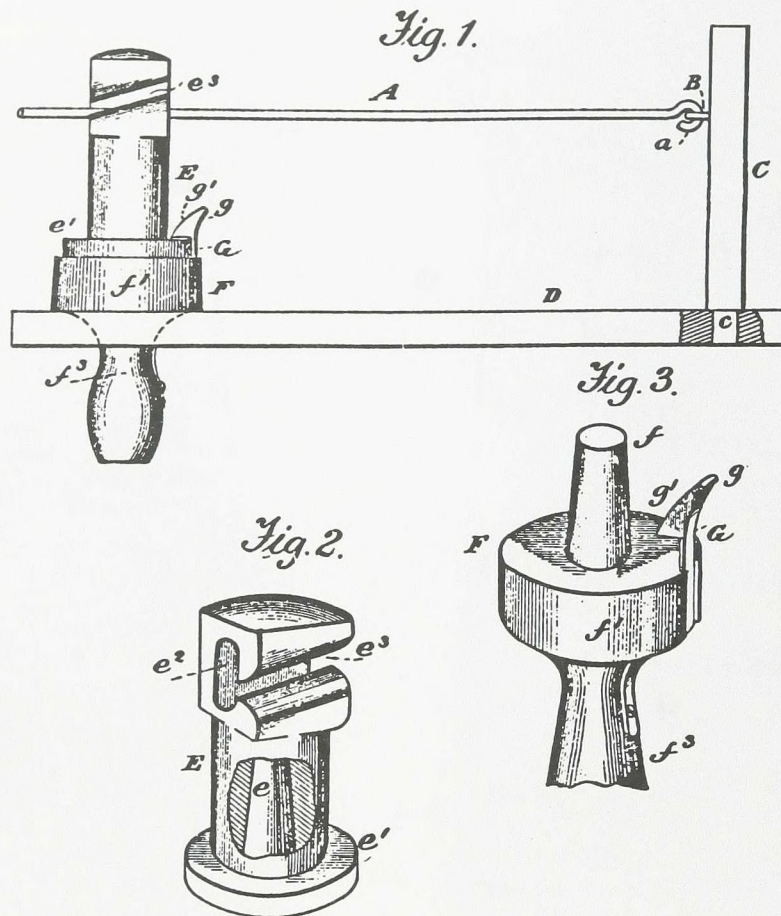
Patented on May 8, 1890, the **CD 141.8** was one of the first of the "no-tie" insulators designs. The patent was granted to **Joseph F. Buzby** of Royer's Ford, Pennsylvania. About a half dozen of this style have been located indicating that it did not receive widespread acceptance or use.

In the picture above (left) as one looks from the embossed side through the upper portion of the insulator, an angular slot can be seen traversing from the upper left portion of the dome to the lower right portion. The line wire was slid through the angular slot and dropped into the bottom of another vertical channel

(seen clearly in the photo on the right) which ran through the width of the crown. Once the line wire had been positioned in the lower slot, it would be difficult for it to slip out of place.

The patent describes how installation of the line was accomplished:

"In order to put the insulator on the wire, it is turned out of perpendicular until the slot e^3 is in the same plane with the wire, which is then readily entered. The insulator is then turned back to a perpendicular and so locked to its stand. The head g of the spring-catch projects over the flange f^1 of the stand, and being



WITNESSES:
A. Rupert,
H. A. Daniels

INVENTOR
Joseph F. Buzby
BY *Thomas P. Thompson*
ATTORNEY.

inclined at g^1 , yields to the insulator, flange e^1 as the latter is pressed down, and then overlaps it so as to hold the insulator E securely to its stand F . In the position shown in Fig. 1 of the drawings the wire A lies across the slot e^2 , and therefore cannot possibly escape."

Since so few of the "Buzby Patent" insulators have been located, it is not surprising that an example of the interesting installation stand used in conjunction with the patent design has not be found.

Ray Klingensmith in the February, 1986 issue of *Antique Bottle and Glass Collector* wrote: "This insulator is a very interesting design in that the lower and central portion of the insulator is round, and the upper portion is square. The very top of the insulator then tapers into a more rounded form once again. [The photographs on the previous page] show the square portion to have beveled corners. One could assume the corners were made that way to prevent any breakage as might be the case if the corners were of a sharp, 90

degree angle type. The style apparently was well designed...

The embossing, which is located on a flat panel of the dome, is visible in the left photo on the previous page. These insulators are of a very tall pattern. This is mosly due to the fact that the slotted top prevented the pinhole from going very close to the top portion of the insulator. It was necessary to form the pinhole of a standard, required length in order to have the pin remain long enough to have sufficient strength. So the end result is a taller than average product.

It is also interesting to note that by changing from a round design to a square one at the dome portion, a small lip is formed. Should a lineman decide to still use a tie wire on the insulator, it would have been very easy to wrap a tie wire under this lip and around the line wire.

There was a lot more thought that went into this design than what may be first apparent."



CD 141.9

CD 141.9

EMMINGERS

(Base) EMMINGER'S PAT/FEBY 20T^H 1872 SB
Light Aqua

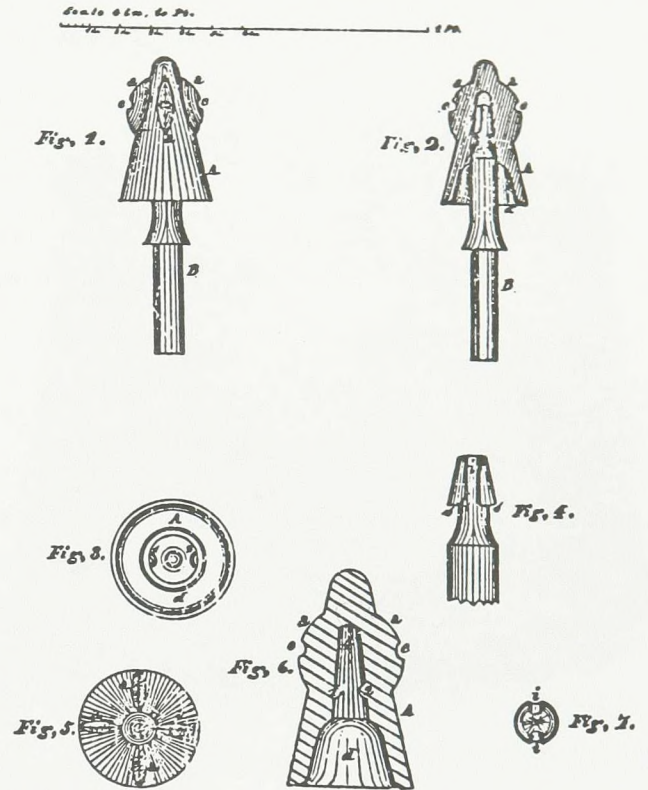
David R.P. Emminger of Harrisburg, Pennsylvania, was granted a patent on February 20, 1872. for the production of **CD 141.9**. His patent states that "the nature of my invention consists in so constructing my improved insulator that dust and dirt are prevented from accumulating upon its outer surface. Also in reducing the points of contact of the conducting wire with the insulator, in a great degree, by a peculiar method of constructing of said insulator.... Upon its outer surface, a proper distance from the upper rounded end, four rhombus or lozenge-shaped projections *a a a a*, are formed. These projections have circular or rounded notches formed in their outer edges a proper distance from their terminations. They are intended to receive

D. R. P. EMMINGER.

Improvement in Telegraph Insulators.

No. 123,878.

Patented Feb. 20, 1872.



and retain in place the binding wire that secures the conducting wire to the insulator." Emminger also stated that the number of projections could be increased, but four seemed to be sufficient. In Fig. 6 of the patent, the insulator drawn has a smooth, threadless pinhole with two glass knobs that projected into the pinhole. A special wooden peg (Fig. 4) was designed to be used with the Emminger patent. It had grooves on each side of the pin, which allowed it to slide passed the pinhole projections and be turned to lock it into position.

Apparently the original design was unsuccessful, for all the known Emminger's patent insulators have the standard threaded pinhole.

All CD 141.9 specimens have come from Pennsylvania. The manufacturer of the insulators is still only speculation. One theory is that the Lancaster Glass Works (See Threadless-The Beginnings -- Manufacturers of Glass Threadless chapter) or the Beaver Falls Glass Company (See Pennsylvania Manufacturers chapter) may have produced the insulator. Lancaster because of it years of operation and proximity to Harrisburg, and B.F.G.CO. due to the years of operation; the similarity in numeral engraving in the embossing on the Emminger and known B.F.G.CO. products; and the presence of a "Y" shaped crease in the top of the pinhole which occurred in embossed and unembossed pieces made by the Beaver Falls Glass Company.



CD 142

CD 142

HEMINGRAY

(F-Skirt) TS_2/[Letter and Numbers]/HEMINGRAY (R-Skirt) W.U.T.CO. RDP
Carnival

(F-Skirt) [Letters and Numbers]/HEMINGRAY (R-Skirt) W.U.T.CO./TS_2 RDP
Carnival, Ice Blue

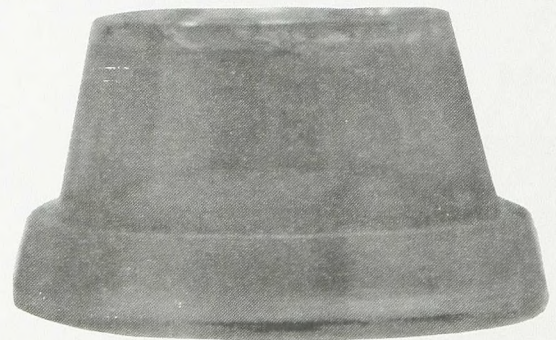
NO NAME

(F-Skirt) TS_2 RDP
Carnival

Both **CD 142** and **CD 142.4** designs are covered by the **Wheeler and McGinnis** Patent No. 2,165,773 of July 11, 1939 and the **Wheeler, McGinnis and Thordarson** Patent No. 2,194,189 of March 19, 1940. Both patents were assigned to the Western Union Telegraph Company of New York. The patents provided for threading on the inside of the single petticoat, a glass insert to protect the insulator from the pin and an iridized coat to reduce water adherence.



CD 142.4



Glass Insert

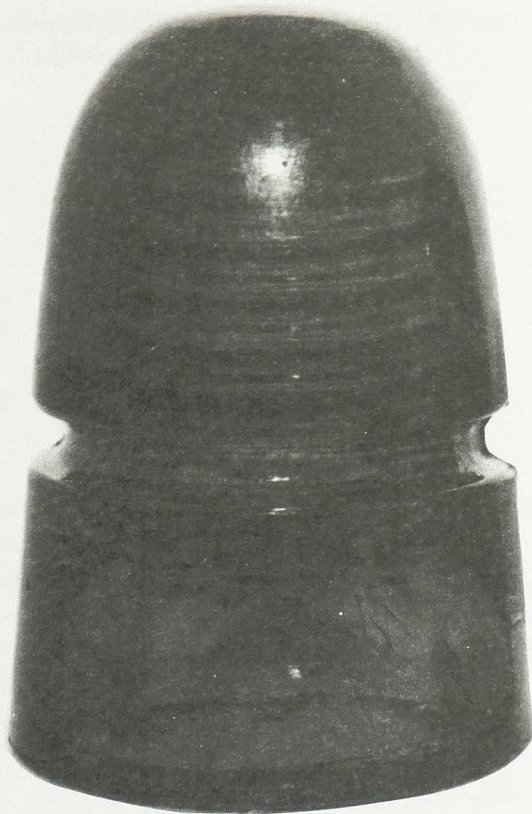
Insert used with the CD 142.4

CD 142.4

NO NAME

(F-Skirt) TS_3 {'S' is backwards} RDP
Carnival

[No Embossing] RDP
Carnival



CD 143

CD 143

C.N.R.

(F-Skirt) C N R (R-Skirt) STANDARD { 'CNR' small embossing } SB
Aqua

(F-Skirt) C.N.R (R-Skirt) STANDARD/['CANADIAN PACIFIC RY CO' Blotted out] SB
Aqua

(F-Skirt) C.N.R (R-Skirt) STANDARD/['CNR' Blotted out] SB
Aqua, Gray Green, Steel Blue, Light Gray, Light Purple

(F-Skirt) C.N.R. SB
Aqua, Steel Blue, Light Gray, Light Purple, Light Violet Blue, Violet Blackglass, Dark Purple

(F-Skirt) C.N.R. (R-Skirt) STANDARD SB
Aqua, Steel Blue, Light Purple, Dark Purple, Dark Violet

(F-Skirt) C.N.R. { Periods are shaped like prisms } SB
Aqua, Green, Yellow Green, Olive Green, Blue, Light Green

(F-Skirt) C.N.R./['CNR' Blotted out] (R-Skirt) STANDARD { 'CNR' small embossing } SB
Aqua, Steel Blue, Light Purple

(F-Skirt) C.N.R./['CNR' Blotted out] (R-Skirt) STANDARD/['CANADIAN PACIFIC RY CO' Blotted out] SB
Aqua

(F-Skirt) ['CNR' Blotted out] SB
Aqua

(F-Skirt) ['CNR' Blotted out] (R-Skirt) ['CPR' Blotted out] SB
Aqua

(F-Skirt) ['CNR' Blotted out] (R-Skirt) ['STANDARD' Blotted out] { 'CNR' small embossing } SB
Aqua

(F-Skirt) [Horizontal dashes]/['CNR' Blotted out] SB
Aqua

C.P.R.

(F-Skirt) C.P.R. (R-Skirt) STANDARD SB
Aqua, Light Purple, Steel Blue

(F-Skirt) C.P.R. (R-Skirt) ['CANADIAN PACIFIC RY CO' Blotted out] SB
Aqua, Light Purple, Light Blue, Blue Gray, Steel Blue

(F-Skirt) C.P.R. (R-Skirt) ['CNR' Blotted out] SB
Aqua, Steel Blue, Blue Gray, Light Purple

(F-Skirt) C.P.R. (R-Skirt) [Horizontal Dashes]/['CNR' Blotted out] SB
Aqua, Light Purple, Blue Gray

(F-Skirt) C.P.R./['CNR' Blotted out] (R-Skirt) STANDARD/['CANADIAN PACIFIC RY CO' Blotted out] SB
Aqua, Light Purple, Steel Blue, Blue Gray, Light Purple/ Aqua Two Tone

(F-Skirt) C.P.R./['CNR' Blotted out] (R-Skirt) STANDARD/['CNR' Blotted out] SB
Aqua, Light Purple

CANADIAN PACIFIC

(F-Skirt) CANADIAN (R-Skirt) PACIFIC RY CO { 'RY' Embossed over upsidedown 'RY' } { MLOD } RB
Light Green, Blue, Aqua

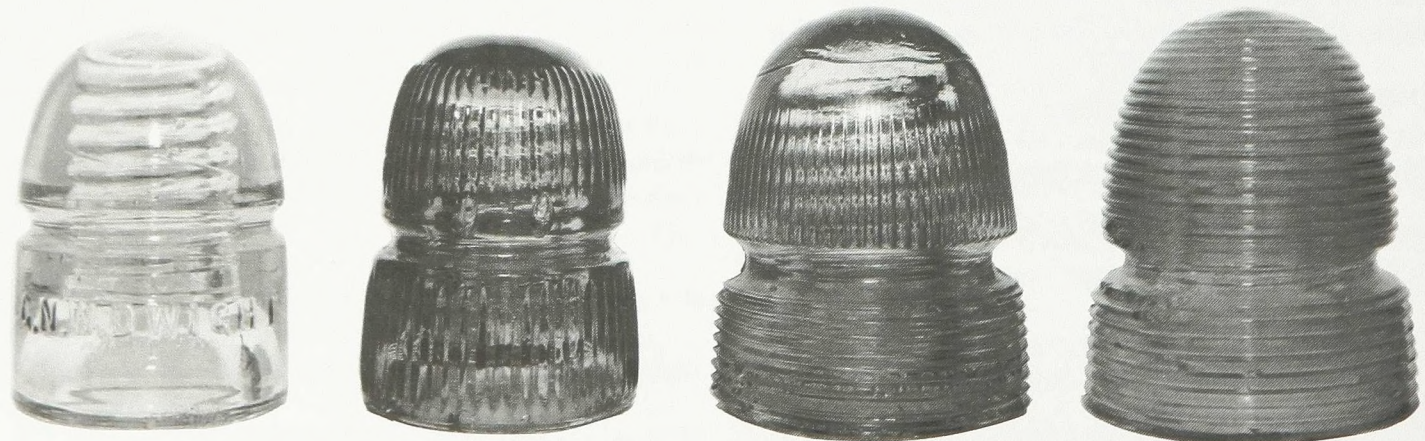
(F-Skirt) CANADIAN (R-Skirt) PACIFIC RY CO { 'RY' is upsidedown } { MLOD } RB
Aqua, Light Green, Blue Aqua, Blue

(F-Skirt) CANADIAN (R-Skirt) PACIFIC RY CO { MLOD } RB
Aqua, Green, Dark Yellow Green, Light Olive Green, Blue, Light Lime Green, Light Yellow Green

- (F-Skirt) CANADIAN (R-Skirt) PACIFIC. RY. CO. {MLOD} RB
Aqua, Green
- (F-Skirt) CANADIAN PACIFIC RY CO (R-Skirt) ['STANDARD' Blotted out] SB
Aqua, Steel Blue, Gray, Purple, Light Green
- (F-Skirt) CANADIAN PACIFIC RY CO {First 'C' in 'PACIFIC' is backwards} {MLOD} SB
Aqua, Green, Clear, Yellow Olive Green, Light Gray, Blue, Royal Purple, Light Green, Sage Green, Light Aqua, Light Yellow Green
- (F-Skirt) CANADIAN PACIFIC RY CO {MLOD} SB
Aqua, Green, Yellow Green, Clear, Royal Purple, Light Purple, Light Green, Blue, Sage Green, Light Aqua
- (F-Skirt) CANADIAN PACIFIC RY CO {Withycombe - 69 vertical ridges above wire groove, 9 left hand spiral ridges below wire groove} SB
Light Aqua, Light Purple
- (F-Skirt) CANADIAN PACIFIC RY {Slug Embossing} {MLOD} RB
Aqua, Light Green, Blue, Olive Green, Green, Dark Aqua
- (F-Skirt) CANADIAN PACIFIC RY.CO. (R-Skirt) STANDARD RB
Aqua
- (F-Skirt) CANADIAN PACIFIC RY.CO. (R-Skirt) STANDARD/['CANADIAN PACIFIC RY CO' Blotted out] SB
Aqua, Light Green
- (F-Skirt) CANADIAN PACIFIC RY.CO. (R-Skirt) ['STANDARD' Blotted out] SB
Aqua, Light Purple, Light Gray, Light Aqua, Steel Blue
- (F-Skirt) CANADIAN PACIFIC RY.CO./['C N R' Blotted out] (R-Skirt) STANDARD/['CANADIAN PACIFIC RY CO' Blotted out] RB
Aqua
- (F-Skirt) CANADIAN PACIFIC RY.CO./['CNR' Blotted out] (R-Skirt) STANDARD RB
Aqua
- (F-Skirt) CANADIAN. PACIFIC. R.Y. CO {MLOD} SB
Aqua, Green, Blue, Purple, Gray, Light Aqua, Light Green, Jade Green Milk
- (F-Skirt) CANADIAN.PACIFIC.RY.CO. {Comes in many different 'period' patterns} SB
Aqua, Green, Steel Blue, Light Purple, Royal Purple, Ice Blue, Light Gray, Light Green, Clear, Light Yellow Amber, Purple, Steel Gray, Blue, Light Aqua
- (F-Skirt) ['CANADIAN PACIFIC RY CO' Blotted out] SB
Aqua, Light Blue
- (F-Skirt) ['CANADIAN PACIFIC RY CO' Blotted out] (R-Skirt) ['STANDARD' Blotted out] SB
Aqua

DWIGHT

- (Dome) [Number] (F-Skirt) ['G.N.W.' Blotted out] DWIGHT (R-Skirt) PATTERN GB
Light Aqua, Light Green, Aqua, Blue Aqua
- (F-Skirt) DWIGHT (R-Skirt) PATTERN SB
Aqua, Light Purple, Light Green
- (F-Skirt) G.N.W. DWIGHT (R-Skirt) PATTERN GB
Aqua



CD 143 Variations

(Left to right) G.N.W. DWIGHT PATTERN, No Name with vertical ridges, No Name (reusing old Canadian Pacific RY. CO molds) with horizontal and vertical ridges, and No Name with horizontal ridges.

(F-Skirt) G.N.W.DWIGHT (R-Skirt) PATTERN SB
Aqua, Green Aqua

(F-Skirt) ['G.N.W.' Blotted out] DWIGHT (R-Skirt)
PATTERN SB
Aqua, Light Green, Steel Blue, Light Purple, Gray

G.N.R.

(F-Skirt) G.N.R. (R-Skirt) STANDARD SB
Aqua, Gray, Light Purple

(F-Skirt) G.N.R./['CNR' Blotted out] (R-Skirt) STAN-
DARD {'CNR' small embossing} SB
Aqua, Light Purple, Gray, Light Steel Blue

G.N.W.

(F-Skirt) G N W {Irregular spacing} {MLOD} SB
Aqua, Green, Gray, Purple, Light Green, Blue Aqua,
Smoke

(F-Skirt) G.N.W SB
Aqua, Light Green

(F-Skirt) G.N.W/[Raised slug plate] {MLOD} SB
Aqua, Light Green

G.P.R.

(F-Skirt) G.P.R./['CNR' Blotted out] (R-Skirt) STAN-
DARD {'CNR' large or small embossing} SB
Aqua, Steel Blue, Light Purple

GREAT NORTHWESTERN

(F-Skirt) GREAT NORTHWESTERN (R-Skirt) TELE-
GRAPH CO GB
Aqua, Light Green

(F-Skirt) GREAT NORTHWESTERN (R-Skirt)
TELEGRAPH.CO {MLOD} SB
Aqua, Light Green

MONTREAL

(F-Skirt) MONTREAL TELEGRAPH (R-Skirt) CO
{MLOD} SB
Green, Olive Green, Blue, Dark Sky Blue, Aqua, Dark
Yellow Green, Dark Aqua

(F-Skirt) MONTREAL TELEGRAPH CO {MLOD} SB
Aqua, Green, Olive Green, Dark Yellow Green, Blue,
Dark Sky Blue, Light Blue, Green Aqua

NO NAME-CANADA

[No Embossing] {Double Threaded} {MLOD} SB
Aqua, Green, Blue, Yellow, Blue Gray, Olive Green,
Cornflower Blue

[No Embossing] {MLOD} RB
Aqua, Green, Yellow Green, Blue, Clear, Olive Green,
Royal Purple, Blue Purple, Gray, Dark Sky Blue, Light
Aqua

[No Embossing] {MLOD} SB
Aqua, Green, Blue, Lime Green, Royal Purple

[No Embossing] {Whittle mold} {MLOD} SB
Aqua, Blue, Green, Gray, Purple, Smoke

[No Embossing] {Withycomb - 11 circular rings above
and 10 circular rings below the wire groove} {MLOD}
SB
Aqua

[No Embossing] {Withycomb - 14 circular ridges above
and 10 left hand spiral ridges below wire groove}
{MLOD} SB
Light Green

[No Embossing] {Withycombe - 16 or 19 circular Rings
above and 8 right hand spiral ridges below wire groove}
{MLOD} SB
Light Gray, Light Purple

[No Embossing] {Withycombe - 50, 52, 53 or 54 vertical
ridges above and below wire groove} SB
Aqua, Green, Blue

STANDARD

(F-Skirt) STANDARD SB
Aqua, Gray, Light Purple, Royal Purple, Clear, Purple,
Light Aqua, Green

(F-Skirt) STANDARD (R-Skirt) ['CNR' Blotted out] SB
Aqua, Olive Green Blackglass

(F-Skirt) STANDARD (R-Skirt) ['CNR' Blotted out]
{'CNR' is small embossing} SB
Aqua, Gray, Light Purple, Royal Purple

(F-Skirt) STANDARD/['CANADIAN PACIFIC RY CO'
Blotted out] SB
Aqua, Light Gray Green, Olive Green Blackglass, Light
Aqua

(F-Skirt) STANDARD/['CANADIAN PACIFIC RY CO'
Blotted out] (R-Skirt) ['CNR' Blotted out] SB
Aqua

(F-Skirt) STANDARD/['CNR' Blotted out] SB
Aqua

(F-Skirt) STANDARD/['CNR' Blotted out] (R-Skirt)
['CNR' Blotted out] SB
Aqua



CD 143.4

CD 143.4

AMERICAN

(Dome) [Letter] (Base) AM. INSULATOR CO. N.Y. DOUBLE PETTICOAT/PAT'D SEPT. 13, 1881, NOV. 13, 1883, FEB. 12, 1884 {This is a CD145 with no inner skirt}

Blue

(Dome) [Letter] (Base) AMERICAN INSULATOR CO. N.Y. DOUBLE PETTICOAT/PAT'D SEPT. 13, 1881, NOV. 13, 1883 {This is a CD145 with no inner skirt}

Blue

BROOKFIELD

(F-Crown) [Number]/(Arc)W. BROOKFIELD/83 FULTON ST/N.Y. (R-Crown) (Arc)PATD.NOV. 13TH 1883/FEB 12TH 1884 {This is a CD145 with no inner skirt} SB

Aqua

(F-Crown) [Number]/(Arc)W.BROOKFIELD/45 CLIFF ST/N.Y. (R-Crown) (Arc)PATD NOV. 13, 1883/FEB. 12, 1884 {This is a CD145 with no inner skirt} SB

Aqua

(F-Skirt) W. BROOKFIELD (R-Skirt) NEW YORK {This is a CD145 with no inner skirt} SB

Aqua



CD 143.5

CD 143.5

T-H.E.

(F-Crown) T-H.E. CO. {MLOD} {Comes in two dome sizes} SB

Light Aqua, Light Green, Aqua



CD 143.6

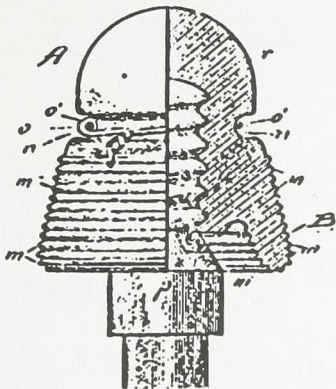
CD 143.6

BOSTON BOTTLE

(Base of Threads) BOSTON BOTTLE WORKS/
PAT.OCT 15 '72 {Three Segmented Threads} SB
Aqua, Dark Green Aqua

F. BAIN.
ELECTRIC INSULATOR.
Patented Dec. 23, 1890.

No. 443,187.



Foree Bain Patent No. 443,187 dated December 23, 1890.

On stationery with "Foree Bain, Patent Lawyer, Monadnock Building, Chicago" as its letterhead, Foree Bain assigned his patent rights to Hemingray Glass Company of Covington, Kentucky, on February 28, 1901 for the sum of one dollar.



CD 144

CD 144

NO NAME

(Dome-in a circle) PATENT.DEC. 23 1890. {Foree Bain} {Inside of skirt has horizontal threaded ridges from the base to the pinhole} SB
Aqua, Light Green

[No Embossing] {Foree Bain} {Inside of skirt has horizontal threaded ridges from the base to the pinhole} SB
Green, Aqua, Light Green, Blue Aqua

NO NAME-CANADA

[No Embossing] {Circular rings above and spiral ridges below the wire groove; known as the "High groove Withycomb"} SB
Light Green



CD 144 Variation

This is the high wire groove Withycombe patent which should not be confused with the CD 143 with horizontal ridges.

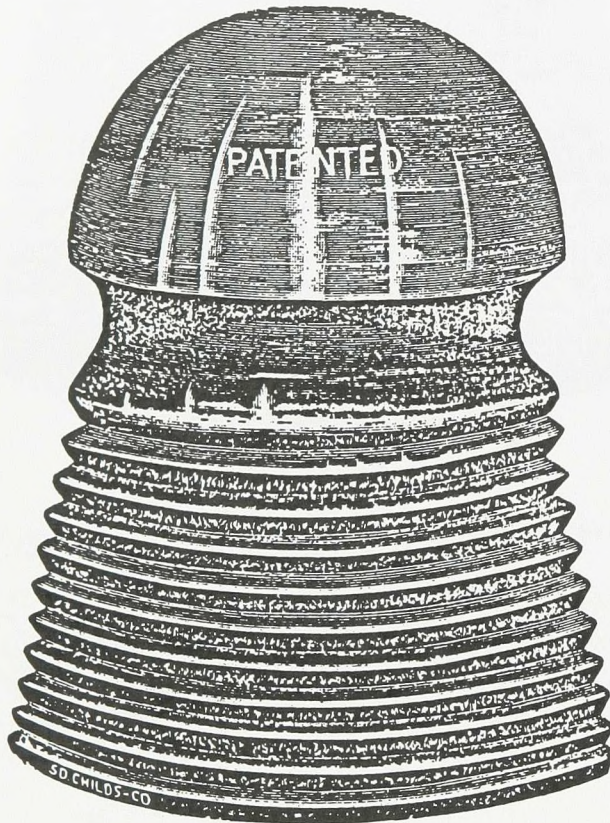
THE BAIN INSULATOR

WE present this week a cut of a new high resistance glass insulator, the invention of Mr. Foree Bain, of Chicago.

The insulator is made extra strong and is especially adapted to heavy work, such as carrying large primary wires, and particularly feeder wires for electric railroad work. The corrugations which are made both outside and inside of the apron increase the distance from the wire to the pin fully 100 per cent., and it is claimed that water will, in passing over the edges of the rings, become thin and broken, and on reaching the inside of the glass will drop off rather than creep over the inner obstructions to the pin.

Another point in favor of this form of insulator is that the many surfaces will reflect the light under the glass in such a way as to keep insects out, obviating a source of much annoyance where plain dark glass is employed.

This insulator will cost a little more to manufacture than the



THE BAIN INSULATOR.



CD 144.5

CD 144.5

NO NAME

(Dome) ['111'] (Base) PAT'D AUG. 19, 1890 {Inside of skirt has horizontal threaded ridges from the base to the pinhole} SB

Aqua, Light Aqua

ordinary plain glass insulator, but the inventor claims that an advance of a few cents per mile in the cost of construction will not be any objection where a high class of work is desired.

Mr. Bain has assigned his patent to the Central Electric Company, of Chicago, who are now sole owners and by whom the article is being placed upon the market.

Electrical Engineer, page 661, December 10, 1890

(Courtesy of Elton Gish)



CD 145

CD 145

AMERICAN

(Base) AM.INSULATOR CO. N.Y. DOUBLE PETTICOAT/PAT'D SEPT. 13, 1881, NOV. 13, 1883, NOV. 1883 {Note spelling; "3's" in both 1883's are backwards; no'day' in third date}

Light Green, Light Blue Aqua, Light Green Aqua

(Dome) [Letter] (Base) AM. INSULATOR CO. N.Y. DOUBLE PETTICOAT/PAT'D SEPT. 13, 1881. NOV. 13, 1883.

Aqua, Light Blue, Yellow Green, Apple Green, Yellow Olive, Golden Amber, Blue, Light Jade, Light Aqua, Green Aqua

(Dome) [Letter] (Base) AM. INSULATOR CO. N.Y. DOUBLE PETTICOAT/PAT'D SEPT. 13, 1881, NOV. 13, 1883, FEB. 12, 1884

Light Aqua, Blue, Light Blue, Aqua, Blue Aqua, Green Aqua, Yellow Olive, Yellow Green, Apple Green, Green

(Dome) [Letter] (Base) AM. INSULATOR CO. N.Y. DOUBLE PETTICOAT/PAT'D SEPT. 13, 1881, NOV. 13, 1883, JAN. 29, 1884 {Note January date} SB

Aqua, Green, Light Blue Aqua, Lime Green, Light Aqua, Light Green, Yellow Olive

B

(Dome) [Letter or Number] (F-Skirt) B SB
Aqua, Blue, Light Blue, Green, Green Aqua, Emerald Green, Yellow Green, Light Green, Light Aqua

(Dome) [Letter or Number] (F-Skirt) B (R-Skirt) B SB
Light Aqua, Light Purple, Off Clear, Emerald Green, 7-up Green, Light Blue, Aqua, Light Green

(Dome) [Number] (F-Skirt) B SDP
Aqua

(F-Skirt) B SB
Emerald Green, Dark Olive Green, Light Aqua, Light Blue, Dark Green, Dark Yellow Green, Green Aqua, Green, Olive Amber, Aqua

(F-Skirt) B (R-Skirt) B SB
Aqua, Green, Yellow Green

(F-Skirt) B (R-Skirt) B SDP
Aqua, Green, Blue, Amber

(F-Skirt) B (R-Skirt) N° 44/[Number] SB
Aqua, Snowy Green Aqua

(F-Skirt) B (R-Skirt) [Number] SB
Light Aqua, Light Green

(F-Skirt) B/['B.G.M.CO.' Blotted out] (R-Skirt) B SB
Light Aqua

B.G.M.

(F-Skirt) B.G.M.CO. SB
Off Clear, Lemon, Purple, Light Purple, Green Tint, Pink

BROOKFIELD

(Dome) [Letter or Number] (F-Crown) (Arc)W.
BROOKFIELD/NEW YORK (R-Crown) PAT.NOV. 13, 1883/FEB. 12 1884 SB
Aqua

(Dome) [Letter or Number] (F-Skirt) BROOKFIELD SB
Aqua, Green, Lime Green, Dark Yellow Green

(Dome) [Number] (F-Skirt) BROOKFIELD (R-Skirt)
NEW YORK SB
Aqua, Light Blue, Green, Dark Green, Yellow Green, Green Aqua

(Dome) [Number] (F-Skirt) BROOKFIELD (R-Skirt)
NEW YORK SDP
Green

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST./N.Y.
 (F-Skirt) ER (R-Crown) [Number]/(Arc)PAT'D NOV.
 13TH 1883/FEB. 12TH 1884 {MLOD} SB
 Aqua, Light Blue, Yellow Green, Light Aqua

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST./N.Y.
 (R-Crown) (Arc)PAT.NOV. 13,1883/FAB. 12, 1884
 {Note Spelling} {MLOD} SB
 Aqua, Green

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST./N.Y.
 (R-Crown) PAT/JAN. 25TH 1870 {MLOD} SB
 Light Aqua, Purple

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST./N.Y.
 (R-Crown) [Number]/(Arc)PAT'D NOV. 13TH 1883/FEB.
 12TH 1884 {MLOD} SB
 Aqua, Blue Aqua, Yellow Green

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST./N.Y.
 (R-Crown) [Number]/PAT/JAN. 25TH 1870 {MLOD} SB
 Light Green, Aqua

(F-Crown) (Arc)W. BROOKFIELD/83.FULTON.ST/
 N.Y. (R-Crown) [Number]/(Arc)/PAT'D NOV 13TH 1883/
 FEB 12TH 1884 {MLOD} SB
 Aqua, Yellow Green

(F-Crown) (Arc)W. BROOKFIELD/NEW YORK (R-
 Crown) PAT.NOV. 13TH 1883/ " FEB.12TH 1881 {Note
 1881 Date} SB
 Aqua, Green Aqua

(F-Crown) (Arc)W. BROOKFIELD/NEW YORK (R-
 Crown) [Letter]/PAT.NOV. 13TH 1883/ " FEB. 12TH 1881
 {Note 1881 Date} SB
 Aqua, Green Aqua

(F-Crown) (Arc)W. BROOKFIELD/NEW YORK (R-
 Crown) [Number]/PAT.NOV. 13, 1883/FEB. 12 1884
 {MLOD} SB
 Aqua

(F-Crown) W. BROOKFIELD/45 CLIFF ST./N.Y. (R-
 Crown) [Number]/(Arc)PAT'D NOV. 13TH 1883/FEB.
 12TH 1884 {MLOD} SB
 Ice Blue, Aqua

(F-Crown) W^M BROOKFIELD/45 CLIFF ST./N.Y. (R-
 Crown) [Number]/PAT./JAN. 25TH 1870 {MLOD} SB
 Light Green

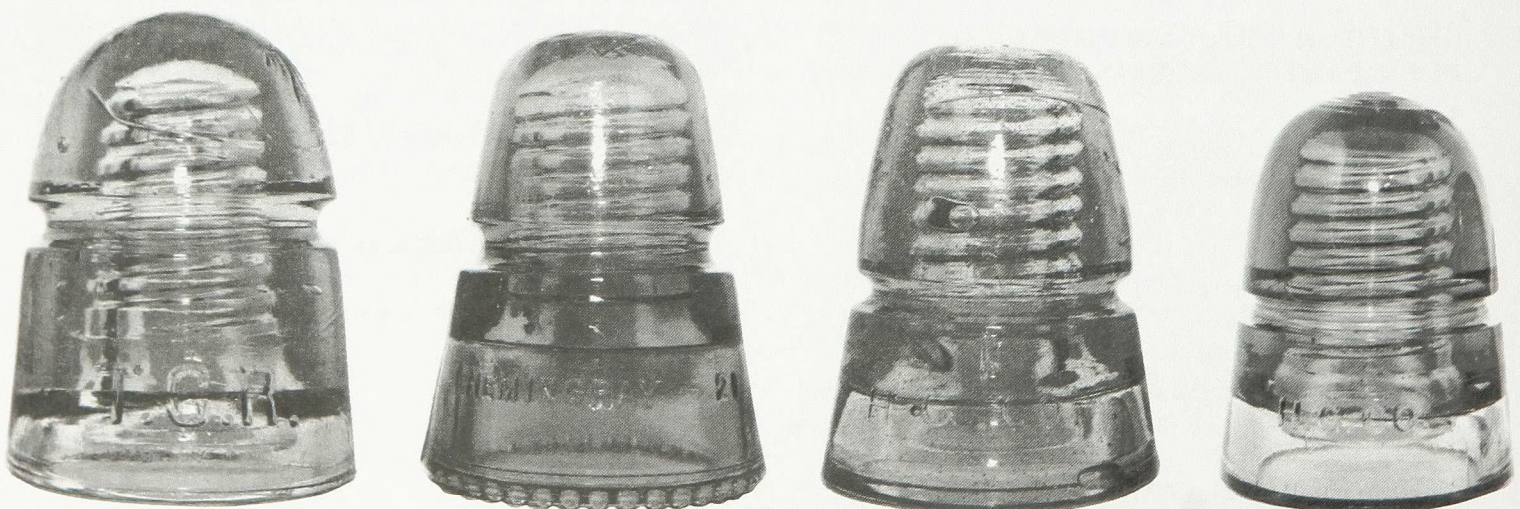
(F-Crown) [Number]/(Arc)W. BROOKFIELD/45 CLIFF
 ST./N.Y. (R-Crown) (Arc)PAT'D NOV. 13TH 1883/FEB.
 12TH 1884 {MLOD} SB
 Aqua, Yellow Green, Ice Blue

(F-Crown) [Number]/(Arc)W. BROOKFIELD/45 CLIFF
 ST./N.Y. {MLOD} SB
 Light Blue w/Snow, Light Aqua, Yellow Green, Purple,
 Green, Aqua, Light Green Aqua

(F-Crown) [Number]/(Arc)W. BROOKFIELD/83.
 FULTON. ST/N.Y. (R-Crown) (Arc)PATD. NOV. 13TH
 1883/FEB 12TH 1884 {MLOD} SB
 Aqua

(F-Skirt) BROOKFIELD (R-Skirt) NEW YORK/
 ['B.G.M.CO.' Blotted out] SB
 Aqua

(F-Skirt) W. BROOKFIELD (R-Skirt) NEW YORK SB
 Light Aqua



CD 145 Variations

(Left to right) T.C.R., a large Canadian railroad communications insulator; three Hemingray products - HEMINGRAY - 21 with a narrow dome, H.G.CO. with the tall, flat dome, H.G.CO. with a straight skirt

CALIFORNIA

(F-Skirt) CALIFORNIA SB

Green, Sage Green, Smoke, Light Purple, Purple, Burgundy, Sage/Purple Two Tone

E.D.R.

(F-Skirt) E.D.R./[Blotted out Embossing] SB

Light Aqua, Light Blue

G.N.W.

(F-Skirt) G.N.W. TEL.CO. SB

Light Aqua, Light Blue, Ice Blue, Purple, Royal Purple, Light Green, Steel Blue, Light Purple

G.T.P.

(Dome) [Number] (F-Skirt) G.T.P. (R-Skirt) B SB

Aqua, Green, Dark Aqua, Emerald Green

(F-Skirt) G.T.P. SB

Light Aqua, Light Blue, Green, Light Lavendar, Gray

(F-Skirt) G.T.P. TEL.CO. SB

Light Aqua, Clear, Steel Blue, Blue, Ice Blue, Light Purple

(F-Skirt) G.T.P./['G.N.W. TEL.CO.' Blotted out] SB

Aqua

(F-Skirt) G.T.P./['G.T.P. TEL.CO.' Blotted out] SB

Steel Blue, Light Purple, Delft Blue, Light Aqua

H.B.R.

(F-Skirt) H.B.R. SB

Aqua, Ice Blue

(F-Skirt) H.B.R./[Blotted out Embossing] SB

Aqua, Ice Blue, Light Aqua

H.G.CO.

(Dome) H (F-Skirt) H.G.CO. SB

Aqua, Light Green, Hemingray Blue, Jade Green Milk, Jade Blue Milk, Green

(Dome) H (F-Skirt) H.G.CO. (R-Skirt) ['H.G.CO.' Blotted out] SB

Aqua

(Dome) [Letter] (F-Skirt) H.G.CO. (R-Skirt) PETTI-COAT SB

Bubbly Clear, Light Aqua, Purple Tint, Ice Green, Yellow Olive, Green Tint, Light Green, Light Apple Green, Yellow Green Tint, Purple

(Dome) [Letter] (F-Skirt) H.G.CO. (R-Skirt) PETTI-COAT {Narrow style} SB

Yellow Olive, Aqua

(Dome) [Letter] (F-Skirt) H.G.CO. (R-Skirt) PETTI-COAT/[Letter] SB

Light Green, Lime Green, Light Aqua, Ice Green, Ice Blue, Dark Lavendar, Ice Aqua, Blue Aqua, Light Purple, Aqua, Light Steel Blue, Jade Blue Milk, Light Blue Aqua, Light Blue, Blue, Sapphire Blue

(Dome) [Letter] (F-Skirt) H.G.CO./[Letter] (R-Skirt) PETTICOAT SB

Light Aqua, Green Aqua, Light Green

(F-Skirt) H.G.CO. SB

Aqua

(F-Skirt) H.G.CO. (R-Skirt) PETTICOAT SB

Ice Green, Clear, Apple Green, Ice Blue, Green, Aqua, Green Tint, Lavendar, Ice Aqua, Light Blue Aqua, Light Yellow Green, Green Tint, Blue Aqua, Green Aqua, Bright Yellow Green, Lime Green, Teal Green

(F-Skirt) H.G.CO. (R-Skirt) PETTICOAT {Narrow style} SB

Purple, Light Blue, Light Green, Dark Purple

(F-Skirt) H.G.CO. (R-Skirt) PETTICOAT/[Letter] SB

Honey Amber, Apple Green, Purple, Yellow, Blue, Sapphire Blue, Yellow Green, Pink, Light Purple, Jade Aqua Milk, Light Aqua, Light Green, Orange Amber, Blue Aqua, Light Lavendar, Ice Blue, Light Steel Blue, Lime Green, Sky Blue, Green Tint, Purple, Ice Aqua, Light Blue Aqua, Light Green Aqua, Amber Olive Green

(F-Skirt) H.G.CO./[Letter] (R-Skirt) PETTICOAT SB

Honey Amber, Steel Blue, Light Blue, Yellow Olive Amber, Light Yellow Green, Ice Aqua, Dark Aqua, Ice Blue, Golden Amber, Light Green, Aqua, Purple, Light Aqua, Light Steel Blue, Yellow Green, Blue Aqua, Orange Amber, 7-up Green

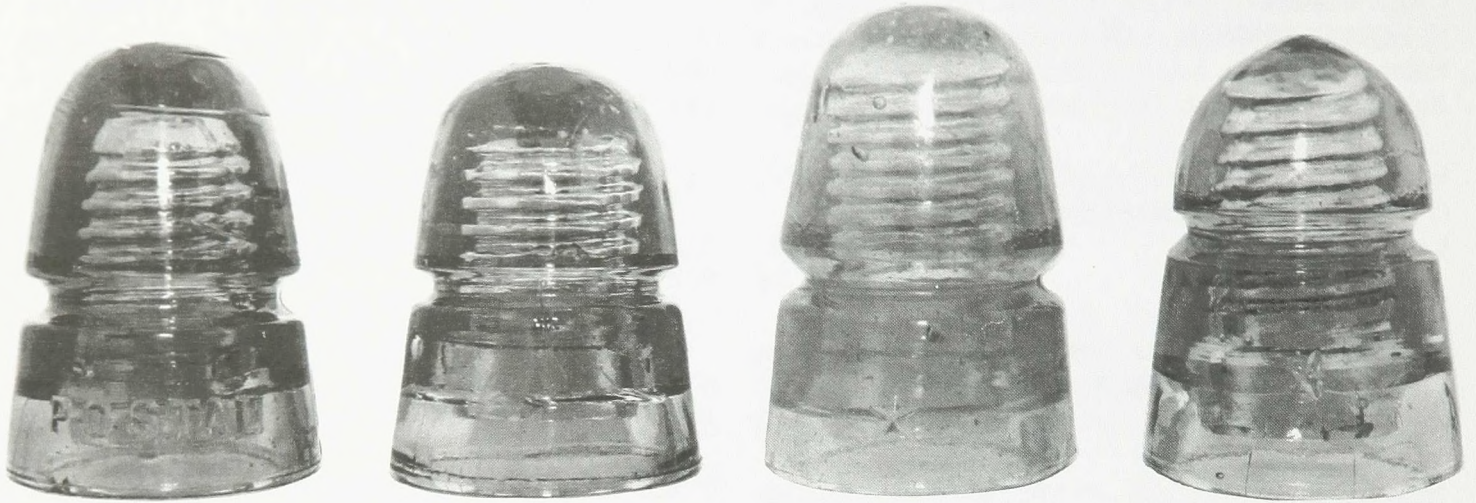
(F-Skirt) [Letter]/H.G.CO. (R-Skirt) PETTICOAT SB
Light Green, Ice Blue, White Milk, Yellow Green, Apple Green, Sky Blue, Aqua, Blue Aqua, Jade Green Milk, Off Clear, Ice Green, Light Aqua, Green Aqua, Sapphire Blue, Ice Aqua, Light Smoky Purple, Lavendar, Light Sky Blue, Forest Green, Golden Amber, Light Lavendar, Light Blue Aqua, Christmas Tree Green, Light Purple, Blue Tint, Aqua Tint, Clear, Cornflower Blue, Light Blue, Yellow Amber, Honey Amber, Dark Orange Amber, Sage Green, Jade Aqua Milk, Dark Aqua

HAWLEY

(Dome) [Letter or Number] (F-Skirt) ['HICo' Entwined Initials]/HAWLEY PA./U.S.A. (R-Skirt) [Letter or

Number] SB

Green Aqua



CD 145 Variations

(Left to right) POSTAL; No Name nicknamed "The Grand Canyon"; tall dome embossed with a "star"; pointed dome embossed on both the front and rear skirt with a "star".

(Dome) [Letter or Number] (F-Skirt) ['HICo' Entwined Initials]/HAWLEY PA./U.S.A. SB
Aqua, Green Aqua, Light Aqua

(Dome) [Letter or Number] (F-Skirt) ['HICo' Entwined Initials]/HAWLEY, PA./U.S.A. {'S' is backwards} (R-Skirt) [Letter or Number] SB
Green Aqua, Ice Green, Aqua, Light Aqua

(Dome) [Letter or Number] (F-Skirt) ['HICo' Entwined Initials]/HAWLEY, PA./U.S.A. {'S' is backwards} SB
Milky Aqua

(F-Skirt) ['HICo' Entwined Initials]/HAWLEY PA./U.S.A. (R-Skirt) [Letter or Number] SB
Aqua, Bubbly Aqua

(F-Skirt) ['HICo' Entwined Initials]/HAWLEY, PA./U.S.A. {'S' is backwards} (R-Skirt) [Letter or Number] SB
Aqua

(F-Skirt) ['HICo' Entwined Initials]/HAWLEY, PA./U.S.A. {Postal Style} SB
Light Aqua

HEMINGRAY

(F-Skirt) HEMINGRAY SB
Aqua

(F-Skirt) HEMINGRAY SDP
Aqua, Blue Aqua

(F-Skirt) HEMINGRAY (R-Skirt) DOUBLE/PETTI-COAT SB
Aqua

(F-Skirt) HEMINGRAY (R-Skirt) DOUBLE/PETTI-COAT SDP
Aqua, Hemingray Blue

(F-Skirt) HEMINGRAY (R-Skirt) N° 21 SB
Aqua

(F-Skirt) HEMINGRAY (R-Skirt) N° 21 SDP
Aqua, Green, Yellow Green, Olive Green, Hemingray Blue

(F-Skirt) HEMINGRAY-21 (R-Skirt) MADE IN U.S.A. RDP
Aqua, Hemingray Blue, Clear

(F-Skirt) HEMINGRAY-21 (R-Skirt) MADE IN U.S.A. SDP
Hemingray Blue

(F-Skirt) HEMINGRAY-21/[Numbers and Dots] (R-Skirt) MADE IN U.S.A./[Number] RDP
Clear

(F-Skirt) HEMINGRAY/MADE IN U.S.A. (R-Skirt) N° 21 SDP
Hemingray Blue, Aqua

K.C.G.W.

(F-Skirt) K.C.G.W. SB
Aqua, Light Green, Green, Light Aqua

LYNCHBURG

(Dome) [Letter or Number] (F-Skirt) LYNCHBURG/['L' in an oval] (R-Skirt) No.43/MADE IN/U.S.A. SDP
Aqua, Celery Green, Light Aqua, Blue Aqua

(Dome) [Letter or Number] (F-Skirt) LYNCHBURG/['L'
in an oval] (R-Skirt) No.-43/MADE IN [Number]/U.S.A.
SDP
Aqua, Blue Aqua

N.E.G.M.

(F-Skirt) N.E.G.M.CO. SB
Light Aqua, Green, Yellow Green, Emerald Green, Olive
Green, Ice Blue, Amber

NO NAME

(Dome) H SB
Light Green

(Dome) H (F-Skirt) [Vertical Bar] (R-Skirt) [Vertical
Bar] SB
Aqua

(Dome) [Letter] {American style} SB
Ice Blue

(F-Skirt) [Vertical Bar] SB
Straw

[No Embossing] {American Style} SB
Light Aqua, Blue Aqua

[No Embossing] {Grand Canyon Style} SB
Blue Aqua, Light Aqua, Teal Blue, Purple, Pink, Steel
Blue, Off Clear, Clear, Lavendar

[No Embossing] {Pennycuick Style} SB
Apple Green, Aqua, Ice Aqua

NO NAME-CANADA

[No Embossing] {Canadian Style} SB
Straw, Pink, Peach, Light Green

O.V.G.

(F-Skirt) O.V.G.CO. SB
Aqua, Green, Light Green, Blue

POSTAL

(F-Skirt) POSTAL SB
Aqua, Green, Yellow Green, Sage Green, Olive Green,
Purple, Burgundy, Sapphire Blue, Black Royal Purple

STANDARD GLASS

(Base) THE STANDARD GLASS INSULATOR CO./
BOSTON MASS.
Blue Aqua, Light Aqua

STAR

(F-Skirt) [Star] SB
Aqua, Blue Aqua, Green, Light Green, Yellow Green,
Olive Green, Lime Green, Light Blue, Olive Amber

(F-Skirt) [Star] (R-Skirt) [Star] {Pointed Dome} SB
Aqua, Blue Aqua, Green, Light Blue, Dark Green, Dark
Yellow Green

(F-Skirt) [Star] {Postal Style} SB
Blue Aqua, Green, Dark Green, Aqua, Olive Green

T.C.R.

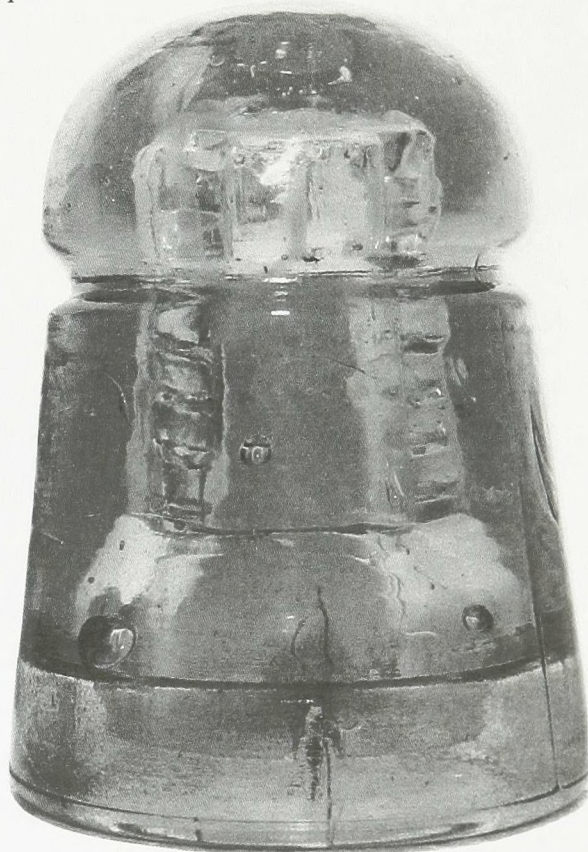
(F-Skirt) T.C.R. SB
Ice Blue, Light Purple, Light Aqua

(F-Skirt) T.C.R./[Blotted out Embossing] SB
Aqua

W.G.M.

(F-Skirt) W.G.M.Co. SB
Purple, Royal Purple, Gray, Straw, Milky Royal Purple

(F-Skirt) W.G.M.Co. {Postal Style} SB
Purple



CD 145.6

CD 145.6

BOSTON BOTTLE

(Base of Inner Skirt) BOSTON BOTTLE WORKS/
PATENT APPLIED FOR {Four Segmented Threads}
{MLOD} SB
Aqua, Root Beer Amber, Dark Olive Green, Blue Aqua

(Base of Inner Skirt) BOSTON BOTTLE WORKS/
PATENT APPLIED FOR {Three Segmented Threads}
{MLOD} SB
Aqua

(Base of inner skirt) BOSTON BOTTLE WORKS/
PATENT OCT 15 72 SB
Aqua

NO NAME

[No Embossing] {Four Segmented Threads} SB
Light Blue Aqua



CD 146.4

CD 146.4

NO NAME

[No Embossing] {This is a CD 104 with an inner skirt}
SB
Aqua, Dark Aqua



CD 146.5

CD 146.5

NO NAME

(F-Skirt) [Vertical Bar] SB
Light Green

[No Embossing] SB
Light Green



CD 147

CD 147

HEMINGRAY

(F-Skirt) HEMINGRAY (R-Skirt) PATENTED OCT. 8 1907. SB

Aqua, Light Aqua

(F-Skirt) HEMINGRAY (R-Skirt) PATENTED OCT. 8 1907. {Second 'E' is backwards} SB

Aqua

NO NAME

(Dome) [Number] (F-Skirt) PATENT'D OCT 8 1907 SB

Aqua

(F-Skirt) PAT. APPL'D FOR SB

Aqua

(F-Skirt) PATENTED (R-Skirt) OCT. 8TH 1907. SB

Aqua, Green, Dark Yellow Green

(F-Skirt) PATENTED OCT 8 1907 SB

Aqua, Green, Emerald Green, Light Aqua

(F-Skirt) PATNTED OCT. 8 1907. {Note Spelling} SB

Aqua

[No Embossing] SB

Aqua



CD 149

CD 149

BROOKFIELD

(F-Skirt) BROOKFIELD (R-Skirt) NEW YORK SB

Aqua, Dark Green, Dark Aqua

NO NAME

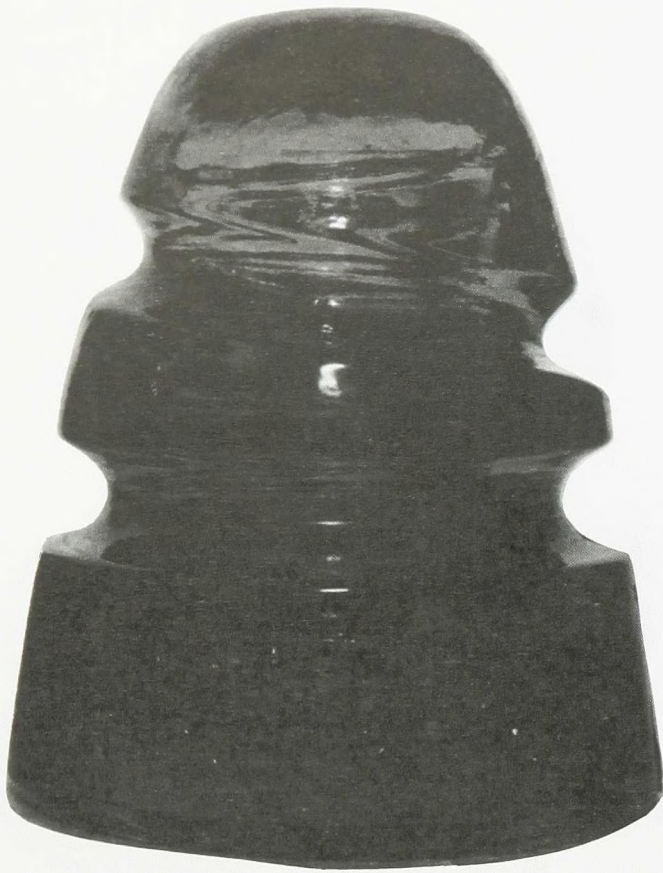
[No Embossing] SB

Aqua, Light Green Aqua, Sapphire Blue, Yellow Green, Blue Aqua, Green Aqua



CD 149 Variation

No Name with an elongated wire groove and Pennycuick style pinhole threading.



CD 150

CD 150

BARCLAY

(F-Skirt) BARCLAY (R-Skirt) PATENTED OCT. 8 1907. SDP

Aqua

BROOKFIELD

(F-Skirt) BROOKFIELD/PAT.OCT. 8- 1907 SB

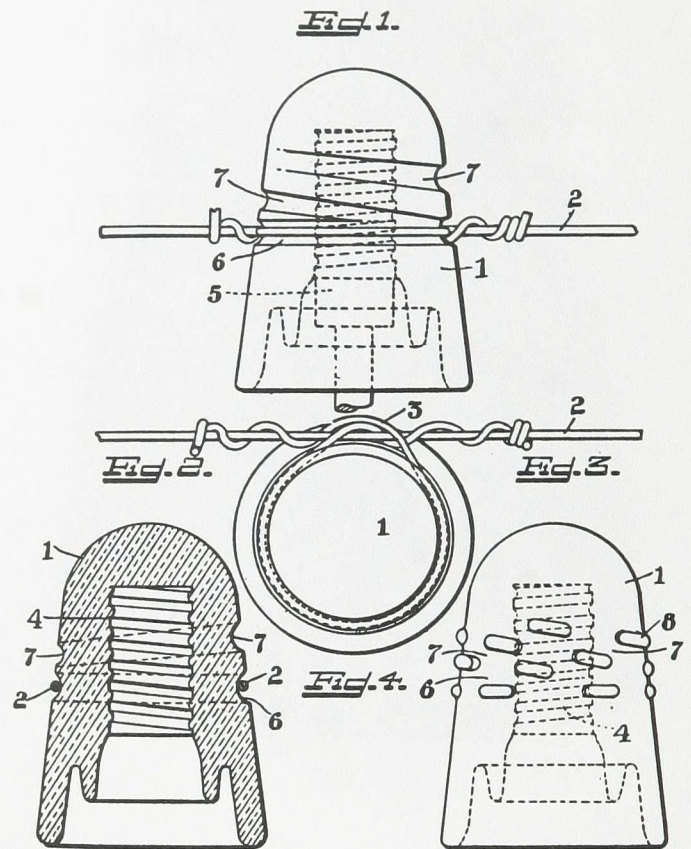
Aqua

On October 8, 1907 **John C. Barclay** was issued a patent for a new insulator design. The letter of patent reads: "For various reasons it is necessary from time to time to renew insulators. They are not infrequently broken for one reason or another, and even if not broken the insulator resistance becomes impaired in time in many locations, owing to the formation on the surface of the insulator, of a film of dust or smoke deposit which reduces materially the insulation resistance. The renewal or even the cleaning of insulators is commonly deferred as long as possible, however, not merely because of the cost of the actual renewals, including the labor and new tie wires required, but because in the renewal the line wire is adapted to be more or less nicked or twisted, and therefore is apt to

No. 867,901.

PATENTED OCT. 8, 1907.

J. C. BARCLAY.
INSULATOR.
APPLICATION FILED JULY 28, 1907.



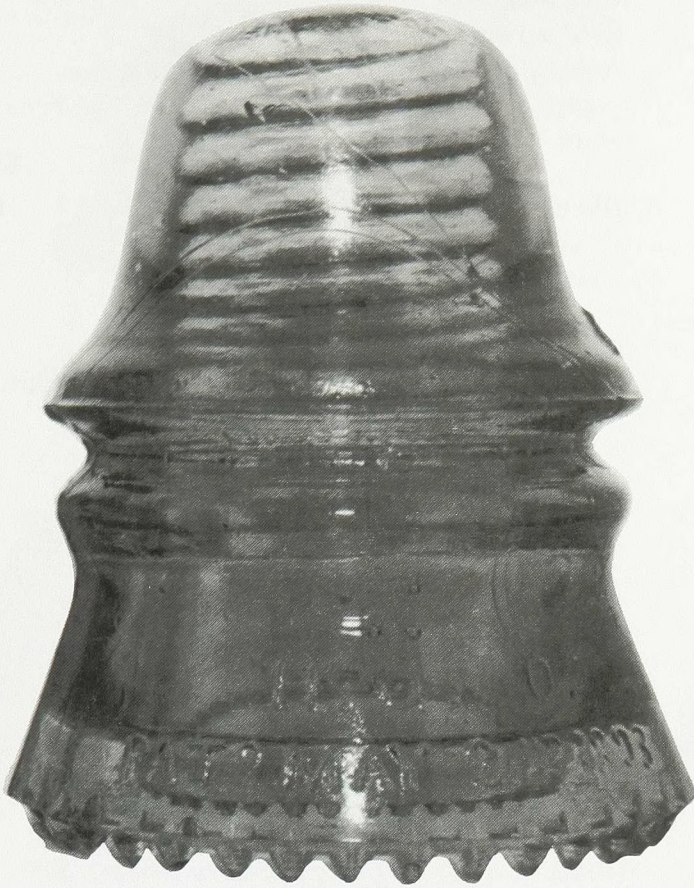
Attest:
[Signature]
Wm. R. Kappan

Inventor:
J. C. Barclay
by *[Signature]*
H. M. Maule
Atty

break during cold weather. This last objection is the more serious because the line conductor, thus injured, is never as reliable as before, and the damage which may result from its injury cannot be estimated."

By the present invention I provide means whereby the insulators may be removed and replaced without unwrapping the tie wire from the line wire and without the slightest injury to the line wire; and it is moreover possible to renew and replace insulators much more rapidly than when the tie wire must be removed and replaced as heretofore. According to my present invention, therefore, I not only save time in the removal of the insulators and save the cost of new tie wires, but I avoid the still greater expense resulting from injury to the line wire due to removal and replacing of the tie wires."

This patent also covers the design of **CD 110** and **CD 147**. (Further information with CD 110)



CD 151

CD 151

BROOKFIELD

(Dome) [Number] (F-Skirt) W. BROOKFIELD (R-Skirt) NEW YORK SB
Light Aqua, Light Green, Light Blue, Aqua

(F-Crown) [Number]/(Arc)W. BROOKFIELD/NEW YORK {MLOD} SB
Aqua, Light Green, Blue Aqua, Light Aqua

(F-Skirt) W. BROOKFIELD (R-Skirt) NEW YORK SB
Apple Green

H.G.CO.

(F-Crown) N.A.T.CO. (F-Skirt) H.G.CO./PAT'D MAY 2ND 1893 (R-Skirt) PETTICOAT SDP
Aqua, Green, Peacock Blue, Electric Blue, Cobalt Blue

(F-Crown) N.A.T.CO. (F-Skirt) H.G.CO./PAT^D MAY 2, 1893 (R-Skirt) PETTICOAT SDP
Aqua, Peacock Blue

(F-Crown) N.A.T.CO. (F-Skirt) H.G.CO./PAT^D MAY 2ND 1893 (R-Skirt) PETTICOAT]/'H.G.CO.' Blotted out] SDP
Peacock Blue

(F-Skirt) H.G.CO. (R-Skirt) PETTICOAT SB
Aqua, Bubbly Clear, Light Green, Yellow Green, Ice Blue, Light Aqua, Cornflower Blue, Orange Brown Amber, Light Purple, Olive Green, Hemingray Blue, Yellow Olive, Purple, Smoke, Clear, Apple Green

(F-Skirt) H.G.CO. (R-Skirt) PETTICOAT SDP
Aqua

(F-Skirt) H.G.CO./PAT^D MAY 2ND 1893 (R-Skirt) PETTICOAT SDP
Aqua, Light Green, Snowy Aqua, Ice Aqua

(F-Skirt) H.G.CO./PATENT MAY 2 1893 (R-Skirt) PETTICOAT SDP
Aqua

(F-Skirt) H.G.CO./PATENT MAY 2ND 1893 (R-Skirt) PETTICOAT SDP
Aqua, Light Green

(F-Skirt) H.G.CO./['PAT'D MAY 2 1893' Blotted out] (R-Skirt) PETTICOAT SDP
Aqua

NO NAME

(F-Skirt) 7 (R-Skirt) 7 SB
Green, Dark Green Aqua, Dark Aqua

(F-Skirt) [Vertical Bar] (R-Skirt) [Vertical Bar] SB
Light Green

[No Embossing] SB
Dark Green Aqua, Ice Aqua



CD 152

CD 152

B

(F-Skirt) B SB
Aqua, Green, Emerald Green, Dark Olive Green, Root Beer Amber, Dark Olive, Dark Olive Amber

BROOKFIELD

(Dome) [Number] (F-Skirt) BROOKFIELD SB
Light Blue, Dark Green, Olive Green, Green Aqua, Blue Aqua

(F-Skirt) BBOOKFIELD {Note Spelling} SB
Aqua, Emerald Green, Olive Green, Green

(F-Skirt) BBOOKFIELD {Note Spelling} SDP
Aqua, Emerald Green, Olive Green, Blue, Amber

(F-Skirt) BROOKFIELD SB
Aqua, Emerald Green, Olive Green, Blue, Green, Olive Amber, Dark Aqua

(F-Skirt) BROOKFIELD SDP
Aqua, Emerald Green, Olive Green, Green, Dark Blue Aqua

(F-Skirt) BROOKFIELD/[Number] (R-Skirt) No 48 SB
Green Aqua

(F-Skirt) BROOKFIELD/[Number] (R-Skirt) No 48 { 'N' is backwards } SB
Aqua, Green

CALIFORNIA

(F-Skirt) CALIFORNIA SB
Aqua, Light Green, Sage Green, Smoke, Clear, Light Purple, Blue, Yellow, Purple/Sage Two Tone, Straw

DIAMOND

(F-Skirt) [Diamond] SB
Straw, Ice Green, Blue

HEMINGRAY

(Dome) [Number] (F-Skirt) HEMINGRAY (R-Skirt) N° 40 SDP
Aqua, Light Green Aqua

(Dome) [Number] (F-Skirt) HEMINGRAY/MADE IN U.S.A. (R-Skirt) N° 40 SDP
Aqua, Olive Green

(F-Skirt) HEMINGRAY (R-Skirt) N° 40 SDP
Aqua, Dark Yellow Green, Emerald Green, Blue, Milky Aqua, Green, Dark Aqua, Light Green, Jade Milk, Olive Green

(F-Skirt) HEMINGRAY (R-Skirt) N°:40 or N° 40: {Comes with several punctuation variations} SDP
Aqua, Milky Aqua

(F-Skirt) HEMINGRAY/MADE IN U.S.A. (R-Skirt) N° 40 SDP
Aqua

(F-Skirt) HEMINGRAY/N° 40 (R-Skirt) HEMINGRAY SDP
Aqua

(F-Skirt) HEMINGRAY/N° 40 (R-Skirt) PATENTED/MAY 2 1893 SDP
Aqua, Green

M^cLAUGHLIN

(F-Skirt) M^cLAUGHLIN (R-Skirt) N° 40 SDP
Aqua, Green

NO NAME

(Dome) [Letter] (F-Skirt) N° 48 SB
Aqua, Green, Blue Aqua

(Dome) [Number] (F-Skirt) N° 40 SB
Dark Aqua, Green, Blue

(F-Skirt) N° 48 SDP
Snowy Aqua

[No Embossing]
Green, Aqua



CD 153

CD 153

BROOKFIELD

(F-Skirt) BROOKFIELD SB
Aqua, Green, Dark Green Aqua

GAYNER

(F-Skirt) GAYNER (R-Skirt) NO. 48-400/[Number] SB
Aqua

(F-Skirt) GAYNER (R-Skirt) NO. 48-400/[Number] SDP
Blue Aqua, Light Green Aqua, Light Green

NO NAME

(F-Skirt) NO.48-40/[Number] SB
Aqua, Light Aqua

CD 153 Variation

The Gayner and No Name units are shaped similar to CD 154 but have smaller dimensions.



CD 154

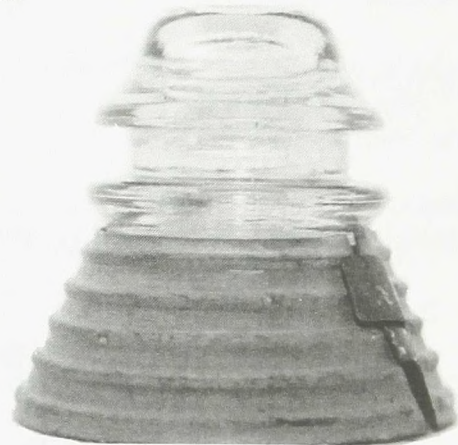
CD 154

A.A.

(F-Skirt) A.A. {Embossed in a dotted oval} RDP
Aqua, Yellow Green, Green

CIA TELEFONICA

(F-Skirt) CIA.TELEFONICA Y TELEGRAFICA MEXICANA RDP
Light Aqua



A CD 154 Dominion-42 with a Corrugated, Metal Shield

This type of protective shield is sometimes installed on the skirt of the insulator in order to protect the glass. The unit is used in areas where rock slides and flying debris might be prevalent.

DIAMOND

(F-Skirt) ['D' in a diamond] RDP
Light Green, Straw, Honey Amber

(F-Skirt) ['D' in a diamond] (R-Skirt) ['D' in a diamond]
RDP
Straw, Green

(F-Skirt) ['D' in a diamond] (R-Skirt) ['D' in a diamond]/
['C.N.R.' Blotted out] SB
Light Green, Light Pink

(F-Skirt) ['D' in a diamond] (R-Skirt) ['D' in a diamond]
{Threaded inner skirt to base} RDP
Straw, Dark Green, Olive Green

(F-Skirt) ['P' in a diamond] SB
Ice Yellow Green

(F-Skirt) [Diamond] SB
Light Green, Straw, Light Yellow Green

DOMINION

(F-Skirt) DOMINION-42 (R-Skirt) ['D' in a diamond]
RDP
Light Green, Dark Red Amber, Yellow Amber, Light
Cornflower Blue, Cornflower Blue, Light Yellow Amber,
Dark Straw, Clear, Light Straw, Pink, Light Sage Green,
Light Yellow, Honey Amber, Dark Cornflower Blue

(F-Skirt) DOMINION-42 (R-Skirt) ['D' in a diamond]
[Number] RDP
Clear, Straw, Cornflower Blue, Yellow Amber, Peach,
Light Cornflower Blue, Red Amber

GAYNER

(F-Skirt) GAYNER (R-Skirt) MADE IN NO.44 U.S.A./
[Number] SB
Aqua, Light Aqua

(F-Skirt) GAYNER (R-Skirt) MADE IN NO.44 U.S.A./
[Number] SDP
Light Green, Aqua

HEMINGRAY

(F-Skirt) HEMINGRAY-42 (R-Skirt) MADE IN U.S.A.
SB
Hemingray Blue

(F-Skirt) HEMINGRAY-42 (R-Skirt) MADE IN U.S.A.
RDP
7-up Green, Light Green, Light Blue, Aqua, Blue Aqua,
Carnival, Ice Blue, Green, Hemingray Blue, Green/Blue
Two Tone

(F-Skirt) HEMINGRAY-42 (R-Skirt) MADE IN U.S.A.
SDP
Hemingray Blue

(F-Skirt) HEMINGRAY-42 (R-Skirt) MADE IN U.S.A./
[Numbers] RDP
Clear, Ice Blue

(F-Skirt) HEMINGRAY-42 {'2' is backwards} (R-Skirt)
MADE IN U.S.A. SDP
Aqua

(F-Skirt) HEMINGRAY-42/[Blotted out Embossing] (R-
Skirt) MADE IN U.S.A. SDP
Hemingray Blue

(F-Skirt) HEMINGRAY-42/[Numbers and Dots] (R-
Skirt) MADE IN U.S.A. RDP
Ice Blue, Green Tint

(F-Skirt) HEMINGRAY-42/[Numbers and Dots] (R-
Skirt) MADE IN U.S.A./[Numbers] RDP
Clear, Off Clear, Ice Blue, White Milk

(F-Skirt) MR/HEMINGRAY-42/[Numbers and Dots] (R-
Skirt) MADE IN U.S.A./[Number and Letters] RDP
Clear

(F-Skirt) ['HEMINGRAY-42' Blotted out] (R-Skirt)
MADE IN U.S.A. {Many varieties of blotouts on the
front skirt} RDP
Hemingray Blue

(F-Skirt) ['HEMINGRAY-42' Blotted out] (R-Skirt)
MADE IN U.S.A. {Many varieties of blotouts on the
front skirt} SDP
Hemingray Blue

LYNCHBURG

(Dome) ['L' in an oval] (F-Skirt) LYNCHBURG (R-
Skirt) MADE IN NO.44 U.S.A./[Numbers] RDP
Aqua, Blue, Green

(Dome) ['L' in an oval] (F-Skirt) LYNCHBURG (R-
Skirt) MADE IN NO.44 U.S.A./[Number] SDP
Blue Aqua, Light Aqua, Blue

(F-Skirt) LYNCHBURG (R-Skirt) [Number]/MADE IN
NO.44 U.S.A. RDP
Sage Green, Smoke, Lime Green

(F-Skirt) LYNCHBURG (R-Skirt) [Number]/MADE IN
NO.44 U.S.A. SDP
Smokey Straw, Ice Green, Aqua, Light Aqua, Ice Blue,
Blue, Green

(F-Skirt) ['L' in an oval]/LYNCHBURG (R-Skirt)
MADE IN NO.44 U.S.A. {'44' is backwards} RDP
Aqua

(F-Skirt) ['L' in an oval]/LYNCHBURG (R-Skirt)
[Number]/MADE IN NO.44 U.S.A. RDP
Pink Tint, Green Aqua, Green, Ice Green, Ice Blue

(F-Skirt) ['L' in an oval]/LYNCHBURG (R-Skirt)
[Number]/MADE IN NO.44 U.S.A. SDP
Smoke, Straw, 7-up Green, Light Aqua, Ice Blue, Ice
Green, Yellow Green

(F-Skirt) ['L' in an oval]/[Number] LYNCHBURG (R-
Skirt) MADE IN NO.44 U.S.A. RDP
Clear, Olive, Sage Green, Yellow Green

(F-Skirt) ['L' in an oval]/[Number] LYNCHBURG (R-
Skirt) MADE IN NO.44 U.S.A. SDP
Straw, Ice Blue

MAYDWELL

(F-Skirt) MAYDWELL-42 (R-Skirt) U.S.A. RDP
Straw, Light Green

(F-Skirt) MAYDWELL-42 (R-Skirt) U.S.A. SDP
Gingerale, Clear, Pale Green, Yellow Straw, Straw, Light
Green, Light Amber, Off Clear, Light Yellow Green,
Pink

(F-Skirt) MAYDWELL-42 (R-Skirt) U.S.A./
['M^{CL}LAUGHLIN' Blotted out] RDP
Straw

(F-Skirt) MAYDWELL-42/['M^{CL}LAUGHLIN' Blotted
out] (R-Skirt) U.S.A. SDP
Clear, Straw

M^{CL}LAUGHLIN

(Dome) [Number] (F-Skirt) M^{CL}LAUGHLIN (R-Skirt) N^o
42 RDP
Aqua, Light Green, Blue Gray, Green, Ice Green, Light
Aqua

(Dome) [Number] (F-Skirt) M^{CL}LAUGHLIN (R-Skirt) N^o
42 {'2' is backwards} RDP
Emerald Green, Light Aqua, Apple Green, Light Green,
Aqua

(F-Skirt) M^{CL}LAUGHLIN (R-Skirt) N^o 40 {Note 'N^o 40'}
SB
Sage Green, Green Aqua, Aqua

(F-Skirt) M^{CL}LAUGHLIN (R-Skirt) N^o 40 {Note 'N^o 40'}
RDP
Blue

(F-Skirt) M^{CL}LAUGHLIN (R-Skirt) N^o 42 SB
Blue Aqua, Aqua, Sage Green

(F-Skirt) M^{CL}LAUGHLIN (R-Skirt) N^o 42 RDP
Light Green, Light Steel Blue, Dark Steel Blue, Corn-
flower Blue, Delft Blue

(F-Skirt) M^{CL}LAUGHLIN 42 SB
Light Green, Blue, Aqua, Sage Green

(F-Skirt) M^{CL}LAUGHLIN-42 FDP
Emerald Green, Light Green, Green

(F-Skirt) M^{CL}LAUGHLIN-42 (R-Skirt) MADE IN U.S.A.
RDP
Blue Gray, Light Green, Light Aqua, Off Clear

NO NAME

(F-Skirt) MADE IN NO.44 U.S.A./[Number] {This is a
Gayner/Lynchburg product with no trace of embossing on
the other side} SDP
Light Aqua

(F-Skirt) MADE IN U.S.A. (R-Skirt) MADE IN U.S.A.
{Hemingray product} RDP
Aqua

(F-Skirt) MADE IN U.S.A. (R-Skirt) MADE IN U.S.A.
{Hemingray product} SDP
Hemingray Blue

WHITALL TATUM

(F-Skirt) WHITALL TATUM CO. N^o 1 (R-Skirt) MADE
IN U.S.A./[Number] SB
Purple

(F-Skirt) WHITALL TATUM CO. N^o 1 (R-Skirt)
[Number]/MADE IN U.S.A. ['W/T' in a triangle] SB
Straw, Light Aqua, Light Lavendar

(F-Skirt) WHITALL TATUM CO. N^o 1/[Number] (R-
Skirt) MADE IN U.S.A. ['W/T' in a triangle] SB
Light Aqua, Light Green, Straw, Dark Red Amber, Pink

(F-Skirt) WHITALL TATUM CO. ['W/T' in a triangle]
(R-Skirt) N^o 1. MADE IN U.S.A. SB
Light Aqua

(F-Skirt) WHITALL TATUM CO. ['W/T' in a triangle]
(R-Skirt) [Number]/N^o 1 MADE IN U.S.A. SB
Light Aqua

(F-Skirt) WHITALL TATUM N^o 1 (R-Skirt) MADE IN
U.S.A. ['W/T' in a triangle] SB
Clear, Pink Tint



CD 154.5

CD 154.5

DERFLINGER

(F-Skirt) DERFLINGER-T.N.-1 {Note Spelling} RDP
Aqua, Green

(F-Skirt) DERFLINGER-T.N.-1 RDP
Aqua, Green, Dark Green Aqua, Dark Green, Green Aqua

(F-Skirt) DERFLINGER-T.N.-1 SDP
Yellow Green

NO NAME

[No Embossing] RDP
Aqua



CD 155

CD 155

ARMSTRONG

(F-Skirt) Ⓐrmstrong D.P.1 (R-Skirt) MADE IN U.S.A. ['A' in a circle] [Numbers and Dots] SB
Off Clear, Straw

(F-Skirt) Ⓐrmstrong D.P.1 (R-Skirt) MADE IN U.S.A. [Numbers and Dots] SB
Clear

(F-Skirt) *Armstrong's* D.P.1 (R-Skirt) MADE IN U.S.A. ['A' in a circle] [Numbers and Dots] SB
Clear, Light Green, Light Olive, Light Smoke, Green Smoke, Amber (Fake)

(F-Skirt) ['K.P.P.' in an oval] [Number] Armstrong D.P.1 (R-Skirt) MADE IN U.S.A. [Numbers and Dots] SB
Off Clear

CRIMSA

(F-Skirt) CRIMSA 45 (R-Skirt) [Letters]-[Number] SB
Clear, Ice Green

DIAMOND

(F-Skirt) ['D' in a diamond]/['C.N.R.' Blotted out] (R-Skirt) ['D' in a diamond] SB
Straw

(F-Skirt) ['D' in a diamond]/[Number] SB
Off Clear

DOMINION

(F-Skirt) DOMINION 42 (R-Skirt) ['D' in a diamond]/
[Number] SB
Straw, Off Clear

HEMINGRAY

(F-Skirt) HEMINGRAY-45 (R-Skirt) MADE IN U.S.A./
[Numbers] CB
Clear, Ice Blue, Straw, Pink, Ice Green

(F-Skirt) HEMINGRAY-45 (R-Skirt) MADE IN U.S.A./
[Numbers] SB
Clear, Ice Green

(F-Skirt) HEMINGRAY-45 (R-Skirt) [Numbers]/MADE
IN U.S.A. SB
Clear, Ice Blue, Off Clear

KERR

(F-Skirt) KERR DP 1 (R-Skirt) MADE IN U.S.A.
[Numbers] SB
Clear, Blue Tint, Clear w/Cobalt Blobs

NO NAME - MEXICO

(F-Skirt) 3 SB
Light Aqua, Emerald Green

(F-Skirt) C 45 SB
Clear

[No Embossing] SB
Emerald Green, Olive Green, Dark Yellow Green, Olive
Amber, Green Aqua

P.S.S.A.

(F-Skirt) ['VB' in a circle]/PSSA 42 RDP
Purple

(F-Skirt) ['VB' in a circle]/PSSA 42 (R-Skirt) DCE-2930
RDP
Smoky Sage Green, Ice Green

R.Y.T.

(F-Skirt) ['R y T' in a circle] (R-Skirt) [Number] SB
Aqua

(F-Skirt) ['R y T' upsidedown in a circle] (R-Skirt) ['TC'
entwined upsidedown in a triangle] SB
Green Aqua, Lime Green, Emerald Green, Honey Amber,
Ice Blue

TEXCOCO

(F-Skirt) CRISOL ['TC' Entwined in a triangle]/TEX-
COCO (R-Skirt) 45 SB
Emerald Green

WHITALL TATUM

(F-Skirt) (Arc)WHITALL TATUM/No 1 (R-Skirt)
(Arc)MADE IN U.S.A./[Numbers]/['A' in a circle] SB
Clear, Pint Tint, Blue Tint, Straw, Smokey Straw



CD 155.6

CD 155.6

HEMINGRAY

(F-Skirt) HEMINGRAY SB
Aqua



CD 156

CD 156

AMERICAN

(Base) AM INSULATOR CO/PAT SEP 13 1881.
Aqua, Blue, Light Green, Blue Aqua, Green Aqua

POSTAL

(Base) POSTAL TELEGRAPH CO PAT SEP 13 1881
{ '3' is backwards }
Aqua, Light Green



CD 156.1

CD 156.1

AMERICAN

(Base) AM INSULATOR CO/PAT SEP 13 1881.
Light Aqua, Light Green, Ice Blue, Ice Green, Blue
Aqua, Light Blue Aqua

(Base) AM. INSUALTOR CO. N.Y. DOUBLE PETTI-
COAT PAT'D SEPT. 13. 1881 NOV. 13. 1883

Light Aqua, Green, Lime Green, Yellow Green, Olive
Green, Blue Aqua, Aqua, Light Green Aqua, Apple
Green

NO NAME

(Base) PAT SEP 13 1881.
Light Aqua, Light Green, Blue Aqua

[No Embossing] SB
Light Blue

POSTAL

(Base) POSTAL TELEGRAPH CO. PAT SEP 13 1881
{ '3' is backwards }
Light Green, Aqua



CD 156.2

CD 156.2

NO NAME

(Base of Inner Skirt) PAT OCT 15 1872 SB
Aqua, Blue

[No Embossing] SB
Blue Aqua

CD 157

BROOKFIELD

(F-Skirt) BROOKFIELD SB
Aqua, Dark Aqua

HEMINGRAY

(F-Skirt) HEMINGRAY/N° 38. (R-Skirt) PATENTED/
MAY 2 1893 SDP
Aqua, Dark Aqua



CD 157.5

CD 157.5

STANDARD GLASS

(Base) THE STANDARD GLASS INSULATOR CO./
BOSTON MASS
Blue Aqua, Light Green, Light Aqua



CD 157



CD 158

BOSTON BOTTLE

(Base of Inner Skirt) BOSTON BOTTLE WORKS/
PATENT APPLIED FOR {Four Segmented Threads}
{Wide wire groove} {MLOD} SB
Aqua, Blue Aqua, Green Aqua, Dark Aqua, Dark Amber,
Light Green, Light Lime Green

(Base of Inner Skirt) BOSTON BOTTLE WORKS/
PATENT APPLIED FOR {Four Segmented Threads}
{Narrow wire groove} {MLOD} SB
Aqua, Light Blue Aqua

NO NAME

(Base of Inner Skirt) PAT OCT 15 1872 {This is a
CD136.7 with an inner skirt} {Three Segmented
Threads} SB
Aqua

[No Embossing] {Four Segmented Threads} {Wide
Groove} {MLOD} SB
Aqua

CD 158



CD 158 Variations

*(Left to right) Boston Bottle (wide wire groove); No Name
"OCT 15 1872" (CD 136.7 with an inner skirt); No Name
[No Embossing] (extra wide wire groove)*



CD 158.1

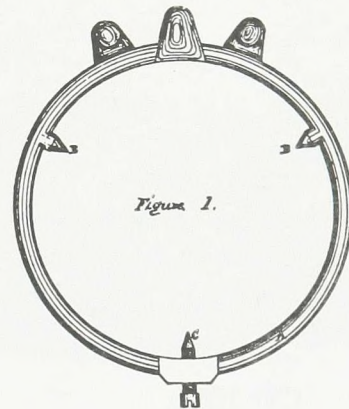
CD 158.1

CHESTER

(Base of Inner Skirt) CHESTER.104.CENTRE ST. N.Y./
PATENTED {Four Segmented Threads} {MLOD} SB
Aqua, Blue, Blue Aqua

NO NAME

[No Embossing] {Four segmented threads} {MLOD}
SB
Blue



Stephen Chester of Elizabeth, New Jersey, patented on May 16, 1871 a metal ring which had three "fingers" to receive the line wire. It is believed that the set screws were used to secure the ring to the wavy, wire groove of **CD 158.1**.



CD 158.2

CD 158.2

BOSTON BOTTLE

(Base of Inner Skirt) BOSTON BOTTLE WORKS/
PATENT APPLIED FOR- {Four Segmented Threads}
SB

Aqua, Blue Aqua

(Base of Inner Skirt) BOSTON BOTTLE WORKS/
PATENT APLD FOR {Four Segmented Threads} SB
Aqua, Blue, Olive Amber, Root Beer Amber, Green, Blue
Aqua, Dark Green Aqua

(Base of Inner Skirt) BOSTON BOTTLE WORKS/
PATENT.OCT.15.72 {MLOD} {Four Segmented
Threads} SB
Dark Green, Light Aqua

(Base of inner skirt) BOSTON BOTTLE WORKS/
PATENT OCT 15 72 {Three segmented threads} SB
Aqua, Yellow Green

(Base of inner skirt) BOSTON BOTTLE WORKS/
PATENTED OCT 15 72 {Four segmented threads} SB
Aqua

(Dome) BOSTON BOTTLE WORKS PATENTED OCT
15 72 {Four segmented threads} SB
Aqua, Dark Green

(Dome) [Blotted out Embossing] (Base of Inner Skirt)
BOSTON BOTTLE WORKS/PATENT.OCT. 15. 72
{Four Segmented Threads} {MLOD} SB
Emerald Green

NO NAME

[No Embossing] {Four Segmented Threads} SB
Aqua, Dark Green Aqua



CD 158.9

CD 158.9

BOSTON BOTTLE

(Base of Inner Skirt) BOSTON BOTTLE WORKS/
PATENT APPLIED FOR- {Four Segmented Threads}
SB

Light Celery Green, Dark Green, Ice Aqua, Ice Green,
Light Aqua, Blue Aqua, Aqua, Root Beer Amber, Dark
Aqua

F. W. GREGORY.
INSULATOR
APPLICATION FILED AUG. 9, 1902.



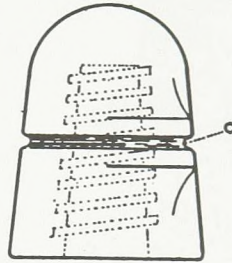
CD 159

CD 159

GREGORY

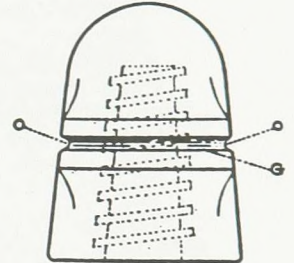
(F-Skirt) PAT. APR. 7TH 1903/F.W. GREGORY SB
Aqua

FIG. 1



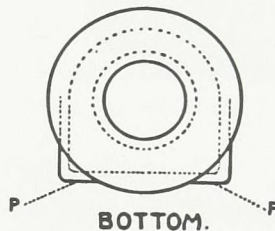
SIDE

FIG. 2



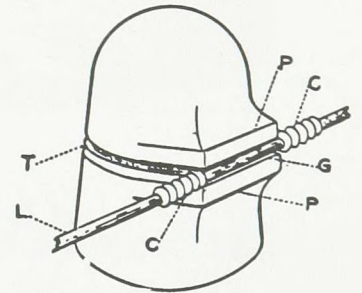
FRONT

FIG. 3



BOTTOM.

FIG. 4



WITNESSES:
A. N. Keep
S. J. Downs

INVENTOR
Ferdinand W. Gregory
BY *J. M. Keep*
ATTORNEY

The design of **CD 159** is based upon a patent issued to **Ferdinand W. Gregory** of New York, New York, and dated April 7, 1903. The patent consisted of "a hollow cap having a vertical face upon one or more sides and horizontal grooves cut into the face of sufficient depth to completely house the line wire and openly terminating on each side of the face. The wire grooves, openly terminating at the parallel sides of the face are equal in length to the diameter of the insulator, thereby making a long solid bearing and reliable support for the line wire and admitting the tie wire being drawn tightly against the ends of the grooves and there easily and smoothly coiled around the line wire without the slightest abrasion, a bend or kink. My improvement ... admits

of using a stronger or thicker tie wire ... and the coil may be extended upon the line wire, thereby relieving any indirect strain at this juncture."

The design of the insulator was not as successful at providing a strong support at the wire groove, for many of the CD 159 units sustained damage which would indicate that the line and tie wire would slice off the corners of the wire groove's ledge.

In recent years treks into the Sierra Mountains of the California have recovered many of the CD 159 style. Their use in that geographical setting would indicate the need for an insulator with extra wire groove support for installations which covered long spans and a change in topographical direction.



CD 160

CD 160

ARMSTRONG

(F-Skirt) *Armstrong's* NO.14 (R-Skirt) MADE IN U.S.A. ['A' in a circle] [Numbers and Dots] SB
Clear

B

(F-Skirt) B SB
Aqua

(F-Skirt) B SDP
Aqua

(F-Skirt) B (R-Skirt) N° 32 SB
Green, Olive Green, Aqua, Blue Aqua, Olive Amber, Blue

BROOKFIELD

(Dome) [Number] (F-Skirt) BROOKFIELD (R-Skirt) NEW YORK SB
Aqua, Light Aqua, Green, Yellow Green, Lime Green

(F-Crown) (Arc)W^M BROOKFIELD/NEW YORK (F-Skirt) PAT'D NOV. 13TH, 1883 {MLOD} SB
Aqua, Light Aqua

(F-Skirt) BROOKFIELD SDP
Aqua

(F-Skirt) BROOKFIELD (R-Skirt) NEW YORK SB
Green, Emerald Green, Olive Green, Aqua, Yellow Green, Olive Amber, Light Aqua, Blue Aqua, Green Aqua, Dark Aqua

(F-Skirt) BROOKFIELD (R-Skirt) NEW YORK SDP
Green, Emerald Green, Olive Green, Aqua, Dark Aqua

(F-Skirt) BROOKFIELD/N.Y. (R-Skirt) PAT'D NOV. 13TH 1883 SB
Aqua, Light Green, Light Aqua

(F-Skirt) W. BROOKFIELD/N.Y. (R-Skirt) PAT'D.NOV. 13TH 1883 SB
Aqua, Light Aqua, Light Blue, Light Green, Yellow Green

CALIFORNIA

(F-Skirt) CALIFORNIA SB
Smoke, Light Purple, Purple, Light Green, Blue, Blue Aqua, Off Clear, Gray, Green, Burgundy, Smokey Purple, Purple/Sage Two Tone

GAYNER

(F-Skirt) GAYNER (R-Skirt) NO. 140/[Number] SDP
Aqua, Light Aqua, Light Blue Aqua

H.G.CO.

(F-Skirt) H.G.CO. (R-Skirt) PETTICOAT RDP
Lime Green

(F-Skirt) H.G.CO. (R-Skirt) PETTICOAT SDP
Aqua, Clear, Light Green, Blue Aqua

(F-Skirt) H.G.CO./PATENT MAY 2 1893 (R-Skirt) PEITTICOAT {Note Spelling} SDP
Light Green, Green, Aqua

(F-Skirt) H.G.CO./PATENT MAY 2 1893 (R-Skirt) PETTICOAT RDP
Aqua, Green, Blue

(F-Skirt) H.G.CO./PATENT MAY 2 1893 (R-Skirt) PETTICOAT SDP
Aqua, Lime Green, Blue, Light Green, Yellow Olive Green, Milky Aqua, Dark Olive Green

(F-Skirt) H.G.CO./PATENT MAY 2 1893 (R-Skirt) PETTICOET {Note Spelling} SDP
Aqua, Green, Blue

(F-Skirt) H.G.CO./PATENT MAY 2 1893/[Blotted out Embossing] (R-Skirt) PEITTICOAT {Note Spelling} SDP
Aqua

(F-Skirt) H.G.CO./PATTENT MAY 2 1893 {Note Spelling} (R-Skirt) PETTICOAT SDP
Aqua

(F-Skirt) H.G.CO./[Blotted out Embossing]/N° 40 (R-Skirt) DOUBLE/PETTICOAT SB
Aqua

(F-Skirt) H.G.CO./[Letter] (R-Skirt) PETTICOAT SB
Light Aqua, Light Lemon, Clear, Off Clear, Aqua,
Cornflower Blue, Light Blue, Light Green

HAWLEY

(F-Skirt) HAWLEY P.A./U.S.A. (R-Skirt) ['HICo'
Entwined Initials] SB
Aqua, Light Aqua

HEMINGRAY

(F-Skirt) HEMINGRAY (R-Skirt) N° 14 RDP
Aqua

(F-Skirt) HEMINGRAY (R-Skirt) N° 14 SDP
Aqua, Blue Aqua

(F-Skirt) HEMINGRAY-14 (R-Skirt) MADE IN U.S.A.
RDP
Aqua, Dark Aqua, Hemingray Blue, Light Green, Blue
Aqua, Green Tint, Blue Tint

(F-Skirt) HEMINGRAY-14 (R-Skirt) MADE IN U.S.A.
SDP
Aqua, Hemingray Blue

(F-Skirt) HEMINGRAY-14 (R-Skirt) MADE IN U.S.A./
[Numbers and Dots] RDP
Clear, Light Straw

(F-Skirt) HEMINGRAY-14/PETTICOAT (R-Skirt)
MADE IN U.S.A./PATENT MAY 2 1893 SDP
Aqua, Hemingray Blue

(F-Skirt) HEMINGRAY-14/PETTICOAT (R-Skirt)
MADE IN U.S.A./[Blotted out Embossing]/PATENT
MAY 2 1893 SDP
Hemingray Blue

(F-Skirt) HEMINGRAY-14/[Numbers and Dots] (R-
Skirt) MADE IN U.S.A. RDP
Ice Aqua, Clear, Green Tint

(F-Skirt) HEMINGRAY/PATENT MAY 2 1893 (R-Skirt)
MADE IN U.S.A./PETTICOAT SDP
Blue Aqua, Hemingray Blue

(F-Skirt) HEMINGRAY/['H.G.CO.' Blotted out] (R-
Skirt) MADE IN U.S.A. SDP
Hemingray Blue

(F-Skirt) HEMINGRAY/['H.G.CO./PATENT MAY 2
1893' Blotted out] (R-Skirt) MADE IN U.S.A./['PETTI-
COAT' Blotted out] SDP
Aqua

(F-Skirt) HEWNIGRAY {Note Spelling} (R-Skirt) N° 14
SDP
Aqua

K.C.G.W.

(F-Skirt) K C G W (R-Skirt) [Number] SB
Light Green, Ice Green, Aqua, Dark Green Aqua

LYNCHBURG

(F-Skirt) ['L' in an oval]/LYNCHBURG (R-Skirt)
NO.32/MADE IN [Number] U.S.A. RDP
Aqua, Light Aqua

(F-Skirt) ['L' in an oval]/LYNCHBURG (R-Skirt)
NO.32/MADE IN [Number] U.S.A. SDP
Aqua, Green Aqua, Light Aqua

MAYDWELL

(F-Skirt) MAYDWELL-14 (R-Skirt) U.S.A. SB
Clear, Straw

(F-Skirt) MAYDWELL-14 (R-Skirt) U.S.A. RDP
Clear, Purple Tint, Yellow Tint, Straw, Smoke, Gingerale

(F-Skirt) MAYDWELL-14 (R-Skirt) U.S.A. SDP
Straw, Yellow, Pink, Smoke

(F-Skirt) MAYDWELL-14/['M^cLAUGHLIN' Blotted
out] (R-Skirt) U.S.A. RDP
Light Smoke

M^cLAUGHLIN

(F-Skirt) M^cLAUGHLIN (R-Skirt) N° 14 FDP
Olive Green Blackglass, Olive Amber Blackglass, Amber
Blackglass, Ice Green

(F-Skirt) M^cLAUGHLIN (R-Skirt) N° 14 RDP
Aqua, Light Green, Ice Blue, Sage, Amber Blackglass,
Olive Amber, Light Blue, Olive Blackglass, Gray Green,
Steel Blue

(F-Skirt) M^cLAUGHLIN (R-Skirt) N° 14 SDP
Light Blue, Green Aqua, Sage Green, Light Aqua

NO NAME

(F-Skirt) [Glass Dot] (R-Skirt) [Glass Dot] SB
Aqua

(F-Skirt) [Glass Dot] (R-Skirt) [Number] {Tall narrow
Dome} SB
Aqua



CD 160 Variations

(Left) CALIFORNIA; (Right) Hemingray-14

(F-Skirt) [Number] (R-Skirt) [Number] SB
Aqua, Light Green

(F-Skirt) [Two Vertical Bars] (R-Skirt) [Number]
{Unembossed KCGW} SB
Aqua, Light Green, Ice Green

O.V.G.

(F-Skirt) O.V.G.CO. (R-Skirt) PETTICOAT PONY SB
Aqua

S.S. & CO.

(F-Skirt) S.S. & Co. MFG'S./CHICAGO/N° 40 (R-Skirt)
DOUBLE/PETTICOAT SB
Green Tint, Ice Blue, Clear

STAR

(F-Skirt) [Star] SB
Aqua, Lime Green, Light Blue, Olive Green, Light
Yellow Olive, Yellow Green, Green Aqua, Blue Aqua,
Light Aqua, Dark Yellow Green

STERLING

(F-Skirt) STERLING (R-Skirt) [Pound Sign] SB
Aqua, Blue Aqua

WHITALL TATUM

(F-Skirt) WHITALL TATUM CO. N° 14/[Number] (R-
Skirt) MADE IN U.S.A. ['W/T' in a triangle] SB
Clear, Straw

(F-Skirt) WHITALL TATUM N° 14/[Number] (R-Skirt)
MADE IN U.S.A. ['A' in a circle]/[Number and Dots]
SB
Clear, Straw, Pink Tint

(F-Skirt) WHITALL TATUM N° 14/[Number] (R-Skirt)
MADE IN U.S.A. ['W/T' in a triangle] SB
Straw, Clear



CD 160.6

CD 160.6

AM.TEL. & TEL.

(F-Crown) [Number] (F-Skirt) AM.TEL & TEL.CO. (R-
Skirt) PATD.NOV. 13TH 1883. {MLOD} {The [Number]
is on the (R-Crown) on the Lt. Yellow Green pieces} SB
Light Aqua Light Yellow Green



CD 160.7

CD 160.7

AMERICAN

(Base) AM INSULATOR CO.N.Y. DOUBLE PETTI-COAT/PAT'D SEPT. 13, 1881, NOV. 13, 1883, FEB. 15, 1884

Light Green, Aqua, Blue Aqua, Yellow Olive, Lime Green, Apple Green, Green Aqua

(Base) AM.INSULATOR CO.N.Y. DOUBLE PETTI-COAT/PAT'D SEPT. 13, 1881 NOV. 13, 1883

Blue Aqua, 7-up Green, Apple Green, Green, Light Blue, Dark Orange Amber



CD 161

CD 161

CALIFORNIA

(Dome) A (F-Skirt) CALIFORNIA SB

Light Sage, Plum, Sage Green, Light Green, Purple/Sage Two Tone, Smoke, Burgundy, Light Purple, Dark Purple, Purple

(F-Skirt) CALIFORNIA SB

Light Green, Light Purple, Light Sage, Sage, Aqua, Purple/Green Two Tone, Purple, Off Clear, Light Yellow Green, Blue Aqua

(F-Skirt) CALIFORNIA SDP

Sage Green, Light Purple

STAR

(F-Skirt) [Star] SB

Aqua, Dark Green, Lime Green, Green Aqua



CD 161.2

CD 161.2

BROOKFIELD

(F-Skirt) BROOKFIELD SB

Aqua, Dark Aqua, Dark Green, Dark Yellow Green

(F-Skirt) [Blotted out Embossing]/BROOKFIELD SB

Aqua



CD 162

CD 162

B.G.M.

(F-Skirt) B.G.M.CO. SB
Pink, Clear, Purple, Light Purple

BROOKFIELD

(Dome) [Letter or Number] (F-Skirt) BROOKFIELD SB
Green Aqua, Green

(Dome) [Letter or Number] (F-Skirt) BROOKFIELD
SDP
Aqua, Green

(Dome) [Letter or Number] (F-Skirt) BROOKFIELD (R-
Skirt) NEW YORK SB
Emerald Green, Light Blue, Aqua, Dark Aqua, Green,
Dark Green

(Dome) [Letter or Number] (F-Skirt) BROOKFIELD (R-
Skirt) NEW YORK SDP
Green, Aqua, Ice Green, Dark Green Aqua, Yellow Green

(Dome) [Number] (F-Skirt) W. BROOKFIELD (R-Skirt)
NEW YORK SB
Light Aqua

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST./N.Y.
(F-Skirt) PAT'D NOV. 13TH 1883 (R-Crown) [Number]
{MLOD} SB
Aqua

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST./N.Y.
(F-Skirt) PAT'D NOV. 13TH 1883 {MLOD} SB
Light Blue, Light Aqua

(F-Crown) (Arc)W. BROOKFIELD/45 CLIFF ST./N.Y.
(R-Crown) [Number] SB
Aqua, Lime Green

(F-Crown) (Arc)W. BROOKFIELD/NEW YORK (F-
Skirt) PAT.FEB. 12TH 1884. (R-Crown) [Letter] {MLOD}
SB
Light Blue

(F-Crown) (Arc)W. BROOKFIELD/NEW YORK (F-
Skirt) PAT.FEB. 12TH 1884. {MLOD} SB
Aqua, Dark Lime Green, Light Blue, Blue Aqua, Light
Green

(F-Crown) (Arc)WM BROOKFIELD/83 FULTON ST./
N.Y. (F-Skirt) PAT'D NOV. 13TH 1883 (R-Crown)
[Number] {MLOD} SB
Light Aqua

(F-Crown) (Arc)WM BROOKFIELD/NEW YORK (F-
Skirt) PATD NOV. 13TH 1883 (R-Crown) [Number]
{MLOD} SB
Aqua, Light Green

(F-Crown) (Arc)WM BROOKFIELD/NEW YORK (R-
Crown) PAT'D NOV. 13TH 1883 {MLOD} SB
Light Blue, Light Aqua, Aqua, Light Green

(F-Crown) (Arc)WM. BROOKFIELD/83 FULTON ST./
N.Y. (F-Skirt) PAT'D NOV. 13TH 1883 {MLOD} SB
Aqua

(F-Crown) [Number] (F-Skirt) BROOKFIELD {Note
Spelling} SB
Aqua

(F-Skirt) BROOKFIELD SB
Aqua

(F-Skirt) BROOKFIELD SDP
Aqua

(F-Skirt) BROOKFIELD (R-Skirt) NEW YORK SB
Light Aqua, Ice Blue, Light Blue, Green, Dark Green,
Dark Yellow Green, Light Purple, Lime Green

(F-Skirt) BROOKFIELD (R-Skirt) NEW YORK/
['B.G.M.CO.' Blotted out] SB
Aqua, Light Blue Aqua

(F-Skirt) BROOKFIELD (R-Skirt) ['B.G.M.CO.' Blotted
out] SB
Ice Blue, Aqua

(F-Skirt) BROOKFIELD {Narrow Dome} SDP
Aqua

(F-Skirt) BROOKFIELD/[Number] SB
Lime Green, Aqua, Olive Green

(F-Skirt) BROOKFIELD/[Number] (R-Skirt) N° 36 SB
Aqua, Blue Aqua, Snowy Aqua

(F-Skirt) W. BROOKFIELD (R-Skirt) NEW YORK SB
Aqua, Light Steel Blue

CALIFORNIA

(F-Skirt) CALIFORNIA SB
Light Yellow Green, Smokey Purple, Light Purple, Green
Aqua, Purple, Yellow, Gray, Sage, Burgundy, Plum,
Purple/Sage Two Tone

F.F.C.C.N.

(Dome) ['M' and 'V' entwined in a triangle]
(F-Skirt) FF CC N DE M RDP
Clear

(F-Skirt) FF CC N DE M RDP
Ice Green

(F-Skirt) FF CC N DE M SDP
Ice Green, Light Green

FORT WAYNE

(F-Crown) [Christian Cross] (F-Skirt) FT.W.E.Co. (R-
Skirt) PAT'D NOV. 13TH 1883 SB
Aqua

(F-Skirt) FT W.E.Co. (R-Crown) [Christian Cross] (R-
Skirt) PAT'D NOV. 13TH 1883 {MLOD} SB
Light Aqua

GAYNER

(F-Skirt) GAYNER (R-Skirt) NO.36-190 SDP
Aqua

(F-Skirt) GAYNER (R-Skirt) NO.36-190/[Number] SB
Aqua

(F-Skirt) GAYNER (R-Skirt) NO.36-190/[Number] SDP
Aqua

GOOD

(F-Skirt) R.GOOD JR. (R-Skirt) PETTICOAT SB
Aqua

(F-Skirt) R.GOOD JR./DENVER, COLO. (R-Skirt)
[Glass Dot]/PETTICOAT SB
Aqua, Purple, Light Purple

H.G.CO.

(F-Skirt) H.G.CO. (R-Skirt) PETTICOAT SB
Peacock Blue, Light Aqua, Ice Blue, Lemon, Light
Green, Dark Red Amber, Dark Yellow Amber, Milky
Golden Amber, Purple, Clear, Lime Green, Olive Green,
Blue Aqua, Yellow, Ice Green, Orange, Hemingray Blue,
Blue Tint, Green Tint

(F-Skirt) H.G.CO./PATENT MAY 2 1893 (R-Skirt)
PETTICOAT SDP
Aqua, Green, Milky Peacock Blue, Sage Green, Hemin-
gray Blue, Olive Amber, Peacock Blue, Light Peacock
Blue, Electric Blue, Light Electric Blue, Jade Blue Milk,
Dark Red Amber, Whiskey Amber, Yellow Amber,
Orange, Purple, Royal Purple, Cornflower Blue, Light
Purple, Brown, Lilac, Clear, Dark Honey Amber, Light
Olive Amber, Yellow Amber, Snowy Aqua, Ice Blue
Gray, Golden Amber, Root Beer Amber, Ruby Red,
Brown Amber, Yellow

(F-Skirt) H.G.CO./PATENT MAY 2 1893 (R-Skirt)
PETTICOAT/['PETTICAOT' Blotted out] SDP
Purple, Royal Purple, Aqua

(F-Skirt) H.G.CO./PATENT MAY 2, 1893 (R-Skirt)
PETTICOAY {Note Spelling} SDP
Aqua

HAMILTON

(F-Skirt) HAMILTON GLASS CO. {MLOD} RB
Light Aqua, Light Green, Light Blue Aqua

HAWLEY

(F-Skirt) ['HICo' Entwined Initials]/HAWLEY PA./
U.S.A. SB
Aqua, Green, Green Aqua

HEMINGRAY

(Dome) 1 (F-Skirt) HEMINGRAY (R-Skirt) N° 19 SB
Light Aqua

(Dome) [Number] (F-Skirt) HEMINGRAY/MADE IN
U.S.A. (R-Skirt) N° 19 SB
Green Aqua

(Dome) [Number] (F-Skirt) HEMINGRAY/MADE IN
U.S.A. (R-Skirt) N° 19 SDP
Clear, Ice Blue, Whiskey Amber, Sapphire Blue, Aqua,
Hemingray Blue, Light Olive Amber

(F-Skirt) HEMINGRAY (R-Skirt) N° 19 SB
Green Aqua

(F-Skirt) HEMINGRAY (R-Skirt) N° 19 SDP
Dark Cobalt Blue, Cobalt Blue, Milky Cobalt Blue, Dark
Aqua, Light Aqua, Dark Red Amber, Dark Orange, Dark
Green, Green, Light Green, Celery Green, Dark Olive
Green, 7-up Green, Olive Amber, Dark Yellow Green,
Root Beer Amber, Jade Green, Hemingray Blue, Sapphire
Blue, Blue

(F-Skirt) HEMINGRAY (R-Skirt) [Blotted out Emboss-
ing] N° 19 SDP
Aqua

(F-Skirt) HEMINGRAY-19 (R-Skirt) MADE IN U.S.A.
SB
Hemingray Blue, Aqua

(F-Skirt) HEMINGRAY-19 (R-Skirt) MADE IN U.S.A.
RDP
Cobalt Blue, Light Cobalt Blue, Dark Blue, Aqua,
Hemingray Blue, Ice Blue, Light Blue Aqua, Dark
Orange Amber, Honey Amber, Yellow Amber, Green,
Light Green, 7-up Green, Light Carnival, Dark Aqua,
Red Amber, Orange Amber, Green/Aqua Two Tone,
Hemingray Blue, Light 7-up Green

(F-Skirt) HEMINGRAY-19 (R-Skirt) MADE IN U.S.A.
SDP
Dark Cobalt Blue, Cobalt Blue, Whiskey Amber, Jade
Aqua Milk, Milky Cobalt, Light Yellow Amber, Aqua,
Hemingray Blue, Olive Green, Golden Amber

(F-Skirt) HEMINGRAY-19 (R-Skirt) MADE IN U.S.A./
[Number] RDP
Green Tint

(F-Skirt) HEMINGRAY-19/[Blotted out Embossing] (R-
Skirt) MADE IN U.S.A./[Blotted out Embossing] SB
Hemingray Blue

(F-Skirt) HEMINGRAY-19/[Number and Dots] (R-Skirt)
MADE IN U.S.A./[Number] RDP
Clear, Straw, Ice Green, Carnival, Flashed Amber

(F-Skirt) HEMINGRAY-19/[Number] (R-Skirt) MADE
IN U.S.A. SB Ice Blue

(F-Skirt) HEMINGRAY-19/[Numbers and Dots] (R-
Skirt) MADE IN U.S.A. RDP
Ice Blue

(F-Skirt) HEMINGRAY-19/[Numbers and Dots] (R-
Skirt) [Number]/MADE IN U.S.A. RDP
Clear

(F-Skirt) HEMINGRAY/MADE IN U.S.A. (R-Skirt) N°
19 SB
Aqua, Ice Blue, Hemingray Blue

(F-Skirt) HEMINGRAY/MADE IN U.S.A. (R-Skirt) N°
19 SDP
Clear, Cobalt Blue, Light Cobalt Blue, Dark Honey
Amber, Honey Amber, Aqua, Hemingray Blue, Light
Olive Green, Whiskey Amber, Olive Amber

(F-Skirt) HEMINGRAY/MAY 2 1893 (R-Skirt) PETTI-
COAT SDP
Aqua, Cobalt Blue, Green Aqua

(F-Skirt) HEMINGRAY/PATENT MAY 2 1893 (R-Skirt)
PETTICOAT SDP
Cobalt Blue, Olive Amber, Orange Amber, Whiskey
Amber, Root Beer Amber, Olive Green, Aqua, Dark
Olive Green, Green Aqua, Red Amber

(F-Skirt) HEMINGRAY/PATENTED (R-Skirt) PETTI-
COAT SDP
Ice Blue, Dark Electric Blue, Light Electric Blue, Light
Green, Ice Green, Aqua, Dark Green Aqua, Green Aqua,
Powder Blue

K.C.G.W.

(F-Skirt) K.C.G.W. SB
Light Aqua, Ice Blue, Green, Dark Green

(F-Skirt) K.C.G.W. (R-Skirt) [Number] SB
Light Green, Dark Green

(F-Skirt) ['K.C.G.W.' Blotted out] SB
Aqua

LYNCHBURG

(Dome) ['L' in an oval] (F-Skirt) LYNCHBURG (R-
Skirt) NO.36/MADE IN [Number] U.S.A. SB
Aqua, Light Green, Green

(Dome) ['L' in an oval] (F-Skirt) LYNCHBURG (R-
Skirt) NO.36/MADE IN [Number] U.S.A. RDP
Sage Green, Aqua

(Dome) ['L' in an oval] (F-Skirt) LYNCHBURG (R-
Skirt) NO.36/MADE IN [Number] U.S.A. SDP
Blue Aqua, Blue, Green

(F-Skirt) LYNCHBURG (R-Skirt,Left) NO.36- (R-
Skirt,Right) MADE IN/U.S.A. SDP
Aqua

(F-Skirt) ['L' in an oval]/LYNCHBURG (R-Skirt) NO.36
U.S.A./[Number] {Note no 'MADE IN'} SDP
Aqua, Green

(F-Skirt) ['L' in an oval]/LYNCHBURG (R-Skirt)
NO.36/MADE IN [Number] U.S.A. SDP
Aqua, Milky Aqua, Light Aqua, Blue

(F-Skirt) ['L' in an oval]/LYNCHBURG (R-Skirt,Left)
NO.36- (R-Skirt,Right) MADE IN/U.S.A. RDP
Sage Green, Aqua, Light Aqua, Green

(F-Skirt) ['L' in an oval]/LYNCHBURG (R-Skirt,Left)
NO.36-/ [Number] (R-Skirt,Right) MADE IN/U.S.A. SB
Light Aqua, Aqua, Ice Blue, Blue, Dark Aqua

(F-Skirt) ['L' in an oval]/LYNCHBURG (R-Skirt,Left)
NO.36-/ [Number] (R-Skirt,Right) MADE IN/U.S.A.
SDP
Aqua, Blue Aqua, Green

(F-Skirt) ['L' in an oval]/LYNCHBURG {'G' is upsid-
edown} (R-Skirt,Left) NO.36- (R-Skirt,Right) MADE IN
.U.S.A {Note periods} RDP
Sage Green

(F-Skirt) ['L' in an oval]/LYNCHBURG {'G' is upsid-
edown} (R-Skirt,Left) NO.36-/ [Number] (R-Skirt,Right)
MADE IN/.U.S.A {Note periods} SB
Light Aqua

(F-Skirt) ['L' in an oval]/LYNCHBURG {'G' is upsid-
edown} (R-Skirt,Left) NO.39-/ [Number] (R-Skirt,Right)
MADE IN/.U.S.A {Note periods} SDP
Light Green, Light Aqua, Green Aqua

(F-Skirt) ['L' in an oval]/LYNCHBURG {'N' is back-
wards; 'G' is upsidedown} (R-Skirt,Left) NO.36-/
[Number] (R-Skirt,Right) MADE IN/.U.S.A {Note
periods} SDP
Light Aqua

(F-Skirt) ['L' in an oval]/LYNCHBURG {'N' is back-
wards} (R-Skirt) NO.36-U.S.A./['190' Blotted out]/
[Number] {'U.S.A.' covers the '190' from a Gayner mold}
SDP
Aqua

(F-Skirt) ['L' in an oval]/LYNCHBURG {'N' is back-
wards} (R-Skirt,Left) NO.36-/ [Number] (R-Skirt,Right)
MADE IN .U.S.A {Note periods} SDP
Light Green

(F-Skirt) ['L' in an oval]/LYNCHBURG/['NEW YORK'
Blotted out] (R-Skirt) NO.36 MADE IN/
['BROOKFIELD' Blotted out]/U.S.A. SDP
Aqua

MAYDWELL

(F-Skirt) MAYDWELL-19 (R-Skirt) U.S.A. RDP
Straw, Clear, Pink, Purple Tint, Light Green, Dark Straw

(F-Skirt) MAYDWELL-19 (R-Skirt) U.S.A. SDP
Purple Tint, Light Straw, Clear, Pink, Smoke, Gingerale

(F-Skirt) ['U.S.A.' Blotted out]/MAYDWELL-19 (R-
Skirt) ['M^oLAUGHLIN 19' Blotted out]/U.S.A. RDP
Straw, Dark Straw, Light Green, Smoky Gray

M^oLAUGHLIN

(F-Skirt) M^oLAUGHLIN {Note Spelling} (R-Skirt) N^o 19
RDP Light Green

(F-Skirt) M^oLAUGHLIN (R-Skirt) N^o 19 SB
Light Green, Green Aqua, Blue, Light Blue Aqua, Steel
Gray, Aqua

(F-Skirt) M^oLAUGHLIN (R-Skirt) N^o 19 FDP
Light Blue, Blue, Ice Green

(F-Skirt) M^oLAUGHLIN (R-Skirt) N^o 19 RDP
Aqua, Blue Gray, Light Yellow Green, Ice Green, Light
Blue, Emerald Green, Green Aqua, Green, Lemon, Light
Plum

(F-Skirt) M^oLAUGHLIN (R-Skirt) N^o 19 SDP
Aqua, Light Green, Light Yellow Green, Light Blue,
Smoke, Emerald Green, Sage Green, Green

N.E.G.M.

(F-Skirt) N.E.G.M.CO. SB
Aqua, Green, Peacock Blue, Blue Aqua, Green Aqua

NO NAME

(F-Crown) [Number] (F-Skirt) PAT'D.NOV. 13TH 1883.
SB Light Aqua, Light Green

(F-Skirt) NO.36-19 SB
Aqua

(F-Skirt) N^o 19 {Hemingray product} SDP
Cobalt Blue, Blue Aqua, Milky Cobalt Blue

(F-Skirt) PETTICOAT (R-Skirt) PETTICOAT SDP
Aqua

(F-Skirt) [Vertical Bar] (R-Skirt) [Vertical Bar] SB
Light Green, Light Aqua

[No Embossing] RDP
Light Aqua

NO NAME-CANADA

(F-Skirt) 1678 SDP
Clear, Light Aqua, Light Purple, Royal Purple, Gray

[No Embossing] {MLOD} {Hamilton Style} RB
Light Aqua, Clear

NO NAME-MEXICO

(Dome) ['M' and 'V' entwined in a triangle] SDP
Sage Green

(Dome) ['M' and 'V' entwined in a triangle]
(F-Skirt) N^{DE} M RDP
Clear

(Dome) ['M' and 'V' entwined in a triangle]
(F-Skirt) N^{DE} M SDP
Clear

(F-Skirt) N^{DE} M SDP
Clear

O.V.G.

(F-Skirt) O.V.G.CO. (R-Skirt) PETTICOAT SB
Aqua, Blue, Light Purple

S.S.& CO.

(F-Skirt) S.S. & Co. MFG'S/CHICAGO/N^o 19 (R-Skirt)
DOUBLE/PETTICOAT SB
Aqua, Clear, Apple Green, Light Blue, Lime Green,
Light Green, Light Aqua

STAR

(F-Skirt) [Star] SB
Light Aqua, Aqua, Lime Green, Green, Light Blue,
Green Aqua, Dark Yellow Green, Olive Green, Yellow
Green, Blue

(F-Skirt) [Star] SDP
Aqua, Green, Blue

(F-Skirt) [Star] (R-Skirt) [Star] SB
Blue Aqua, Aqua, Olive Green

T-H.E.

(F-Skirt) T-H.E.CO. (R-Skirt) PAT'D NOV. 13TH 1883
{MLOD} SB
Aqua, Light Blue

(F-Skirt) T-H.E.CO. (R-Skirt) [Blotted out Embossing]/
PAT'D NOV. 13TH 1883 {MLOD} SB
Aqua

W.F.G.

(F-Skirt) W.F.G.CO./DENVER, COLO. (R-Skirt) [Glass
Dot]/PETTICOAT SB
Aqua, Clear, Purple, Ice Blue, Off Clear

W.G.M.

(F-Skirt) W.G.M.CO. SB
Straw, Clear, Purple, Light Purple, Royal Purple, Pink

WESTINGHOUSE

(F-Skirt) WESTINGHOUSE/NO.2 SB
Blue Aqua, Light Green, Off Clear, Lime Green

WHITALL TATUM

(F-Skirt) WHITALL TATUM CO. NO.4/[Number] (R-
Skirt) MADE IN U.S.A. ['W/T' in a triangle] SB
Clear

(F-Skirt) WHITALL TATUM NO.4/[Number] (R-Skirt)
MADE IN U.S.A. {'W/T' in a triangle}/[Number] SB
Clear, Pink



CD 162.1

CD 162.1

BROOKFIELD

(Dome) [Number] (F-Skirt) BROOKFIELD SB
Dark Green Aqua

(Dome) [Number] (F-Skirt) BROOKFIELD (R-Skirt)
NEW YORK SB
Aqua, Green, Emerald Green, Olive Amber

(F-Skirt) BROOKFIELD SB
Aqua, Blue

(F-Skirt) BROOKFIELD SDP
Aqua, Dark Aqua

(F-Skirt) BROOKFIELD (R-Skirt) NEW YORK SB
Aqua, Dark Green

(F-Skirt) BROOKFIELD (R-Skirt) NEW YORK SDP
Aqua, Green, Dark Aqua, Dark Yellow Green

STAR

(F-Skirt) [Star] SB
Green Aqua



CD 162.3

CD 162.3

BROOKFIELD

(F-Skirt) W. BROOKFIELD (R-Skirt) NEW YORK SB
Ice Blue, Steel Blue, Gray, Purple, Light Aqua

STAR

(F-Skirt) [Star] SB
Aqua, Light Blue, Green Aqua, Light Purple, Light Steel
Blue, Light Green, Dark Green, Lime Green, Apple
Green

(F-Skirt) [Star] WDP
Aqua, Light Green, Blue



CD 162.4

CD 162.4

NO NAME - CANADA

(F-Skirt) 1673 SB
Aqua, Lemon

(F-Skirt) 1673 SDP
Light Aqua, Aqua

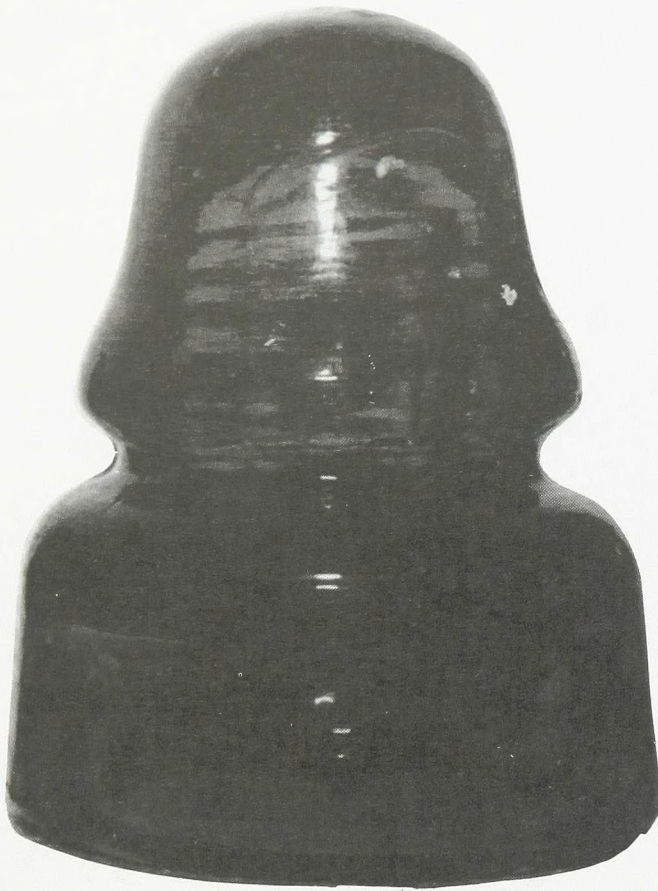
(F-Skirt) 1678 SB
Straw, Aqua, Clear, Blue Aqua, Lemon, Olive Green,
Dark Aqua, Steel Blue, Green, Lime Green, Purple, Ice
Blue, Light Gray, Smokey Purple, Yellow, Sage Green,
Purple Tint, Blue

(F-Skirt) 1678 RDP
Straw, Aqua

(F-Skirt) 1678 SDP
Aqua, Ice Aqua, Light Purple, Gray, Blue, Ice Gray,
Green, Purple, Lime Green, Indigo Blue

(F-Skirt) 1678 {'8' is engraved over a '3'} SB
Light Green, Dark Green Aqua

[No Embossing] {MLOD} SB
Green, Aqua, Purple, Blue, Apple Green, Royal Purple



CD 162.5

CD 162.5

P.L.W.

(Dome) P.L.W. (F-Skirt) B SB
Aqua, Green

P.R.R.

(Dome) P.R.R. (F-Skirt) B SB
Aqua, Yellow Green, Green, Blue Aqua

(Dome) R.R.R. {Note Spelling} (F-Skirt) B SB
Aqua



CD 162.7

CD 162.7

DERF

(F-Skirt) DERF (R-Skirt) TELG^S NACL^S MEXICO SB
Aqua, Sage Green, Dark Green Aqua

(F-Skirt) DERF (R-Skirt) TELG^S NACL^S MEXICO RDP
Dark Green, Lime Green, Aqua, Emerald Green

(F-Skirt) DERF (R-Skirt) TELG^S NACL^S MEXICO SDP
Aqua, Green Aqua, Dark Yellow Green, Dark Aqua, Dark
Green Aqua, Dark Olive Green

F.F.C.C.N.

(F-Skirt) F.F.C.C.N^{DE} M/F.D. RDP
Aqua, Clear, Lime Green

NO NAME-MEXICO

[No Embossing] {MLOD} SB
Light Green, Dark Olive Green, Aqua

[No Embossing] {MLOD} RDP

Aqua, Lime Green, Purple, Rose, Yellow Green, Light
Gray, Light Purple

P.S.S.A.

(F-Skirt) ['VB' in a circle]/PSSA #19 RDP
Sage Tint



CD 163

CD 163

ARMSTRONG

(F-Skirt) *Armstrong's* No.4 (R-Skirt) MADE IN USA.
 ['A' in a circle] [Numbers and Dots] SB
 Clear

HEMINGRAY

(F-Skirt) HEMINGRAY-19 (R-Skirt) MADE IN U.S.A./
 [Numbers and Dots] RDP
 Clear, Straw

WHITALL TATUM

(F-Skirt) (Arc)WHITALL TATUM/No.4 (R-Skirt)
 (Arc)MADE IN U.S.A./[Numbers and Dots]/['A' in a
 circle] SB
 Clear, Light Pink

(F-Skirt) WHITALL TATUM CO. No.4/[Number] (R-
 Skirt) MADE IN U.S.A. ['W/T' in a triangle] SB
 Aqua, Ice Aqua, Straw



CD 163 Variation

*Whitall Tatum molds are a little wider in the dome
 and skirt than Armstrong and Hemingray units.*



CD 163.2

CD 163.2

NO NAME

(F-Skirt) [Vertical Bar] (R-Skirt) [Vertical Bar] SB
 Light Aqua, Light Green



CD 164

CD 164

ARMSTRONG

(F-Skirt) *Armstrong's* N° 5 (R-Skirt) MADE IN U.S.A.
 ['A' in a circle] [Numbers and Dots] CB
 Light Smoke

(F-Skirt) *Armstrong's* N° 5 (R-Skirt) MADE IN U.S.A.
 ['A' in a circle] [Numbers and Dots] SB
 Clear, Light Green, Off Clear

B

(F-Skirt) B SB
 Aqua, Green, Yellow Green, Emerald Green

(F-Skirt) B SDP
 Aqua, Green

B.C.DRIP

(F-Skirt) B.C/DRIP SB
 Light Aqua

(F-Skirt) B.C/DRIP SDP
 Light Aqua, Aqua

B.G.M.

(F-Skirt) B.G.M.CO. SB
 Clear, Purple, Light Purple

BROOKFIELD

(Dome) [Letter or Number] (F-Skirt) BROOKFIELD SB
 Aqua, Green, Emerald Green, Yellow Green, Olive
 Green, Olive Amber

(Dome) [Letter or Number] (F-Skirt) BROOKFIELD
 SDP
 Aqua, Green, Yellow Green, Olive Amber

(Dome) [Number] (F-Skirt) BROOKFIELD (R-Skirt)
 NEW YORK SB
 Aqua, Green

(F-Crown) (Arc)W. BROOKFIELD/NEW YORK (F-
 Skirt) PAT'D NOV. 13TH 1883 SB
 Aqua, Light Aqua

(F-Skirt) BROOKFIELD (R-Skirt) NEW YORK SB
 Aqua, Light Blue, Light Green

(F-Skirt) BROOKFIELD (R-Skirt) NEW YORK SDP
 Aqua, Green, Olive Green

(F-Skirt) BROOKFIELD (R-Skirt) NEW YORK/
 ['B.G.M.CO.' Blotted out] SB
 Light Aqua, Light Green

(F-Skirt) BROOKFIELD (R-Skirt) N° 38 SB
 Aqua, Green, Olive Green, Yellow Green, Olive Amber

(F-Skirt) BROOKFIELD/[Number] SB
 Aqua, Green, Blue Aqua, Green Aqua

(F-Skirt) W. BROOKFIELD (R-Skirt) NEW YORK SB
 Aqua, Light Aqua

DIAMOND

(F-Skirt) [Diamond] SB
 Aqua, Straw, Light Green, Peach, Light Steel Blue, Light
 Purple, Purple, Ice Yellow Green

DOMINION

(F-Skirt) DOMINION 614 (R-Skirt) ['D' in a diamond]
 [Numbers and Dots] RDP
 Straw, Light Green, Ice Green

(F-Skirt) DOMINION 614 (R-Skirt) ['D' in a diamond]
 [Numbers and Dots] SDP
 Light Green, Clear

(F-Skirt) DOMINION-614 (R-Skirt) [Diamond] RDP
 Clear, Light Green, Straw, Pink

(F-Skirt) DOMINION-614 (R-Skirt) [Diamond] SDP
 Clear, Light Green, Straw, Light Sage

GAYNER

(F-Skirt) GAYNER (R-Skirt) NO.38-20/[Number] SDP
Aqua

(F-Skirt) GAYNER (R-Skirt) NO.38-20/[Number] {Some
of them are tall, similar to a CD166} SB
Aqua

H.G.CO.

(F-Skirt) H.G.CO. (R-Skirt) PETTICOAT SB
Aqua, Ice Blue, Blue Aqua, Ice Green, Off Clear, Light
Green, Lime Green, Light Steel

(F-Skirt) H.G.CO./PATENT MAY 2 1893 (R-Skirt)
PETTICOAT SDP
Aqua, Green, Lime Green, Hemingray Blue, Peacock
Blue, Emerald Green, Amber, Purple, Ice Aqua, Jade
Green Milk, Yellow Green, Olive Green

(F-Skirt) H.G.CO./PATENT MAY 2 1893 (R-Skirt)
PETTICOAY {Note Spelling} SDP
Aqua

HAWLEY

(F-Skirt) ['HICo' Entwined Initials] (R-Skirt) HAWLEY
PA. U.S.A. SB
Aqua

(F-Skirt) ['HICo' Entwined Initials]/['STERLING'
Blotted out] (R-Skirt) HAWLEY PA. U.S.A./['Pound
Sign' Blotted out] SB
Aqua, Blue Aqua

HEMINGRAY

(F-Skirt) HEMINGRAY (R-Skirt) N° 20 SDP
Aqua, Emerald Green, Olive Green

(F-Skirt) HEMINGRAY-20 (R-Skirt) HEMINGRAY-20
RDP
Hemingray Blue

(F-Skirt) HEMINGRAY-20 (R-Skirt) HEMINGRAY-20
SDP
Hemingray Blue

(F-Skirt) HEMINGRAY-20 (R-Skirt) MADE IN U.S.A.
SB
Aqua

(F-Skirt) HEMINGRAY-20 (R-Skirt) MADE IN U.S.A.
RDP
Aqua, Green, Hemingray Blue, Ice Blue, Golden Amber,
Clear/Aqua Two Tone, Carnival

(F-Skirt) HEMINGRAY-20 (R-Skirt) MADE IN U.S.A.
SDP
Aqua, Hemingray Blue

(F-Skirt) HEMINGRAY-20 (R-Skirt) MADE IN U.S.A./
[Number] SB
Clear

(F-Skirt) HEMINGRAY-20/['42' Blotted out] (R-Skirt)
MADE IN U.S.A. SDP
Hemingray Blue

(F-Skirt) HEMINGRAY-20/[Numbers and Dots] (R-
Skirt) MADE IN U.S.A. RDP
Ice Blue

(F-Skirt) HEMINGRAY-20/[Numbers and Dots] (R-
Skirt) MADE IN U.S.A./[Number] RDP
Clear, Ice Blue

(F-Skirt) HEMINGRAY/MADE IN U.S.A. (R-Skirt) N°
20 SDP
Aqua, Hemingray Blue

(F-Skirt) HEMINGRAY/PATENTED MAY 2 1893 (R-
Skirt) PETTICOAT SDP
Aqua, Cobalt Blue, Emerald Green, Yellow Green, Lime
Green

(F-Skirt) HEMINGRAY/[Blotted out Embossing] (R-
Skirt) N° 20 SDP
Aqua

(F-Skirt) [Numbers and Dots]/HEMINGRAY-20 (R-
Skirt) MADE IN U.S.A./[Number] RDP
Ice Blue

K.C.G.W.

(F-Skirt) K C G Co (R-Skirt) PERU SB
Aqua, Lime Green, Light Blue, Ice Aqua

(F-Skirt) [Glass Dot]/['K C G Co' Blotted out] (R-Skirt)
[Glass Dot]/['PERU' Blotted out] SB
Aqua, Light Green, Light Blue

LYNCHBURG

(F-Skirt) LYNCHBURG (R-Skirt) NO.38-20/[Number]
SB
Aqua

(F-Skirt) LYNCHBURG (R-Skirt) NO.38-20/[Number]
SDP
Light Aqua, Yellow Green

(F-Skirt) LYNCHBURG (R-Skirt,Left) No.38-/ [Number]
(R-Skirt,Right) MADE IN/U.S.A. SDP
Aqua

(F-Skirt) LYNCHBURG/['L' in an oval] [Number] (R-Skirt,Left) No.38-/[Number] (R-Skirt,Right) MADE IN/ U.S.A. SB
Aqua

(F-Skirt) LYNCHBURG/['L' in an oval] [Number] (R-Skirt,Left) No.38-/[Number] (R-Skirt,Right) MADE IN/ U.S.A. SDP
Aqua, Blue Aqua

(F-Skirt) ['L' in an oval]/LYNCHBURG (R-Skirt) NO.38-20/[Number] SB
Green

(F-Skirt) ['L' in an oval]/LYNCHBURG (R-Skirt) NO.38-20/[Number] RDP
Aqua

(F-Skirt) ['L' in an oval]/LYNCHBURG (R-Skirt) NO.38-20/[Number] SDP
Aqua, Green, Sage Green

(F-Skirt) ['L' in an oval]/LYNCHBURG (R-Skirt,Left) NO.38-/[Number] [Number] (R-Skirt,Right) MADE IN U.S.A.. {Note periods} SB
Green, Yellow Green

(F-Skirt) ['L' in an oval]/LYNCHBURG (R-Skirt,Left) No.38-/[Number] (R-Skirt,Right) MADE IN/U.S.A. SB
Aqua, Green, Light Aqua, Blue Aqua

(F-Skirt) ['L' in an oval]/LYNCHBURG (R-Skirt,Left) No.38-/[Number] (R-Skirt,Right) MADE IN/U.S.A. RDP
Aqua, Light Blue Aqua

(F-Skirt) ['L' in an oval]/LYNCHBURG (R-Skirt,Left) No.38-/[Number] (R-Skirt,Right) MADE IN/U.S.A. SDP
Aqua, Light Aqua, Green, Yellow Green

MAYDWELL

(F-Skirt) MAYDWELL-20 (R-Skirt) U.S.A. SDP
White Milk, Straw, Light Sage Green, Off Clear, Clear, Smoke, Light Yellow

(F-Skirt) MAYDWELL-20 (R-Skirt) U.S.A./ ['M^{CL}AUGHLIN' Blotted out] RDP
White Milk

(F-Skirt) MAYDWELL-20 (R-Skirt) U.S.A./[Number] RDP
White Milk, Straw, Clear, Pink, Green Tint, Smoke, Off Clear, Peach, Light Yellow

(F-Skirt) MAYDWELL-20/['M^{CL}AUGHLIN' Blotted out] (R-Skirt) U.S.A. RDP
Clear, White Milk

M^{CL}AUGHLIN

(F-Skirt) M^{CL}AUGHLIN (R-Skirt) N^o 20 SB
Off Clear, Aqua, Sage Green, Light Blue, Steel Blue, Straw, Smoke, Light Green

(F-Skirt) M^{CL}AUGHLIN (R-Skirt) N^o 20 RDP
Green Aqua, Light Green, Lime Green, Light Blue, Yellow, Steel Blue, Aqua, Green Aqua

(F-Skirt) M^{CL}AUGHLIN (R-Skirt) N^o 20 SDP
Steel Blue, Light Green, Sage Green, Light Blue

(F-Skirt) M^{CL}AUGHLIN (R-Skirt) N^o-20 FDP
Green Aqua

(F-Skirt) M^{CL}AUGHLIN {'N' is backwards} (R-Skirt) N^o 20 SB
Aqua, Light Blue, Light Sage Green

(F-Skirt) M^{CL}AUGHLIN {'N' is backwards} (R-Skirt) N^o 20 RDP
Light Green, Light Blue, Light Sage Green

(F-Skirt) M^{CL}AUGHLIN {'N' is backwards} (R-Skirt) N^o 20 SDP
Sage Aqua, Light Green, Ice Blue, Steel Blue

(F-Skirt) M^{CL}AUGHLIN {'N' is backwards} (R-Skirt) N^o-20 FDP
Light Green, Light Green Aqua, Aqua

(F-Skirt) M^{CL}AUGHLIN-20 FDP
Delft Blue, Ice Green, Light Green, Blue

(F-Skirt) M^{CL}AUGHLIN-20 RDP
Aqua, Green, Emerald Green, Citron, Clear, Off Clear, Yellow Green, Light Yellow Green, Lemon, Light Green

(F-Skirt) M^{CL}AUGHLIN-20 SDP
Aqua, Green, Emerald Green, Yellow Green

NO NAME

(F-Skirt) NO.38-20/[Number] SB
Aqua, Blue

(F-Skirt) PETTICOAT SDP
Purple, Royal Purple

(F-Skirt) [Vertical Bar] [1] {'1' is upsidedown and backwards} (R-Skirt) [Vertical Bar] SB
Green Aqua

[No Embossing] SB
Aqua, Sage Green

STAR

(F-Skirt) [Star] SB
Aqua, Blue, Green, Yellow Green, Dark Yellow Green,
Green Aqua, Olive Green, Lime Green, Blue Aqua

(F-Skirt) [Star] SDP
Aqua

(F-Skirt) [Star] (R-Skirt) [Blotted Circle] SB
Dark Aqua

STERLING

(F-Skirt) STERLING (R-Skirt) [Pound Sign] SB
Aqua, Green Aqua

WHITALL TATUM

(F-Skirt) WHITALL TATUM CO. No.5 (R-Skirt) MADE
IN U.S.A. [Numbers and Dots] SB
Light Pink

(F-Skirt) WHITALL TATUM No.5/[Number] (R-Skirt)
MADE IN U.S.A. ['W/T' in a traingle]/[Numbers and
Dots] SB
Smoke, Clear, Straw

(F-Skirt) WHITALL TATUM No.5/[Number] (R-Skirt)
MADE IN U.S.A. [Numbers and Dots] SB
Clear, Straw, Light Pink



CD 164.4

CD 164.4

NO NAME

[No Embossing] {Fry Glass} SB
White Opalescent, Black Opalescent, Straw, Opaque
Cobalt Blue



CD 165

CD 165

HEMINGRAY

(F-Skirt) HEMINGRAY-20 (R-Skirt) MADE IN U.S.A./
[Numbers and Dots] SB
Clear

(F-Skirt) HEMINGRAY-20 (R-Skirt) MADE IN U.S.A./
[Numbers and Dots] RDP
Clear, Light Straw



CD 165.1

WHITALL TATUM

(F-Skirt) N° 5/WHITALL TATUM CO. (R-Skirt) MADE IN U.S.A. SB

Light Aqua

(F-Skirt) WHITALL TATUM CO. N° 5/[Number] (R-Skirt) MADE IN U.S.A. ['W/T' in a triangle] SB

Ice Aqua, Aqua, Straw, Clear

CD 166

CALIFORNIA

(F-Skirt) A011/CALIFORNIA SB

Sage Green, Smoke, Peach, Yellow, Purple, Burgundy, Gray Blue, Light Purple

(F-Skirt) CALIFORNIA SB

Aqua, Green, Purple

CD 165.1



CD 166



CD 166.2

CD 166.2

E.L.

(F-Skirt) E.L.Co. SB

Aqua

NO NAME

[No Embossing] SB

Aqua, Emerald Green, Dark Yellow Green, Olive Green, Olive Amber, Light Aqua, Apple Green



CD 166.2 Variation
The "E.L." embossed units have a long skirt but the same dome shape as the No Name style.



CD 167

CD 167

ARMSTRONG

(F-Skirt) (Arc)ARMSTRONG/[Numbers and Dots] ['A' in a circle]/[Number] (R-Skirt) 51-C1/MADE IN U.S.A. CB
 Root Beer Amber

(F-Skirt) (Arc)ARMSTRONG/[Numbers and Dots] ['A' in a circle]/[Number] (R-Skirt) 51-C1/MADE IN U.S.A. SB
 Clear, Light Straw, Root Beer Amber

NO NAME

(F-Skirt) [Numbers and Dots] [Owens Illinois Trademark] [Number and Dots] (R-Skirt) 51 C1 CB
 Light Straw, Clear

(F-Skirt) [Numbers] [Owens Illinois Trademark] [Numbers] (R-Skirt) 51 C1 SB
 Clear



CD 168

CD 168

HEMINGRAY

(F-Skirt) HEMINGRAY/MADE IN U.S.A. (R-Skirt) D-510 SB
 Aqua, Carnival

(F-Skirt) LOWEX/HEMINGRAY/MADE IN U.S.A. (R-Skirt) D-510 SB
 Off Clear

(F-Skirt) [Number] HEMINGRAY/MADE IN U.S.A. (R-Skirt) D-510 SB
 Carnival, Ice Blue

(F-Skirt) [Number]/HEMINGRAY/MADE IN U.S.A. (R-Skirt) ['LOWEX' Blotted out]/D-510 SB
 Dark Olive, Dark Olive Amber, Yellow Tint, Clear

(F-Skirt) [Numbers and Dots]/HEMINGRAY/MADE IN U.S.A. (R-Skirt) LOWEX/D-510 SB
 Carnival, Dark Olive Amber

(F-Skirt) [Numbers and Dots]/HEMINGRAY/MADE IN U.S.A. (R-Skirt) REG.U.S.PAT.OFF./LOWEX/D-510 SB
 Ice Green, Dark Olive Amber, Straw, Clear

(F-Skirt) [Numbers and Dots]/HEMINGRAY/MADE IN U.S.A. (R-Skirt) ['REG. U.S. PAT.OFF.' Blotted out]/ ['LOWEX' Blotted out]/D-510 CB
 Clear



CD 168 Variation

The Whitall Tatum units have a larger mold and different dome shape from the Hemingray products.

(F-Skirt) [Numbers and Dots]/HEMINGRAY/MADE IN U.S.A. (R-Skirt) [Number]/D-510 SB
Ice Blue, Clear, White Opalescent, Carnival, Orange Amber, Dark Olive Amber

WHITALL TATUM

(F-Skirt) WHITALL TATUM CO. N° 11/[Number] (R-Skirt) MADE IN U.S.A. ['W/T' in a triangle] SB
Light Aqua, Light Green, Ice Blue



CD 169

CD 169

HEMINGRAY

(F-Skirt) HEMINGRAY (R-Skirt) TYPE.1 SDP
Aqua

WHITALL TATUM

(F-Skirt) NO.4/WHITALL TATUM CO. (R-Skirt) MADE IN U.S.A./[Number] SB
Light Aqua, Ice Blue



CD 168.5

CD 168.5

NO NAME

(F-Skirt) [Glass Dot] SB
Dark Aqua



CD 169 Variation

The Hemingray unit has a gradual slope in the skirt.



CD 169.5

BROOKFIELD

(F-Skirt) BROOKFIELD SB

Aqua, Green, Dark Green, Green Aqua

CD 170

NO NAME

[No Embossing] SB

Aqua, Green Aqua, Light Aqua

CD 169.5



CD 170



CD 170.1

CD 170.1

NO NAME

[No Embossing] SB

Aqua, Light Blue Milk, Olive Amber, Light Lavendar,
Emerald Green, Root Beer Amber



CD 173

BROOKFIELD
(Dome) BROOKFIELD SB
Aqua

CD 174

BROOKFIELD
(F-Skirt) BROOKFIELD SB
Aqua

CD 173



CD 174



CD 175

CD 175

HEMINGRAY
(F-Skirt) HEMINGRAY-25 (R-Skirt) MADE IN U.S.A.
SB
Aqua, Ice Blue

(F-Skirt) HEMINGRAY-25/[Numbers and Dots] (R-
Skirt) MADE IN U.S.A./[Numbers] SB
Clear



CD 176

CD 176

WHITALL TATUM

(F-Under Wire Groove) WHITALL TATUM CO. NO.12

MADE IN U.S.A. (R-Under Wire Groove) PATENT

NO.1708038 SB

Light Straw

Termed a design for a "low loss" insulator, **Leon T. Wilson** of East Orange, New Jersey, was issued a **patent** for CD 176 on April 9, 1929. The embossing on the unit contains the patent number (**NO. 1708038**) instead of the date the patent was issued. Wilson assigned his patent to the American Telephone and Telegraph Company of New York.

His claim stated: "An insulator having a flange extending outwardly therefrom, a groove in said flange for carrying a line conductor and a tie-wire, an interior bore within the insulator whereby it may be mounted upon a supporting pin, said groove being located well below the top of said supporting pin and the diameter of said groove being more than twice the diameter of said internal bore, and a groove extending upwardly into said flange from the underside thereof to a point well above the external groove and approximately as high as said interior bore so that an air-space will intervene between the said external groove and the supporting pin."



CD 178

CD 178

CALIFORNIA

(F-Skirt) CALIFORNIA (R-Skirt)

303/SANTA ANA SB

Sage Green, Purple

HEMINGRAY

(F-Skirt) HEMINGRAY (R-Skirt)

PATENT MAY 2 1893 SDP

Aqua

NO NAME

(F-Skirt) 303 SB
Smoke, Purple

[No Embossing] SB
Aqua

SANTA ANA

(F-Skirt) 303/SANTA ANA SB
Smoke, Purple

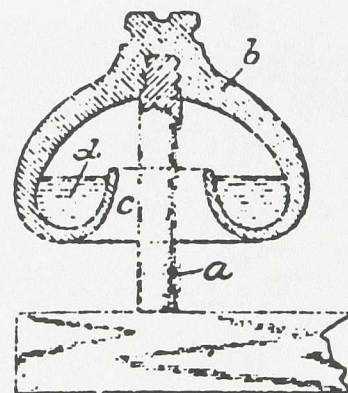
(F-Skirt) SANTA ANA SB
Aqua, Green, Yellow Green, Light Purple, Purple,
Smoke, Olive Green, Lime Green

(F-Skirt) [~~SANTA ANA~~] SB
Dark Aqua

Although no specific patent information has been found that covers the design of **CD 180** and **CD 180.1**, there was reference to both of these styles in a patent that was filed August 14, 1894 by George H. Winslow of Pittsburgh, Pennsylvania.

In his patent, Winslow refers to the two styles as the "old form of insulator". He described and illustrated each as follows:

CD 180 "The old form insulator was composed of the supporting pin *a*, upon which was screwed an insulating head *b*, to which the conductor was intended to be fastened; which head was provided with upturned under edges in annular form shown at *c*, designed for the reception of a bath of insulating oil *d*. The object of this construction was to interpose an insulating surface of oil between the two parts of such a watery film as would form upon the surface of the insulator during the rain storms or in a fog."



CD 180

CD 180

LIQUID

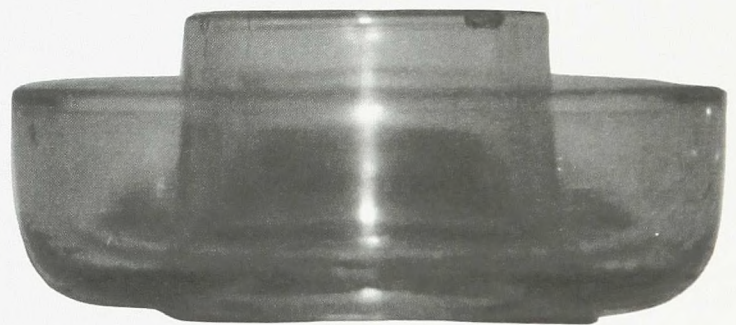
(F-Skirt) LIQUID INSULATOR SB
Light Aqua



CD 180.1

CD 180.1

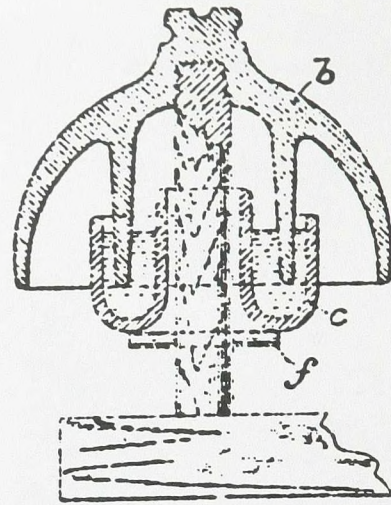
FLUID
(F-Skirt) FLUID INSULATOR SB
Ice Aqua, Light Aqua



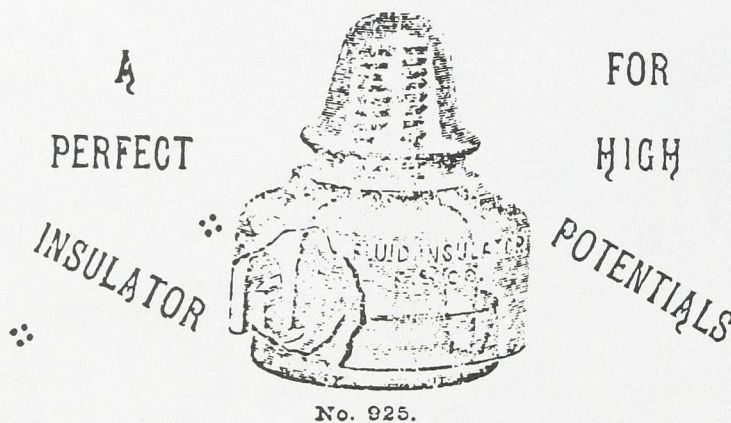
Insert for Fluid Insulator

Oil was placed in the resevoir of the insert to prevent leakage.

CD 180.1 "Another old form of insulator is where the oil cup *c* is supported upon the stem of the insulator, for instance, usually by means of a cotter pin *f*, passing through the body of the support. The object of this construction was to enable the cup to be lowered by removal of the cotter pin and its contents [insulating oil] to be replenished and the insulator to be cleaned."



• OIL ❖ INSULATORS •



These Insulators are designed to prevent Surface Leakage. An Insulating Fluid which will not support a film of dust or moisture is placed in a recess formed in the insulator.

One gallon of fluid will fill 150 insulators; the fluid does not freeze, creep or evaporate. One filling is effective for 3 or 4 years.

IN USE ALL OVER THE WORLD.

Long Distance Transmission Made Possible.

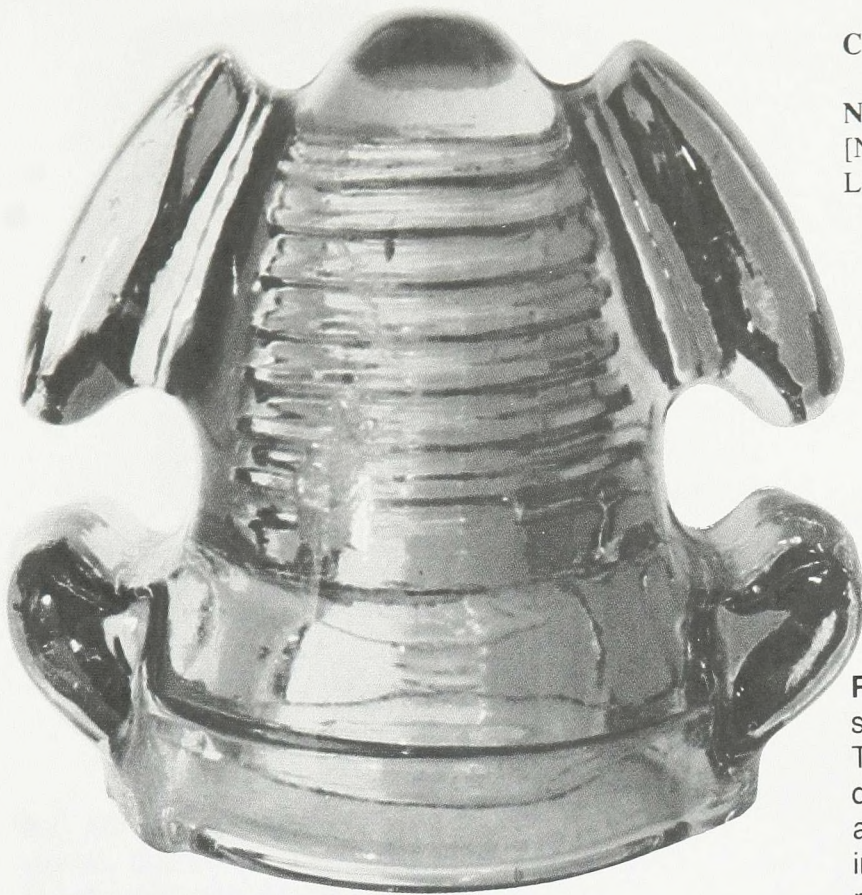
THE ELECTRICAL SUPPLY CO.,

102-104 MICHIGAN AVE.,

Formerly 171 Randolph St.,

CHICAGO.

An interesting Electrical Supply Company ad for the "FLUID INSULATOR"



CD 181

NO NAME

[No Embossing] SB

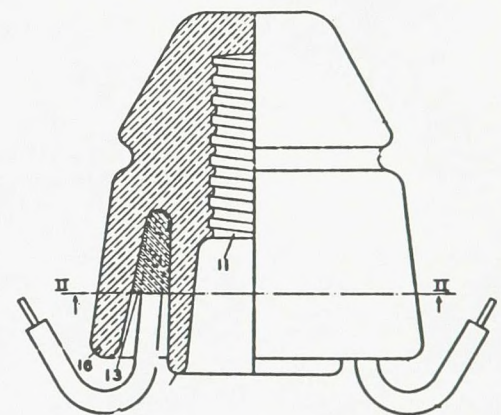
Light Aqua

CD 181

Rufus Gould of New York, New York, assigned one-half of his patent to the Postal Telegraph Cable Company of New York. The design of the February 26, 1929 patent was for a "dry spot" insulator similar to **CD 182**. The insulator's outer surface was designed to shed rain and moisture. Used in conjunction with the insulator was a material called "Leverite", a trade name for a natural asphalt having a high melting point. The line wire was attached with Leverite to the insulator's recess between the outer and inner petticoats. This type of installation provided a "dry spot" at the point of attachment to the insulator and protected the line wire from precipitation.



CD 182



CD 182

DRY SPOT

(F-Skirt) DRY SPOT INSULATOR N° 10
 (R-Skirt) ['W/T' in a triangle]/MADE IN
 U.S.A. SB
 Straw, Off Clear



CD 183

HEMINGRAY

(F-Skirt) HEMINGRAY-71 (R-Skirt)

MADE IN U.S.A. CB

Clear

(F-Skirt) HEMINGRAY-71 (R-Skirt)

MADE IN U.S.A./[Numbers and

Dots] CB

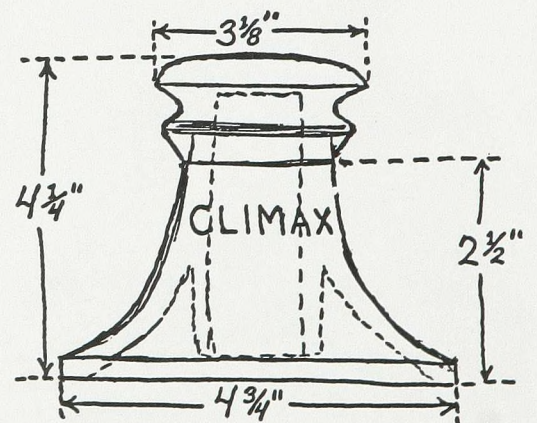
Clear

CD 183

To date no complete **CD 184** has been found, but pieces that almost "match" each other have been dug at one of the Brookfield dump sites in New Jersey. The actual measurements and reconstructed drawing are provided below courtesy of Alonzo Carter (digger), Bob McElvaney (owner) and Claude Wambold (artist).



CD 184



CD 184

CLIMAX

(F-Center) CLIMAX SB

Blue Aqua



CD 185

CD 185

B
(F-Above Wire Groove) B SB
Aqua

(F-Above Wire Groove) B-1 SB
Aqua

HEMINGRAY
(F-Skirt) HEMINGRAY (R-Skirt) N° 95 SB
Aqua, Hemingray Blue

(F-Skirt) HEMINGRAY (R-Skirt) N° 95 SDP
Aqua

(F-Skirt) HEMINGRAY-95 (R-Skirt) MADE IN U.S.A.
SDP
Aqua, Hemingray Blue

JEFFREY
(F-Above Wire Groove) SPECIAL MINE INSULATOR/
JEFFREY MFG. CO. (F-Skirt) COLUMBUS OHIO/
PATENT SEPT 25 1894 SB
Aqua, Ice Aqua

(F-Above Wire Groove) 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} SDP
Aqua

NO NAME
(F-Skirt) MINE/INSULATOR SB
Aqua

[No Embossing] SB
Aqua

STAR
(F-Skirt) [Star] SB
Aqua, Green, Lime Green, Yellow Green



CD 185.2

(Photograph courtesy of Mike Guthrie)

CD 185.2

B.E.L.CO.
(F-Above Wire Groove) B.E.L.Co. SB
Dark Aqua



CD 186

CD 186

HEMINGRAY

(F-Skirt) HEMINGRAY 19/[Number and Dots] (R-Skirt)

MADE IN U.S.A./[Number] SB

Clear, Green Tint



CD 186.1

CD 186.1

HEMINGRAY

(F-Skirt) HEMINGRAY-19/[Numbers and Dots] (R-

Skirt) MADE IN U.S.A./[Number] SB

Clear



CD 186.2

CD 186.2

HEMINGRAY

(F-Skirt) HEMINGRAY 19/[Number and Dots] (R-Skirt)

MADE IN U.S.A./[Number] [A six sided nut with

machine threading is embedded in the dome] SB

Clear



CD 187



CD 187 Variation

The California and the No Name [Vertical Bar] styles have a square-shape to the lower skirt

CD 187

CALIFORNIA

(F-Skirt) CALIFORNIA SB
Smoke, Light Purple, Light Sage Green

GREELEY

(F-Above Wire Groove) GREELEY/N.Y. (R-Above Wire Groove) PATENTED/NOV. 23rd 1886 SB
Light Aqua

NO NAME

(F-Above Wire Groove) PAT'D SB
Green

(F-Above Wire Groove) PAT'D/NOV. 23^D 1886 SB
Aqua, Olive Green, Light Blue, Ice Green, Olive Blackglass, Light Purple, Light Aqua, Clear

(F-Above Wire Groove) PAT'D/NOV. 23^D 1886 {Two Segmented Threads} SB
Light Aqua

(F-Skirt) [Vertical Bar] SB
Light Green, Yellow Green, Blue Aqua, Aqua, Blue, Green Aqua



CD 188

CD 188

B

(F-Above wire groove) B SB
Dark Aqua, Emerald Green

NO NAME

(F-Above Wire Groove) PAT'D/NOV. 23^D 1886 SB
Aqua, Green, Emerald Green, Light Blue, Ice Green, Light Aqua, Dark Aqua



CD 190/191

CD 190/191

A.T.& T.

{191 Top} (Dome) [Number] (F-Skirt) A.T.& T.Co. {190 Bottom} (F-Skirt) [Number] A.T.& T.Co. {Number on the skirt can come before or after 'A.T.& T.Co.'} SB
Aqua, Green, Light Blue, Light Aqua, Dark Aqua

{191 Top} (F-Skirt) A.T.& T.Co. {190 Bottom} (F-Skirt) A.T.& T.Co. SB
Light Aqua, Light Blue, Ice Green, Light Green

{191 Top} (F-Skirt) A.T.& T.Co. {190 Bottom} (F-Skirt) [Number] A.T.& T.Co. SB
Aqua, Green, Dark Green Aqua

{191 Top} (F-Skirt) A.T.& T.Co. {MLOD} {190 Bottom} (F-Skirt) [Number] A.T.& T.Co. SB
Green, Ice Green, Green Aqua, Light Aqua

{191 Top} {Unverified} {190 Bottom} (F-Skirt) [Number] ['A.T.& T. Co' Blotted out] SB
Dark Yellow Green

AM.TEL.& TEL.

{191 Top} (F-Skirt) AM.TEL.& TEL.Co. (R-Skirt) TWO PIECE/TRANSPOSITION {CD 190 Bottom} (F-Skirt) AM.TEL.& TEL.Co. (R-Skirt) TWO PIECE/TRANSPOSITION SB

Aqua, Blue, Green, Jade Green Milk, Hemingray Blue, Milky Aqua

{191 Top} (F-Skirt) AM.TEL.& TEL.Co. (R-Skirt) TWO PIECE/TRANSPOSITION {Note Spelling} {190 Bottom} (F-Skirt) AM.TEL.& TEL.Co. (R-Skirt) TWO PIECE/TRANSPOSITION {Note Spelling} SB

Aqua

{191 Top} (F-Skirt) AM.TEL.& TEL.Co. {190 Bottom} {Unverified} SB

Light Aqua

B

{191 Top} (F-Skirt) B (R-Skirt) [Number] {190 Bottom} (F-Skirt) B (R-Skirt) [Number] SB

Green

{191 Top} (F-Skirt) B {190 Bottom} (F-Skirt) B SB
Aqua, Olive Green, Emerald Green, Yellow Green, Green, Dark Aqua, Light Aqua, Blue Aqua

BROOKFIELD

{191 Top} (F-Skirt) BROOKFIELD (R-Skirt) MNT.TEL.& TEL.CO. {190 Bottom} (F-Skirt) BROOKFIELD (R-Skirt) MNT.TEL.& TEL.CO. SB
Aqua

CALIFORNIA

{191 Top} CALIFORNIA {190 Bottom} (F-Skirt) A021/CALIFORNIA SB
Light Purple, Smoke

DIAMOND

{191 Top} [No Embossing] {190 Bottom} (F-Above Wire Groove) [Diamond] (F-Skirt) [Diamond] (R-Above Wire Groove) [Diamond] (R-Skirt) [Diamond] SB
Light Aqua, Ice Green, Ice Blue, Lime Green, Light Yellow Green, Royal Purple, Light Purple, Smoke, Gray, Off Clear, Light Yellow

{191 Top} [No Embossing] {190 Bottom} (F-Skirt) [Diamond] (R-Skirt) [Diamond] SB
Light Blue

HEMINGRAY

{191 Top} (F-Skirt) HEMINGAY-50 {Note Spelling} (R-Skirt) MADE IN U.S.A. {190 Bottom} (F-Skirt) HEMINGAY-50 {Note Spelling} (R-Skirt) MADE IN U.S.A. SB
Aqua

{191 Top} (F-Skirt) HEMINGRAY (R-Skirt) N° 50 {190 Bottom} (F-Skirt) HEMINGRAY (R-Skirt) N° 50 SB
Aqua, Green Aqua

{191 Top} (F-Skirt) HEMINGRAY-50 (R-Skirt) MADE IN U.S.A. {190 Bottom} (F-Skirt) HEMINGRAY-50 (R-Skirt) MADE IN U.S.A. SB
Aqua, Blue, Green Aqua, Clear, Green Tint, Hemingray Blue, Ice Blue

{191 Top} (F-Skirt) HEMINGRAY-50/[Numbers and Dots] (R-Skirt) MADE IN U.S.A./[Number] {190 Bottom} (F-Skirt) HEMINGRAY-50/[Numbers and Dots] (R-Skirt) MADE IN U.S.A./[Number] SB
Clear

{191 Top} (F-Skirt) HEMINGRAY-50/[Numbers and Dots] (R-Skirt) MADE IN U.S.A. {190 Bottom} (F-Skirt) HEMINGRAY-50 (R-Skirt) MADE IN U.S.A. SB
Ice Aqua

{191 Top} {Unverified} {190 Bottom} (F-Skirt) HEMINGRAY_50 (R-Skirt) MADE IN U.S.A./[Blotted out Embossing] SB
Aqua

K
{191 Top} (F-Skirt) K {190 Bottom} (F-Skirt) K SB
Aqua, Ice Blue, Light Green

NO NAME
{191 Top} (F-Skirt) TWO PIECE/TRANSPOSITION (R-Skirt) [Blotted out Embossing] {190 Bottom} (F-Skirt) TWO PIECE/TRANSPOSITION (R-Skirt) [Blotted out Embossing] SB
Aqua

{191 Top} (F-Skirt) TWO PIECE/TRANSPOSITION {190 Bottom} (F-Skirt) TWO PIECE/TRANSPOSITION SB
Light Aqua, Aqua, Blue Aqua, Blue, Ice Blue, Green Aqua, Jade Green Milk, Hemingray Blue

{191 Top} (F-Skirt) TWO PIECE/TRANSPOSITON {Note Spelling} {190 Bottom} (F-Skirt) TWO PIECE/TRANSPOSITON {Note Spelling} SB
Aqua, Green Jade Milk

{191 Top} [No Embossing] {190 Bottom} [No Embossing] SB
Aqua, Light Blue

P.R.R.
{191 Top} (Dome) P.R.R. {190 Bottom} (F-Skirt) B SB
Green, Dark Aqua

PRISM

{191 Top} (F-Skirt) [Prism] {190 Bottom} (F-Skirt) [Prism] SB
Dark Yellow Green, Aqua, Ice Blue, Green, Blue Aqua, Olive Green



CD 192/193

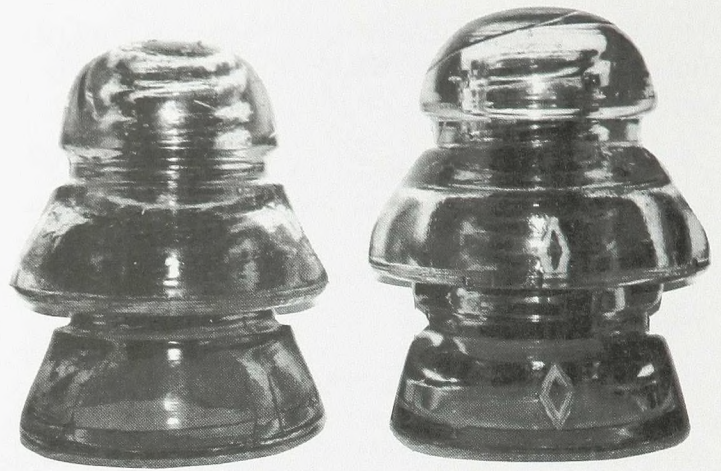
CD 192/193

AM.TEL.& TEL.

{193 Top} (F-Skirt) AM.TEL.& TEL.Co. {192 Bottom} (F-Skirt) AM.TEL.& TEL.Co. SB
Aqua

NO NAME

{193 Top} [No Embossing] {192 Bottom} [No Embossing] SB
Aqua



Size Comparison
CD 192/193 (left) and CD 190/191 (right)

CD 192/193.1

(Note: The bottom half shown is CD 192, not CD 192.1)

CD 192.1/193.1

AM.TEL.& TEL.

{193.1 Top} (F-Skirt) AM.TEL.& TEL.Co.

{192.1 Bottom} (F-Skirt) AM.TEL.&

TEL.Co. SB

Aqua

NO NAME

{193.1 Top} [No Embossing] {192.1 Bot-

tom} {Unverified} SB

Light Aqua

{193.1 Top} [No Embossing] {192.1 Bot-

tom} {Unverified} {MLOD} SB

Light Aqua, Light Green

CD 194/195

HEMINGRAY

{195 Top} (F-Skirt) HEMINGRAY-

54-A (R-Skirt) MADE IN U.S.A./

[Number] {194 Bottom} (F-Skirt)

HEMINGRAY-54-B (R-Skirt)

MADE IN U.S.A./[Number] SB

Purple, Light Purple, Off Clear



CD 194/195



CD 194.5/195.5

CD 194.5/195.5

PYREX

{ 195.5 Top } (F-Skirt) PYREX/T.M.REG.U.S.PAT.OFF.
 MADE IN U.S.A. (R-Skirt) PAT.APP.FOR { 194.5
 Bottom } (F-Below Wire Groove) CODE NO 70005 (F-
 Skirt) PYREX/T.M.REG.U.S.PAT.OFF. MADE IN
 U.S.A. SB

Light Carnival (Top), Clear (Bottom)

On June 3, 1930, a patent was granted to **Chester S. Gordon** of Boonton, New Jersey, and **James T. Lowe** of Newark, New Jersey for a transposition insulator. Gordon and Lowe assigned their patent to the American Telephone and Telegraph Company, New York.

CD 194.5 and 195.5 were designed to be used as a two-piece transposition which would transpose the wires at certain points along pole lines to reduce cross-talk. The patent also designed the top of the bottom half to fit snugly into the bottom of the top piece to form a water-tight joint. The inside of the skirt on the bottom half was corrugated to increase the path between the outside of the skirt and the pin, therefore reducing the chance of leakage.

To date, only one complete unit has been located.

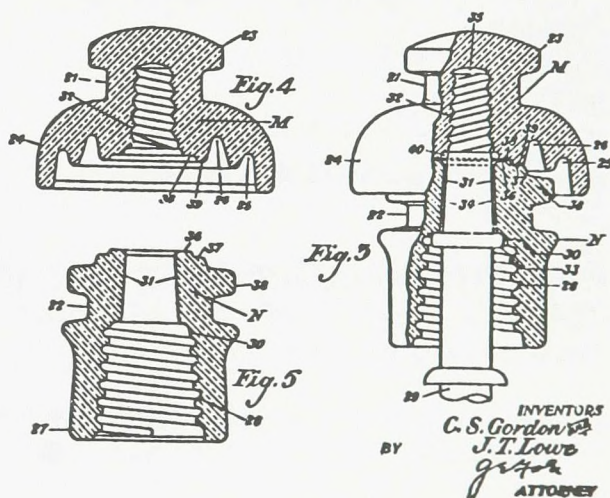
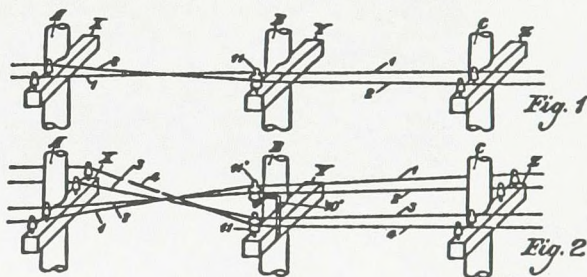
June 3, 1930.

C. S. GORDON ET AL

1,760,983

INSULATOR

Filed Dec. 19, 1928



INVENTORS
 C. S. Gordon
 J. T. Lowe
 BY *J. T. Lowe*
 ATTORNEY



CD 196

CD 196

B

(F-Skirt) B SDP
Aqua, Green, Emerald Green, Dark Aqua

H.G.CO.

(F-Skirt) H.G.CO. (R-Skirt) PAT MAY 2 1893 SDP
Aqua, Milky Aqua, Hemingray Blue, Gray Green, Light
Purple, Ice Blue, Ice Aqua

(F-Skirt) H.G.CO. (R-Skirt) PATD MAY 2 1893 SDP
Ice Aqua, Ice Blue, Light Aqua

(F-Skirt) H.G.CO. (R-Umbrella) PATENT APPLIED
FOR (R-Skirt) PATD MAY 2 1893 SDP
Aqua

(F-Skirt) N° 51/H.G.CO. (R-Skirt) PAT. MAY 2 1893
SDP
Aqua, Hemingray Blue, Dark Blue Aqua

HEMINGRAY

(F-Umbrella) HEMINGRAY (F-Skirt)
HEMINGRAY (R-Skirt) N° 51 SDP
Aqua

(F-Umbrella) HEMINGRAY (F-Skirt)
N° 51 (R-Skirt) HEMINGRAY SDP
Hemingray Blue

NO NAME

[No Embossing] SDP
Aqua, Blue Aqua

O.V.G.

(F-Skirt) O.V.G.CO. SB
Aqua

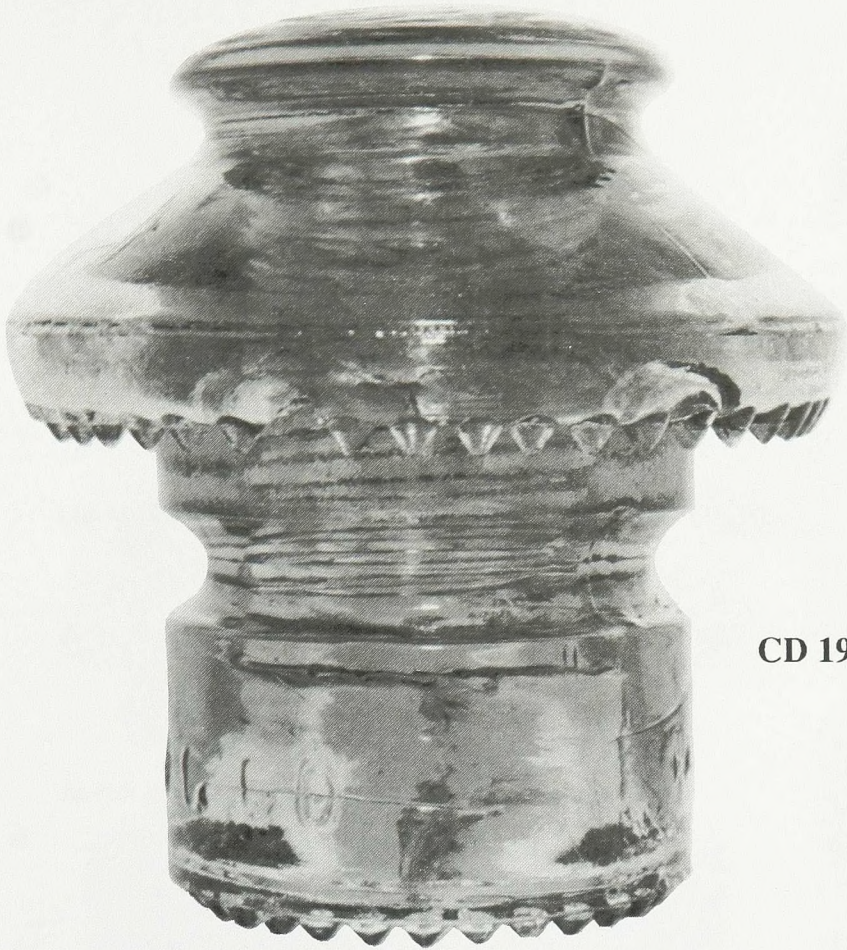


CD 196.2

CD 196.2

H.G.CO.

(F-Skirt) H.G.CO. (R-Umbrella) PATENT APPLIED
FOR (R-Skirt) PATD MAY 2 1893 SDP
Aqua



CD 196.5

H.G.CO.

(F-Skirt) H.G.CO. (R-Skirt) PAT MAY
2 1893 SDP
Aqua

CD 196.5



CD 197

HEMINGRAY

(F-Skirt) HEMINGRAY-53 (R-Skirt) MADE
IN U.S.A./[Number] SB
Clear, Pink Tint

(F-Skirt) HEMINGRAY-53 (R-Skirt) MADE
IN U.S.A./[Numbers and Dots] CB
Clear, Straw, Light Green

(F-Skirt) HEMINGRAY-53S/[Number and
Dots] (R-Skirt) MADE IN U.S.A./[Number]
SB
Off Clear, Clear, Ice Blue

WHITALL TATUM

(F-Skirt) (Arc)WHITALL TATUM/NO.15
(R-Skirt) (Arc)MADE IN U.S.A./[Number
and Dots] ['W/T' in a circle] SB
Clear, Smoke

(F-Skirt) WHITALL TATUM CO. NO.15/
[Number] (R-Skirt) MADE IN U.S.A./['W/
T' in a triangle]/[Number] SB
Light Straw

(F-Skirt) WHITALL TATUM NO.15/
[Number] (R-Skirt) MADE IN U.S.A. ['W/
T' in a triangle] SB
Clear

CD 197



CD 200

CALIFORNIA

(F-Skirt) CALIFORNIA SB
Purple, Yellow, Peach, Dark Burgundy

NO NAME

(F-Skirt) N° 2 (R-Skirt) TRANSPOSITION
SB
Aqua, Green, Dark Aqua, Light Green Aqua

(F-Skirt) N° 2 (R-Skirt) TRANSPOSITION
SDP

Aqua, Dark Green Aqua

STAR

(F-Skirt) [Star] SB
Light Aqua, Blue Aqua, Green, Light Green,
Lime Green

CD 199

CD 199

PRISM

(F-Umbrella) [Prism] SB
Blue, Yellow Green, Lime Green



CD 200



CD 201

CD 201

CALIFORNIA

(F-Skirt) CALIFORNIA SB
Blue Aqua, Light Green, Purple

H.G.CO.

(F-Skirt) H.G.CO. (R-Skirt) PATENT MAY 2
1893 SDP
Aqua

HEMINGRAY

(F-Umbrella) N° 2 TRANSPOSITION (F-Skirt)
HEMINGRAY (R-Skirt) PATENT MAY 2 1893
SDP
Aqua, Blue Aqua

(F-Umbrella) N° 2 TRANSPOSITION (F-Skirt)
HEMINGRAY (R-Skirt) PATENT/MAY 2
1893 SDP
Aqua, Green Aqua, Milky Aqua

(F-Umbrella) N° 2 TRANSPOSITION (F-Skirt)
HEMINGRAY/['H.G.CO.' Blotted out] (R-
Skirt) PATENT/MAY 2 1893 SDP
Aqua

(F-Umbrella) N° 2 TRANSPOSITION (F-Skirt)
HEMINGRAY/['H.G.CO.' Blotted out] (R-
Skirt) PATENT MAY 2 1893 SDP
Aqua

CD 202

HEMINGRAY

(F-Skirt) HEMINGRAY-53 (R-Skirt) MADE IN
U.S.A. SDP
Hemingray Blue, Aqua, Blue

(F-Skirt) HEMINGRAY-53/MADE IN U.S.A.
(R-Skirt) PATENTED/MAY 2 1893 SDP
Hemingray Blue

(F-Skirt) HEMINGRAY/N° 14 (R-Skirt)
PATENTED/MAY 2 1893 SDP
Aqua, Green, Blue

(F-Skirt) HEMINGRAY/N° 53 (R-Skirt)
PATENTED/MAY 2 1893 SDP
Aqua

(F-Skirt) HEMINGRAY_53/[Number and Dots]
(R-Skirt) MADE IN U.S.A./[Letters and
Numbers] RDP
Aqua, Clear, Ice Blue



CD 202

K

(F-Skirt) K SB

Aqua, Green, Dark Yellow Green, Light Blue, Blue
Aqua, Green Aqua

LOCKE

(Dome) [Number] (F-Skirt) FRED M. LOCKE VICTOR
N.Y. (R-Skirt) N° 14/PAT.MAY 22 1894 SB
Aqua, Green

(Dome) [Number] (F-Skirt) LOCKE VICTOR N.Y. (R-
Skirt) N° 14/PAT.MAY 22 1894 SB
Dark Aqua, Green, Yellow Green, Olive Green

(F-Skirt) FRED M. LOCKE VICTOR N.Y. (R-Skirt) N°
14/PAT.MAY 22 1894 SB
Blue Aqua, Green Aqua, Light Aqua

(F-Skirt) FRED M. LOCKE VICTOR N.Y. (R-Skirt)
PAT.MAY 22 1894 SB
Light Aqua, Blue, Light Green

(F-Skirt) LOCKE VICTOR N.Y. (R-Skirt) N° 14/
PAT.MAY 22 1894 SB
Aqua

NO NAME

(F-Skirt) No.51 SB
Aqua, Dark Green

(F-Skirt) No.51 (R-Skirt) [Blotted out Embossing] SB
Aqua

(F-Skirt) N° 14/[Blotted out Embossing] (R-Skirt)
[Blotted out Embossing] SB
Dark Aqua, Green, Emerald Green, Olive Green, Olive
Amber, Blue Aqua

**CD 203****CD 203****ARMSTRONG**

(F-Skirt) *Armstrong's* T.W. (R-Skirt) MADE IN U.S.A.
['A' in a circle] [Number and Dots] SB
Clear, Light Smoke, Light Straw, Light Pink, Green Tint

(F-Skirt) Ⓐrmstrong T.W. (R-Skirt) MADE IN U.S.A.
[Numbers and Dots] SB
Smoky Straw, Off Clear, Clear

HEMINGRAY

(F-Skirt) HEMINGRAY-56 (R-Skirt) MADE IN U.S.A./
[Number] CB
Clear, Light Straw

KERR

(F-Skirt) KERR T.W. (R-Skirt) MADE IN U.S.A.
[Number] SB
Clear



Feb. 7, 1956

E. J. BONNESEN
 TRANSPPOSITION INSULATORS
 Filed Nov. 30, 1950

2,734,098

CD 203.2

CD 203.2

ARMSTRONG

(F-Skirt) *Armstrong's* T.W. (R-Skirt) MADE IN U.S.A.

['A' in a circle] [Numbers and Dots] SB

Clear

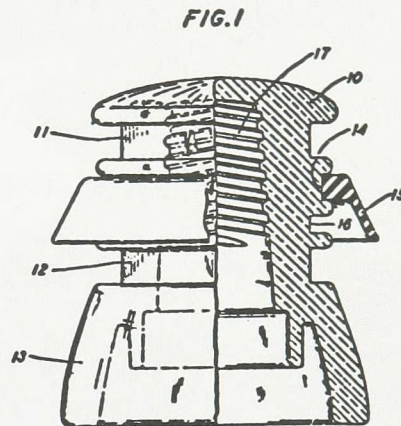
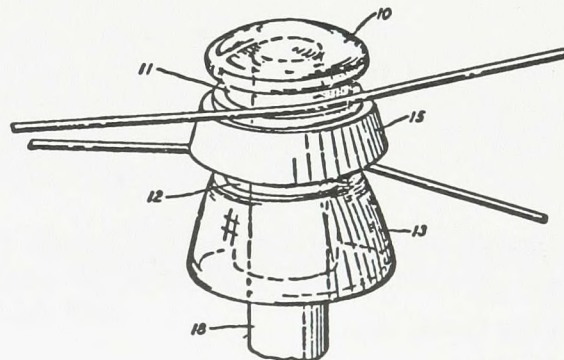


FIG. 2



INVENTOR
 E. J. BONNESEN
 BY *[Signature]*
 ATTORNEY

The **CD 203.2** style is covered by a patent issued to **Elmer Johannes Bonnesen** of West Orange, New Jersey, on February 7, 1956. The patent was assigned to the American Telephone and Telegraph Company of New York.

"The object of this invention is the provision of a multiple-groove composite type transposition insulator which will have greater mechanical strength than presently known insulators."

You will note in the patent drawing that a skirt, made of a non-vitreous material such as wax impregnated rubber, is fitted on the insulator between the top and middle wire groove. This provided for a longer leakage path between line wires using the top and bottom wire grooves.



CD 204

CD 204

LOCKE

(F-Skirt) F.M. LOCKE & CO. VICTOR N.Y./PAT'D
MAY 22, 1884 SB
Light Aqua, Light Green, Blue

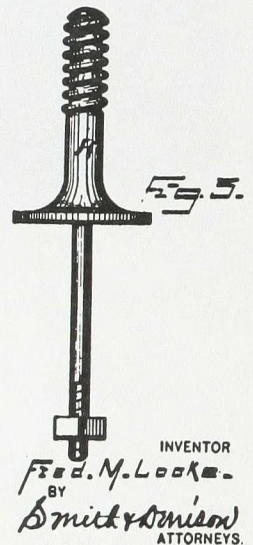
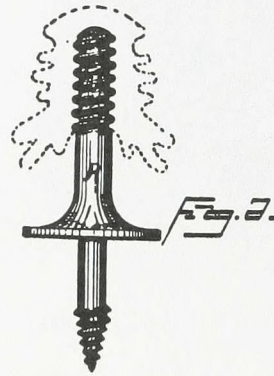
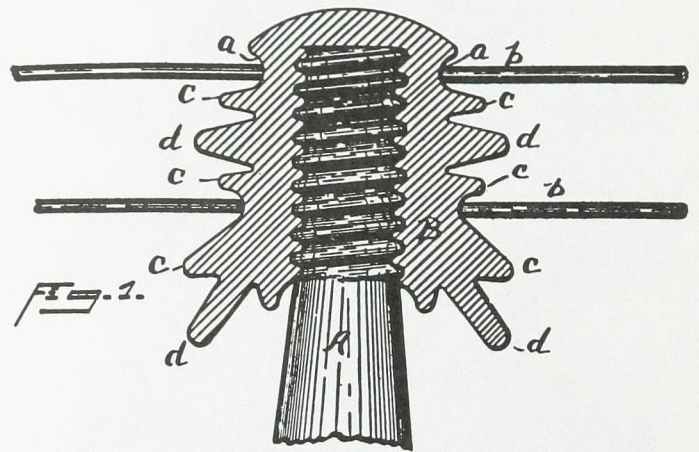
NO NAME

[No Embossing] SB
Blue Aqua

F. M. LOCKE.
INSULATOR.

No. 520,367.

Patented May 22, 1894.



WITNESSES:
Shas. Marvin.
H. A. Gubart,

INVENTOR
Fred. M. Locke.
BY
Smith & Sonison
ATTORNEYS.

Fred M. Locke of Victor, New York, was granted a patent on May 22, 1894 for a one-piece transposition style insulator. He assigned one-half of the patent to **George A. Paddock** of Auburn, New York, and **Willard C. Page** of Palmyra, New York.

Locke wrote "I have learned from experience that electric currents often creep through moisture, dust or other matter on the surface of an insulator part way, that is to the edge of the first petticoat, and then jump through the air to the wet cross arm or other points, and my object is to force the current over the surface, if it escape at all."

"My further object is to produce such an insulating hood so constructed that it may be used to

support one or more wires, and, at the same time, providing it with a multiplicity of petticoats so constructed as to prevent the current from escaping from one wire to another, or from the wire to the pin itself without first traveling the surface of the hood, cheap and durable in construct and of great utility. It may also be used in place of double insulators for transposing wires..."

CD 204 has the addition of "cross top" saddle groove in the dome, however, the structure of the insulator body is that of the May 22, 1884 patent. Many of the Locke CD 202 units also are embossed with this patent date.



CD 205

CD 205

BROOKFIELD

(F-Skirt) BROOKFIELD SB
Dark Aqua, Yellow Green, Dark Green

(F-Skirt) BROOKFIELD (R-Skirt) N° 3 TRANS. SB
Aqua, Green, Dark Yellow Green, Dark Olive Green,
Emerald Green, Dark Green, Green Aqua, Dark Blue
Aqua

(F-Skirt) BROOKFIELD (R-Skirt) N° 53 SB
Aqua, Dark Aqua, Green

(F-Skirt) BROOKFIELD (R-Skirt) N° 53/['N° 3 TRANS.'
Blotted out] SB
Dark Green Aqua

(F-Skirt) BROOKFIELD (R-Skirt) ['N° 3 TRANS'
Blotted out] SB
Dark Aqua, Emerald Green, Dark Green

GAYNER

(F-Skirt) GAYNER (R-Skirt) NO.530/[Number] SB
Aqua, Light Aqua, Blue

(F-Skirt) GAYNER (R-Skirt) NO.530/[Number] SDP
Light Aqua, Sage Green, Celery

HEMINGRAY

(F-Skirt) HEMINGRAY (R-Skirt) N° 55 SB
Aqua, Dark Aqua, Blue Aqua

(F-Skirt) HEMINGRAY-55 (R-Skirt) MADE IN U.S.A.
SB
Aqua, Blue Aqua, Hemingray Blue, Ice Blue

(F-Skirt) HEMINGRAY-55 (R-Skirt) MADE IN U.S.A.
RDP
Aqua, Light Blue, Clear, Ice Aqua, Hemingray Blue

(F-Skirt) HEMINGRAY/MADE IN U.S.A. (R-Skirt) N°
55 SB
Hemingray Blue, Green

(F-Skirt) HEMINGRAY/MADE IN U.S.A. (R-Skirt) N°
55 SDP
Aqua

LYNCHBURG

(F-Skirt) LYNCHBURG (R-Skirt) NO.53/MADE IN
U.S.A./[Number] SB
Light Aqua, Light Green

(F-Skirt) LYNCHBURG (R-Skirt) NO.530/MADE IN
U.S.A./[Number] SB
Aqua, Light Green, Green Aqua

(F-Skirt) LYNCHBURG (R-Skirt) NO.530/MADE IN
U.S.A./[Number] SDP
Aqua, Blue Aqua

(F-Skirt) LYNCHBURG/['GAYNER' Blotted out] (R-
Skirt) NO.53/MADE IN U.S.A./[Number] SB
Light Blue

(F-Skirt) LYNCHBURG/['GAYNER' Blotted out] (R-
Skirt) NO.530/MADE IN U.S.A./[Number] SDP
Green Aqua



CD 205 Variation

*The Brookfield units are
a little narrower through
the body of the insula-
tor.*



CD 206

NO NAME

[No Embossing] FDP
Light Green, Light Blue, Light Aqua

[No Embossing] SDP
Straw

[No Embossing] {Rounded turrets} SDP
Straw

CD 205.5

CD 205.5

NO NAME

[No Embossing] {This is a CD 116 with an inner skirt}

SB
Aqua



CD 206.5



CD 206



Side view of the CD 206.5 Harloe

CD 206.5

HARLOE

(F-Skirt) HARLOE'S PATENT/MAR 21,'99/MAR 12,'01/DEC 9,'02 P2S (R-Skirt) ['HICo' Entwined Initials]/HAWLEY, PA./U.S.A. [Number] SB
Aqua, Light Aqua

(F-Skirt) HARLOE'S PATENT/MAR 21,99/MAR 12,01/DEC9,02/P2S SB
Aqua

(F-Skirt) HARLOE'S PATENT/MAR 21,'99/MAR 12,'01/DEC 9,'02 P2 S (R-Skirt) [Blotted out Embossing]/ ['HICo' Entwined Initials]/HAWLEY,PA./U.S.A. SB
Aqua

*CD 207 with the cap
screwed onto the body
of the insulator.*

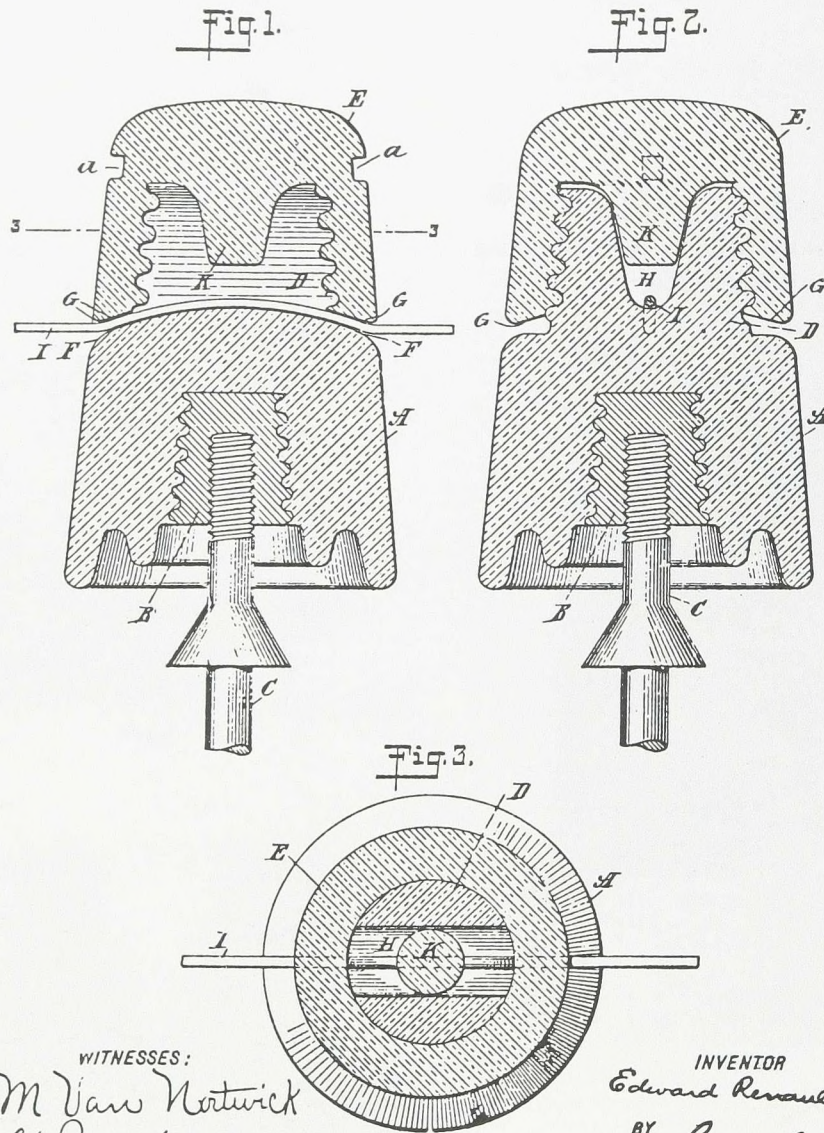


CD 207

B
(F-Crown) B SB
Aqua



CD 207



WITNESSES:
M Van Norderick
L. Bancker

INVENTOR
Edward Renault
BY *George Cook*
ATTORNEY.

Waldo, Florida, was the home of **Edward Renault** whose was granted a patent on December 25, 1900 for **CD 207**. The insulator was designed with a notched, threaded projection which would receive a correspondingly threaded cap. In previous insulators of this type, the line wire would cross through the notch, be secured by the lug of the screw-on cap and would tend to bind and break with any play in the wire.

Renault stated "I overcome this difficulty by removing the binding action from the central portion of the insulator to the outer edges thereof, the lower edge of the cap at the two opposite points holding the wire against a suitable shoulder formed around the upper

portion of the body of the insulator, the binding edges being properly shaped to prevent the collection and retention of water and also to prevent the chipping or cracking of the edges by reason of the swinging or moving of the wire due to wind or other causes."

To date only one of the Renault patent insulators has been found. It was removed from the side of a house in Florida many years ago. Its only embossing is the letter "B" on the cap. This may indicate that it was manufactured by the Brookfield Glass Company, for they marked many of their products with only the embossed "B" after 1903 until about 1921.



CD 210

NO NAME

[No Embossing] {Unembossed California} SB
Sage Green

POSTAL

(Top of Ear) POSTAL SB
Emerald Green, Dark Aqua

(Top of Ear) POSTAL SDP
Dark Aqua, Aqua

(Top of Ear) POSTAL (F-Skirt) [Vertical Bar] SDP
Aqua, Dark Aqua



CD 208

CD 208

BROOKFIELD

(F-Skirt) BROOKFIELD SB
Green, Aqua

CALIFORNIA

(F-Skirt) CALIFORNIA SB
Smoke, Yellow, Light Purple

HEMINGRAY

(F-Skirt) HEMINGRAY (R-Skirt) N° 44. SDP
Aqua, Green Aqua

(F-Skirt) HEMINGRAY-44 (R-Skirt) MADE IN U.S.A.
RDP
Aqua

(F-Skirt) HEMINGRAY-44 (R-Skirt) MADE IN U.S.A.
SDP
Aqua, Hemingray Blue

(F-Skirt) HEMINGRAY/MADE IN U.S.A. (R-Skirt) N°
44 SDP
Aqua, Hemingray Blue, Green Aqua

CD 210 Variation

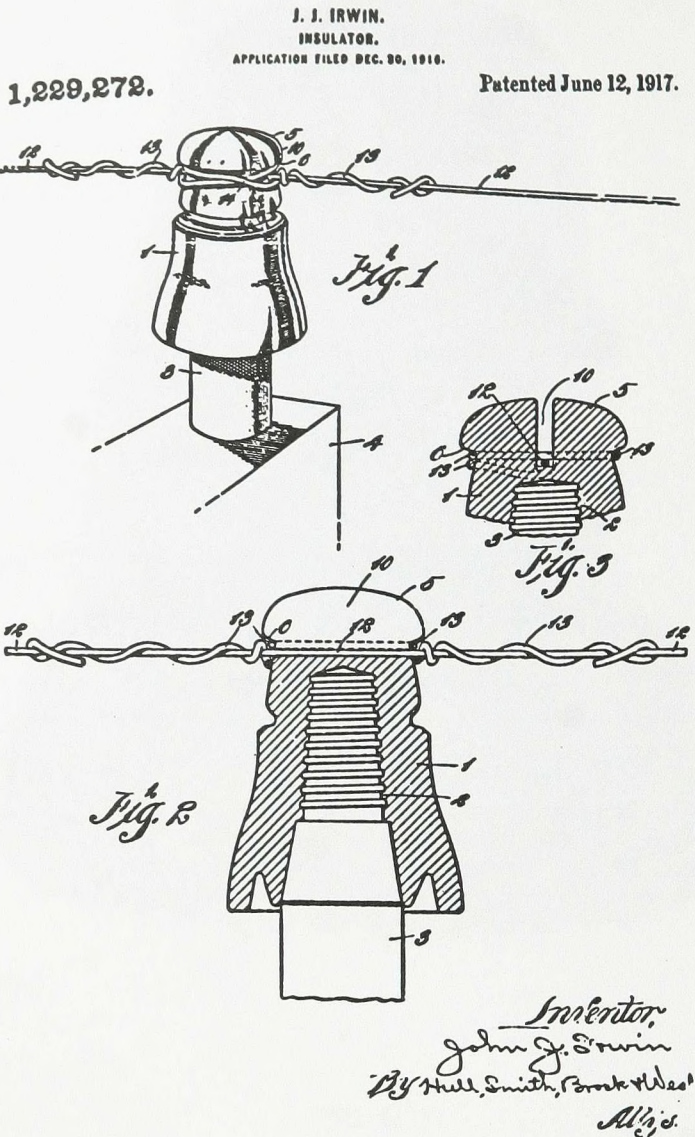
The POSTAL insulator's shape differs from the unembossed California style.



The Postal Telegraph Company operated its own lines throughout the United States in direct competition with Western Union. In 1943 the company was absorbed by the Western Union monopoly. Three styles of insulators were used on the Postal lines. The earliest was a large signal made by Brookfield (CD 138). With the issue of a patent to **John J. Irwin** of Cleveland, Ohio, on June 12, 1917, a new style was adopted by the Postal Telegraph Company. The **CD 210** saddle-groove style became the standard for Postal installations. Both Brookfield and Hemingray Glass Company supplied this insulator in great quantities to Postal. Also in use on many of the Postal lines was a CD 145 double petticoat insulator characterized by a lower wire groove than many of the other CD 145 styles. (See CD 145 for picture)

"This invention related to an improved insulator for supporting telephone and telegraph wires or other like electrical conductors, and is of the class known to the trade as the 'saddle-top' insulator, that is, of the sort having a transverse groove in its top within which the line wire rests, in contradistinction to a very common form of insulator having a circumferential groove for the retention of a tie wire by which the line wire is lashed to the side of the insulator.

The numerous advantages of a properly designed saddle-top insulator over that have only the circumferential groove--such as its facilitating the removal of slack from a comparatively long stretch of wire, and its expediting the construction of the line, because of its ability to support the line wire in a well insulated condition even in the absence of tie wire--are well known and thoroughly appreciated by persons familiar with the general subject of 'line wire support'; but, in the use of all saddle-top insulators with which I am familiar the difficulties are experienced of the insulators breaking due to the strains imposed upon them by the line wire by reason of their improper design, and of the breaking of the line wire because of the distortion to which it is subjected by the wire-holding or engaging parts of the insulators.



In all insulators of the class to which my improvements belong (as well as in the insulators of the circumferential groove type), tie wires or their equivalents are required for holding the line wire against displacement. The conditions sought for and which should exist in an insulator are these: The insulator should support the line wire practically without the need (so far as the support is concerned) of ties and without imposing upon the line wire any biting, bending or straining effect other than results from the weight of the wire; and the tie wire should fulfil its function of holding the line wire against displacement without kinking or pinching the wire or in any way injuring it."

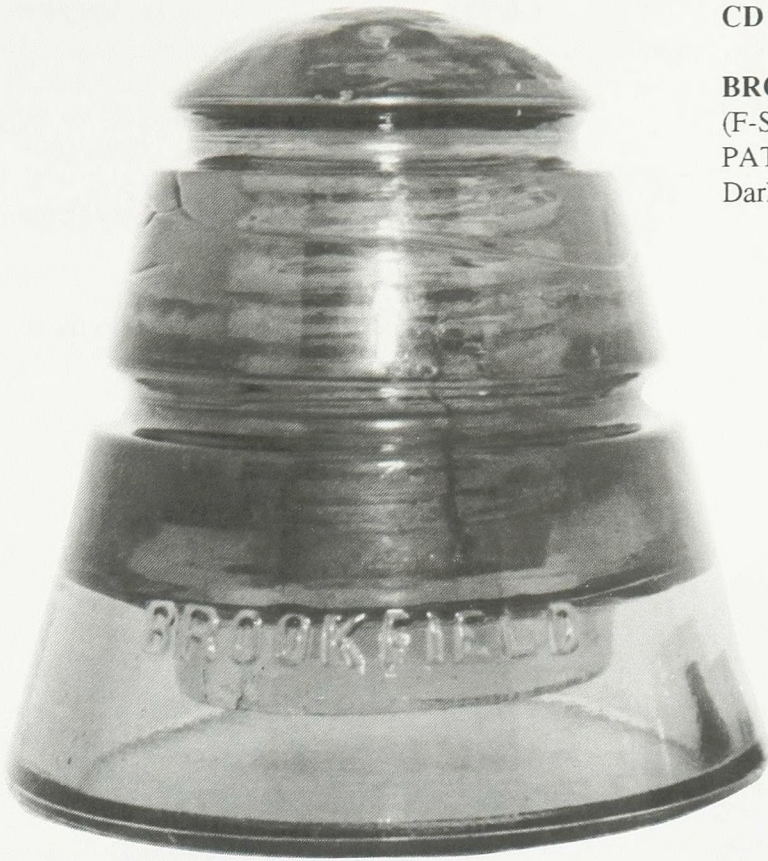
CD 211

BROOKFIELD

(F-Skirt) BROOKFIELD (R-Skirt) NO LEAK D./

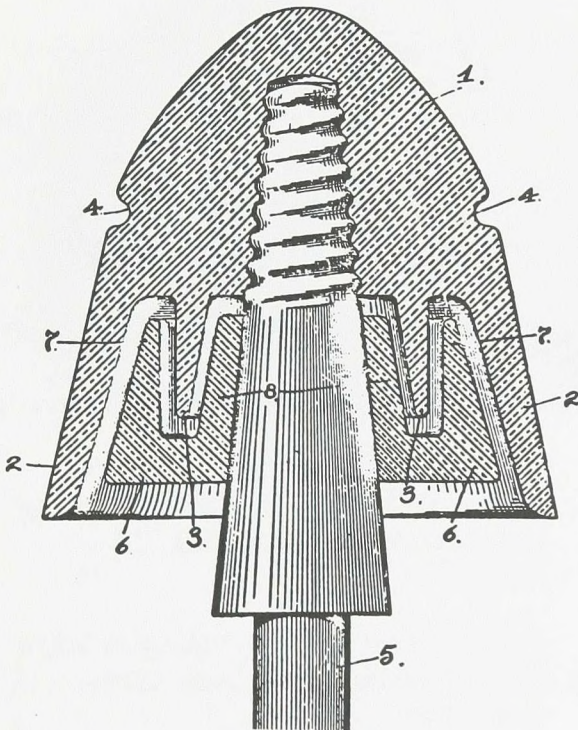
PATENTED SB

Dark Aqua, Green Aqua



Insert for No Leak

CD 211



Various techniques during the evolution of the insulator had been tried in order to prevent leakage from the wire to the pin. Oil in cups had been used, but the surface of the oil became covered with dust. The wind and capillarity tended to coat the insulator surfaces with the oil placed in the cups which caused dust and dirt to adhere to the insulator's surface. Others had tried adding petticoats to the insulator which increased the distance current would travel from wire to the pin.

Leonard W. Storrer of San Francisco, California, had a better idea. By placing a double petticoat insert underneath a corresponding double petticoat on the underside of the insulator, a protected, unbroken zone of dryness and cleanliness could be accomplished and therefore prevent leakage due to fog, moisture and other substances.

On March 24, 1908, Storrer was granted the patent design for the **CD 211** "No Leak" insulator.



CD 213

CD 213

HEMINGRAY

(F-Skirt) HEMINGRAY (R-Skirt) N° 43 RDP
Aqua

(F-Skirt) HEMINGRAY (R-Skirt) N° 43 SDP
Aqua

(F-Skirt) HEMINGRAY (R-Skirt) [Vertical
Bar] N° 43 RDP
Aqua, Hemingray Blue

(F-Skirt) HEMINGRAY (R-Skirt) [Vertical
Bar] N° 43 SDP
Aqua

(F-Skirt) HEMINGRAY/MADE IN U.S.A. (R-
Skirt) N° 43 RDP
Aqua, Emerald Green, Hemingray Blue

(F-Skirt) HEMINGRAY/MADE IN U.S.A. (R-
Skirt) N° 43 SDP
Aqua, Hemingray Blue



CD 214

CD 214

ARMSTRONG

(F-Skirt) *Armstrong's* NO 10 (R-Skirt) MADE
IN U.S.A. ['A' in a circle] [Number and Dots]
SB

Clear, Light Straw

HEMINGRAY

(F-Skirt) HEMINGRAY-43 (R-Skirt) MADE
IN U.S.A. RDP

7-up Green, Blue, Aqua, Dark Green Aqua, Ice
Blue

(F-Skirt) HEMINGRAY-43 (R-Skirt) MADE
IN U.S.A./[Numbers and Dots] CB
Yellow Tint, Clear

(F-Skirt) HEMINGRAY-43 (R-Skirt) MADE
IN U.S.A./[Numbers and Dots] RDP
Clear, Straw

(F-Skirt) HEMINGRAY-43/[Numbers and
Dots] (R-Skirt) MADE IN U.S.A./[Number]
RDP
Off Clear

NACIONALES

(F-Skirt) NACIONALES (R-Skirt) TELEGRAFOS RDP
Green Amber, Dark Red Amber, Golden Amber

WHITALL TATUM

(F-Skirt) WHITALL TATUM Co. NO 10/[Number] (R-Skirt) MADE IN U.S.A. ['W/T' in a triangle]/[Number] SB
Smoke, Clear, Light Green, Light Aqua

LOWEX

(F-Skirt) LOWEX/REG.U.S.PAT.OFF. (R-Skirt) -MADE IN U.S.A.- [Number] SB
Light Straw

WHITALL TATUM

(F-Skirt) (Arc)WHITALL TATUM/512U (R-Skirt) (Arc)MADE IN U.S.A./[Numbers]/['A' in a circle] SB
Clear, Smoke, Amber



CD 216

CD 216

ARMSTRONG

(F-Skirt) *Armstrong's* 51-2U (R-Skirt) MADE IN U.S.A. ['A' in a circle] [Numbers and Dots] SB
Clear, Root Beer Amber

HEMINGRAY

(F-Skirt) HEMINGRAY-661 (R-Skirt) MADE IN U.S.A./[Numbers] SB
Flashed Amber, Clear, Red Amber



CD 217

CD 217

ARMSTRONG

(F-Skirt) *Armstrong's* 51 C3 (R-Skirt) MADE IN U.S.A. ['A' in a circle] [Numbers and Dots] SB
Root Beer Amber



CD 218

CD 218

HEMINGRAY

(F-Skirt) HEMINGRAY-660 (R-Skirt) MADE IN U.S.A./
[Numbers and Dots] CB
Light Green, Ice Green, Clear, Straw, Carnival



CD 219

CD 219

HEMINGRAY

(F-Skirt) HEMINGRAY-66/[Numbers] (R-Skirt) MADE
IN U.S.A./[Number] SB
Red Amber, Clear

(F-Skirt) HEMINGRAY-660 (R-Skirt) MADE IN U.S.A./
[Numbers and Dots] CB
Clear

(F-Skirt) HEMINGRAY-660 (R-Skirt) MADE IN U.S.A./
[Numbers and Dots] SB
Amber, Clear, Ice Blue

(F-Skirt) HEMINGRAY-660/LOWEX (R-Skirt) MADE
IN U.S.A./[Numbers and Dots] SB
Clear w/Carnival Top, Ice Green, Olive Amber, Honey
Amber

(F-Skirt) HEMINGRAY-660/[Numbers and Dots] (R-
Skirt) MADE IN U.S.A./[Numbers and Dots] SB
Olive Amber

NO NAME

[No Embossing] SB
Clear



CD 220

CD 220

HEMINGRAY

(F-Skirt) HEMINGRAY-67/[Numbers] (R-Skirt)
MADE IN U.S.A./[Number] SB
Light Amber

(F-Skirt) HEMINGRAY-670 (R-Skirt) MADE
IN U.S.A./[Numbers and Dots] CB
Ice Aqua, Clear, Off Clear

(F-Skirt) HEMINGRAY-670 (R-Skirt) MADE
IN U.S.A./[Numbers and Dots] SB
Clear

(F-Skirt) HEMINGRAY-670/LOWEX (R-Skirt)
MADE IN U.S.A./[Numbers and Dots] SB
Ice Green w/Treated Top

(F-Skirt) HEMINGRAY-670/LOWEX/
REG.U.S.PAT.OFF. (R-Skirt) MADE IN
U.S.A./[Numbers and Dots] CB
Ice Blue, Amber

(F-Skirt) HEMINGRAY-670/LOWEX/
REG.U.S.PAT.OFF. (R-Skirt) MADE IN
U.S.A./[Numbers and Dots] SB
Olive Amber

(F-Skirt) HEMINGRAY-670/['LOWEX'
Blotted out] (R-Skirt) MADE IN U.S.A./
[Numbers and Dots] CB
Clear

(F-Skirt) HEMINGRAY-670/['LOWEX'
Blotted out]/REG. U.S. PAT. OFF (R-
Skirt)MADE IN U.S.A./[Number and Dots]
CB
Blue Tint, Clear w/Carnival Top, Clear, Straw

(F-Skirt) HEMINGRAY-670/[Numbers and
Dots] (R-Skirt) MADE IN U.S.A./[Number]
SB
Clear, Amber

CD 221

HEMINGRAY

(F-Skirt) HEMINGRAY-68 (R-Skirt) MADE IN U.S.A./
[Number and Dots] SB
Amber

(F-Skirt) HEMINGRAY-680 (R-Skirt) MADE IN U.S.A./
[Numbers and Dots] CB
Clear, Ice Green, Straw



CD 221

(F-Skirt) HEMINGRAY-680/LOWEX (R-Skirt) MADE
IN U.S.A./[Number] SB
Ice Green, Ice Green w/Carnival Top, Clear

(F-Skirt) HEMINGRAY-680/LOWEX/
REG.U.S.PAT.OFF. (R-Skirt) MADE IN U.S.A./
[Numbers and Dots] SB
Clear, Clear w/Carnival Top, Ice Green

(F-Skirt) HEMINGRAY_68/[Numbers and Dots] (R-
Skirt) MADE IN U.S.A./[Number] SB
Olive Amber

(F-Skirt) HEMINGRAY_680/['LOWEX' Blotted out]/
['REG. U.S. PAT.OFF.' Blotted out] (R-Skirt) MADE IN
U.S.A./[Numbers and Dots] SB
Clear

WHITALL TATUM

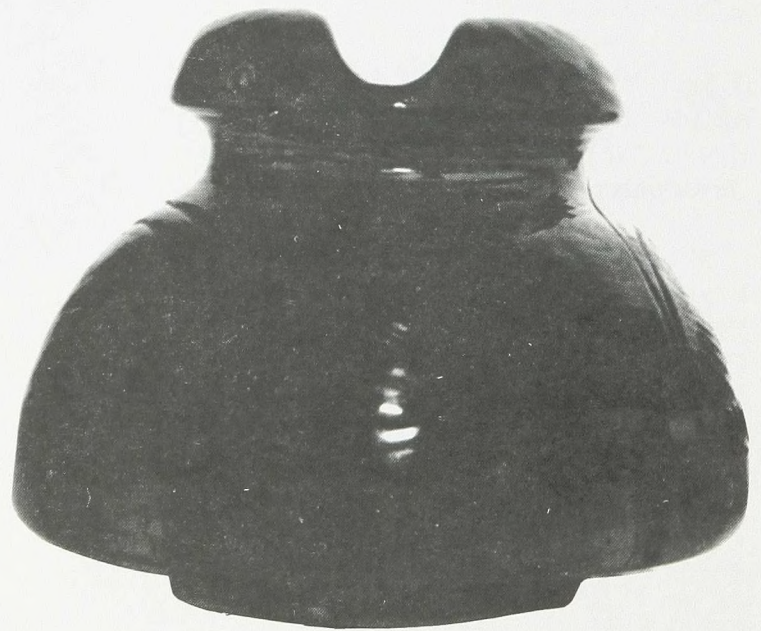
(F-Skirt) WHITALL TATUM CO. NO. 514/[Number]
(R-Skirt) MADE IN U.S.A. ['W/T' in a triangle] SB
Dark Red Amber



CD 225

BROOKFIELD
(F-Skirt) BROOKFIELD SB
Dark Aqua

CD 225



CD 226

CD 226

NO NAME
(F-Skirt) NO.115 SB
Aqua, Green



CD 226.3

CD 226.3

B
(F-Skirt) B SB
Emerald Green Blackglass



CD 228

CD 228

BROOKFIELD
(F-Skirt) BROOKFIELD SB
Dark Aqua

CD 228.5

NO NAME
(F-Skirt) 51-C2 (R-Skirt)
['A' in a circle] {An
Armstrong product} SB
Clear



CD 228.5



CD 229.6

CD 229.6

NO NAME
[No Embossing] {Fry Glass} SB
Black Opalescent



CD 230

CD 230

HEMINGRAY

(F-Skirt) HEMINGRAY (R-Skirt) 512/[Number] MADE IN U.S.A. [Number and Dots] CB
Clear

(F-Skirt) HEMINGRAY (R-Skirt) 512/[Number] MADE IN U.S.A. [Number and Dots] SB
Clear

(F-Skirt) HEMINGRAY/MADE IN U.S.A. (R-Skirt) D-512 SB
Citron, Ice Blue, Honey Amber

(F-Skirt) HEMINGRAY/MADE IN U.S.A.
(R-Skirt) LOWEX/D512 SB
Honey Amber

(F-Skirt) HEMINGRAY/MADE IN U.S.A.
(R-Skirt) [Number]/D-512 SB
Light Carnival, Yellow Amber, Dark Orange Amber

(F-Skirt) [Number and Dots]/HEMINGRAY/MADE IN U.S.A. (R-Skirt) [Number]/D-512 SB
Ice Blue, Amber, Red Amber, Carnival, Deep Olive Amber, Light Green, Clear

(F-Skirt) [Numbers and Dots] HEMINGRAY/MADE IN U.S.A. (R-Skirt) D-512 SB
Amber

(F-Skirt) [Numbers and Dots]/HEMINGRAY/MADE IN U.S.A. (R-Skirt) LOWEX/D-512 SB
Honey Amber

(F-Skirt) [Numbers] HEMINGRAY/MADE IN U.S.A. (R-Skirt) LOWEX/D-512 SB
Amber

LOWEX

(F-Skirt) LOWEX/REG. U.S. PAT. OFF (R-Skirt) 512/[Number] MADE IN U.S.A. [Number] SB
Deep Olive, Honey Amber, Clear

NO NAME

(F-Skirt) 512/[Number] MADE IN U.S.A. SB
Clear

CD 230.1

HEMINGRAY

(F-Skirt) HEMINGRAY/MADE IN U.S.A. (R-Skirt) D-512 SB
Aqua, Green Aqua



CD 230.1



CD 230.2

CD 230.2

ARMSTRONG

(F-Skirt) *Armstrong's* 51-C1A (R-Skirt)
MADE IN U.S.A. ['A' in a circle] [Numbers] SB
Root Beer Amber



CD 231

CD 231

HEMINGRAY

(F-Skirt) HEMINGRAY-820/TEMPERED (R-Skirt) MADE IN U.S.A./[Numbers] CB
Clear

KIMBLE

(F-Skirt) KIMBLE-820/TEMPERED (R-Skirt) MADE IN U.S.A./[Numbers and Dots] CB
Light Pink, Clear, Peach

(F-Skirt) KIMBLE-820/[Blotted out Embossing]/TEMPERED (R-Skirt) MADE IN U.S.A./[Numbers and Dots] CB
Light Pink, Peach, Clear



CD 231.2

KIMBLE
 (F-Skirt) KIMBLE-820/TEMPERED
 (R-Skirt) MADE IN U.S.A./[Num-
 bers] SB
 Clear, Light Straw

CD 231.2



CD 232

HEMINGRAY

(F-Skirt) HEMINGRAY-513 (R-Skirt) MADE IN U.S.A./
 [Numbers] CB
 Clear

(F-Skirt) HEMINGRAY/MADE IN U.S.A. (R-Skirt) D-
 513 SB
 Ice Aqua

CD 232

(F-Skirt) [Numbers and Dots]/HEMINGRAY/MADE IN
 U.S.A. (R-Skirt) [Number] D-513 SB
 Clear, Ice Blue, Carnival, Honey Amber, Ice Aqua

(F-Skirt) [Numbers and Dots]/HEMINGRAY/MADE IN
 U.S.A. (R-Skirt) [Number]/D-513 CB
 Clear, Light Straw



CD 232.1

HEMINGRAY
(F-Skirt) HEMINGRAY/
MADE IN U.S.A. SB
Dark Aqua

CD 232.1



CD 233

HEMINGRAY
(F-Skirt) HEMINGRAY-E.3. (R-Skirt) MADE
IN U.S.A. SB
Aqua, Clear, Lemon, Off Clear

PYREX
(F-Skirt) PYREX REG. U.S. PAT. OFF. (R-
Skirt) 61/CORNING MADE IN U.S.A. SB
Clear, Straw, Lemon, Carnival

(F-Skirt) PYREX REG. U.S. PAT. OFF. (R-
Skirt) 661/CORNING MADE IN U.S.A. SB
Carnival, Lemon, Clear

(F-Skirt) PYREX REG. U.S. PAT. OFF. (R-
Skirt) CORNING MADE IN U.S.A. SB
Clear, Straw

CD 233

CD 233.2

HEMINGRAY

(F-Skirt) HEMINGRAY-511/LOWEX (R-Skirt) [Number]/MADE IN U.S.A. SB
Green Tint, Clear



CD 233.2

CD 234

CD 234

PYREX

(F-Skirt) PYREX T.M. REG. U.S.
PAT. OFF (R-Skirt) [Letter]/MADE
IN U.S.A. 63 SB
Clear, Carnival, Straw, Light Yellow



CD 235

PYREX

(F-Skirt) CORNING PYREX T.M. REG. U.S.
PAT. (R-Skirt) OFF. MADE IN U.S.A. 662 SB
Clear, Carnival

(F-Skirt) CORNING PYREX T.M. REG. U.S.
PAT. (R-Skirt) OFF. MADE IN U.S.A. 62 SB
Clear, Carnival

(F-Skirt) CORNING PYREX T.M. REG. U.S.
PAT. (R-Skirt) [Number]/OFF. MADE IN
U.S.A. 662 SB
Clear

(F-Skirt) CORNING PYREX T.M. REG. U.S. (R-Skirt) PAT. OFF. MADE IN U.S.A. 662 SB
Clear



CD 235

(F-Skirt) CORNING {'C' is backwards}
PYREX T.M. REG. U.S. PAT. (R-Skirt)
OFF MADE IN U.S.A. 62 SB
Carnival

(F-Skirt) CRNING {'C' is backwards, Note
Spelling} PYREX T.M. REG. U.S. PAT.
OFF. (R-Skirt) MADE IN U.S.A. 662 SB
Carnival

(F-Skirt) [Number]/CORNING PYREX
T.M.REG. U.S. PAT. (R-Skirt) OFF.
MADE IN U.S.A. 662 SB
Clear



CD 236

BROOKFIELD

(F-Skirt) BROOKFIELD SB
Dark Aqua

CD 236



CD 237

CD 237

HEMINGRAY

(F-Skirt) HEMINGRAY-72 (R-Skirt) MADE IN U.S.A.
RDP
Clear, Ice Blue, Ice Aqua

(F-Skirt) HEMINGRAY-72.A/[Numbers] (R-Skirt)
MADE IN U.S.A. RDP
Ice Blue

(F-Skirt) HEMINGRAY-72/[Numbers and Dots] (R-
Skirt) MADE IN U.S.A. SB
Clear

(F-Skirt) HEMINGRAY-72/[Numbers and Dots] (R-
Skirt) MADE IN U.S.A./[Number] SB
Clear, Ice Blue

(F-Skirt) HEMINGRAY-720 (R-Skirt) MADE IN U.S.A./
[Numbers and Dots] CB
Clear

(F-Skirt) HEMINGRAY-720/[Numbers] (R-Skirt) MADE
IN U.S.A./[Numbers] SB
Clear, Ice Blue



CD 238

CD 238

HEMINGRAY

(F-Skirt) HEMINGRAY-514 (R-Skirt) MADE IN U.S.A./
[Number] SB
Light Honey Amber, Clear

(F-Skirt) HEMINGRAY-514 (R-Skirt) MADE IN U.S.A./
[Numbers and Dots] CB
Honey Amber, Clear, Light Straw

(F-Skirt) [Numbers and Dots]/HEMINGRAY/MADE IN
U.S.A. (R-Skirt) D-514 CB
Clear, Ice Blue

(F-Skirt) [Numbers and Dots]/HEMINGRAY/MADE IN
U.S.A. (R-Skirt) D-514 SB
Amber, Clear, Green Tint

(F-Skirt) [Numbers and Dots]/HEMINGRAY/MADE IN
U.S.A. (R-Skirt) [Number] D-514 SB
Honey Amber

(F-Skirt) [Numbers and Dots]/HEMINGRAY/MADE IN
U.S.A. (R-Skirt) [Number]/D-514 CB
Clear, Green Tint

CD 238.2

NO NAME

(F-Skirt) ['A' in a circle]/[Numbers] {An
Armstrong product} SB
Clear



CD 238.2



CD 239

CD 239

HEMINGRAY

(F-Skirt) HEMINGRAY/['KIMBLE-830' Blotted out]/
TEMPERED (R-Skirt) MADE IN U.S.A./[Number and
Dots] SB
Clear w/Carnival Top

(F-Skirt) KIMBLE/HEMINGRAY-830 [Letter]/TEM-
PERED (R-Skirt) MADE IN U.S.A./[Numbers and Dots]
CB
Clear

KIMBLE

(F-Skirt) KIMBLE [Letter]/830/TEMPERED (R-Skirt)
MADE IN U.S.A./[Numbers and Dots] CB
Clear

(F-Skirt) KIMBLE-830 (R-Skirt) MADE IN U.S.A./
[Numbers] SB
Clear w/Carnival Top

(F-Skirt) KIMBLE-830/TEMPERED (R-Skirt) MADE IN
U.S.A./[Numbers and Dots] CB
Peach, Light Green, Clear, Straw



CD 239.2

(Photograph courtesy of Mike Guthrie)

CD 239.2

KIMBLE

(F-Skirt) KIMBLE-850 (R-Skirt) MADE IN U.S.A./
[Numbers] CB
Clear

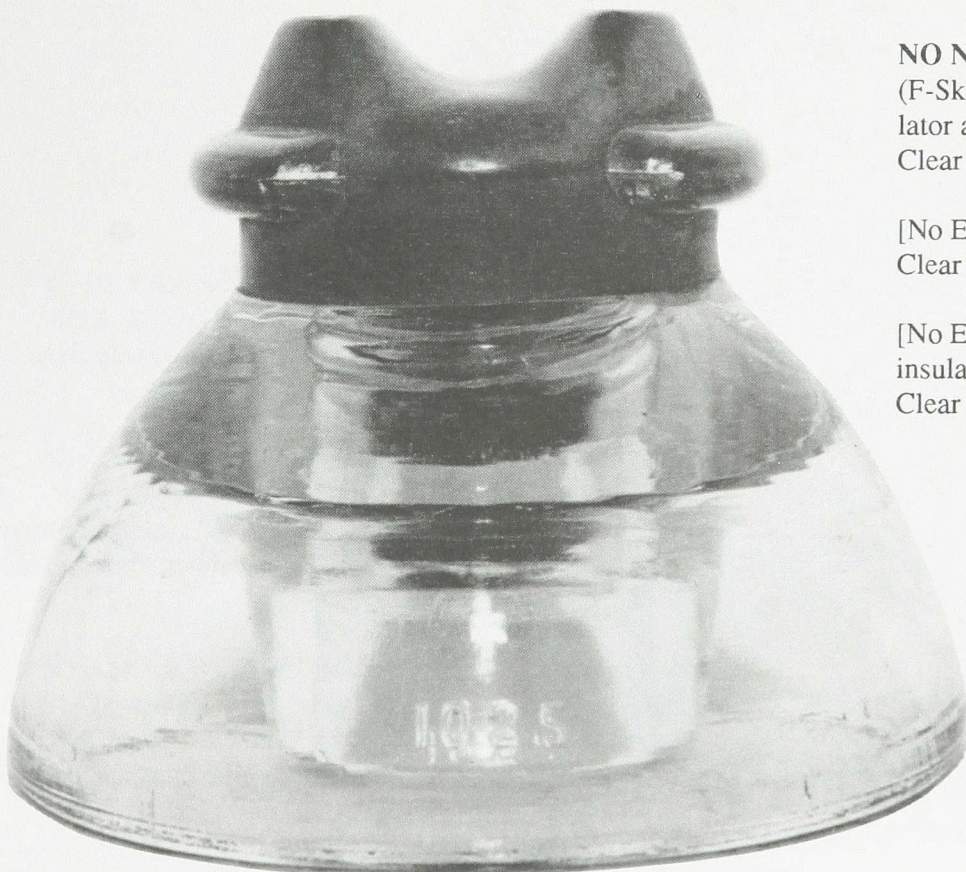


CD 240

PYREX

(F-Skirt) CORNING PYREX REG. U.S.
PAT. OFF. (R-Skirt) MADE IN U.S.A. -
131[Number] SB
Clear, Yellow Tint

CD 240



CD 240.2

NO NAME

(F-Skirt) 1025 {Metal cap covers the insu-
lator above the wire groove} SB
Clear

[No Embossing] SB
Clear

[No Embossing] {Metal cap covers the
insulator above the wire groove} SB
Clear

CD 240.2



CD 240.5

CD 240.5

PYREX

(F-Skirt) CORNING
PYREX REG. U.S. PAT.
OFF. (R-Skirt) MADE IN
U.S.A. 161 SB
Light Lemon, Clear

(Skirt) CORNING PYREX
T.M.REG. U.S. PAT.OFF.
MADE IN U.S.A. 161
[Number] {Embossed all the
way around the skirt} SB
Clear



CD 241

CD 241

HEMINGRAY

(F-Skirt) HEMINGRAY-23 (R-
Skirt) MADE IN U.S.A. RDP
Honey Amber, Hemingray Blue,
Aqua

(F-Skirt) HEMINGRAY-23 (R-
Skirt) MADE IN U.S.A. SDP
Root Beer Amber, Aqua, Hemingray
Blue, Yellow Amber, Orange Amber

LOCKE

(F-Skirt) PAT'D BY F.M. LOCKE/
VICTOR/N.Y. (R-Skirt) MARCH
31, 1914 FEB 2, 1915/OCT. 12,
1915 {Embossing is upsidedown}
SB
Clear, Aqua



CD 241.2

HEMINGRAY

(F-Skirt) HEMINGRAY-24 (R-Skirt) MADE IN U.S.A. SDP

Aqua, Golden Amber, Hemingray Blue

CD 241.2



CD 242

CD 242

HEMINGRAY

(F-Skirt) HEMINGRAY-66 (R-Skirt) MADE IN U.S.A. SDP

Aqua, Hemingray Blue



CD 243

CD 243

HEMINGRAY

(F-Skirt) HEMINGRAY-88 (R-Skirt) MADE IN U.S.A. SDP

Aqua, Hemingray Blue

CD 244

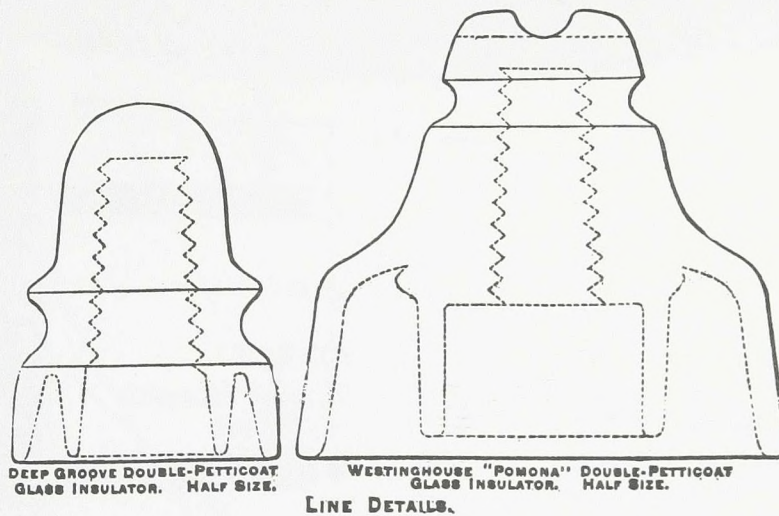
NO NAME

[No Embossing] SB

Purple



CD 244



In a 1894 State of California geological and mining report, the CD 244 was pictured and referred to as the Westinghouse "**Pomono**" double petticoat glass insulator. (Courtesy of David Downes)

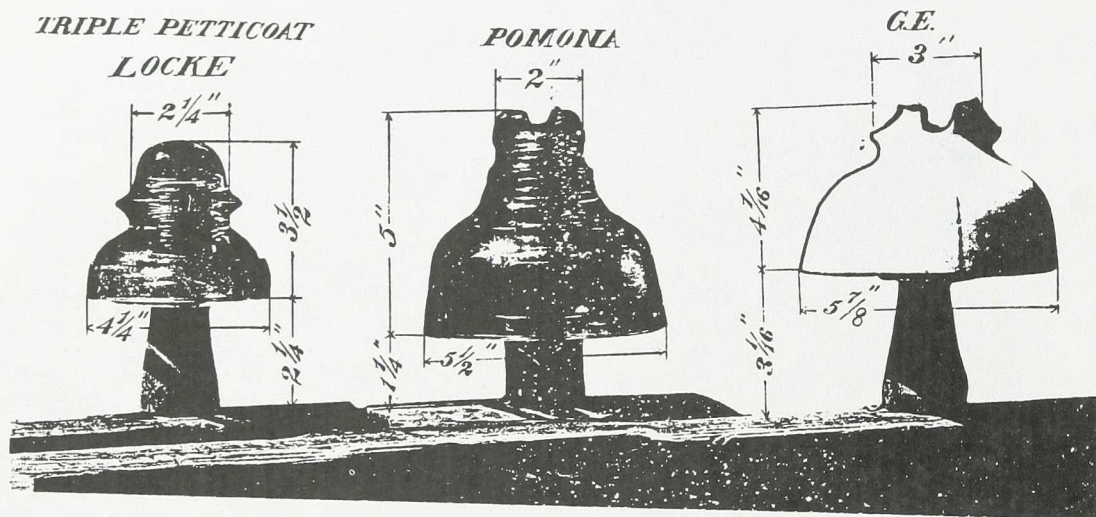
Research of power company records also show that the San Antonio Light and Power Company began construction on November 28, 1892, of a fourteen mile long line from San Antonio Canyon to Pamona, California. Construction was also started on a second line from San Antonio Canyon to San Bernardino, California, a distance of twenty-eight miles. The line was a 10kV line and used the CD 244 "Pomona" insulators. Normal operation began February 16, 1893. (Courtesy of Elton Gish)

In Volume II, page 153 of *Ralph Davenport Mershon* by Edith Cookins, there is discussion of an experimental line testing proposal.

"In the spring of 1895, Mr. L.L. Nunn, General Manager of the Telluride Power Transmission Company, having recognized as a result of his experience in power transmission matters the necessity for more accurate data than was then available as to the use of high voltages on transmission lines, made arrangements with the Westinghouse Electric and Manufacturing Company for taking up jointly with the latter company a line of work which should lead to the acquisition of the required data.

In accordance with this arrangement apparatus was built for the purpose of running, at various voltages higher than those ordinarily in use, the synchronous power transmission plant originally installed for Mr. Nunn by the Westinghouse Company for supplying power to the mill of the Gold King Mining and Milling Company."

The line constructed ran from Ames to the Gold King Mill, a distance of 2.2 miles. It consisted of sixty-two poles, each with three crossarms, the upper one being approximately twenty-six feet from the ground. Each crossarm had one circuit and each circuit had its own type of insulator. The circuit was called the "Pomona, Locke, G.E." The Locke insulator had a triple petticoat, while the other two insulators were a double petticoat style.



Three types of Insulators used in experiment

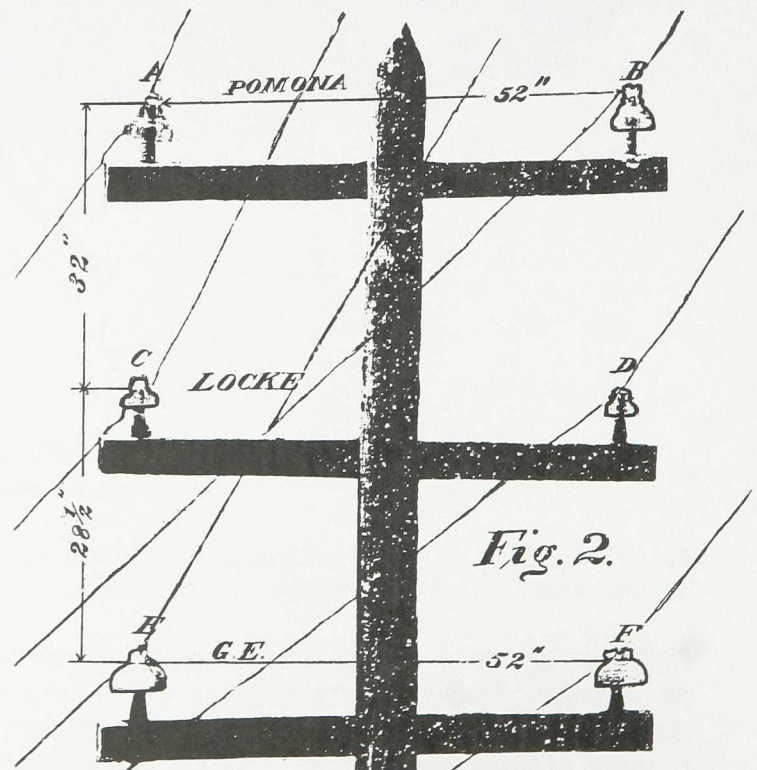


Fig. 2.

Top of pole, showing three crossarms

As shown in the illustration, the bottom crossarm contained white porcelain G.E. power insulators, the middle crossarm had two CD 287 Locke No. 15 style insulators, while the top crossarm had two of the "Pomona" insulators.

Even though the CD 244 "Pomona" has been noted as in use on several different lines, there have only been a very limited number of the insulators recovered. To date, there are only four or five known specimens. (Information on high voltage experiments at Telluride courtesy of Rick Soller)



CD 244.5

CD 244.5

GREELEY
(F-Skirt) L & S/PATTERN (R-Skirt)
GREELEY/N.Y. SB
Aqua



CD 245

CD 245

NO NAME

(F-Skirt) 9200 SB

Aqua, Light Blue, Green

T-H.

(F-Skirt) T-H (R-Skirt) 9200 SB

Aqua, Light Blue, Light Aqua



CD 247

CD 247

NO NAME

[No Embossing] SB

Aqua, Light Green



CD 248

CD 248/311

HEMINGRAY

(248 Top) (F-Skirt) HEMINGRAY (R-Skirt) N° 79
{CD311 sleeve is unembossed} SDP
Aqua, Hemingray Blue

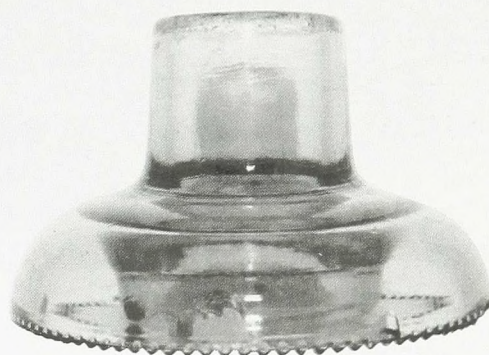
PYREX

(248 Top) (F-Skirt) CORNING PYREX REG. U.S. PAT.
OFF (R-Skirt) MADE IN U.S.A. {See CD311 for sleeve
embossing} SB
Clear, Straw

(Skirt) PYREX PAT. 5-27-19. MADE BY CORNING
GLASS WORKS, CORNING N.Y. U.S.A. {Embossed all
the way around the skirt} {See CD311 for sleeve emboss-
ing} SB
Clear, Straw, Yellow Tint



CD 248 and two CD 311 units



CD 311 Sleeve

The typical use of the CD 248 is with two CD 311 sleeves. A special long pin is used to accommodate the installation of the three pieces. The pin end contains a standard threading, over which are slipped the two sleeves and then the CD 248 is screwed onto the pin above the two sleeves.

The CD 311 sleeve contains a double petticoat and no threading on the hole through which the pin passes.

ACTUAL SIZE: 6 5/8" in height; 8 1/2" in width
Photo Size: 80% of Full Size



CD 249



CD 249/312

HEMINGRAY
(F-Skirt) HEMINGRAY (R-Skirt)
No 0, PROVO TYPE/PATENTED
APRIL 25 1899 {CD312 sleeve is
unembossed} SB
Aqua

CD 312 Sleeve
Used with CD 249



CD 250

CD 250

N.E.G.M.

(F-Skirt) N.E.G.M.CO. {Note no inner skirt} SB
Aqua



CD 250.2

CD 250.2

ERICSSON

(F-Skirt) TELEFONOS ERICSSON-LD-1 SB
Green, Aqua, Celery Green



CD 251

CD 251

HEMINGRAY

(F-Skirt) HEMINGRAY-61 (R-Skirt) MADE IN U.S.A./
RDP
Ice Blue, Aqua, Clear

(F-Skirt) HEMINGRAY-61 (R-Skirt) MADE IN U.S.A./
[Numbers and Dots] CB
Ice Blue, Clear

(F-Skirt) HEMINGRAY-61 (R-Skirt) MADE IN U.S.A./
[Numbers and Dots] SB
Ice Blue, Aqua, Clear

(F-Skirt) HEMINGRAY-61/[Numbers and Dots] (R-
Skirt) MADE IN U.S.A./[Number] RDP
Clear

(F-Skirt) HEMINGRAY/N° 1 CABLE (R-Skirt) PAT-
ENTED/MAY 2 1893 SDP
Aqua, Light Aqua

(F-Skirt) MADE IN U.S.A./HEMINGRAY/N° 61 CABLE
(R-Skirt) PATENTED/MAY 2 1893 SDP
Aqua, Hemingray Blue

(F-Skirt) N° 61/HEMINGRAY/MADE IN U.S.A. (R-
Skirt) PATENTED/MAY 2 1893 SDP
Aqua, Hemingray Blue

LYNCHBURG

(F-Skirt) ['L' in an oval]/LYNCHBURG (R-Skirt)
[Number]/MADE IN NO.1 U.S.A. SDP
Light Aqua

(F-Skirt) ['L' in an oval]/LYNCHBURG/['N.E.G.M.CO.'
Blotted out] (R-Skirt) [Number]/MADE IN NO.1 U.S.A./
['PAT JUNE 17 1890' Blotted out] SDP
Light Aqua

N.E.G.M.

(F-Skirt) N.E.G.M.CO. SB
Aqua, Ice Blue, Sapphire Blue, Green

(F-Skirt) N.E.G.M.CO. (R-Skirt) "PAT JUNE 17 1890"
SB
Aqua, Green, Olive Green, Ice Blue, Dark Yellow Green,
Dark Blue, Light Aqua



CD 252

CABLE

(F-Skirt) NO.2 CABLE SB
Light Blue, Aqua, Dark Olive Amber, Ice Green, 7-up
Green, Dark Yellow Green, Light Aqua, Light Steel Blue,
Dark Aqua, Dark Green, Dark Olive Green, Peach, Light
Straw, Sage Green

E.S.S.

(F-Skirt) E.S.S.Co./[Blotted out Embossing] (R-Skirt) N°
401 SB
Aqua

GAYNER

(F-Skirt) GAYNER (R-Skirt) NO.620/[Number] SDP
Aqua

HEMINGRAY

(F-Skirt) HEMINGAY-62 {Note Spelling} (R-Skirt)
MADE IN U.S.A. RDP
Aqua, Hemingray Blue

(F-Skirt) HEMINGRAY-62 (R-Skirt) MADE IN U.S.A.
RDP
Aqua, Carnival, Ice Blue, Hemingray Blue

(F-Skirt) HEMINGRAY-62 (R-Skirt) MADE IN U.S.A./
[Number and Dots] CB
Green Tint, Clear, Carnival

(F-Skirt) HEMINGRAY-62 (R-Skirt) MADE IN
U.S.A./[Number and Dots] SB
Clear, Flashed Amber, Olive Amber

(F-Skirt) HEMINGRAY-62/LOWEX (R-Skirt)
MADE IN U.S.A./[Numbers and Dots] SB
Olive Amber, Flashed Amber

(F-Skirt) HEMINGRAY-62/LOWEX REG. U.S.
PAT. OFF (R-Skirt) MADE IN U.S.A./[Num-
bers and Dots] SB
Clear, Light Pink

(F-Skirt) HEMINGRAY-62/['LOWEX' Blotted
out] (R-Skirt) MADE IN U.S.A./[Number and
Dots] CB
Clear, Smoke

(F-Skirt) HEMINGRAY-62/['LOWEX' Blotted
out] (R-Skirt) MADE IN U.S.A./[Numbers and
Dots] SB
Clear

CD 252

CD 252 Variations

Both of the insulators at the right are embossed units which were distributed by the M & E Company (Mayer & Englund) of Philadelphia. The one (left) is the tall skirt version, while the one (right) is the narrow style.



(F-Skirt) HEMINGRAY-62/[Numbers and Dots] (R-Skirt) MADE IN U.S.A./[Number] SB
Ice Blue

(F-Skirt) HEMINGRAY-62/[Numbers and Dots] (R-Skirt) MADE IN U.S.A./[Number] RDP
Clear, Green Tint

(F-Skirt) HEMINGRAY/LOWEX (R-Skirt) MADE IN U.S.A. SB
Olive Amber

(F-Skirt) HEMINGRAY/N° 2 CABLE (R-Skirt) PAT. MAY 2ND 1893 SDP
Aqua, Green

(F-Skirt) HEMINGRAY/N° 2 CABLE (R-Skirt) ['KNOWLES CABLE' Blotted out]/PAT.MAY 2ND 1893 SDP
Aqua, Green, Blue Aqua, Dark Aqua

(F-Skirt) HEMINGRAY/N° 2 CABLE/[Blotted out Embossing] (R-Skirt) PAT.MAY 2ND 1893 SDP
Aqua

(F-Skirt) HEMINGRAY/N° 62 CABLE (R-Skirt) MADE IN U.S.A./KNOWLES CABLE/PAT.MAY 2ND 1893 SDP
Dark Aqua

(F-Skirt) HEMINGRAY/N° 62 CABLE (R-Skirt) MADE IN U.S.A./PAT. MAY 2ND 1893/[Blotted out Embossing] SDP
Aqua, Ice Blue, Hemingray Blue

(F-Skirt) HEMINGRAY/N° 62 CABLE (R-Skirt) MADE IN U.S.A./PAT.MAY 2ND 1893 RDP
Ice Blue

(F-Skirt) HEMINGRAY/N° 62 CABLE (R-Skirt) MADE IN U.S.A./PAT.MAY 2ND 1893 SDP
Hemingray Blue

(F-Skirt) HEMINGRAY/N° 62 CABLE (R-Skirt) PAT. MAY 2ND 1893 SDP
Aqua

(F-Skirt) HEMINGRAY/N° 62 CABLE (R-Skirt) PAT.MAY 2 1893 SDP
Aqua

(F-Skirt) HEMINGRAY/N° 62 CABLE/['KNOWLES/CABLE INSULATOR' Blotted out] (R-Skirt) MADE IN U.S.A./PAT. MAY 2ND 1893 SDP
Aqua, Ice Blue, Blue

KNOWLES

(F-Skirt) KNOWLES CABLE/INSULATOR SB
Light Aqua, Aqua, Light Green

(F-Skirt) KNOWLES/NO.2 CABLE {Slug embossed} (R-Skirt) (Arc)PATENTED/[Prism]/JUNE.17. 1890 SB
Green, Aqua, Apple Green, Light Blue, Blue Aqua, Yellow Green, Dark Yellow Green, Yellow Olive

(F-Skirt) KNOWLES/NO.2 CABLE (R-Skirt) [Prism] SB
Aqua

LYNCHBURG

(F-Skirt) LYNCHBURG (R-Skirt) N° 2 CABLE/MADE IN U.S.A. {'N' in 'IN' is backwards} SDP
Light Aqua

(F-Skirt) ['L' in an oval]/LYNCHBURG (R-Skirt) N° 2 CABLE/MADE IN U.S.A. SDP
Aqua, Sage Green

(F-Skirt) ['L' in an oval]/LYNCHBURG (R-Skirt) N° 2 CABLE/MADE IN U.S.A. {'N' in 'IN' is backwards} SDP
Aqua

(F-Skirt) ['L' in an oval]/LYNCHBURG {'N' is backwards} (R-Skirt) N° 2 CABLE/MADE IN U.S.A. {'N' in 'IN' is backwards} SDP
Aqua, Celery Green

(F-Skirt) ['L' in an oval]/LYNCHBURG/MADE IN U.S.A. (R-Skirt) N° 62 CABLE {Note N° 62} SDP
Aqua

(F-Skirt) [Backwards 'L' in an oval]/LYNCHBURG (R-Skirt) N° 2 CABLE/MADE IN U.S.A. {'S' is backwards} SDP
Aqua

M. & E.

(F-Skirt) M & E Co./PHILA {Slug Embossed} (R-Skirt) [Prism] SB
Dark Yellow Green, Green

(F-Skirt) THE M & E Co. (R-Skirt) N° 401 SB
Aqua, Light Green Aqua

(F-Skirt) THE/M & E Co./PHILADELPHIA (R-Skirt) KNOWLES CABLE/INSULATOR {Can be 1/2" taller than most 252's} SB
Aqua, Green

MAYDWELL

(F-Skirt) MAYDWELL-62 (R-Skirt) U.S.A. SDP
Light Purple, Light Green, Off Clear, Straw, Light Straw, Pink, Gingerale, Yellow Green Tint

CD 253

KNOWLES

(F-Skirt) KNOWLES CABLE/INSULATOR SB
Green, Blue, Light Aqua

(F-Skirt) KNOWLES CABLE/INSULATOR/''PATENTED.JUNE.17.1890'' SB
Aqua, Yellow Green, Blue, Green, Green Aqua

(F-Skirt) MAYDWELL-62/['M^cLAUGHLIN' Blotted out] (R-Skirt) U.S.A. RDP
Light Blue, Yellow Green

M^cLAUGHLIN

(F-Skirt) M^cLAUGHLIN-62 RDP
Light Green, Emerald Green

(F-Skirt) M^cLAUGHLIN-62 SDP
Sage Green, Delft Blue, Pink, Steel Blue, Ice Green, Aqua, Light Blue

NO NAME

[No Embossing] {Knowles Style} SB
Brooke's Blue

PRISM

(F-Skirt) [Prism] SB
Aqua

(F-Skirt) [Prism] (R-Skirt) NO.2 SB
Blue Aqua, Ice Blue, Green, Light Green Aqua, Aqua



CD 253



CD 254

CABLE

(F-Skirt) NO.3 CABLE SB
Aqua, Light Blue Aqua, Dark Green

(F-Skirt) NO.3 CABLE/[Blotted out Embossing] SB
Emerald Green

HEMINGRAY

(F-Skirt) HEMINGRAY (R-Skirt) N° 3 CABLE SB
Aqua, Green, Dark Aqua

(F-Skirt) HEMINGRAY (R-Skirt) N° 3 CABLE SDP
Aqua, Blue, Dark Aqua

(F-Skirt) HEMINGRAY-63 (R-Skirt) MADE IN U.S.A.
SB
Clear, Ice Aqua, Ice Blue

CD 254

(F-Skirt) HEMINGRAY-63 (R-Skirt) MADE IN U.S.A.
SDP
Ice Blue, Aqua

(F-Skirt) HEMINGRAY-63/[Number] (R-Skirt) MADE
IN U.S.A./[Number] SB
Off Clear, Clear

(F-Skirt) HEMINGRAY/MADE IN U.S.A. (R-Skirt) N°
63 CABLE SDP
Hemingray Blue

M.& E.

(F-Skirt) THE M & E Co. (R-Skirt) N° 58 SB
Aqua, Blue Aqua, Light Aqua



CD 256 Variations

The "MANHATTAN" embossed insulators were manufactured in a short, squat size (left) and the normal size (right).



CD 256

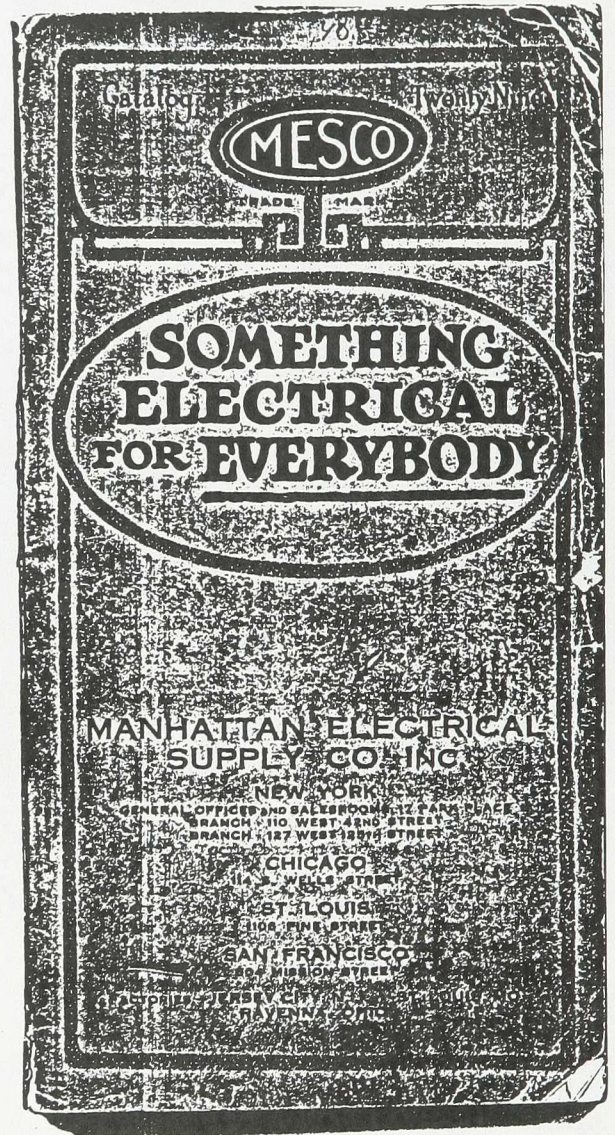
CD 256

MANHATTAN

(F-Skirt) MANHATTAN SB
Aqua, Blue

(F-Skirt) MANHATTAN (R-Skirt) "PAT-
ENTED JUNE 17 1890" SB
Aqua, Light Aqua, Blue, Green, Yellow Green,
Olive Green

(F-Skirt) MANHATTAN (R-Skirt) PAT-
ENTED JUNE 17 1890 SB
Aqua, Green Aqua, Blue, Ice Blue, Light Green



MESCO Catalog Twenty-Nine

Headquarters of Manhattan Electrical Supply Co., Inc. were New York City, with offices in Chicago, St. Louis, and San Francisco. Factories were listed as Jersey City, N.J., St. Louis, MO., and Ravenna, Ohio. (Courtesy Kevin Lawless)



CD 257

CD 257

HEMINGRAY

(F-Skirt) HEMINGRAY (R-Skirt) MADE IN U.S.A./N° 60 SDP
Hemingray Blue

(F-Skirt) HEMINGRAY (R-Skirt) N° 60 SDP
Light Green, Aqua, Emerald Green, Green Aqua

(F-Skirt) HEMINGRAY (R-Skirt) PATENT/JUNE 17 1890 MAY 2 1893 SDP
Aqua, Electric Blue, Emerald Green, Light Electric Blue, Jade Blue Milk, Jade Aqua Milk, Light Aqua

(F-Skirt) HEMINGRAY (R-Skirt) PATENT/JUNE 17 1890 MAY 2 1893 {Wide Groove} SDP
Emerald Green, Green, Aqua, Light Aqua, Blue Aqua, Forest Green

(F-Skirt) HEMINGRAY (R-Skirt) PATENT/JUNE 17 1893 MAY 2 1893 {Note 'June 1893' Date} {Wide Groove} SDP
Emerald Green, Green, Aqua



CD 257 Variation

The CD 257 "Mickey Mouse" with a flat, wide wire groove.

(F-Skirt) HEMINGRAY-60 (R-Skirt) MADE IN U.S.A. RDP

Aqua, Ice Blue, Hemingray Blue, Carnival (Altered)

(F-Skirt) HEMINGRAY-60 (R-Skirt) MADE IN U.S.A. SDP

Aqua, Blue

(F-Skirt) HEMINGRAY-60 (R-Skirt) MADE IN U.S.A. {Wide Groove} RDP

Clear, Ice Blue, Straw, Aqua, Hemingray Blue, Carnival (Altered)

(F-Skirt) HEMINGRAY-60/[Numbers and Dots] (R-Skirt) MADE IN U.S.A./[Number] RDP

Clear, Light Straw, Aqua, Carnival, Ice Blue, Off Clear

(F-Skirt) HEMINGRAY-63 {Note '63'} (R-Skirt) MADE IN U.S.A. {Wide Groove} RDP

Hemingray Blue, Clear, Aqua

(F-Skirt) HEMINGRAY/N° 60-A (R-Skirt) MADE IN U.S.A./JUNE 17 1890 MAY 2 1893 SDP

Aqua

(F-Skirt) HEMINGRAY/N° 60-A (R-Skirt) MADE IN U.S.A./JUNE 17 1890 MAY 2 1893 {Wide Groove} SDP
Hemingray Blue

(F-Skirt) HEMINGRAY/N° 63-A {Note '63'} (R-Skirt) MADE IN U.S.A./JUNE 17 1890 MAY 2 1893 {Wide Groove} SDP
Hemingray Blue

(F-Skirt) HEMINGRAY/[Number and Dots] (R-Skirt) MADE IN U.S.A./N° 60/[Number] RDP
Clear, Aqua

(F-Skirt) MADE IN U.S.A./HEMINGRAY/N° 60-A (R-Skirt) PATENT/JUNE 17 1890 MAY 2 1893 {Wide Groove} SDP
Hemingray Blue

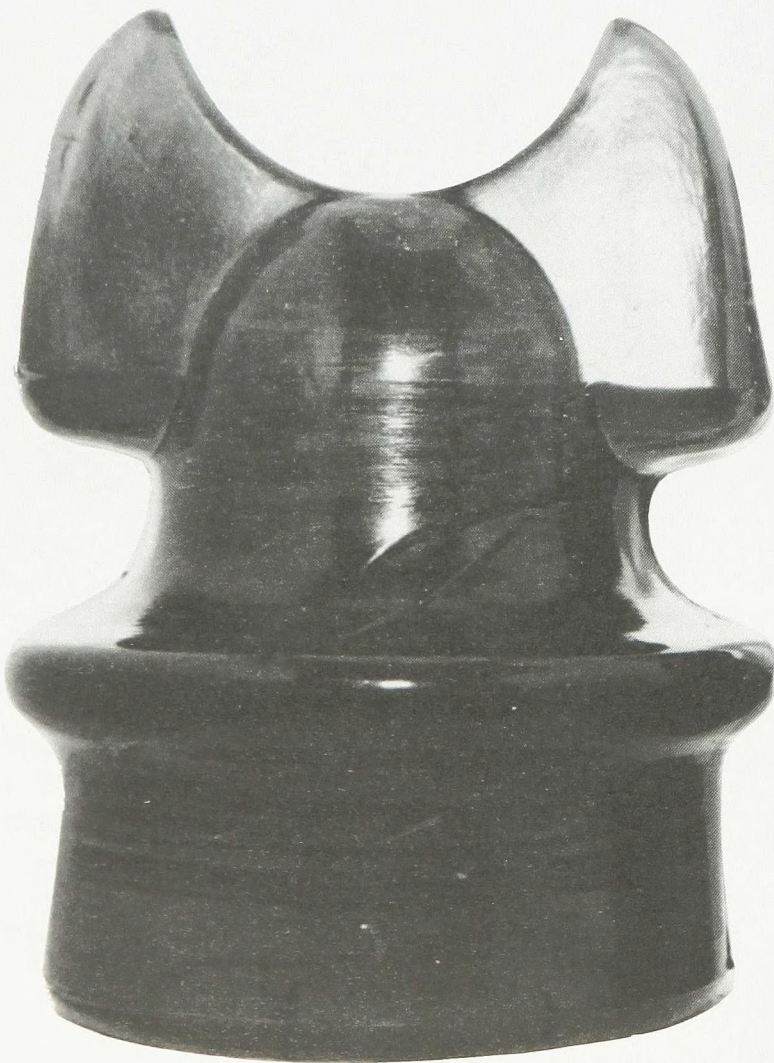
(F-Skirt) MADE IN U.S.A./HEMINGRAY/N° 60-A (R-Skirt) PATENT/JUNE 17 1893 MAY 2 1893 {Note 'June 1893' Date} {Wide Groove} SDP
Hemingray Blue

(F-Skirt) N° 60-A/HEMINGRAY (R-Skirt) MADE IN U.S.A./['PATENT' Blotted out]/JUNE 17 1893 MAY 2 1893 {Note: 'June 1893' Date Error} SDP
Aqua

NO NAME

(F-Skirt) PATENT/JUNE 17 1890 (R-Skirt) PATENT/MAY 2 1893 SDP
Aqua, Light Aqua, Green, Ice Blue, Clear, Blue, Ice Green

(F-Skirt) PATENT/JUNE 17 1890 (R-Skirt) PATENT/MAY 2 1893 {Wide Groove} SDP
Light Aqua, Aqua



CD 258

CD 258

CABLE

(F-Skirt) CABLE SDP
Dark Aqua

(F-Skirt) CABLE {Comes with and without threading on the Inside of the Outer Skirt} SB
Emerald Green, Aqua, Dark Aqua



CD 259

CABLE

(F-Skirt) CABLE {Inside of Outer Skirt is Threaded} SB

Aqua, Green, Emerald Green, Light Blue

(F-Skirt) CABLE {Inside of Outer Skirt is Threaded} SDP

Dark Aqua, Green

NO NAME

(Base) PAT'D JUNE 17, 1890, AUG. 19, 1890

Light Blue

OAKMAN

(F-Skirt) CABLE (Base) OAKMAN M'F'G. CO. BOSTON/PAT'D JUNE 17, 1890, AUG. 19, 1890.

{Inside of Outer Skirt is Threaded}

Aqua, Light Blue, Light Aqua

CD 259



CD 260

CABLE

(F-Skirt) CABLE

SB

Aqua



CD 260 Variations

Pictured are two "CALIFORNIA" cables. The one on the left has the wide wire groove, while the unit on the right has the narrower "pinch ear" groove.

CD 260

CALIFORNIA

(F-Skirt) CALIFORNIA SB
Green, Sage Green, Smoke, Purple, Peach, Yellow

(F-Skirt) CALIFORNIA {Pinch Eared} SB
Aqua, Green

HAWLEY

(F-Skirt) ['HICo' Entwined Initials] (R-Skirt) HAWLEY,
PA./U.S.A. SB
Aqua

STAR

(F-Skirt) [Star] SB
Blue Aqua, Green Aqua

(F-Skirt) [Star] (R-Skirt) "PATENTED JUNE. 17. 1890"
SB
Light Blue, Light Green, Green, Snowy Green, Light
Aqua, Yellow Green, Aqua, Lime Green



CD 262

CD 262

COLUMBIA

(F-Skirt) N° 2 COLUMBIA (R-Skirt)
PAT'D MAY 12TH 1891 SB
Aqua, Green, Dark Aqua

The design of the **CD 262**, **CD 263**, and **CD 264** cables are covered in **Samuel Oakman's patent of May 12, 1891**. (See New England Manufacturers -- The Influence of Samuel Oakman chapter)



CD 263

CD 263

COLUMBIA

(F-Skirt) COLUMBIA SB
Light Aqua

(F-Skirt) COLUMBIA {Inside of Outer Skirt is Threaded} SB
Light Aqua

(F-Skirt) PAT'D MAY 12 1891/COLUMBIA SB
Dark Aqua, Blue, Yellow Green, Green

(F-Skirt) PAT'D MAY 12 1891/COLUMBIA {Inside of Outer Skirt is Threaded} SB
Dark Aqua, Light Blue, Green Aqua

(F-Skirt) PAT'D MAY 12 1891/COLUMBIA {Wide Ear} {Inside of Outer Skirt is Threaded} SB
Aqua, Dark Aqua

(F-Skirt) PAT'D MAY 12TH 1891/COLUMBIA {Inside of Outer Skirt is Threaded} SB
Aqua

HEMINGRAY

(F-Skirt) HEMINGRAY (R-Skirt) PAT'D. MAY 12 1891 SDP
Aqua

(F-Skirt) HEMINGRAY (R-Skirt) PAT'D. MAY 12 1891/COLUMBIA SB
Aqua, Hemingray Blue, Light Green, Green

(F-Skirt) HEMINGRAY (R-Skirt) PAT'D. MAY 12 1891/COLUMBIA SDP
Aqua, Hemingray Blue

NO NAME

(F-Skirt) "PATENTED.JUNE. 17. 1890" SB
Blue Aqua, Yellow Green, Light Blue

OAKMAN

(F-Skirt) COLUMBIA (Base) PAT.JUNE 17, 1890. AUG. 19, 1890. MAY 12, 1891./OAKMAN M'F'G CO. BOSTON {Inside of Outer Skirt is Threaded}
Light Aqua, Light Blue



CD 264

CD 264

COLUMBIA
(F-Skirt) COLUMBIA SB
Light Aqua, Light Blue



CD 265



CD 265

FISHER

(F-Skirt) FISHER/
 (Arc)ELECTRIC RAILWAY
 SYSTEM/BUILT BY/DETROIT
 ELECTRICAL/WORKS SB
 Aqua, Lime Green, Ice Blue,
 Yellow Green

NO NAME

[No Embossing] SB
 Light Green

In the mid-1880's, **Frank E. Fisher**, manager of the **Detroit Electrical Works** of Detroit, Michigan, developed an electric railway system. Detroit civic leaders dreamed of matching similar railway systems which were in operation in New York City and London. Lack of public interest and financing modified the size of the railway to a three mile stretch called the Highland Railway Company. The line would serve excursions along the Conner Creek to Lake St. Clair in Highland Park, Michigan.

OUR SYSTEM is the ONLY System,

-- BECAUSE --


**THERE IS NO SYSTEM USING TWO MOTORS
 TO DO THE WORK OF ONE.**

.....

WE INVITE INVESTIGATION.

.....

Multipolar Generators.
 Street Railway Motors.



DETROIT ELECTRICAL WORKS,
 DETROIT, MICH.

NEW YORK,
 110 Broadway Street.
 LOUISVILLE,
 The Omberine.

CHATTANOOGA,
 350 First Street.

CHICAGO,
 Broadway Building.
 CINCINNATI,
 Fifth Building.

A Street Railway Gazette ad for the
 Detroit Electrical Works
 (Courtesy of James Doty)

The system used a "third-rail" power source which was buried below the level of the street. The rail was supported by a flat-top glass insulator (CD 265). For every twenty feet of track, one Fisher insulator was installed on a wooden, threaded pin and the rail secured along the flat notch on the top of the insulator.

In 1886 St. Louis, Missouri, had a small experimental line in operation, but the largest installation occurred on an electric railway line to be built from San Jose to Santa Clara, California. Construction of the line commenced in October of 1887. Operation of the system began in July, 1888. Due to both electrical and mechanical problems, the line ceased functioning by the fall of 1888.

A **No Name CD 265** (at the right) has also been located. Although it is similar in style to the embossed Fisher insulator, it has a rounded cable top instead of a flat, third rail style. All of the embossed units are molded in vintage aqua and green glass colors. The unembossed pieces are all a light green color. Most would agree that the insulator was probably not manufactured for use on Fisher Electric Railway construction. At least



CD 265 Variation

one of these styles was removed from a factory in the Detroit area, and several others were traced to a Detroit area auction where a box of unused specimens were offered for sale.



CD 266

NO NAME
(F-Skirt)
"PATENTED.JUNE.17.
1890" SB
Dark Aqua, Aqua

CD 266



CD 267

CD 267

CABLE

(F-Skirt) No.4 CABLE SB
Aqua, Green, Emerald Green

(F-Skirt) N.E.G.M.CO. (R-Skirt)
"PATENTED JUNE.17. 1890" SB
Aqua, Blue, Green, Light Green

N.E.G.M.

(F-Skirt) N.E.G.M. SB
Aqua

NO NAME

[No Embossing] SB
Aqua, Light Blue



CD 267.5

CD 267.5

N.E.G.M.

(F-Skirt) N.E.G.M.CO. SB
Blue Aqua, Green, Light Green,
Emerald Green, Blue



CD 268

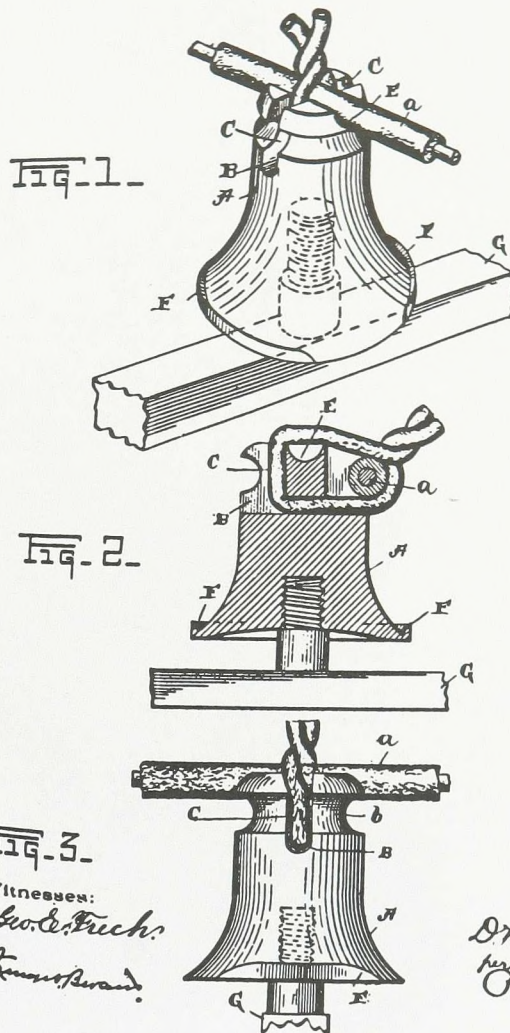
CD 268

CROWN

(F-Skirt) THE CROWN/PAT ALLOWED SB
Dark Aqua, Aqua

"THE CROWN" insulator did have a "PAT ALLOWED" on September 3, 1895. The patentee was Daniel M. Rothenberger of Lancaster, Pennsylvania, who assigned two-thirds to Charles A. Inglis and Edward D. Reilly also of Lancaster.

"One object of my invention is to provide an insulator with vertical side grooves terminating in a transverse ligament, which ligament is approximately the same thickness as the diameter of the main wire, and a transverse opening communicating with the vertical grooves or slots and beneath the said ligament, whereby the tie-wire can be passed beneath the ligament and turned upward at each side of the main wire

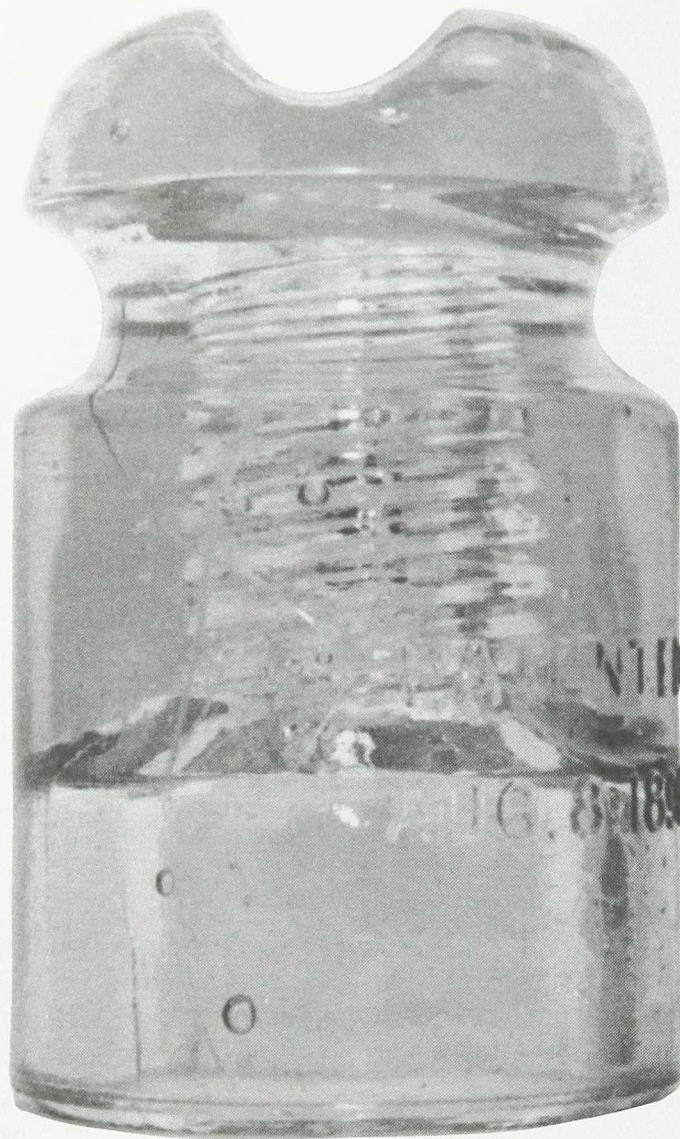


Witnesses:
Geo. C. Frick
James Berard

Inventor.
D. M. Rothenberger
per
Patison & Smith
Attorneys.

and form a part of the groove in which the main wire is placed, whereby the main wire is securely clamped against slipping after it is once drawn.

Another object of my invention is to provide an insulator with a top groove to receive the main wire, with a circumferential groove beneath the said top groove, and a ligament or web around which a tie-wire is passed, the under opening forming the bottom of the ligament being beneath the circumferential groove, whereby the tie-wire may be used to secure a main wire either in the top groove or in the circumferential groove when it is desired to pass the wire around a corner or to make a curve therein."



CD 268.5

CD 268.5

STANDARD GLASS

(F-Skirt) PATENTED/AUG. 8, 1893 (Base) THE
STANDARD GLASS INSULATOR CO./BOSTON
MASS
Aqua



CD 269

CD 269

JUMBO

(F-Skirt) JUMBO SB
Aqua, Dark Aqua, Green

(F-Skirt) JUMBO (R-Skirt) ['BROOKFIELD' Blotted
out] SB
Aqua

OAKMAN

(F-Skirt) JUMBO (R-Skirt) PAT'D JUNE 17, 1890, AUG
19, 1890 (Base) OAKMAN M'F'G. CO. BOSTON
Light Aqua, Green



CD 270

CD 270

NO NAME
[No Embossing] SB
Aqua, Green



CD 272

CD 272

ARMSTRONG
(F-Skirt) *Armstrong's 511A* (R-Skirt) MADE
IN U.S.A. ['A' in a circle] [Numbers] CB
Root Beer Amber

(F-Skirt) *Armstrong's 511A* (R-Skirt) MADE
IN U.S.A. ['A' in a circle] [Numbers] SB
Root Beer Amber

NO NAME
[No Embossing] SB
Aqua

WHITALL TATUM
(F-Skirt) WHITALL TATUM CO. NO. 511A/
[Number] (R-Skirt) MADE IN U.S.A. ['W/T'
in a triangle]/[Number] SB
Root Beer Amber

(F-Skirt) WHITALL TATUM CO. N° 62/
[Number] (R-Skirt) MADE IN U.S.A. SB
Root Beer Amber

(F-Skirt) WHITALL TATUM NO. 511A/
[Number] (R-Skirt) MADE IN U.S.A. SB
Root Beer Amber

(F-Skirt) WHITALL TATUM NO. 511A/
[Number] (R-Skirt) MADE IN U.S.A. ['W/T'
in a triangle] SB
Clear, Smoke, Straw, Root Beer Amber, Light
Green



CD 273

CD 273

NO NAME
[No Embossing] SB
Dark Aqua



CD 275

CD 275

LOCKE
(F-Skirt) F.M.LOCKE VICTOR
N.Y. (R-Skirt) N° 21 SB
Green Aqua, Aqua

(F-Skirt) LOCKE VICTOR N.Y. (R-
Skirt) N° 21 SB
Aqua, Dark Aqua, Green

NO NAME
(F-Skirt) N° 21 SB
Emerald Green, Green



CD 280

HEMINGRAY

(F-Skirt) HEMINGRAY/PATENT
MAY 2 1893 (R-Skirt) HIGH
VOLTAGE/TRIPLE PETTICOAT/
N° 1 SDP

Aqua, Green Aqua, Ice Aqua, Light
Aqua, Blue Aqua

NO NAME

(F-Skirt) N° 135 SB
Green, Emerald Green

PRISM

(F-Skirt) [Prism] SB
Aqua, Yellow Green, Green

CD 280



CD 281

HEMINGRAY

(F-Skirt) HEMINGRAY-71 (R-
Skirt) MADE IN U.S.A. RDP
Carnival, Dark Aqua, Aqua,
Hemingray Blue

(F-Skirt) HEMINGRAY-71 (R-
Skirt) MADE IN U.S.A. SDP
Hemingray Blue

(F-Skirt) HEMINGRAY/N° 1
HIGH VOLTAGE (R-Skirt)
PATENT MAY 2 1893 SDP
Green Aqua, Dark Aqua, Heming-
ray Blue

(F-Skirt) HEMINGRAY/N° 1
HIGH VOLTAGE (R-Skirt)
PATENTED MAY 2 1893 SDP
Aqua

CD 281

(F-Skirt) HEMINGRAY/N° 2 HIGH VOLTAGE (R-Skirt)
PATENT MAY 2 1893 SDP
Aqua, Blue

(F-Skirt) HEMINGRAY/N° 71 HIGH VOLTAGE (R-
Skirt) PATENT MAY 2 1893/MADE IN U.S.A. RDP
Hemingray Blue

(F-Skirt) HEMINGRAY/N° 71 HIGH VOLTAGE (R-
Skirt) PATENTED MAY 2 1893/MADE IN U.S.A. SDP
Aqua, Hemingray Blue, Ice Blue

(F-Skirt) HEMINGRAY/PATENT MAY 2 1893 (R-Skirt)
HIGH VOLTAGE/TRIPLE PETTICOAT/N° 1 SDP
Green

LYNCHBURG

(Dome) NO. 180 (F-Skirt) ['L' in an oval]/LYN-
CHBURG (R-Skirt) MADE IN U.S.A. SDP
Aqua, Green



CD 282 Variation
*The KNOWLES 5 1/2
unit has a flat dome style*

CD 282

CD 282

HEMINGRAY

(F-Skirt) HEMINGRAY/N° 2 "PROVO" TYPE (R-Skirt)
PATENT MAY 2 1893 SDP
Light Aqua

(F-Skirt) HEMINGRAY/N° 2 PROVO TYPE (R-Skirt)
PATENT MAY 2 1893 SDP
Aqua, Light Hemingray Blue

(F-Skirt) HEMINGRAY/N° 2 PROVO TYPE (R-Skirt)
PATENT MAY 2 1893/PATENTED APRIL 25 1899
SDP
Aqua, Dark Aqua, Hemingray Blue

KNOWLES

(F-Skirt) KNOWLES 5 1/2 (R-Skirt) BOSTON SB
Aqua

PRISM

(F-Skirt) [Prism] SB
Aqua, Blue Aqua, Lime Green



CD 283

CONVERSE

(F-Skirt) V.G. CONVERSE/'PROVO' TYPE (R-Skirt)
 PATENT MAY 2 1893 SDP
 Aqua, Light Aqua, Hemingray Blue

HEMINGRAY

(F-Skirt) HEMINGRAY/N° 1 'PROVO' TYPE (R-Skirt)
 PATENT MAY 2 1893 SDP
 Aqua, Green

(F-Skirt) HEMINGRAY/N° 1 'PROVO' TYPE (R-Skirt)
 PATENTED APRIL 25 1899/PATENT MAY 2 1893
 RDP
 Dark Aqua

CD 283

(F-Skirt) HEMINGRAY/N° 1 'PROVO' TYPE (R-Skirt)
 PATENTED APRIL 25 1899/PATENT MAY 2 1893
 SDP
 Hemingray Blue

(F-Skirt) HEMINGRAY/N° 1 'PROVO' TYPE (R-Skirt)
 PATENTED MAY 2 1893 SDP
 Hemingray Blue

PRISM

(F-Skirt) [Prism] SB
 Blue, Aqua, Lime Green



CD 284

CD 284

FLOY

(F-Skirt) FLOY { Base has V-shaped
notches} SB

Lime Green, Aqua, Light Blue

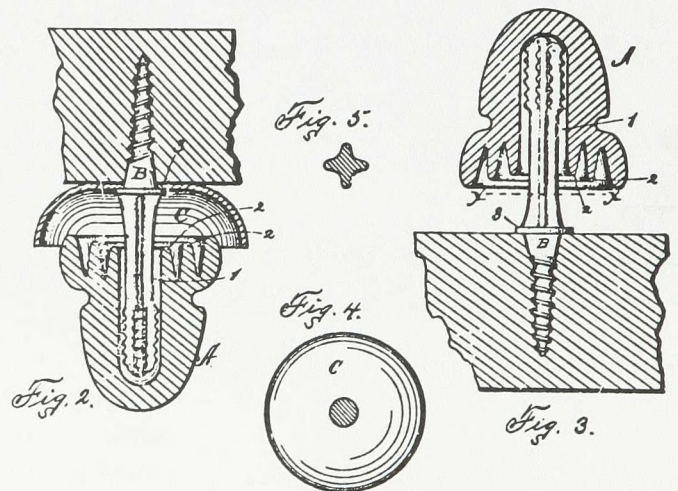
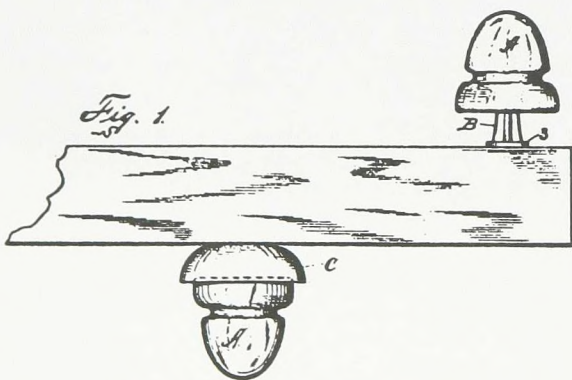


CD 285

NO NAME

[No Embossing] SB
Yellow Green, Aqua

CD 285



The purpose of **Fred M. Locke's** October 11, 1892 patent was to "produce a more perfect insulator not affected by storms of rain or sleet, in which the shank is more securely fastened in the insulating-cap and its metallic contact therewith is reduced to a minimum, in which the insulating cap is provided with skirts to prevent the flow of electricity from the wire over the wet exterior of the cap onto the shank, and in which when the insulator is pendent from a crossarm a cover is provided to protect the skirts and keep them dry."

CD 285 has often been referred to as "The Edison" and has a porcelain counterpart with the same shape. The insulator may have been a standard item distributed by electrical supply houses. It's ability to be installed above or below the crossarm doubled its installation options.

Little is known about the cap used to cover the petticoats of the insulator when installed below the crossarm. The patent called for its installation to the pin by pouring wax or melted sulphur around the opening in the cap.



CD 286

CD 286

LOCKE

(F-Skirt) F.M. LOCKE VICTOR N.Y. (R-Skirt) PAT. MAY
22 94/ " NOV. 24 96/ "DEC. 15 96/ " SEPT. 28 97/ " JUNE
7 98 SB

Aqua, Light Green, Light Blue



CD 286.9

CD 286.9

WESTINGHOUSE

(F-Skirt) WESTINGHOUSE ELECTRIC & M'F'G CO./PITTSBURG, PA.

(R-Skirt) "TELLURIDE" TYPE C. SB

Aqua



CD 287

CD 287

LOCKE

(Dome) [Number] (F-Skirt) F.M. LACKE VICTOR N.Y./
PAT'D MAY 22 1894 {Note Spelling} (R-Skirt) N° 15
SB
Light Aqua

(Dome) [Number] (F-Skirt) F.M. LOCKE VICTOR N.Y./
(R-Skirt) N° 15 SB
Aqua, Emerald Green

(Dome) [Number] (F-Skirt) F.M. LOCKE VICTOR N.Y./
PAT'D MAY 22 1894 (R-Skirt) N° 15 SB
Aqua, Light Aqua

(Dome) [Number] (F-Skirt) F.M. LOCKE VICTOR N.Y./
['PAT'D MAY 22 1894' Blotted out] (R-Skirt) N° 15 SB
Aqua

(Dome) [Number] (F-Skirt) F.M. LOCKE VICTOR N.Y./
[Blotted out Embossing] (R-Skirt) N° 15 SB
Aqua

(F-Skirt) F.M. LOCKE & CO. VICTOR N.Y./PAT'D
MAY 22 1894 SB
Aqua, Blue, Green, Ice Blue

(F-Skirt) F.M. LOCKE VICTOR N.Y. (R-Skirt) N° 15
SB
Aqua

(F-Skirt) F.M. LOCKE VICTOR N.Y./PAT'D. MAY 22
1894 SB
Light Aqua

(F-Skirt) LOCKE VICTOR N.Y. (R-Skirt) N° 15 SB
Aqua, Dark Green

(F-Skirt) ['F.M. LOCKE VICTOR N.Y.' Blotted out]/
PAT'D MAY 22 1894 (R-Skirt) N° 15 SB
Emerald Green

NO NAME

(Dome) [Number] (F-Skirt) N° 15 SB
Aqua, Green

(Dome) [Number] (F-Skirt) [Blotted out Embossing] (R-
Skirt) N° 15 SB
Aqua, Olive Green

(F-Skirt) N° 135 SB
Aqua, Green



CD 287.1

LOCKE

(F-Skirt) F.M. LOCKE & Co VICTOR.
N.Y./PATD MAY 22 1894 SB
Light Aqua, Red Amber, Peacock Blue

(F-Skirt) F.M. LOCKE ['& Co' Blotted
out] VICTOR. N.Y./PATD MAY 22 1894
SB
Light Aqua

CD 287.1



CD 287.2

BROOKFIELD

(F-Crown) (Arc) W. BROOKFIELD/NEW
YORK. (F-Skirt) LOCKE PATENTS
PENDING. SB
Aqua, Light Aqua

CD 287.2



CD 288

CD 288

LOCKE

(F-Umbrella/Above ridge) (Arc)FRED M. LOCKE
 VICTOR N.Y. (R-Umbrella/Above ridge) PAT. MAY
 22-94/' NOV. 24-96 (R-Umbrella/Below ridge) SEPT.
 28-97/&JUNE 7-98 SB
 Aqua

(F-Umbrella/Above ridge) (Arc)LOCKE VICTOR N.Y.
 (F-Umbrella/Below ridge) N° 18 SB
 Aqua

MERSHON

(F-Umbrella) By R.D.MERSHON {Three ridges} SB
 Aqua



CD 288 Variation
Three-ridge Mershon

CD 288 Variation
No Name with no ridges



(F-Umbrella/Below ridge) PAT'D/By R.D. MERSHON
 {One ridge} SB
 Light Green, Light Aqua

(F-Umbrella/Below ridge) R.D.MERSHON {One ridge}
 SB
 Aqua

NO NAME

[No Embossing] SB
 Aqua, Light Aqua, Ice Green, Light Blue



CD 289

CD 289

LOCKE

(F-Skirt) FRED M. LOCKE VICTOR N.Y. SB
Aqua

(F-Skirt) FRED M. LOCKE VICTOR N.Y. (R-Skirt)
PAT. MAY 22 1894 SB
Aqua, Green

(F-Skirt) FRED. M. LOCKE VICTOR N.Y. (R-Skirt)
[Blotted out Embossing] SB
Aqua, Dark Aqua

NO NAME

[No Embossing] SB
Aqua, Dark Aqua

CD 289.9

NO NAME

(F-Skirt) PATD. MAY 7. 89 SB

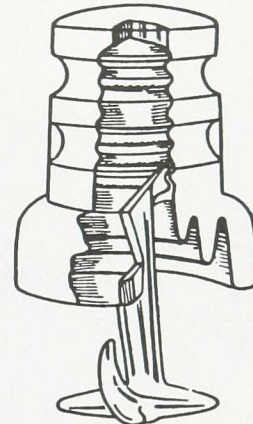
Aqua



CD 289.9

SHEET No. 261.

THE E.S. GREELEY & CO. (SUCCESSORS TO L.G. TILLOTSON & CO.) NEW YORK



Insulator drawn 47% of actual size.

TRIPLE PETTICOAT PATTERN CROSS-ARM GLASS INSULATOR.

Securely locked in place by a dowel driven at right angles through the cross-arm intersecting the groove in the Insulator.

Cat. No. 44261 Price each, \$0.10

In ordering, do not fail to mention the Cat. No. of each article wanted.

In an article for *Antique Bottle World* in November, 1978, Paul Mohrs (editor of the Ohio Valley Insulator Club newsletter) shared the following information:

"Fred M. Locke had a personal stake in developing this insulator. Locke had been employed by the N.Y.C.R.R. as a telegrapher and was fired for sleeping on duty. Locke proclaimed that he had not been asleep, that poorly insulated lines were at fault. He asserted that every time a thick fog or rain appeared there were problems on the lines, but Fred was blamed for sleeping on the job. Locke then made it his business to remedy the insulation problems.

The lines had a knack of grounding out at the small cylindrical Western Union insulators when the current would follow the path of moisture to the cross-arm and eventually the pole, which was a skip and a splinter to the soil.

Also, insulators detached themselves from the pin and the pin and insulator would both pop into the air away from the crossarm.

The resulting patent was Locke's first venture into the insulation industry."

Fred M. Locke of Victor, New York, and **John Lapp** of Honeoye Falls, New York, were granted a patent on May 7, 1889. It provided for a design that would prevent the popping off of the insulator. The unit was to be mounted on the underside of the crossarm and held in place by two dowel shafts going through the crossarm and locking the insulator in place. The uppermost groove on the insulator body received the dowel. Locke also specified that there should be three petticoats to provide for a longer mechanical distance. A suspended hook into which the line wire would be placed was secured into the pinhole of the insulator by using melted sulphur.

Mohrs adds the following comment: " This insulator was basically perfect for everything that Locke intended it for (i.e. to battle the moisture problems). The only real design drawback was the hook. It was antiquated to a degree that it was probably considered a joke by those perusing the catalog for electrically perfect insulators."

There is only one known specimen of the **CD 289.9** Locke-Lapp patent.



CD 291

CD 291

HEMINGRAY

(F-Skirt) HEMINGRAY/PATENT MAY
2 1893 SDP

Aqua

(F-Skirt) HEMINGRAY/PATENT MAY
2 1893 (R-Skirt) HIGH VOLTAGE N° 1/
TRIPLE PETTICOAT SDP

Aqua

(F-Skirt) HEMINGRAY/PATENT
MAY 2 1893 (R-Skirt) HIGH
VOLTAGE N° 3/TRIPLE PETTI-
COAT SDP

Aqua

NO NAME

(F-Skirt) N° 5 SB

Aqua

(F-Skirt) N° 5 SDP

Aqua

CD 292

NO NAME

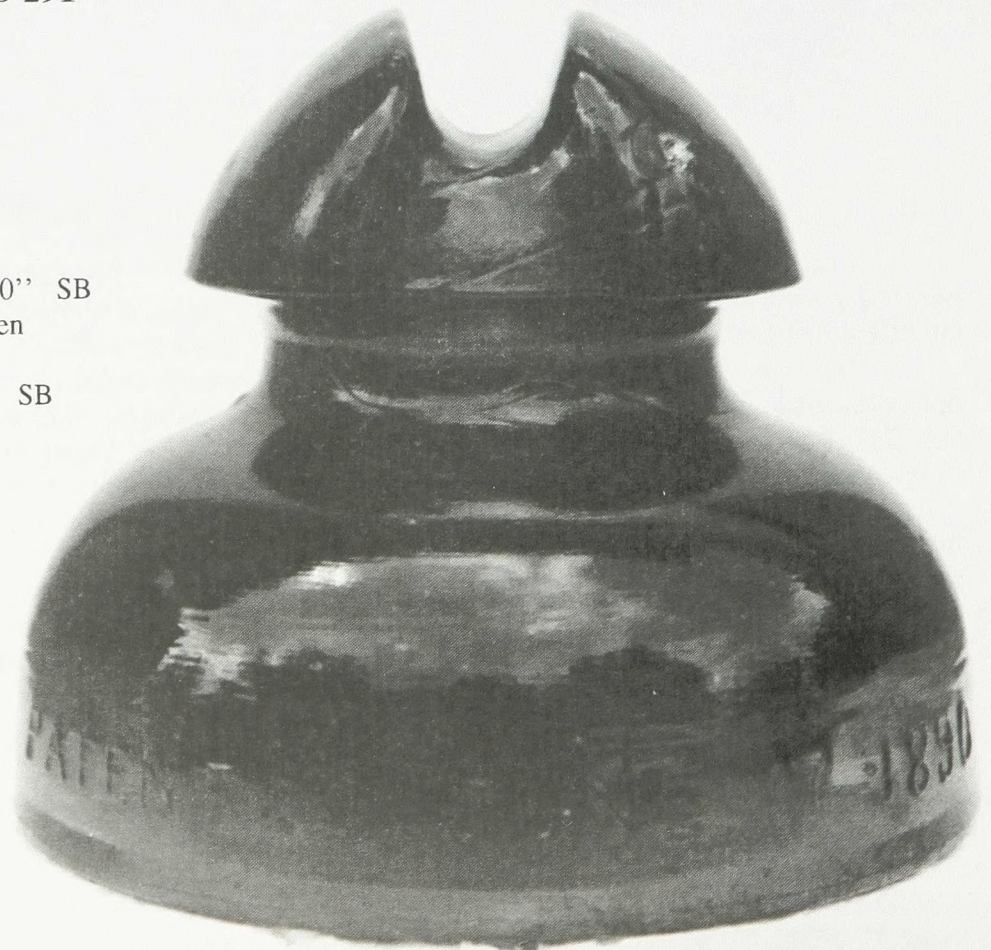
(F-Skirt) "PATENTED.JUNE. 17, 1890" SB
Emerald Green, Aqua, Light Blue, Green

(F-Skirt) PATENTED.JUNE. 17, 1890 SB
Green, Dark Yellow Green

[No Embossing] SB
Aqua

PRISM

(F-Skirt) [Prism] SB
Aqua, Green



CD 292



CD 292.5

CD 292.5

KNOWLES

(F-Skirt) BOSTON (R-Skirt) "KNOWLES 6" SB

Dark Green, Blue, Aqua

(F-Skirt) KNOWLES-6 (R-Skirt) BOSTON/PATENTED JUNE 17, 1890 SB

Aqua

(F-Skirt) [Prism] "KNOWLES 6" PATENTED. JUNE. 17. 1890" (R-Skirt)

BOSTON SB

Light Aqua, Blue



CD 293

CD 293

LOCKE

(F-Skirt) FRED M. LOCKE VICTOR N.Y./PATD MAY 22-94 NOV.24-96 DEC.15-96 -
SEPT.28-97 (R-Skirt) OTHER PAT'S PENDING SB
Aqua, Light Blue

(F-Skirt) FRED M. LOCKE VICTOR N.Y./PAT'D MAY 22-94 NOV.24-96 DEC.15-96
(R-Skirt) SEPT.28-97 OTHER PAT'S PENDING SB
Aqua, Light Green, Blue Aqua, Light Purple, Light Gray Purple



CD 293.1

CD 293.1

LOCKE

(F-Skirt) FRED M LOCKE VICTOR N.Y./PAT'D. MAY
22-94 NOV. 24-96 DEC. 15-96 SEPT. 28-97 (R-Skirt)

OTHER PAT'S PENDING SB

Light Aqua, Light Green, Blue Aqua



CD 294

N.E.G.M.
(F-Skirt) N.E.G.M.CO. (R-Skirt)
TRIPLE PETTICOAT SB
Aqua, Light Blue

CD 294



CD 295

HEMINGRAY
(F-Skirt) HEMINGRAY-72 (R-Skirt)
MADE IN U.S.A. RDP
Aqua, Ice Blue

(F-Skirt) HEMINGRAY-72 (R-Skirt)
MADE IN U.S.A./[Number] SB
Clear, Aqua

CD 295

(F-Skirt) HEMINGRAY-72.A (R-Skirt) MADE IN U.S.A. RDP
Aqua

(F-Skirt) HEMINGRAY-72.A/[Number] (R-Skirt) MADE IN U.S.A. RDP
Ice Aqua

(F-Skirt) HEMINGRAY-72.A/[Numbers and Dots] (R-Skirt) MADE IN U.S.A./[Number] RDP
Clear

(F-Skirt) HEMINGRAY/PATENTED MAY 2 1893 (R-Skirt) HIGH VOLTAGE/TRIPLE PETTICOAT/N° 4 SDP
Aqua, Hemingray Blue

(F-Skirt) HEMINGRAY/PATENTED MAY 2 1893 (R-Skirt) HIGH VOLTAGE/TRIPLE PETTICOAT/N° 72 SDP
Aqua, Blue Aqua, Hemingray Blue

(F-Skirt) HEMINGRAY/PATENTED MAY 2 1893 (R-Skirt) HIGH VOLTAGE/TRIPLE PETTICOAT/N° 72/ [‘4’ Blotted out] SDP
Blue Aqua



CD 296

CD 296

LOCKE

(F-Skirt) LOCKE VICTOR N.Y. SB
Aqua

(F-Skirt) LOCKE VICTOR N.Y. (R-Skirt) N° 20 SB
Aqua, Dark Green, Emerald Green

(F-Skirt) [‘F.M.’ Blotted out] LOCKE VICTOR N.Y. (R-Skirt) N° 20 SB
Green, Emerald Green

NO NAME

(F-Skirt) N° 20 SB
Aqua, Green

PRISM

(F-Skirt) [Prism] SB
Aqua



CD 297

CD 297

LOCKE

(F-Skirt) F.M. LOCKE VICTOR N.Y./[Blotted out Embossing] (R-Skirt) N° 16 SB
Dark Aqua

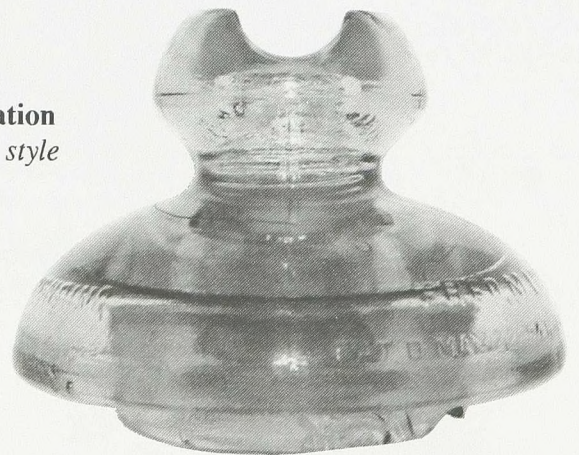
(F-Skirt) FRED M. LOCKE VICTOR N.Y. (R-Skirt) N° 16/OTHER PATENTS PENDING SB
Aqua, Light Aqua

(F-Skirt) FRED M. LOCKE VICTOR N.Y. (R-Skirt) N° 16/[Blotted out Embossing] SB
Aqua, Light Green, Emerald Green

(F-Skirt) FRED M. LOCKE VICTOR N.Y./PAT'D MAY 22-94 NOV.24-96 DEC.15-98 SEPT.28-97 (R-Skirt) OTHER PAT'S PENDING {Narrow Neck} SB
Light Aqua, Light Blue, Light Green

(F-Skirt) FRED M. LOCKE VICTOR N.Y./[Blotted out Embossing] (R-Skirt) N° 16 SB
Green Aqua

CD 297 Variation
Narrow neck style



(F-Skirt) FRED. M. LOCKE VICTOR N.Y. (R-Skirt) N° 16 SB
Aqua, Green, Dark Aqua

NO NAME

(F-Skirt) N° 16/[Blotted out Embossing] (R-Skirt) [Blotted out Embossing] SB
Green, Dark Green, Dark Aqua, Dark Yellow Green, Aqua

[No Embossing] SB
Dark Aqua



CD 298

CD 298

NO NAME

[No Embossing] SB

Aqua, Blue, Light Aqua, Ice Aqua



CD 299

BROOKFIELD
(F-Skirt) BROOKFIELD SB
Dark Aqua

(Top of Ear) BROOKFIELD SB
Dark Aqua, Emerald Green

CD 299



CD 299.1

PRISM
(F-Skirt) [Prism] (R-Skirt) 4 1/2 SB
Light Aqua

CD 299.1



CD 299.2

CD 299.2

NO NAME

[No Embossing] {Fry Glass} SB
White Opalescent, Black Opalescent



CD 300

BROOKFIELD

(F-Skirt) BROOKFIELD (R-Skirt) [Blotted out Embossing] SB

Aqua

(F-Skirt) No.17/BROOKFIELD SB

Aqua, Green

(F-Skirt) No.17/BROOKFIELD (R-Skirt) [Blotted out Embossing] SB

Green

(F-Skirt) ['No.17' Blotted out]/BROOKFIELD (R-Skirt) [Blotted out Embossing] SB

Dark Aqua

LOCKE

(F-Skirt) F.M. LOCKE VICTOR N.Y. (R-Skirt) No.17 SB

Aqua

CD 300

(F-Skirt) F.M. LOCKE VICTOR N.Y. (R-Skirt)

PAT.MAY 22,94/ " SEPT.28,97/ " JUNE 7,98 SB

Olive Green

(F-Skirt) F.M. LOCKE VICTOR N.Y. PAT.MAY 22,94/

" NOV.24 96/ " DEC.15 96/ " SEPT 28 97/" JUNE 7

98 SB

Aqua, Olive Green

(F-Skirt) No.17/F.M.LOCKE VICTOR N.Y. (R-Skirt)

PAT.MAY 22 96/" NOV. 24 96/" DEC. 15 96/" SEPT.

28 97/" JUNE 7 98 SB

Aqua

(F-Skirt) No.17/F.M. LOCKE VICTOR N.Y. (R-Skirt)

PAT'D MAY 22,94 MAY 24,96/ " SEPT.28,97 SB

Aqua

(F-Skirt) No.17/F.M. LOCKE VICTOR N.Y. (R-Skirt)

PATENT/[Blotted out Embossing] SB

Aqua, Green, Dark Green



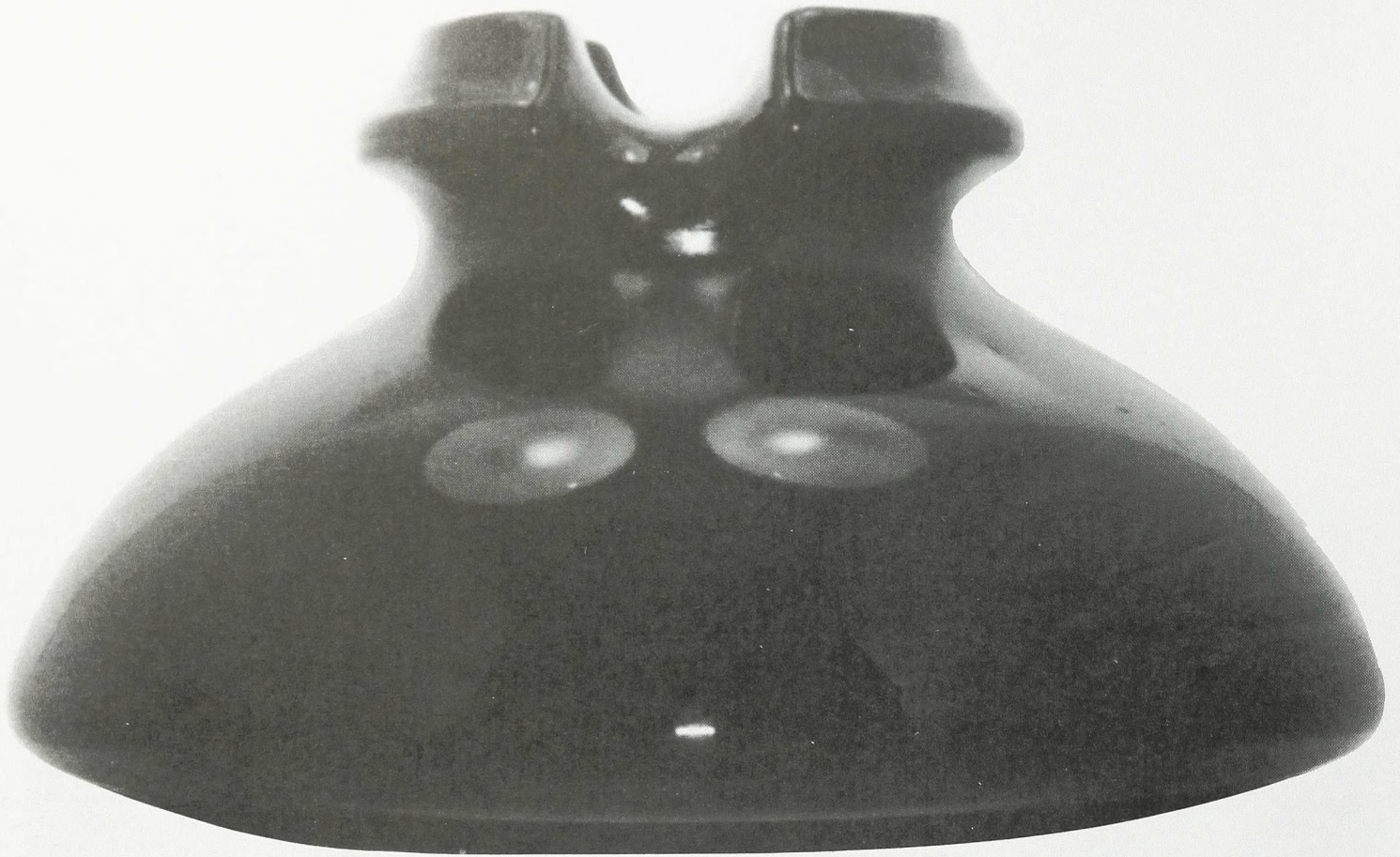
CD 301

CD 301

NO NAME

[No Embossing] SB

Ice Blue, Aqua



CD 301.2

CD 301.2

NO NAME

[No Embossing] {Fry Glass} SB
Black Opalescent, White Opalescent



CD 301.5

CD 301.5

HEMINGRAY

(F-Skirt) HEMINGRAY-515 (R-Skirt) MADE IN U.S.A./

[Number and Dots] SB

Clear, Honey Amber



CD 302

CD 302

HEMINGRAY

(F-Skirt) HEMINGRAY-75/PATENT MAY 2 1893 (R-Skirt) MUNCIE RDP

Aqua

(F-Skirt) HEMINGRAY/PATENT MAY 2 1893 (R-Skirt) MADE IN U.S.A./MUNCIE TYPE/N° 75 RDP

Aqua, Hemingray Blue

(F-Skirt) HEMINGRAY/PATENT MAY 2 1893 (R-Skirt) MUNCIE TYPE RDP

Aqua

(F-Skirt) HEMINGRAY/PATENT MAY 2ND 1893 RDP

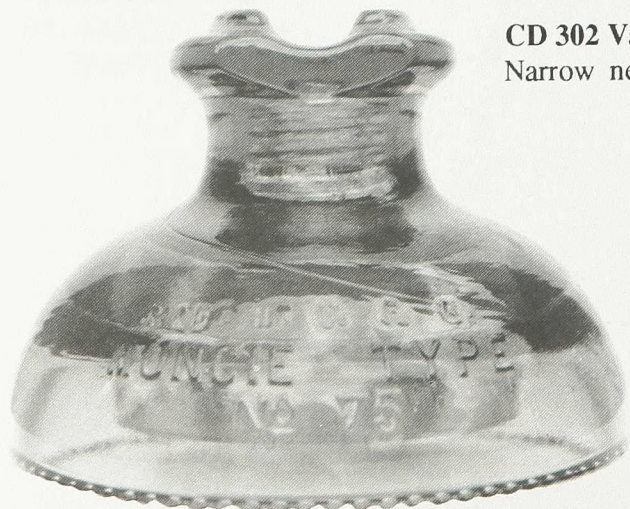
Aqua

(F-Skirt) HEMINGRAY/PATENT MAY 2ND 1893 (R-Skirt) MUNCIE TYPE RDP

Aqua

(F-Skirt) HEMINGRAY/PATENT MAY 2ND 1893 (R-Skirt) OHIO RDP

Aqua



CD 302 Variation
Narrow neck style

ACTUAL SIZE: 12 1/4" in height; 9" in width
Photo Size: 55% of Full Size



CD 303/310

CD 303

HEMINGRAY

(F-Skirt) HEMINGRAY 76/PATENT MAY 2ND 1893
(R-Skirt) MUNCIE {CD310 sleeve is unembossed} SDP
Aqua

(F-Skirt) HEMINGRAY/PATENT MAY 2ND 1893 (R-
Skirt) MUNCIE TYPE {CD310 sleeve is unembossed}
RDP

Aqua, Hemingray Blue, Green

(F-Skirt) HEMINGRAY/PATENT MAY 2ND 1893 (R-
Skirt) MUNCIE TYPE/N° 76 {CD310 sleeve is unembos-
sed} RDP
Aqua



CD 310

NO NAME

[No Embossing] SB

ACTUAL SIZE: 7 7/8" in height; 8" in width
Photo Size: 70% of Full Size



CD 303.5

CD 303.5

HEMINGRAY

(F-Skirt) HEMINGRAY/N° 4 "PROVO" TYPE (R-Skirt)

PATENT MAY 2 1893 SDP

Aqua

ACTUAL SIZE: 11 5/8" in height; 9" in width
Photo Size: 55% of Full Size



CD 304/310

(The sleeve used with CD 304 is the CD 310, which is pictured with CD 303)

CD 304

HEMINGRAY

(F-Skirt) HEMINGRAY/PATENT MAY 2 1893 {CD310 sleeve is unembossed} SDP
Aqua, Green, Hemingray Blue

(F-Skirt) HEMINGRAY/PATENTED MAY 2 1893 {CD310 sleeve is unembossed} SDP
Aqua

(F-Skirt) [Blotted out Embossing]/HEMINGRAY/PATENTED MAY 2 1893 {CD310 sleeve is unembossed} SDP
Aqua



CD 306

CD 306

LYNCHBURG

(Top of ear) NO.181 (F-Skirt) ['L' in an oval]/LYNCHBURG

(R-Skirt) MADE IN U.S.A. RDP

Aqua

(Top of ear) NO.181 (F-Skirt) ['L' in an oval]/LYNCHBURG

(R-Skirt) MADE IN U.S.A. SDP

Aqua



CD 307

CD 307

HEMINGRAY

(F-Skirt) HEMINGRAY/PATENT MAY 2 1893 (R-Skirt)
HIGH POTENTIAL/TRIPLE PETTICOAT CABLE SDP
Aqua



CD 308

CD 308

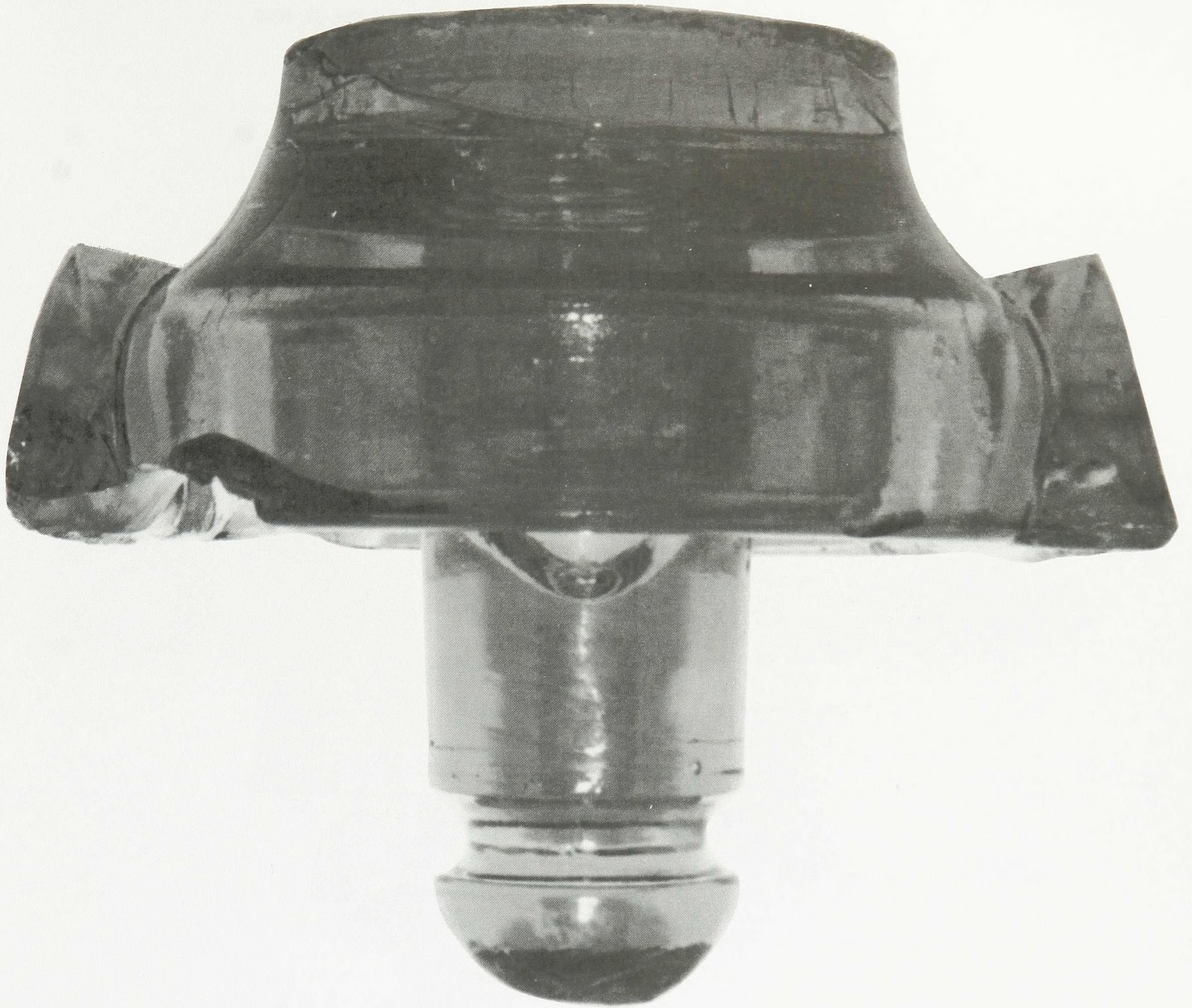
NO NAME

(F-Skirt) N° 100 SB

Light Aqua, Green, Lime Green, Light Green Aqua, Light
Blue

[No Embossing] SB

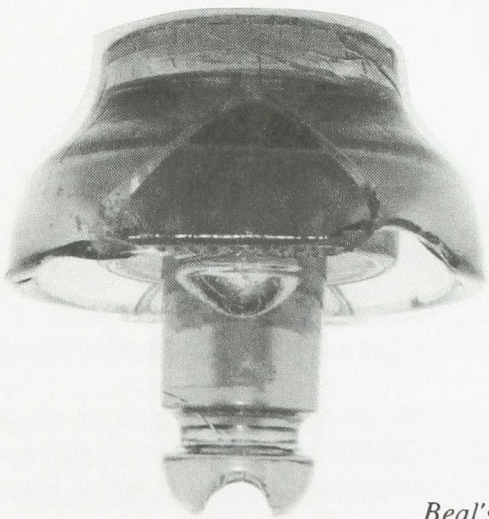
Light Aqua, Light Blue, Light Apple Green



CD 309

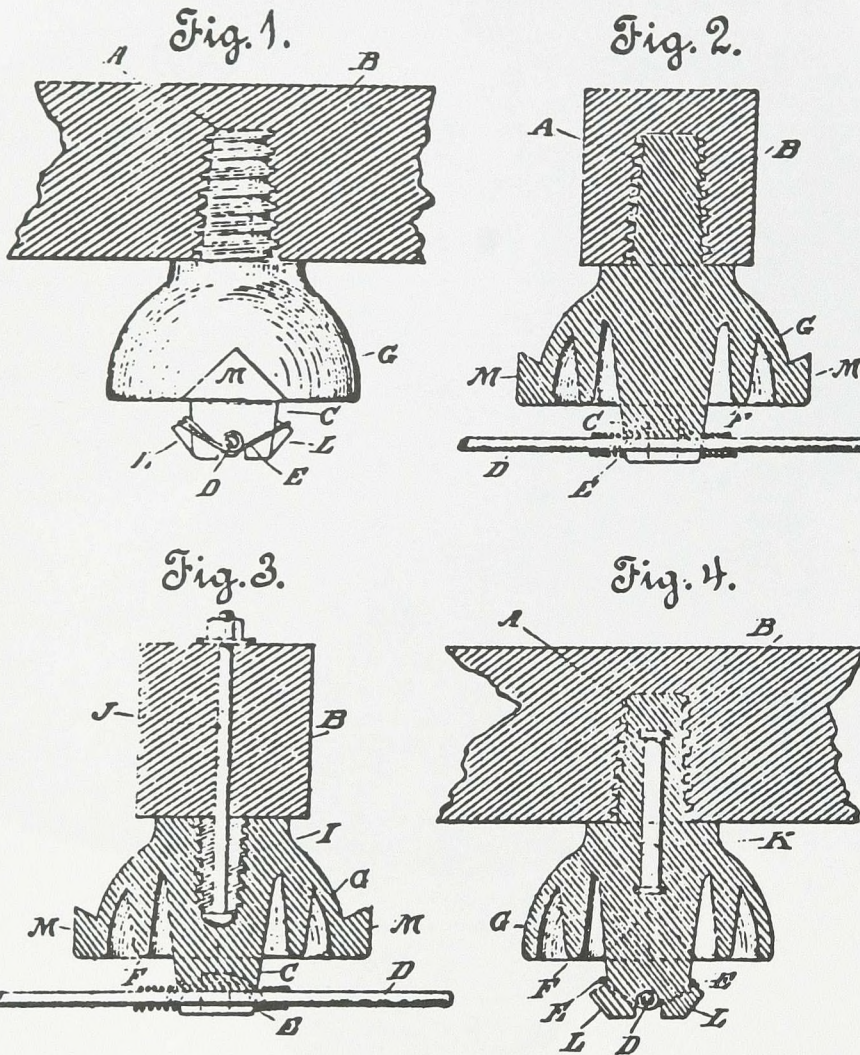
CD 309

BEAL'S
(Top/Left Ear) BEAL'S HIGH TENSION/
INSULATOR (Top/Right Ear) PATENTED
OCT. 10 1899 SB
Aqua



Side View
Beal's High Tension Insulator

C. N. BEAL.
INSULATED SUPPORT FOR ELECTRIC WIRES.
(Application filed Nov. 17, 1897.)



Witnesses.

W. H. H. H. H. H.
W. H. H. H. H. H.

Inventor.

Carroll N. Beal
By J. Richards & Co.
Attys

Carroll N. Beal of San Francisco, California, was issued a patent on October 10, 1899. The insulator covered in the patent, CD 309, was designed to be mounted below the crossarm which would protect the conducting surface of the insulator from rain and snow. The design also had two triangular-shaped flanges on each side of the insulator body which paralleled the line

wire forcing water to be shed outward and away from the line wire. The flanges served as "umbrellas" for the line wire.

Although the Beal's patent drawing shows several types of installation, CD 309 has a pinhole with standard threading and would be mounted as pictured in Figure 3. in the drawing.

ACTUAL SIZE : 10" in height;
7 3/4" in width
Photo Size: 85% of Full Size



CD 309.5

WESTINGHOUSE
(F-Skirt) WESTINGHOUSE
ELECTRIC & M'F'G CO./
PITTSBURGH, PA. (R-Skirt)
"TELLURIDE" TYPE B. SB
Aqua

CD 309.5

This insulator is similar to the design of the Beal's Patent (CD 309) since it is an insulator to be mounted to the underside of the crossarm. It has a double petticoat and no transverse wire groove on the crown or it might resemble the November 12, 1901 patent granted to Ralph G. Hemingray. (See Gray and Hemingray Revisited chapter for patent information)

INSULATOR SLEEVES

CD 310 through CD 314 are insulator sleeves and have been pictured and listed with their companion insulator that precede or follow this portion of the Consolidated Design Numbering System.

In order to list these special pieces in sequence, the following information regarding the insulators with which they were installed appears here. Please refer to the related CD style for pictures and details.

CD 310 (used with both CD 303 and CD 304)

NO NAME

[No Embossing] SB

Aqua, Hemingray Blue, Green

CD 311 (used with CD 248)

NO NAME

[No Embossing] SB

Clear, Amber, Yellow Tint

[No Embossing] RDP

Aqua, Hemingray Blue

[No Embossing] SDP

Aqua, Hemingray Blue

PYREX

(F-Skirt) CORNING PYREX REG. U.S. PAT.OFF. (R-Skirt) MADE IN U.S.A. SB

Clear

(F-Skirt) PYREX PAT. 5-27-19. MADE BY CORNING GLASS WORKS, CORNING N.Y. U.S.A. SB

Clear, Straw

CD 312 (used with CD 249)

NO NAME

[No Embossing] SB

Aqua

CD 313 (used with CD 317.8)

HEMINGRAY

(F-Skirt) "SECTION 2" (R-Skirt) HEMINGRAY

PATENT MAY 2 1893 SDP

Aqua

(F-Skirt) HEMINGRAY (R-Skirt) PATENT MAY 2 1893 SDP

Aqua

CD 313.1 (used with CD 317.8)

NO NAME

[No Embossing] SB

Aqua

CD 314 (used with CD 317.7)

NO NAME

[No Embossing] SB

Aqua



CD 315

CD 315

PRISM

(F-Umbrella) (Arc)REGISTERED TRADE MARK/
[Prism] SB
Blue

(F-Umbrella) (Arc)REGISTERED TRADE MARK/
[Prism] (R-Umbrella) PATENTED JUNE 17 1890 SB
Blue Aqua

(F-Umbrella) [Prism] SB
Aqua, Blue

(F-Umbrella) [Prism] (R-Umbrella) (Arc)PATENTED/
JUNE 17, 1890 SB
Light Aqua



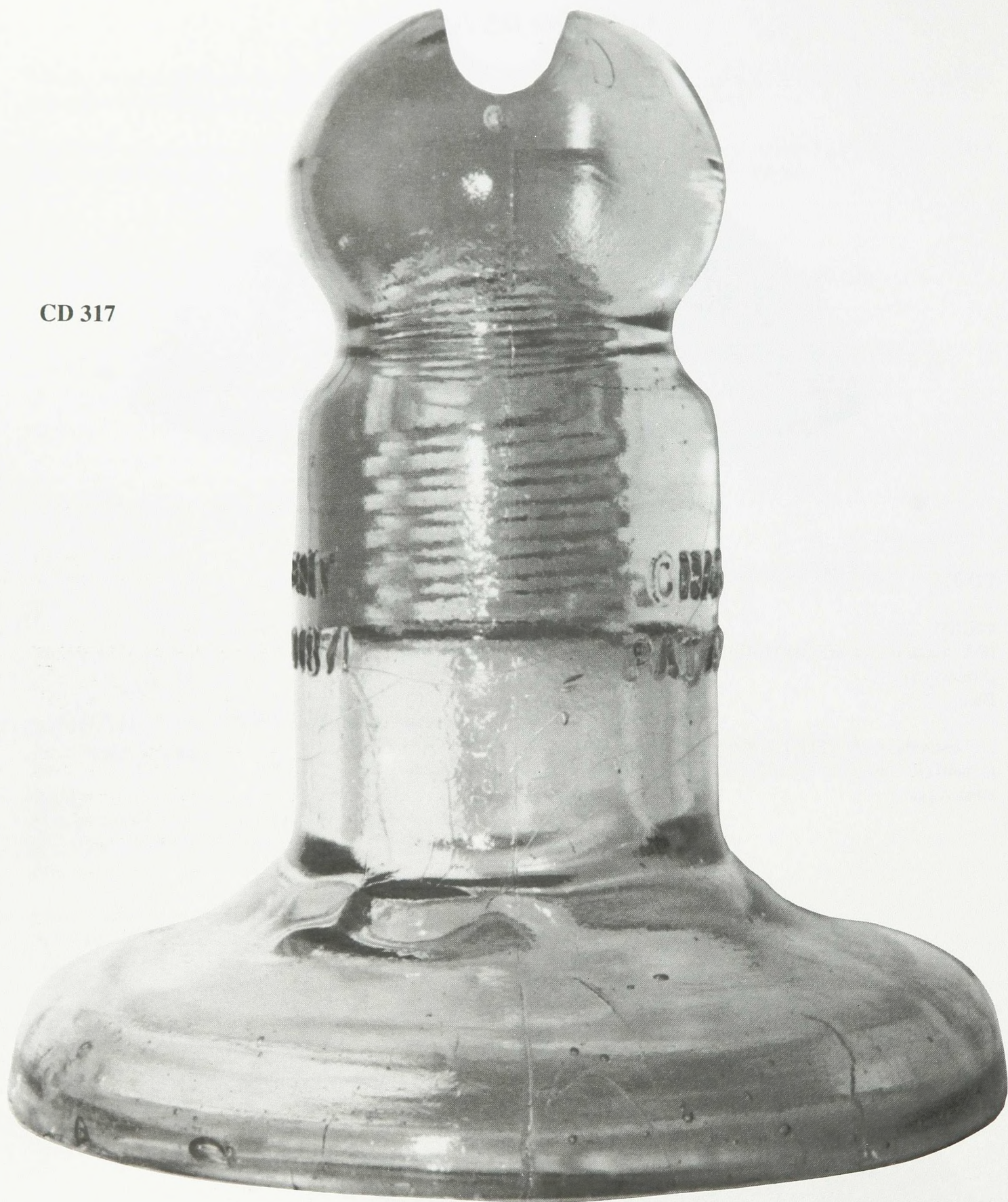
CD 316

CD 316

BROOKFIELD

(F-Umbrella) BROOKFIELD SB
Aqua, Green

CD 317



CD 317

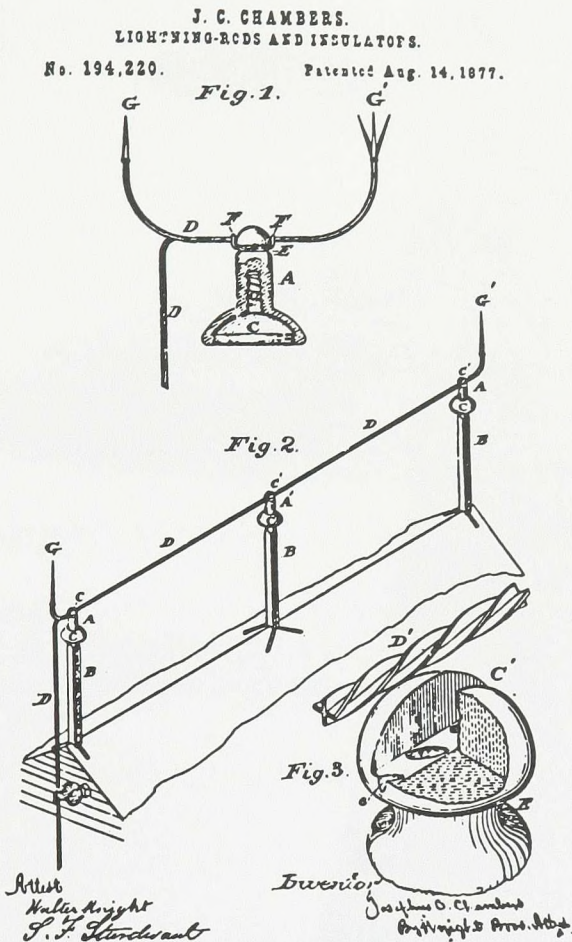
CHAMBERS

(F-Center) CHAMBERS/PAT.AUG. 14-1877 (R-Center) PATENT/DEC 19 1871 SB

Aqua, Light Aqua, Light Green, Lime Green, Cornflower Blue, Light Purple, Dark Aqua, Sapphire Blue, Off Clear

The Covington and Newport (Kentucky) business directory of 1878 listed **Josephus C. Chambers** as superintendent of the Chambers' National Lightning Protection Company. Over a period of seventeen years, Chambers was awarded twenty-one patents. The patent of August 14, 1877 was issued for Lightning-Rods and Insulators which were the components of Chamber's system.

half of its large surface *always remains dry*, its weight is *five pounds* instead of only three ounces, and it separates the rod from *twelve to fourteen* inches from the building, instead of one and a half inches.



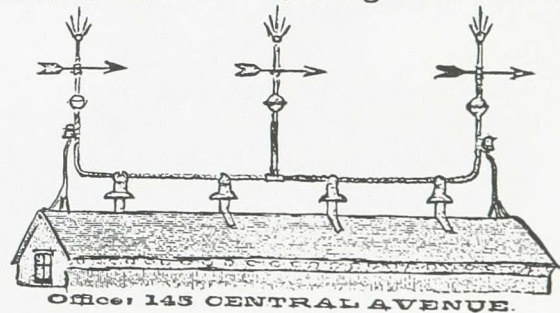
This insulator is of glass [CD 317], 7 inches high, 3 inches thick, and seven inches across the base, with a summit groove for the reception of the rod, and a circumferential groove for the tying wire, to secure said rod in position, with a screw socket and a cavity below the screw socket to prevent the electric current coming in contact with the post, and an umbrella-shaped flange to prevent the rain from wetting the inner side of the glass or the post. These large glass insulators are placed along the comb, or top, of the buildings from eight to ten feet apart; the rods are placed along on the top of these insulators in a groove made for their reception, and places the rod twelve or more inches above the building. From this rod, extending upwards, are other rods four or five feet in length, terminating in five points.

"The old rod attracts a stroke of lightning to our dwelling and fails to take care of it; the new Insulated Rod of Mr. Chambers, works oppositely, by preventing or repelling a stroke, or if received on one point it is thrown back into the atmosphere in a diffused state and not conducting it down the side of our houses and endangering our lives, it practically assists nature to do its own work, without harm to any structure which may happen to be upon the surface of the earth at the point where this restoration becomes necessary."

In an 1879 pamphlet printed by the Chambers' National Protection Company of Cincinnati, Chambers' theory of atmospheric electricity is described as the "true method of protection against lightning". Rather than providing a "grounded" protection system, Chambers maintained that electricity could be attracted and diffused back into the atmosphere using his system without the use of a grounding wire.

"This apparatus is so constructed as to be electrically insulated from the earth and house, or in other words, acts as though it is suspended in the air above the building. The first thing to be done in order to have such an apparatus constructed, is to have a glass insulator made in such a shape as to keep that portion dry that connects with a wooden screw that fastens them to the building. This we do by making the glass insulator in the shape of a bell or umbrella, which served to keep the inner surface of the insulator and the wooden support dry, making it impossible for electricity to pass over it. The glass is so formed that nearly one-

Chambers' National Lightning Protection Co.,



The 1882 Cincinnati Business Directory advertised the Chambers' system. Both the CD 317 style and

the companion CD 132.4 are shown installed on the rooftop. (See CD 132.4 listing for additional information)

There were two insulator styles (**CD 317** and **CD 317.5**) produced to hold the horizontal cable and two styles (**CD 132.4** and **CD 124.5**) designed for the vertical "riser" cables. Many theorize that the CD 317

and CD 132.4 were sold as components of the "high-priced" system, while the CD 317.5 and CD 124.5 comprised the "poor man's" system. The latter two styles are less common of the four styles.

All four Chambers insulators were manufactured by the Hemingray Glass Company and bear Robert Hemingray's December 19, 1871 patent.

CD 317.5



CD 317.5

CHAMBERS

(F-Center) CHAMBERS/PAT.AUG. 14. 1877

(R-Center) PATENT/DEC. 19. 1871 SB

Light Aqua

ACTUAL SIZE: 4 3/8" in height; 9" in width
Photo Size: 70% of Full Size

CD 317.7

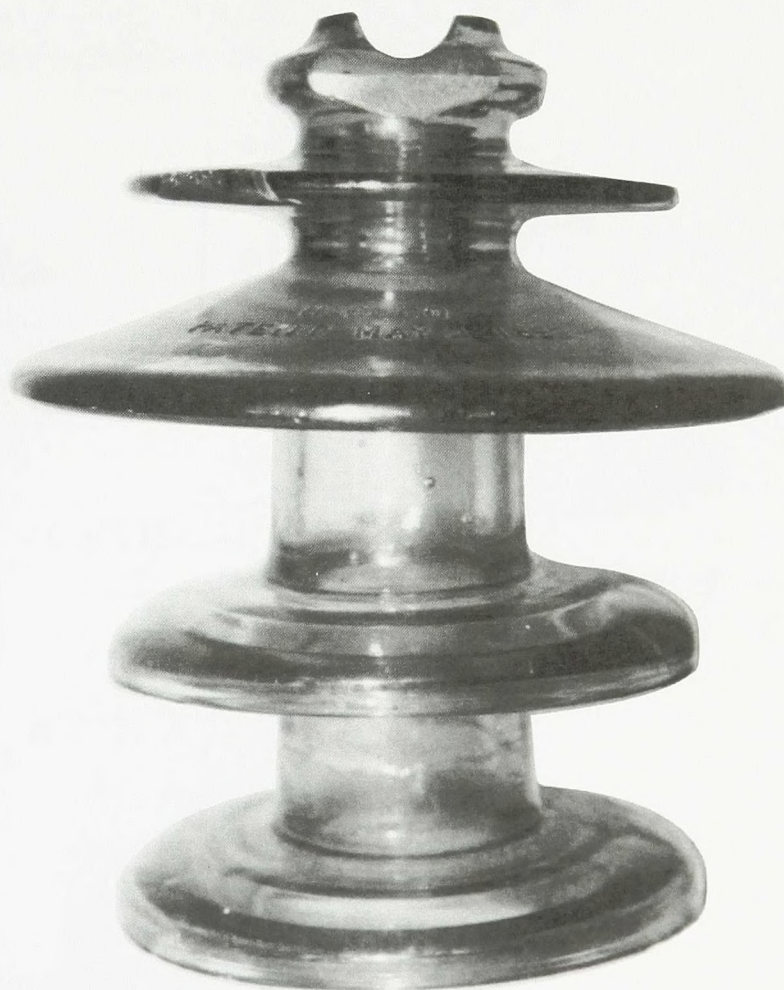


CD 317.7

H.G.CO.

(F-Skirt) H.G.CO./PATENT MAY 2. 1893 {RDP
on inner skirt only} {CD314 sleeve is unembos-
sed} RDP

Aqua



CD 314

CD 314

NO NAME

[No Embossing] SB

Aqua

CD 317.7 with two CD 314 Sleeves

*Mounted with two sleeves, the
unit stands 10 1/2" in height*

There are several unusual features about the CD 317.7 power piece that should be noted. The "H.G.CO." embossing is very unusual, since all of the previously identified Hemingray high-voltage insulators are embossed with "HEMINGRAY".

The insulator also contains the May 2, 1893 drip point patent. At first glance, the insulator appears to have no drip points, however, if turned upsidedown the small inner skirt does have the drip points. It is unique to find drip points on only the inner skirt. Hemingray did make the CD 151 style with drip points on both the outer and inner skirts and some units with drip

points on only the outer skirt, omitting them from the inner skirt. The CD 317.7 is a reversal of the standard Hemingray use of drip points.

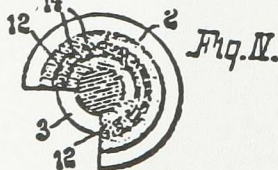
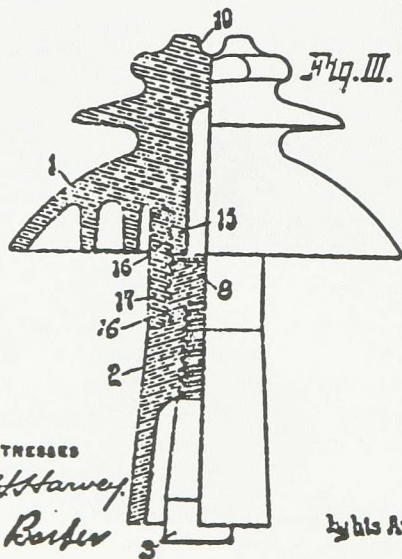
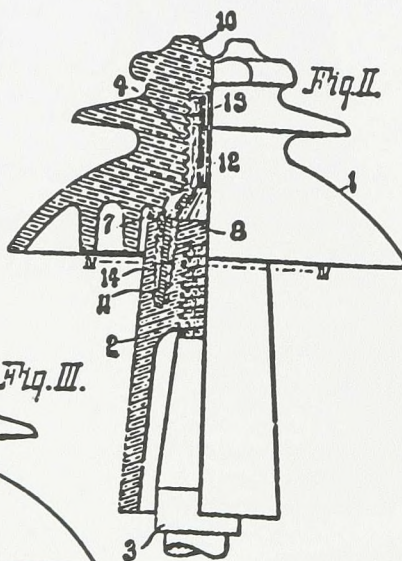
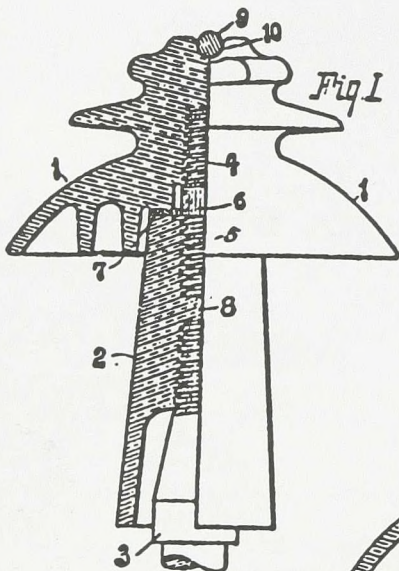
Another Vernon G. Converse patent gives those who dream of "new finds" something to think about in their search. Note that section is similar to the style of both the CD 317.7 and CD 317.8, however, the interesting feature is the sleeve section. The internal surface of the sleeve is threaded to receive a duplex threaded pin which would attach it with section one. The search goes on....!

No. 735,212.

PATENTED AUG. 4, 1903.

V. G. CONVERSE.
INSULATOR.

APPLICATION FILED NOV. 10, 1902.



WITNESSES
Geo. H. Hawley
T. A. Barber

INVENTOR
Vernon G. Converse
By his Attorney
Wm. L. Pierce

ACTUAL SIZE; 6 1/4" in height; 10 3/8" in width
Photo Size: 60% of Full Size

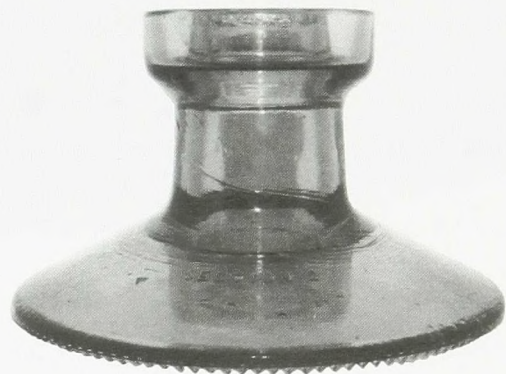
CD 317.8



CD 317.8

NO NAME

(F-Skirt) "SECTION 1" (R-Skirt) PATENTED JUNE 10
1902 {See CD313 and CD313.1 for embossing on
sleeves} SB
Aqua



CD 313

HEMINGRAY

(F-Skirt) "SECTION 2" (R-Skirt) HEMINGRAY
PATENT MAY 2 1893 SDP
Aqua

CD 313

(F-Skirt) HEMINGRAY (R-Sleeve) PATENT
MAY 2 1893 SDP
Aqua

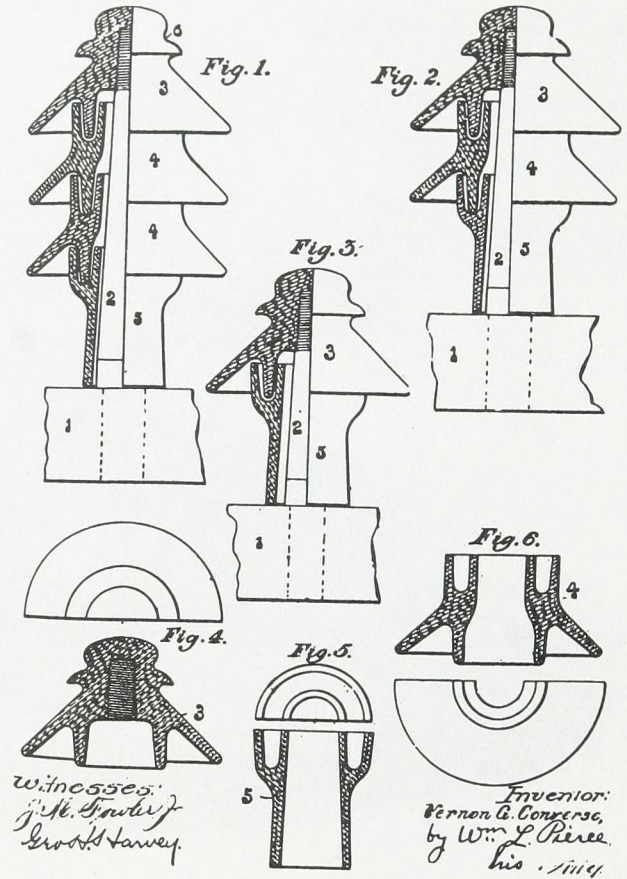
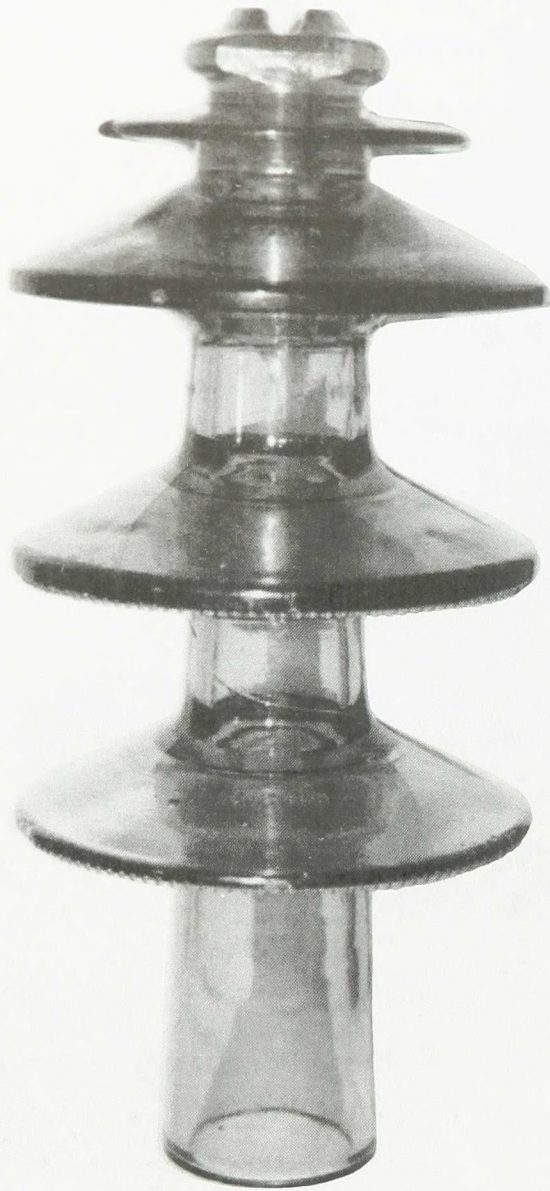


CD 313.1

NO NAME

[No Embossing] SB
Aqua

CD 313.1



CD 317.8 with two CD 313 Sleeves and one CD 313.1 Sleeve

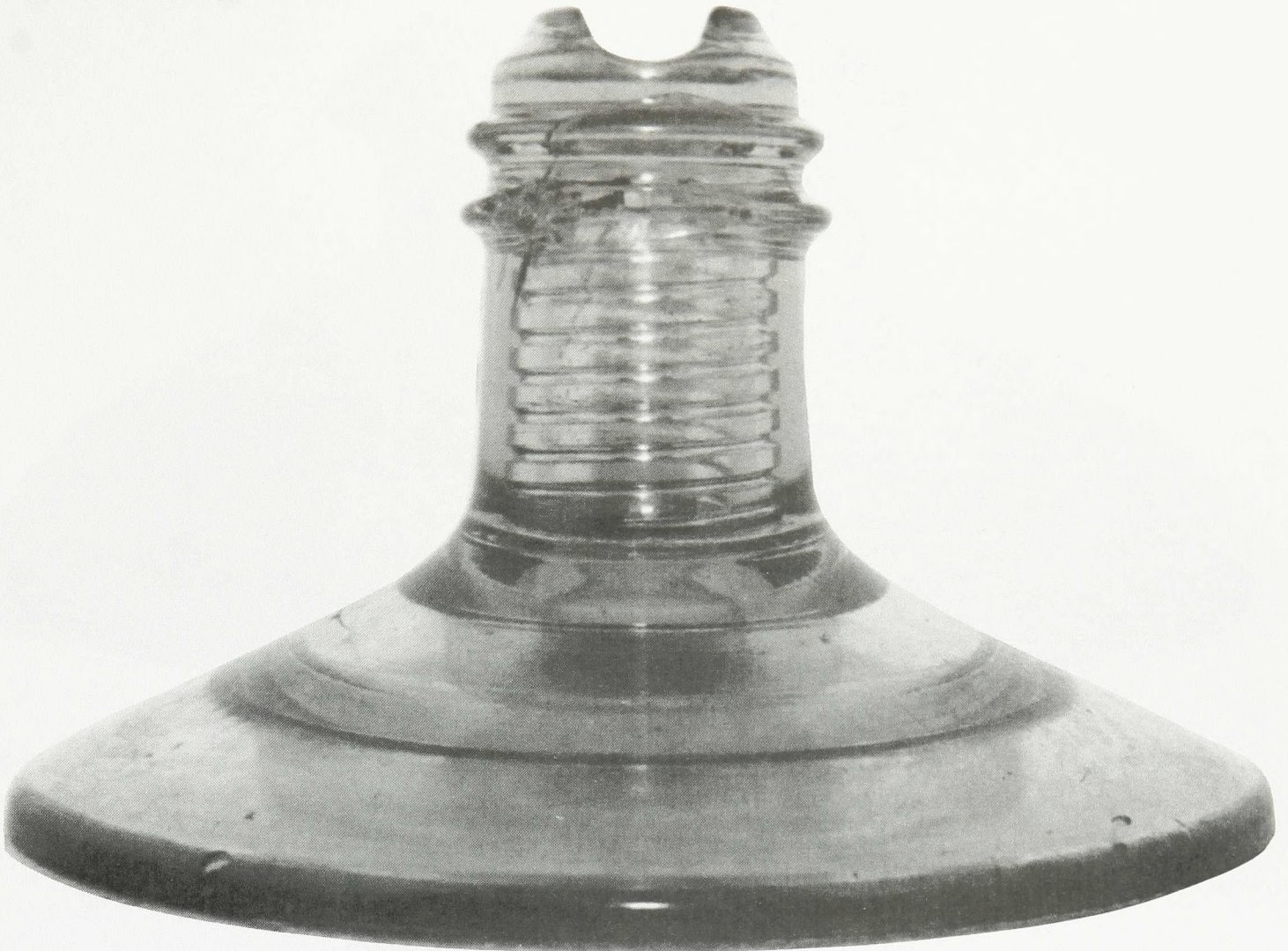
Mounted with three sleeves, the unit stands 23" in height

The patent date on **CD 317.8** belongs to **Vernon G. Converse** of Pittsburgh, Pennsylvania. The patent was granted June 10, 1902. In order to produce a high-voltage insulator, Converse enlarged the size of the insulator in order to increase the distance between the conductor and the pin. Instead of increasing the diameter of the insulator, length was added by making use of "several insulators or pieces which are not so large but that offer a high resistance to surface leakage and are easy of manufacture and to build them up in such a way that a series of breaks or gaps will be made between the conductor and the support for the insulator or insulators."

The CD 317.8 and both CD 313 sleeves have a second petticoat which fits snugly in the circular depression of the piece below it. This groove not only provided for a connecting rest between pieces but was also to be filled with oil or another insulating substance.

Two CD 317.8 units have been located, but only one of each of the mounting sleeves has been found. All four parts of this enormous multi-part high voltage insulator were made available to collectors in 1989 from an employee of the Hemingray Glass Company who had salvaged this insulator and the only known examples of CD 286.9, CD 303.5, CD 309, CD 309.5, and CD 317.7 styles.

ACTUAL SIZE: 5 1/4" in height; 8" in width
Photo Size: 85% of Full Size



CD 317.9

CD 317.9

NO NAME

[No Embossing] SB
Aqua

[No Embossing] SDP
Aqua

ACTUAL SIZE: 6" in height; 7 1/2" in width
Photo Size: 90% of Full Size



CD 318

CD 318

LOCKE

(F-Umbrella) FRED M. LOCKE VICTOR N.Y. (R-Umbrella)

[Blotted out Embossing]/N° 19 SB

Aqua, Light Green Aqua

ACTUAL SIZE: 6 1/8" in height; 9" in width
Photo Size: 75% of Full Size



CD 319

CD 319

LOCKE

(F-Umbrella) F.M. LOCKE VICTOR N.Y./N° 23

SB

Aqua

(F-Umbrella) FRED M. LOCKE VICTOR N.Y.

(R-Umbrella) [Blotted out Embossing] SB

Aqua, Light Green



CD 320

CD 320

PYREX

(F-Skirt) CORNING PYREX T.M. REG. U.S. PAT. (R-Skirt) OFF.
MADE IN U.S.A. [Number]/171 SB
Clear, Carnival, Straw

(Skirt) PYREX T.M. REG. U.S. PAT. OFF. MADE IN U.S.A.
[Number]/171 {Embossed all the way around the skirt} SB
Clear, Straw



CD 321

CD 321

NO NAME

(F-Umbrella) REGISTERED TRADE MARK (R-Umbrella) (Arc) PATENTED/JUNE 17, 1890 SB
Aqua, Green, Blue

PRISM

(F-Umbrella) (Arc) REGISTERED/(Arc) TRADE MARK/
[Prism] (R-Umbrella) PATENTED JUNE 17, 1890 SB
Light Aqua, Light Blue, Green

(F-Skirt) REGISTERED/TRADE [Prism] MARK (R-Skirt) (Arc) PATENTED/JUNE 17 1890 SB
Aqua

(F-Umbrella) [Prism] (R-Umbrella) (Arc) PATENTED/
JUNE 17, 1890 SB
Aqua



CD 321 Variation

Note the tall, pointed ears which differ from the large photograph



CD 322

CD 322

PYREX

(Skirt) CORNING PYREX T.M. REG. U.S. PAT. OFF. MADE IN
U.S.A. [Number]/233 {Embossed all the way around the skirt} {1" or 1
3/8" pinhole} SB
Clear, Light Straw, Carnival

ACTUAL SIZE: 5 1/2" in height; 7 1/2" in width
Photo Size: 90% of Full Size



CD 323

CD 323

PYREX

(Skirt) CORNING PYREX T.M. REG. U.S. PAT.
OFF. MADE IN U.S.A. [Letter or Number]/271
{Embossed all the way around the skirt} {1 3/8" or
1 5/8" pinhole} SB
Clear, Light Straw, Carnival

ACTUAL SIZE: 7" in height; 8 1/2" in width
Photo Size: 70% of Full Size



CD 324

CD 324

PYREX

(Skirt) PYREX T.M. REG. U.S. PAT. OFF. MADE IN U.S.A. 353/[Letter]

{Embossed all the way around the skirt} {1 3/8" pinhole} SB

Clear, Straw, Carnival

ACTUAL SIZE: 6 3/4" in height; 9" in width
Photo Size: 75% of Full Size



CD 325

CD 325

PYREX

(Skirt) CORNING PYREX T.M. REG. U.S. PAT. OFF. MADE IN U.S.A.

[Letter]/401 {Embossed all the way around the skirt} {1 3/8" or 1 5/8"
pinhole} SB

Clear, Carnival, Straw, Green Tint, Light Pink

ACTUAL SIZE: 8 1/8" in height: 10" in width
Photo Size: 60% of Full Size



CD 326

CD 326

PYREX

(Skirt) PYREX T.M. REG. U.S. PAT. OFF MADE IN
U.S.A. 453 [Letter] {1 3/8" pinhole} SB
Clear, Carnival, Straw

ACTUAL SIZE: 7 5/8" in height; 11" in width
Photo Size: 65% of Full Size



CD 327



CD 327

PYREX
(Skirt) CORNING PYREX T.M. REG. U.S. PAT.
OFF. MADE IN U.S.A. 441 {Embossed all the way
around the skirt} {1 3/8" or 1 5/8" pinhole} SB
Clear, Straw, Carnival, Green Tint

Top Variation on CD 327
*Several units have a small second ledge
on the dome of the insulator presumably for
a different type of mounting fixture.*
(Photograph courtesy of Dan Wagner)

ACTUAL SIZE: 9 1/4" in height; 12" in width
Photo Size: 55% of Full Size



CD 328

CD 328

PYREX

(F-Skirt) PYREX T.M.REG. U.S. PAT.OFF. MADE IN U.S.A. 553

(R-Skirt) C SB

Clear

ACTUAL SIZE: 10 3/8" in height; 15" in width
Photo Size: 47% of Full Size



CD 330

CD 330

PYREX

(Dome) A (F-Skirt) PYREX T.M.REG. U.S. PAT.OFF. MADE IN
U.S.A. (R-Skirt) 663 A SB
Clear, Light Yellow

ACTUAL SIZE: 11" in height; 15" in width
Photo Size: 45% of Full Size



CD 331

Largest One-Piece Glass Pintype Insulator

CD 331

PYREX

(Umbrella) CORNING PYREX T.M. REG. U.S. PAT. OFF. MADE IN U.S.A.
{Embossed all the way around the umbrella} {2 1/4" pinhole} SB
Clear, Yellow Tint, Green Tint

ACTUAL SIZE: 5 1/2" in height; 7 1/2" in width
Photo Size: 90% of Full Size



CD 333

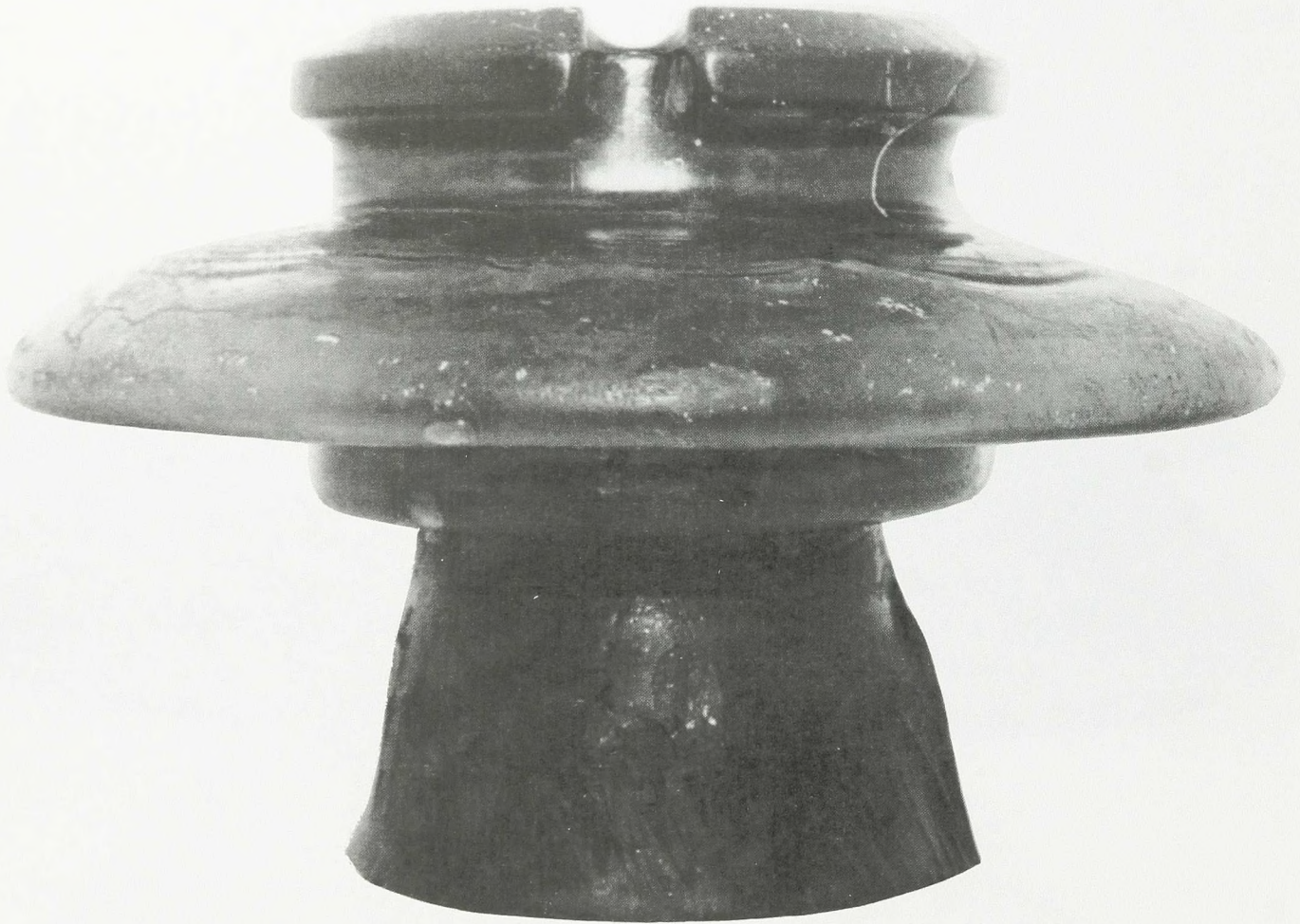
CD 333

PRISM

(F-Umbrella) (Arc)PATENTED/[Prism]/JUNE 17 1890 SB
Blue Aqua, Light Blue, Olive Green

(F-Umbrella) [Prism] SB

Green Aqua, Green, Olive Green, Yellow Green, Aqua



CD 338

CD 338

BROOKFIELD

(Top of Ear) BROOKFIELD SB

Dark Aqua

Please Note: To date only one specimen of the top portion of this insulator has been located. The skirt had been broken away from the upper section of the insulator. A plastic repair was made to reconstruct the skirt.

ACTUAL SIZE: 10" in height; 11" in width
Photo Size: 60% of Full Size



CD 342



CD 342

LOCKE
(F-Skirt) LOCKE PATENTS APR.29.1902 JUNE 7.1898
NOV.2.1896/SEPT.28.1897 DEC.15.1896 APR.30.1891
(R-Skirt) NO 25 (Sleeve-not a separate CD Number)
(F-Center) LOCKE PAT/DEC. 15. 96 JUNE 7. 98. SB
Aqua

Sleeve for CD 342

The sleeve for the CD 342 is not a separate CD for it is cemented to the upper portion at the installation site. You will note the ridges on the upper surface of the sleeve. These allow for better adherence of the cementing material.

**CONSOLIDATED DESIGN
PICTORIAL REFERENCE FOR
THREADLESS PINTYPE
GLASS INSULATORS**



CD 700

CD 700

NO NAME

[No Embossing] SB

Light Sage, Light Aqua, Dark Aqua, Light Purple (pink cast), Light Purple (blue cast), Light Green Aqua

Slightly convex sides between wire groove and base and between wire groove and top



CD 700.1

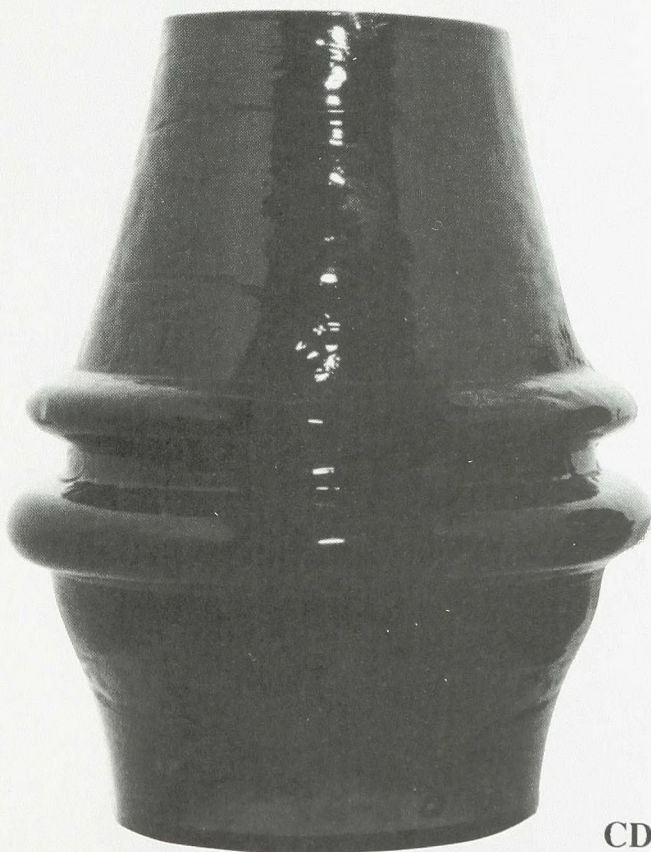
CD 700.1

NO NAME

[No Embossing] SB

Bubbly Clear, Root Beer Amber, Olive Green, Emerald Green, Light Blue, Blue, Green Aqua, Aqua, Light Aqua

Straight sides between wire groove and top and between wire groove and base



CD 701

CD 701

NO NAME

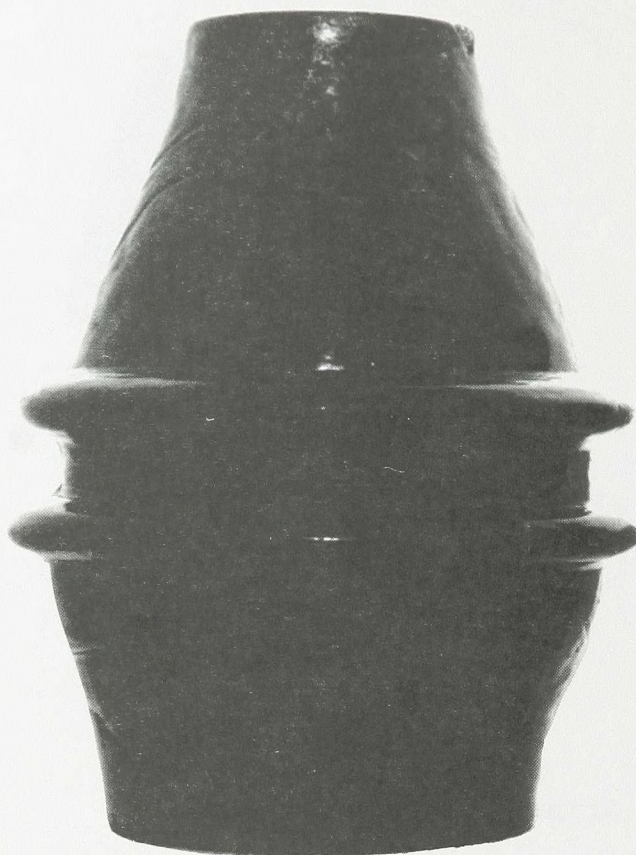
[No Embossing] SB

Teal Green, Emerald Green, Milky Green Blackglass, Dark Aqua, Milky Emerald Green, Light Aqua, Dark 7-up Green, 7-up Yellow Green, Teal Blue, Blackglass, Milky Aqua

Regular "Egg" - pinhole tapers to base



CD 701.1



CD 701.3

CD 701.3

Very narrow top

NO NAME

[No Embossing] SB

Dark Forest Green, Dark Green

CD 701.1

NO NAME

[No Embossing] SB

Light Straw, Light Green, Light Aqua, 7-up Green, Citron, Blue Aqua, Bubbly Aqua, Emerald Green, Light Lime Green

Improved "Boston" Egg - a cavity is formed inside the skirt, and the pinhole is more like that of a normal threadless

CD 701.5

NO NAME

[No Embossing] SB

Dark Green, Dark Teal

CD 701.5

Larger size than a regular CD 701 egg





CD 701.6

CD 701.6

NO NAME

[No Embossing] SB

Dark Cobalt Blue, Green Blackglass, Dark Olive, Aqua,
Dark Teal, Dark Emerald Green, Dark Olive Amber,
Dark Green with Milk Swirls

*"Confederate" Egg - large size with concave skirt,
many have an "extended" base*



CD 701.8

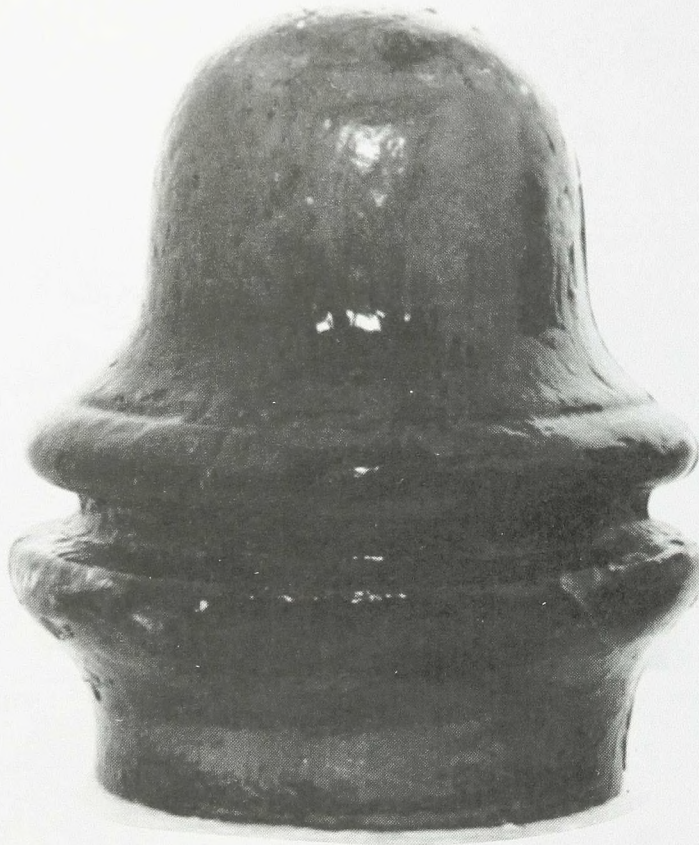
CD 701.8

NO NAME

[No Embossing] SB

Blue Aqua, Light Aqua

*"National Road" Egg - a much smaller
size and a different shape*



CD 718

CD 718

NO NAME - CANADA

[No Embossing] SB

Cobalt Blue, Dark Cornflower Blue, Light Cornflower Blue, Root Beer Amber, Olive Green, Dark Orange Amber, Milky Emerald Green, Aqua, Light Cobalt Blue, Dark Olive Amber, Dark Yellow Amber, Dark Emerald Green, Purple Blackglass, Sky Blue, Jade Aqua, Light Purple, Light Aqua, Blue Aqua, Light Green, Olive Green Blackglass, Olive Amber Blackglass, Dark Forest Green, Bubbly Aqua, Bubbly Milky Aqua, Gray, Plum, Emerald Green, Indigo, Dark Aqua, Gingerale

TILLOTSON

(F-Crown) (Arc) TILLOTSON & Co/16/BROADWAY/N.Y. SB

Teal Green, Aqua, Green Milk, Snowy Aqua, Emerald Green, Light Blue, Light Green, Dark Yellow Olive, Root Beer Amber Blackglass, Light Aqua

Several mold varieties exist with differing heights



CD 718 Variation

This insulator is the tallest of the CD 718 style. It is well made and has nearly a 3/4" extension at the base of the skirt. The color is a dark milky green. It was used on a line up Mt. Washington in New Hampshire.

(Courtesy of John Hall collection; photograph by John McDougald)



CD 721



CD 722

CD 721

NO NAME - CANADA

[No Embossing] SB

Powder Blue, Aqua, Light Aqua, Cornflower Blue, Jade Milk

"Beveled Top" Baby Canadian Wade - Raised "dashes" on surface, side tapers inward slightly from bottom to top, top corner is beveled

CD 722

NO NAME - CANADA

[No Embossing] SB

Green, Aqua, Bubbly Aqua, Jade Aqua, Bubbly Green

Baby Canadian Wade - Raised "dashes" on surface, side more straight, flat top, not beveled like CD 721



Canadian "Baby Wades" with partially decayed wood covers.

(Left to right) CD 722, CD 721 and a third unit which has too much of its cover remaining to make an identification.

(Courtesy of the Paul Plunkett family collection; photograph by John McDougald)



CD 723

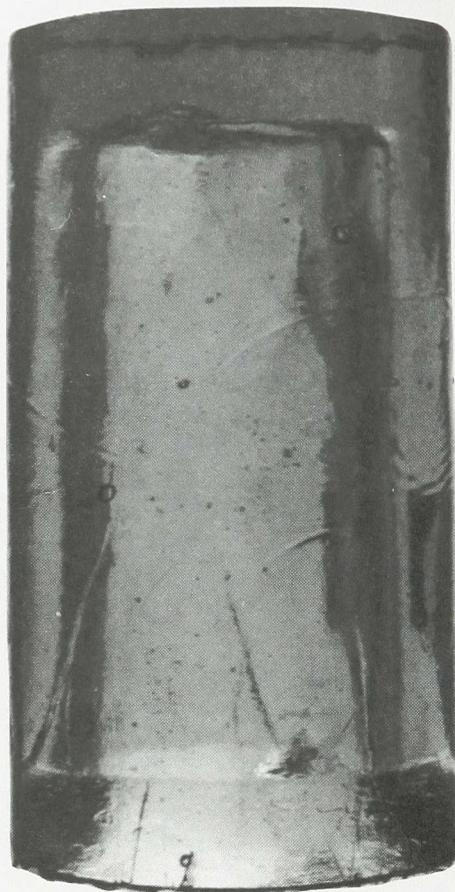
CD 723

NO NAME

[No Embossing] SB

Blue, Aqua, Light Olive, Light Celery, Green, Light Green, Clear

Regular size "Dot - Dash" Wade type



CD 723.3

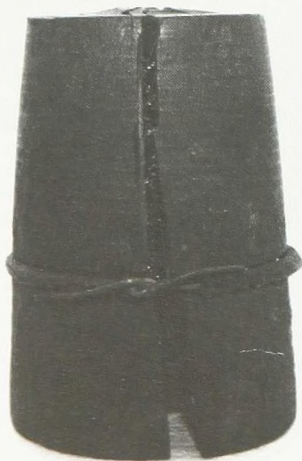
CD 723.3

NO NAME

[No Embossing] SB

Blue, Aqua, 7-up Green, Green Aqua, Blue Aqua, Aqua with Amber, Cobalt Blue

Regular size Wade type, smooth surface without "dots - dashes"



Two wood-covered Wade type insulators.

(Left) This one looks as though it was never put into use. The wood has dried and split, a wire is wrapped around the cover to keep it intact. (Right) This cover shows wear and decay.

(Courtesy of James Doty collection; photograph by John McDougald)



CD 723.5

Smooth surface, smaller than CD 723.3



CD 724

Slightly flared skirt

CD 723.5

NO NAME

[No Embossing] SB

Blue with Amber Swirls, Bubbly Green Aqua

CD 724

CHESTER

(F-Skirt)CHESTER N.Y. SB

Cobalt Blue

NO NAME

[No Embossing] SB

Lime Green, Pink, Cobalt Blue



CD 723.6

CD 723.6

NO NAME

[No Embossing] SB

Dark Green Aqua

Smooth surface, smaller than CD 723.5



CD 724.3

*Smaller size than CD 724,
skirt flares more*

CD 724.3

NO NAME - CANADA

[No Embossing] SB

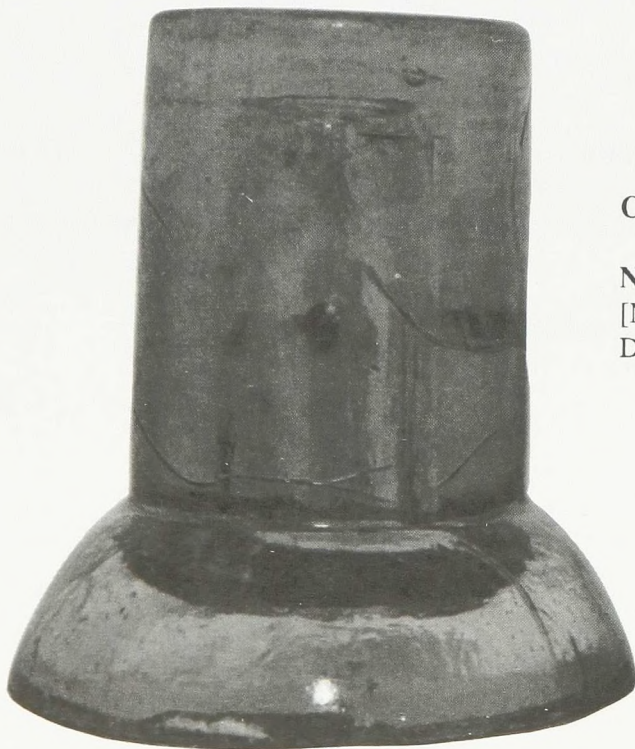
Olive Green, Olive Blackglass, Olive Amber Blackglass



CD 724.3 with the "Chester Ring" still intact.

The CD 724.3 is a smaller, Canadian style of the CD 724 Chester. Stephen Chester patented a "ring" which provided an attachment for the line. The ring was placed around the body of the insulator and eliminated the need for a tie wire. The only contact the line wire had with the insulator was with the three projections on the ring. (See CD 158.1 for May 16, 1871 patent information) It is believed that Chester offered a ring without projections prior to the 1871 patent, and it was installed around the insulator and used in conjunction with a wooden cover.

(Courtesy of Paul Plunkett family collection; photograph by John McDougald)



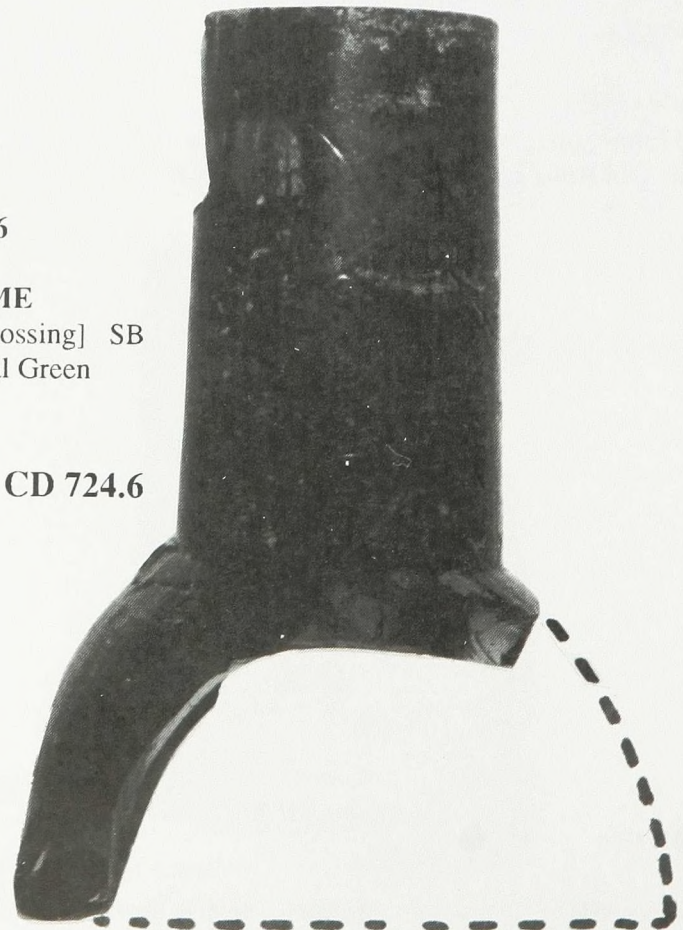
CD 724.6

NO NAME

[No Embossing] SB

Dark Teal Green

CD 724.6



CD 724.5

CD 724.5

*Larger diameter than
CD 724, larger skirt*

NO NAME

[No Embossing] SB

Lime Green

Sleeve has narrow diameter, very large skirt



CD 725

Concave sides

CD 725

NO NAME

[No Embossing] SB

Blue Aqua, Aqua with Amber Swirls



CD 726

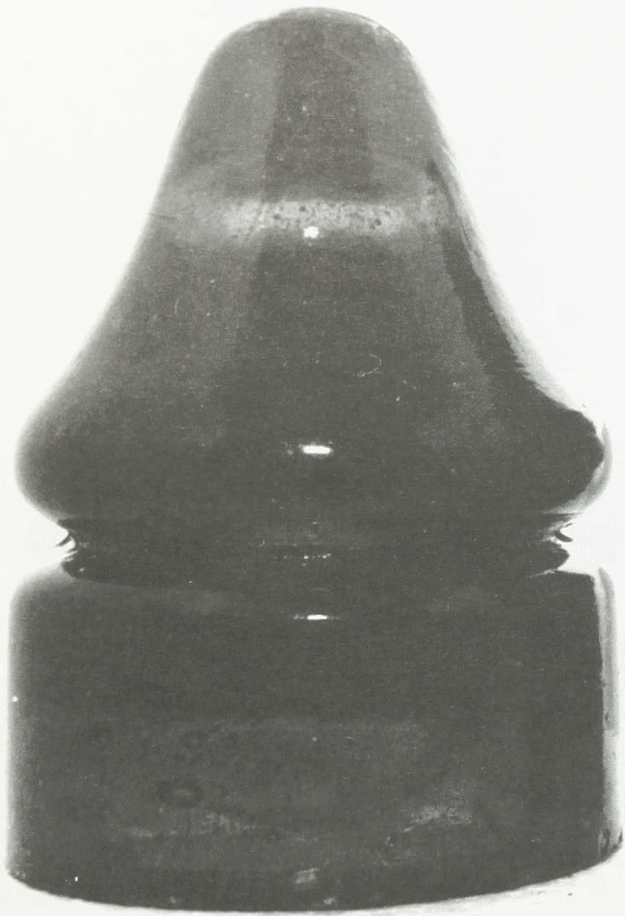
Both a grooved base and a tapered "M.T.CO." type base exist

CD 726

NO NAME - CANADA

[No Embossing] SB

Aqua, Light Blue, Light Blue Aqua, Blue with Milky Swirl, Sky Blue, Light Aqua, Milky Aqua, Olive Amber Blackglass, Light Purple, Gray, Green Blackglass, Dark Puce, Dark Cornflower Blue, Milky Violet Blue, Cranberry Red



CD 727

CD 727

NO NAME

[No Embossing] SB

Dark Green, Olive Green Blackglass



CD 728.2

CD 728.2

NO NAME

(Dome) M or W SB

Aqua, Blue Aqua, Green, Green with Amber Streaks, Blue

(See Pennsylvania Manufacturers - Beaver Falls Glass Company chapter for additional information)

Flat top, heavy construction



CD 728

NO NAME

[No Embossing] SB

Aqua, Light Blue, Ice Aqua Amber Swirl, Light Aqua

CD 728

Straight skirt



CD 728.4

CD 728.4

BROOKFIELD

(F-Crown) (Arc)W.BROOKFIELD/[Number]/55 FULTON ST/N.Y. (R-Crown) (Arc)CAUVET'S/PAT./JULY 25,1865 SB

Aqua, Light Blue Aqua



CD 728.7

CD 728.7

NO NAME

[No Embossing] SB
Blue Aqua, Light Blue

OAKMAN

(Base of Threads) OAKMAN'S PATENT. JULY 26.1870. SB

Aqua

No inner skirt, more pointed dome



CD 728.5

Shaped more like an American Insulator Company CD 134, pinhole narrows in the middle and flares at the top

CD 728.5

NO NAME

[No Embossing] SB
Light Blue Aqua



CD 728.8



CD 729

CD 728.8

BOSTON BOTTLE

(Base) BOSTON BOTTLE WORKS-OAKMAN'S PAT
JULY 26 1870 SB
Light Aqua, Aqua

(Base) BOSTON BOTTLE WORKS-OAKMAN'S
PATENT. JULY 26.1870. SB
Aqua

*Has an inner skirt, skirt flares outward
from the wire groove to the base*

CD 729

MULFORD & BIDDLE

(F-Skirt)MULFORD &. BIDDLE/83 JOHN ST. N.Y.
SB
Blue Aqua, Milky Green Aqua, Blue

NO NAME

[No Embossing] SB
Green, Dark Green Aqua, Aqua, Dark Teal Green,
Emerald Green, Light Green, Dark Forest Green, Blue
Aqua, Dark Amber, Dark Red Amber, Milky Green
Blackglass

Flat, button top

(Photograph courtesy of Ray Klingensmith)



CD 729.3

CD 729.3

KEELING

(F-Crown) (Arc) J.S. KEELING (F-Skirt) 16 B-WAY N.Y.
SB

Olive Green Blackglass, Light Bubbly Green, Teal Blue,
Aqua, Teal Aqua, Opaque Blackglass

*More rounded dome than CD 729, distance between
top of wire groove and dome top is short*



CD 729.4

CD 729.4

MULFORD & BIDDLE

(F-Skirt) MULFORD & BIDDLE/83 JOHN ST. N.Y.
SB

Light Aqua, Dark Green Aqua, Aqua, Blue, Dark Aqua,
Blue Aqua, Teal Aqua, Milky Green Aqua, Blue

NO NAME

[No Embossing] SB
Dark Green

*Dome even more rounded, more like CD 729.6,
skirt near base is very narrow*



CD 729.6

CD 729.6

PT APD FOR

(Base)PT AP^D FOR SB
Light Aqua, Green

Rounded, beehive shaped dome, concave skirt



CD 731

CD 731

BROOKFIELD

(F-Crown) (Arc)CAUVET'S/PAT/JULY 25 1865 (F-Skirt) W.BROOKFIELD/55 FULTON ST N.Y.

(R-Skirt) 6. SB

Blue Aqua, Light Aqua, Aqua

MCKEE

(F-Skirt)S.M^CKEE &.Co. SB

Aqua Blue, Blue, Aqua

NO NAME

(Dome) M or W SB

Aqua

[No Embossing] SB

Red Amber Blackglass, Aqua, Light Aqua, Light Blue, Light Green, Green, Green Aqua, Olive Blackglass, Bubbly Aqua, Dark Orange Amber, Dark Honey Amber, Green with Amber, White Milk

TILLOTSON

(F-Crown) (Arc)TILLOTSON SB

Light Blue, Teal Blue, Light Sapphire Blue, Green Aqua, Lime Green, Teal Green, Emerald Green, Dark Yellow Amber, Dark Brown Amber, Light Green, Dark Cobalt Blue, Ice Aqua, Light Aqua with Amber, Aqua, Dark Sapphire Blue, Yellow Lime Green

"Compromise" style, regular, concave skirt



CD 731.2

Very similar to CD 728 except it has a very slight concave skirt

CD 731.2

NO NAME

[No Embossing] SB

Aqua, Light Blue



CD 731.3

Flat top

CD 732

NO NAME

[No Embossing] SB

Aqua, Dark Amber, Lime Green, Dark Aqua, Green Aqua, Olive Blackglass, Light Green Slag, Green Aqua Slag, Light Aqua, Jade Aqua, Light Purple, Teal Green, Gingerale

CD 731.3

NO NAME

[No Embossing] SB

Olive Blackglass, Dark Yellow Amber, Blue, Bubbly Light Blue, Aqua, Amber Blackglass

"Stoddard" type, flat button top which is very narrow, wide wire groove, concave skirt



CD 732



CD 732.2

CD 732.2

Round top

L.G.T.&CO.

(F-Skirt)L.G.T.&C^o SB

Light Aqua

NO NAME

[No Embossing] SB

Celery Green, Light Green, Dark Lime Green, Blue Aqua



CD 734.1

CD 734.1

NO NAME

[No Embossing] SB

Aqua

Flat top, rounded skirt



CD 734

MCMICKING (CANADA manufacture)

(F-Skirt) M^cMICKING (R-Skirt) VICTORIA.B.C. 75 SB

Blue Aqua, Light Aqua, Light Green

(F-Skirt) M^cMICKING (R-Skirt) VICTORIA.B.C. 75 SB

Aqua, Light Blue Aqua, Light Green Aqua

Round top, rounded skirt

CD 734



CD 734.3

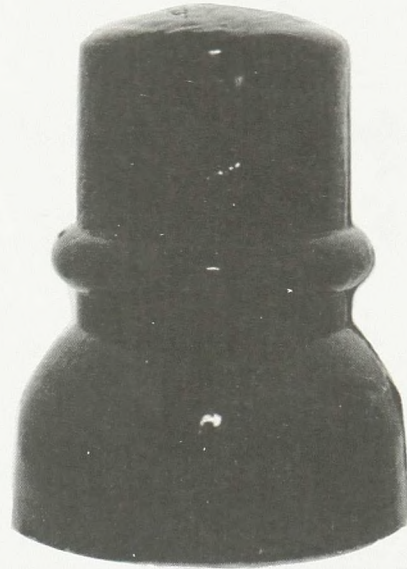
CD 734.3

NO NAME

[No Embossing] SB

Dark Amber

Flat top, straight skirt



CD 734.8

CD 734.8

NO NAME - CANADA

[No Embossing] SB

Dark Olive, Dark Amber, Light Green, Light Aqua, Dark Olive Amber

"Baby Battleford", round top, rounded skirt



CD 734.5

NO NAME - CANADA

[No Embossing] SB

Dark Olive

CD 734.5

Flat top, straight skirt



CD 735

CD 735

CHESTER

(F-Skirt) CHESTER/N.Y. SB
 Light Green, Ice Aqua, Aqua, Amber, Aqua with Amber,
 Light Yellow, Snowy Aqua, Brown Amber Blackglass,
 Lime Green, Yellow Amber Blackglass, Emerald Green,
 Dark Olive Amber

MULFORD&BIDDLE

(F-Skirt) MULFORD & BIDDLE SB
 Aqua, Light Aqua, Blue Green, Light Blue

(F-Skirt) MULFORD & BIDDLE (R-Skirt) U.P.R.R. SB
 Light Yellow Green, Light Green, Powder Blue, Aqua,
 Ink Cobalt Blue, Light Aqua, Dark Aqua, Green, Blue
 Aqua, Teal Blue

NO NAME

[No Embossing] *{This piece was manufactured during the
 early 1970's and is not an old insulator. All authentic
 CD 735 insulators are embossed.}* SB
 Blue Aqua, Green

SO EX CO

(F-Skirt) SO EX CO (R-Skirt) CHESTER/N.Y. SB
 Aqua, Light Aqua, Amber Blackglass

TILLOTSON

(F-Crown) (Arc)TILLOTSON & CO SB
 Light Teal, Dark Teal

(F-Crown) (Arc)TILLOTSON & Co (F-Skirt) (Arc)16
 BROADWAY/N.Y. SB
 Light Aqua, Aqua, Olive, Yellow Green, 7-up Green,
 Emerald Green, Bubbly Emerald Green, Amber, Dark
 Aqua, Ice Aqua, Blue Aqua, Green Aqua, Lime Green



CD 735.3

CD 735.3

U.S.TEL.CO.

(F-Skirt) U.S.TEL.CO. (R-Skirt) CHESTER/N.Y. SB
 Dark Aqua, Light Aqua

*Larger size than CD 735, taller
 and has a larger diameter*



CD 735.5

CD 735.5

LINEA DEL SUPO (MEXICO manufacture)
(F-Skirt)LINEA DEL SUP^o (R-Skirt)GOBIERNO SB
Green Aqua

Broader skirt than CD 735

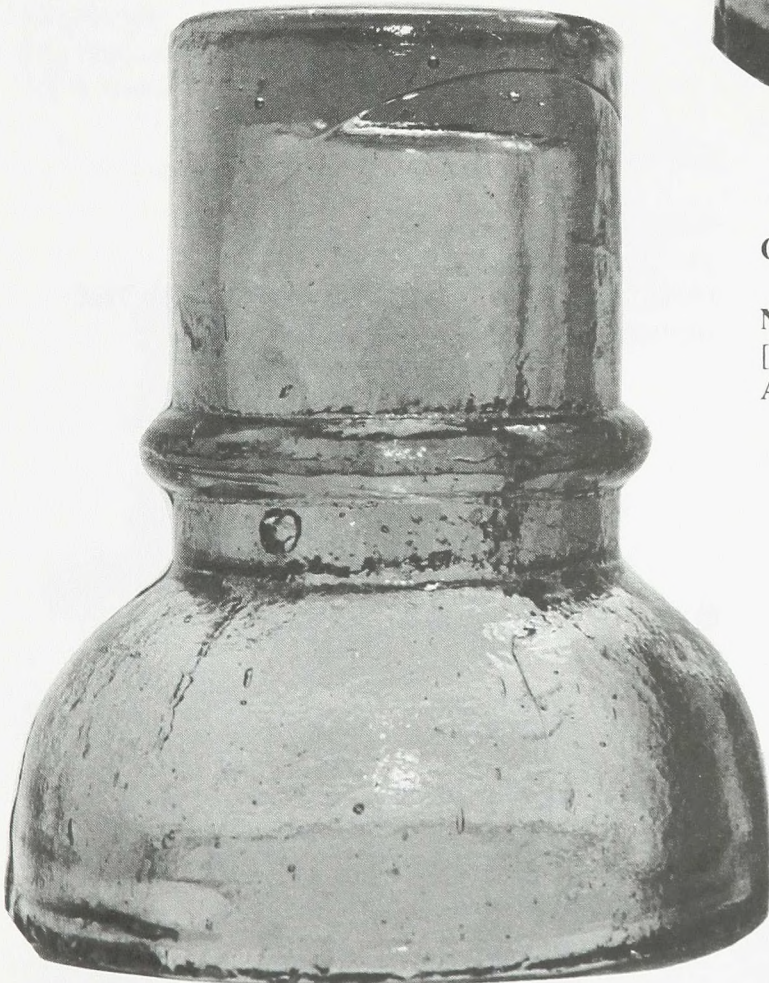


CD 735.7

CD 735.7

NO NAME
[No Embossing] SB
Aqua, Blue Aqua, Light Aqua

Slightly more rounded top



CD 735.6

CD 735.6

NO NAME
[No Embossing] SB
Aqua, Green, Blue Aqua
Flat top



CD 736

CD 736

E.R.W.

(F-Skirt) E.R.W. SB
Light Blue Aqua, Light Green

N.Y.&E.R.R.

(F-Skirt) N.Y.&. (R-Skirt) E.R.R. SB
Light Milky Aqua, Puce

(F-Skirt) N.Y.&E.R.R. SB

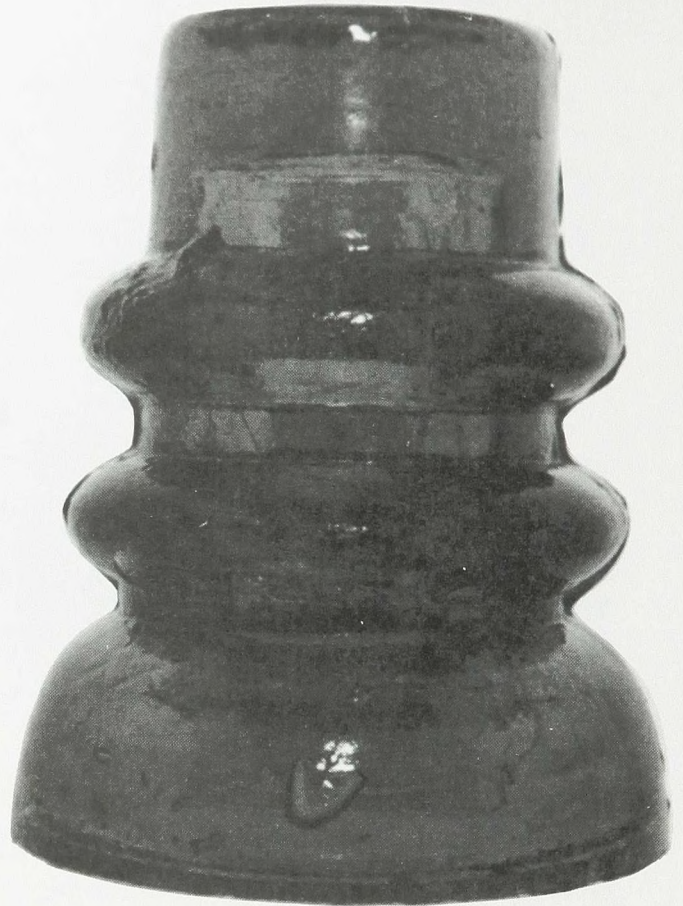
Light Cornflower Blue, Brown Puce, Light Green Aqua,
Aqua, Milky Aqua, Light Aqua, Burgundy Puce, Saph-
phire Blue, Blue Aqua

NO NAME

[No Embossing] SB
Root Beer Amber, Aqua, Dark Yellow Amber

TILLOTSON

(F-Crown) (Arc)TILLOTSON/& Co (F-Skirt) 16
BROADWAY N.Y. SB
Dark Amber, Aqua, Emerald Green, Green, Amber
Blackglass, Light Green, Green Aqua, Blue Aqua



CD 736.1

CD 736.1

NO NAME

[No Embossing] SB
Green Aqua, Light Aqua, Dark Aqua, Lockport Teal,
Emerald Green, Green, Aqua

"Erie" type, heavier, larger wire ridges



CD 736.3

CD 736.3

NO NAME

[No Embossing] SB

Aqua, Green Aqua, Light Aqua, Sky Blue, Dark Aqua

About two-thirds the size of CD 736



CD 736.5

Narrow dome

CD 736.5

NO NAME

[No Embossing] SB

Green Tint, Emerald Green



CD 736.4

NO NAME

[No Embossing] SB

CD 736.4 Dark Sapphire Blue, Yellow Green, Light Green, Clear



CD 736.7

CD 736.7

NO NAME
[No Embossing] SB
Emerald Green



CD 737

CD 737

L.G.TILLOTSON
(F-Skirt) L.G.TILLOTSON & Co (R-Skirt) 26 DEY
ST. N.Y. SB
Blackglass, Aqua

LEFFERTS
(F-Skirt) LEFFERTS SB
Light Aqua, Light Green Aqua, Blue Aqua, Dark
Teal Aqua, Blue

NO NAME
[No Embossing] SB
Green Aqua, Green, Dark Olive Amber, Aqua

*Very "refined" look, lower wire ridge
closer to skirt than on CD 738*



CD 737.5

CD 737.5

NO NAME

[No Embossing] SB
Apple Green, Green Tint

[No Embossing] {Square Pin Hole} SB
Light Green

Note diameter of wire groove is much larger than diameter of dome



CD 737.6

CD 737.6

NO NAME

[No Embossing] SB
Olive Blackglass

Wire groove closer in diameter to that of dome, dome tapers inward slightly from top wire ridge to dome top

CD 737.9

NO NAME

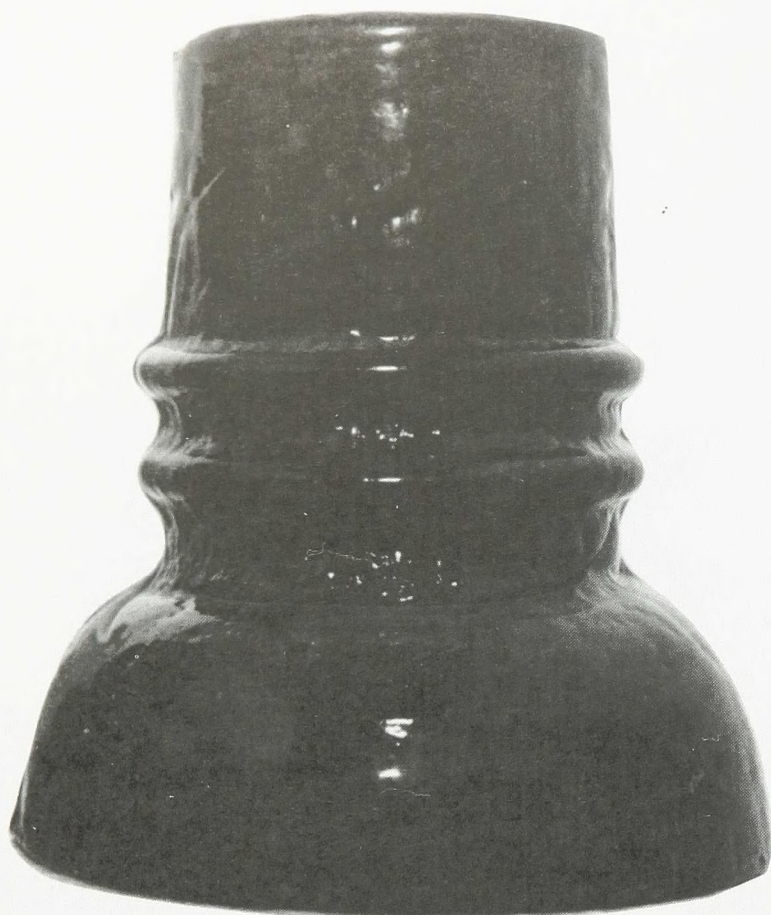
[No Embossing] SB
Blackglass

Extra flange or ring around upper portion of the dome



CD 737.9

(Photograph courtesy of Ray Klingensmith)



CD 738



CD 738.5

CD 738.5

NO NAME

[No Embossing] SB
Blackglass

CD 738

CHESTER

(F-Skirt) CHESTER, N.Y. SB
Root Beer Amber

NO NAME

[No Embossing] SB

Green, Dark Forest Green, Lockport Green, Aqua, Teal
Blue, Teal Green, Aqua Blackglass, Root Beer Amber,
Olive Amber Blackglass, Amber Blackglass, Olive
Blackglass

CD 738.6

NO NAME

[No Embossing] SB
Olive Blackglass

*Similar to CD 738.5 except this one
has a flange or ring at the top*



CD 738.6



CD 739

NO NAME

[No Embossing] SB

Light Blue, Light Blue Aqua, Amber Blackglass

Wire ridges placed high above the skirt

CD 739



CD 739.2

NO NAME

[No Embossing] SB

Aqua

CD 739.2



CD 739.5

NO NAME

[No Embossing] {"Washboard" Dome} SB
 Green Aqua, Puce, Aqua, Light Gray Purple, Light
 Sapphire Blue, Light Green

[No Embossing] {Smooth Dome} SB
 Light Ice Aqua, Amber, Blue Aqua, Aqua

"The Washboard"

CD 739.5

CD 740

DUPONT - (CANADA manufacture)

(Base) E. DUPONT ST. JEAN {"N" in Dupont is
 backwards} SB

Blackglass, Dark Green, Light Green, Snowy Aqua, Light
 Yellow Green

(Base) E.DUPONT ST. JEAN SB

Light Green, Aqua, Milky Aqua

FOSTER - (CANADA manufacture)

(Base) FOSTER.BROTHERS. ST. JOHN.C.E.1858

{"N" in John is backwards} SB

Light Green, Aqua, Emerald Green, Olive Green, Olive
 Blackglass, Root Beer Amber, Olive Amber Blackglass,
 Green Blackglass

NO NAME - CANADA

[No Embossing] SB

Green, Olive Amber, Olive Blackglass, Honey Amber,
 Orange Amber Blackglass, Aqua, Dark Yellow Green,
 Olive Amber Blackglass, Bubbly Green

TILLOTSON

(F-Crown) (Arc)TILLOTSON/& Co (F-Skirt) 16

BROADWAY.N.Y. SB

Amber, Yellow Green, Aqua, Emerald Green, Amber
 Blackglass, Bubbly Aqua

(F-Crown) (Arc)TILLOTSON/& Co (F-Skirt) 16

BROADWAY.N.Y. {'6' is backwards} SB

Blackglass, Aqua



CD 740



CD 740.1

NO NAME - CANADA

[No Embossing] SB

Snowy Aqua, Aqua, Olive Green, Light Green, Green Aqua, Dark Yellow Amber, Dark Orange Amber, Light Blue, Olive, Aqua Blue, Bubbly Light Green Aqua, Green, Dark Green, Root Beer Amber, Bubbly Light Amber, Green Blackglass

This type has an extra collar below the wire groove which is quite pronounced, many of these have a pinhole that comes very close to the base

CD 740.3

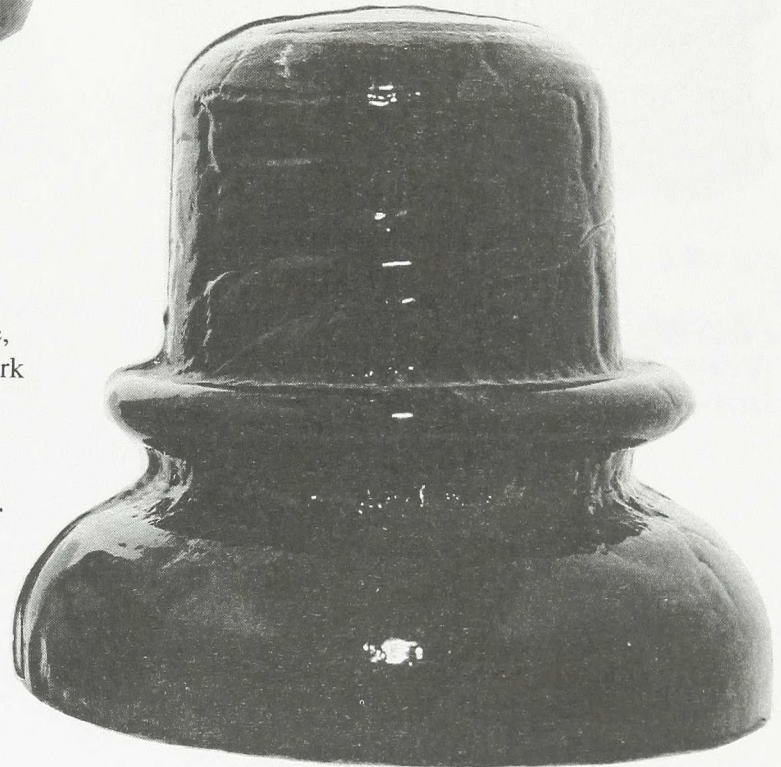
CD 740.1

NO NAME - CANADA

[No Embossing] SB

Root Beer Amber, Olive Blackglass, Bubbly Yellow Amber, Amber Blackglass, Bubbly Olive Green, Olive, Teal Green, Olive Green, Olive Amber Blackglass, Dark Green, Golden Amber, Dark Golden Amber

A larger, more squatty mold variant than a regular CD 740, note extra diameter of the wire ridge



CD 740.3

CD 740.4

NO NAME - CANADA

[No Embossing] SB

Aqua, Bubbly Aqua, Blue Aqua, Dark Amber

Very high dome overall and a taller tapered portion on top of dome



CD 740.4



CD 740.6

CD 740.6

CHESTER

(Base) CHESTER N.Y. SB
Dark Cobalt Blue, Dark Green

Flat top



CD 740.7

CD 740.7

NO NAME - CANADA

[No Embossing] SB
Dark Green, Green, Olive Green Blackglass, Amber
Blackglass, Ice Green, Clear

High dome, sharp wire ridge

CD 740.8

TELEGRAFICA (MEXICO manufacture)

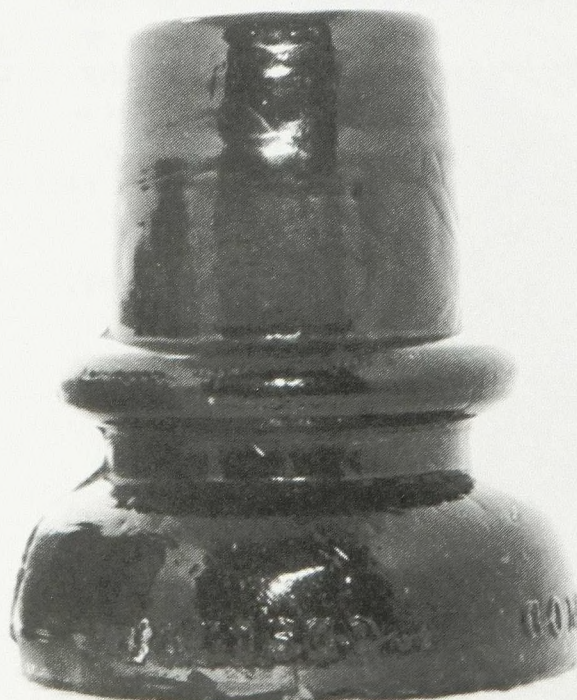
(F-Skirt) TELEGRAFICA DE (R-Skirt) JALISCO.
COMPA!. SB

Dark Forest Green

TELEGRAFO (MEXICO manufacture)

(F-Skirt)[Blotted out Embossing] (Base) TELEGRAFO
DE JALISCO P SB

Dark Green, Dark Forest Green



CD 740.8

Flat top, dome narrows toward top



CD 742

CD 742

D.T.CO. - (CANADA manufacture)

(Base) D.T.Co. SB

Aqua

M.T.CO. - (CANADA manufacture)

(Base) M.T.Co. {Embossing is backwards} SB

Milky Jade Blue

(Base) M.T.Co SB

Light Blue, Dark Cornflower Blue, Cornflower Blue,
Milky Teal, Milky Light Aqua, Aqua, Blue, Purple,
Cobalt Blue, Green Aqua, Green Aqua, Teal, Snowy
Aqua

(Base)M.T.C^o {Period under "o"} SB

Cobalt Blue, Light Blue, Green Aqua, Aqua

NO NAME - CANADA

[No Embossing] SB

Milky Blue, Aqua, Dark Teal Blue, Hemingray Blue,
Cornflower Blue, Light Aqua, Light Green Aqua, Light
Green, Dark Sky Blue, Light Cobalt Blue

*Montreal Telegraph Company regular
type, molds can vary slightly in size*



CD 742.3

CD 742.3

M.T.CO. - (CANADA manufacture)

(Base) M.T.Co SB

Teal, Light Teal, Light Blue, Teal Green, Light Cobalt
Blue

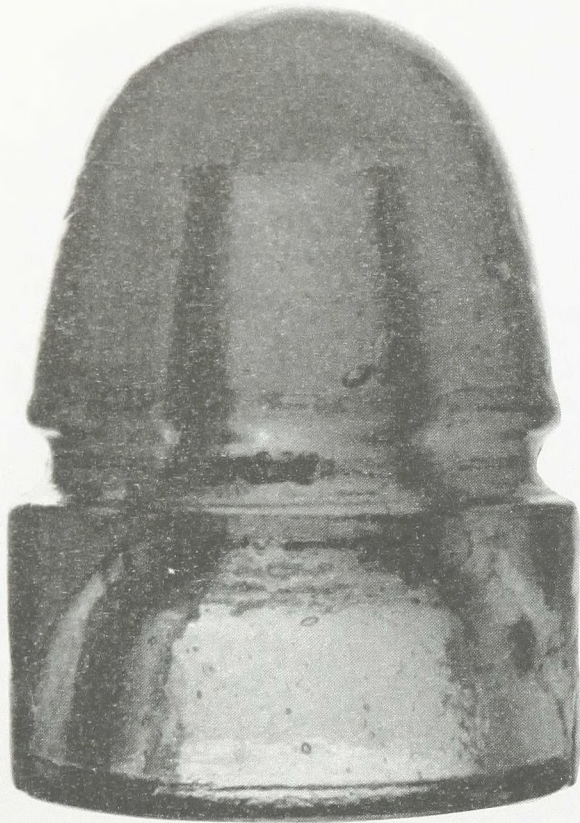
NO NAME - CANADA

[No Embossing] SB

Electric Blue, Light Teal, Aqua, Dark Teal, Dark Aqua,
Blue Aqua, Light Cobalt Blue

Montreal Telegraph Company "Rounded Dome"

(Photograph courtesy of Ray Klingensmith)



CD 743.1

CD 743.1

NO NAME - CANADA

[No Embossing] SB

Aqua, Light Aqua, Dark Green, Cobalt Blue, Light Green, Olive Green, Light Yellow Green, Light Cobalt Blue

"Regular" style beehive



CD 743.2

CD 743.2

NO NAME - CANADA

[No Embossing] SB

Aqua, Light Blue Aqua, Light Green Aqua, Light Green, Light Blue with Amber, Blue Aqua

"Chubby Dome" style beehive, slightly large in diameter than CD 743.1, the skirt and area above the wire groove two-thirds the distance to the top are closer to vertical than CD 743.1 or CD 743.3

CD 743.3

NO NAME - CANADA

[No Embossing] SB

Aqua

"Skinny" beehive, the appearance is much thinner than CD 743.1 or CD 743.2



CD 743.3



CD 780

CD 780

NO NAME
[No Embossing] SB
Light Aqua



CD 784

CD 784

NO NAME
[No Embossing] SB
Aqua

Groove top

(Photograph courtesy of Ray Klingensmith)



CD 782

M.T.CO. - (CANADA manufacture)
(F-Skirt) M.T.Co. {Embossing is upsidedown} SB
Aqua

CD 782

Much larger than CD 780



CD 785

CD 785

NO NAME

[No Embossing] SB

Amber Blackglass, Dark Olive Green, Dark Yellow Green Slag, Bubbly Dark Amber



CD 788

Intersecting grooves form a "cross top"

CD 788

NO NAME

[No Embossing] SB

Olive Amber Blackglass, Apple Green, Light Green, Dark Amber, Dark Green

"Slash Top"



CD 790

CD 790

NO NAME

[No Embossing] SB

Dark Green, Green, Bubbly Dark Green, Dark Teal

"Teapot", regular size



CD 791

CD 791

NO NAME

[No Embossing] SB

Dark Green

"Baby Teapot"



CD 796

CD 796

BOSTON BOTTLE

(F-Skirt) BOSTON BOTTLE WORKS/NO SOMERVILLE/MASS. (R-Skirt) OAKMAN'S/JULY 26 '70/PATENT (Base around pinhole) OAKMAN'S PATENT.JULY 26. 1870. SB
Aqua



CD 1000

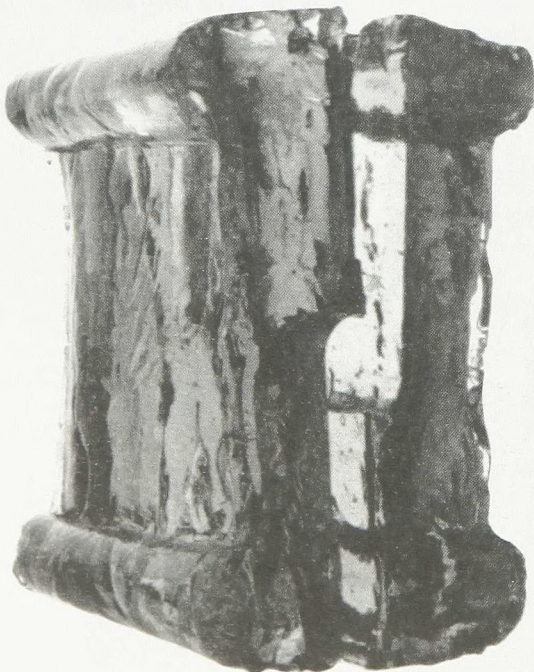
CD 1000

NO NAME

[No Embossing] SB
Light Green Aqua, Aqua, 7-up Green, Emerald Green, Dark Yellow Amber, Light Aqua, Blue Aqua, Dark Amber, Lime Green, Christmas Tree Green, Opaque Milky Green

Regular size block, flanged ends with normal or "right handed" wire slot

(Photograph courtesy of Ray Klingensmith)



CD 1002

Regular size block, flanged ends with "left handed" wire slot

CD 1002

NO NAME

[No Embossing] SB
Aqua, Blue

(Photograph courtesy of Ray Klingensmith)



CD 1004

CD 1004

Longer type block

NO NAME
[No Embossing] SB
Blue, Vaseline

(Photograph courtesy of Ray Klingensmith)



CD 1006

CD 1006

NO NAME
[No Embossing] SB
Light Aqua

*"Baby Block" with "v"
center projections*



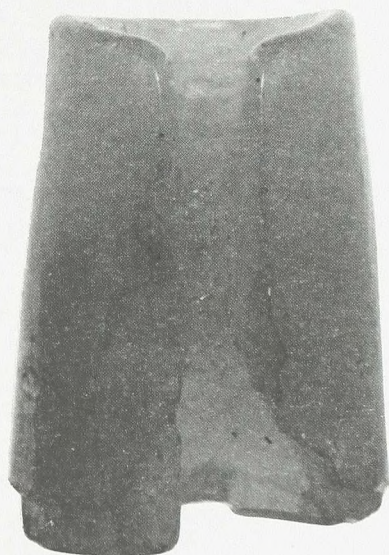
CD 1007

CD 1007

NO NAME
[No Embossing] SB
Dark Aqua, Aqua

"Baby Block" with rounded center projections

(Photograph courtesy of Ray Klingensmith)



CD 1010

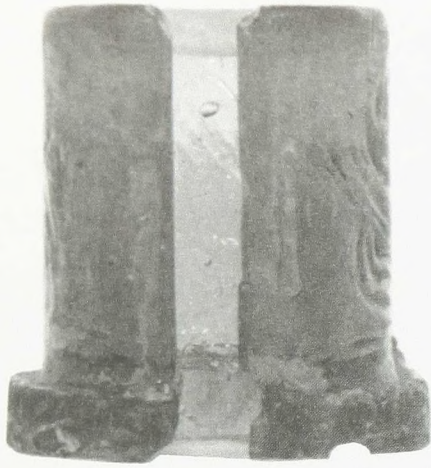
CD 1010

(View from bottom of insulator)

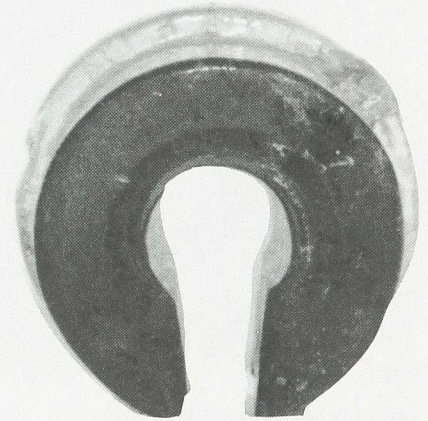
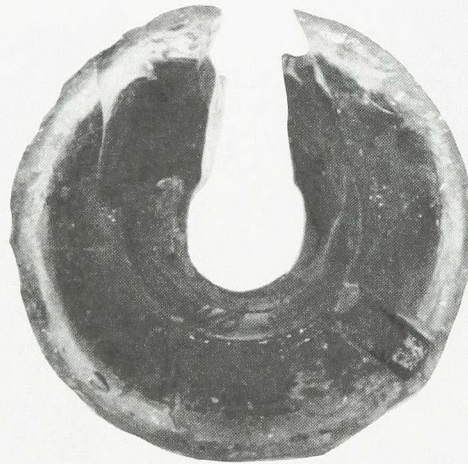
NO NAME
[No Embossing] SB
Aqua, Emerald Green, Grey Green Vaseline, Olive Blackglass, Dark Bubbly Olive Green

"California Sleeve", uniform taper in diameter from one end to other





CD 1012



(Bottom and top view of insulator)

"Yandell Patent" - Flange at one end

CD 1012

NO NAME

[No Embossing] SB

Aqua



CD 1014

CD 1014

NO NAME

[No Embossing] SB

Dark Celery Green, Aqua, Blue

Improved "Yandell" type, one end flares out to a larger diameter

(Photograph courtesy of Ray Klingensmith)

ET CETERA

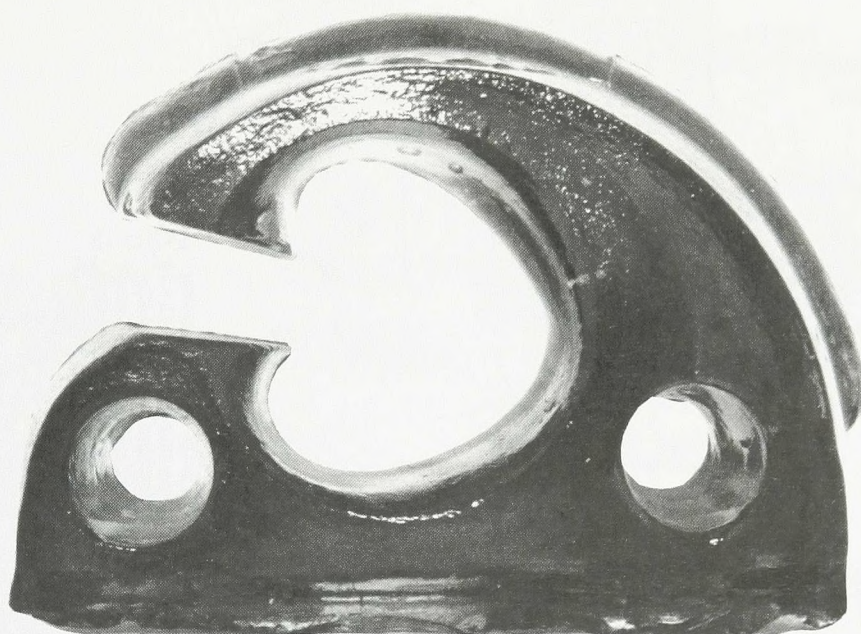
Non-Pintype Glass Insulators

Two classic insulators styles which have been researched, assigned CD numbers and reside in private collections are the Cutter and Garrity patents.

"**Scott C. Cutter**, ex-Mayor of Oswego, [Illinois] is one of the popular men of Kendall County, one whom his fellow townsmen are proud to honor, as one of the most progressive and public-spirited citizens of this locality. He was born in Oswego Township, November 5, 1874, a son of Henry C. and Mary (Fox) Cutter." So wrote Newton Bateman and Paul Selby, editors of *Historical Encyclopedia of Illinois and History of Kendall County, Vol. II*, Chicago, Munsell Publishing Company, 1914.

Scott C. Cutter was issued a patent on April 26, 1904 for an insulator "which would support wires running through trees and [used] where it may be impossible or undesirable to set poles, also where a plurality of wires run through a tree and it is desired to prevent such wires from crossing or touching each other during a wind."

The glass Cutter "tree insulators" had two holes through the belly of the insulator through which a wire or rope could be passed in order to secure the



CD 1038

Cutter was educated at Oswego High School and graduated with a degree in pharmaceutical chemistry from Northwestern University in 1905. He established himself in business with the purchase of the W.T. Putt drug store in Oswego. He was active in village politics and the Republican party. Cutter was elected Oswego's mayor twice and "Oswego never had so efficient an executive officer, and under his wise, businesslike administration, many important civic improvements were made, and others started. Mr. Cutter is a man of education, and wide experience, and deeply imbued with a love for his native country."

insulator to a tree limb. The original patent indicated that the insulator would also have two lugs with holes (13. and 14. on Figure 4.) on the base in order for a nail or screw to fasten the insulator to a tree. However, there have been no glass insulators found that were manufactured with the fastening lugs.

On August 13, 1924, Cutter was issued a second patent in which he stated "It is the practice to secure these insulators to a tree trunk or limb by means of girdling the trunk or limb, but there is frequently objection to this girdling, and the primary object of my present invention is to provide means for securing the

insulator to the trunk or limb without girdling it." The invention was for a bracket to be used in conjunction with a tree insulator made of porcelain.

To our knowledge, the glass Cutter insulator was never used with the bracket and was installed by girdling the limb or trunk of the tree with a wire or rope. The glass Cutter is also found with two different bases. One is a ribbed bottom which was described in the 1904 patent as a means of providing traction during the installation of the unit. The other base is referred to as a "coffin" bottom and has a rectangular depression in the base. This style may have been designed to receive a bracket, however, there is no documented evidence for this theory.

The son of Scott C. Cutter became an employee of the Edison Electric Company of Illinois and it may have been his father's interest in electricity that led him into the electrical profession. Several years ago a mold for the porcelain Cutter tree insulator was recovered out of the Cutter family home in Oswego. To date, no mold for the glass style has been found.

CD 1038 is embossed on the top of the insulator in a two inch diameter slug. It reads: "CUTTER APRIL 26, 04". Some units have a taller base and can measure from 1/2" to 1" from the tie holes to the base. Most units are a dark aqua, but they have also been found in emerald green.

No. 758,175.

PATENTED APR. 26, 1904.

S. C. CUTTER.
INSULATOR.

APPLICATION FILED DEC. 11, 1902.

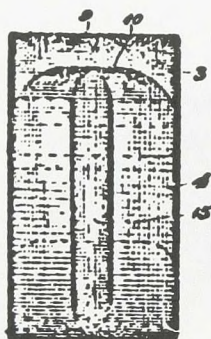


Fig. 1.

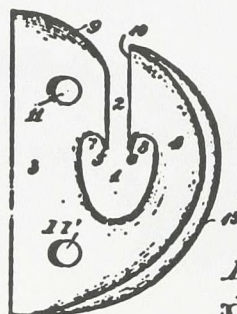


Fig. 2.



Fig. 5.

Fig. 4.



Fig. 3.



Witnesses:
Samuel W. Novander.
Charles J. Schmidt.

Inventor
Scott C. Cutter
By Charles A. Brown
Attorney

John Garity of East Birmingham, Pennsylvania, was issued a patent on January 3, 1871. In his patent he stated "The insulator is made of solid glass by being pressed in a mold having suitable cavities, in any of the ways known to the art.

The part which is to be inserted into the telegraph pole, cross-bar, or other support for the wires, is of a tapering cylindrical form, as shown at *a*.

On this form, at the same time and in the same way the rest is formed, a screw-thread *a'*, of any desired slope or angle of thread.

The head *b* is grooved, as at *b'*, for convenience in attaching the telegraph wire, and is made with faces of other than circular form, as shown in Fig. 1, for ease in screwing the pin *a* into the telegraph-pole or other support.

With this form of insulator head an ordinary wrench, of form to correspond, is used. Instead of a head of polygonal form, as in Fig. 1, with which a wrench

is used, a head of circular form may be used, as shown in Fig. 2, but in the latter case a pin or lug, *c*, should be made on the circular head *b*, so as to admit of the screwing in of the pin *a* by the use of an ordinary spanner or suitable form.

To secure the necessary strength at the base of the head, which commonly is the weakest point, I make the pin *a* with a gradual taper from the base of the head to or toward the point, any desired distance, the object being to get a larger body of glass in the head-end of the pin *a*.

A solid glass insulator of the form described I have found to possess sufficient strength at all points for practical use, while it is simple in its construction, is made at small cost, and is easily applied.

To date only one **CD 1040** specimen of the Garity patent has been located. It has the hexagonal head as shown in Fig. 1. of the patent. It is not embossed and is a light aqua color.

J. GARITY.
GLASS TELEGRAPH INSULATOR.

No. 110,645.

Patented Jan. 3, 1871.

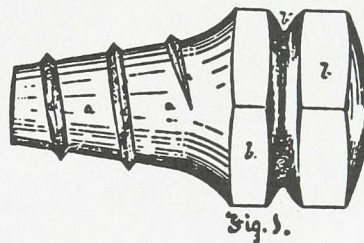


Fig. 1.

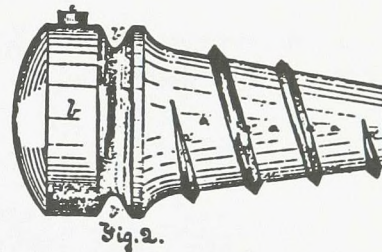


Fig. 2.



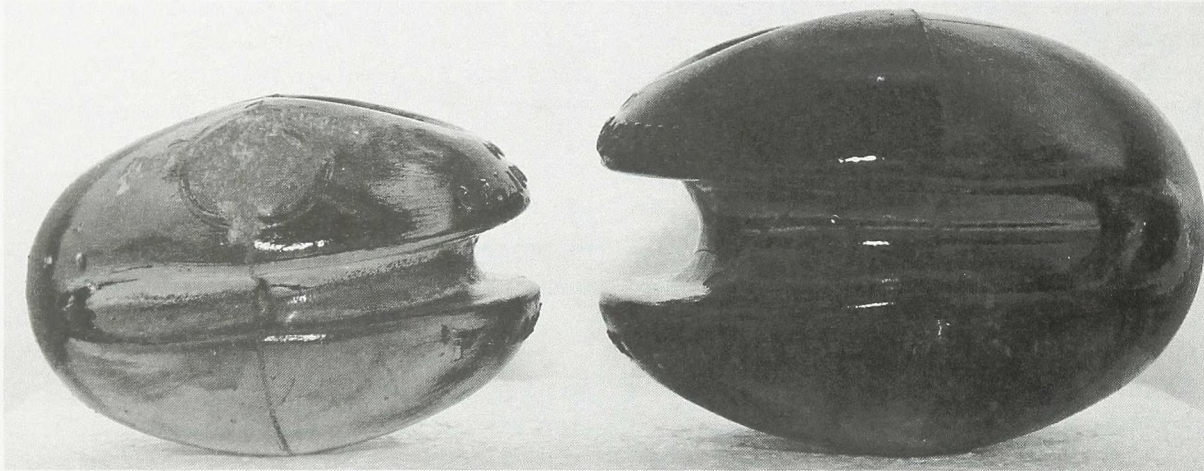
CD 1040

Witnesses:

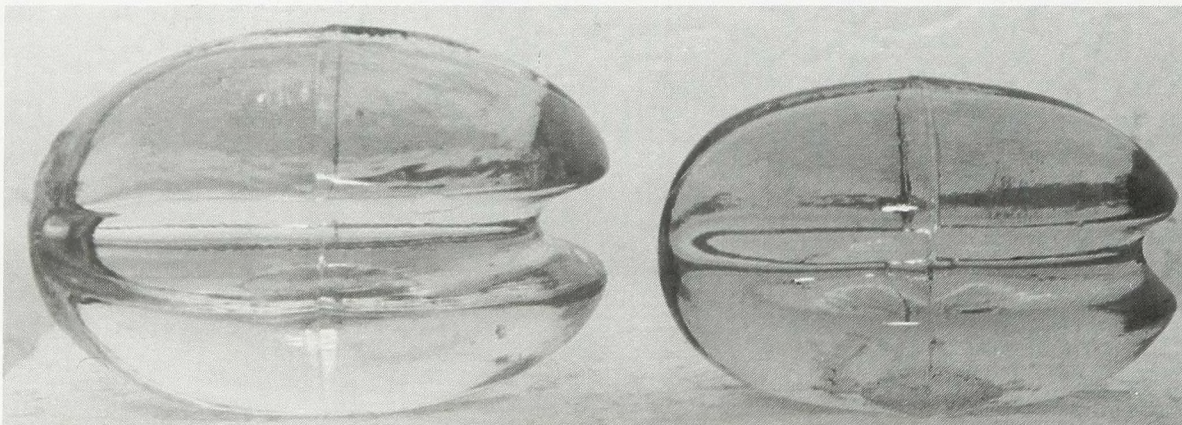
R. C. Marshall
Shawley

Inventor:
John Garity,
by Bakewell & Christy
his attys.

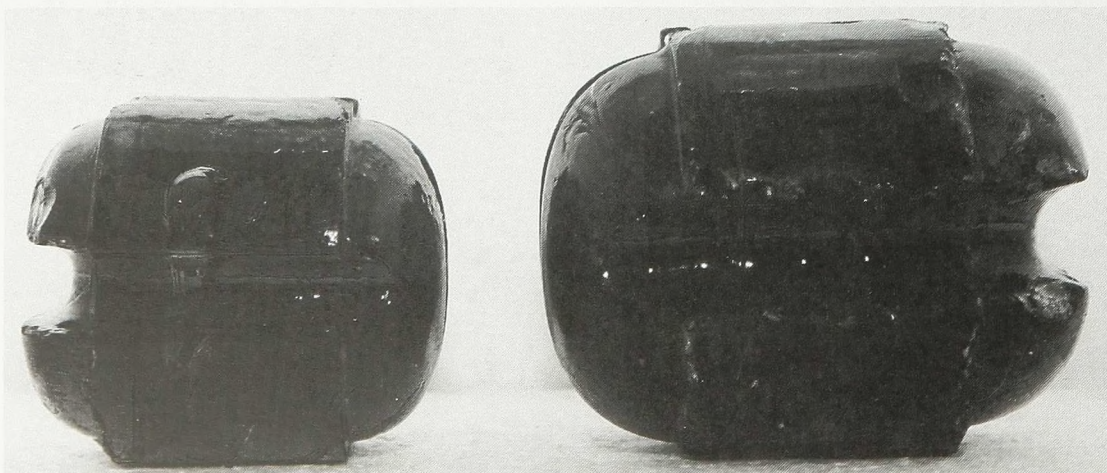
Glass Strain Insulators



Pictured are two sizes of California glass guy wire strain insulators, embossed "CALIFORNIA" above the open lip and "PAT APL'D FOR" below the lip. (Courtesy of Mike Guthrie collection; photograph by John McDougald)



These are two sizes of unembossed glass guy wire strain insulators. The manufacturer is unattributed. (Courtesy of Bill Heitkotter collection; photograph by John McDougald)

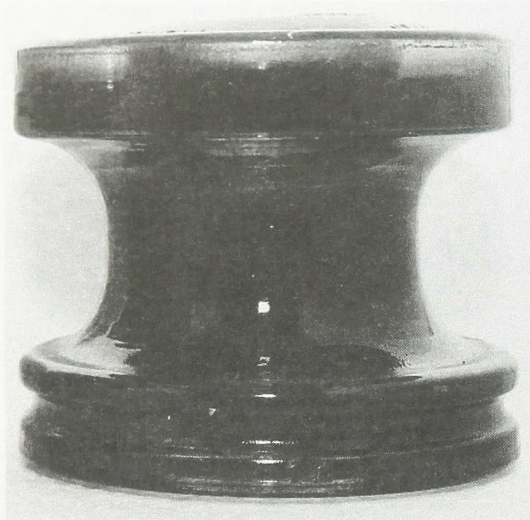


These styles are often referred to as "Johnny Balls" and are also guy wire strains. The manufacture of many of these insulators has been attributed to both Brookfield Glass Company and Hemingray Glass Company. (Courtesy of Don Fiene collection; photograph by John McDougald)

Glass Knobs and Spool Insulators

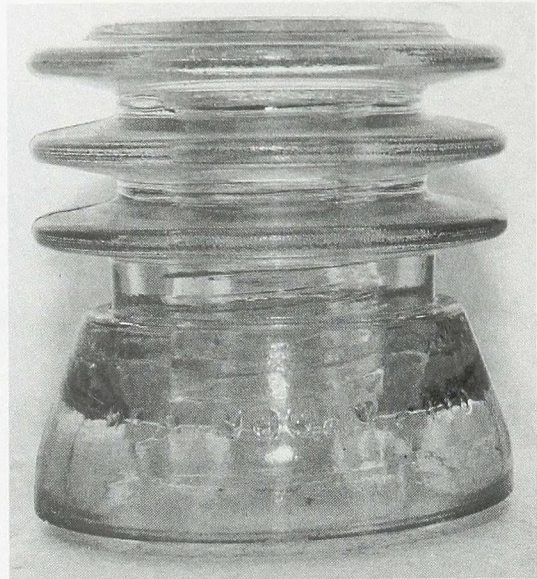


Glass spools come in a variety of sizes and shapes, most of which served as some kind of "dead end" or tie-off function. Both Hemingray and Brookfield made large quantities of this type of insulator. (Courtesy of Don Fiene collection; photograph by John McDougald)



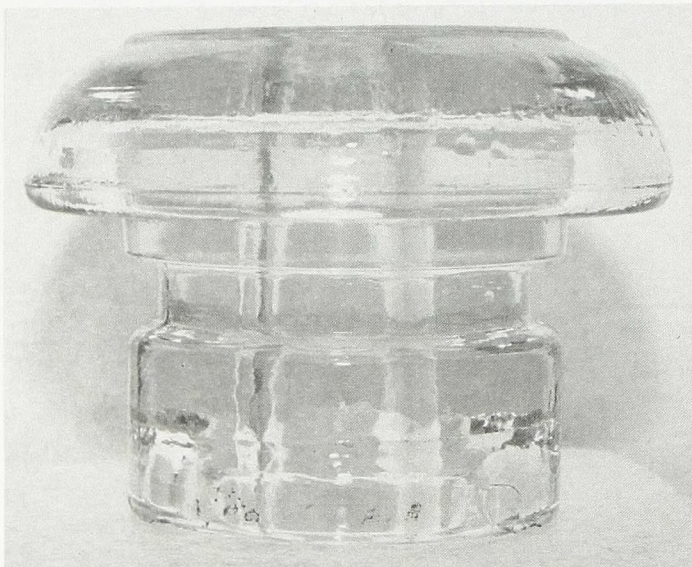
CD 1052

This 3" x 3" size spool is one of the most frequently used styles. They were a product of Hemingray (Number 518)



CD 1071

This is another of the deadend spool varieties which can accommodate two wires. It is a Hemingray product (Number 110).



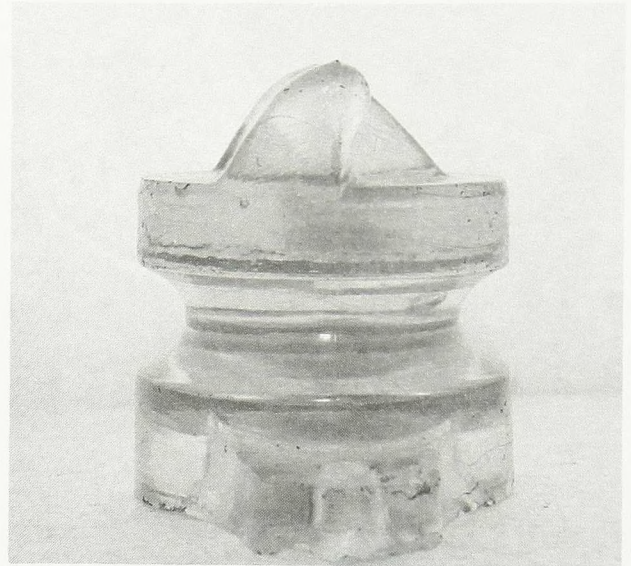
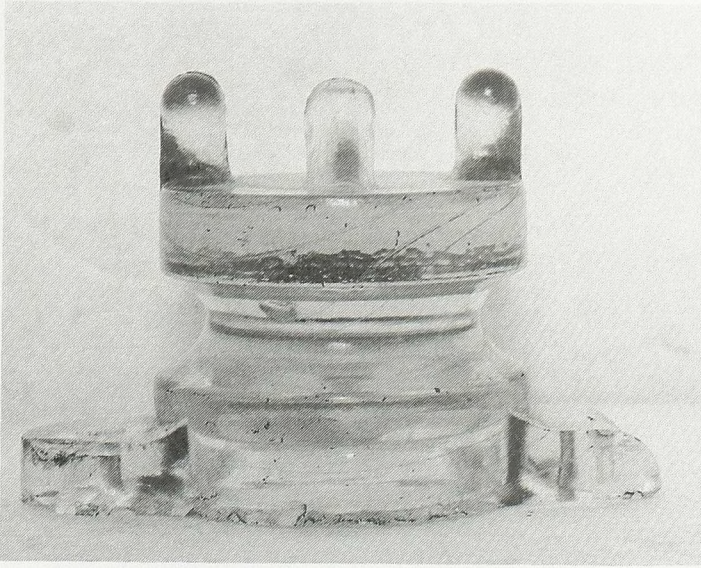
CD 1070

Hemingray produced this dead end spool (Number 109).

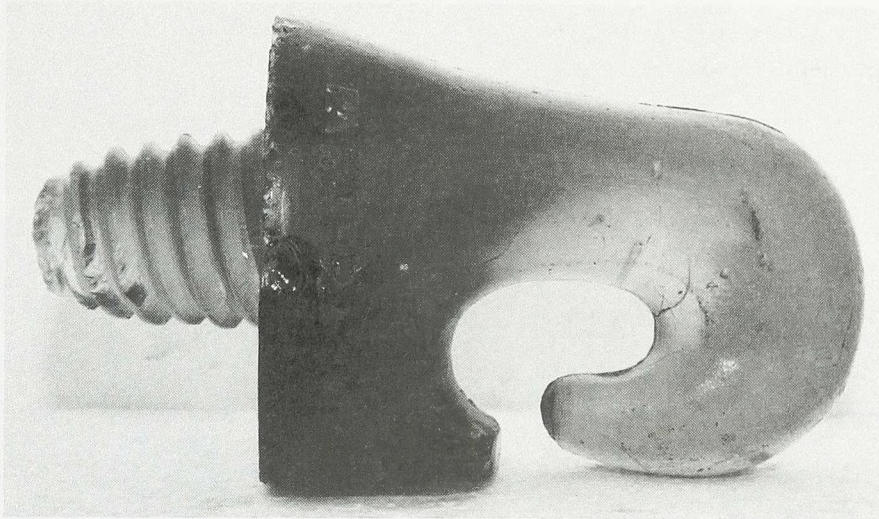
The Hemingray No. 109 was the standard telegraph dead-end with the Association of American Railroads. It was designed to be used with a galvanized clevis. It had a full petticoat which increased the surface distance from the clevis to the wire groove. The distance on the top half of the insulator was increased by the overhanging skirt which also gave wet-weather protection. A lead washer was used between the insulator bottom and clevis and the shackle bolt had a lead bushing.

(Courtesy of Don Fiene collection; photograph by John McDougald)

Further Research Necessary

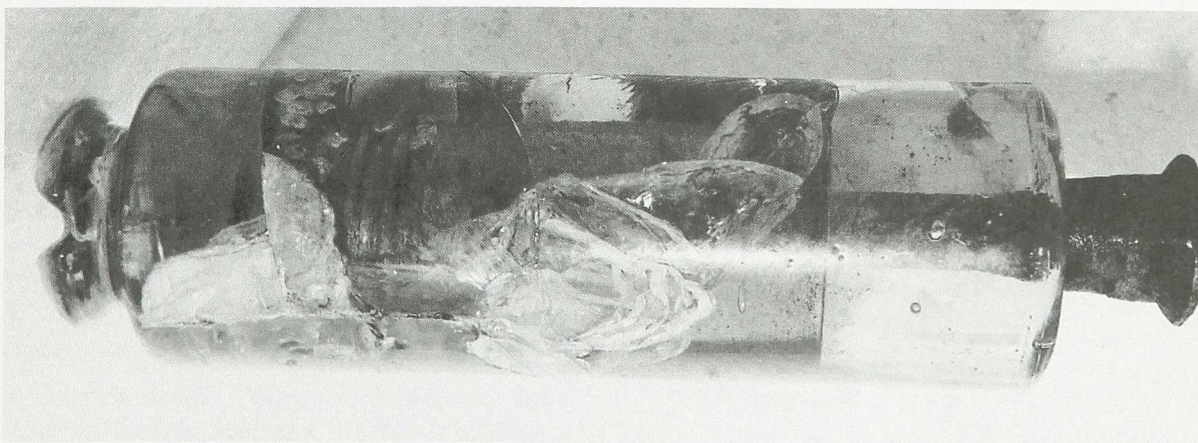


All of the insulators pictured here are not pintypes, but are some of the unusual glass insulators that have been found. Further research needs to be done in order to understand their insulating applications as well as the history of their manufacture. Pictured (above) are two views of the same "three finger" insulator. (Courtesy of Bob and Phoebe Adams collection)

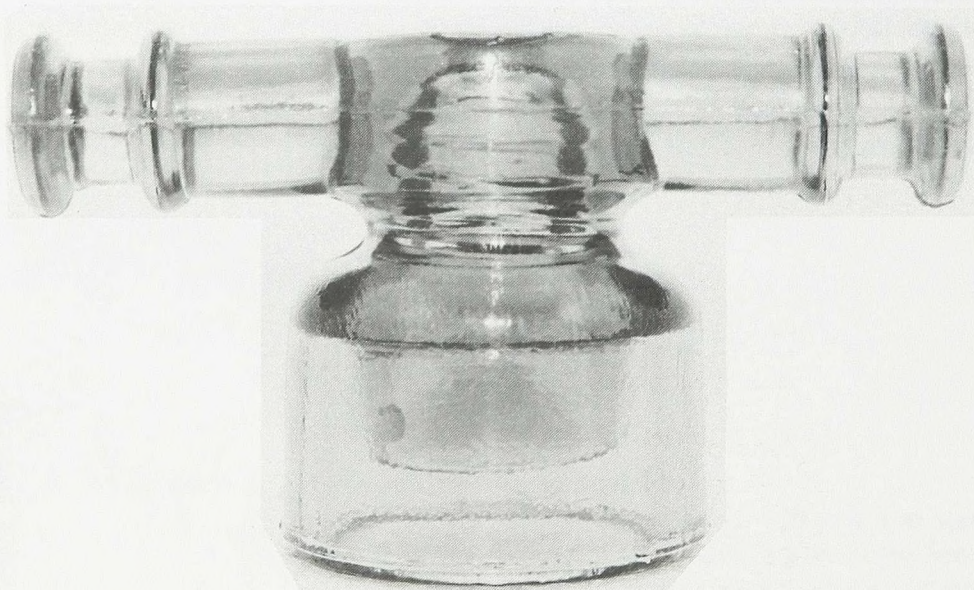
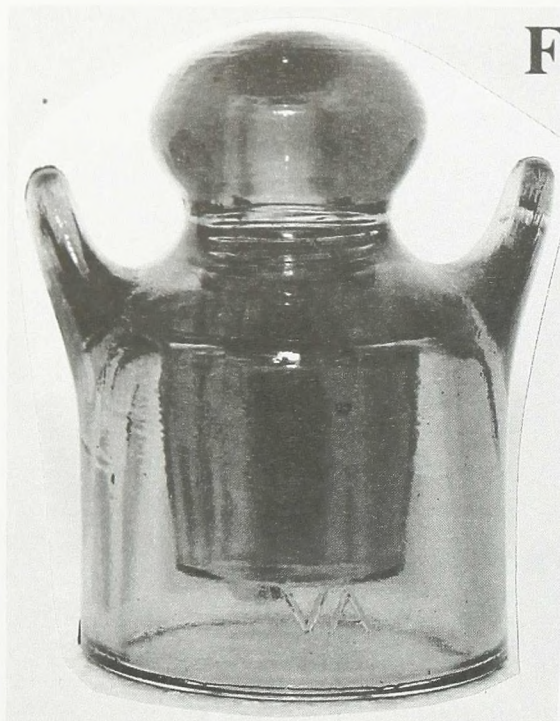


Pictured (above) is a glass hook embossed "PAT. APP. FOR.". (Courtesy of Tommy Bolack collection)

Pictured (below) is a "slim pin" insulator. (Courtesy of "Butch" and Eloise Haltman collection)



Foreign Glass



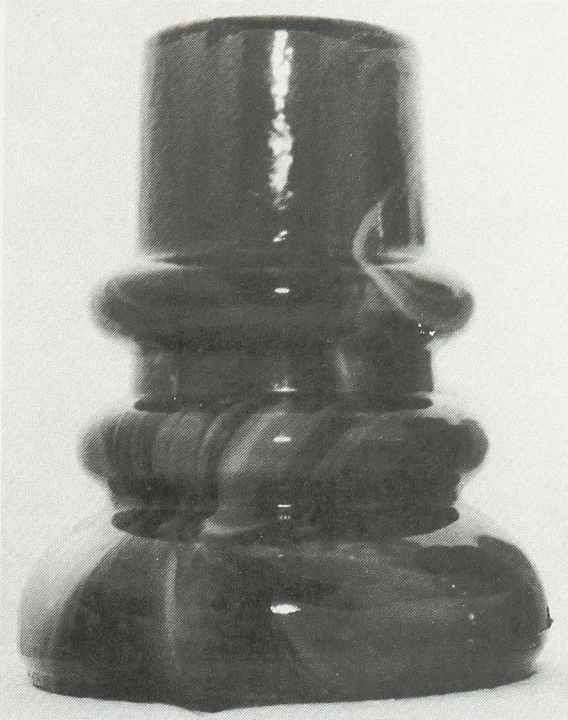
The unique styles of the pieces shown above hold special fascination for collectors who are attracted to "foreign" insulators. The supply, as well as the variety of colors and shapes, seems to be endless, perhaps explaining the recent upsurge of interest in this area of collecting.

(Upper Left) **CD 640**, a French design and better known as the "gingerbread boy", can be seen by the thousands in French Morocco. (Upper Right) **CD 506** comes from Russia near the Iranian border. (Center) **CD 670.1**, also of French origin, is nicknamed the "T-bar" (Lower Right) **CD 563.1** was found in Belgium and features an unusual 3-ridged skirt.

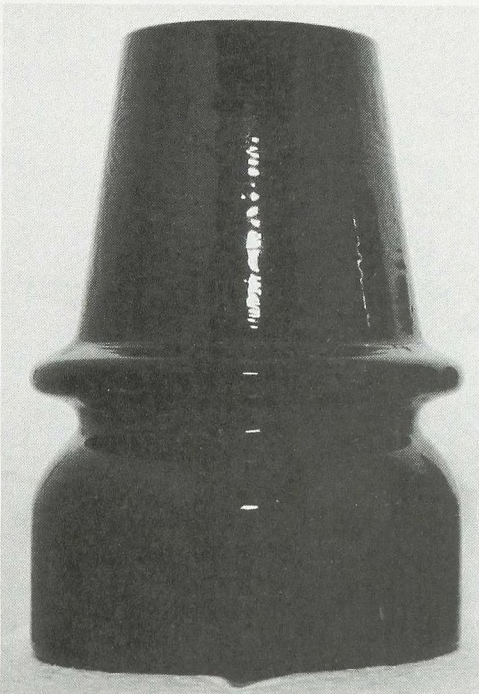
(See Reference Bibliography for further information)

Glass Insulator Commemoratives

During the life of the insulator hobby, both organizations and individuals have used insulator shapes to produce privately-issued replicas or replicas which commemorate events within the hobby.



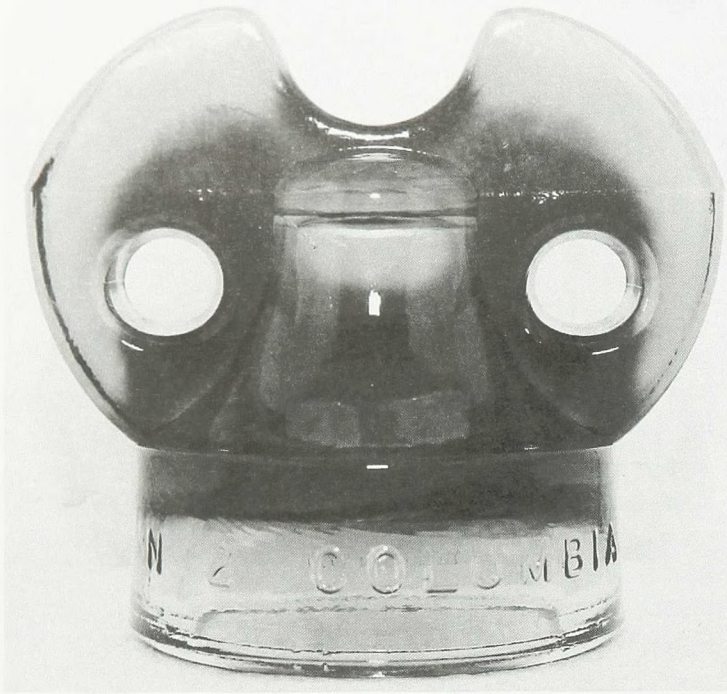
The National Insulator Association adopted the "threadless hat" commemorative for its annual show. Originally designed by Frank Miller of Tulsa, Oklahoma, the commemorative was first made following the First National Swap Meet in New Castle, Indiana, in 1970. The commemorative continues to be issued annually with only the color of glass and the show location which is embossed on the base changing. John and Carol McDougald took over its production in 1979.



In 1972 the Telephone Pioneers of America, Columbus, Ohio, Council produced a "pilgrim hat" commemorative in a variety of colors. The project generated funds for the Council's philanthropic interests. It is embossed with the "Telephone Pioneers of America" logo on the front skirt and "HUMAN SERVICE" on the rear skirt. "No 1" is embossed on the dome.



In 1978 the Southern New England Telephone Company Pioneers produced a "hat" commemorative in only one color--a dark cobalt blue. The project generated funds for the Council's philanthropic interests. It is embossed with the "Telephone Pioneers of America" logo on the front skirt, and "1878 SNET CO. 1978/100 Years of Service" on the rear skirt.



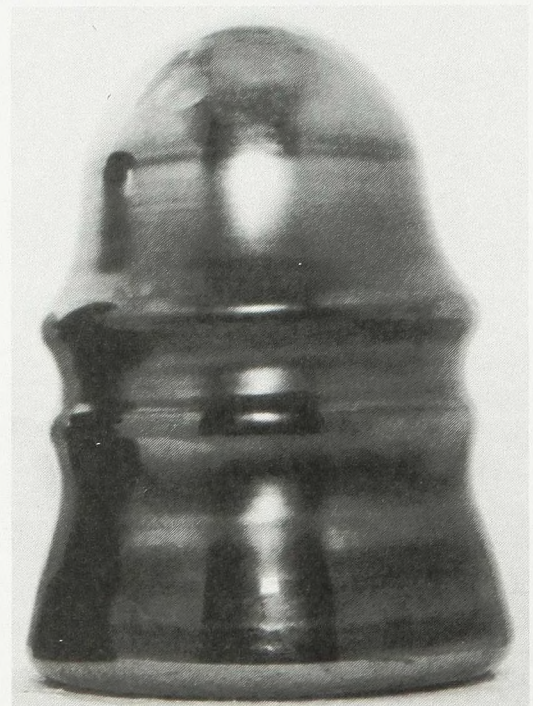
Larry S. Veneziano made a full size replica of a CD 262. It is embossed "No. 2 COLUMBIA" on the front skirt and "L.S.V." on the rear skirt. It has no internal threads. The first run of two green colors was made in 1971, a run of cobalt in 1974 and then a seven color "End of an Era" set was run in 1988.



For the National Insulator Association's 10th Anniversary in 1983, approximately 300 sets with five colors of a full size replica of a CD 257 were produced. Profits donated to the National Insulator Association funded the republication of the N.I.A. handbook. The commemorative has no internal threads and is embossed "NATIONAL INSULATOR ASSOCIATION 10TH ANNIVERSARY 1983" on the base. John and Carol McDougald sponsored the project.



Two miniature sets, one a replica of a CD 162 signal embossed "HEMINGRAY" in six colors and the other a set of five colors of a CD 154 embossed "DOMINION" were offered by John and Carol McDougald in 1984 and 1985 respectively.



A solid-pour paperweight made by the St. Clair Glass Company of Elwood, Indiana, was sold through *Old Bottle Magazine* in the early 1970's.

**CROSS REFERENCE -
MANUFACTURER AND USER
EMBOSSING TO CD NUMBER**

CROSS REFERENCE - MANUFACTURER AND USER EMBOSSING TO CD NUMBER

A.A.	154		
<hr/>			
A.T.&T.	121		190/191
<hr/>			
A.U.	116		121.4
	126.3		
<hr/>			
AM.TEL.&TEL.	106		121
	160.6		190/191
	192.1/193.1		192/193
<hr/>			
AMERICAN	105		126.4
	134		143.4
145	156		156.1
160.7			
<hr/>			
ARMSTRONG	107		113
	115		122
128	129		155
160	163		164
167	203		203.2
214	216		217
230.2	272		
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AYALA	106		
<hr/>			
B	102		103
112	116.5		145
152	160		164
185	188		190/191
196	207		226.3
<hr/>			
B&O	136		
B.C. DRIP	164		
B.E.L. CO.	185.2		
B.F.G.	133.2		
<hr/>			
B.G.M.	102		133
134	145		162
164			
<hr/>			
B.T.C.	102		121
BARCLAY	150		
BEAL'S	309		
BIRMINGHAM	106		
<hr/>			
BOSTON BOTTLE	136.5		143.6
145.6	158		158.2
158.9	728.8		796
<hr/>			
BROOKE'S	120		127
	131		133.1
<hr/>			
BROOKFIELD	101		102
	104		110
112	115		116
119	121		126
126.1	126.3		127
131	133		134
134.6	136		138
143.4	145		149
150	151		152
153	157		160
161.2	162		162.1
162.3	164		169.5
173	174		190/191
205	208		211
225	228		236
287.2	299		300
316	338		728.4
731			
<hr/>			
BUZBY	141.8		
C.& P.	121		
C.D.& P.	121		
C.E.L.	134		
C.E.W.	120		
C.G.I.	102		
C.N.R.	143		
<hr/>			
CABLE	252		254
258	259		260
267			
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CALIFORNIA	102		112
	121		133
134	145		152
160	161		162
166	178		187
190/191	200		201
208	260		
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CALIFORNIA ELECTRIC WORKS			130
			130.1
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CANADA	121		
CANADIAN PACIFIC	143		
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CHAMBERS	124.5		317
	317.5		

CHESTER	123.2	158.1	FOSTER	740	
724	735	738	G.E. CO.	134	
CHICAGO	109	135	G.N.R.	143	
CIA COMERCIAL	106		G.N.W.	143	145
CIA TELEFONICA	154		G.P.R.	143	
CITY FIRE ALARM	133		G.T.P.	145	
CLIMAX	184				
COLUMBIA	262	263	GAYNER	103	106
	264		121	153	154
COMBINATION SAFETY	139		160	162	164
CONVERSE	283		205	252	
CRIMSA	155		GOOD	106	121
CRISA	107		134	162	
CROWN	268		GREAT NORTHWESTERN	143	
D.T. CO.	742		GREELEY	187	244.5
DERFLINGER	154.5	162.7	GREGORY	159	
DIAMOND	102	106	H.B.R.	145	
108	112.4	115	H.G. CO.	133	145
121	122	152	151	160	162
154	155	164	164	196	196.2
190/191			196.5	201	317.7
DIAMOND P	134		HAMILTON	162	
DOMINION	108	115	HARLOE	109.5	206.5
	122	154	HAWLEY	102	112
155	164		121	145	160
DRY SPOT	182		162	164	260
DUQUESNE	106.1	106.3	HEMINGRAY	100.6	102
	113.2		106	106	107
DUPONT	740		112.4	113	114
DWIGHT	143		115	121	122
E.C. & M.	123		122.4	124	125
E.D.R.	145		128	128.4	129
E.L.	166.2		133	134	137
E.R.	133	145	142	145	147
E.R.W.	135.5	736	152	154	155
E.S.S.	252		155.6	157	160
ELECTRICAL SUPPLY	133.1	134	162	163	164
EMMINGERS	141.9		165	168	169
ERICSSON	106	250.2	175	178	183
F.F.C.C.N. DE M.	162	162.7	185	186	186.1
FALL RIVER	134		186.2	190/191	184/195
FISHER	265		196	197	201
FLOY	284		202	203	205
FLUID	180.1		208	213	214
FORT WAYNE	162		216	218	219
			220	221	230
			230.1	231	232
			232.1	233	233.2
			237	238	239
			241	241.2	242
			243	248/311	249

HEMINGRAY (Continued)	251	252	MAYDWELL	106	115
254	257	263		121	122
280	281	282	154	160	162
283	291	295	164	252	
301.5	302	303			
303.5	304	307			
313			MCKEE	731	
JEFFREY	185				
JOHNSON AND WATSON	109.7		MCLAUGHLIN	106	115
JUMBO	140	269		121	122
K	190/191	202	139.9	152	154
			160	162	164
			252		
K.C.G.W.	102.3	120			
134	145	160	MCMICKING	734	
162	164		MERSHON	288	
			MONTREAL	102	143
KEELING	729.3				
			MULFORD AND BIDDLE	729	729.4
KERR	122	128		735	
129	155	203			
			N DE M	162	
KIMBLE	231	231.2			
	239	239.2	N.E.G.M.	102	145
				250	251
KNOWLES	252	253	162	267.5	294
	282	292.5	267		
LAWRENCE GRAY	138.2		N.W.& B.I.T.	102	
LEFFERTS	737				
LINEA DEL SUPO	735.5		N.Y.& E.R.R.	736	
LIQUID	180				
			NACIONALES	214	
LOCKE	202	204			
241	275	286	NATIONAL	104	110.5
287	287.1	288		110.6	138.2
289	293	293.1			
296	297	300	NEW ENGLAND TEL	102.4	104
318	319	342		110.5	112
				121	
LOWEX	216	230			
			NO NAME	102	104
LYNCHBURG	106	112	105	106	106.3
	121	122	112	116	117
145	154	160	118	120	121
162	164	205	124	125	126
251	252	281	126.3	127	127.4
306			128	131	131.4
			131.8	132	132.2
M.& E.	252	254	133	133.2	133.3
			133.4	134	134.4
M.T. CO.	742	742.3	136.4	136.7	137.5
	782		138.2	138.9	139.8
			140	140.5	141
MANHATTAN	256		141.6	142	142.4
			144	144.5	145
			145.6	146.4	146.5
			147	149	151
			152	153	154

NO NAME (Continued)	156.1	156.2
158	158.1	158.2
160	162	163.2
164	164.4	166.2
167	168.5	170
170.1	178	181
185	187	188
190/191	192/193	192.1/193.1
196	200	202
204	205.5	206
210	219	226
228.5	229.6	230
238.2	240.2	244
245	247	252
257	259	263
265	266	267
270	272	273
275	280	285
287	288	289
289.9	291	292
296	297	298
299.2	301	301.2
308	310	311
312	313.1	314
317.8	317.9	321
700	700.1	701
701.1	701.3	701.5
701.6	701.8	723
723.3	723.5	723.6
724	724.5	724.6
725	727	728
728.2	728.5	728.7
729	729.4	731
731.2	731.3	732
732.2	734.1	734.3
734.5	734.8	735
735.6	735.7	736
736.1	736.3	736.4
736.5	736.7	737
737.5	737.6	737.9
738	738.5	738.6
739	739.2	739.5
780	784	785
788	790	791
1000	1002	1004
1006	1007	1010
1012	1014	
NO NAME - CANADA	102	112.5
113	121	133
134	143	144
145	162	162.4
718	721	722
724.3	726	740
740.1	740.3	740.4
740.7	742	742.3
743.1	743.2	743.3

NO NAME - DEC PAT	104	116
	120	124
124.2	124.3	127.4
131.4	132	132.4
133	133.1	133.4
134		
NO NAME - MEXICO	103.4	106
	106.4	107.2
154.5	155	162
162.7		
O.V.G.	106	112
121	133	145
160	162	196
OAKMAN	134	140
259	263	269
728.7		
P.& W.	133.2	
P.L.W.	162.5	
P.R.R.	162.5	190/191
P.S.S.A.	106	106.2
107	155	162.7
PAISLEY	132.2	
PAT APP FOR	120.2	125
132	133.1	729.6
PAT'D	102	132
132		133.4
PETTINGELL ANDREWS	134	
PONY	120.2	
POSTAL	138	145
156	156.1	210
PRISM 190/191	199	252
280	282	283
292	296	299.1
315	321	333
PYREX	100.5	111
122.4	128	139.6
194.5/195.5	233	234
235	240	240.5
248/311	311	320
322	323	324
325	326	327
328	330	331

R.Y.T.	155	
S.B.T.& T.	112	
S.F.	102	112
S.S.& CO.	160	162
SANTA ANA SEILERS	178 130.2	
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SO. MASS.	102	
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STANDARD	143	
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STANDARD GLASS	104	114.2
	121	138.2
145	157.5	268.5
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STAR	102	104
106	112	113
133	134	145
160	161	162
162.1	162.3	164
185	200	260
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STERLING	102	112
	160	164
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SURGE	100	100.2
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T-H.	245	
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T-H.E.	134	143.5
162		
<hr/>		
T.C.R.	145	
<hr/>		
TEL. FED. MEX.	133	133.1
	133.5	
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TELEGRAFICA	740.8	
TELEGRAFO	740.8	
TEXCOCO	106.5	155

TILLOTSON	131	131.4
	718	731
732.2	735	736
737	740	
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TWIGGS	141.7	
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U.S. TEL.	121	735.3
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V.B.	106	
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V.M.R. NAPOLI	122	
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W.E. MFG.	126.4	
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W.F.G.	106	121
	134	162
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W.G.M.	106	121
	134	145
	162	
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W.U.	125	127
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WESTINGHOUSE	102	113
	134	162
	286.9	309.5
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WHITALL TATUM	107	108
	113	115
122	128	154
155	160	162
163	164	165.1
168	169	176
197	214	216
221	272	

