

What Are Insulators?





Lineman's Rodeo, Salt Lake City, Utah, 2012



CD 230.1 "Frog Eyes"

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Visit: www.NIA.org

E-mail: President@NIA.org or Membership@NIA.org

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CD 319 "Ballerina"

The History of this Booklet

This "What Are Insulators?" booklet was originally written by H. G. "Bea" Hye and published by Carol McDougald. It was updated in 2006 by Don Briel and distributed by the National Insulator Association (NIA). In 2012 all rights were transferred to the NIA and the contents continue to be periodically updated.

WHAT ARE INSULATORS?



“Insulators? You mean those glass things on the top of telephone poles? I must have shot hundreds of those things when I was a kid!” Insulator collectors hear that a lot, as we attempt to explain just *what it is* that we collect. Hearing it usually makes us cringe, wondering just what rare treasure that person shot off the crossarm those many years ago. Insulator collecting is a comparatively new hobby. We’re the “new kid on the block”, so to speak. We haven’t been around as long as the bottle and jar collectors, for instance, and there’s a reason for this.

INSULATOR COLLECTING IN THE PAST

Insulators became collectable in the early 1960s, although a few people were already collecting years before that. Up to that time, most insulators were still on duty, high atop their perches. But as lines went underground, insulators were no longer needed. People soon began finding them on downed poles, and linemen started rescuing them as they took them down. As a result, insulators showed up more often at swapmeets, flea markets, garage sales, and in antique and junk shops.

Most of the very early collectors were unaware that there were other people all over the country doing the same thing they were doing; gathering these pretty, shiny, colorful hunks of glass and lining them up in windows and along backyard fences. Soon they began to notice the wide variety of shapes and colors, and they also heard of others who had insulators. So they started trading them,

at first on a local level, but as word got around that different areas often had different insulators they soon traded by mail as well.

The first book on insulators was entitled *The Glass Insulator in America, 1965 Report*, by Mr. N.R. Woodward, reflecting ten years of research. This was followed by his *1967 Report*. John Tibbitts published *A Guide for Insulator Collectors* in 1967 which was the first insulator reference book with prices. Then in March 1969, the first issue of *Insulators, Crown Jewels of the Wire* was



*The first issue of
Insulators, Crown
Jewels of the Wire*

published by Dora Harned of Chico, California, providing insulator collectors with their very own monthly journal. Another fine insulator magazine, *Cross Arms*, was published from February 1972 through July 1975 by Jim Garrity of Paxinos, Pennsylvania.

With the birth of *Crown Jewels of the Wire*, it was just a matter of time until the first insulator show was held. As far as can be determined, this meet took place at the Bickford's home in Woodland, California, in May 1969. Not long after that, our fledgling hobby saw its first national show, which took place in New Castle, Indiana, in June 1970. Soon afterward came the idea of a national organization and our hobby was thus further developed and enhanced by the formation of the National Insulator Association (NIA). The date was July 1973, and the place was Hutchinson, Kansas, the setting of the fourth national insulator show.

Very early telegraph insulators were hardly more than inverted glass cups which were hollow inside and were slipped onto a peg. These types were later named the "threadless" variety. In 1865 Louis A. Cauvet patented a method of producing an insulator with a screw-threaded cavity (pinhole) which matched a corresponding screw-threaded wood pin. This was a great improvement, because it enabled the insulator to be securely fastened to the pin so that it wouldn't pop



CD 734
"Pilgrim hat"
(Threadless)

off in bad weather or for any other reason. Cauvet's invention has remained essentially unchanged since its inception in 1865.

Over the years many improvements, refinements, and experiments were made in insulators. That is one reason why there are so many different shapes (there are hundreds). Not only were there many attempts to find the perfect insulator shape, but there were also various insulator sizes and styles designed to fit widely varying needs.



CD 145
"Beehive"

INSULATOR COLLECTING TODAY

The beginning insulator collector today has a much larger variety of pieces from which to choose than those collectors in the early years. There has also been a lot more research and resulting information available to the collector. Attending a show is one of the best ways to see the many insulators available, and to learn about them through the information given with each display. There are always a lot of fine informative insulator and go-with displays at every show. Collectors are understandably proud of their collections, and their zeal for displaying is one of the strong points in our hobby. It is interesting to see the various collections, and the clever ideas used to portray each specialty. Another learning experience is talking with dealers and collectors, for they not only know the current prices, but they can tell many stories connected with insulator collecting. Most collectors decided on what specialty they would pursue just from what they saw and learned at a show.

In addition to many locally sponsored shows and sales around the country (some of which are put on by local insulator clubs), the NIA sponsors regional and national shows. There is one national show each year, held in rotation in one of three regions (Western, Central, or Eastern) every summer. Regional shows may be held in whichever two regions are not having a National show. You are cordially invited to join in the fun by attending a National show, as well as any or all other insulator gatherings. No matter what your

age, you will enjoy the shows and the people. There is no generation gap in the hobby of insulator collecting!

DIFFERENT WAYS TO COLLECT INSULATORS

Insulators can range in price from free to many thousands of dollars. But most readily available pieces are in the \$5.00 to \$100.00 bracket. A new collector can build a nice collection very quickly for comparatively little money because there are so many different ways to collect insulators. Some choose just one shape or one company. Others opt for attractive colors. There's a big following in foreign insulators, as well as in threadless and porcelain, but threaded glass seems to have the largest number of devotees. Most new collectors start out by attempting to acquire every insulator shape ever made, but soon realize how impossible that is and decide to specialize instead.



U-280A
(Porcelain)



CD 640
"Gingerbread
man" (Foreign)



(Lightning Rod
Insulator)

THE PURPOSE OF INSULATORS

The need for the insulator arose out of the discovery of electricity, which in turn led to the invention of the light bulb, telegraph, telephone, electrical power transmission, and other electricity oriented innovations. Also, as railroads began crisscrossing the continent the need for signal devices arose. Electricity had to be transmitted economically from one place to another to meet the increasing demands generated by these new marvelous inventions.

According to Webster, to insulate means “to separate or cover with a non-conducting material in order to prevent the passage or leakage of electricity, heat, or sound.” Communication and electric line wires in service must be kept as electrically isolated as possible from the ground and each other. That also means the path from the wire to ground must be kept as dry as possible in order to function efficiently, and to cut down on loss of energy. Wires are kept off the ground and out of reach by being strung between poles. But something was needed to keep the wires and (sometimes wet) poles apart. This “something” had to meet three basic needs; it must (1) be made of a fast-drying non-conducting material; (2) be able to hold the line wire in place; and (3) stay on the pole. This “something” was the insulator. It was developed and improved upon over the years to meet those basic requirements; it (1) is most commonly made of glass or porcelain; (2) has a wire groove to accommodate the line wire; and (3) has a pinhole which fits onto a pin (which in turn is attached to the crossarm on the pole).

The more insulation between the wire and the pin the better. To create a longer distance between the two, and to cut down on loss of current, many insulators have one or more “petticoats” (see page 11 for description). The petticoats increase the linear distance measured along the surface of the insulator between the wire and pin, and improve the efficiency of whatever service is being provided by the line wire. The skirt of an insulator is also considered to be a petticoat. (There will be more discussion of insulator terminology later.) Also, many insulator designs are illustrated throughout this booklet.

INSULATOR CLASSIFICATIONS, MATERIALS, AND SHAPES

Insulators can be classified into several categories; glass, porcelain, non-glass/non-porcelain, North American, foreign, unipart, multipart, threaded, and threadless (non-threaded). The first three groups refer to the material of which the insulator is made.

“Foreign” means any insulator not used on the North American continent. (Mexican and Canadian insulators are not usually classified as foreign.) “Unipart” means any one-piece insulator; “multipart” means any insulator of two or more separately molded parts, either cemented together after manufacture, or used together on the line. “Threaded” means any insulator with internal threads which correspond to matching threads on a pin; “threadless” means any pintype insulator without threads and having a smooth pinhole (not to be confused with spool-type insulators). There are also numerous other special purpose insulator types that are becoming popular collectibles (i.e. glass blocks, battery rests, strain insulators, etc.).

Insulators have been made of many other materials besides glass (although this booklet will deal mainly with the glass type). A few other materials of which insulators have been made include wood, rubber, polyethylene, plastic, fiberglass, iron, and composition.

Insulator shapes and sizes vary greatly. There is one small insulator which is only about two inches tall and weighs just a few ounces. Another is nearly 11 inches tall, 15 inches across at one point, and weighs nearly 40 pounds. Both of these are one-piece insulators. Some of the multipart insulators are even larger and heavier.

INSULATOR DESIGN IDENTIFICATION SYSTEMS

There are four copyrighted systems in use to assist in identifying and cataloging insulators. They are: CD numbers, U numbers, M numbers, and SI numbers. These are not numbers given or used by the manufacturers, but are numbers assigned by certain collectors at a later date. Below you will find a brief explanation of each non-overlapping system, along with a comment from its originator. (Detailed explanations can be found in the publications listed with each commentary.)

CD - CONSOLIDATED DESIGN NUMBER - A system invented by Mr. N.R. “Woody” Woodward of Houston, Texas, in late 1952 or early 1953. Every different **glass pintype** insulator style found so far has been assigned its own CD number by Mr. Woodward as a means of identification.

“The reason for the CD numbers is the need for approximate identification of insulator styles regardless of their markings. Although many insulators carry a manufacturer’s style number, others do not, and therefore carry no key to their style. It is also true that the same style insulator may have several different manufacturer’s numbers assigned by different manufacturers at different times. It is also true that one manufacturer sometimes uses the same style number for totally different insulator types at different times. For example, there are three distinct styles of Hemingray No. 14. [Thus] it is seen that there is a definite need for a consolidated numbering system for identification purposes.

Use of the CD numbers was first initiated by someone other than me in November of 1965, when early collector Helmer Turner asked for and received a list of the numbers for use in his personal collection. It was later through his efforts that the CD numbers began to come into general use. They first appeared in my publication, *The Glass Insulator in America, 1967 Report.*” (Mr. N. R. Woodward)

Scale drawings of the CD numbers were published in *The Glass Insulator in America, 1988 Report*, by N. R. Woodward. Scale drawings of CD numbers for foreign insulators were published in *Glass Insulators from Outside North America, Second Revision*, by Marilyn Albers and N.R. Woodward.

The CD Numbering system continues to be updated with new finds, foreign glass insulators, and changes when warranted.

Oversight of the CD system is now in the hands of Mr. Dario D. DiMare who purchased the rights from Mr. Woodward in 2012.

Battery Rests
(CD 10 – CD 99)



CD 35



CD 50

Threaded Glass
Pintypes
(CD 100 – CD399)



CD 142.4



CD 194/195

Threadless Glass
Pintypes
(CD 700 – CD799)



CD 701



CD 729

Pintypes from Outside North America
(CD 100 – CD 699)

Note: CD 100 – CD 399 styles are the same styles as their North American counterparts.



CD 674

Threaded Glass Blocks
(CD 1000 – CD1024)

Spools, Nail Knobs, Guy Wire Strains, & Misc. Glass
(CD 1025 – CD 1199)

U - UNIVERSAL STYLE CHART NUMBER - A system invented by Mr. Jack H. Tod of Phoenix, Arizona, in 1971, for identifying **unipart porcelain pintype** insulators.



U-399B

“All the known shapes of unipart porcelain pintype insulators were shown in a published ‘Universal Style Chart’, the name stemming from the facts that many of the styles were universally made by a number of manufacturers, and also because the definitive style reference numbers in the chart are universally used by all collectors. [Therefore], any insulator is easily and completely described simply by listing its style number, such as U-16, its color, and any marking.” (Mr. Jack H. Tod)

The Universal Style Chart for U.S. unipart porcelains was published in *Porcelain Insulators Guide Book*, by Jack H. Tod. The Universal Style Chart for foreign unipart porcelains was published in *World Wide Porcelain Insulators* by Marilyn Albers and Jack H. Tod.

M - MULTIPART NUMBER - A system invented by Mr. Elton Gish of Buna, Texas, in 1988, for identifying **multipart porcelain** insulators.

“The Multipart Style Chart was developed using drawings found in 51 manufacturer’s catalogs and over 90 photographs of specimens not shown in available catalogs. The Multipart Style Chart (M-Chart) uses M-numbers to designate the various multipart porcelain insulator styles in much the same manner as U-numbers for unipart porcelain insulators and CD numbers for glass insulators.” (Mr. Elton Gish)



M-3250
“Multipart”

The Multipart Style Chart for multipart porcelains is published in *Multipart Porcelain Insulators*, (Mr. Elton Gish)

SI – SPECIAL ISSUE - A system invented by Mr. Donald R. Briel of Providence, Utah, in 2011, for identifying commemoratives, miniatures, and salesman’s samples.

“Special Issue items refer to imitation glass insulators that have been produced for various purposes. Included are commemoratives, salesman samples, and miniatures. Many were meant to commemorate an event. Some were produced by the same glass companies that produced the original authentic insulators. Others were introduced as commercial endeavors on the part of individuals to profit from their production and sale.” (Mr. Donald R. Briel)

The SI numbering system first appeared in the publication *North American Glass Insulators – Price Guide, 2011*, by Mr. Donald R. Briel.



CD 128.4
“Big Mouth”



CD 130.1



CD 136.5



CD 141.9



CD 137
“Hockey puck”



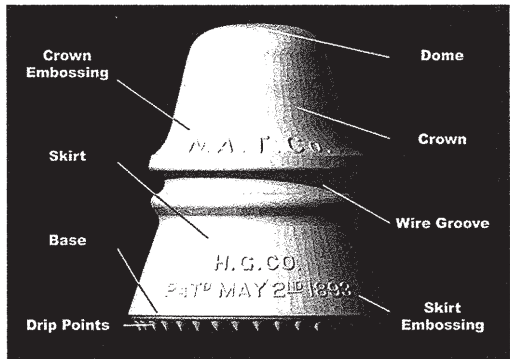
CD 214

BASIC INSULATOR TERMINOLOGY

DOME - The top surface of the insulator.

CROWN - The portion between the dome and the wire groove.

WIRE GROOVE - The indentation where the tie wire is attached.



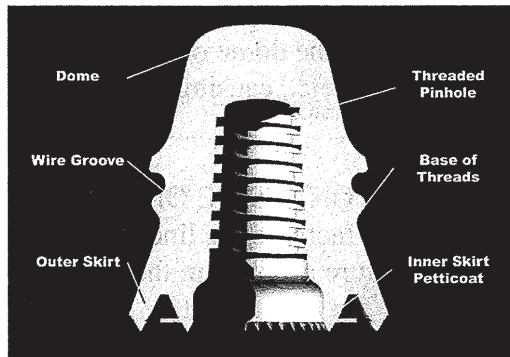
SKIRT - The portion of the insulator below the lowest wire groove.

BASE - The surface of the insulator upon which it rests.

DRIP POINTS - Points or beads around the base of the insulator meant to allow water to drip off more efficiently.

EMBOSSING - Raised letters or numbers anywhere on the insulator.

THREADS - Spiral grooves in the pinhole corresponding to matching grooves on the pin, allowing the insulator to stay securely fastened to the pin.



BASE OF THREADS - The point nearest the base of the insulator where the threads begin.

INNER SKIRT or PETTICOAT - An extra band(s) of glass (or porcelain, etc.) at the bottom of the insulator, increasing the

leakage path from the wire to the pin (the outer skirt is also considered a petticoat).

Following are a few other insulator parts:
(The sample shown is one example of many in most cases.)

EARS - Projections on top of the insulator to keep the line wire in place.



CD 106.3



CD 257



SADDLE or CABLE GROOVE - An indentation in the dome or between the ears of an insulator which held the line wire or cable.

CD 210

EYES - Holes in the ears of the insulator to hold the tie wire in place for the line wire or cable.



CD 264



HORIZONTAL or VERTICAL RIDGES - Regularly spaced narrow projections on the dome or skirt (or both), meant to deflect rocks, etc., causing less damage to the body of the insulator.

CD 144

THREADS ON INSIDE OF SKIRT - Ridges designed to increase the linear surface or to help drain moisture away from the pinhole, but are not part of the pin attachment.



CD 144.5



WIRE GROOVE RIDGES - Projections directly above and below the wire groove (called "upper" and/or "lower".)

CD 106

RIBS - Two or more small vertical ridges meant to

strengthen the lower wire groove ridge.



CD 206
"Castle"

TURRETS - Regularly spaced block or round-shaped vertical projections (miniature battlements) at the top of the insulator.

the insulator.

CLAW - Regularly spaced twisted fingerlike projections on the top of



CD 109.5
"Claw"



CD 288

RIDGES - Narrow horizontal projections (one or more) placed on the top of two opposite sides of the umbrella, meant to deflect water from the crossarm.

FLUKES/FLUTES - Regularly spaced vertical outward projections (flukes) or indentations (flutes) at the wire groove, meant to keep the tie wire away from the body of the insulator.



CD 135
"Diamond groove"



CD 248/311/311
"Stacker"



CD 303/310
"Muncie"



CD 304/310
"Coolie hat"

INSULATOR NICKNAMES AND STYLES

Below are a few insulator nicknames. Only one representative CD number is given for each nickname.

THREADED NORTH AMERICAN

Ballerina (CD 319)
Bat ears (CD 321)
Beehive (CD 145)
Big mouth (CD 128.4)
Blob (CD 140.5)
Blob top (CD 126)
Bullet (CD 132)
Candlestick (CD 317)
Castle (CD 206)
Claw (CD 109.5)
Coolie hat (CD 304/310)
Corkscrew (CD 110.5)
Cross top (CD 208)
Diamond groove (CD 135)
Door knob (CD 175)
Frog eyes (CD 232)
Hoop skirt (CD 152)
Hot cross bun (CD 141)
Ice cream cone (CD 160.7)
Keg (CD 112)
Mad Hatter (CD 134.6)
Mickey Mouse (CD 257)
Mushroom (CD 176)
Pilgrim hat (CD 135.5)
Pluto (CD 181)

Roman helmet (CD 259)
Screw top (CD 158.9)
Spaceship (CD 178)
Spiral groove (CD 147)
Teepee (CD 157)
Tramp (CD 196)
Twin pin (CD 138.9)
Viking helmet (CD 258)

FOREIGN

Baby bottle (CD 430)
Bustle (CD 695)
Gingerbread boy (CD 640)
Gingerbread man (CD 642)
Gingerbread mom (CD 641)
Noser (CD 665)
Spook (CD 650)
T-bar (CD 670)

THREADLESS

Egg (CD 700)
Hat (CD 735)
Slash top (CD 788)
Teapot (CD 790)

Some insulator styles include: Fence, pony, exchange, toll, carrier, signal, baby signal, through-pinhole (mine), transposition, block, tree, lightning rod, spool, strain, rack, shackle, knob, suspension, dry spot, cable, power, sleeve, umbrella, glass liner (Wade-type), single (double and triple) petticoat, and dead-end.

John Tibbitts was the inventor of insulator nicknames (the “beehive” being one of many he coined). N. R. “Woody” Woodward stuck with the names given by manufacturers, dealers and users. However, Woody created one nickname, the “signal” for the CD 162, which style was phased out in the 1960s in favor of the CD 164.

INSULATOR TERMINOLOGY AND ABBREVIATIONS

COMMEMORATIVE - An insulator-type shape, made to commemorate a national show or other event.

MINIATURE - A small copy of a real insulator, salesman’s sample, or whimsical item.

GO-WITH - Any item related directly or indirectly to insulators. (Examples: Company advertising, brackets, etc.)

RDP - Round drip points
SDP - Sharp drip points
FDP - Flat drip points
WDP - Wedge drip points
CD - Continuous drip points
ISC - Inner skirt chip
WG - Wire groove
SB - Smooth base
RB - Rounded base
CB - Corrugated base (flat base with tiny indented grids)

GB - Grooved base
NN - No Name (no embossed name)
MLOD - Mold line over the dome (2-piece mold)
MLOB – Mold line over base (always present on RB)
PPD – Postpaid
SASE - Self-addressed stamped envelope

INSULATOR COLORS

Following are a few insulator color-name explanations:

CARNIVAL - Factory-applied outer coat of tin oxide.

FLASHED AMBER - Factory-applied outer coat of amber color.

SWIRLS/STREAKS - Pronounced or contrasting amber, milky, or other colored swirls or streaks in the glass.

JADE MILK - Less pronounced, more thoroughly mixed “milk” throughout blue or green glass giving an even clouded effect.

SNOW – Firebrick particles throughout the glass.

BUBBLES - Tiny/larger bubbles throughout the glass.

SCA - Sun-colored amethyst or purple, which may or may not have been caused by exposure to the sun.

It is a common misconception that blue green (aqua) insulators have been turned that color (and can become darker) from exposure to the sun. In fact, only some purple insulators can be sun-turned. Until 1914, manganese was used in glass batches as a decolorizer when clear glass was wanted. However, it was discovered that after prolonged exposure to ultra violet rays, clear glass containing manganese would turn various shades of purple, depending on the amount of manganese in the glass. After World War I began, however, manganese was not readily available, so other decolorizers were used. Selenium was used from 1915 to 1930, which imparts a peach, straw, or honey tint. So the sun will not change or darken glass to any other color but shades of purple. (For more details, please see the article by Rick Baldwin of Brunswick, Ohio, in *Crown Jewels of the Wire*, 7-1985 p. 23.)

The colors found in glass insulators are astounding, and provide a sparkling beauty that cannot be compared to anything else. Just mentioning a few such colors brings to mind a veritable rainbow of glass. The blues are represented by peacock, cobalt, delft, sapphire, cornflower, ink, powder, teal, midnight, etc. Greens can be found in 7-up, olive, lime, emerald, sage, etc. Aqua varieties are

many, but a few include milky aqua and jade milk plus all of the shades ranging from blue aqua to green aqua. Purples appear in burgundy, lavender, royal, SCA, pink, and smoke. Ambers go from blackglass, to brown, olive, red, orange, and yellow amber. Imagine such lovely shades as peach, lemon, and straw. Even those labeled “clear” can be found in several variations. The only color not yet found in a real glass insulator is a true bright red, although a few ambers have a dark reddish appearance sometimes described as “oxblood” red. Certain insulators have been found in carnival glass, one of the most popular colors among new collectors. Even non-collectors are attracted to the “carnies”.

DESCRIBING THE CONDITION OF AN INSULATOR

The following descriptions are standards currently in use by most insulator collectors/dealers.

- M - Mint (perfect)
- VNM - Very near mint (no distracting damage)
- NM - Near mint (minor damage)
- GOOD - Some damage, not bad.

- FAIR - Medium amount of damage.
- POOR - A lot of damage.
- SPECIMEN - So much damage that it simply represents that style or color as a specimen or example.

In insulator magazine ads and sales lists, you might see variations such as, “VVVNM” (almost perfect-one very small flaw), “NM-” (just off of near mint), “VNM+” (a bit better than VNM), etc.



CD 108



CD 119

The following are descriptions of insulator imperfections caused during manufacture (these are often seen as adding character and increasing value):

OPEN BUBBLE - A pit in the glass caused by bubbles bursting at the time of manufacture.

UNDERPOUR - An uneven place where not enough glass was used in the mold, and where it didn't fill in; usually on the base or petticoat.

LOPSIDED or **DEFORMED** - Caused when an insulator was removed from the mold when it was too warm, and slumped as it cooled.

GHOST EMBOSSEING or **GHOSTING** - Caused when molten glass fell into a mold which was too cool. The gob of glass struck a spot on the engraving as it fell, and in that fraction of a second, cooled enough to retain the impression in the glass. Ghost embossing generally occurs above the intended embossing.

STRAW MARK - A long fold line in the glass, usually on the crown, caused by the mold or glass being too cool when the insulator was pressed.

INTERNAL STRESS CRACK - Usually caused by improper cooling following manufacture, or by stressful temperature changes while in service (doesn't increase value).

The following are descriptions of insulator imperfections caused after manufacture (these are from use and detract from value):

BRUISE - A round or elongated fracture in the glass; no glass missing.

FRACTURE - A crack in the glass; no glass missing.

BB DING, PING or **FLEA BITE** - A small round pit or bruise caused by an air-borne foreign object.

SHEER - A long (usually vertical) slice or shallow chip caused by a blow.

CHIP - Any piece of glass missing.

FLAKE - A small shallow chip.

FLASHOVER - Discolored area where an electrical arc leaped across the insulator from the wire to the (usually wet) pole. This is often caused by lightning hitting the line wire.

HOW TO CLEAN YOUR INSULATOR

There are various methods one can use to clean insulators, but we have chosen one suggested by Charlie Allmon of Kansas City, Missouri. The following is condensed from three articles he submitted to *Crown Jewels of the Wire*, with added editorial suggestions. (For more details, please see *Crown Jewels of the Wire*, 12-1980 p. 35, 6-1986 p. 18, and 11-1986 p. 6.)

“Here’s a tip on cleaning insulators that is safe, cheap, long lasting, and really works! Most grocery stores carry a product called ‘B.K.F.’ (Bar Keepers Friend). It comes in a cardboard can, and is usually stacked beside the Comet, Ajax, etc. This product costs very little, and it contains oxalic acid. It will NOT detonate when added to water, nor will it cause severe burns.”

“Put about one-third of a can into a [nonmetal] bucket, adding about one gallon of water. Before adding the insulators, allow the liquid to reach room temperature. It is very important NOT to add cold insulators to warm water or vice versa, to avoid fractures in the insulator. Soak for about 12 hours, or perhaps longer if the insulator is very dirty. Use rubber gloves when removing the insulator [to protect your hands from the solution], but not when scrubbing it [to allow you to grip the insulator firmly]. (Some B.K.F. will have settled on the insulator; you will need to stir your solution to redistribute the cleaner, as one batch can be used several times.)”

“Scrub the insulator with an SOS pad (Brillo pads are too coarse for glass and could cause scratches). [Using a nylon pad would eliminate having to rinse away soap later on.] Some ‘elbow grease’ will also be needed, along with extra cleaning around the embossing and drip points with a toothbrush.

You'll need to occasionally rinse the insulator to see how the scrubbing is proceeding. If it is still very dirty, more soaking may be needed. Rinse away the soap and dry. Turn the insulator upside down and look through the skirt. It is clean if no hazy white stain is visible, and if the dome sparkles.”



CD 317.8/313/313.1



Railroad signaling insulators in Inkom, Idaho, 2013

THE NATIONAL INSULATOR ASSOCIATION



An international organization for all collectors of antique electrical insulators and related items.

www.NIA.org

The National Insulator Association (NIA) is an organization of collectors and friends interested in electrical insulators, and other artifacts connected with the many industries associated with electrical power, such as telephone and telegraph, railroads, and lightning protection devices.

The NIA was officially founded on July 7, 1973, at the national show held in Hutchinson, Kansas. In the first year of its operation, more than 800 charter members joined its ranks. Since then, the number of annual paid members continues to grow. In all, the NIA has had more than 9,000 members. Residents from each of the states of the United States and the provinces of Canada have been NIA members as well as many foreign nations including Germany, Great Britain, Australia, New Zealand, Czech Republic, Holland, Columbia, Sweden, Italy, and Uruguay. All members receive a quarterly publication titled "*Drip Points*".

N.I.A. MEMBERSHIP

Any person interested in insulators, lightning rod equipment or related collecting or historical activity is eligible to apply for membership. The fiscal year for membership is January 1st through December 31st. All dues are payable in U.S. funds. New members are entitled to all membership privileges immediately upon payment of current dues and acceptance by the NIA.

Obtain a membership application at www.nia.org/membership.

INSULATOR CLUBS

There are numerous insulator clubs that collectors can join. In fact, so many it would be impractical to mention them all in this booklet. However, there is one that is free and references many of the other clubs. It is ICON, a worldwide online insulator club.

Insulator Collectors on the Net

(Internet – Worldwide)

c/o Bill Meier

103 Canterbury court

Carlisle, MA 01741-1860

(978) 369-0208

E-mail: icon@clubs.insulators.net

(Bill Meier)

Visit: www.Insulators.info



Insulator Collectors On the Net (ICON) had well over 2,000 members worldwide in 2012. The club is open to anyone with access to the Internet and email. Although the club doesn't have a newsletter per se, members communicate daily with each other via e-mail discussing subjects from "*How to Clean Insulators*" to asking questions and sharing new finds. The web site is filled with information about hobby resources, on-line books, show calendars, club information, and more. You can view hundreds of full color images of rare insulators from all over the world, as well as see the most complete collection of insulator related go-withs. The "People Finder" with its powerful search features allows collectors to locate other insulator collectors by name or location. The "Picture Poster" is a means whereby collectors can easily post their own photographs in any one of a number of albums. Nearly 100,000 photos have been posted!

Local club listings may be found at www.Insulators.info/clubs

View insulator show listings at www.Insulators.info/shows

CROWN JEWELS OF THE WIRE INSULATOR MAGAZINE

Crown Jewels of the Wire, Howard Banks, editor

Crown Jewels has been published continuously since March 1969. The magazine was founded by Dora Harned, who wanted to provide a forum for collectors to share this fascinating hobby with one another. Carol McDougald became publisher in 1985, introducing color printing in the late 1990's. Howard and Linda Banks took over *Crown Jewels* in 2003 and introduced full color printing in every issue beginning in 2011. Starting in 2012, every new issue is available in an electronic format at the magazine's website. Articles from past issues of the magazine can also be searched in the archival section of the website. Dedicated to all insulator collectors, this magazine covers subjects such as book reviews, club news, collector profiles, research articles, information on all insulators, patent information, personal experiences, material from the NIA, telecommunications, show reports, reproductions, tips, etc. Also included, are sections for *Coming Events*, *Classified Ads*, *Letters to the Editor*, etc. In 2012 there were about 1,200 magazine subscribers. *Crown Jewels of the Wire* is published monthly with an optional annual directory of collectors.

Subscription Information:

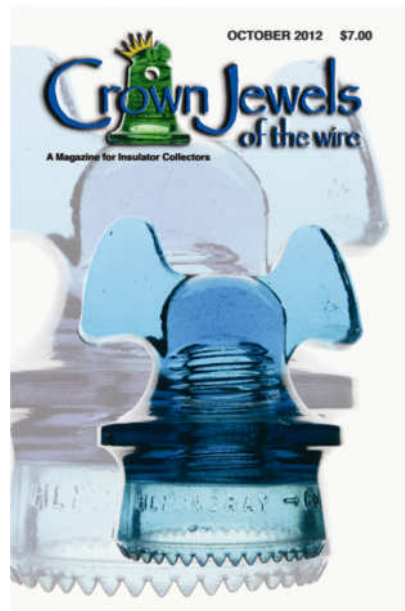
Crown Jewels of the Wire
65028 Granger Rd.

Lostine, Oregon 97857

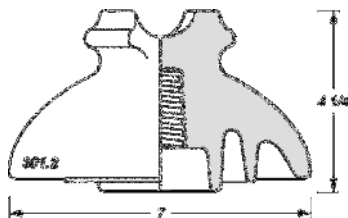
(541) 569-2318

E-mail: Editor@CJOW.com

Visit: www.CJOW.com



INSULATOR REFERENCE LIBRARY



There are many reference books, pamphlets, on-line articles, etc. that are available to insulator collectors. Many are current, but others are out of print or obsolete. The list is constantly changing. Following are just a few websites where various links to reference materials may be found and are generally up to date:

Crown Jewels of the Wire magazine

<http://CJOW.com/>

Insulator Collectors on the Net

<http://www.Insulators.info/>

<http://www.insulators.info/books/>

<http://reference.insulators.info/publications/>

National Insulator Association

<http://www.nia.org/>

<http://www.nia.org/archives/referenc.htm>

<http://www.nia.org/archives/price.htm>



CD 301.2



CD 301.5

THE FUTURE OF INSULATOR COLLECTING

Insulator collecting is a lot of fun and it is a great way to meet some of the nicest people anywhere. It is a fast-growing hobby, and seems to be enjoying a period of ever-increasing interest. Since most insulators are old (most are over 75 years old and many are over 150 years old), it is a most fascinating hobby to pursue if you like color, glass, and history all wrapped up in one neat little package. And, as more lines go underground, and insulators are relegated to the past, they will continue to become more collectable. The number of active members in the NIA is growing, new insulator clubs are forming (www.insulators.info/clubs), subscriptions to *Crown Jewels of the Wire* are increasing in number every month, and insulator shows are popping up everywhere. And, the emergence of the availability of insulators on the Internet and blossoming of individual websites makes the future for insulator collecting look very bright indeed! So don't be left out of this growing, thriving hobby.

Hopefully, this booklet has helped you to learn about insulators. And now, when someone asks you "what are insulators?" you will be able to tell them, and help spread the word about this fascinating, fast-growing, and fun hobby. We know that you will enjoy your association with insulators and with other collectors!



CD 331

MISCELLANEOUS TYPES OF INSULATORS



Cochrane Bells



Wood Block Ramshorn



*U.S.
"Porcelain"*



*Goodyear
Rubber Hat*



*Cutter Tree
Insulator*



*California
"Johnny ball"*



*Radio
Strain*



Buzby

INSULATORS FROM OUTSIDE OF NORTH AMERICA



*Australian
"Bell"*



*English
"Metal top"*



*United
Kingdom*



Columbia



*French
"Multipart"*



*German
"Porcelain"*

A. L. STADERMANN.

INSULATOR.

APPLICATION FILED AUG. 19, 1907.

Patented Apr. 12, 1910.

954,596.

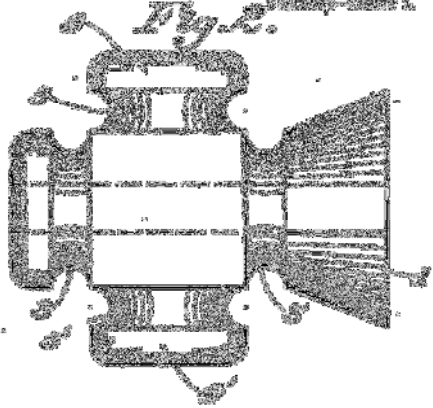
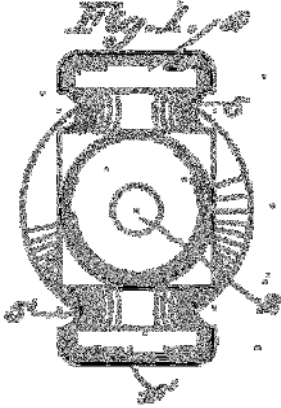
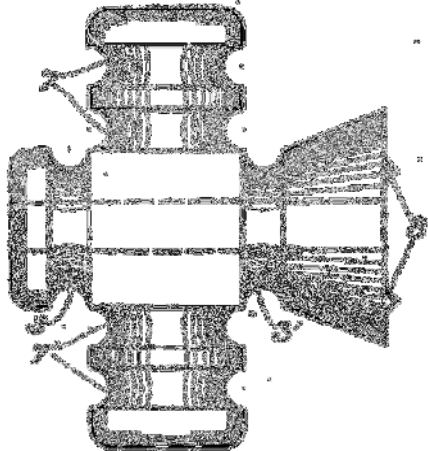
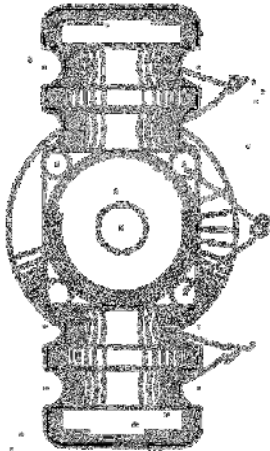


Fig. 3.

Fig. 4.



Witnesses:
A. L. Stadermann
Herman R. Kue

Albert L. Stadermann
Inventor
By G. W. ...
Attorney

NOTES





Last of the Muncie & Coolie Hats in Helena, Montana, 2013



www.NIA.org